RECIRCULATED DRAFT ENVIRONMENTAL IMPACT REPORT

Remedial Action Plan for Ascon Landfill Site

Huntington Beach, California

October 2014

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State Clearinghouse #2013041010

Prepared For:

DEPARTMENT OF TOXIC SUBSTANCES CONTROL
5796 Corporate Avenue
Cypress, California 90630-4732

Prepared By:

PCR SERVICES CORPORATION
One Venture, Suite 150
Irvine, California 92618

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1.0 Introduction

1.0 INTRODUCTION

1. RECIRCULATED DRAFT EIR OVERVIEW

This Recirculated Draft Environmental Impact Report (Recirculated Draft EIR) is part of the ongoing environmental review process being conducted by the Department of Toxic Substances Control (DTSC), as the Lead Agency, for the proposed Remedial Action Plan (RAP) at the Ascon Landfill Site (the "Site") located at 21641 Magnolia Street in Huntington Beach, California. The RAP (also referred to as the "Project") presents the proposed remediation plan for the Site. This Recirculated Draft EIR has been prepared in accordance with the California Environmental Quality Act (CEQA), Public Resources Code §§21000, *et seq*. (CEQA) and the State CEQA Guidelines, California Code of Regulations, title 14, §§15000, *et seq*. (CEQA Guidelines). CEQA is a State law that requires the lead agency to consider and disclose potential adverse environmental impacts of its proposed actions before approving them.

This document is considered a recirculated partial EIR because significant new short-term traffic and related off-site mobile-source noise information has been incorporated into some of the impact analyses presented in the Draft EIR, which was circulated for public review and comment beginning in August 2013. For purposes of clarity, this document is referred to as the "Recirculated Draft EIR." The previously circulated Draft EIR made available by DTSC for public comment during a 45-day public review period that began August 29, 2013, and ended October 14, 2013, is referred to as the "Draft EIR." In consideration of public comments received on the Draft EIR and Draft RAP during the public review period, DTSC commissioned further studies related to potential traffic impacts identified in the Draft EIR. Specifically, the feasibility of implementing the Draft EIR's prescribed traffic mitigation measures along the Project's proposed haul route, including Beach Boulevard (State Route 39) and Pacific Coast Highway (PCH), was further explored due to the existing and forecasted operating deficiencies on Beach Boulevard. The Draft EIR identified a single haul route that would have all haul trucks exit and access the I-405 Freeway at Beach Boulevard. As a designated "State Route," Beach Boulevard is under the jurisdiction of California Department of Transportation (Caltrans). DTSC conducted a series of meetings with Caltrans, the City of Huntington Beach, and the City of Fountain Valley to explore truck haul route alternatives to Beach Boulevard. Based on these meetings, DTSC undertook additional traffic studies to determine if, while minimizing traffic impacts to Beach Boulevard, there is an alternative haul route(s) that would result in no new significant traffic impacts along such a route. The results of detailed impact analyses verified that Brookhurst Street, a designated truck route by the City of Huntington Beach from Pacific Coast Highway to Garfield Avenue, and by the City of Fountain Valley north of Garfield Avenue, is a viable haul route in addition to Beach Boulevard that could accommodate a portion of the Project's truck trips. That is, all trucks contracted for export trips, regardless of point of origin or destination, would use Beach Boulevard. Import and supply trucks could use either Beach Boulevard or Brookhurst Street. Up to a maximum of 100 trucks per day traveling to and from the Site would utilize Beach Boulevard, with the remaining trucks utilizing Brookhurst Street. DTSC therefore updated the traffic analysis in the Draft EIR to include this additional haul route that was not studied previously.

Per CEQA, the Project's proposed revised truck haul routes and truck distribution, and the resulting changes to traffic and mobile-source noise impacts (from haul truck traffic) analyzed in the Draft EIR are presented in this Recirculated Draft EIR, which focuses on these two environmental issues (traffic and noise).

This Recirculated Draft EIR will be used, in conjunction with the Draft EIR, to enable DTSC and other interested parties to evaluate the environmental impacts associated with the proposed RAP. Responses to timely comments previously submitted on the Draft EIR and/or timely comments submitted on the new portions of the Recirculated Draft EIR will be developed and incorporated into the Final EIR, which will be considered for certification by the DTSC at a future date.

2. CEQA REQUIREMENTS FOR RECIRCULATION

Under CEQA, a lead agency is required to recirculate an EIR, or portions of an EIR, when significant new information is added to the EIR after notice is given of the availability of the Draft EIR for public review but before certification. New information added to an EIR is not "significant" unless the EIR is changed in a way that deprives the public of meaningful opportunity to comment upon a substantial adverse environmental effect of the project, or a feasible way to mitigate or avoid such an effect (including a feasible project alternative) that the project's proponent has declined to implement.

"Significant new information" requiring recirculation includes, for example, a disclosure showing that:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented;
2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance;
3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the significant environmental impacts of the project, but the project's proponents decline to adopt it; or
4. The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded. (See, CEQA Guidelines §15088.5, subd. (a)(1)-(4).)

Under CEQA, if the revision is limited to a few chapters or portions of the Draft EIR, the lead agency need only recirculate the chapters or portions that have been modified (CEQA Guidelines §15088.5, subd. (c)). Recirculation of an EIR requires notice pursuant to CEQA Guidelines section 15087 and consultation pursuant to CEQA Guidelines section 15086.

The "significant new information" pertaining to the Project triggering the need to recirculate the Draft EIR arises under Item 1 above, due to a potential new significant environmental impact that would result from the Project. The proposed revised truck haul routes and truck distribution have resulted in changes to the traffic and mobile-source noise impact (from traffic) analyses presented in the Draft EIR. The changes to the Draft EIR traffic analysis include the addition of new mitigation measures and newly identified significant and unavoidable traffic impacts triggering Item 1 above. Because of the significant new information, DTSC is recirculating the following Draft EIR sections: Executive Summary; Chapter 2.0, *Project Description*; Section 4.9, *Noise*; Section 4.10, *Traffic and Circulation*; Chapter 5.0, *Alternatives* (portions therein); and Chapter 6.0, *Other Mandatory CEQA Considerations*. Chapter 1.0, *Introduction,* is a new section for this Recirculated Draft EIR.

3. REVISED PROJECT DESCRIPTION SUMMARY

The changes to the Draft EIR's "Project Description" (Chapter 2.0 of the Draft EIR) are shown in Chapter 2.0, *Recirculated Draft EIR Sections*, of this Recirculated EIR, with a summary of the changes presented below. The addition of a new truck haul route does not change the phasing, duration and construction methods to implement the proposed Site remediation activities or the long-term operations at the Site as presented in the Draft RAP and Draft EIR. Thus, the changes would only affect the Draft EIR's analysis of off-site traffic and associated mobile-source noise impacts from the Project and Alternatives.

In general, regional access to the Site would be provided by I-405 for trips not originating in the City of Huntington Beach or nearby communities. Workers and visitors (DTSC or other agency staff, etc.) could approach the Site using Beach Boulevard, Magnolia Street, Brookhurst Street, or Pacific Coast Highway (PCH), depending on point of origin. The Project will, during various phases, include a substantial daily number of trucks for export of material (contaminated, recyclable, general or green waste, etc.), import of clean fill, and delivery of cap construction materials and other supplies.

The Draft EIR identified a single haul route that would have import and export haul trucks exit the Site and access the I-405 Freeway at Beach Boulevard. As presented therein, trucks exiting I-405 would travel south on Beach Boulevard to PCH, turn left on PCH to Newland Street, turn left (go north) on Newland Street to Hamilton Avenue, and turn right (go east) on Hamilton Avenue to the current Site entrance. The current Project entrance for all import and export haul trucks is located on Hamilton Avenue west of Magnolia Street. Trucks leaving the Site would exit on Magnolia Street and turn right (travel south) to PCH. The trucks would then travel northwest on PCH and turn right (go north) on Beach Boulevard to the freeway entrance for the I-405.

The recirculated "Project Description" identifies the Brookhurst Street corridor as a new haul route for import trucks (those bringing in clean-fill or other cap materials) to utilize during the proposed remediation activities. Brookhurst Street would not be utilized for export of contaminated materials from the Site. For in-bound trips utilizing Brookhurst Street, trucks would exit the I-405 and travel southbound on Brookhurst Street, turn right onto PCH and travel northwest along PCH, turn right onto Newland Street, travel north to Hamilton Avenue, and then turn right on Hamilton Avenue to the current Site entrance on the right-hand side. For the egress route, import trucks would exit from the Site's east gate on Magnolia Street, turn right out of the Site's gate and travel south on Magnolia Street, turn left onto PCH and travel southeast along PCH, turn left to travel north on Brookhurst Street to the northbound I-405 entrance or turn right on Talbert Avenue to enter the southbound I-405.

The haul route(s) on municipal streets would be stipulated in a Construction Traffic Management/Haul Route Plan reviewed and approved by the City of Huntington Beach and the City of Fountain Valley, as applicable, prior to Project implementation. All trucks contracted for export trips, regardless of point of origin, destination, or export material, are expected to use Beach Boulevard. Import and supply trucks could use either Beach Boulevard or Brookhurst Street. Up to a maximum of 100 trucks per day traveling to and from the Site are expected to utilize Beach Boulevard, with the remaining trucks utilizing Brookhurst Street.

4. ENVIRONMENTAL REVIEW PROCESS FOR THE RECIRCULATED DRAFT EIR

The review process for the Recirculated Draft EIR involves the following procedural steps:

Public Notice/Public Review

CEQA Guidelines Section 15088.5 describes the procedures for recirculation of a portion of an EIR. Consistent with CEQA requirements, the Recirculated Draft EIR will be subject to public review and comment for a period of 45 days. The review period commences on October 6, 2014, and ends on November 21, 2014. DTSC has submitted a public Notice of Availability (NOA) of the Recirculated Draft EIR and a Notice of Completion (NOC) to the State Clearinghouse. The NOA for the Recirculated Draft EIR has also been mailed to residences within a ½ -mile radius of the Site, in addition to those public agencies, organizations, and individuals that commented on the Draft EIR or who have otherwise requested to be on the mailing list. The NOA has also been published in the Huntington Beach Independent and Huntington Beach Wave (OC Register) newspapers. Proof of the mailings and publication is available at DTSC. The NOA indicates the Recirculated Draft EIR will be available for review at the following locations:

- Huntington Beach Central Library - 7111 Talbert Avenue, Huntington Beach, CA 92648, phone # (714) 842-4481
- Banning Branch Library - 9281 Banning Avenue, Huntington Beach, CA 92646, phone # (714) 375-5005
- Department of Toxic Substances Control - 5796 Corporate Avenue, Cypress, CA 90630, phone # (714) 484-5337
- DTSC's EnviroStor website at www.EnviroStor.dtsc.ca.gov. Enter "Huntington Beach" as the City and select "Ascon Landfill Site" in the list of projects within the scroll-down menu.

Any agency, organization or members of the public desiring to comment on the Recirculated EIR must submit their comments in writing to Mr. Safouh Sayed prior to the end of the public review period at the address below:

Department of Toxic Substances Control
Attn: Safouh Sayed, DTSC Project Manager
5796 Corporate Avenue
Cypress, CA 90630-4732
RE: Ascon Landfill RAP
Or via email at: Safouh.Sayed@dtsc.ca.gov

Focus of Comments on this Recirculated Draft EIR

Consistent with the provisions of CEQA Guidelines Section 15088.5, subd. (f)(2), because the Draft EIR is being revised only in part, and because DTSC is recirculating only revised sections or portions of the Draft EIR in this document, DTSC need only respond to: (i) comments received during the initial circulation period that relate to chapters or portions of the Draft EIR that were not revised or recirculated; and (ii) comments received during the 45-day recirculation period that relate to the chapters or portions of the Draft EIR that were revised and recirculated in this Recirculated Draft EIR.

Thus, agencies, organizations, and individuals that wish to comment on this Recirculated Draft EIR, should limit their comments to only the revised sections presented in Chapter 2.0 of this Recirculated Draft EIR and the revised analyses contained therein. The revised analyses presented in Chapter 2.0 includes new text shown in double underline (i.e., underline) and deleted text shown in strikeout (i.e., ~~strikeout~~). Comment letters submitted on the previously circulated Draft EIR during the prior comment period will be addressed in the Final EIR and need not be resubmitted in conjunction with this Recirculated Draft EIR.

Responses to Comments/Final EIR

Following the 45-day public comment period on the Recirculated Draft EIR, a Final EIR will be prepared. The Final EIR will consist of the Draft EIR and this Recirculated EIR (incorporated by reference), responses to comments addressing concerns raised by responsible agencies and reviewing parties during the public comment periods on the Draft EIR and this Recirculated Draft EIR, corrections and additions to the Draft EIR and Recirculated Draft EIR (as necessary), and a mitigation monitoring and reporting program (MMRP). According to Public Resources Code (PRC) Section 21081.6, for projects in which significant impacts will be avoided by mitigation measures, the Lead Agency must include a MMRP. The purpose of the MMRP is to ensure compliance with required mitigation during implementation of the project. After the Final EIR is completed, and at least 10 days prior to its certification, a copy of the response to comments on the Draft EIR will be provided or made available to all commenting parties.

According to PRC Section 21081, the Lead Agency must make specific Findings of Fact (Findings) before approving the Final EIR, when the EIR identifies significant environmental impacts that may result from a project. The purpose of the Findings is to establish the link between the contents of the Final EIR and the action of the Lead Agency with regard to approval or rejection of the proposed project. Prior to approval of a project, one of three findings must be made, as follows:

- Changes or alterations have been required in, or incorporated into, the project that avoid or substantially lessen the significant environmental effect as identified in the Final EIR.
- Such changes or alterations are within the responsibility and jurisdiction of another public agency and not the agency making the finding. Such changes have been adopted by such other agency or can and should be adopted by such other agency.
- Specific economic, legal, social, technological, or other considerations, including provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or project alternatives identified in the Final EIR.

Environmental impacts may not always be mitigated to a less than significant level. When this occurs, impacts are considered significant and unavoidable. If DTSC concludes that the Project would result in significant and unavoidable effects, which are identified in the Draft EIR and this Recirculated Draft EIR, DTSC must adopt a "statement of overriding considerations" prior to approval of the Project in compliance with PRC Section 21081. Such statements are intended under CEQA to provide a written means by which DTSC balances the benefits of the Project and the significant and unavoidable environmental impacts. Where DTSC concludes that the economic, legal, social, technological, or other benefits outweigh the unavoidable environmental impacts, DTSC may find such impacts "acceptable" and approve the Project.

5. CONTENT, FORMAT, AND SUMMARY OF THE RECIRCULATED DRAFT EIR

Consistent with the provisions of Section 15088.5, subd. (f)(2) of the CEQA Guidelines, this Recirculated Draft EIR contains only the portions of the Draft EIR that have been revised and replaced. In summary, the Recirculated Draft EIR is comprised of the following new information:

- Chapter 1.0, *Introduction*
- Chapter 2.0, *Revised Draft EIR Sections*
- Executive Summary (revises portions of the Executive Summary chapter in the Draft EIR);
- Chapter R2.0, Project Description;
- Section R4.9, Noise;
- Section R4.10, Traffic and Circulation;
- Chapter R5.0, Alternatives (revises portions of Chapter 5.0, *Alternatives*, in the Draft EIR); and
- Chapter R6.0, Other Mandatory CEQA Considerations (revises portions of Chapter 5.0, *Other Mandatory CEQA Considerations*, in the Draft EIR).

Within Chapter 2.0 of this Recirculated Draft EIR, the following chapters/sections are presented in their entirety: Chapter R2.0, *Project Description*; Section R4.9, *Noise*; and Section R4.10, *Traffic and Circulation*. The Project's proposed additional haul route and distribution of truck trips resulted in changes to only portions of the Executive Summary, Chapter 5.0, *Alternatives*, and Chapter 6.0, *Other Mandatory CEQA Considerations*, in the Draft EIR pertaining to short-term traffic and noise impacts. Thus, consistent with CEQA Guidelines Section 15088.5(b) of the CEQA Guidelines, only those portions of the Draft EIR's Executive Summary, Chapter 5.0, and Chapter 6.0 that have changed are presented in Chapter 2.0 of this Recirculated Draft EIR. Please refer to the introductory language in each of these recirculated Draft EIR chapters for a description of the revised sub-sections included within the respective chapter.

This Recirculated Draft EIR also contains revised technical analyses that are included as appendices. The revised appendices are as follows:

- Revised Appendix F - Noise Worksheets (Off-Site Haul Truck Noise Calculations Only)
- Revised Appendix G – Revised Traffic Study

6. INCORPORATION BY REFERENCE

As permitted in Section 15150 of the CEQA Guidelines, both the Draft EIR and Recirculated Draft EIR have referenced technical studies, analyses, and reports. Information from the referenced documents has been briefly summarized in the appropriate section(s) of both the Draft EIR and Recirculated Draft EIR. All documents referenced in both the Draft EIR and Recirculated Draft EIR are hereby incorporated by reference and are available for public inspection and review upon request to DTSC (see contact information for Mr. Safouh Sayed, above).

2.0 Recirculated Draft EIR Sections

R-EXECUTIVE SUMMARY

This Recirculated Draft EIR section has been prepared pursuant to CEQA Guidelines Section 15088.5, *Recirculation of an EIR Prior to Certification*. Per Section 15088.5(b), "If the revision is limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified." The Project's proposed additional haul route and distribution of truck trips resulted in significant changes to the Draft EIR's construction noise and traffic analyses presented in Sections 4.9, *Noise*, and 4.10, *Transportation/Traffic*, respectively. In addition, changes were provided to Section 2.0, *Project Description*, of the Draft EIR. Consistent with CEQA Guidelines Section 15088.5(b), only the portions of the Draft EIR's Executive Summary that have changed are presented in this Recirculated Draft EIR chapter. These sub-sections include "Summary of Environmental Impacts" and "Alternatives." The discussions of "Proposed Project" and "Issues Raised During Notice of Preparation Process," in the Draft EIR's Executive Summary have not changed based on the revised analysis presented in this Recirculated Draft EIR. Accordingly, these sub-sections are not included in this Recirculated Draft EIR chapter.

1. SUMMARY OF ENVIRONMENTAL IMPACTS

This section provides a summary of impacts, mitigation measures, and impacts after implementation of the mitigation measures associated with implementation of the RAP. The summary is provided by environmental issue area below in **Table RES-1**, *Summary of Project Impacts and Mitigation Measures*. Please refer to Section R2.0, *Project Description*, for a list of the Project Design Features (PDFs) that would be implemented by the Project relative to each environmental issue area. The PDFs, in many cases, would serve to reduce the extent of the Project's potential for environmental impacts.

Table RES-1 provides a summary of the short-term noise and traffic issues. Only the modified sections of Table ES-1 of the Draft EIR are subject to recirculation.

Section 15126.2(b) of the CEQA Guidelines requires that an EIR describe significant environmental impacts that cannot be avoided, including those effects that can be mitigated but not reduced to a less than significant level. As shown in Table ES-1 (of the Draft EIR) and as analyzed in Section 4.2, *Air Quality*, of the Draft EIR even with the incorporation of all project design features and a mitigation measure to implement best available control technology, to the extent feasible, during construction, the Project would remain in exceedance of the SCAQMD regional threshold for NOx from intensive use of diesel powered heavy-duty construction equipment for most days throughout implementation of the RAP construction remediation activities. Regional PM_{10} emissions would also exceed SCAQMD regional thresholds due to equipment exhaust and fugitive dust generated from the project. Worst-case hourly emissions of NOx are predicted to result in localized concentrations of NO_2 in excess of the applicable local significance criterion (the state ambient air quality standard). In addition, 24-hour and annual emissions of PM_{10}, from dust and diesel exhaust, are predicted to result in localized concentrations in excess of the applicable significance criteria (the SCAQMD's allowable incremental increase concentrations). As such, implementation of the RAP would result in significant and unavoidable impacts with regards to regional NOx emissions and its contribution to the formation of the non-attainment pollutant ozone, localized maximum 1-hour NO_2 concentrations, 24-hour and annual PM_{10} concentrations. ~~Please refer to~~ Section 4.2, *Air Quality*, of ~~this~~ the Draft EIR ~~for further~~ provides a discussion of this topic.

Table RES-1

Summary of Project Impacts and Mitigation Measures

Issue	Project Impact	Mitigation Measures	Level of Significance After Mitigation
Noise			
Short-Term - Noise Levels in Excess of Standards/Permanent and Temporary Noise Level Increase: On-site, short-term construction activities associated with implementation of the RAP, aside from the use of the Pit F blower during nighttime, would be conducted during daytime hours specified in the City's Noise Ordinance. Given the temporary nature of the daytime construction activities associated with implementation of the RAP and the fact that daytime construction noise would not exceed the significance threshold of 80 dBA at nearby noise sensitive receptor locations, daytime short-term construction noise impacts would be less than significant. With implementation of the Mitigation Measure NOISE-1, potentially significant nighttime construction-related noise impacts related to the Pit F blower would be reduced to a less than significant level.	Less Than Significant with Mitigation	**NOISE-1** Should a blower with the potential to increase ambient noise levels to greater than 50 dBA at the exterior of nearby residences be utilized during nighttime hours during Pit F excavation activities, the RPs shall take reasonable care to locate and orient the blower in a manner that minimizes sound transmission towards the nearby residences. If, based on the noise generation level of the blower selected and the distance to the residences, the potential remains that the blower noise would exceed 50 dBA, the RPs shall provide a temporary noise barrier to reduce noise levels to ambient levels or acceptable nighttime levels pursuant to the City of Huntington Beach's Noise Ordinance and/or obtain an exemption to the Noise Ordnance for such temporary noise per Municipal Code Section 8.40.90 (j and/or k, or as otherwise applicable). If an exemption is not granted by the City, the RPs shall retain the services of a qualified acoustical engineer with expertise in design of sound isolations to ensure the Pit F blower is screened so as to meet the City's exterior noise limits (50 dBA) during nighttime hours at the property line of the nearest noise sensitive receptor locations (R1 [residential], R2 [fire station], and R3 [residential]).	Less Than Significant
Short-and Long-Term - Groundborne Vibration and Noise: Activities associated with implementation of the RAP that would create vibration would not have any effect on the existing vibration environment nearby the project area. Thus, implementation of the RAP would result in vibration impacts that are less than significant.	Less Than Significant	No mitigation measures are necessary.	Less Than Significant

Table RES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Issue	Project Impact	Mitigation Measures	Level of Significance After Mitigation
Transportation/Traffic			
Short-Term – Traffic: ~~Short-term construction activities associated with implementation of the RAP would impact four study intersections on Beach Boulevard during the P.M. peak hour and one study intersection on Beach Boulevard during the A.M. peak hour under Project Operating Year (2015) Plus Project Conditions. Implementation of the prescribed mitigation measures would reduce traffic impacts to a less than significant level under this scenario.~~ Short-term construction activities associated with implementation of the RAP would result in potentially significant impacts to seven (7) study area intersections. The prescribed mitigation measure would reduce delay times at two of the seven impacted intersections, such that intersection impact thresholds at these two intersections would not be exceeded under 2017 operational conditions. However, even with implementation of the mitigation measure, impacts at the remaining five intersections on Beach Boulevard would not be reduced to a less than significant level. Thus, impacts to five intersections would be significant and unavoidable during the P.M. peak hour under Operating Year (2017) Plus Project conditions, even with the inclusion of Project mitigation.	~~Less Than Significant With Mitigation~~ Potentially Significant Impact	~~**TRAF-1:** Beach Boulevard at Edinger Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection to be consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS D and delay of 45.8 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~ ~~**TRAF-2:** Beach Boulevard at Talbert Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS D and delay of 51.8 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~	~~Less Than Significant~~ Significant and Unavoidable Impact

Table RES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Issue	Project Impact	Mitigation Measures	Level of Significance After Mitigation
		~~**TRAF-3**: Beach Boulevard at Garfield Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOD D and delay of 53.0 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~ ~~**TRAF-4**: Beach Boulevard at Atlanta Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS D and a delay of 43.2 seconds or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~ ~~**TRAF-5:** Beach Boulevard at Pacific Coast Highway – A.M. Peak Hour. The Responsible Parties shall coordinate with~~	

Table RES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Issue	Project Impact	Mitigation Measures	Level of Significance After Mitigation
		~~Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve A.M. operations to LOS C and delay of 34.2 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~ **RTRAF-1:** The Project shall limit the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour). This mitigation measure to be verified through monthly compliance reports submitted by the RPs to the DTSC Unit Chief, Brownfields & Environmental Restoration.	
Short-Term – CMP Intersections: The implementation of the RAP would not conflict with the applicable Orange County CMP level of service standards or travel demand measures for designated roads or highways along the proposed haul routes. Impacts to CMP intersections would be less than significant.	Less Than Significant	No mitigation measures are necessary.	Less Than Significant
Short- and Long-Term – Emergency Access: The Site's ingress and egress driveways would be designed to meet City of Huntington Beach standards. The site	Less Than Significant	No mitigation measures are necessary.	Less Than Significant

Table RES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Issue	Project Impact	Mitigation Measures	Level of Significance After Mitigation
ingress/egress driveways may be adjusted or shift during the construction process to allow for construction of the cap. All site access and circulation would be reviewed by the City of Huntington Beach Department of Public Works and Fire Department to ensure that the Site provides adequate emergency access. ~~As discussed above, the Project would also result in less than significant traffic impacts with implementation of the prescribed mitigation measures. Accordingly, the function of the street system would remain, and there would be available capacity to accommodate the projected traffic volumes, in addition to emergency vehicles.~~ It is acknowledged that the Project would result in significant unavoidable impacts at five (5) study intersections on Beach Boulevard and less than significant impacts along the Brookhurst Street haul route. However, these impacts would be temporary, occurring periodically during the 11-month construction phase. Also, because emergency vehicles have priority access, the ability to use warning sirens at all intersections, and alternative routing flexibility, the Project's impacts on intersection capacity would not substantially diminish emergency access along the project's haul routes. Specific to Orange Coast Memorial Hospital, the adjacent intersections would continue to operate at acceptable levels of service with the Project providing further assurance that no significant impediments to emergency access at the Hospital would occur as a result of the Project's haul truck traffic on Brookhurst Street. In addition, during construction activities on the Site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage.			

Table RES-1 (Continued)

Summary of Project Impacts and Mitigation Measures

Issue	Project Impact	Mitigation Measures	Level of Significance After Mitigation
This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to include a shared left-turn/through/right-turn lane. This lane closure could potentially affect emergency access should the intersection operate a deficient level of service. As discussed in the Project's traffic impact analysis~~ above~~, the intersection would remains at LOS A with the implementation of the lane closure during both the AM and PM peak hours. As such, the temporary lane closure would not result in substantial adverse emergency access impacts. Overall, based on the above, impacts related to emergency access would be less than significant.			
Short-Term – Alternative Transportation Facilities: Implementation of the project design features would ensure that impacts to alternative transportation facilities and services are less than significant.	Less Than Significant	No mitigation measures are necessary.	Less Than Significant

Also shown in Table RES-1 and as analyzed in Section R4.10, *Traffic and Circulation,* of this Recirculated Draft EIR, even with the incorporation of Mitigation Measure RTRAF-1 to decrease the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) from 20 to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and from 25 to 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour), the Project would exceed Caltrans threshold criteria at five intersections on Beach Boulevard during the A.M. and/or P.M. peak hours under Operating Year (2017) Plus Project conditions in the City of Huntington Beach. These intersections, listed below, would have significant and unavoidable short-term impacts under Operating Year (2017) Plus Project conditions.

- Beach Boulevard at Edinger Avenue – a.m. and p.m. peak hours
- Beach Boulevard at Heil Avenue - p.m. peak hour
- Beach Boulevard at Warner Avenue - p.m. peak hour
- Beach Boulevard at Slater Avenue - p.m. peak hour
- Beach Boulevard at Talbert Avenue – mid-day and p.m. peak hours

Please refer to Section R4.10, *Traffic and Circulation*, of this Recirculated Draft EIR for further discussion of these impacts.

2. ALTERNATIVES

The *CEQA Guidelines* section 15126.6 requires an EIR to "describe a range of reasonable alternatives to the project, or to the location of the project, which will feasibly attain most of the basic objectives of the project but will avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives." The *CEQA Guidelines* direct that selection of alternatives be guided by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice.

Section R5.0, *Alternatives*, includes an evaluation of the alternatives considered and evaluated in this Recirculated Draft EIR. As discussed therein, the alternatives analysis includes the following three alternatives: Alternative 1 - No Action Alternative; Alternative 2 - Source Removal with Off-Site Disposal; and Alternative 3 - Lower Intensity - Extended Schedule Alternative.

Alternative 1, the No Action Alternative, is the baseline alternative presented in the 2007 RFS (RAP Alternative 1) because it represents a continuation of existing conditions and no removal of soil, material, or debris. Under this Alternative, no further action would be taken to contain, treat, or remove the impacted on-site soils and waste beyond current monitoring and maintenance activities. All existing Site features, such as the perimeter berms, fencing, vegetation, lagoons, pits, and other physical features would remain as under existing conditions.

Alternative 2, Source Removal with Off-Site Disposal, calls for bringing the Site to unrestricted use condition. Alternative 2, as discussed in the "Alternatives" section of this Recirculated Draft EIR (Section R5.0), is

evaluated as "Alternative 6, Source Removal with Offsite Disposal" in the RAP. Under this Alternative, nearly all waste materials would be removed, and the Site would be excavated as needed and backfilled with suitable import materials to street grade. The specific depth of excavation needed would be determined during excavation, based on the applicable remedial goals for unrestricted land uses (i.e, residential uses). This Alternative would remove approximately 1,000,000 bank cubic yards (BCY, a measurement of volume with "in-the-ground" density) of material from the Site. Construction activities under this Alternative would occur for approximately 41 months, which is approximately 2.5 years longer than the Project. This Alternative would generally involve a similar daily intensity of activities using a similar profile of construction equipment and same number of daily construction-related vehicle trips when compared to the Project.

No cap would be developed under this Alternative. Similar to the Project, the City Parcel would be rendered usable by the City of Huntington Beach for future landscaping and streetscape improvements.

This Alternative would result in a near-flat, vacant Site suitable for unrestricted use. This Alternative anticipates that a restrictive covenant would not be imposed on the Site for future land uses, but as Table 5-1 of the RAP indicates, pending field or post-remedy conditions, a long-term restrictive covenant may be necessary. Likewise, long-term groundwater monitoring is not expected to be required with implementation of this Alternative, but field conditions may dictate that a monitoring plan be developed and maintained for up to a 30-year period following completion of the clean-up, as determined appropriate based on consultation with the Santa Ana Regional Water Quality Control Board (SARWQCB).

Alternative 3, the Lower Intensity - Extended Schedule Alternative, would remove the same amount of material from the Site and provide the same cap system and long-term design as the Project, except that construction activities would extended over an approximate three-year period, as opposed to an approximately one year period for implementation of the Project. As a result, construction related impacts would be less intense than those anticipated to result from the Project. This extended-schedule Alternative is not contemplated in the Draft RAP. The primary purpose of this Alternative is to address the Project's significant and unavoidable air quality impacts, while also reducing the extent of the daily traffic ~~impacts~~ (~~although~~ traffic impacts would be ~~less than~~ significant and unavoidable at five intersections for the Project after implementation of the prescribed mitigation measure~~s~~). Regional air quality impacts are determined based on daily emission threshold levels established by the South Coast Air Quality Management District (SCAQMD). By decreasing the intensity of daily construction activities such that daily emission levels from construction activities would fall below applicable SCAQMD thresholds (after mitigation), as discussed above, the length of construction activities would be extended by approximately 24 months compared to the Project. Thus, rather than approximately 12 months of construction activities that would occur under the Project, this Alternative would result in approximately 36 months of construction activities.

It is noted that not all six of the RAP Alternatives warrant detailed analyses under CEQA, as discussed in subsection 2.0, *Alternatives Considered and Rejected*, in Section 5.0 of the Draft EIR. As discussed therein, Alternatives 2, 3 and 5 in the RAP have not been further evaluated in this Recirculated Draft EIR.

Alternatives Impacts

With regards to the No Project Alternative, as this Alternative would not include short-term remediation activities, key short-term impacts such as those relating to traffic, air quality, hazardous materials, and noise

would not occur and therefore would be less than the Project. However, as the Site would not be remediated under this Alternative, key long-term impacts relating to air quality, hazardous materials and water quality would be greater under this Alternative than those of the Project.

As Alternative 2, Source Removal with Off-Site Disposal (Alternative 6 in the RAP), would generally include more intense construction activities over a longer period of time, key short-term impacts regarding air quality, hazardous materials, water quality, noise and traffic would be greater under this Alternative than under the Project. However, key long-term impacts regarding air quality, hazardous materials and water quality would be less under this Alternative than those of the Project.

As indicted above, Alternative 3, the Lower Intensity - Extended Schedule Alternative, would remove the same amount of material from the Site and provide the same cap system and long-term design as the Project, except that construction activities would be less intense compared to the Project, which would result in an extended construction schedule. Due to the lower intensity of daily construction activities, the Project's significant and unavoidable regional NO_x and PM_{10} air quality impact during construction activities would not occur under this Alternative. Under this Alternative, regional NO_x and PM_{10} air quality impacts would be less than significant. Nonetheless, even at a lower intensity, this Alternative would result in significant and unavoidable localized 1-hour NO_2, 24-hour and annual PM_{10} impacts, but at a reduced level compared to the Project. While this Alternative would have a limited number of worst-case construction days where peak hour traffic would be similar to the Project, on most days, traffic during the peak hours would be less, and the daily overall amount of traffic would be less throughout this Alternative. However, it is acknowledged that traffic generated by this Alternative would occur for three years, as compared to one year under the Project; and that three (3) more intersections would be significantly impacted (significant and unavoidable) compared to the Project given the later 2020 year operational analysis. Therefore, the traffic impact under this Alternative is concluded to be more than the Project, even though this Alternative would result in less overall daily traffic than the Project. ~~However~~ Also, it is noted~~,~~ that short-term water quality impacts would be greater under this Alternative than those of the Project. Generally, long-term impacts would be similar to the Project, as the same cap system over the Site would be implemented under this Alternative and the Project.

A complete comparative summary of the environmental impacts anticipated under each alternative with the environmental impacts associated with the project is provided in Table 5-20 of Section 5.0, *Alternatives*, in ~~this~~ the Draft EIR, with updates to the short-term noise and traffic analyses presented in Table R5-23 of this Recirculated Draft EIR. ~~while a~~ A summary of the ability of each alternative to meet the project objectives is provided in Table ~~5-21~~ R5-24 of this Recirculated Draft EIR.

Environmentally Superior Alternative

Section 15126.6(e)(2) of the *CEQA Guidelines* indicates that an analysis of alternatives to a proposed project shall identify an environmentally superior alternative among the alternatives evaluated in an EIR. The *CEQA Guidelines* also state that should it be determined that the No Project Alternative is the environmentally superior alternative, the EIR shall identify another environmentally superior alternative among the remaining alternatives. With respect to identifying an environmentally superior alternative among those analyzed in this EIR, the range of feasible alternatives to be considered includes the: Alternative 1 - No Action Alternative; Alternative 2 - Source Removal with Off-Site Disposal; and Alternative 3 - Lower Intensity - Extended Schedule Alternative.

Alternative 3 would result in impacts similar to or better (reduced) than those for the Project for several of the issue areas, with the notable exceptions of short-term traffic impacts wherein more intersections would have significant and unavoidable impacts than under the Project and short-term water quality impacts, wherein a longer construction schedule extending through three wet seasons slightly increases the chance of impacting groundwater. It is acknowledged that Alternative 3, due to the 2020 background conditions resulting from the longer duration in implementing Alternative 3, would produce eight (8) significant and unavoidable impacted traffic intersections, compared to five (5) under the Project. However, as mentioned above, Alternative 3 would result in less overall daily traffic, although for a longer duration. The lower intensity of this Alternative would reduce the Project's significant and unavoidable regional NOx and PM_{10} air quality impact to less than significant levels. However, the Project's 1-hour localized NO_2 impact remains significant and unavoidable. Even with the lower daily and annual emissions of PM_{10} under this Alternative, it is expected to result in localized 24-hour and annual concentrations of PM_{10} that exceed applicable thresholds and impacts would remain significant and unavoidable. Overall, ~~Because~~ Alternative 3 would reduce, as well as increase, impacts under several environmental issues compared to the Project, with the majority of impacts under this Alternative being generally similar to the Project. However, this Alternative would ~~most short-term impacts, including~~ eliminate the Project's significant and unavoidable short-term regional NOx air quality impact and have similar long-term impacts~~,~~. For these reasons, Alternative 3 is selected as the Environmentally Superior Alternative.

While Alternative 3 is identified as the Environmentally Superior Alternative in this ~~Draft~~ Recirculated Draft EIR, this does not mean it is selected as the remediation plan for the Site at this time by DTSC. DTSC will consider the analysis included within this EIR along with public input throughout the environmental review process in their decision-making process to select the remediation plan for the Site.

R2.0 PROJECT DESCRIPTION

INTRODUCTION

This section of the Recirculated Draft EIR provides a description of the existing conditions at the Ascon Landfill Site ("Site"), the background of the Site, the process by which the proposed remediation plan was selected by Department of Toxic Substances Control (DTSC), and a description of the proposed remediation plan.

Remedial Action Plan Background

The Draft Remedial Action Plan (RAP) (also referred to as the "Project") presents the proposed remediation plan for the Site. The Site operated as a waste disposal facility from approximately 1938 through 1984, receiving at times what is now considered hazardous waste. Since 1984, waste materials have not been accepted, and the Site has remained a closed landfill facility. In 2003, DTSC entered into an Imminent and Substantial Endangerment Determination Consent Order (I&SE CO), Docket No. I&SE CO 02/03-007, and an Imminent and Substantial Endangerment Determination and Order and Remedial Action Order (I&SE-RAO), Docket No. I&SE-RAO 02/03-018, with ten Responsible Parties (RPs).[1] As a result of these agreements, the RPs are required to implement the remediation activities (clean-up plan) at the Site.

Over the past approximately 30 years, there have been numerous and extensive investigations (i.e., waste and soil characterizations, hydrogeological assessments, biological assessments, health risk assessments, groundwater contamination assessments, air quality sampling, etc.) conducted at the Site, which have led up to preparation of the RAP. Of particular relevance, these investigations have included several Remedial Investigations (RIs) to define the nature and extent of waste materials and Site conditions; two Baseline Health Risk Assessments (BHRA)[2] to evaluate potential human health risks associated with the Site; and a Feasibility Study (FS)[3] and Revised Feasibility Study (RFS)[4] to evaluate several remedial action alternatives for the Site and present the rationale for selecting a preferred alternative.

Out of the alternatives provided in the DTSC-approved RFS, Alternative 4 (Partial Source Removal with Protective Cap) was selected as the "preferred alternative" for remediation of the Site. The preferred alternative included the partial removal of existing on-site material and installation of a protective cap that would allow the Site to be developed with a to-be-determined mix of restricted commercial, light industrial, and/or recreational uses, subject to future approval by DTSC and/or other agencies and public entities, such as the City of Huntington Beach. Additional studies, knowledge, and experience gained since DTSC approval of the RFS have led to modifications and updates to the RFS-selected preferred alternative, in addition to taking into account the significant changes to Site conditions as a result of waste removal from the Site during the Interim Removal Measure (IRM), described below. Alternative 4 as defined in the RAP, which

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[1] *The ten RPs are Chevron U.S.A. Inc., Texaco Inc. (Chevron U.S.A Inc. and Texaco Inc. are now considered a single party as they are wholly-owned subsidiaries of Chevron Corp.), Conoco Inc., Phillips Petroleum Company (Conoco Inc. and Phillips Petroleum Company are now combined as ConocoPhillips Company), ExxonMobil Corp., Shell Oil Company, Atlantic Richfield Company (ARC), The Dow Chemical Company, TRW (now Northrop Grumman Systems Corporation), and Southern California Edison Company.*

[2] *Geosyntec, Groundwater Remedial Investigation Report (Revision 1.0)–June 14, 2007.*

[3] *ENVIRON International Corporation (Environ), 2000, Feasibility Study Report, prepared for California/Nevada Developments, LLC., November 2000. Approved by DTSC July 2001.*

[4] *Project Navigator, Ltd., 2007, Revised Feasibility Study, September 21, 2007. Approved by DTSC September 2007.*

includes the modifications and updates, is the Project being evaluated under CEQA in this EIR. Furthermore, the other remedial alternatives considered in the RFS have been modified in the RAP using the same studies, knowledge, and experience gained since the 2007 RFS and with post-IRM conditions. Therefore, the feasibility study has also been revisited in the RAP using the modified alternatives to determine if the selection of Alternative 4 continues to be the preferred alternative.

1. PROJECT LOCATION AND SURROUNDING USES

The approximately 38-acre Site is located at the southwest corner of the intersection of Hamilton Avenue and Magnolia Street (21641 Magnolia Street) in the southeast portion of the City of Huntington Beach, California. The Site is identified by Assessor's Parcel Numbers 114-150-75, 114-150-78, 114-150-79, and 114-150-80.

Regional access to the Site is provided via the Interstate 405 (I-405) Freeway, State Highway 39 (Beach Boulevard), and State Highway 1 (Pacific Coast Highway or PCH) as shown in **Figure R2-1**, *Regional and Local Vicinity Map*. The Site is located approximately five miles south of I-405, one mile east of Beach Boulevard, and one-quarter mile north of PCH. **Figure R2-2**, *Surrounding Land Uses*, provides an aerial photograph of the Site and surrounding land uses. As indicated in Figure R2-2, the Site is bounded by Hamilton Avenue to the north, Magnolia Street to the east, an oil storage tank area to the south, and light industrial uses and the Huntington Beach Flood Control Channel (Huntington Beach Channel) to the west. The Site is surrounded by the following land uses: Edison Park and Community Center to the north across Hamilton Avenue; Edison High School near the northeast corner of Hamilton Avenue and Magnolia Street; single-family residential uses east of Magnolia Street; and the AES power plant to the southwest.

2. SITE OWNERSHIP

The Site is comprised of two primary parcels: the Cannery Hamilton Properties, LLC (CHP)[5] parcel and the City parcel. The CHP parcel is that portion of the Site currently owned by CHP. The CHP parcel is the entire Site except for an approximately 30-foot wide margin along the northern edge of the Site along Hamilton Avenue and an approximately 20-foot wide margin along the eastern edge of the Site along Magnolia Street. Collectively, these two margin areas comprise the City parcel (refer to **Figure R2-3**, *Site Ownership*).

In addition, it is acknowledged that Ownership of the Site is divided into separate surface and subsurface mineral estates. CHP owns the surface estate, but others own the subsurface mineral estate (mineral estate owners, or the "MEOs"). The MEOs hold title to the oil and gas resources underlying the Site. By law, surface estate ownership is subordinate to the rights of subsurface owners.

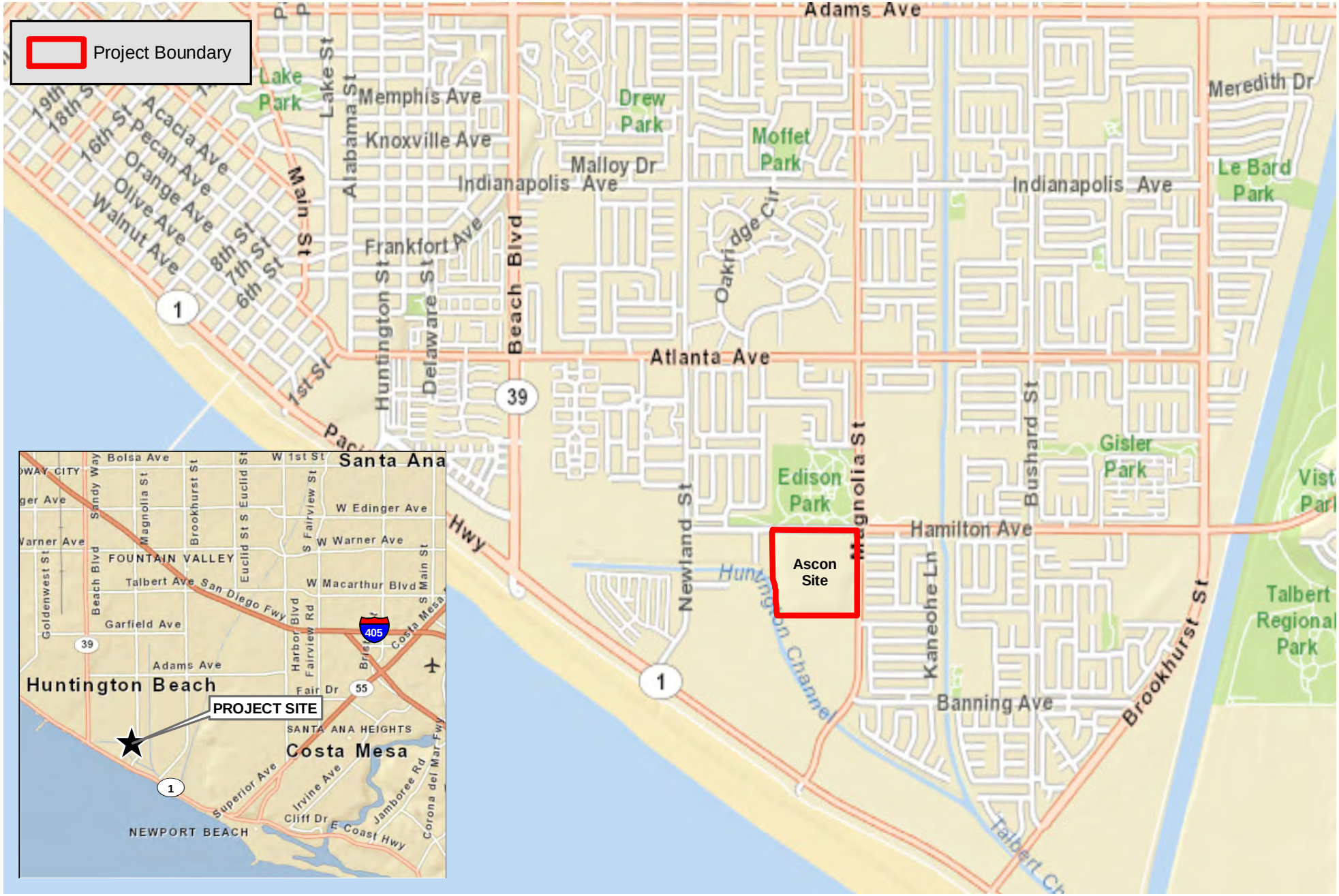
3. EXISTING SITE CONDITIONS

Topography

The Site is located in a low-lying coastal area that gently slopes to the south/southwest toward the Pacific Ocean. The surface topography of adjacent properties is generally flat with elevations ranging from 5 to 10 feet above mean sea level (MSL)[6]. The natural topography of the Site has been disturbed extensively over the

[5] *Two of the RPs, Chevron and ConocoPhillips, created a limited liability corporation called Cannery Hamilton Properties, LLC to purchase the Site, and CHP is the current Site owner.*

[6] *All elevations in the RAP and EIR are presented relative to MSL per the NAVD88 vertical control datum.*



PCR

N

0 2,000 4,000 Feet

Regional and Local Vicinity Map

RAP EIR - Ascon Landfill Site

Source: Esri, 2010; PCR Services Corporation, 2013.

FIGURE

R2-1

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Surrounding Land Uses

RAP EIR - Ascon Landfill Site
Source: Project Navigator, 2013.

FIGURE
R2-2

LEGEND

- Perimeter Fence
- Property Boundary
- Site Boundary

N

0 400 Feet

Site Ownership

RAP EIR - Ascon Landfill Site

Source: Project Navigator, 2013.

FIGURE

R2-3

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years by the operation of the landfill and waste disposal activities. Elevation ranges from approximately 5 feet above MSL at the southeastern corner to approximately 25 feet above MSL near the center of the Site.

An earthen berm, approximately 10 to 20 feet high, has been constructed around much of the Site perimeter to contain on-site pits, lagoons, and former lagoon areas. The outside slopes of the perimeter berm are covered with shrubs, scattered small trees, and other vegetation. The central portion of the northern berm along Hamilton Avenue was reduced in height by up to approximately 8 feet in 2005 during the Emergency Action removal, explained below.

Site Features

The Site is currently a closed landfill. A perimeter chain link fence with three locked vehicular gates encloses the Site. Generally, the interior of the Site beyond the perimeter berms and construction fencing are not visible from surrounding roadways and land uses. At the present time there are four lagoons on the Site (refer to **Figure R2-4**, *Site Features*). In addition to the lagoons, the Site includes various former pits that have been backfilled with construction debris and/or fill material, each of which are of relatively limited areal extent at less than 100 feet on a side. Pits A, B, and H are located in the northwest corner of the Site; Pits C, D, E, F, and G are located in the southeast corner of the Site (Figure R2-4). Available records show that Pits A and B were used for disposal of oily wastes and Pits C and D were used for disposal of chromic and sulfuric acids. Oily wastes were placed in Pit E; styrene tar and synthetic rubber wastes were disposed in Pit F. Records regarding the types of wastes disposed of in Pits G and H are not available. Investigations show that material from Pit F appears to have migrated in the subsurface to an areal extent of approximately 1.1 acres, all within the Site fence line.

It is apparent from an inspection of the Site, as well as from historical aerial photographs, that large quantities of construction debris, such as concrete rubble, asphalt, wood, and other construction wastes, have been disposed at the Site. The volume of construction debris at the Site prior to the IRM was estimated at 69,000 cubic yards.[7]

Figure R2-4 shows that, in addition to the lagoon and pit areas, the majority of the Site's interior is vacant with intermittent vegetation located throughout the Site. Vegetation on-site is dominated by non-native ruderal (i.e., weedy) species and ornamental vegetation. However, the western and southern perimeters of the Site are mostly lined with mature Lollipop trees (*Myoporum laetum*). In addition, in the southwest corner of the site is approximately 0.2 acres of coastal salt marsh, which is a sensitive natural community considered to be environmentally sensitive habitat area (ESHA) by the California Coastal Act and City of Huntington Beach's Coastal Element of the General Plan. Also, much of the disturbed areas within the Site provide suitable conditions to support southern tarplant (*Centromadia [Hemizonia] parryi* ssp*. australis*), which is listed by the California Native Plant Society (CNPS) as "seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat)." Section 4.3, *Biological Resources*, provides a detailed discussion of the biological resources on the Site.

There are also interior dirt and gravel roadways and/or pathways located throughout the Site. In addition, there is an oil production facility consisting of two oil wells on leased property situated on-site along the western perimeter of the project Site, separated from the majority of the Site by chain link fencing. This

[7] *Project Navigator, Ltd., 2007, Revised Feasibility Study, September 21, 2007.*

facility is operated by third parties (South Coast Oil Corporation [SCOC], or its successor) and is not owned, operated, or leased by the RPs. Access to the SCOC property is gained via Surveyor Circle located to the west of the Site. The SCOC site is an active oil producing site.

Figure R2-5 (a-b), *Site Photographs*, provides photographs of the exisitng site conditions, described above. Figure R2-4 identifies the locations of the photographs in Figure R2-5.

Groundwater

Data collected from 25 groundwater monitoring wells installed throughout the Site show that groundwater is present at shallow depths below ground surface (bgs). The groundwater elevations are near mean sea level (MSL), as expected from the Site's proximity to the Pacific Ocean and adjacent Huntington Beach Flood Control Channel. Groundwater elevation has varied a few feet over time with seasonal variations. Monitoring well data show that the highest groundwater elevations occur in the southwest corner of the Site near the flood control channel at near 0 feet MSL, while lowest groundwater elevations occur in the northwest corner of the Site at approximately -5 feet MSL. A tidal study reported in July 2003 showed that the flood control channel recharges, or contributes to, groundwater at the southwestern corner of the Site, and that the Site does not contribute groundwater to the channel. The groundwater flow direction in the area of the Site adjacent to the flood control channel is generally toward the north or northeast (away from the channel) while groundwater flow across the Site is generally northward. In the southeastern portion of the Site, the groundwater flow direction, at times, has a slight component to the east.

As discussed in Section 4.7, *Water Quality*, of this EIR, the underlying aquifers beneath the Site are not used as a water resource due to seawater intrusion, and there are no drinking water wells within three (3) miles of the Site. Salinity measured in groundwater confirms seawater impacts to groundwater under and in the vicinity of the Site.[8]

Waste Types

The total number of waste types previously accepted at the Site is not known. Past investigators have summarized the types of wastes reportedly disposed of at the Site. The largest volumes of wastes disposed at the Site were drilling mud and oil field wastes. Other wastes reportedly disposed of at the Site include the following:

- Chromic and sulfuric acids
- Aluminum slag
- Magnesium and potassium chloride
- Corrosive material (acid sludges)
- Mercaptans
- Styrene
- Styrene tars

[8] *Geosyntec, Groundwater Remedial Investigation Report (Revision 1.0)–June 14, 2007.*

LEGEND

- Internal Fences
- Site Gate
- Trailer
- Buried Pits
- # Photograph Locations

PCR

N

0 440 Feet

Site Features

RAP EIR - Ascon Landfill Site

Source: Project Navigator, 2013.

FIGURE

R2-4

Photograph 1: Northerly view of Lagoon 1-2.

Photograph 2: Easterly view towards Lagoon 1-2.

Photograph 3: Northwesterly view of SCOC oil operations.

Photograph 4: Easterly view of Lagoon 4.

Photograph 5: Northerly view of Lagoon 4.

Photograph 6: Southerly view of Lagoon 3.

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Site Photographs

RAP EIR - Ascon Landfill Site

Source: PCR Services Corporation, 2013.

FIGURE

R2-5a

Photograph 7: Northerly view of Lagoon 5.

Photograph 8: View of on-site construction debris materials.

Photograph 9: Southerly view of typical on-site vegetation and drainage swale.

Photograph 10: View of Pit F (Styrene Pit).

Photograph 11: Southwesterly view of on-site access roads.

Photograph 12: Easterly view of on-site earthen detention basin.

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Site Photographs

RAP EIR - Ascon Landfill Site

Source: PCR Services Corporation, 2013.

FIGURE

R2-5b

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- Polyester resin fractions
- Phenolic wastes
- Synthetic rubber
- Fuel oil (unusable/out of specification)
- Oily wastes
- Construction and other debris (soil, concrete, asphalt, wood, metal, abandoned vehicles, etc.).

Of the reported wastes, not all of these wastes have been identified at the Site as a result of the remedial investigations. The thickness of the Site waste varies from a few feet to as much as 20 feet. In various areas throughout the Site, soil and construction debris, consisting of wood, brick, concrete, and asphalt were placed over much of the waste material and can currently be seen throughout the Site. In such areas, it is estimated that the combined thickness of solid debris and waste materials ranges from approximately five to 25 feet.

Throughout this EIR these wastes may be referred to collectively as "contaminated material," which is meant solely to denote material which may be or have had contact with a contaminant (i.e. non-native substance or chemical). The term "contaminated material" is not meant to indicate or imply that the material was found to meet any specific definition of hazardous waste, hazardous material, or similar characterization, or to indicate the presence of such substance or chemical at a level that could threaten human health and safety or the environment. Likewise, the adjective "hazardous," when used in a description of a Site material, is not meant to indicate or imply that the material was found to meet any definition of hazardous waste, except when specifically noted as such.

4. BACKGROUND

Site History

The Site was operated as a waste disposal facility from approximately 1938 through 1984 receiving many types of materials, some of which are now known to be hazardous. The waste brought to the Site was placed on top of the original ground surface and contained by earthen berms. As the waste accumulated, the berms were raised such that much of the Site surface is now approximately 10 to 20 feet above the surrounding street level.

Based on the review of the aerial photos, it appears that nearly the entire Site was used at some time for waste disposal. There is evidence that up to eight discrete disposal pits (Pits A through H) existed in the northwestern and southeastern portions of the Site (refer to Figure R2-4 for pit locations). These pits, except for Pit F, appear to have been subsequently backfilled with construction debris and fill material, as have former lagoon areas.

During the early years of operation, most of the waste disposed of on the Site came from oil drilling operations. Oil field wastes included drilling muds, wastewater brines, and other drilling wastes. Records show that from 1957 to 1971, other wastes, such as chromic acid, sulfuric acid, aluminum slag, fuel oils, styrene and other wastes were also disposed on the Site.

A separate landfill, the Cannery Street Disposal Site, was located north of the Site and operated by the County of Orange from 1957 to 1969. Aerial photographs taken in 1961 and 1967, during operation of the Cannery Street Disposal Site, show that the southern extent of the landfill was aligned with the northern extent of the east-west power transmission line right-of-way, creating a buffer of over 200 feet between the Ascon Landfill Site and the Cannery Street Disposal Site during all operating phases of both landfills.

From 1971 to 1984, inert solid wastes such as asphalt, concrete, metal, soil, and wood were disposed on the Site. From 1984 to 2002, the Site remained essentially unchanged. Site visits made by investigators during 1997 found old drums, vehicles, motorcycles, trailers, and miscellaneous debris scattered throughout the Site, most of which has now been removed. There was an unauthorized firewood operation on a portion of the Site in 1996 and 1997. There were also other indications of trespassers entering and possibly living at the Site. Beginning in 2002, the RPs undertook routine maintenance and housekeeping at the Site, and security has been significantly improved, which has reduced trespassing.

Until July 2004, equipment remained on a two-acre oil production lease area in the east-central portion of the Site. The oil production well (Krik Well No. 80) and associated tank storage were removed during clean-up operations in response to a crude oil release from the well that occurred on March 17, 2004. Krik Well No. 80 was abandoned by the California Department of Conservation, Division of Oil, Gas & Geothermal Resources on March 27, 2004, and oil production activities ceased at the Krik release site (oil production facilities remain at the western perimeter at the SCOC site). The removal action in response to the release was completed on April 27, 2004, and a Krik Well No. 80 Release Completion Report was submitted to the EPA on June 14, 2004.[9]

In 2005 through early 2006, an Emergency Action was undertaken that consisted of material removal, berm strengthening, Site grading, and installation of best management practices for storm water control. In 2010 through early 2011, the IRM was performed to remove most of the tarry materials from select lagoons. More information regarding the Emergency Action and the IRM is presented below.

Summary of Key Interim Actions

Emergency Action (2005)

In July 2005, following record amounts of rainfall, the RPs commenced an Emergency Action, under DTSC oversight, to address concerns about potential release of waste from the Site. The rainfall resulted in approximately 3.8 million gallons of storm water collecting on-site, which presented a risk of potential failure of the north berm. Because of observed cracks in the north berm and ponded water on Hamilton Avenue, the on-site water was treated, pumped, and discharged under permit to the Orange County Sanitation District.

The primary objective of the Emergency Action was to strengthen the north berm by reducing the load on the berm, and to mitigate potential seepage along the northern edge of the Site. The following work was performed in the Emergency Action: removal of a significant portion of drilling mud from Lagoons 4 and 5, reshaping of the north berm to reduce the height, flattening of the north (outboard) slope, and installation of an under drain (toe drain) at the toe of the outboard slope of the north berm. The excavated drilling mud

[9] *Letter from Robert Wise, Federal On-Scene Coordinator, to CHP, dated April 27, 2004.*

was mixed with Site soil to improve material handling characteristics and then transported by end-dump trucks to an approved disposal facility. Approximately 47,000 cubic yards of waste and soil were removed from the Site. In addition, a buttress constructed from on-site concrete debris was placed at the southern portion of Lagoon 4 to support the internal berm between Lagoons 3 and 4 after the removal of some drilling mud from Lagoon 4. The Emergency Action was completed in January of 2006.

Interim Removal Measure (2010-2011)

From July 2010 through March 2011, the RPs conducted an IRM to remove approximately 70,000 cubic yards of tarry waste materials from Lagoons 1, 2, and 3 in order to safely investigate the material beneath Lagoons 1 and 2 via a drilling program. It was determined by the RPs and DTSC that geotechnical data from this drilling program were needed for remedy planning. The results of the investigation indicated that the deeper soils under these lagoon areas are similar to deeper soils elsewhere at the Site.

During the IRM, investigations of the removed tarry materials concluded that recycling/reclamation of these materials was infeasible. In addition to removal of the tarry waste materials, the IRM included placement of gravel on internal roads and other non-vegetated areas for erosion and dust control.

There were five lagoons prior to completion of the IRM, which combined the footprint of Lagoons 1 and 2. The other areas formerly occupied by lagoons have been filled in and covered over with soil and construction debris. The lagoons were used mainly for disposal of oil production wastes such as drilling mud, brines, and petroleum-contaminated soil. Most of the tarry materials that were contained within Lagoons 1 and 2 were excavated and disposed off-site during the IRM. Because of the IRM, Lagoons 1 and 2 have presently become a single open depression, referred to as Lagoon 1-2.

The removal of lagoon waste during implementation of the IRM is a principal reason for the need to update the RFS remedial alternatives and comparative anlaysis from the feasibility study in the RAP, in addition to other needed modifications, including updated remedial technologies, volumes and costs.

Other Interim Removal Activities

In addition to the Emergency Action and IRM, several other activities have been implemented at the Site to provide protection for the public and Site workers. These actions include the following:

- Implementation of a storm water pollution prevention plan program and installation of storm water collection improvements, including collection swales and storm water detention basins. The swales and detention basins channel storm water that isn't already captured in the lagoons and reduce potential sediments in any storm water runoff. Storm water runoff, if any, is sampled and tested, with results reported to the Regional Water Quality Control Board (RWQCB) and DTSC. Site inspections are conducted during rain events and once per month during the wet season to ensure that storm water handling improvements (Best Management Practices) are operating correctly and that repairs are made as necessary.
- Maintenance of the chain-link security fence to prevent trespassers.

- Construction of separate fences around Pit F, Lagoons 1-2 and 3, and Lagoons 4 and 5 to provide extra barriers of protection around waste material. Bird netting was formerly placed over Lagoons 1 and 2, but was removed for the IRM.
- Installation of special locks on entrance gates to allow emergency access for police and fire department personnel.
- Posting of No Trespassing and Proposition 65 warning signs on the perimeter fence and the entrance gates, and hazardous waste signs at significant Site features.
- Installation of high-visibility posts along all access roads throughout the Site to assist emergency (i.e., fire and police) personnel for nighttime emergency access and to delineate "No Equipment Zones" that protect sensitive biological resources.
- Collection and removal of 55-gallon drums strewn throughout the Site (most of which contained drill cuttings or purge water from previous soil and groundwater investigations).
- Destruction (abandonment) of Well No. 80 near Magnolia St. following the 2004 blow-out. The oil well was properly destroyed (abandoned), and contaminated soils and vegetation were removed and disposed off-site.
- Installation of a reinforced polypropylene cover, a high density polyethylene cover, and a second reinforced polypropylene cover (three covers) over the original cover on Pit F in order to mitigate emissions and odors.
- Installation of new padlocks on the groundwater monitoring wells.
- Installation of flush-mount well boxes for groundwater monitoring wells located in Edison Park and in the Site entrance driveway from Hamilton Avenue.
- Implementation of regular Site security and status inspections to check for trespassers and make any necessary repairs.
- Inspections, as necessary, and treatment of ponded storm water, if any, by the Orange County Vector Control District to ensure against on-site flourishing of mosquitoes or vermin.
- Implementation of regular geotechnical inspections to verify that Site improvements made during the Emergency Action and the Interim Removal Measure are performing as designed.
- Annual weed abatement activities.
- Placement of on-site trailers and gravel parking lots.

In addition to above listed activities, numerous risk assessments have been conducted for the Site. Two BHRAs were performed to identify and evaluate the potential risks to human and ecological receptors posed by Site conditions. One BHRA addressed potential risk due to on-site soils and was completed by Environmental Science and Engineering (ESE). This BHRA was submitted to DTSC in 1997[10], and DTSC approved it in June of 2001. A reevaluation of the BHRA was conducted in 2002 to provide a more refined estimate of potential off-site risks using more detailed modeling and the latest toxicity values.[11] The results of the reevaluation indicated that estimated risks and non-cancer hazards were within the risk management

[10] *Environmental Science and Engineering, Inc. (ESE), 1997a, Remedial Investigation Report, Ascon Property, prepared for Savannah Resources Corporation, August 30, 1996, Revision 01 - June 11, 1997.*

[11] *Geosyntec, 2002, Re-evaluation of Air Pathway Analysis, Revised Air Pathway Risk Assessment ("Re-evaluation").*

range of $1x10^{-4}$ to $1x10^{-6}$ and below the threshold value (Hazard Index) of 1, respectively, for all offsite receptors. In addition to the reevaluation, perimeter air monitoring was conducted between August 2002 and December 2003 to evaluate the potential for offsite air impacts from the Site and to establish a baseline for comparison purposes for future remedial activities. The results of the air monitoring indicated that measured concentrations would not pose a significant health risk or were generally within background levels for those chemicals commonly detected in air within the Los Angeles Area.

The second BHRA addressed groundwater and was completed as a part of the Groundwater Remedial Investigation, Revision 1.0, prepared by Geosyntec.[12] This BHRA was approved by DTSC in July of 2007. These BHRAs estimate risks during periods of inactivity at the Site ("baseline conditions"). The results of these risk assessments are presented in Section 4.6, *Hazards and Hazardous Materials*, of this EIR.

Summary and Evaluation of Alternatives and Selection of the Remedy Per RFS and RAP

Remedial Alternatives Considered

The RFS, conditionally approved by DTSC in August 2007, screened alternatives for remediation of the Site. The stated objectives of the RFS were to evaluate remedial technologies available to address impacted media at the Site,[13] to evaluate and confirm the appropriateness of process options to implement those technologies, to assemble remedial alternatives and evaluate them against the nine criteria set forth in the National Contingency Plan ("NCP"), summarized below, and to recommend a preferred alternative. The NCP, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), describes the organizational structure and procedures for preparing for and responding to discharges of oil, hazardous substances, pollutants, and contaminants. RAPs prepared or approved by DTSC under Health and Safety Code Section 25356.1 must be based upon the NCP, and other specified requirements.

The approach and analysis used in the RFS were conducted in accordance with DTSC requirements as follows. The RFS first identified remedial action objectives and requirements for the Site. Next, various treatment technologies and remediation processes were reviewed for their applicability to the Ascon wastes. To evaluate the effectiveness of candidate technologies, focused, low volume treatability studies were conducted on specific wastes. Based on the technology reviews, the specific Ascon field-testing results, the conclusions of the 2000 FS report, and additional groundwater and soils investigations conducted from 2004 through 2007, six specific remedial alternatives were selected for detailed evaluation and comparison and are discussed in greater detail in the RFS. These RFS alternatives have been modified in the RAP as discussed above and detailed below, and the prior feasibility study was revisited and documented in the RAP to verify that the modified Alternative 4 remained the preferred alternative.

The 2013 updates to the comparative analysis in the feasibility study were limited to 1) refinement of the remedial alternatives with current Site conditions and conceptual design results, including updated volumes, schedule durations, costs, and other project metrics of the various alternatives, 2) updating the potential remedial technologies to be employed to achieve the remedial objectives, and 3) re-evaluating the comparative evaluation of the alternatives. The update did not include new remedial alternatives. The significant elements of each updated alternative are described below.

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[12] *Geosyntec, 2007, Groundwater Remedial Investigation, Revision 1.0, Ascon Landfill Site, Huntington Beach, California, June 14, 2007.*

[13] *The affected media at the Site are soils and drilling muds in the former and current lagoons and in the pits, tarry waste in Pit F, Pit F-impacted soils, construction debris throughout the Site, and shallow groundwater beneath the Site.*

Alternative 1: No Action - Alternative 1 consists of no further action at the Site and is required to be evaluated as a baseline alternative under the NCP. If Alternative 1 were implemented, no further action would be taken to contain, treat, or remove the affected soils, groundwater, or waste. While the existing fencing would restrict entrance to the Site, direct contact with Site wastes could occur to workers and trespassers. The City parcel would continue to be impacted by contaminated materials. The No Action alternative would continue to include a long-term groundwater monitoring program (all alternatives would contain a groundwater monitoring program). The No Action Alternative approximate cost of $13.8 million would include maintenance and monitoring over the next 30 years.

Alternative 2: Limited Waste Removal - Alternative 2 would include removal of the Pit F waste with off-site disposal. The lagoon areas would be covered with acceptable soils to prevent direct exposure. Waste would remain on the City parcel, and the CHP parcel and City parcel would be deed restricted to prevent any inconsistent development or activities at the Site. Note that the 2007 RFS-presented Alternative 2 included the removal of tarry liquids from the lagoons, removal that was performed during the IRM.

Alternative 2 would remove approximately 2,250 bank cubic yards (BCY, a measurement of volume with "in-the-ground" density) of waste from the Site and would be completed approximately five (5) months from commencement. A total of approximately 9,600 cubic yards of soils would need to be imported onto the Site to cover the lagoon areas. The construction ("capital") cost would be approximately $6.9 million, and the Operations and Maintenance (O&M) costs would be approximately $19.3 million over 30 years. This would bring the total present worth cost of Alternative 2 to approximately $26.23 million.

Alternative 3: Protective Cap - Alternative 3 would include development of a protective cap to cover the remaining materials after select waste deposits are removed. To enable the construction of the cap, the waste and soils at the Site would need to be graded to reconsolidate waste from the Site perimeter to the Site interior and to create appropriate slopes for storm water runoff and collection from the cap.[14] Alternative 3 would include excavation and off-site disposal of up to 30,000 BCY of Site waste and soils, in addition to the removal of the Pit F waste (2,250 BCY), to allow for cap installation. The waste surfaces of Lagoons 4 and 5 would be reinforced to support the cap, and the lagoon waste would be held in place using sheet piling (i.e., a form of driven piling using sheets of steel to obtain a continuous barrier) that would be driven into native soils underneath the lagoons. Contaminated materials on the City parcel and in the areas of the perimeter maintenance road and storm water detention basins would be excavated to at least street level and then, if necessary, to a depth achieving the applicable Risk-based Concentrations (RBCs) (see Table 4-1 in the RAP), background concentrations, or until groundwater is reached. Pit wastes (Pits A - E, G, and H) would be excavated as needed to at least adjacent street elevation and deeper, if necessary, to make room for the storm water detention basins. The entire Site within the property boundaries (CHP parcel), except the perimeter maintenance road and storm water detention basins, would be capped, and a long-term groundwater-monitoring program would be maintained. The CHP parcel would be deed restricted to prevent development and activities incompatible with the cap, but commercial or recreational uses would be allowed.

Alternative 3 would remove up to approximately 32,250 BCY of waste from the Site and would be completed approximately 11 months from commencement. A total of approximately 206,000 cubic yards of suitable

[14] *Reconsolidation of waste generally involves excavation of waste within an area and moving the waste to a different area. In this case, waste near the Site perimeter or above the final cap elevation would be reconsolidated to areas that would be under the cap.*

soils would need to be imported onto the Site to construct the cap and backfill the non-capped areas. Capital cost would be approximately $36.9 million, and the O&M costs would be approximately $22 million over 30 years. The total present worth cost of Alternative 3 would therefore be approximately $58.8 million.

Alternative 4: Partial Source Removal with Protective Cap - Alternative 4 was the RFS-recommended alternative and is similar to the protective cap of Alternative 3. To enable the construction of the cap, the waste and soils at the Site would need to be graded to reconsolidate waste from the Site perimeter to the Site interior and to create appropriate slopes for storm water runoff and collection from the cap. Alternative 4 includes excavation and off-site disposal of up to 30,000 BCY of Site contaminated materials, in addition to the removal of the Pit F waste (approximately 2,250 BCY), to allow for cap installation. The waste surfaces of Lagoons 3, 4 and 5 would be reinforced, as needed, to support the cap, and the lagoon material in Lagoons 4 and 5 would be held in place using cement, mixed with waste, that would be left in place under the cap (i.e., an internal geotechnical buttress). Contaminated materials on the City parcel and in the areas of the perimeter maintenance road and storm water detention basins would be excavated to at least street level and then, if necessary, to a depth achieving the RBCs (refer to Table 4-1 in the RAP), background concentrations, or until groundwater is reached. Pit wastes (Pits A - E, G, and H) would be excavated as needed to at least adjacent street elevation and deeper, if necessary, to make room for the storm water detention basins.

The capped areas could vary in elevation and size depending on the area and vertical extent of source reconsolidation or removal along the east and north sides of the Site. To blend the topography of the capped Site with the surrounding vicinity and reduce its visual massing from vantage points north and east of the Site, the Site would slope gradually upward from approximately 35 feet inside the Magnolia Street fence line and approximately 45 feet within the Hamilton Avenue fence line, with a peak height of approximately 44 feet MSL, approximately 37 to 39 feet above street level, near the southwest corner of the Site.

A restrictive covenant would be implemented to protect the integrity of the cap and any prevent inconsistent land uses. Any proposals for future alterations to the cap, including but not limited to beneficial uses of the Site (i.e. industrial, recreational, etc.) would need to be reviewed by the DTSC, and undergo separate environmental review, likely with the City of Huntington Beach as the Lead Agency. Implementation of this Alternative, upon completion of the remediation activities as contemplated in this EIR and in the RAP, would include a vegetated cover placed over the engineered cap, surrounded by an internal access road on all sides, and chain link security fencing. A long-term groundwater-monitoring program would be maintained. Details are provided in Section 6 below.

Alternative 4 would remove up to 32,250 BCY of contaminated materials from the Site which would be completed approximately 11 months from commencement. A total of approximately 206,000 cubic yards of suitable soils would need to be imported to construct the cap and backfill the non-capped areas. Construction cost would be approximately $36.6 million, and the O&M costs would be approximately $22 million over 30 years. Thus, the total present worth cost of Alternative 4 is approximately $58.6 million.

Alternative 5: Source Removal with Off-Site Disposal and SIT (Slurry Injection Technology) - Alternative 5 calls for complete removal of all Site waste through off-site disposal or slurry injection technology (pumping the waste deep underground into the fractured oil reservoir). After removal or injection of the waste, impacted groundwater at the Site would be removed or treated, if necessary, to meet groundwater objectives

after a post-remediation risk assessment is conducted. A groundwater-monitoring program would be maintained. If groundwater objectives are found to be unachievable following soils/waste removal, then the CHP Parcel would be deed restricted to prevent incompatible development and activities.

Alternative 5 would remove approximately 710,000 BCY of material from the Site, inject approximately 305,000 BCY of waste into the subsurface fractured oil reservoir, which would be completed approximately 55 months (4.5 years) from commencement. A total of approximately 521,000 cubic yards of suitable soils would need to be imported to backfill the excavation and leave appropriately graded slopes. The construction or capital cost would be approximately $251.5 million, and the O&M costs, if O&M is needed for long-term groundwater monitoring, would likely be $10.4 million over 30 years. This would bring the total present worth cost of Alternative 5 to approximately $262 million.

Alternative 6: Source Removal with Off-Site Disposal - Alternative 6 would remove and transport all on-site waste materials off-site for disposal. Alternative 6 would remove approximately 1,010,000 BCY of material from the Site and would be complete approximately 41 months from commencement. A total of approximately 521,000 cubic yards of suitable soils would need to be imported to backfill the excavation and leave appropriately graded slopes. The capital cost would be approximately $292 million, and the O&M costs, if O&M is needed for long-term groundwater monitoring, would likely be $10.4 million over 30 years. This would bring the total present worth cost of Alternative 6 to approximately $302 million.

To enable comparisons, the significant elements of the alternatives are summarized in **Table R2-1**, *Components of RFS Remedial Alternatives*. Also, **Table R2-2**, *Metrics of RFS Remedial Alternatives*, summarizes the present worth capital and O&M costs, volumes of waste to be removed, volume of import soils, estimated number of truck trips needed, and estimated duration of the construction for each alternative.

Long-Term Groundwater Monitoring and Contingency Mitigation. All remedial alternatives would contain a groundwater-monitoring program. This long-term monitoring program would be similar to the Interim Groundwater Monitoring Program now in place, or, in the cases of Alternatives 1 and 2, potentially the same, with groundwater sampling and analyses performed at a regular interval from wells generally near the Site perimeter. Because the status of certain monitoring wells would change during remedial construction, existing wells to be used, new wells to be installed, and other specifics for the long-term program would be identified during the development of an O&M Plan for the Site. The proposed groundwater contingency program that outlines the means to verify future impacts to off-site groundwater, if any, and subsequent steps to remedy the impacts is described under the "Description of the Project" section below (Section 6.0).

Evaluation Criteria

The NCP mandates a detailed evaluation of remedial alternatives retained after the screening analysis. This involved assessing each of the remedial alternatives against nine NCP criteria and comparing the relative performance of the remedial alternatives against those criteria. The nine NCP evaluation criteria are listed below. An alternative must meet NCP Criteria 1 and 2, the "threshold criteria" to be recommended. NCP Criteria 3 through 7, the "balancing criteria" are evaluated to determine the best overall solution. After public comment, DTSC may alter its preference on the basis of the "modifying criteria," Criteria 8 and 9.

1. ***Overall protection of human health and the environment***: Whether an alternative provides adequate protection and eliminates, reduces, or controls threats to public health and the environment through institutional controls, engineering controls, or treatment.

Table R2-1

Components of RFS Remedial Alternatives

Metrics of Remedy Alternatives	Alt 1 No Action	Alt 2 Limited Waste Removal	Alt 3 Protective Cap	Alt 4 Partial Source Removal with Protective Cap [a]	Alt 5 Source Removal (with Off-site Disposal and SIT)	Alt 6 Source Removal (with Off-site Disposal)
Deed Restriction(s)		●	●	●	○	○
Remove Waste from City Parcel			●	●	●	●
Remove Pit F Area Wastes		●	●	●	●	●
Remove Lagoon 4 and 5 Wastes (Partial or Complete)			○	○	●	●
Remove Pits A-E, G and H			○	○	●	●
Remove All Waste					●	●
Cap			●	●		
Long-Term Groundwater Monitoring	●	●	●	●	○	○

● = *component*
○ = *potential component, pending on design and field or post-remedy conditions*

Source: Project Navigator, Ltd, Remedial Action Plan, 2013

Table R2-2

Metrics of RFS Remedial Alternatives

Metrics of Remedy Alternatives	Alt 1 No Action	Alt 2 Limited Waste Removal	Alt 3 Protective Cap	Alt 4 Partial Source Removal with Protective Cap	Alt 5 Source Removal (with Off-site Disposal and SIT)	Alt 6 Source Removal (with Off-site Disposal)
Remedy Construction Costs ($MM)	$0	$6.9	$36.9	$36.6	$252	$292
Operational and Maintenance ($MM)	$13.8	$19.3	$22.0	$22.0	$10.4	$10.4
Total Present Worth Cost ($MM)	$13.8	$26.2	$58.8	$58.6	$262	$303
Volume of Waste Removed from Site (1,000 cy)[a,b]	0	2.25	32.3	32.3	710	1,014
Volume of Import Soils (1,000 cy)	0	9.6	205.8	205.8	521	521
Estimated # of One Way Truck Trips –Waste	0	290	4,830	4,830	90,400	129,340
Estimated # of One Way Truck Trips –Import	0	1,160	24,700	24,700	62,500	62,500
Estimated Duration of Remedy Construction (months)	0	5	11	11	55	41

[a] *For Alt. 3 and 4 - Includes the maximum volume of waste that would be disposed off-site. The minimum volume would be 2,250 cy.*
[b] *For Alt. 5 - Includes only solid material disposed off-site - not waste injected via slurry injection well(s).*

Source: Project Navigator, Ltd, Remedial Action Plan, 2013

2. ***Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)***: Whether the alternative meets state and federal environmental laws, regulations, and other requirements that pertain to the Site and, if not, whether a waiver is justified.
3. ***Long-term effectiveness and permanence***: The ability of an alternative to maintain protection of human health and the environment over time, and the reliability of such protection.
4. ***Reduction of toxicity mobility and volume through treatment***: An alternative's use of treatment to reduce the harmful effects of principal contaminants, their ability to move in the environment, and the volume of contaminated materials remaining.
5. ***Short-term effectiveness***: How fast the alternative reaches the clean-up goal and the risks the alternative poses to workers, residents, and the environment during construction or implementation of the alternative.
6. ***Implementability***: The technical and administrative feasibility of implementing the alternative, such as relative availability of goods and services. Also, whether the technology has been used successfully on other similar sites.
7. ***Cost***: Estimated capital and operations, maintenance, and monitoring (O&M) costs, as well as present worth costs.
8. ***State acceptance***: Whether DTSC agrees with the analyses and recommendations of the RI/FS and the RAP.
9. ***Community acceptance***: Evaluated after public comment period on the RAP.

Alternatives Analysis and Recommended Alternative

The purpose of the evaluation of relative performance of the alternatives is to select a preferred remedial alternative that would be most suitable for the Site, based on the NCP criteria. In the comparative analysis/evaluation, the remedial alternatives are weighed against each of the nine NCP criteria, and comparisons between alternatives are made to assist in screening out inferior alternatives and selecting a preferred alternative. The preferred alternative becomes the alternative that meets the threshold criteria (criteria 1 and 2 below, numbered for convenience in discussion) and best achieves a balance between the balancing criteria (criteria 3 through 7). The modifying criteria (number 8 and 9) are used to guide DTSC's approval of Site remediation activities. A summary of the evaluation follows.

1. ***Overall protection of human health and the environment***: The capping and source removal alternatives (3 through 6) meet this criterion by minimizing or eliminating risks from direct contact with waste and impacted soils and by removing contaminant pathways to groundwater either through removal or isolation of waste from precipitation. Alternatives 1 and 2 fail this criterion because they do not provide adequate elimination of direct contact with the bulk of the waste and because percolation to groundwater is neither minimized nor prevented.
2. ***Compliance with Applicable or Relevant and Appropriate Requirements (ARARs)***: Alternatives 3 through 6 would meet this criterion. Alternatives 1 and 2 fail the chemical ARAR criterion because they do not provide protection of air and groundwater as mandated by regulation. Because Alternatives 1 and 2 fail to meet either threshold criteria, they are screened out and not addressed further in the criteria analysis.
3. ***Long-term effectiveness and permanence***: Of the remaining Alternatives, Alternatives 5 and 6 provide a high degree of confidence regarding long-term effectiveness and permanence because

all waste materials are removed from the Site or deep well injected. The capping Alternatives 3 and 4, through the use of an engineered and maintained cap, provide a lower, but significant, degree of long-term effectiveness and permanence, and represent a moderate level of confidence that the criterion would be achieved. The cap would isolate waste and thereby protect against human exposure, percolating storm water and lateral migration. The cap would be maintained and regularly inspected to ensure effectiveness, and all elements of the selected alternative would be formally reviewed every five years by DTSC to ensure protection of human health and the environment. To protect the integrity and effectiveness of the cap, a restrictive covenant would be recorded by the property owner for the Site.

4. ***Reduction of toxicity mobility and volume through Treatment***: None of the alternatives treat significant quantities of waste to alter the waste's inherent toxicity, migration, or volume. However, the cap Alternative 3 and 4 isolate the waste and thereby prevent migration of contaminants from the waste (i.e., mobility reduction). Alternatives 3 and 4 also result in a reduction of on-site volume, through removal and off-site disposal and/or treatment at a disposal facility. Alternatives 5 and 6 provide the highest degree of volume reduction through removal and off-site disposal and/or treatment.

5. ***Short-term effectiveness***: Alternatives 5 and 6 present the greatest short-term negative impacts in that all waste is excavated and removed, resulting in significant dust, noise, odors, and truck traffic, and more so than would result under Alternatives 3 or 4, which require the excavation and removal of smaller volumes of waste. While chemical air emissions from on-site waste have been effectively controlled through vapor suppressants, experience has shown that odors would likely be associated with excavation of the waste. Also, the importing of fill soils for the cap construction of Alternatives 3 or 4, although significant in volume and with commensurate trucking, dust, and noise, is significantly less than the import needed for the Site-wide backfill of Alternatives 5 and 6 (i.e., short-term negative impacts are much more severe for Alternatives 5 and 6).

   The duration of the clean-up operations for each alternative is listed in Table R2-2. The cap options (Alternatives 3 and 4) would take far less time to complete than would the removal alternatives (Alternatives 5 and 6). Alternative 5 would take the longest (approximately 4.5 years) due to the slow rate of deep well injection.

6. ***Implementability***: Alternative 5 is deemed to be the least implementable due to the permitting process for SIT, a technology relatively new to California that would necessitate the drilling of a new deep injection well. Alternative 6 would also present potential implementation issues in that the total removal of waste could strain transportation and landfill capacities because of the limited number of appropriate waste haulers available in California and due to the large volume of waste that would need to be disposed at appropriate landfills with limited capacities.

   Alternatives 3 and 4 use proven capping technologies and could be readily implemented, although Alternative 3 would be more difficult to implement than Alternative 4 due to potential difficulties associated with the sheet pile wall needed within Lagoons 4 and 5, the installation of which includes noise from driving the sheet piles and the possibility of breaching the native soils' natural containment of Site contaminants.

7. ***Cost***: Present worth costs, updated in 2013, are listed for each alternative in Table R2-2. Alternatives 3 and 4 are less costly than Alternatives 5 and 6, largely due to the cost of waste transportation and off-site disposal associated with Alternatives 5 and 6.

8. ***State or Regulatory acceptance***: The SIT component of Alternative 5 is expected to be unacceptable to regulatory bodies due to the need to drill a new deep well and use reservoir fracturing technology to inject the slurried waste. Regulatory acceptance for the other alternatives would be determined through the commenting and approval process.

9. ***Community acceptance***: The community has not yet been given the opportunity to formally respond to the alternatives. The community would be able to respond on the proposed RAP during the public comment period and at another public meeting specifically called for that purpose.

RFS-Recommended Alternative

Alternative 4, *Partial Source Removal with Protective Cap*, was the recommended remedial alternative of the RFS, and the modified Alternative 4 was confirmed by DTSC in 2013 as the preferred remedial alternative in the Draft RAP. The rationale for selecting Alternative 4 is as follows:

Between the complete removal alternatives (Alternatives 5 and 6), Alternative 6 is preferable due to the difficulty of implementing SIT in Alternative 5 the sole distinguishing element, aside from the greater waste removal to off-site facilities under Alternative 6. Because Alternative 6 is preferable between Alternatives 5 and 6, Alternative 5 is not considered further.

The primary advantage of Alternative 4 over the other cap alternative, Alternative 3, is the greater feasibility of constructing the buttress in Lagoons 4 and 5, using cement mixed with the lagoon materials called for in Alternative 4, to hold the material that would remain in place in Lagoons 4 and 5, over the installation of sheet piling called for in Alternative 3. Because sheet piling in Lagoons 4 and 5 versus mixing material in Lagoons 4 and 5 with cement is the only significant difference between Alternatives 3 and 4, and Alternative 4 is preferable between them, Alternative 3 is not considered further.

The benefits of Alternative 4 over Alternative 6 is that Alternative 4 would provide the fastest and most cost-effective means to protect human health and the environment, but with less impact to the environment, surrounding communities, and on-site workers during implementation than would result under Alternative 6. The primary benefit of Alternative 6 over Alternative 4 is that Alternative 6 would provide more long-term effectiveness and permanence through off-site disposal of all waste.

The disadvantage of Alternative 6 when compared to Alternative 4 is that any increase of long-term permanence and protection of human health and the environment would be achieved at a cost of significantly greater potential impacts to the community during implementation of the remedy. These impacts include potential emissions, odors, truck traffic, and noise, all of which would persist significantly longer under Alternative 6 than under Alternative 4. Alternative 6 would also present significantly greater economic cost than any other alternative. Nonetheless, the impacts of Alternative 6 are evaluated against the Project in Section 5.0, *Alternatives*, of this EIR. For purposes of this EIR analysis, Alternative 6 in the RAP is presented as "Alternative 3" in Section 5.0.

The benefits of Alternative 4 over Alternative 6 are:

- Fewer negative impacts would result from implementation as compared to Alternative 6 (i.e., significantly less potential odors, emissions, dust, truck traffic, noise);
- Implementation of Alternative 4 would be completed much faster than Alternative 6 (approximately 2.5 years shorter time to implement Alternative 4 than Alternative 6);
- For hauling waste to off-site facilities, Alternative 4 would require approximately 124,500 fewer one-way truck trips than Alternative 6;
- For hauling import soils, Alternative 4 would require approximately 37,800 fewer import one-way truck trips than Alternative 6; and
- Alternative 4 would be completed at a lower relative cost than Alternative 6 (implementation of Alternative 6 would cost approximately five times that of Alternative 4).
- Alternative 4 would provide the greatest balance between short-term and long-term effectiveness.

Based on the above, Alternative 4 was selected as the preferred alternative and is proposed by DTSC as the Project in this EIR under CEQA.

Please refer to the RFS for a more detailed evaluation of the process conducted under DTSC's direction and oversight, and for additional details on each of the pre-modified alternatives. The RFS is available for review on DTSC's EnviroStor website at www.EnviroStor.ca.gov and at the Ascon Landfill website at: http://www.ascon-hb.com, located under the 'Site Documents' tab. Please refer to the RAP for a more detailed evaluation of the updated alternatives.

5. PROJECT OBJECTIVES

The following objectives have been established by DTSC for the Project. The objectives will aid decision makers in their review of the Project and environmental impacts, and alternatives.

1. To reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste.
2. To reduce the potential for short-term risks (during implementation activities) to life, property and the environment (inclusive of nearby residences, schools, parks, businesses, and on-site workers) from contaminated materials and waste through proper handling, treatment and disposal.
3. To ensure that contaminated materials and waste are transported in a safe, efficient and coordinated manner to minimize risks to sensitive uses (such as nearby residences and schools).
4. To reduce the potential for on-site contaminated materials to impact groundwater or migrate off-site.
5. To remediate the Site to enhance public health, safety and welfare and ultimately allow potential new uses of the site that will not endanger human health and the environment.
6. To remediate the Site in a timely, expedient, and cost effective manner.

6. DESCRIPTION OF THE PROJECT

Overview and Safety Measures

Implementation of the RAP would include the following primary components: removal of some of the most hazardous materials from the Site (i.e., styrene materials in Pit F); grading of the Site to reconsolidate waste materials such that the perimeter berms are removed from the City parcel and the Site topography gradually slopes up from Hamilton Avenue and Magnolia Street to a "high point" in the southwestern corner of the Site (away from the nearby residences); and installation of a "protective cap" over the Site (except City Parcel, perimeter road and storm water detention basins) with self-sustaining vegetation (e.g., grass) on the surface. The completion schedule duration for the remedial action fieldwork (construction activities) is estimated to be approximately 11 months.

During the remediation activities, numerous safety measures would be implemented to verify that field activities are conducted in a manner protective of the health of on-site workers and the public. These safety measures would include, but are not limited to, the following.

Worker Protection. The Project would implement a site-specific Health and Safety Plan (HASP). The HASP would address health risks and hazards for each Project phase, and would include, but not be limited to, requirements to provide or ensure the following: employee training assignments to assure compliance with Title 8 of the California Code of Regulations; personal protective equipment; frequency and types of air monitoring; environmental sampling techniques and instrumentation to be used; Site safety and control measures; decontamination procedures; emergency procedures such as spills or fires; procedures for providing potable water and a sanitary facilities to Project personnel; and, procedures to verify that adequate illumination is provided. Implementation of the HASP would ensure that all Project personnel would be responsible for operating in accordance with the most current Occupational Safety and Health Administration (OSHA) regulations including 29 CFR 1910.120 (hazardous waste operations and emergency response), and 29 CFR 1926 (construction industry standards), as well as other applicable federal, state, and local laws and regulations.

Air Monitoring and Dust Control. The Project would implement a perimeter air monitoring plan (AMP), including time-averaged sampling for dust and volatile chemicals and real-time perimeter air monitoring for odors, dust, and volatile chemicals. During the remediation activities, water and/or Rusmar® foam, or similar suppressant, would be applied to the waste materials to suppress potential dust and emissions of potential chemicals of concern. The AMP would include action levels with corresponding actions if/when action levels are exceeded.

The Project would implement fugitive dust control measures consistent with SCAQMD rules and regulations. The dust control measures would consist of various elements including: proper maintenance and watering of internal haul roads; water spraying of soil excavated and placed for cover or soil reconsolidation; applying water on intermediate soil cover areas; and seeding/planting native vegetation on the completed protective cap. In addition, traffic speeds of no more than 10 miles per hour (mph) would be maintained for on-site haul trucks, and no more than 15 mph for non-haul truck vehicles on all on-site, unpaved road surfaces. Further, to minimize fugitive dust from haul loads, water and/or Rusmar® foam, or similar suppressant, would be applied to these loads.

During excavation of Pit F, a temporary structure (e.g., Sprung) would be installed to capture potential fugitive dust and volatile emissions resulting from soil handling. Materials excavated from Pit F would be

placed in sealed bins that would be loaded onto trucks for transport off-site, resulting in lower fugitive emissions. Additional details regarding this temporary structure and sealed bins are discussed below.

Groundwater Monitoring. The Project would continue to monitor groundwater levels and quality within the numerous monitoring wells located near the Site perimeter[15] to confirm that groundwater contamination does not extend horizontally beyond the Site boundaries.

Traffic Control. During major construction operations, trucks entering and exiting the Site would be required to follow a City-approved traffic plan that establishes the trucking route, days and hours of truck operation, the maximum number of trucks per day, and various requirements to provide traffic, pedestrian and bicycle safety. Traffic lane closures that would be necessary during stages of the project would be performed in accordance with a City-approved traffic control plan. Near the Site, construction flagmen would be positioned at both the ingress and egress points of the Site to provide additional safety during turning movements into and out of the Site.

Haul Trucks. Prior to leaving the Site, each truck would be inspected and decontaminated as necessary to remove loose debris in tire wells and on the truck exterior. Hazardous waste haul truck operators (drivers) are required to have the proper registration to haul hazardous waste.[16] Trucks transporting hazardous waste are required to maintain a hazardous waste manifest that describes the content of the materials in the event of a spill. These manifests would be supplied by the waste receiver facility and prepared by the contractor or trucking company and the Ascon Landfill Site RP representative(s) prior to export off-site. The contracted trucking company would be a certified hazardous waste transportation contractor, if the material is profiled as hazardous.

Noise Control. Site activities would be conducted in compliance with Cal-OSHA regulations and the City of Huntington Beach Noise Ordinance. Workers would be provided with hearing protection (e.g., ear plugs or muffs) to reduce exposure from continued on-site noise levels. Noise-intensive activities, such as concrete crushing, would occur a suitable distance from the nearest residences if noise levels would be above the City's limit, unless other forms of noise attenuation, such as acoustical curtains, are used to reduce noise levels to below the City's Noise Ordinance limit.

Community Relations. Community relations outreach would be conducted by the RPs and DTSC to inform residents in adjacent neighborhoods of current and upcoming remediation activities and the overall Project process. A telephone number would be established to allow community members to ask questions regarding the remediation activities on the Site. DTSC would also provide updates on the DTSC Envirostor website to provide information to the community during Project implementation.

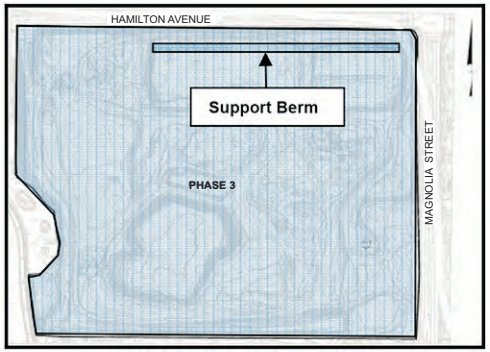
Project Phasing

The volume of waste materials to be excavated from the Site is estimated to be no more than 32,250 BCY for planning purposes, most of which would be hauled in end-dump trucks to an off-site disposal site permitted to accept the waste material. The Project is planned to be implemented in approximately 10 phases, as described below. Some phases would overlap, as noted below, and thus would not be conducted in a linear sequence. **Figure R2-6**, *Project Phasing*, provides an illustration of the work areas during each phase of the Project, as well as the anticipated interior haul road locations. **Table R2-3**, *Activity by Phase*, indicates the

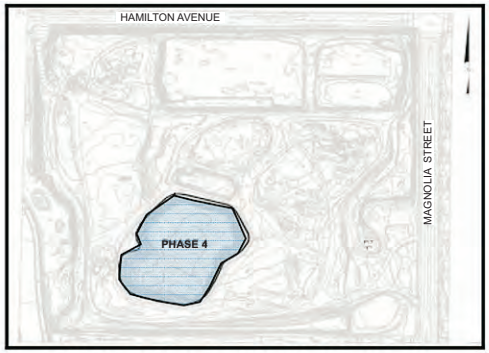
[15] *Many or all of the existing groundwater monitoring wells located on-site would be properly destroyed (abandoned) during remedy implementation, and therefore, new wells would be installed as part of the groundwater monitoring program to be followed after the remedy is completed.*

[16] *http://www.dtsc.ca.gov/HazardousWaste/Transporters/upload/Hazardous-Waste-Transporter-Requirements.pdf*

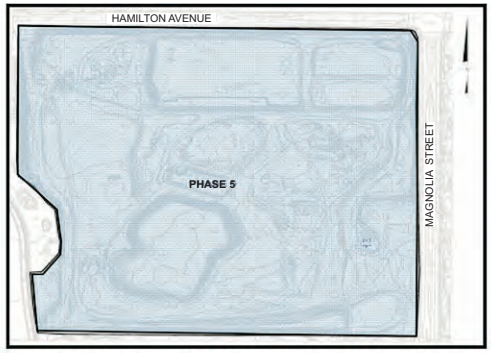
PHASE 2 - PIT F



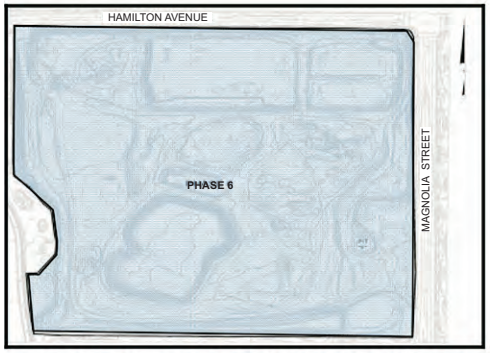
PHASE 3 - CUT/FILL TO TOP OF WASTE



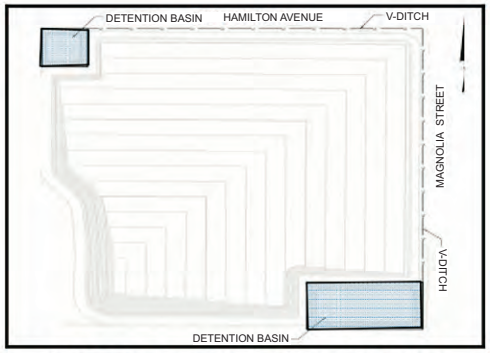
PHASE 4 - TREATMENT CELL



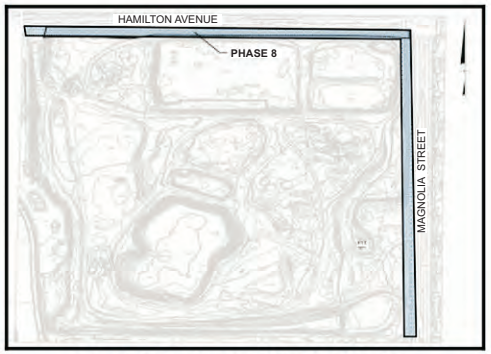
PHASE 5 - CONCRETE DEBRIS; CONSOLIDATE, REDUCE, AND PLACE AS SELECT DEEP FILL



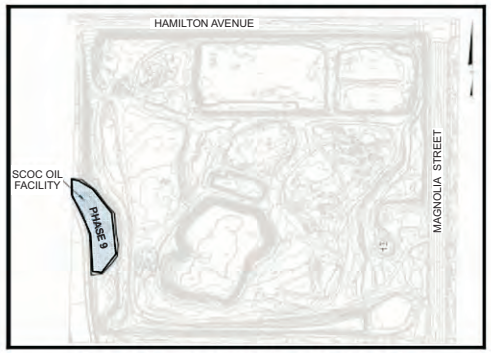
PHASE 6 - FILL TO FINAL GRADE



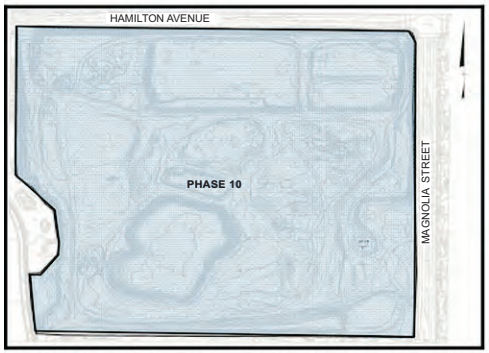
PHASE 7 - SURFACE WATER CONTROLS



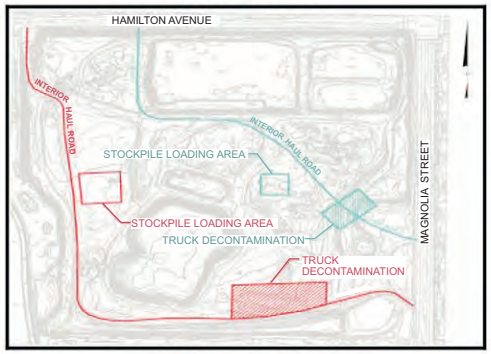
PHASE 8 - CITY PARCEL



PHASE 9 - SOUTH COAST OIL CORPORATION



PHASE 10 – SITE RESTORATION



HAUL ROAD STAGING AREAS

PCR

N

Project Phasing

RAP EIR - Ascon Landfill Site

Source: Geosyntec Consultants, 2012.

FIGURE

R2-6

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activities that would occur in each phase. Also, **Table R2-4**, *Earthwork Quantities*, indicates the amount of daily earthwork, average and maximum truck trips per day, and durations of each task.

Phase 1 - Mobilization

Phase 1 would begin with general mobilization, which includes establishing a staging area with office trailer(s), installing utilities, bringing in earthwork and supporting equipment (e.g., water tower, foam units), bringing in and setting up perimeter air monitoring equipment, and installing storm water best management practice (BMP) features for construction, etc. Phase 1 would also consist of clearing activities, which includes removal of interior fencing and existing tall vegetation and establishing haul roads and work platforms. Haul roads within the Site would be established and maintained throughout the Project. The removal of tall vegetation could occur in advance of other mobilization activities, depending on the time of year of removal.

Phase 2 – Pit F

Upon completion of mobilization activities in Phase 1, Pit F materials would be excavated for transport and off-site disposal (Phase 2) at a facility permitted to accept the waste material. The area surrounding Pit F would be temporarily graded to a working elevation. A temporary structure (e.g., Sprung) is planned to be constructed over Pit F. The structure would be operated as a negative-pressure air enclosure whose effluent would be treated using granular activated carbon (GAC) to capture emissions from the excavated waste prior to discharge to the atmosphere. Construction equipment operating within this enclosed structure would require exhaust emissions to be directly discharged to the outside using flexible piping (also known as a "snorkel") attached to the equipment exhaust. This is primarily to ensure worker safety through the reduction of buildup and exposure to toxic air contaminants (TACs) such as Diesel Particulate Matter (DPM). The excavation of Pit F, consisting of approximately 2,250 BCY, would be performed under the enclosure by slot cutting, utilizing slurry trench technology. The trenches from which the Pit F materials would be excavated would be filled with a slurry to minimize potential emissions from the Pit F waste and inflow of groundwater. The Pit F materials would be excavated through the slurry. The excavated slots would then be backfilled with a mix of sand, water, and additives such as Portland cement (i.e., "flowable fill"). Upon completion of the excavation, the non-hazardous slurry would either be absorbed into adjacent soils or be disposed of with the excavated materials. The Pit F materials are planned to be loaded into sealed roll-off bins, or similar, and staged on-site. The staged bins would be transported to the disposal facility utilizing bin trucks and/or rail transportation. Excavation, loading of bins, and backfilling would be performed under the negative-pressure structure. Although the excavation volume is anticipated to be approximately 2,250 BCY, the volume of Pit F removal could be up to approximately 4,500 BCY. Upon completion of Pit F work, the Pit F area would consist of cured flowable fill from working grade to the depth needed to remove the pit materials (up to approximately 30 feet below working grade [i.e., structure floor at approximately 13 feet MSL]).

A new haul road is anticipated to be built on-site that would enter the Site near the northwest corner of Lagoon 4 from Hamilton Avenue. This haul road would allow trucks to travel shorter distances during certain phases, reducing the amount of fugitive dust and exhaust emissions. The haul road would travel south along the western boundary of Lagoon 4, then head east along the southern boundary of Lagoon 4, north of Lagoon 3. The haul road would then travel south to the Pit F area and exit on Magnolia Street. Depending on the timing of the new road, a new curb cut may be necessary in order for trucks to come on-site from Hamilton Avenue onto this haul road.

Table R2-3

Activity by Phase

Activity	Phase 1	Phase 2	Phase 3	Phase 4	Phase 5	Phase 6	Phase 7	Phase 8	Phase 9	Phase 10
Install and uninstall temporary facilities including utilities.	●			●				●		●
Mobilize and demobilize equipment	●	●	●				●	●		●
Clear and grub; no potential for contact with VOC impacted material	●	●	●		●			●	●	
Excavate Pit F Waste and place in bins		●								
Install/backfill with flowable fill		●	●							
Transport and dispose of Pit F waste in bins		●								
Excavate, grade, backfill, handle, haul, stockpile, windrow potentially VOC-impacted material including monitoring excavation and SCAQMD Rule 1166 compliance		●	●	●	●			●	●	
Apply foam or other suppressants		●	●	●	●			●	●	
Dust control measures	●	●	●	●	●	●	●	●	●	●
Excavate, grade, backfill, handle, haul clean import soil						●	●			●
Import fill using bottom dump trucks						●			●	
Install/maintain SWPPP features	●	●	●	●	●	●	●	●	●	●

Source: Geosyntec Consultants, 2013

Table R2-4

Earthwork Quantities

Depth (ft bgs)	Duration of Task	Average Daily Qty Excavated	Max Qty Excavated During One Day	Avg Number of Truck Trips During One Day	Max Number of Truck Trips During One Day
Phase 2 Pit F, Task 1; Clear and grub, prepare haul roads, lay-down areas and initial grade					
N/A	30 days	N/A	N/A	(2) 10CY On-road dump trucks	(5) 10CY On-road dump trucks
Phase 2 Pit F, Task 2, Traffic Control and Temporary Fencing					
N/A	5 days	N/A	N/A	N/A	N/A
Phase 2 Pit F, Task 3; Assemble Sprung Structure					
N/A	15 days	N/A	N/A	N/A	N/A
Phase 2 Pit F, Task 4; Slurry Trench Excavation (waste in bins)					
0 to 27.5	8 days	300 CY	400CY	N/A	N/A
Phase 2 Pit F, Task 5; Transport and Dispose of Impacted Material					
N/A	16 days	N/A	N/A	13	15
Phase 3 North Slope, Task 1; Install slurry wall					
12	21 days	208 CY	225 CY	21 Concrete Trucks	25 Concrete Trucks
Phase 3, Task 2; Cut/fill to top of waste					
0 to 16.5	116 days	2,300 CY	2,500 CY	N/A	N/A
Phase 3, Task 3; Place waste in treatment cell, stockpile .or compact					
N/A	110 days	N/A	N/A	N/A	N/A
Phase 3, Task 4; Excavate, stockpile, and export up to 30,000 BCY					
N/A	13 days	2,300 CY	2,500 CY	90 End dumps	100 End dumps
Phase 4, Task 1; Treat VOC-impacted material					
N/A	136 days	N/A	N/A	N/A	N/A
Phase 5, Concrete debris; Consolidate, reduce and place as select deep fill					
N/A	60 days	N/A	N/A	N/A	N/A
Phase 6, Fill to Final Grade (import)					
N/A	102 days	N/A	N/A	115 bottom dumps	200 bottom dump
Phase 7, Surface Water Controls, Task 1; Install detention basins					
N/A	22 days	N/A	N/A	N/A	N/A
Phase 7, Surface Water Controls, Task 1; Install v-ditches					
N/A	20 days	N/A	N/A	N/A	N/A
Phase 8, City Property, Task 1; Cut and backfill					
6	6 days	2,300 CY	2,300 CY	N/A	N/A
Phase 8, Task 2, Utility poles					
8	4 days	2 CY	2 CY	N/A	N/A
Phase 9, South Coast Oil Corporation, Task 1; Cut					
7.5	6 days	2,000 CY	2,200 CY	N/A	N/A
Phase 9, Task 2; Backfill to top of final grade					
N/A	8 days	N/A	N/A	70 end dumps	80 end dumps
Phase 10, Site Restoration					
N/A	N/A	N/A	N/A	N/A	N/A

Source: Geosyntec Consultants, 2013

Phase 3 – Cut and Fill Activities

Upon completion of Phase 2, Phase 3 of the Project would consist of grading, reconsolidation, and compaction of existing site materials. After clearing and grubbing, materials would be excavated and moved to designated fill areas on the Site and then compacted. Prior to commencement of grading in the northern and northeastern portions of the Site, adjacent to Hamilton Avenue and the northern Site area along Magnolia Street, the contents of Lagoons 4 and 5 that are remaining in place would be retained with a new berm constructed south and west of and parallel to the existing berms, inside the lagoons. This berm would be constructed by mixing the lagoon material with a binding material (e.g., cement, fly ash, lime kiln material, etc.) in the desired location of the new berm, which would be left in place under the cap as part of the preferred alternative. After construction of the berm, Phase 3 would continue with the excavation and relocation of Lagoon 4 and 5 materials located to the north and east of the newly constructed berm to appropriate fill areas, on-site.

Excavation would be most extensive for those portions of the Site designated as the stormwater detention basins, future perimeter road (an approximately 15 to 25-foot wide margin inside the CHP property line) and the City parcel (an approximately 30-foot wide margin along the northern edge of the Site along Hamilton Avenue and an approximately 20-foot wide margin along the eastern edge of the Site along Magnolia Street). Details regarding the perimeter access road and the City parcel are described under Phase 8 below. Preliminary excavation would be performed for the stormwater detention basin during this phase. Final surface water controls including the detention basin, ditches and drains would be installed once final grade (Phase 5) has been achieved.

If at any time during the excavation and reconsolidation VOC-contaminated materials[17] are encountered, they would be placed in an emissions treatment/control cell ("emissions control cell") approved by the South Coast Air Quality Management District (SCAQMD) in accordance with SCAQMD Rule 1166. All material excavated during Phase 3, as well as any material excavated during any other future project implementation Phase, would be monitored for VOCs and handled per the Site's SCAQMD Rule 1150/1166 permit. Material designated as VOC-contaminated per SCAQMD Rule 1166 would be treated and retained on-site in the emissions control cell, which cell will likely be located in the former Lagoons 1 and 2 area per the SCAQMD Permit-to-Construct/Permit-to-Operate (PTC/PTO) for this system, or removed and disposed at an off-site disposal facility permitted to accept this material. Additional details are presented under Phase 4 below.

The Site would be graded, including excavation where necessary, and backfilled to the top of subgrade, the final elevation of the waste prior to capping. Some excavated and graded materials (non-VOC contaminated materials) may be stockpiled on-site and would be used as fill as necessary to achieve subgrade. Other materials could be stockpiled for removal/disposal as part of the potential 32,250 BCY removal.

With regard to the other pit wastes (Pits A - E, G, and H), the remediation plan would remove these wastes and contaminated materials to the approximate adjacent street elevation (exact elevation to be determined

[17] *VOC-contaminated material is defined by SCAQMD as excavated soil that measures greater than 50 parts per million (ppm) total volatile organic compounds (VOCs) as measured with an organic vapor analyzer (OVA) (e.g., PID), within three inches of the excavated material within three minutes of excavation.*

during remedial design).[18] These materials would be excavated and placed under the cap or disposed of off-site as part of the potential 32,250 BCY removal.

Groundwater, which may be exposed in the bottom of excavations, may be reused on-site or pumped into a water treatment system, if necessary, and discharged or disposed. Surface water would be managed appropriately under the General Construction National Pollution Discharge Elimination System (NPDES) permit from the State Water Resources Control Board (SWRCB) and the Site's Construction Storm Water Pollution Prevention Plan (SWPPP), and by one or more of the following three methods: (a) discharge to the City of Huntington Beach storm drain system after appropriate treatment using existing Best Management Practices (BMPs); (b) use as construction water; or (c) use as dust control water.

While not part of the Project, there would be an investigation of the locations of former groundwater monitoring wells AW-6 and AW-7, thought to be located under Hamilton Avenue based on anomalies found during a magnetic survey. If and when found, AW-6, and AW-7 wells would be properly abandoned/destroyed.

Phase 4 – Treatment Cell

During Phases 3, 5, and 6, treatment of any VOC-contaminated materials would be performed by placement of the material in windrows in the emissions control cell and covering with vapor collection piping and plastic sheeting, per the SCAQMD PTC/PTO. Emissions collected from these materials would be transported through the piping using a blower and treated with granular activated carbon prior to discharge to the atmosphere.

Phase 5 – Concrete Debris

Concurrent with the cut and fill of existing material to achieve subgrade (Phase 3); some existing concrete debris and rubble would be consolidated and placed on-site as select deep fill (i.e., the debris would be placed in locations and at depths so as to avoid detrimental impacts to the geotechnical stability of the cover system). As needed, some concrete debris may be broken and/or crushed with a breaker attachment on an excavator or a concrete crusher.

Phase 6 – Cap Construction

Phase 6 of the Project would consist of construction of the final cover system (or "cap"). Cap construction would occur as cut/fill activities are completed during Phase 3. Thus, there would be overlap between Phase 6 and Phases 3 and 5. As subgrade is achieved in portions of the cut and fill area, construction of the final cover system could be initiated. This would include the installation of the gas collection layer and associated conveyance features (e.g., piping, strip composite, etc.), as well as the import, placement, and compaction of cover material. Bottom dump/belly dump trucks would be used up to 10 hours per workday to import approximately 240,000 BCY of cover materials over a period of 102 workdays, with a delivery rate of up 200 import trucks per workday. The cover materials would be graded to final grade. The cover system would not be constructed over the City parcel, the perimeter access road, or the SCOC area, although these areas

[18] *Note that the removal/excavation in at least portions of Pits A, H, C, D, and G is anticipated to be down to the bottom of the detention basins in these areas (exact elevation to be determined during remedial design).*

would receive import soils to fill any excavations, as needed to achieve final grade. The perimeter access road is planned to be constructed along the perimeter of the Site, outside of the toe of the cap and within the Ascon property line (on the CHP parcel).

The cap over the Site would likely be a continuously and gently sloped cap, where the southwestern portion of the cap would be at a higher elevation than the cap at its northern and eastern extents. This design has evolved since the proposal of a two-tiered cap as described in the 2007 RFS and 2007 Draft RAP for Alternative No. 4. The conceptual cap configuration is illustrated in **Figure R2-7**, *Conceptual Cap Configuration*. The capped areas may vary in elevation and size from those shown in Figure R2-7 and described herein depending on the final area and vertical extent of source removal along the east and north sides of the Site, all of which would be determined during the remedial design. The Project Description used in this EIR, which serves as the basis for analysis of potential impacts, represents the reasonably foreseeable details regarding implementation of the RAP at the time of the analyses. The constructed cap would be designed to meet applicable laws and regulations, and would include a drainage system to collect and remove percolated storm water and a gas collection and removal system.

The cover system is anticipated to include the following elements, or a combination thereof:

1. Main Cap - The upper deck of the cap would include a 3% gradient surrounded by side slopes along the Site perimeter with a 3H:1V (horizontal to vertical) gradient (side slopes are discussed below). The cap is anticipated to include, from top to bottom, a 2-foot vegetative cover soil layer, a geonet biotic layer to prevent wildlife intrusion (burrowing) at the mid depth of the vegetative cover soil layer, a geosynthetic drainage layer (may be nonwoven geotextile or geocomposite and strip composite, if necessary, as determined during final design), a geomembrane barrier layer (60 mil[19] thick [0.060 inches] linear low density polyethylene [LLDPE] geomembrane), a vapor collection system, and a 2-foot thick foundation layer comprised of in-place or reconsolidated waste materials and/or import fill. The geomembrane layer would minimize surface water infiltration into the underlying material. A gas collection and treatment system with granular activated carbon (GAC) would be installed to collect and treat gases before discharge to the atmosphere. The conceptual profile for the main cap ("top deck") is illustrated in **Figure R2-8**, *Conceptual Cap Profiles*. The profile shown in Figure R2-8 is a conceptual illustration and the remedial design would be subject to review and approval by DTSC.

2. Side Slopes - The cap's side slopes along the perimeter of the cap are expected to include from top to bottom, a 4-foot thick vegetative cover soil layer, a geonet biotic layer placed one foot below the surface, and a 2-foot thick foundation layer comprised of *in-situ* materials. The conceptual profile of the cap on the side slopes is illustrated in Figure R2-8. The profile shown in Figure R2-8 is a conceptual illustration and the remedial design would be subject to review and approval by DTSC.

3. To monitor the effectiveness of the cap to contain soil gas, a series of soil gas monitoring probes would be installed, with soil gas collection screens at a depth of approximately five feet below street level (i.e., above groundwater level). The number and spacing of soil gas monitoring probes will comply with the April 1, 2011, amendment of SCAQMD Rule 1150.1, except that the shallow groundwater table at Ascon precludes

[19] *mil = a thousandth of an inch*

LEGEND

- EXISTING MAJOR GROUND CONTOUR
- EXISTING MINOR GROUND CONTOUR
- 25 — PROPOSED MAJOR GROUND CONTOUR
- PROPOSED MINOR GROUND CONTOUR
- PROPERTY BOUNDARY
- CAP FOR TOP DECK AREA
- CAP FOR SIDE SLOPES
- STORM WATER DETENTION BASINS (NOTE 1)
- OIL LEASE PROPERTY (NOTE 2)
- PERIMETER ACCESS ROAD (NOTE 3)
- CITY OF HUNTINGTON BEACH (NOTE 3)
- APPROXIMATE GAS TREATMENT SYSTEM LOCATION

ELEVATION OF MAGNOLIA STREET = 6.5 TO 7.5 FT
ELEVATION OF HAMILTON AVENUE = 4.1 TO 6.5 FT
ELEVATION AT TOP OF EAST AND NORTH SIDE SLOPES = 13 FT
ELEVATION AT HIGH POINT NEAR SOUTHWEST CORNER = 44 FT
SETBACK OF TOE OF SIDE SLOPES FROM PROPERTY BOUNDARY:
NORTH AND EAST = 15 FT
SOUTH AND WEST = 25 FT

ALL ELEVATIONS ARE APPROXIMATE AND IN FEET ABOVE MEAN SEA LEVEL (NAVD88)

NOTES:

1. STORM WATER DETENTION BASINS EXCAVATED POTENTIALLY DOWN TO GROUNDWATER SURFACE. WASTE MATERIAL EXCAVATED AND RECONSOLIDATED UNDER FINAL COVER.
2. OIL LEASE PROPERTY WASTE MATERIAL, RELATED TO ASCON OPERATIONS, IF PRESENT, EXCAVATED AND RECONSOLIDATED UNDER FINAL COVER OR DISPOSED OFF-SITE AT APPROVED DISPOSAL FACILITY (DEPENDING ON TIMING OF CLOSURE CONSTRUCTION AND LEASE STATUS).
3. PERIMETER ROAD AND CITY OF HUNTINGTON BEACH PARCEL WASTE MATERIAL EXCAVATED TO A MAXIMUM DEPTH OF GROUND WATER SURFACE AND RECONSOLIDATED UNDER FINAL COVER.

PCR

N

0 300 Feet

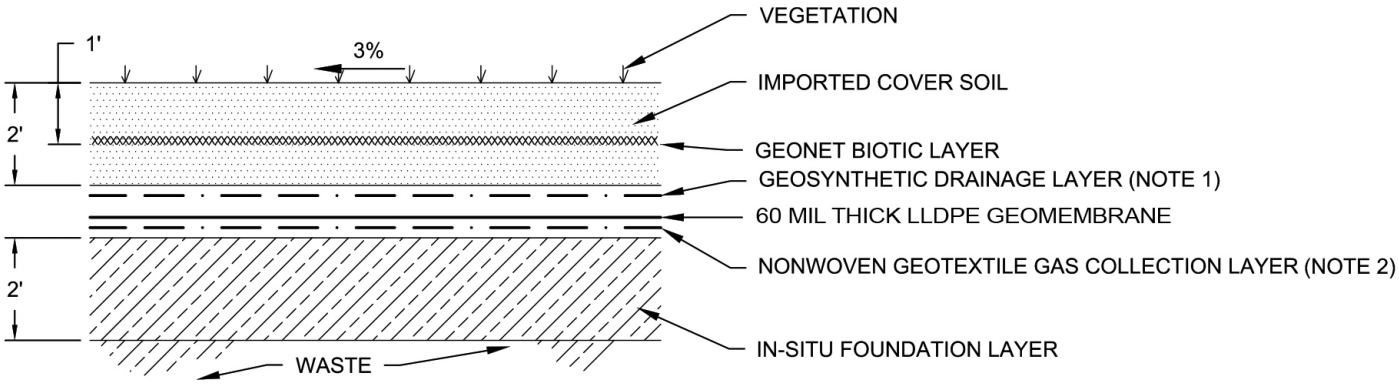
Conceptual Cap Configuration

RAP EIR - Ascon Landfill Site

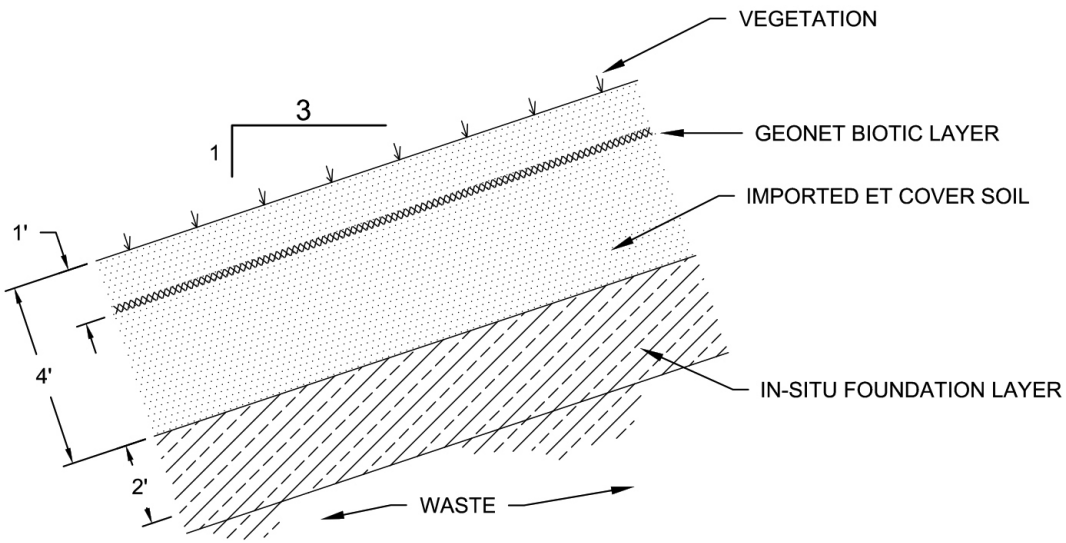
Source: Project Navigator, Ltd., 2013.

FIGURE

R2-7



PROFILE OF PROPOSED CAP FOR TOP DECK
(GEOMEMBRANE)



PROFILE OF PROPOSED CAP ON SIDE SLOPES
(EVAPOTRANSPIRATIVE)

NOTES:

1. DRAINAGE LAYER MATERIAL MAY BE NONWOVEN GEOTEXTILE OR GEOCOMPOSITE, AS DETERMINED DURING FINAL DESIGN.
2. GAS COLLECTION LAYER TO BE UNDERLAIN BY GEOCOMPOSITE STRIP AND/OR PIPE NETWORK, TO COLLECT AND CONVEY GAS TO TREATMENT SYSTEM, AS DETERMINED DURING FINAL DESIGN.

The cap profiles shown in this figure are conceptual. The final cap profiles will be subject to review and approval by DTSC.

PCR

Conceptual Cap Profiles

RAP EIR - Ascon Landfill Site

Source: Project Navigator, 2013.

FIGURE

R2-8

the installation of multiple-depth probes starting at 10 feet below ground surface, requirements otherwise specified by the rule. These monitoring wells would be monitored following cap construction to determine whether soil gases have migrated from under the cap.

The details of the soil gas monitoring system would be provided in a remedial design package to be prepared subsequent to DTSC approval of the Final RAP. The system components would be maintained according to a written O&M Plan. The O&M Plan for the proposed remedy would be developed after the remedial design plans are approved by DTSC.

Also, the specifics of the cap's vapor collection and treatment system would be determined in the design plans. Currently, for purposes of this EIR analysis, it is anticipated that the gas collection system would be located on the western portion of the Site along the perimeter access road. If necessary, the long-term parking area of the Site would be along the western Site perimeter near the gas collection system, remote from nearby single-family residential uses.

An active vapor treatment system would operate for an initial approximately two-week startup period, after which the need for continued operation would be determined in consultation with DTSC and based on criteria set forth in the O&M Plan. Prior to discontinuing or adjusting to intermittent operation of the active vapor treatment system, the RPs would consult with DTSC regarding the plan to modify or discontinue the operation of the system. The recovery system's passive operation would comply with the April 1, 2011, amendment of SCAQMD Rule 1150.1 requirements.

Phase 7 – Surface Water Controls

During implementation of the remediation activities, storm water falling on the Site would be managed through the Site's storm water system under the General Construction NPDES permit from the SWRCB and the Site's Construction SWPPP. This is anticipated to be similar to the existing storm water management practices.

After the remedy is complete, storm water would be managed per the General Industrial NPDES permit from the SWRCB and the Site's Industrial SWPPP as appropriate. It is anticipated that detention basins and storm water swales, or V-ditches, would be installed along the perimeter of the final cover. Diversion berms would be installed above the final cover as needed. It is anticipated that storm water would be discharged from the on-site detention basins to the City's storm drain system in a manner similar to existing practices. The detention basins are illustrated in Figure R2-7.

Phase 8 – City Parcel

During the latter part of Phase 3, the City parcel and on-site perimeter access road areas would be excavated as needed and backfilled with suitable import materials to top of final design grade. In the City parcel, all above street-level materials would be removed. The depth of excavation needed would be determined during excavation, based on the applicable remedial goals. Due to the future land uses of the perimeter road and City parcel, the RAP established RBCs for use as Soil Cleanup Levels (SCLs) for each of the Chemicals of Potential Concern (COPCs) assuming potential exposure for future construction and commercial workers (see Table 4-1 of the Draft RAP). Waste materials, if any, found below street-level within the City parcel with concentrations of COPCs that exceed the RBCs (or exceed background concentrations if background is higher

than the RBC) would be removed and replaced with clean fill. The excavated materials would be reconsolidated in a fill area to be capped on-site, treated on-site, or removed off-site, as appropriate. To assess if the RBCs and City of Huntington Beach Soil Cleanup Standards have been met in the area of the perimeter access road around the cap and in the City parcel during fieldwork, COPC concentrations in soils would be measured at the excavation bottoms during remedy implementation, provided the excavation did not proceed down to native soils. One confirmation sample would be collected for every 100 linear feet in the City parcel and the area of the perimeter access road around the cap from the bottom of the excavation, anticipated to be approximately two feet below existing ground surface for the City parcel and approximately four feet below existing ground surface in the perimeter access road. However, for planning purposes in this EIR, it assumed that excavation in the City parcel could occur to a maximum depth of six (6) feet deep (approximately to groundwater), although such an extensive excavation is not likely to be needed. The lateral excavation limits for the City parcel would be the fence line along Hamilton Avenue and Magnolia Street, and the CHP parcel property line for the perimeter access road area. Soil samples would be collected and analyzed for the COPCs shown on Table 4-1 of the Draft RAP. Analytical results would be compared to the RBCs (or to background concentrations for those higher than the RBC) for each COPC to determine if additional action is warranted.

The City parcel excavation would occur prior to completion of filling to final grade and cap construction (Phase 6).

Phase 9 – South Coast Oil Corporation (SCOC) Site

Prior to completion of Phase 6, any Ascon-related contaminated materials in the SCOC area may be excavated, as needed, and backfilled with suitable import materials. Any excavated waste material from the SCOC property would be placed and reconsolidated on-site under the Site's cap and/or transported and disposed off-site, pending the timing of the remediation of the SCOC area. Due to the active oil lease for the minerals beneath the SCOC property, the removal of contaminated materials from the SCOC area could be postponed or conducted by the mineral estate owners and/or mineral estate lessees at a later time. Nevertheless, for CEQA planning purposes, it is assumed that the excavation would be simultaneous with the remediation activities and the materials would be incorporated under the remedy cap as necessary and appropriate.

Phase 10 - Site Restoration

Phase 10 of the Project would consist of Site restoration activities including demobilizing Project equipment, final grading of the perimeter road, and establishing grasses and/or other vegetation on the cap. In addition, this phase would establish monitoring and maintenance requirements, including groundwater monitoring and soil gas monitoring and documentation in the O&M Plan.

Grasses and/or other shallow-rooted vegetation are planned to be grown on the completed cap to provide erosion control and improve aesthetics. The grasses would be self sustaining (i.e., no irrigation beyond initial growth cycle) and maintained according to the O&M Plan, likely including conducting weed abatement annually for fire prevention if growth is a potential fire hazard. No perimeter landscaping is proposed as part of the Project. The Groundwater Monitoring Contingency Program is discussed in detail within Section 4.7, *Hydrology and Water Quality*. Air Quality monitoring during the remediation activities is discussed in detail within Section 4.2, *Air Quality*, and Section 4.6, *Hazards and Hazardous Materials*, as appropriate.

Finally, this phase would establish and implement administrative controls/deed restrictions, as appropriate, to assure appropriate limitations on any future land use and activities.

Construction Schedule

The completion schedule duration for the proposed remedial action fieldwork is estimated to be approximately 11 months. The remediation time frame allows for some downtime due to rain or other delays. The remedial action fieldwork would begin after the final remedial design is completed and approved or a design/build approach is implemented, and after contracting and permitting are completed. The remedial design, contracting, and permitting are anticipated to be completed approximately one year after the EIR and RAP are approved at which time the remedial action fieldwork can begin. This schedule can be implemented only after the EIR is certified, and fieldwork can begin only after securing applicable approvals and permits from DTSC and other agencies. Based on this schedule, and with the necessary design and permitting activities, construction activities could potentially commence as early as ~~2015~~ 2016.

Construction Equipment and Truck Activities

Implementation of the Project would require the use of various pieces of heavy equipment throughout the construction activities. Heavy equipment that would be used during Project implementation would likely include, but is not limited to, tracked excavators, front-end loaders, bulldozers, water trucks, dump trucks, etc. Light duty vehicles such as pickup trucks and other support vehicles also would likely be used during the Project. The Project would use construction equipment compliant with EPA Tier 3 emissions standards if commercially available.

Project implementation would include use of five-axle semi-tractor trailer trucks and/or semi-tractor trailer end-dump trucks, and possibly tanker trucks, to haul waste materials from the Site to the appropriate off-site receiver facility. Trucks exporting soil would be model year 2007 or newer, if available, where engines would have lower pollutant emissions compared to older model year trucks. The daily maximum number of trucks visiting the Site for export and import of construction materials would likely vary by phase. The maximum number of daily import truck trips is expected to occur during Phase 6, and may include up to 200 maximum daily bottom or end dumps for import materials.

The Project activities are expected to occur on-site Monday through Saturday, from 7:00 a.m. to 6:00 p.m., with employee arrival, safety meetings, and work day preparations (e.g., equipment inspections) beginning as early as 6:00 a.m. As many as 37 employees and up to 10 visitors are expected to be routinely on-site. Haul trucks are proposed to access the Site no earlier than 6:00 a.m. and depart the Site no later than 6:00 p.m., Monday through Saturday. However, in accordance with applicable municipal code, mechanized construction equipment will not operate before 7:00 a.m.; thus, no loading or unloading of materials may occur before 7:00 a.m. In any one hour, the Project proposes to allow up to 25 haul trucks ~~may~~ to enter the Site and up to 25 haul trucks ~~may~~ to depart from the Site. Non material hauling trucks and other Project-related vehicles would also be allowed to access the Site between 6:00 a.m. and 6:00 p.m. Monday through Saturday. To ensure continuous pedestrian (including bicycle) and vehicular safety at the entrance and exit points of the Site, a flag person would be available during work hours to assist with truck ingress and egress, as needed.

In general, regional access to the Site would be provided by I-405 for trips not originating in the City of Huntington Beach or nearby communities. Workers and visitors (DTSC or other agency staff, etc.) could approach the Site using Beach Boulevard, Magnolia Street, Brookhurst Street, or PCH, depending on their point of origin. The Project will, during various phases, include a substantial daily number of trucks for export of material (contaminated, recyclable, general or green waste, etc.), import of clean fill, and delivery of cap construction materials and other supplies. The most intensive days could involve up to 300 roundtrip haul truck trips (including import and export haul trucks), 10 delivery truck trips, and 70 personal passenger vehicle trips.

~~The haul route to the Site would have haul trucks exit the I-405 Freeway at Beach Boulevard.~~ Trucks are expected to utilize either Beach Boulevard or Brookhurst Street from the I-405. Both streets are designated truck routes by the City of Huntington Beach and, in the case of the northern portion of Brookhurst Street, the City of Fountain Valley. In-bound trucks utilizing Beach Boulevard would travel south ~~on Beach Boulevard~~ to PCH, turn left on PCH to Newland Street, turn left (go north) on Newland Street to Hamilton Avenue, and turn right (go east) on Hamilton Avenue to the current Site entrance. The current Project entrance for haul trucks is located on Hamilton Avenue west of Magnolia Street. Out-bound ~~T~~trucks leaving the Site would exit the Site on Magnolia Street and turn right (travel south) to PCH. The trucks would then travel northwest on PCH and turn right (go north) on Beach Boulevard to the freeway entrance for the I-405. For in-bound trips utilizing Brookhurst Street, trucks would exit the I-405 and travel southbound on Brookhurst Street, turn right onto PCH and travel northwest along PCH, turn right onto Newland Street, travel north to Hamilton Avenue, and then turn right on Hamilton Avenue to the current Site entrance on the right-hand side. For the egress route, import trucks would exit from the Site's east gate on Magnolia Street, turn right and travel south on Magnolia Street, turn left to travel southeast along PCH, turn left to travel north on Brookhurst Street to the northbound I-405 entrance or turn right on Talbert Avenue to enter the southbound I-405. The haul route(s) on municipal streets would be stipulated in a Construction Traffic Management/Haul Route Plan reviewed and approved by the City of Huntington Beach and City of Fountain Valley, as necessary, prior to Project implementation. All trucks contracted for export trips, regardless of point of origin or destination, are expected to use Beach Boulevard. Import and supply trucks could use either Beach Boulevard or Brookhurst Street. Up to a maximum of 100 trucks per day traveling to and from the Site are expected to utilize Beach Boulevard, with the remaining trucks utilizing Brookhurst Street.

Prior to leaving the Site, each truck would be inspected and decontaminated as necessary to remove loose debris in tire wells and on the truck exterior. The contracted trucking company would be a certified hazardous waste transportation contractor, if the material is profiled as hazardous.

The receiver facility where material would be transported depends on the types of wastes to be removed from the Site. Proposed potential receiver destinations for contaminated materials include: Waste Management Kettleman Hills Facility (Kettleman City, California), McKittrick Facility (McKittrick, California), Clean Harbors' Buttonwillow Facility (Buttonwillow, California), US Ecology (Beatty, Nevada), Clean Harbors Environmental Services Aragonite and Grassy Mountain Facilities (Utah), ECDC (Utah), La Paz County Landfill (Arizona), Copper Mountain Landfill (Arizona), and South Yuma County Landfill (Arizona). The mode of transportation to these facilities could include truck haulers (e.g., end dumps, bin haulers with sealed roll-off bins for Pit F waste) and, potentially, train (likely only if taken out of state). If by train, roll-off bins may be transferred in Alhambra or along a rail spur in Huntington Beach. If dewatering is necessary, transportation may include vacuum trucks for liquids, when disposed off-site.

Proposed potential receiver locations for "green" waste and other non-impacted refuse include: Orange County's Frank R. Bowerman, Olinda Alpha, and Prima Deschecha landfills, Waste Management Azusa and El Sobrante landfills, Republic Sunshine Canyon landfill, and Los Angeles County Sanitation District Puente Hills landfill.

Long-Term Operations

This environmental analysis for the Project evaluates the implementation of the RAP, specifically, the proposed remediation activities described above needed to achieve the requirements of the Imminent and Substantial Endangerment Determination Consent Order issued by DTSC. The remediation activities would be concluded when the Site consists of a vegetated cap (e.g., grasses and/or other low vegetation) over the majority of the Site, surrounded by perimeter fencing, and the City parcel cleared and returned to existing street grade. Section 4.1, *Aesthetics*, includes visual simulations of the pre- and post-remediated Site. Essentially, if the remediation plan is implemented, the Site would represent a near-flat and vacant, vegetated capped site. Public access to the Site would be restricted following completion of the Project.

Subsequent development on the capped site following completion of the RAP is not contemplated as part of this Project. At this time, it is not possible to determine how long the capped Site would remain in its remediated state. Since the Project does not propose specific development on the Site after the remediation activities, any subsequent development proposals may be subject to a deed covenant. Such development would likely require DTSC approval and a subsequent entitlement process, including environmental review as appropriate pursuant to CEQA.

The following long-term activities are anticipated after the remediation activities are complete:

- Maintenance of a landfill gas collection and treatment system. Landfill gasses collected from under the cap would be routed to a GAC system before being emitted to the atmosphere to minimize the release of COPCs.
- Maintenance of a long-term groundwater monitoring program to ensure compliance with the remedial action objectives ("RAOs") identified in the RFS. The long-term groundwater monitoring program would include monitoring and sampling perimeter wells. Should impacts be found and verified above threshold levels at the Site perimeter, a contingency plan would be followed, as appropriate.
- Maintenance of cap vegetation would include annual weed abatement (e.g., mowing) for fire prevention.
- Implementation of an O&M Plan to ensure the above referenced activities are being properly implemented. The O&M Plan would be reviewed by DTSC every five (5) years.

Project Design Features

Project Design Features (PDFs) are specific design elements proposed by the RPs that would be incorporated into the Project to prevent the occurrence of or to minimize the significance of potential environmental effects. Because PDFs have been incorporated into the Project, they do not constitute mitigation measures, as defined by Section 15126.4 of the State CEQA Guidelines (Title 14 of the California Code of Regulations). However, PDFs would be included in the Mitigation Monitoring and Reporting Program (MMRP) to ensure

their implementation as a part of the Project. As with mitigation measures, if the Project is modified through the public hearing process in a manner that would require modification(s) to the PDFs, the RPs may be permitted to modify the PDFs before they are included in the MMRP proposed for adoption. The Project would implement the below listed PDFs. Note that some of the PDFs may be similar to other PDFs as each PDF was developed in response to individual environmental issue areas.

Aesthetics

PDF 1-1 The upper deck of the cap would include a three percent (3%) gradient surrounded by side slopes along the cap perimeter with a horizontal-to-vertical gradient of three to one (3H:1V), excluding the Site perimeter access road, City parcel, SCOC area, and storm water detention basins. (This PDF to be verified prior to approval of the Final Cap Design Plan by the DTSC, Unit Chief, Brownfields & Environmental Restoration.)

PDF 1-2 The cap would be vegetated with self-sustaining vegetation (such as grasses and/or other vegetation) on the surface. (This PDF to be verified prior to approval of the Final Cap Design Plan by the DTSC, Unit Chief, Brownfields & Environmental Restoration.)

PDF 1-3 The RPs would conduct weed abatement and litter control on the vegetated cap cover on a periodic basis to maintain the appearance and low-lying vegetation of the cap and minimize the potential for fire hazard. (This PDF to be verified through compliance reports submitted by the RPs to the DTSC, Unit Chief, Brownfields & Environmental Restoration.)

PDF 1-4 The position of the new fence lines along Magnolia Street and Hamilton Avenue would be located along the property line approximately 20 and 30 feet further from each street, respectively, than presently positioned. Also, with the 15-foot wide perimeter road along Magnolia Street and Hamilton Avenue, the cap would not begin to rise until approximately 35 to 45 feet inside the present fence line. (This PDF to be verified prior to approval of the Final Cap Design Plan by the DTSC, Unit Chief, Brownfields & Environmental Restoration.)

Air Quality

PDF 2-1 All off-road diesel construction equipment remaining on-site for more than 15 work days shall meet USEPA Tier 3 off-road emission standards, if commercially available locally. Use of Tier 3 engines results in a substantial reduction in NO_X emissions compared to similar Tier 2 or lower engines, and has been shown to increase fuel economy over similar Tier 2 engines.[20] Documentation of all off-road diesel construction equipment on-site including Tier 3 certification shall be maintained and made available to DTSC for inspection upon request.

PDF 2-2 All on-road waste haul trucks exporting soil to the appropriate receiver facility shall be model year 2007 or newer or retrofitted to comply with USEPA Year 2007 on-road

[20] *Komatsu Technical Report, Development of Tier 3 Engine ecot3, Vol. 52, No. 157, http://www.komatsu.com/CompanyInfo/profile/report/pdf/157-03_E.pdf. 2006. Accessed June 2013.*

emissions standards. Documentation of all on-road trucks exporting soil shall be maintained and made available to DTSC for inspection upon request.

PDF 2-3 The Project would prohibit the idling of on- and off-road heavy duty diesel vehicles for more than five minutes at a time. This project design feature is consistent with California regulations and laws as well as CARB Air Toxics Control Measure (ATCM) requirements.

PDF 2-4 The Project, during the remediation activities, would implement a perimeter air monitoring plan (AMP). The AMP include real-time perimeter air monitoring for odors, dust, and volatile chemicals, as well as more limited time-integrated sampling for volatile chemicals and dust at the locations and frequencies outlined in the AMP, which will be approved by the DTSC. During the excavation activities, water and/or Rusmar® foam, or similar suppressant (e.g. Soil Seal), would be applied to the waste materials as necessary to suppress potential dust, odors, and emissions, including volatiles. The AMP would include action levels with corresponding actions if/when action levels are exceeded. Air monitoring logs will be maintained on-site at all times per the AMP. A log containing dates on which action levels are triggered and response will be maintained on-site. These logs will be made available to DTSC and SCAQMD for inspection upon request.

PDF 2-5 A protective cap, inclusive of a gas collection and treatment system, would be installed to collect and treat landfill gas and other emissions generated by the Site. A vegetated cover would be planted and maintained on the completed protective cap.

PDF 2-6 The Project would comply with applicable SCAQMD rules that govern the control of air pollutant emissions from the Site, including: SCAQMD Rule 1150 – Excavation of Landfill Site, and SCAQMD Rule 1166 – Volatile Organic Compound Emissions from Decontamination of Soil.

- Submit a Mitigation Plan in accordance with Attachment A of SCAQMD Rule 1166, and obtain approval from the SCAQMD. A copy of the approved plan must be on-site during the entire excavation period.
- Monitor for the presence of VOC, and implement the approved mitigation plan when VOC-contaminated soil, as defined in Rule 1166, is detected.
- If required, obtain a SCAQMD Permit for Project activities, and provide a copy of said Permit to the DTSC.

PDF 2-7 During excavation of Pit F, a temporary structure (e.g., Sprung or similar) would be installed to capture potential odors and volatile emissions resulting from soil handling. Exhaust from Pit F will be treated using granular activated carbon (GAC) units which will be maintained according to manufacturer specifications. Off-road equipment operating under the Pit F temporary structure will be snorkeled (exhausted) directly outside of the structure for worker safety reasons. The temporary structure and GAC would capture and control at least 95 percent of VOC emissions. Materials excavated from Pit F would be placed in sealed or covered bins that would be loaded onto trucks for transport off-site, resulting in lower volatile emissions. Maintenance logs for the GAC system, including dates activated carbon is changed, will be maintained on-site.

PDF 2-8 The Project would implement fugitive dust control measures consistent with SCAQMD rules and regulations. The dust control measures would consist of various elements including: proper maintenance and watering of internal haul roads; water spraying of soil excavated and placed for cover or soil reconsolidation; applying water on intermediate soil cover areas; and seeding/planting vegetation on the completed protective cap. This project design feature is consistent with SCAQMD Rule 403 requirements.

PDF 2-9 Traffic speeds of no more than 5 miles per hour (mph) would be maintained for haul trucks when on-site, and no more than 15 mph for non-haul truck vehicles on all on-site, unpaved road surfaces. Signs will be posted throughout the Site to remind equipment operators and truck drivers of the speed limits.

PDF 2-10 Exposed surfaces and active excavation sites would be controlled with water and/or suppressants certified by CARB, the SCAQMD, or other air pollution control agency, to control fugitive dust. Such suppressants include foams, nontoxic binders, or other suppressants to reduce fugitive dust emissions. Logs of water purchase or usage and suppressant application (including brand/manufacturer, date of application, area treated and amount applied) will be maintained on-site and made available to DTSC and SCAQMD for inspection upon request.

PDF 2-11 Prior to leaving the Site, each haul truck, and other delivery trucks that come in contact with Site waste, would be inspected and put through procedures as necessary to remove loose debris from tire wells and on the truck exterior. Haul truck operators (drivers) would be required to have the proper training and registration by the State and as applicable to the material they would be hauling. Trucks transporting hazardous waste are required to maintain a hazardous waste manifest that describes the content of the materials. These manifests would be supplied by the waste receiver facility and prepared by the contractor or trucking company and the Ascon Landfill Site RP representative(s) prior to export off-site. The contracted trucking company would be a certified hazardous waste transportation contractor, if the material is profiled as hazardous. A log of manifest data will be maintained on-site and made available to DTSC for inspection upon request.

PDF 2-12 Waste haul trucks and soil delivery trucks entering and exiting the Site would be required to follow a City-approved traffic plan that establishes the trucking route, days and hours of truck operation, the maximum number of trucks per day, and various requirements to provide traffic, pedestrian and bicycle safety. Truck operators will be provided with a trucking route map and hours of operation allowed.

PDF 2-13 To the maximum practical extent, recyclable materials, including non-hazardous construction and demolition debris, would be reused or recycled.

Biological Resources

No PDFs are applicable.

Geology and Soils

PDF 4-1 Prior to the start of construction, a geotechnical evaluation prepared by a registered geotechnical engineer would be prepared and submitted to the DTSC for review and approval. The evaluation would comply with all applicable state and local code requirements and would include, but not be limited to:

- Analysis of the expected seismic ground shaking at the Site from known active faults using applicable methods;
- Analysis of the liquefaction potential using applicable methods;
- Analysis of the potential for earthquake-induced settlements using applicable methods;
- Analysis of the earthquake-induced lateral spreading using applicable methods;
- Analysis of the fault rupture potential and its impacts. The analysis should be performed using applicable methods;
- Slope stability analysis to ensure the slopes for the cap will be stable from the expected ground shaking and potential liquefaction hazards;
- Analysis of geotechnical recommendations for grading, including suitability of imported soil, excavation characteristics, and placement and compaction of fill material;
- Development of site-specific design measures to address seismic, liquefaction, settlement, slope-stability, grading and other geologic hazards in accordance with the geotechnical analyses; and
- Deterministic analysis of potential seismic ground shaking and recommended structural features needed to minimize seismic damage to the landfill cap.

PDF 4-2 Prior to construction, a site-specific Health and Safety Plan would be developed and submitted to DTSC for review in accordance with applicable regulations. Specific measures to reduce the potential physical hazards associated with strong seismic ground shaking, liquefaction, subsidence, unstable soil conditions, temporary slopes and excavations, permanent slopes, and other earthwork-related conditions during construction would be addressed in accordance with the applicable regulations.

PDF 4-3 To control soil erosion during construction, Best Management Practices (BMPs) for the control of erosion during construction would be incorporated into the Project's Storm Water Pollution Prevention Plan (SWPPP) and made available to the City of Huntington Beach for review prior to the initiation of construction. Long-term erosion control would include the planting and maintenance of grass and/or other shallow-rooted vegetation within the 2-foot soil cover overlying the Site's engineered cap. This PDF to be verified prior to the completion of construction activities by DTSC, Unit Chief, Brownfields & Environmental Restoration.

PDF 4-4 During construction, the Project geotechnical engineer would regularly monitor construction activities and test soils to ensure that materials used in construction and grading of slopes are consistent with the recommendations presented in the site-specific geotechnical evaluation and the plans and specifications approved by the regulatory

agency. This PDF to be verified through monthly compliance reports submitted by the RPs to the DTSC, Unit Chief, Brownfields & Environmental Restoration.

PDF 4-5 During construction, the Project geotechnical engineer would regularly monitor stability of slopes and excavations to ensure safe working conditions for personnel and equipment. This PDF would be verified through monthly compliance reports submitted by the RPs to the DTSC, Unit Chief, Brownfields & Environmental Restoration.

PDF 4-6 During the long term operation of the remediated capped Site, the Responsible Parties, in coordination with the DTSC, would provide monitoring and inspection of the cap to ensure the structural integrity of the cap and permanent fill slopes. Geotechnical monitoring would occur during operations and maintenance (O&M), per the O&M Plan for the Site. Any cracks, subsidence, settling, or other physical changes (including, but not limited to, evidence of burrowing activity by coyotes or other medium- to large-sized mammals capable of breaching the geonet biotic layer) to the cap would be noted, and damage would be repaired in accordance with DTSC standards and/or other applicable regulatory requirements. This PDF to be verified through quarterly compliance reports submitted by the RPs to the DTSC, Unit Chief, Brownfields & Environmental Restoration.

PDF 4-7 The operation and maintenance of the gas collection and treatment system would include contingency plans in the event of a significant seismic event or power outage. Preliminarily, following each seismic event of magnitude 5 or greater in the immediate vicinity of the Site, inspection and routine monitoring of the system would be performed in accordance with a DTSC-approved Operations and Maintenance (O&M) Plan.

Greenhouse Gas Emissions

PDF 5-1 All off-road diesel construction equipment remaining on-site for more than 15 work days shall meet USEPA Tier 3 off-road emission standards, if commercially available locally. Use of Tier 3 engines has been shown to increase fuel economy over similar Tier 2 engines.[21]

PDF 5-2 All on-road export haul trucks shall at minimum comply with USEPA 2007 on-road emissions standards.

PDF 5-3 The Project would comply with the use of low carbon vehicle fuels as required under State law.

PDF 5-4 To the maximum practical extent, recyclable materials, including non-hazardous construction and demolition materials, would be reused or recycled.

PDF 5-5 A protective cap, inclusive of a landfill gas collection and treatment system, would be installed to treat landfill gas and minimize odors generated by the Site.

[21] *Komatsu Technical Report, Development of Tier 3 Engine ecot3, Vol. 52, No. 157, http://www.komatsu.com/CompanyInfo/profile/report/pdf/157-03_E.pdf. 2006. Accessed June 2013.*

Hazards and Hazardous Materials

Project design features listed in other sections are applicable to reducing potential hazards and hazardous materials impacts. These PDFs include the following:

- PDF 2-2 to PDF 2-11 (Air Quality)
- PDF 4-1 (Geology and Soils)
- PDF 7-1 and 7-9 (Water Quality)

No other PDFs are applicable to hazards and hazardous materials.

Water Quality

PDF 7-1 Prior to the start of RAP implementation, an application for a Coastal Development Permit would be submitted by the RPs to the City of Huntington Beach and a Notice of Intent would be submitted to the SWRCB to comply with the General Construction NPDES Permit. To comply with NPDES Permit conditions, a Water Quality Management Plan (WQMP) and Construction Storm Water Pollution Prevention Plan (SWPPP) would include descriptions of best management practices (BMPs) that would reduce the potential for discharge of pollutants in runoff into the storm drain system during grading and construction. Typical BMPs include silt fences, fiber rolls, stockpile management, spill prevention and control, and the use of protective sheeting or tarps prior to any rain event on steep slopes. BMPs would minimize erosion from, and stabilization of, disturbed surfaces. Site specific BMPs would be available to the City of Huntington Beach for review. The SWPPP would require that all structural and non-structural BMPs described in the WQMP be installed and implemented in accordance with approved plans and specifications prior to the beginning of construction activities.

PDF 7-2 Plans for the remedy stormwater collection system would be submitted for approval to the City of Huntington Beach Department of Public Works. The stormwater collection system would be designed to divert rainfall from the Site surface to two unlined detention basins. The conceptual cap design includes two detention basins to be located on-site in uncapped areas of native or imported soils. The uncapped detention basins, perimeter access road and City parcel would be unlined to allow percolation. A diversion system consisting of V-ditches and/or swales would be installed along the perimeter of the final cover to collect and redirect runoff from the cap to the detention basins prior to runoff entering the perimeter road and City parcel. The system would be in compliance with the General Industrial NPDES Permit with the California SWRCB and the Site's Industrial SWPPP. The stormwater collection plan would be reviewed and approved by the City of Huntington Beach Department of Public Works prior to construction of the stormwater detention basins.

PDF 7-3 Silty-clay layers which underlie the site and provide protection for the existing groundwater table would be kept in an undisturbed condition to the maximum extent feasible. Visual soil inspections would occur as necessary by a qualified geologist during excavation activities that are anticipated to occur close to the silty clay layer to ensure silty clay layers are preserved.

PDF 7-4 If groundwater of the SPA were encountered during excavation activities (besides Pit F), the removal of materials at that location would be terminated, with the exception of at Pit F. The excavation site (except at Pit F) would be backfilled with soils to prevent waste materials from entering groundwater. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in monthly compliance certification reports submitted by the project contractor.

PDF 7-5: For contingency planning, construction dewatering may be required during removal of Pit F materials. If dewatering is necessary, contact water would be disposed off-site or treated prior to discharge in accordance with applicable NPDES and dewatering permit requirements implemented by the SARWQCB. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in monthly compliance certification reports submitted by the project contractor.

PDF 7-6 After completion of the cap, a 30-year Operations and Maintenance (O&M) Plan would outline long-term groundwater monitoring requirements under a Groundwater Contingency Program. The long-term groundwater-monitoring program would be similar to the interim groundwater monitoring program now in place. Groundwater monitoring and sampling would be performed at regular intervals from wells located generally near the Site perimeter. During the proposed long-term program, if any chemical concentrations in a perimeter, downgradient well are detected above threshold limits (i.e., Maximum Contaminant Levels or vapor-risk values), and are not within background levels (i.e., above levels already present due to natural occurrence), steps would be taken to further assess and remedy the condition as appropriate. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in semi-annual groundwater monitoring reports submitted by the RPs.

PDF 7-7 Installation of new monitoring wells would be performed in accordance with the Cal EPA guidelines, Monitoring Well Design and Construction for Hydrogeologic Characterization (1995) and California Well Standards (1991). Well replacement activities would comply with the Cal EPA's and State of California guideline standards for borehole construction; stratigraphic control; installation procedures; well casing and screen materials; well casing diameters; casing cleaning requirements; well intake design; documentation of well design, construction, and development; and processes for the decommissioning of groundwater monitoring wells and boreholes. All work would be conducted by qualified contractors. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in monthly compliance certification reports submitted by the project contractor.

PDF 7-8 During implementation of the RAP, site inspections would be conducted prior to and during rain events and once per month during the wet season per the Site-specific Construction SWPPP to verify that on-site stormwater handling improvements (BMPs) are operating correctly and so that repairs can be made, as needed. During construction and operation, stormwater runoff from the Site would be sampled and tested per applicable SARWCQB requirements, and results would be reported to the SARWQCB. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in Annual Report(s) for Stormwater Discharges Associated with Construction Activities for the Site submitted by the Responsible Parties.

PDF 7-9 The proposed cap system would include a geomembrane layer on the top deck to minimize surface water infiltration into the underlying waste materials to a degree equivalent to cover systems installed at transfer, storage and disposal facilities, the design requirements for which are set forth in California's Title 22, section 66265.310(a). The side slopes would include a four-foot thick vegetated evapotranspirative soil layer, geonet biotic layer, and two-foot thick foundation layer to minimize precipitation infiltrating the waste materials and, thus, potentially entering the groundwater supply. The cap would also prevent the exposure of the waste materials to collected or sheet-flow precipitation. The design of the cap will be reviewed and approved by the DTSC, Unit Chief, Brownfields & Environmental Restoration prior to construction of the cap.

PDF 7-10 A cover of grass and/or other shallow-rooted vegetation would be provided on the top deck and side slopes of the cap to control erosion and minimize potential movement of materials from under the cap into surface runoff. In addition, the perimeter road would be surfaced with gravel to minimize soil erosion during rain events. The design of the cap and side slopes will be reviewed and approved by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to construction of the cap.

Land Use

No PDFs are applicable.

Noise

PDF 9-1 The Project contractor(s) shall equip all construction machinery and equipment, fixed or mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.

PDF 9-2 Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.

PDF 9-3 To the extent feasible, construction activities shall be scheduled so as to avoid operating several pieces of heavy equipment simultaneously, which causes high noise and vibration levels.

Traffic

PDF 10-1 Prior to the start of ~~construction~~ hauling activities, the project contractor, in coordination with DTSC, Caltrans, ~~and~~ City of Huntington Beach, and City of Fountain Valley, as necessary, would prepare a Construction Traffic Management/Haul Route Plan to be implemented during implementation of the RAP. The Plan would stipulate that all haul trucks contracted for export trips, regardless of point of origin or destination, use Beach Boulevard for access to/from the I-405 Freeway. Import and supply trucks could use either Beach Boulevard or Brookhurst Street for access to/from the I-405 Freeway. Up to a maximum of 100 trucks per day traveling to and from the Site could utilize Beach Boulevard, with the remaining trucks utilizing Brookhurst Street. The Plan would identify all traffic control measures, signs, and delineators to be implemented by the construction contractor through the duration of ~~construction~~ hauling activities associated with the RAP. The Construction Traffic Management Plan would require coordination

with emergency providers regarding any lane closures or other construction effects that would impact emergency access. The Plan shall also consider construction traffic from nearby simultaneous construction activities and pedestrian safety related to school and bike routes. The Plan would be subject to final approval by the City of Huntington Beach Public Works Department and City of Fountain Valley Public Works Department, as necessary.

PDF 10-2 During RAP construction activities that encroach upon Magnolia Street or Hamilton Avenue, temporary barricades (e.g., "K rails") would be placed on the southbound side of Magnolia Street and/or the eastbound side of Hamilton Avenue to provide a buffer between construction activities and the public street. If a temporary lane closure is required along Hamilton Avenue, the Responsible Parties would coordinate with the City of Huntington Beach Public Works Department to identify appropriate traffic measures such as lane restriping or re-painting the directional lane arrows, if determined necessary in consultation with City Staff. This PDF to be verified as part of the Construction Traffic Management/Haul Route Plan subject to review and approval by the City of Huntington Beach Public Works Department.

PDF 10-3 During RAP construction activities, left turns by trucks entering or exiting the Site shall be limited to four or fewer axle, single-trailer trucks unless assisted by safety flagmen to direct vehicular traffic, pedestrians and bicyclists. This PDF to be verified as part of the Construction Traffic Management Plan subject to review and approval by the City of Huntington Beach Public Works Department.

PDF 10-4 During RAP construction activities, on-going communication would be maintained with school administration at Edison High School, providing sufficient notice to forewarn students and parents/guardians when existing pedestrian, bicycle and vehicle routes to the school may be affected to maintain school traffic, bicycle and pedestrian safety. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

PDF 10-5 During RAP construction activities, to maintain school traffic, bicycle and pedestrian safety, haul trucks or trucks larger than four-axle, single trailer trucks would not be permitted to travel on Magnolia Street or Hamilton Avenue past Edison High School. This PDF to be verified within the haul route plan subject to approval by the City of Huntington Beach Public Works Department.

PDF 10-6 During RAP construction activities, temporary traffic control signage and flagmen would be present during import/export on Magnolia Street and Hamilton Avenue at the ingress/egress driveways to direct vehicular traffic, pedestrians and bicyclists around the construction site in order to maintain school traffic and pedestrian safety. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

PDF 10-7 During RAP construction activities that encroach upon Magnolia Street or Hamilton Avenue, signage would be posted along the Site perimeter to notify pedestrians to use the

sidewalks along the north side of Hamilton Avenue and the east side of Magnolia Street in place of the barricaded areas on the south side of Hamilton Avenue and the west side of Magnolia Street. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

PDF 10-8 During RAP construction activities that encroach upon Magnolia Street or Hamilton Avenue, signage would be posted along the Site perimeter to notify cyclists of alternative routes that can be used in lieu of the eastbound Hamilton Avenue and the southbound Magnolia Street bike lanes. An alternative east-west bicycle route near the Site would be Banning Avenue. Alternative north-south bicycle routes include Newland Street, Bushard Street, and Brookhurst Street. These alternative routes provide connection to many of the same destinations as Hamilton Avenue and Magnolia Street, particularly to the Pacific Ocean. This PDF to be verified by the DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

7. USES OF THE EIR AND REQUIRED AGENCY ACTIONS AND PERMITS

Permits and other approvals required prior to the implementation of the RAP are anticipated to include, but may not be limited to, those listed in **Table R2-5**, *Subsequent Permits, Approvals, Review and Consultation Requirements*.

Table R2-5

Subsequent Permits, Approvals, Review and Consultation Requirements

Agency	Approval
California Department of Toxic Substances Control	▪ Approval of the proposed RAP pursuant to California Health and Safety Code Section 25356.1 ▪ Approval of the Final Design of the Cap
State Water Resources Control Board	▪ General Construction NPDES Permit for construction activities. (The existing General Industrial NPDES Permit would be kept in place as necessary.)
South Coast Air Quality Management District	▪ Rule 1166/Rule 1150 permit for any necessary handling of VOC-impacted materials ▪ Permit-to-Construct/Permit-to-Operate for the planned emissions control cell in Lagoon 1-2 ▪ Permit-to-Construct/Permit-to-Operate for the landfill gas collection and treatment system
City of Huntington Beach	▪ Coastal Development Permit per California Coastal Act ▪ Approval of Construction Traffic Management/Haul Route Plan ▪ Construction and Grading Permits ▪ Permit(s) for encroachment into street and sidewalk rights of way.
Orange County Health Care Agency, Environmental Health Division	▪ Well Construction/Destruction Permit to install/abandon/destruct groundwater monitoring wells.
City of Fountain Valley	▪ Approval of Construction Traffic Management/Haul Route Plan

Source: PCR Services Corporation, 2013.

R4.9 NOISE

This section analyzes potential impacts resulting from noise and vibration associated with construction and operation of the Project. The analysis describes the existing noise environment within the vicinity of the Site, estimates future noise levels at surrounding land uses resulting from construction and operation of the Project, identifies the potential for significant impacts, and provides mitigation measures to address significant impacts. Noise calculation worksheets are included in "Revised Appendix F" of this Recirculated Draft EIR.

1. ENVIRONMENTAL SETTING

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perceptibility of sound is subjective, and the physical response to sound complicates the analysis of sound's impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness." That is, a change in sound level of 3 dB is considered "just perceptible," a change in sound level of 5 dB is considered "clearly noticeable", and a change in 10 dB is recognized as "twice as loud."[1]

Sound pressure magnitude is measured and quantified using a logarithmic ratio of pressures, the scale of which gives the level of sound in decibels (dB). The human hearing system is not equally sensitive to sound at all frequencies. Therefore, to approximate this human, frequency-dependent response, the A-weighted filter system is used to adjust measured sound levels. The A-weighted sound level is expressed in "dBA." This scale de-emphasizes low frequencies to which human hearing is less sensitive and focuses on mid- to high-range frequencies.

Although the A-weighted scale accounts for the range of people's response, and therefore, is commonly used to quantify individual event or general community sound levels, the degree of annoyance or other response effects also depends on several other perceptibility factors. These factors include:

- Ambient (background) sound level;
- Magnitude of sound event with respect to the background noise level;
- Duration of the sound event;
- Number of event occurrences and their repetitiveness; and
- Time of day that the event occurs.

In an outdoor environment, sound levels attenuate through the air as a function of distance. Such attenuation is called "distance loss" or "geometric spreading" and is based on the source configuration: point source or line source. For a point source, the rate of sound attenuation is 6 dB per doubling of distance from the noise source. For example, a sound level of 50 dBA at a distance of 25 feet from the noise source would attenuate to 44 dBA at a distance of 50 feet. A point source can attenuate at a higher rate of 7.5 dBA at acoustically "soft" sites, which are noise-absorptive sites characteristic of normal earth and most ground

[1] *California Department of Transportation, Technical Noise Supplement, November 2009.*

with vegetation.[2] For a line source, such as a constant flow of traffic on a roadway, the rate of sound attenuation is 3 dB per doubling of distance.[3] Empirical evidence has shown that, where a line source propagates close to "soft" ground, a more suitable drop-off rate to use is 4.5 dBA per doubling of distance.[4]

In addition, structures (e.g., buildings and solid walls) and natural topography (e.g., hills) that obstruct the line-of-sight between a noise source and a receptor further reduce the noise level if the receptor is located within the "shadow" of the obstruction, such as behind a sound wall. This type of sound attenuation is known as "barrier insertion loss." If a receptor is located behind the wall but still has a view of the source (i.e., line-of-sight not fully blocked), some barrier insertion loss would still occur, however to a lesser extent. Additionally, a receptor located on the same side of the wall as a noise source may actually experience an increase in the perceived noise level as the wall reflects noise back to the receptor, thereby compounding the noise. Noise barriers can provide noise level reductions ranging from approximately 5 dBA (where the barrier just breaks the line-of-sight between the source and receiver) to an upper range of 20 dBA with a more substantial barrier.[5]

Community noise levels usually change continuously during the day. The equivalent sound level (L_{eq}) is normally used to describe community noise. The L_{eq} is the equivalent steady-state A-weighted sound level that would contain the same acoustical energy as the time-varying A-weighted sound level during the same time interval. For intermittent noise sources, the maximum noise level (L_{max}) is normally used to represent the maximum noise level measured during the measurement. Maximum and minimum noise levels, as compared to the L_{eq}, are a function of the characteristics of the noise source. As an example, sources such as generators have maximum and minimum noise levels that are similar to L_{eq} since noise levels for steady-state noise sources do not substantially fluctuate. However, as another example, vehicular noise levels along local roadways result in substantially different minimum and maximum noise levels when compared to the L_{eq} since noise levels fluctuate during pass-by events. The City of Huntington Beach ("City") Municipal Code and the City of Fountain Valley Municipal Code use~~s~~ the L_{eq} to evaluate noise violations.

To assess noise levels over a given 24-hour time period, the Community Noise Equivalent Level (CNEL) descriptor is used. CNEL is the time average of all A-weighted sound levels for a 24-hour period with a 10 dBA adjustment (upward) added to the sound levels which occur in the night (10 p.m. to 7 a.m.) and a 5 dBA adjustment (upward) added to the sound levels which occur in the evening (7 p.m. to 10 p.m.). These adjustments attempt to account for increased human sensitivity to noise during the quieter nighttime periods, particularly where sleep is the most probable activity.

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. With respect to ground-borne vibration, velocity and acceleration, descriptors are typically used, as most vibration sensors are either a velocity or an acceleration sensor. In addition, the response of humans, buildings, and equipment to vibration is more accurately

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2 *U.S. Department of Transportation, Federal Highway Administration, Highway Noise Fundamentals, 1980, 97. An acoustically "hard" or reflective site does not provide any excess ground-effect attenuation and is characteristic of asphalt, concrete, and very hard packed soils. An acoustically "soft" or absorptive site is characteristic of normal earth and most ground with vegetation.*

3 *Caltrans, Technical Noise Supplement (TeNS), 2009.*

4 *U.S. Department of Transportation, Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guidance, 2010 (revised 8/11/2010), 10.*

5 *Ibid.*

described using velocity or acceleration.[6] Vibration amplitudes are usually described as peaks, as in peak particle velocity (PPV). The peak level represents the maximum instantaneous peak of the vibration signal. In addition, vibrations can be measured in the vertical, horizontal longitudinal, or horizontal transverse directions. Ground vibrations are most often greatest in the vertical direction.[7] Therefore, the analysis of ground-borne vibration is addressed in the vertical direction.

Regulatory Framework

Many government agencies have established noise standards and guidelines to protect citizens from potential hearing damage and various other adverse physiological and social effects associated with noise and ground-borne vibration. The City of Huntington Beach and City of Fountain Valley have ~~has~~ adopted a number of policies that are based in part on federal and State regulations and are intended to control, minimize or mitigate environmental noise effects. The regulations and policies that are relevant to Project construction and operation noise are discussed below.

Noise

Applicable City of Huntington Beach Regulations and Policies

Noise Element

- Objective N 1.4- Minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or "noise-sensitive" uses.

Policy N. 1.4.3- Require that the parking areas of all commercial and industrial land uses, which abut residential areas, to be buffered and shielded by walls, fences, or adequate landscaping.

Huntington Beach Municipal Code

Section 8.40.050, Exterior Noise Standards

(a) The following noise standards, unless otherwise specifically indicated, shall apply at exterior of all residential properties within a designated noise zone:

Exterior Noise Standards

	Noise Zone	Noise Level	Time Period
1	All residential properties	55 db(A)	7 A.M. - 10 P.M.
		50 db(A)	10 P.M. - 7 A.M.
2	All professional office and public institutional properties	55 db(A)	Anytime
3	All commercial properties with the exception of professional office properties	60 db(A)	Anytime
4	All industrial properties	70 db(A)	Anytime

[6] *Federal Transit Authority, Transit Noise and Vibration Impact Assessment, Final Report, May 2006.*
[7] *California Department of Transportation (Caltrans), Transportation Related Earthborne Vibrations, page 4, February 2002.*

(b) In the event the alleged offensive noise consists entirely of impact noise,[8] simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by five (5) db(A).

Section 8.40.060, Exterior Noise Levels Prohibited.

It shall be unlawful for any person at any location within the incorporated area of the City to create any noise, or to allow the creation of any noise on property owned, leased, occupied, or otherwise controlled by such person, which causes the noise level when measured on any residential, public institutional, professional, commercial or industrial property, either within or without the City, to exceed the applicable noise standards:

(a) For a cumulative period of more than thirty (30) minutes in any hour;

(b) Plus 5 db(A) for a cumulative period of more than fifteen (15) minutes in any hour;

(c) Plus 10 db(A) for a cumulative period of more than five (5) minutes in any hour;

(d) Plus 15 db(A) for a cumulative period of more than one (1) minute in any hour; or

(e) Plus 20 db(A) for any period of time.

In the event the ambient noise level exceeds any of the first four noise limit categories above, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

Huntington Beach Municipal Code Noise Exemption

Section 8.40.090, Special Provisions

The following activities shall be exempt from the provisions of this chapter:

(d) Noise sources associated with construction, repair, remodeling, or grading of any real property; provided a permit has been obtained from the City; and provided said activities do not take place between the hours of 8 P.M. and 7 A.M. on weekdays, including Saturday, or at any time on Sunday or a federal holiday.

Sections (a) through (c) and (e) through (k) of Section 8.40.090 are not described here since they are not relevant to the project implementation.

Neither the City of Huntington Beach nor the County of Orange has quantitative standards for construction noise levels. Therefore, for purposes of this analysis, DTSC has utilized the Federal Transit Administration's (FTA) guidelines suggested limit of 80 dBA for an 8-hour L_{eq} as the noise standard for determining adverse noise impacts during short-term construction activities.

[8] *"Impact Noise" shall mean the noise produced by the collision of one mass in motion with a second mass which may be either in motion or at rest, HBMC Section 8.40.020.*

Applicable City of Fountain Valley Regulations and Policies

Fountain Valley Noise Element

Policy 7.1.2 – Establish measures to reduce noise impacts from traffic noise sources.

a. The City may require the construction of barriers to mitigate sound emissions where necessary or where feasible. Barriers shall not have gaps or openings. Wherever possible, freeway walls shall not stop short of bridge overcrossings but shall continue until meeting with the walls supporting the bridges. Without prevention, openings or gaps could render the sound walls ineffective.

b. The City shall insure the effective enforcement of City, State and Federal noise levels by all appropriate City divisions.

Fountain Valley Municipal Code

Haul trucks would travel along a portion of Brookhurst Street within the City of Fountain Valley. According to the City of Fountain Valley Municipal Code, the following ordinances may apply.

6.28.050, Exterior Noise Standards

(e) The following noise standards, unless otherwise specifically indicated, shall apply to all residential properties within a designated noise zone:

Noise Zone	Noise Level	Time Period
1	55 db(A)	7 A.M. - 10 P.M.
	50 db(A)	10 P.M. - 7 A.M.

In the event the alleged offensive noise consists entirely of impact noise, simple tone noise, speech, music, or any combination thereof, each of the above noise levels shall be reduced by 5 dB(A).

(f) It is unlawful for any person at any location within the city to create any noise, or to allow the creation of any noise on property owned, leased, occupied or otherwise controlled by such person, when the foregoing causes the noise level, when measured on any other residential property, either incorporated or unincorporated, to exceed:

(1) The noise standard for a cumulative period of more than thirty minutes in any hour; or

(2) The noise standard plus five dB(A) for a cumulative period of more than fifteen minutes in any hour; or

(3) The noise standard plus ten dB(A) for a cumulative period of more than five minutes in any hour; or

(4) The noise standard plus fifteen dB(A) for a cumulative period of more than one minute in any hour; or

(5) The noise standard plus twenty dB(A) for any period of time.

(g) In the event the ambient noise level exceeds any of the first four noise limit categories set forth in subsection (b) of this section, the cumulative period applicable to said category shall be increased to reflect said ambient noise level. In the event the ambient noise level exceeds the fifth noise limit category, the maximum allowable noise level under said category shall be increased to reflect the maximum ambient noise level.

6.28.070 Special provisions.

The following activities shall be exempted from the provisions of this chapter:

(5) Noise sources associated with the construction, repair, remodeling or grading of any real property, provided said activities take place between the hours of seven a.m. and eight p.m. Monday through Friday, nine a.m. through eight p.m. on Saturday and at no time on Sunday or any legal holiday. For purposes of this exception the use of saws, buffers, sanders, drills, and sprayers shall be included, as shall similar activity;

6.28.148, Commercial Delivery Prohibition.

No person shall make, cause, accept or permit a delivery of goods, merchandise, material, equipment, meat, poultry, fish, groceries, dairy products, foodstuffs, food, or beverage within one hundred feet of a residentially zoned property between the hours of ten p.m. and seven a.m. or at any time on a Sunday or legal holiday so as to disturb the peace and quiet of any reasonable person of normal sensitivity residing in the area. Proof of such a violation may be established by the testimony of a peace officer, code enforcement officer, or any other person. For purposes of this section "delivery" shall not only mean the completed act of a delivery, but all preparatory and related steps taken within the one hundred-foot distance including, but not limited to, driving, stopping, idling or parking a vehicle, the opening or shutting of doors, or the movement of pallets, dolleys, floor jacks, or lifts. (Ord. 1173 § 1, 1992)

Vibration

The City of Huntington Beach currently does not have any specific policies or guidelines relative to ground-borne vibration. As such, the following is a summary of the California Department of Transportation (Caltrans)'s ground-borne vibration policies and guidelines. With respect to ground-borne vibration from construction activities, Caltrans has adopted guidelines/recommendations to limit ground-borne vibration based on the age and/or condition of the structures that are located in close proximity to construction activity. With respect to residential and commercial structures, Caltrans's technical publication, titled "Transportation- and Construction-Induced Vibration Guidance Manual" (June 2004), provides a vibration damage potential threshold criteria of 0.5 inches per second PPV for older residential structures, 1.0 inch-per-second PPV for newer residential structures, and 2.0 inches per second PPV for modern industrial/commercial buildings. Human perception ranges from 0.02 to 0.1 inches per second PPV. The Caltrans' Transportation- and Construction-Induced Vibration Guidance Manual also provides human perception threshold of 0.02 inches per second PPV.

Existing Conditions

Noise-Sensitive Receptor Locations

Some land uses, such as residences, schools, motels and hotels, libraries, and hospitals, are considered more sensitive to intrusive noise than others due to the types of activities typically involved at the receptor location. There are residential uses located east, southeast, and northwest of the Site. Existing noise sensitive uses in the project vicinity are described below:

- Single-family residential uses are located approximately 100 feet to the east of the Site.
- Edison High School is located approximately 400 feet to the northeast of the Site.
- A Fire Station (where employees reside while on shift) is located approximately 350 feet to the northeast of the Site.
- Single-family residential uses are located approximately 300 feet to the northwest of the Site.
- Mobile home uses are located approximately 1,600 feet to the west of the Site.

Ambient Noise Levels

The existing noise environment at the Site is dominated primarily by auto traffic on Hamilton Avenue and Magnolia Street. Other community noise sources include incidental noise from industrial-related activities, such as loading dock/delivery truck activities, parking, and refuse services activities, ambulance and police sirens, landscaping maintenance at nearby residential uses, and ocean surf. To quantify existing noise levels in the project area, short-term (15-minute) measurements were conducted at seven locations, identified as R1 though ~~R7~~ R11 in **Figure R4.9-1**, *Noise Measurement Locations*. The ambient noise measurements were conducted on Tuesday, April 16, 2013 (Locations R1-R7) and on Monday, April 7, 2014 (Locations R8-R11), as described below:

- Measurement Location R1: The noise measuring device (sound level meter) was placed east of the Site across Magnolia Street near single-family residential uses. Location R1 represents the existing general noise environment of single-family residential uses east of the Site.
- Measurement Location R2: The sound level meter was placed on the northeast corner of the intersection of Hamilton Avenue and Magnolia Street. The noise level at this location is considered representative of the existing noise environment of Edison High School and the Fire Station.
- Measurement Location R3: The sound level meter was placed north of Hamilton Avenue near single-family residential uses. This measurement location represents the existing noise environment of single-family residential uses along Hamilton Avenue northwest of the Site.
- Measurement Location R4: The sound level meter was placed west of Newland Street. This measurement location represents the existing noise environment of mobile home uses along Newland Street.
- Measurement Location R5: The sound level meter was placed north of Pacific Coast Highway near mobile home uses. This measurement location represents the existing noise environment of mobile home uses along Pacific Coast Highway.
- Measurement Location R6: The sound level meter was placed along Beach Boulevard between Atlanta Avenue and Pacific Coast Highway. This measurement location represents the existing noise

environment of residential uses along the truck route at Beach Boulevard, between Atlanta Avenue and Pacific Coast Highway.

- Measurement Location R7: The sound level meter was placed along Beach Boulevard between Atlanta Avenue and Indianapolis Avenue. This measurement location represents the existing noise environment of residential uses along Beach Boulevard between Atlanta Avenue and Indianapolis Avenue.
- Measurement Location R8: The sound level meter was placed along Brookhurst Street, between Banning Avenue and Hamilton Avenue. This measurement location represents the existing noise environment of residential uses along Brookhurst Street, between Banning Avenue and Hamilton Avenue.
- Measurement Location R9: The sound level meter was placed along Brookhurst Street, between Atlanta Avenue and Indianapolis Avenue. This measurement location represents the existing noise environment of residential uses along Brookhurst Street, between Atlanta Avenue and Indianapolis Avenue.
- Measurement Location R10: The sound level meter was placed along Brookhurst Street, between Adams Avenue and Yorktown Avenue. This measurement location represents the existing noise environment of residential uses along Brookhurst Street, between Adams Avenue and Yorktown Avenue.
- Measurement Location R11: The sound level meter was placed along Brookhurst Street, between Ellis Avenue and Talbert Avenue. This measurement location represents the existing noise environment of residential uses along Brookhurst Street, between Ellis Avenue and Talbert Avenue.

Noise measurements were conducted using Larson-Davis 820 Precision Integrated Sound Level Meters (SLM). The Larson-Davis 820 SLM is a Type 1 standard instrument as defined in the American National Standard Institute (ANSI) S1.4. All instruments were calibrated and operated according to the applicable manufacturer specification. The recording microphones were placed at a height of five feet above the local grade elevation. The sound level meters were set up to collect the 15-minute average noise level, L_{eq}.

Table R4.9-1, *Summary of Ambient Noise Measurements,* presents the existing noise levels in the vicinity of the Site. Based on field observation and measured sound data, the existing noise environment in the vicinity of the Site is dominated mainly by auto traffic noise. As indicated on Table R4.9-1, the noise sensitive receptors near the Site are currently exposed to an exterior noise level of 65 dBA east of the Site (Location R1) with noise levels ranging from 63 to 68 dBA near the Site's northern boundaries (Locations R2 and R3) during daytime hours. Mobile home uses (R4 and R5) along Newland Street and Pacific Coast Highway are exposed to exterior noise levels ranging from 64 to 71 dBA. Residential uses (R6 and R7) along Beach Boulevard are exposed to exterior noise levels ranging from 62 to 65 dBA. Residential uses (R8 through R11) along Brookhurst Street are exposed to exterior noise levels ranging from 71 to 78 dBA.

PCR

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0 0.5 1 Miles

Noise Measurement Locations and Existing Noise Sensitive Uses

RAP EIR - Ascon Landfill Site

Source: Google (Aerial), 2011; PCR Services Corporation, 2013.

FIGURE

R4.9-1

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Table R4.9-1

Summary of Ambient Noise Measurements

Measurement Location Date (Start Time) / Day of Week	Measured Ambient Noise Levels dBA (L_{eq} 15 minutes) Daytime
R1; 4/16/13 (11:41 A.M.)/ Tuesday	65
R2; 4/16/13 (11:23 A.M.)/ Tuesday	63
R3; 4/16/13 (11:04 A.M.)/ Tuesday	68
R4; 4/16/13 (10:28 A.M.)/ Tuesday	64
R5; 4/16/13 (10:44 A.M.)/ Tuesday	71
R6; 4/16/13 (10:06 A.M.)/ Tuesday	62
R7; 4/16/13 (09:46 A.M.)/ Tuesday	65
R8; 4/7/14 (10:47 A.M.)/ Monday	71
R9; 4/7/14 (11:11 a.m.)/ Monday	78
R10; 4/7/14 (11:32 a.m.)/ Monday	74
R11; 4/7/14 (11:56 a.m.)/ Monday	71

Source: PCR Services, ~~2013~~ 2014.

2. ENVIRONMENTAL IMPACTS

Significance Criteria

For purposes of this EIR, DTSC has utilized the checklist questions in Appendix G of the *CEQA Guidelines* as significance criteria to determine whether a project would have a significant environmental impact regarding noise. Based on the potential for noise impacts, the criteria identified below are included for evaluation in this EIR. Please refer to Section 6.0, *Other Mandatory CEQA Considerations*, for a discussion of other issues associated with the evaluation of noise where the characteristics of the Project made it clear that effects would not be significant and further evaluation in this section was not warranted.

Would the Project:

4.9-1 Result in exposure of persons to or generation of noise levels in excess of standards presumed in the local general plan or noise ordinance, or applicable standards of other agencies (refer to Impact 4.9-1);

4.9-2 Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project (refer to Impact Statement 4.9-2); and

4.9-3 Result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels (refer to Impact Statement 4.9-3)?

Based on the ~~City's~~ City of Huntington Beach and City of Fountain Valley regulations and DTSC's noise impact criteria described above, the Project would result in a significant noise impact if:

- Criterion 1– Construction activities during implementation of the RAP would occur outside the hours of 7:00 A.M. to 8:00 P.M. on weekdays, including Saturday, or at any time on Sunday or a federal holiday, unless a permit was obtained from the City allowing for a temporary exemption from the specified hours of construction;
- Criterion 2– Activities during implementation of the RAP would result in noise levels above the applicable standard of 80 dBA at a noise-sensitive property boundary for an 8-hour L_{eq} between the hours of 7:00 A.M. to 8:00 P.M. on weekdays, including Saturday; or
- Criterion 3 – Project-related stationary noise sources (e.g., mechanical fans) generate noise levels that would exceed measured ambient noise levels at the designated sensitive receptor locations.

As previously discussed, with respect to the community noise assessment, changes in noise levels of less than 3 dBA, in an urban setting, are generally not discernable to most people, while changes greater than 5 dBA are readily noticeable and would be considered a significant increase. Therefore, the significance threshold for noise resultant from off-site transportation sources (motor vehicles including trucks) is based on human perceptibility to changes in noise levels (increases), with consideration of existing ambient noise conditions. Therefore, the Project would have a significant impact on noise levels from off-site transportation sources if following criterion is exceeded:

- Criterion 4 – The Project's transportation sources would cause ambient noise levels to increase by 3 dBA CNEL or more.

As previously described, the City of Huntington Beach does not have a significance criterion to assess vibration impacts during implementation of the RAP. Thus, the Caltrans standards described above are used to evaluate potential vibration impacts related to Project construction. Thus, the Project would result in a significant vibration impact if:

- Criterion ~~4~~5 – Activities during implementation of the RAP would cause PPV ground-borne vibration levels to exceed 0.5 inches per second PPV at any off-site residential structures;
- Criterion ~~5~~6 – Activities during implementation of the RAP would cause PPV ground-borne vibration levels to exceed 2.0 inches per second PPV at any modern industrial/commercial buildings; or
- Criterion ~~6~~7 – Potential Human Annoyance - Implementation of the RAP activities would cause ground-borne vibration levels to exceed 0.02 inches per second PPV at off-site vibration sensitive receptors .

Project Design Features

The following Project Design Features (PDFs) are intended to reduce Project-related noise and are proposed as part of the Project subject to review and approval by the City of Huntington Beach. Therefore, they have been taken into account in the analysis of potential Project impacts.

PDF 9-1 The Project contractor(s) shall equip all construction machinery and equipment, fixed or mobile, with properly operating and maintained noise mufflers, consistent with manufacturers' standards.

PDF 9-2 Engine idling from construction equipment such as bulldozers and haul trucks shall be limited, to the extent feasible.

PDF 9-3 To the extent feasible, construction activities shall be scheduled so as to avoid operating several pieces of heavy equipment simultaneously, which causes high noise and vibration levels.

Methodology

Short-Term Noise

On-Site Noise Sources

On-site equipment and haul truck staging and haul route noise impacts are evaluated by determining the noise levels generated by the different types of construction activity, calculating the RAP-related noise level at nearby sensitive receptor locations, and comparing these construction-related noise levels to existing ambient noise levels (i.e., noise levels without construction noise). More specifically, the following steps were undertaken to calculate construction-period noise impacts:

1. Ambient noise levels at surrounding sensitive receptor locations were estimated based on field measurement data (refer to Table R4.9-1) or presumed noise level as stated in the Huntington Beach Municipal Code (HBMC), Section 8.40.050;
2. Typical noise levels for each type of on-site construction equipment were obtained from the Federal Highway Administration's (FHWA) Roadway Construction Noise Model;
3. Distances between construction site locations (noise source) and surrounding sensitive receptors were measured using project architectural drawings, Google Earth™, and site plans; and
4. The Project-generated noise level was then calculated for sensitive receptor locations based on the conventional standard point source noise-distance attenuation factor of 6.0 dBA for each doubling of distance.

Off-Site Roadway Noise Sources

Roadway noise impacts were evaluated using the Caltrans Technical Noise Supplement (TeNS) methodology. This methodology allows for the definition of roadway configurations, barrier information (if any), and receiver locations. Roadway noise attributable to project development was calculated and compared to baseline noise levels that would occur under the "without project" condition.

Short-Term Ground-Borne Vibration

Ground-borne vibration impacts were evaluated by identifying potential vibration sources, measuring the distance between vibration sources and surrounding structure locations, and making a significance determination based on the thresholds discussed below. Potential vibration sources during implementation of the RAP include heavy duty equipment needed for excavation and hauling of materials. Typical vibration levels expected from each type of equipment were obtained from the published standard vibration data by the FTA.

Long-Term Noise

After implementation of the RAP, the Site would be a capped closed landfill. Sources of long-term noise include mechanical equipment related to the gas collection system and occasional vehicular access for periodic service of the equipment and routine maintenance. The current plan is to locate the gas collection system on the western portion of the Site along the perimeter access road. Landfill gas, if generated under the cap, would be collected via mechanical fans (e.g., blowers) and filtered through a granulated activated carbon (GAC) system to remove volatile contaminants before being released to the atmosphere. The GAC must be periodically replaced and regenerated off-site, necessitating a vendor vehicle trip. In addition, periodic inspections of the cap and landfill would be performed, and may include weed abatement and other maintenance activities.

On-Site Noise Sources

Stationary point-source noise impacts were evaluated by identifying the noise levels generated by stationary noise sources such as mechanical fans, estimating the noise level from each noise source at surrounding residential property locations, and comparing such noise levels to ambient noise levels to determine significance.

Off-Site Roadway Noise Sources

The closed, capped landfill would not generate off-site vehicular traffic, with the exception of the occasional vehicle trip mentioned above. Even several vehicles accessing the Site simultaneously would produce only negligible noise to off-site receptors, and no quantitative analyses are warranted.

Long-Term Vibration

No sources of ground-borne vibration are expected to remain at the Site long-term upon completion of the cap. Therefore, analysis of long-term vibration impacts is not warranted.

Analysis of Project Impacts

On-Site Noise during Implementation of the RAP

Impact 4.9-1	Would the project expose persons to or generate noise levels in excess of standards presumed in the local general plan or noise ordinance, or applicable standards of other agencies?
Impact 4.9-2	Would the project result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Short-Term Noise

On-Site Noise Sources

Noise from short-term construction activities during implementation of the RAP would be generated by vehicles and equipment involved during various Project phases: Phase 1--Mobilization, Phase 2 --Pit F, Phase 3--Cut and Fill activities, Phase 4--Treatment cell, Phase 5--Concrete Debris, Phase 6--Cap

Construction, Phase 7--Surface water controls, Phase 8--City Parcel, Phase 9--SCOC site, Phase 10--Site Restoration. Each stage would involve the use of different kinds of construction equipment, and, therefore, each has its own distinct noise characteristics. The list of construction equipment that would be used during implementation of the RAP assumed for purposes of this noise analysis is shown in Appendix F. During Phase 2--Pit F, excavation would be performed under a structure to capture the emissions. Therefore, the structure would require air handling units with blower(s) and filtration. During Phase 3 and Phase 5, a concrete breaking or crushing machine may be used on-site to break and/or crush concrete debris into usable material. Therefore, as a worst case scenario, concrete crushing equipment was considered in the noise calculations for Phase 3 and Phase 5 during implementation of the RAP.

The noise levels created by construction equipment would vary depending on factors such as the type of equipment, the specific model, the operation being performed and the condition of the equipment. Construction noise associated with implementation of the RAP was analyzed using a mix of typical construction equipment, estimated durations and activity phasing. The Project equipment noise model is based on heavy-duty equipment noise levels as published by the Federal Highway Administration (FHWA).[9]

In an outdoor environment, sound levels attenuate through the air as a function of distance. Such attenuation is called "distance loss" or "geometric spreading" and is based on the source configuration, point source or line source. For a point source such as heavy-duty equipment, the rate of sound attenuation is 6 dB per doubling of distance from the noise source. For example, a noise level of 85 dBA at a reference distance of 50 feet from the equipment would attenuate to 79 dBA at 100 feet, and 73 dBA at 200 feet**. Table R4.9-2**, *Estimate of Implementation of the RAP Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations,* provides the estimated noise levels during implementation of the RAP at nearby noise sensitive receptors where current ambient noise levels were recorded. The estimated noise levels are representative of worst-case conditions when noise generators are located closest to noise sensitive receptors and when haul trucks are passing by on roadways adjacent to the same noise sensitive receptors.

These noise calculations account for the installation and use of standard noise mufflers on fixed or mobile equipment, consistent with manufacturers' specifications. The estimated noise levels are conservative because activities during implementation of the RAP are analyzed as if they were occurring along the perimeter of the Site, whereas in actuality these activities would typically occur throughout the Site, further away from noise-sensitive receptors. A summary of the noise impacts associated with implementation of the RAP at the nearby sensitive receptors is provided in Table R4.9-2. Detailed noise calculations for construction activities are provided in Appendix F. As shown therein, implementation of the RAP would result in noise levels that would exceed ambient noise levels at the nearest single-family residential uses, R1, during Phase 2, Phase 3, and Phases 5 through 8. Ambient noise levels would be exceeded at Edison High School, R2, during Phase 3 and Phase 8. Ambient noise levels would be exceeded at the Fire Station, R2, during Phases 3, 5, 6, and 8. The maximum noise level associated with implementation of the RAP would be 71 dBA during Phase 8 at the noise sensitive receptor location R1. Noise levels usually diminish at a rate of approximately 6 dBA per doubling of distance. Thus, as heavy equipment passes near the boundary of the Site, the peak construction noise level at a given moment in time could reach 71 dBA. However, as the equipment operates near the center of the Site, which is approximately 600 feet from the closest single-family residential uses to the east, lower noise level of approximately 55 dBA would be generated at the nearest noise sensitive receptor.

[9] *Roadway Construction Noise Model, Federal Highway Administration, 2006.*

Table R4.9-2

Estimate of Implementation of the RAP Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations

Receptor	Implementation of the RAP Phases	Nearest Distance between Receptor and the Site, feet	Estimated Implementation of the RAP Noise Levels at the Noise Sensitive Receptor by Equipment and Haul Trucks Hourly L_{eq} (dBA)	Significance Impacts Threshold L_{eq} (dBA)	Exceeds Significance Threshold?
R1 Single-family Residential Uses	Phase 1	350	65	80	No
	Phase 2	190	68		
	Phase 3	160	67		
	Phase 4	600	64		
	Phase 5	100	67		
	Phase 6	100	68		
	Phase 7	100	68		
	Phase 8	100	71		
	Phase 9	1,200	64		
	Phase10	100	65		
R2 Edison High School	Phase 1	1,200	62	80	No
	Phase 2	1,200	63		
	Phase 3	460	66		
	Phase 4	1,300	62		
	Phase 5	400	63		
	Phase 6	400	63		
	Phase 7	1,200	62		
	Phase 8	400	66		
	Phase 9	1,800	62		
	Phase10	400	63		
R2 Fire Station	Phase 1	850	63	80	No
	Phase 2	1,150	63		
	Phase 3	330	67		
	Phase 4	1,150	62		
	Phase 5	350	64		
	Phase 6	350	64		
	Phase 7	850	62		
	Phase 8	350	66		
	Phase 9	1,500	63		
	Phase10	350	63		
R3 Single-family Residential Uses	Phase 1	500	63	80	No
	Phase 2	1,500	62		
	Phase 3	500	65		
	Phase 4	1,000	62		
	Phase 5	300	64		
	Phase 6	300	65		
	Phase 7	300	64		
	Phase 8	300	67		
	Phase 9	900	63		
	Phase10	300	63		

[a] *Detailed construction noise data and calculations are included in Appendix F.*

Source: PCR Services Corporation, 2013.

Thus, activities associated with implementation of the RAP would increase the existing ambient noise in close proximity of the Site only during peak, limited moments. Also, this momentary increase in ambient noise would be dampened by the block wall along the east side of Magnolia Street, a feature not accounted for in the noise estimation.

In addition, it is acknowledged that during Pit F excavation activities, a blower may need to be temporarily utilized during daytime and nighttime hours. The blower is not expected to be perceptible at the residences during daytime hours due to existing noise levels of approximately 65 dBA and on-site sources of noise being louder than a typical blower. However, during nighttime hours, when ambient noise levels in residential neighborhoods decrease, noise from a blower has the potential to exceed the City's 50 dBA standard, depending on the noise level of the blower that is ultimately selected, the location of the blower (distance), and the presence of intervening structures or topography that may dampen sound transmission to the offsite residences. If existing ambient levels are greater than the 50 dBA standard, the noise from the blower may not be perceptible at the residences even if it exceeded 50 dBA. If the blower generates noise less than the existing ambient environment, the contribution would increase the total noise level by less than 3 dBA, which would not be a perceptible change (a change in sound level of 3 dBA is considered barely perceptible by the human ear). In accordance with Mitigation Measure Noise-1, the RPs would locate the blower so as to not generate noise in excess of 50 dBA at the residences and/or provide a temporary noise barrier to reduce noise levels to ambient levels or acceptable nighttime levels (below 50 dBA), as warranted. The RPs may alternatively seek to obtain an exemption to the City's Noise Ordnance for such temporary noise per Municipal Code Section 8.40.90 (j and/or k, or as otherwise applicable).

During implementation of the RAP, activities would be temporary in nature and would be required to comply with the City's noise limitations during corresponding hours as described above. Noise resulting from implementation of the RAP during daytime hours would not exceed the significance threshold of 80 dBA at noise-sensitive receptor locations. To address the potential for nighttime noise impacts associated with the Pit F blower, Mitigation Measure NOISE-1 has been prescribed. With implementation of the prescribed mitigation measure, potentially significant nighttime construction-related noise impacts from the Pit F blower would be reduced to a less than significant level. In addition, requirements set forth in the Project Design Features would further reduce construction noise impacts.

Off-Site Roadway Noise

Haul trucks are expected to utilize either Beach Boulevard or Brookhurst Street from the I-405. Both streets are designated truck routes by the City of Huntington Beach and, in the case of the northern portion of Brookhurst Street, the City of Fountain Valley. In-bound trucks utilizing Beach Boulevard would travel south to PCH, turn left on PCH to Newland Street, turn left (go north) on Newland Street to Hamilton Avenue, and turn right (go east) on Hamilton Avenue to the current Site entrance. Out-bound trucks leaving the Site would exit the Site on Magnolia Street and turn right (travel south) to PCH. The trucks would then travel northwest on PCH and turn right (go north) on Beach Boulevard to the freeway entrance for the I-405. For in-bound trips utilizing Brookhurst Street, trucks would exit the I-405 and travel southbound on Brookhurst Street, turn right onto PCH and travel northwest along PCH, turn right onto Newland Street, travel north to Hamilton Avenue, and then turn right on Hamilton Avenue to the current Site entrance. For the out-bound route, trucks would exit from the Site's east gate, travel south on Magnolia Street, turn left to travel southeast along PCH, turn left to travel north on Brookhurst Street to the northbound I-405 entrance or to turn right on Talbert Avenue to enter the southbound I-405.

Future roadway noise levels were calculated along the arterial segments adjacent to the Site and along the two proposed haul routes. Roadway-noise attributable to the Project was calculated using the traffic noise model previously described and compared to baseline noise levels that would occur under the "No Project" condition. To fully describe peak hour and daily average traffic related impacts, noise levels were described in L_{eq} and CNEL. As discussed above, CNEL is based on 24-hour time period and L_{eq} is based on daytime peak hour traffic volumes. ~~The haul route to the Site would result in haul trucks exiting the I-405 Freeway at Beach Boulevard. Trucks would then travel south on Beach Boulevard to PCH, turn left on PCH to Newland Street, go north on Newland Street to Hamilton Avenue, and turn right on Hamilton Avenue to the current Site entrance. The current Site entrance for haul trucks is located on Hamilton Avenue west of Magnolia Street. Future entrance(s) along Hamilton Avenue may be needed to accommodate activities associated with implementation of the RAP. Trucks leaving the Site would exit on Magnolia Street and travel south to PCH. The trucks would then travel northwest on PCH and north on Beach Boulevard to the freeway entrance for the I-405. **Table 4.9-3**, *Estimate of Haul Truck Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations,* provides the estimated haul truck noise levels at noise sensitive receptors along the haul truck route where current sound ambient noise levels were recorded and provides a comparison with the noise impact criteria. The table also provides the ambient noise levels and the change in noise levels with the addition of the haul truck noise.~~

~~**Table 4.9-3**~~

~~**Estimate of Haul Truck Noise Levels (L_{eq}) at Off-Site Sensitive Receiver Locations**~~

~~Receptor~~	~~Estimated Haul Truck Noise Levels at the Noise Sensitive Receptor Hourly L_{eq} (dBA)~~	~~Existing Ambient Noise Levels L_{eq} (dBA)~~	~~Noise Level with Haul Truck Noise L_{eq} (dBA)~~	~~Change in Ambient Levels with Haul Truck Noise~~
~~R4 (Newland Street)~~	~~64~~	~~64~~	~~67~~	~~+3 dBA~~
~~R5 (PCH)~~	~~64~~	~~71~~	~~71.8~~	~~+0.8 dBA~~
~~R6 (Beach Blvd.)~~	~~62~~	~~62~~	~~65~~	~~+3 dBA~~
~~R7 (Beach Blvd.)~~	~~62~~	~~65~~	~~66.8~~	~~+1.8 dBA~~

~~[a] *Detailed haul truck noise calculations are included in Appendix F.*~~

~~*Source: PCR Services Corporation, 2013.*~~

For existing conditions, as shown in **Table R4.9-3**, *Off-Site Traffic Noise Impacts, CNEL,* the maximum increase in Project-related traffic noise levels over existing traffic noise levels would be 0.8 dBA, which would occur along Newland Street, between Pacific Coast Highway and Hamilton Avenue. In addition, **Table R4.9-4,** *Off-Site Traffic Noise Impacts, L_{eq},* the maximum increase in Project-related traffic noise levels over existing traffic noise levels would be 0.9 dBA, which would occur along Newland Street, between Pacific

Table R4.9-3

Off-Site Traffic Noise Impacts, CNEL

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA) Weekday						
	Existing (A)	Existing with Project [a] (B)	Operation Year No Project [b] (C)	Operation Year with Project [c] (D)	Existing Project Increment [d] (B - A)	Operation Year Project Increment [e] (D – C)	Cumulative Increment [f] (D – A)
Beach Boulevard							
Between Center Avenue and Edinger Avenue	74.9	75.0	75.4	75.5	0.1	0.1	0.6
Between Edinger Avenue and Stark Drive	74.8	74.9	75.2	75.3	0.1	0.1	0.5
Between Stark Drive and MacDonald Drive	74.7	74.8	75.1	75.2	0.1	0.1	0.5
Between MacDonald Drive and Heil Avenue	74.7	74.8	75.2	75.3	0.1	0.1	0.6
Between Heil Avenue and Terry Drive	74.4	74.5	74.8	74.9	0.1	0.1	0.5
Between Terry Drive and Warner Avenue	74.3	74.4	74.8	74.9	0.1	0.1	0.6
Between Warner Avenue and Slater Avenue	74.2	74.3	74.7	74.8	0.1	0.1	0.6
Between Slater Avenue and Newman Avenue	74.0	74.1	74.6	74.7	0.1	0.1	0.7
Between Newman Avenue and Talbert Avenue	74.0	74.1	74.5	74.6	0.1	0.1	0.6
Between Talbert Avenue and Main Street/Ellis Avenue	73.8	74.0	74.4	74.5	0.2	0.1	0.7
Between Main Street/Ellis Avenue and Garfield Avenue	72.2	72.4	72.8	72.9	0.2	0.1	0.7
Between Garfield Avenue and Yorktown Avenue	72.2	72.4	72.8	72.9	0.2	0.1	0.7
Between Yorktown Avenue and Utica Avenue	73.0	73.1	73.6	73.7	0.1	0.1	0.7
Between Utica Avenue and Adams Avenue	72.7	72.8	73.3	73.5	0.1	0.2	0.8
Between Adams Avenue and Indianapolis Avenue	71.9	72.1	72.5	72.8	0.2	0.2	0.8
Between Indianapolis Avenue and Atlanta Avenue	71.2	71.4	71.9	72.1	0.2	0.2	0.9
Between Atlanta Avenue and Pacific View Avenue	69.7	70.0	70.1	70.4	0.3	0.3	0.7
Between Pacific View Avenue and Pacific Coast Highway	69.6	69.9	70.4	70.7	0.3	0.3	1.1

Table R4.9-3 (Continued)

Off-Site Traffic Noise Impacts, CNEL

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA) Weekday					Operation	
	Existing (A)	Existing with Project [a] (B)	Operation Year No Project [b] (C)	Operation Year with Project [c] (D)	Existing Project Increment [d] (B - A)	Year Project Increment [e] (D – C)	Cumulative Increment [f] (D – A)
Pacific Coast Highway							
Between Beach Boulevard and Newland Street	73.2	73.4	73.9	74.0	0.2	0.1	0.8
Magnolia Street and Brookhurst Street	73.7	73.8	74.3	74.4	0.1	0.1	0.7
Newland Street							
Between Pacific Coast Highway and Hamilton Avenue	64.6	65.4	64.7	65.5	0.8	0.8	0.9
Hamilton Avenue							
Between Newland Street and Magnolia Street	64.1	64.4	64.2	64.5	0.3	0.3	0.4
Magnolia Street							
Between Hamilton Avenue and Pacific Coast Highway	64.7	65.3	64.8	65.4	0.6	0.6	0.7
Brookhurst Street							
(Segments within the City of Huntington Beach)							
Between Pacific Coast Highway and Bushard Street	68.0	68.5	68.2	68.6	0.5	0.4	0.6
Between Bushard Street and Banning Avenue	67.9	68.4	68.0	68.5	0.5	0.5	0.6
Between Banning Avenue and Hamilton Avenue	69.1	69.6	69.3	69.7	0.5	0.4	0.6
Between Hamilton Avenue and Atlanta Avenue	70.7	71.1	70.9	71.2	0.4	0.3	0.5
Between Atlanta Avenue and Indianapolis Avenue	71.2	71.5	71.3	71.6	0.3	0.3	0.4
Between Indianapolis Avenue and Adams Avenue	71.8	72.0	71.9	72.2	0.2	0.3	0.4
Between Adams Avenue and Yorktown Avenue	72.4	72.6	72.5	72.7	0.2	0.2	0.3
Between Yorktown Avenue and Garfield Avenue	72.7	72.9	72.9	73.1	0.2	0.2	0.4
(Segments within the City of Fountain Valley)							
Between Garfield Avenue and Ellis Avenue	72.7	72.9	72.9	73.1	0.2	0.2	0.4
Between Ellis Avenue and Quail Avenue	72.8	73.0	73.0	73.2	0.2	0.2	0.4

Table R4.9-3 (Continued)

Off-Site Traffic Noise Impacts, CNEL

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, CNEL (dBA) Weekday						
	Existing (A)	Existing with Project [a] (B)	Operation Year No Project [b] (C)	Operation Year with Project [c] (D)	Existing Project Increment [d] (B - A)	Operation Year Project Increment [e] (D – C)	Cumulative Increment [f] (D – A)
Between Quail Avenue and Stonefield Drive	73.3	73.5	73.5	73.7	0.2	0.2	0.4
Between Stonefield Drive and Talbert Avenue	73.4	73.6	73.6	73.8	0.2	0.2	0.4

[a] *Include existing plus proposed project traffic.*
[b] *Include future growth plus related (cumulative) projects identified in the traffic study.*
[c] *Include future growth plus related (cumulative) projects and proposed project traffic.*
[d] *Increase due to project-related traffic only at existing.*
[e] *Increase due to project-related traffic only at project build-out.*
[f] *Increase due to future growth, related (cumulative) projects, and project traffic.*

Source: PCR Services Corporation, 2014.

Table R4.9-4

Off-Site Traffic Noise Impacts, L_{eq}

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, L_{eq} (dBA) Weekday						
	Existing (A)	Existing with Project [a] (B)	Operation Year No Project [b] (C)	Operation Year with Project [c] (D)	Existing Project Increment [d] (B - A)	Operation Year Project Increment [e] (D – C)	Cumulative Increment [f] (D – A)
Beach Boulevard							
Between Center Avenue and Edinger Avenue	73.7	73.8	74.2	74.3	0.1	0.1	0.6
Between Edinger Avenue and Stark Drive	73.5	73.6	74.0	74.1	0.1	0.1	0.6
Between Stark Drive and MacDonald Drive	73.5	73.6	73.9	74.0	0.1	0.1	0.5
Between MacDonald Drive and Heil Avenue	73.5	73.6	74.0	74.0	0.1	0.0	0.5
Between Heil Avenue and Terry Drive	73.1	73.2	73.6	73.7	0.1	0.1	0.6

Table R4.9-4 (Continued)

Off-Site Traffic Noise Impacts, L_{eq}

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, L_{eq} (dBA) Weekday						
	Existing (A)	Existing with Project [a] (B)	Operation Year No Project [b] (C)	Operation Year with Project [c] (D)	Existing Project Increment [d] (B - A)	Operation Year Project Increment [e] (D – C)	Cumulative Increment [f] (D – A)
Between Terry Drive and Warner Avenue	73.1	73.2	73.6	73.7	0.1	0.1	0.6
Between Warner Avenue and Slater Avenue	72.9	73.1	73.5	73.6	0.2	0.1	0.7
Between Slater Avenue and Newman Avenue	72.8	72.9	73.3	73.4	0.1	0.1	0.6
Between Newman Avenue and Talbert Avenue	72.8	72.9	73.3	73.4	0.1	0.1	0.6
Between Talbert Avenue and Main Street/Ellis Avenue	72.6	72.7	73.2	73.3	0.2	0.1	0.7
Between Main Street/Ellis Avenue and Garfield Avenue	71.0	71.2	71.6	71.7	0.2	0.1	0.7
Between Garfield Avenue and Yorktown Avenue	71.0	71.2	71.6	71.7	0.2	0.1	0.7
Between Yorktown Avenue and Utica Avenue	71.8	71.9	72.4	72.5	0.1	0.1	0.7
Between Utica Avenue and Adams Avenue	71.4	71.6	72.1	72.3	0.2	0.2	0.9
Between Adams Avenue and Indianapolis Avenue	70.6	70.8	71.3	71.5	0.2	0.2	0.9
Between Indianapolis Avenue and Atlanta Avenue	70.0	70.2	70.7	70.9	0.2	0.2	0.9
Between Atlanta Avenue and Pacific View Avenue	68.5	68.8	68.9	69.2	0.3	0.3	0.7
Between Pacific View Avenue and Pacific Coast Highway	68.4	68.7	69.2	69.5	0.3	0.3	1.1
Pacific Coast Highway							
Between Beach Boulevard and Newland Street	72.0	72.2	72.6	72.8	0.2	0.2	0.8
Magnolia Street and Brookhurst Street	72.4	72.6	73.1	73.2	0.2	0.1	0.8
Newland Street							
Between Pacific Coast Highway and Hamilton Avenue	63.3	64.2	63.5	64.3	0.9	0.8	1.0
Hamilton Avenue							
Between Newland Street and Magnolia Street	62.9	63.2	63.0	63.3	0.3	0.3	0.4

Table R4.9-4 (Continued)

Off-Site Traffic Noise Impacts, L_{eq}

Roadway Segment	Calculated Traffic Noise Levels at 25 feet from Roadway, L_{eq} (dBA) Weekday						
	Existing (A)	Existing with Project [a] (B)	Operation Year No Project [b] (C)	Operation Year with Project [c] (D)	Existing Project Increment [d] (B - A)	Operation Year Project Increment [e] (D – C)	Cumulative Increment [f] (D – A)
Magnolia Street							
Between Hamilton Avenue and Pacific Coast Highway	63.4	64.0	63.6	64.2	0.6	0.6	0.8
Brookhurst Street							
(Segments within the City of Huntington Beach)							
Between Pacific Coast Highway and Bushard Street	66.8	67.3	67.0	67.4	0.5	0.4	0.6
Between Bushard Street and Banning Avenue	66.7	67.2	66.8	67.3	0.5	0.5	0.6
Between Banning Avenue and Hamilton Avenue	67.9	68.3	68.0	68.5	0.4	0.5	0.6
Between Hamilton Avenue and Atlanta Avenue	69.5	69.9	69.7	70.0	0.4	0.3	0.5
Between Atlanta Avenue and Indianapolis Avenue	70.0	70.3	70.1	70.4	0.3	0.3	0.4
Between Indianapolis Avenue and Adams Avenue	70.6	70.8	70.7	70.9	0.2	0.2	0.3
Between Adams Avenue and Yorktown Avenue	71.2	71.4	71.3	71.5	0.2	0.2	0.3
Between Yorktown Avenue and Garfield Avenue	71.5	71.7	71.7	71.9	0.2	0.2	0.4
(Segments within the City of Fountain Valley)							
Between Garfield Avenue and Ellis Avenue	71.4	71.6	71.7	71.9	0.2	0.2	0.5
Between Ellis Avenue and Quail Avenue	71.6	71.8	71.9	72.0	0.2	0.1	0.4
Between Quail Avenue and Stonefield Drive	72.1	72.3	72.3	72.5	0.2	0.2	0.4
Between Stonefield Drive and Talbert Avenue	72.2	72.4	72.4	72.6	0.2	0.2	0.4

[a] *Include existing plus Project traffic.*
[b] *Include future growth plus related (cumulative) projects identified in the traffic study.*
[c] *Include future growth plus related (cumulative) projects and Project traffic.*
[d] *Increase due to Project-related traffic only at existing.*
[e] *Increase due to Project-related traffic only at Project build-out.*
[f] *Increase due to future growth, related (cumulative) projects, and Project traffic.*
Source: PCR Services Corporation, 2014.

Coast Highway and Hamilton Avenue for Existing; and 0.8 dBA, along Newland Street, between PCH and Hamilton Avenue for Operation Year. All other roadway segments are predicted to experience traffic-related noise increases below these maxima. With respect to the City of Fountain Valley Commercial Delivery Prohibition Ordinance, because the Site is physically located in Huntington Beach, only that portion of trucking within the City's boundaries could potentially be subject to the limitations. However it should be noted that truck trips that may occur outside of the daytime hours specified would not "disturb the peace" in that the noise studies verify that the incremental noise produced by the maximum haul truck trips will not be discernable to most people. As these increases fall well below the more conservative 3-dBA CNEL significance threshold, roadway noise level increases would be less than significant, and no mitigation measures are required.

~~It is estimated that during implementation of the RAP, there would be a maximum of 300 haul truck trips per day. As shown in Table 4.9-3, noise from the Project's truck trips range from 62 dBA along Beach Boulevard to 64 dBA along Newland Street and Pacific Coast Highway. Based on the measured existing traffic noise level of 62 dBA along Pacific Coast Highway and 64 dBA along Newland Street, noise levels generated by haul truck trips would result in a temporary increase in traffic noise levels along Pacific Coast Highway and Newland Street of up to 3 dBA. In general a change in sound level of 3 dBA is considered barely perceptible by the human ear.[10] Activities associated with the RAP would be required to comply with the City's allowable hours as described above and would be temporary in nature. Because the temporary noise levels associated with implementation of the RAP would not be barely perceptible and are also exempt from the City's noise ordinance requirements, haul truck-related noise would result in a less than significant noise impact.~~

Long-Term Noise

Mechanical equipment (e.g., mechanical fans) for long-term use would be designed to comply with the City's Noise Ordinance requirement, Sections 8.40.050 and 8.40.060. The Project mechanical design documentation would be required to demonstrate that mechanical fan and/or other related mechanical components to the cap system noise levels would not exceed the measured ambient noise levels shown in Table R4.9-1 during daytime hours at each corresponding measurement location and 50 dBA during nighttime hours at each measurement location. Mitigation Measure NOISE-2 is prescribed to ensure that the noise impacts associated with the operation of mechanical fans would be less than significant.

If necessary, the long-term parking area of the Site would be along the western Site perimeter, remote from nearby single-family residential uses (R1). Therefore, parking related noise impacts would be less than significant and no mitigation measures would be required.

Conclusion. On-site, short-term construction activities associated with implementation of the RAP, aside from the use of the Pit F blower during nighttime, would be conducted during daytime hours specified in the City's Noise Ordinance. Given the temporary nature of the daytime construction activities associated with implementation of the RAP and the fact that daytime construction noise would not exceed the significance threshold of 80 dBA at nearby noise sensitive receptor locations, daytime short-term construction noise impacts would be less than significant. With implementation of the Mitigation Measure NOISE-1, potentially significant nighttime construction-related noise impacts related to the Pit F blower would be reduced to a

~~[10] U.S. Department of Transportation, Federal Highway Administration, Highway Traffic Noise: Analysis and Abatement Guidance, (2011).~~

less than significant level. Long-term noise from mechanical equipment and parking areas would not exceed the City's Noise Ordinance requirement. Implementation of Mitigation Measure NOISE-2 would ensure that noise impacts associated with the long-term operations of mechanical fans would be less than significant.

Mitigation Measures

NOISE-1 Should a blower with the potential to increase ambient noise levels to greater than 50 dBA at the exterior of nearby residences be utilized during nighttime hours during Pit F excavation activities, the RPs shall take reasonable care to locate and orient the blower in a manner that minimizes sound transmission towards the nearby residences. If, based on the noise generation level of the blower selected and the distance to the residences, the potential remains that the blower noise would exceed 50 dBA, the RPs shall provide a temporary noise barrier to reduce noise levels to ambient levels or acceptable nighttime levels pursuant to the City of Huntington Beach's Noise Ordinance and/or obtain an exemption to the Noise Ordnance for such temporary noise per Municipal Code Section 8.40.90 (j and/or k, or as otherwise applicable). If an exemption is not granted by the City, the RPs shall retain the services of a qualified acoustical engineer with expertise in design of sound isolations to ensure the Pit F blower is screened so as to meet the City's exterior noise limits (50 dBA) during nighttime hours at the property line of the nearest noise sensitive receptor locations (R1 [residential], R2 [fire station], and R3 [residential]).

NOISE-2 The RPs shall retain the services of a qualified acoustical engineer with expertise in design of sound isolations to ensure the mechanical fans and/or other related mechanical components to the cap system installed for long-term use is designed (i.e., installation of building enclosure) so as to meet the City's exterior noise limits (50 dBA) at the property line of the nearest noise sensitive receptor locations (R1 [residential], R2 [school and fire station], and R3 [residential]).

Short-Term Ground-Borne Vibration

Impact 4.9-3	Would the project result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

The Project would be constructed using typical heavy-duty construction equipment such as excavators, dozers, and trucks. Most equipment operated during RAP implementation would be stationary vibration sources such as an excavator, foam applicator, ODEX applicator, compactor, etc. In addition, vibration from moving equipment within limited areas of the Site would also be considered a point source. The effect on buildings located in the vicinity of the Site often varies depending on soil type, ground strata, and project characteristics of the receptor buildings. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibration at moderate levels, to slight damage at the highest levels. The FTA has published standard vibration velocities for construction equipment operations. The PPV for construction equipment pieces anticipated to be used during implementation of RAP are listed in **Table ~~4.9-4~~ R4.9-5**, *Typical Vibration Velocities for Potential Project Equipment*. As such, it is anticipated that the equipment to be used during implementation of the RAP would not cause excessive groundborne noise or vibration.

Table ~~4.9-4~~ R4.9-5

Typical Vibration Velocities for Potential Project Construction Equipment

Equipment	Reference Vibration Velocity Levels at 25 ft, inch/second PPV[a,b]
Large bulldozer	0.089
Loaded trucks	0.076
Jackhammer	0.035
Small bulldozer	0.003

[a] *PPV=Peak particle velocity.*
[b] *FTA's "Transit Noise and Vibration Impact Assessment", Table 12-2.*

Source: USDOT Federal Transit Administration, 2006.

The City of Huntington Beach does not address vibration in the HBMC. According to the FTA, ground vibrations from general construction activities very rarely reach the level that can damage structures.[11] A possible exception is the case of old, fragile buildings of historical significance where special care must be taken to avoid damage. Activities that typically generate the most severe vibrations are blasting and impact pile driving, which would not be utilized for the Project. The Project would utilize typical construction equipment and methods such as the use of bulldozers and excavators, which would generate limited ground-borne vibration during excavation, soil hauling, and cap-construction activities. Based on the vibration data by the FTA, the typical vibration velocity from the operation of a large bulldozer would be approximately 0.089 inches per second PPV at 25 feet from the source of activity. The nearest residential building (single-family residential uses, R1), which is approximately 100 feet from the Site, would be exposed to a vibration velocity of 0.01 inches per second PPV. As this value is well below the 0.5 inches per second PPV significance threshold (potential building damage for older residential building), vibration impacts associated with implementation of the RAP would be less than significant at the nearest residential building.

In addition, the vibration velocity of 0.01 inches per second PPV would not exceed the 0.02 inches per second PPV significance threshold for potential human annoyance. Therefore, vibration impacts associated with implementation of the RAP would be less than significant at the nearest single-family residential uses, R1 and no mitigation measures would be required.

Conclusion. Activities associated with implementation of the RAP that would create vibration would not have any effect on the existing vibration environment near the project area. Thus, implementation of the RAP would result in vibration impacts that are less than significant.

City of Huntington Beach General Plan Noise Element

The City of Huntington Beach General Plan Noise Element Objective N 1.4 seeks to minimize noise spillover or encroachment from commercial and industrial land uses into adjoining residential neighborhoods or "noise-sensitive" uses. As discussed in the impact analysis above, the Project would implement PDF 9-1 to 9-

[11] *U.S. Department of Transportation, Federal Transit Administration, Transit Noise and Vibration Impact Assessment, 2006.*

3 to reduce Project-related noise. Short-term construction activities associated with implementation of the RAP, aside from the use of the Pit F blower during nighttime, would be conducted during daytime hours specified in the City's Noise Ordinance. Given the temporary nature of the daytime construction activities associated with implementation of the RAP and the fact that daytime construction noise would not exceed the significance threshold of 80 dBA at nearby noise sensitive receptor locations, daytime short-term construction noise impacts would be less than significant. With implementation of the Mitigation Measure NOISE-1, potentially significant nighttime construction-related noise impacts related to the Pit F blower would be reduced to a less than significant level. Long-term noise from mechanical equipment and parking areas would not exceed the City's Noise Ordinance requirement. Implementation of Mitigation Measure NOISE-2 would ensure that noise impacts associated with the long-term operations of mechanical fans would be less than significant. Based on the above, construction and operational noise impacts would be less than significant and minimized in accordance with Objective N 1.4. Also, if needed, the long-term parking area of the Site is planned to be along the western Site perimeter, remote from nearby single-family residential uses. Therefore, parking related noise impacts would be less than significant consistent with Policy N. 1.4.3.

City of Fountain Valley General Plan Noise Element

The City of Fountain Valley General Plan Noise Element Policy 7.1.1 seeks to establish measures to reduce noise impacts from traffic noise sources. The Project would result in short-term, less than significant noise impacts along Brookhurst Street. As such no, noise barriers would be required per Policy 7.1.2(a). Also, as mobile source noise impacts would be less than significant, the Project would be consistent with Policy 7.1.2(b) to ensure insure that noise levels do not exceed applicable City, State and Federal noise level standards.

3. CUMULATIVE IMPACTS

As discussed in Section 3.0 of this EIR, there are 25 related projects located in the vicinity of the Site. Of the 25 related projects, the one closest is situated adjacent to the Site (Related Project No. 2, Plains All American Pipeline Tanks removal). All other applicable related projects are located a minimum of 1,500 feet away from the project site. The potential for noise impacts to occur are specific to the location of each related project, as well as the cumulative traffic on the surrounding roadway network.

The geographic context for the analysis of cumulative noise impacts depends on the impact being analyzed. For short-term noise impacts, only the immediate area around the proposed Site would be included in the cumulative context. Noise is by definition a localized phenomenon, and the magnitude of which significantly decreases with increased distance from the source. As such, only projects and growth due to occur in the immediate project area, including development within the City of Huntington Beach, would be likely to contribute to cumulative noise impacts.

Increases in noise at adjacent sensitive uses would occur as a result of the implementation of the RAP, along with other construction in the vicinity. As discussed under Impact 4.9-1, construction activities would be conducted within the daytime hours specified in the City's Noise Ordinance and haul truck trips that occur outside of the daytime hours specified in the City of Fountain Valley Commercial Delivery Prohibition ordinance would not "disturb the peace" in that the noise studies verify that the incremental noise produced by these haul truck trips will not be discernable to most people. Additionally, although noise levels associated with implementation of the RAP would be temporary and result in less than significant impacts,

mitigation measures would be implemented, as appropriate, to reduce the noise impacts to the maximum extent feasible.

Other construction that may occur in the vicinity of the Site could contribute noise levels similar to those generated for the Project. Where this development adjoins the proposed project, the combined short-term noise levels would have a cumulative effect on nearby sensitive uses. However, decibels are logarithmic values, noise is not additive, and a doubling of noise sources would not cause a doubling of noise levels; as such, cumulative construction noise levels are expected to be below the City's Municipal Code exterior standards at nearby sensitive receptors, unless the adjoining project alone exceeds the noise standards.

Under Section 8.40.090 (Special Provisions) of the City's Municipal Code, noise sources associated with construction associated with the RAP are exempt from the requirements of the Municipal Code, provided that implementation of RAP activities do not occur between the hours of 8:00 P.M. to 7:00 A.M. on weekdays, including Saturday, or at any time on Sunday or a federal holiday. Because compliance with this construction time limit is required by the Huntington Beach Municipal Code, the proposed project and all other cumulative development would be exempt, and the cumulative impact associated with construction noise in the Huntington Beach area would be considered less than significant.

Noise from traffic volumes from the Project and ambient growth traffic was evaluated and presented in Table R4.9-3 and Table R4.9-4. Cumulative traffic volumes would result in a maximum increase of 1.1 dBA, CNEL and 1.1 dBA L_{eq}, along the segment of Beach Boulevard, between Pacific View Avenue and PCH. As this noise level increase would be below the 3 dBA CNEL significance threshold, roadway noise impacts due to cumulative traffic volumes would be less than significant.

Conclusion. The Project combined with cumulative projects would not impact noise-sensitive uses in the vicinity of the project area.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

With implementation of Mitigation Measures NOISE-1 and NOISE-2, the nearest noise sensitive receptors (single-family residential uses, school, and fire station) would not be exposed to high noise levels from implementation of the RAP. Therefore, long- and short-term noise impacts resulting from implementation of the RAP would be less than significant.

R4.10 TRAFFIC AND CIRCULATION

This Recirculated Draft EIR traffic section ~~of the EIR~~ analyzes the Project's potential effects relative to roadway traffic and traffic safety based on the Project's revised haul routes, developed subsequently to the public review period of the Draft EIR in response to stakeholder comments received during and after the Draft EIR comment period. Applicable regulations and existing conditions are described, as well as the potential for ~~increased~~ haul truck activity to impact intersection service levels compared to the City of Huntington Beach, City of Fountain Valley, and Orange County Congestion Management Project's established standards. This section also evaluates the relationship of the Project to adopted City of Huntington Beach and City of Fountain Valley General Plan Circulation Element policies supporting traffic safety and reduction of pedestrian, bicycle, and vehicular conflicts. The analysis presented herein evaluates the Project's consistency with the standards and policies in the City of Huntington Beach's 2013 Circulation Element. This is a change from the Draft EIR, in which the analysis was performed under the prior iteration of the Circulation Element. The 2013 Circulation Element was adopted by the City after preparation of the traffic analysis included in the Draft EIR. The traffic impact analysis is based on the analysis, conclusions, and recommendations of the *Ascon Landfill Site Partial Removing and Capping Transportation Impact Study Revised Draft Report* ("Traffic Study") (Fehr & Peers, ~~June 2013~~ August 2014). The Traffic Study, contained in Appendix R-G of this EIR, was prepared based on consultation with ~~the~~ California Department of Transportation (Caltrans), City of Huntington Beach, and City of Fountain Valley.~~Public Works and Planning staff.~~

1. ENVIRONMENTAL SETTING

Regulatory Framework

Southern California Association of Governments Regional Transportation Plan

The Southern California Association of Governments (SCAG) Regional Transportation Plan (RTP) is a long-range plan that provides a vision for transportation investments throughout the region. The RTP envisions a future multi-modal transportation system for the region and provides the basic framework for coordinated, long-term investment in the regional transportation system over the planning horizon of 2035. In compliance with state and federal requirements, SCAG prepares the Regional Transportation Improvement Program (RTIP) to implement projects and programs listed in the RTP. Updated every other year, the RTP contains a listing of transportation projects proposed for the region over a six-year period. Transportation projects proposed in the region are required to be consistent with the RTP and included within the RTIP to be eligible for state or federal funding. The 2012-2035 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) identifies mobility as an important component of a much larger picture with added emphasis on sustainability and integrated planning. In addition, the RTP/SCS includes goals and policies that pertain to mobility, accessibility, safety, productivity of the transportation system, protection of the environment and energy efficiency, and land use and growth patterns that complement the state and region's transportation investments. An integral component of the RTP/SCS is a commitment to reduce emissions from transportation sources, in compliance with Senate Bill 375; to improve public health; and to meet the National Ambient Air Quality Standards as set forth by the Clean Air Act. For further discussion of air quality and greenhouse gas emissions, see Sections 4.2, *Air Quality*, and 4.5, *Greenhouse Gas Emissions*, of this EIR, respectively.

Orange County Congestion Management Program

State regulations require the preparation and implementation of a Congestion Management Program (CMP) in each of California's urbanized counties. One required element of the CMP is a process to evaluate the transportation and traffic impacts of large projects on the regional transportation system. That process is undertaken by local agencies, project applicants, and traffic consultants through a transportation impact report usually conducted as part of the CEQA project review process.

The purpose of the state-mandated CMP is to monitor roadway congestion and assess the overall performance of the region's transportation system. Based upon this assessment, the CMP contains specific strategies and identifies proposed improvements to reduce traffic congestion and improve the performance of a multi-modal transportation system. Examples of strategies include increased emphasis on public transportation and rideshare programs, mitigating the impacts of new development and better coordinating land use and transportation planning decisions.

As Orange County's designated Congestion Management Agency (CMA), the Orange County Transportation Authority (OCTA) is responsible for conformance monitoring and biennial updating of the CMP. OCTA administers a variety of funding programs for cities to widen streets, improve intersections, coordinate signals, build Smart Streets and rehabilitate pavement. OCTA also administers regional streets and roads improvement projects. The Project's potential for impacts to CMP facilities is discussed below.

City of Huntington Beach General Plan Circulation Element

The Circulation Element of Huntington Beach General Plan (adopted in ~~1996~~ 2013) provides a technical synopsis of the street and highway system that serves the city and a discussion of regional access and the existing circulation system. The purpose of the Circulation Element is to evaluate the transportation needs of the City and to present a comprehensive transportation plan to accommodate those needs. The Circulation Element acknowledges that the effective movement of goods and people within a community is a pervasive local need. Issues include traffic congestion and pedestrian, bicyclist, and motorist safety. Primary goals of the Circulation Element are to provide a balanced transportation system (Goal CE 1) and provision of a circulation system that ~~supports existing, approved, and planned land uses while maintaining a desired level of service~~ moves people and goods throughout the City efficiently, promotes economic development, preserves residential neighborhoods, meets safety standards, and minimizes environmental impacts.

The Circulation Element describes the level of service (LOS) concept as a tool to describe the operating characteristics of the street system in terms of the level of congestion or delay experienced by traffic. ~~The City's acceptable service levels are mandated by the General Plan's Growth Management Element (Policies GM 3.1.2 and 3.1.3).~~ The Circulation Element in Objective 2.1, provides the City's acceptable services levels for traffic-signal controlled intersections during peak hours. The Circulation Element also recognizes the needs of bicycle enthusiasts and commuters by providing numerous bicycle facilities throughout the city. These include Class I facilities for bicycle travel completely separated from any street or highway (e.g., the Santa Ana River bike path) and Class II facilities, which are striped lanes for one-way travel on a public street.

Objectives and policies of the Circulation Element that would be applicable to the Project are discussed in the impact analysis below.

City of Fountain Valley General Plan Circulation Element

The City of Fountain Valley General Plan Circulation Element (adopted in 2008) describes the City's street and highway system and regional transportation and regional roadway planning within the existing circulation system. The purpose of the Circulation Element is to provide for the movement of goods and people, including pedestrians, bicycles, buses, trucks, and automobiles. The Circulation Element designates future road improvements and extensions and addresses non-motorized transportation alternatives. It primarily consists of the general location and extent of existing and proposed major thoroughfares, transportation routes, terminals, and other public utilities and facilities correlated to the land use element of the General Plan, as required under Government Code Section 65302(b).

As discussed in the Circulation Element, the street classification system comprises several routes of regional significance, including the San Diego Freeway (I-405) (which passes through the City of Fountain Valley); Edinger Avenue; Harbor Boulevard; Warner Avenue; and Brookhurst Street. The respective regional local streets are defined as major arterials, which are typically six-lane, divided roadways that carry a large volume of regional traffic not handled by the freeway. According to the Circulation Element, major arterials have a maximum capacity of 56,300 average daily trips and a peak-hour capacity of approximately 5,630 trips.[1] The Circulation Element describes LOS concept as a tool to describe the operating characteristics of the street system in terms of the level of congestion or delay experienced by traffic. LOS D is mandated as the lowest acceptable LOS for peak hour intersections volumes in the City.

The Circulation Element recognizes that the City experiences moderate amounts of truck traffic generated by commercial and light industrial uses. According to the Circulation Element, truck traffic may increase in future years in support of business inside and outside of the City. To minimize truck traffic impacts on noise sensitive uses, the City developed a truck route plan that directs trucks to arterial roadways.[2] As shown on Figure 3-3 of the Circulation Element, Brookhurst Street is a designated truck route.

The Circulation Element provides regional bikeway planning through a comprehensive bicycle network, illustrated in the Trails Plan, Figure 3-4 of the Circulation Element. The Trails Plan, which outlines bike paths, non-city trails, and equestrian trails, is based on the County's Master Plan of Countywide Bikeways and utilizes the same signage and classification system. No trails or bike paths are located or indicated for the future on Brookhurst Street to the south of I-405. However, Class II bike paths cross Brookhurst Street at Garfield Avenue and Ellis Avenue.

Existing Conditions

Existing Roadways

Regional access to the Site is provided by I-405 and State Route (SR) 1 (Pacific Coast Highway or "PCH"). Local access is provided by SR 39 (Beach Boulevard), Brookhurst Street, Newland Street, Magnolia Street, Atlanta Avenue and Hamilton Avenue. Roadways in the study area are classified according to the City of Huntington Beach General Plan and described in detail below.

[1] *City of Fountain Valley, General Plan Circulation Element June 2, 2008., page 3-3,*

[2] *Op. Cit., page 3-9*

Regional Roads

- **Interstate 405 (I-405)** – I-405 is generally a north-south freeway that begins at Interstate 5 (I-5) in the north San Fernando Valley and reconnects to the I-5 in Irvine. In the study area, I-405 generally contains ten lanes (four lanes and a high occupancy vehicle lane in each direction). Access to the Site from I-405 is provided via Beach Boulevard or Brookhurst Avenue interchanges.
- **State Route 1 (Pacific Coast Highway) (SR-1)** - Pacific Coast Highway is classified as a Congestion Management Plan (CMP) highway in the 2011 Orange County CMP and as a ~~six-lane major (divided) highway~~ Smart Street Arterial in the City of Huntington Beach General Plan. The roadway extends from SR-101 in Leggett, California, south along the Pacific Coast over 650 miles before terminating at I-5 in Dana Point, California. Within the study area, PCH has an east-west orientation and is divided by a center median. On-street parking is generally not permitted within the study area. The posted speed limit along PCH within the study area is 50 miles per hour (mph).

Local Access Roads

- **State Route 39 (Beach Boulevard)** – Beach Boulevard is classified as a CMP Highway in the 2011 Orange County CMP as ~~an eight-lane principal (divided) highway~~ a Smart Street Arterial in the City of Huntington Beach General Plan, and as a Smart Street Arterial in the Orange County Master Plan of Arterial Highways (MPAH). Near the Site, Beach Boulevard is a six-lane facility with a center median. North of Ellis Avenue the roadway contains eight lanes and is separated by a center median. On-street parking is not permitted along Beach Boulevard north of Ellis Avenue but is generally permitted south of Ellis Avenue. Beach Boulevard is oriented in the north-south direction, and the posted speed limit ranges from 45 to 50 mph. Beach Boulevard provides direct access to SR-90, I-5, SR-91, SR-22, and I-405.
- **Brookhurst Street** – Brookhurst Street is classified in the City of Huntington Beach General Plan, ~~as an eight-lane principal (divided) highway between Garfield Avenue and Indianapolis Avenue and as a six-lane major (divided) highway between Indianapolis Avenue and PCH as well as a major arterial in the MPAH.~~ the City of Fountain Valley General Plan, and the MPAH as a Major Arterial. Brookhurst Street is a north/south roadway and is typically separated by a center median. Some on-street parking is permitted south of Adams Avenue. Brookhurst Street contains bike lanes from Bushard Street to Pacific Coast Highway, and the posted speed limit ranges from 45 to 50 mph. Brookhurst Street provides direct access to I-405, SR-22, I-5 and SR-91.
- **Newland Street** – Newland Street is classified in the City of Huntington Beach General Plan, the City of Fountain Valley General Plan, and the MPAH as a Secondary Arterial. ~~four-lane primary (divided) highway and is designated as a Secondary Arterial in the MPAH.~~ Newland Street is a north/south street that contains four lanes (divided) north of Hamilton Avenue and two lanes (undivided) south of Hamilton Avenue. On-street parking is generally not permitted on Newland Street due to the bike lanes present between Warner Avenue and PCH, though some parking lanes are provided. The posted speed limit on Newland Street varies between 35 and 45 mph.
- **Magnolia Street** – Magnolia Street is a north/south highway classified in the City of Huntington Beach General Plan, the City of Fountain Valley General Plan, and the MPAH as a Primary Arterial. ~~as a four-lane primary (divided) highway and is designated as a primary arterial in the MPAH.~~ On-street parking is generally not permitted on Magnolia Street due to the bike lanes between Slater Avenue and PCH, although some parking lanes are provided. The posted speed limit on Magnolia Street varies between 35 and 45 mph. Magnolia Street provides direct access to the Site.

- **Main Street** – Main Street is classified in the Huntington Beach General Plan and the MPAH as a Primary Arterial. ~~six-lane major (divided) highway between Delaware Street and Beach Boulevard, as a four-lane primary (divided) highway between Delaware Street and Pacific Coast Highway, and as a Primary Arterial.~~ Main Street begins at Ellis Avenue and Beach Boulevard, traveling in a north/south direction to Pacific Coast Highway. The roadway contains six lanes (divided) between Beach Boulevard and Yorktown Avenue, four lanes (divided) between Yorktown Avenue and 17th Street and two lanes (undivided) south of 17th Street. Parking is generally permitted along Main Street, and Main Street contains bike lanes between Beach Boulevard and Loma Avenue. The speed limit on Main Street ranges between 25 and 45 mph.
- **Center Avenue** – Center Avenue is classified in the City of Huntington Beach General Plan as a ~~four-lane (divided) secondary, east/west highway~~ Secondary Arterial. On-street parking is generally not permitted along Center Avenue, and the posted speed limit is 35 mph.
- **Edinger Avenue** – Edinger Avenue is an east/west roadway classified in the City of Huntington Beach General Plan as ~~a six-lane major (divided) highway~~ an Augmented Primary Arterial between Springdale Street and Newland Street, ~~a four-lane primary (divided) highway elsewhere in Huntington Beach~~ and a Primary Arterial from PCH to Springdale Street, and as a primary arterial in the MPAH. On-street parking is generally not permitted on Edinger Avenue. Edinger Avenue contains bike lanes east of Newland Street, and the posted speed limit is 40 mph.
- **Warner Avenue** – Warner Avenue is an east/west roadway classified in the City of Huntington Beach General Plan, ~~as a six-lane major (divided) highway between Algonquin Street and Gothard Street, an eight-lane principal (divided) highway elsewhere in Huntington Beach, and as a primary arterial in the MPAH~~ the City of Fountain Valley General Plan, and the MPAH as a Major Arterial. On-street parking is generally not permitted on Warner Avenue due to the bike lanes present between PCH and Newland Street, though some parking lanes are provided. The posted speed limit on Warner Avenue is 45 mph.
- **Talbert Avenue** – Talbert Avenue is an east/west roadway classified in the City of Huntington Beach General Plan, ~~as a six-lane major (divided) highway between Gothard Street and Beach Boulevard, a four-lane primary (divided) highway elsewhere in Huntington Beach, and as a primary arterial in the MPAH~~ the City of Fountain Valley General Plan, and the MPAH as a Primary Arterial. On-street parking is generally not permitted on Talbert Avenue due to the bike lanes present between Gothard Street and Bushard Street. The posted speed limit on Talbert Avenue is 45 mph.
- **Ellis Avenue** – Ellis Avenue is an east/west roadway, and from Edwards Street to Delaware Street, is classified in the City of Huntington Beach General Plan as ~~a four-lane primary (divided) highway and is designated as a secondary arterial in the MPAH~~ an Augmented Collector Arterial. In the MPAH and within the City of Fountain Valley, Ellis Avenue is classified as a Secondary Arterial. On-street parking is typically not permitted along Ellis Avenue due to the bike lanes present from Newland Street to Ward Street. The posted speed limit on Ellis Avenue ranges from 40 to 45 mph.
- **Garfield Avenue** – Garfield Avenue is an east/west roadway classified in the City of Huntington Beach General Plan ~~as a six-lane major (divided) highway between Seapoint Street and Magnolia Avenue, a four-lane primary (divided) highway east of Magnolia Avenue and is designated as a primary arterial in the MPAH~~ City of Fountain Valley General Plan, and the MPAH as a Primary Arterial. On-street parking is generally not permitted due to the bike lanes present between Seapoint Street and Ward Street. The posted speed limit on Garfield Avenue is 45 mph.

- **Adams Avenue** – Adams Avenue is an east/west roadway, and from Lake Street to Beach Boulevard, is classified in the City of Huntington Beach General Plan ~~as a four-lane primary (divided) highway between 1st Street and Beach Boulevard, as a six-lane major (divided) highway east of Beach Boulevard and is designated as a major arterial in the MPAH~~ and the MPAH as a Primary Arterial. East of Beach Boulevard it is classified as a Major Arterial. Adams Avenue contains two lanes (undivided) between 17th Street and Lake Street, four lanes (divided) between Lake Street and beach Boulevard, and six lanes (divided) east of Beach Boulevard. On-street parking is generally not permitted along Adams Avenue due to the bike lanes present from Lake Street to Magnolia Avenue. The posted speed limit on Adams Avenue ranges from 25 to 45 mph.
- **Atlanta Avenue** – Atlanta Avenue is an east/west roadway classified in the City of Huntington Beach General Plan ~~as a four-lane primary (divided) and as a primary arterial in the MPAH~~ and the MPAH as a Primary Arterial. On-street parking is generally permitted where bike lanes are not present or where parking lanes are provided adjacent to bike lanes. Bike lanes are present on Atlanta Avenue between Beach Boulevard and the terminus of Atlanta Avenue at Surge Lane. The posted speed limit on Atlanta Avenue ranges between 40 and 45 mph.
- **Hamilton Avenue** – Hamilton Avenue is an east/west roadway classified in the City of Huntington Beach General Plan as a four-lane primary (divided) highway and as a primary arterial in the MPAH and in the MPAH as a Primary Arterial. Hamilton Avenue contains two lanes (undivided) between Newland Street and Magnolia Street and four lanes (divided) east of Magnolia Street. On-street parking is generally permitted, and discontinuous bike lanes are present throughout the roadway. Hamilton Avenue provides direct access to the Site.

Existing Traffic Conditions

Study Area Intersections

The Project study area was established in ~~accordance~~ collaboration with Caltrans, the City of Huntington Beach ~~Public Works staff~~ and City of Fountain Valley, and covers the area adjacent to the Site which would be utilized by Project traffic. The study area is generally bounded by I-405 to the north, Beach Boulevard to the west, PCH to the south and Brookhurst Street to the east. A vicinity map which illustrates the study area intersections is provided in **Figure R4.10-1**, *Study Area Intersections*. The following forty intersections were chosen for analysis:

~~1. Beach Boulevard at Center Avenue~~

~~2. Beach Boulevard at Edinger Avenue~~

~~3. Beach Boulevard at Warner Avenue~~

~~4. Beach Boulevard at Talbert Avenue~~

~~5. Beach Boulevard at Main Street/Ellis Avenue~~

~~6. Beach Boulevard at Garfield Avenue~~

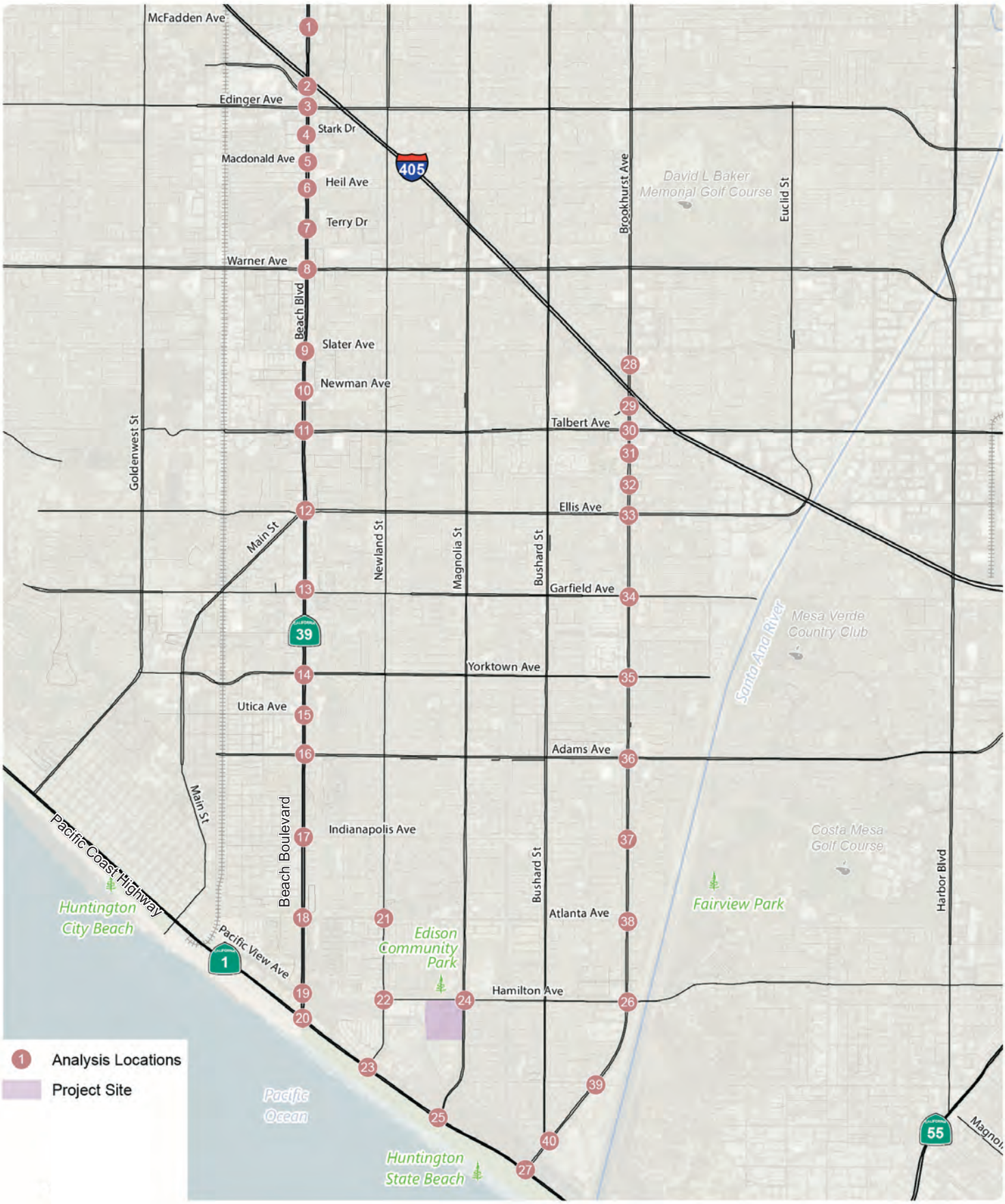
~~7. Beach Boulevard at Adams Avenue~~

~~8. Beach Boulevard at Atlanta Avenue~~

~~9. Beach Boulevard at Pacific Coast Highway~~

~~10. Newland Street at Atlanta Avenue~~

~~11. Newland Street at Hamilton Avenue~~



Not to scale

Study Area Intersections

RAP EIR - Ascon Landfill Site

Source: Fehr & Peers, 2014.

FIGURE

R4.10-1

PCR

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~~12. Newland Street at Pacific Coast Highway~~
~~13. Magnolia Street at Hamilton Avenue~~
~~14. Magnolia Street at Pacific Coast Highway~~
~~15. Brookhurst Street at Hamilton Avenue~~
~~16. Brookhurst Street at Pacific Coast Highway~~

1. Beach Boulevard at McFadden Avenue
2. Beach Boulevard at Center Avenue
3. Beach Boulevard at Edinger Avenue
4. Beach Boulevard at Stark Drive
5. Beach Boulevard at MacDonald Drive
6. Beach Boulevard at Heil Avenue
7. Beach Boulevard at Terry Drive
8. Beach Boulevard at Warner Avenue
9. Beach Boulevard at Slater Avenue
10. Beach Boulevard at Newman Avenue
11. Beach Boulevard at Talbert Avenue
12. Beach Boulevard at Main St/Ellis Avenue
13. Beach Boulevard at Garfield Avenue
14. Beach Boulevard at Yorktown Avenue
15. Beach Boulevard at Utica Avenue
16. Beach Boulevard at Adams Avenue
17. Beach Boulevard at Indianapolis Avenue
18. Beach Boulevard at Atlanta Avenue
19. Beach Boulevard at Pacific View Avenue
20. Beach Boulevard at Pacific Coast Highway (PCH)
21. Newland Street at Atlanta Avenue
22. Newland Street at Hamilton Avenue
23. PCH at Newland Street
24. Magnolia Street at Hamilton Avenue

25. PCH at Magnolia St
26. Brookhurst Street at Hamilton Avenue
27. PCH at Brookhurst Street
28. Brookhurst Street at I-405 Northbound Ramps
29. Brookhurst Street at I-405 Southbound Ramps
30. Brookhurst Street at Talbert Avenue
31. Brookhurst Street at Stonefield Drive
32. Brookhurst Street at Quail Avenue
33. Brookhurst Street at Ellis Avenue
34. Brookhurst Street at Garfield Avenue
35. Brookhurst Street at Yorktown Avenue
36. Brookhurst Street at Adams Avenue
37. Brookhurst Street at Indianapolis Avenue
38. Brookhurst Street at Atlanta Avenue
39. Brookhurst Street at Banning Avenue
40. Brookhurst Street at Bushard Street

Of the intersections listed above, those along Beach Boulevard (#1-20), PCH (#23, 25 and 27) and at the I-405 ramps (#28-29) are under Caltrans jurisdiction, with the remainder being under the jurisdiction of the City of Huntington Beach (#21, 22, 24, 34-40) or City of Fountain Valley (#28-34). As discussed below, both Cities have the same significance thresholds for analyzing traffic impacts.

Existing Traffic Volumes

Traffic volume counts were collected at study intersections ~~on March 14, 2013~~ in May 2014, between 7:00 and 9:00 A.M., mid-day (11:00 A.M. to 1:00 P.M.), and between 4:00 and 6:00 P.M. peak hours. These time periods are representative of peak traffic hours. Existing intersection turning movement volumes for the A.M. and P.M. peak hours, which are summarized in the Revised Traffic Study contained in Revised Appendix G of this Recirculated Draft EIR, are used to represent Existing (~~2013~~2014) conditions.[3] Existing traffic count data are also provided in the Revised Traffic Study.[4]

[3] *Fehr & Peers, Remedial Action Plan Ascon Landfill Site ~~Partial Removing and Capping~~ Transportation Impact Study Draft Report , Figure 3-1 (~~May 2013~~ August 2014).*

[4] *Fehr & Peers, Op. Cit., Appendix A.*

Existing Intersection Operations

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS "A", representing completely free-flow conditions, to LOS "F", representing breakdown in flow resulting in stop-and-go conditions. LOS "E" represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

Since the Project would utilize truck routes along state highways as well as City of Huntington Beach and City of Fountain Valley facilities, the traffic analysis has been performed using the Highway Capacity Manual (HCM) methodology to satisfy Caltrans requirements ~~for the intersections that include Beach Boulevard and PCH~~ and the Intersection Capacity Utilization (ICU) methodology to satisfy City requirements. ~~for other intersections that include City streets alone.~~ The HCM and ICU methodologies are considered the state-of-the-practice methodologies for evaluating intersection operations, and are consistent with Caltrans requirements. ~~and~~ the City of Huntington Beach General Plan Circulation Element requirements, ~~respectively~~ and the City of Fountain Valley requirements.

The HCM 2000 Methodology estimates a quantitative delay at intersections while the ICU methodology measures a quantitative volume-to-capacity (V/C) ratio at intersections. After the quantitative delay or V/C ratio estimates are complete, the methodologies assign a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) "A" (minimal delay) to LOS "F" (excessive congestion), as described above. LOS "E" represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in ~~**Table 4.10-1**~~**Table R4.10-1**, *Level of Service Standards for Signalized and Unsignalized Intersections*.

The HCM 2000 methodology for signalized intersections estimates the average control delay for the vehicle at the intersection. The HCM analysis is conducted with the Synchro 8 Software. The HCM analysis uses a lane capacity of 1,900 vehicles per hour per lane (vphpl) with a peak hour factor.

The ICU methodology assigns a qualitative letter grade that represents the operations of the intersection based off a V/C ratio instead of estimated delay. The ICU methodology bases the calculation procedure on critical movements at an intersection. The ICU methodology is conducted with the Traffix 8.0 Software. A capacity of 1,700 vphpl is assumed together with a 0.05 clearance interval, based upon the guidelines in the Orange County CMP.

The City of Huntington Beach General Plan Circulation Element defines LOS ~~"D" or better at intersections during the peak hour as the accepted standard~~ standards based on the intersection classification (i.e., critical, principal or secondary). The LOS standards and performance criteria are different for each of the classifications as follows:

- Critical Intersections: LOS "E" or better is acceptable
- Principal Intersections: LOS "D" or better is acceptable
- Secondary Intersections: LOS "C" or better is acceptable

Table R4.10-1

Level of Service Standards for Signalized and Unsignalized Intersections

Level of Service	Description	ICU Signalized V/C	HCM Signalized Delay (Seconds)
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0.00-0.60	≤10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	0.61-0.70	>10.0 to 20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	0.71-0.80	>20.0 to 35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	0.81-0.90	>35.0 to 55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	0.91-1.00	>55.0 to 80.0
F	Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	>1.00	>80.0

Source: Highway Capacity Manual (Transportation Research Board, 2000).

All intersections under the Huntington Beach jurisdiction analyzed in the study are classified as "principal" intersections with LOS "D" criteria, except for Newland Street & Hamilton Avenue and Newland Street & Atlanta Ave which are "secondary" intersections with LOS "C" criteria.

The City of Fountain Valley General Plan Circulation Element states that LOS D is the lowest acceptable service level for intersections in Fountain Valley.

Existing traffic volumes and lane configurations collected in the field, and signal timing information provided by City staff and Caltrans, were used to evaluate operations at the study intersections for existing A.M. and P.M. peak hour conditions. The results are summarized in **Table R4.10-2**, *Intersection Level of Service – Existing Conditions*. As shown in Table R4.10-2, all of the study intersections currently operate acceptably at LOS D or better during the peak hours, with the exception of the P.M. peak hour at the intersections of Beach Boulevard and ~~Garfield~~ McFadden Avenue and at Beach Boulevard and Warner Avenue, both of which currently operate at LOS E. Lane configurations and peak hour traffic volumes at study intersections for existing (~~2013~~2014) conditions are illustrated in Figure 3-1 in the Revised Traffic Study.

Alternative Transportation Facilities – Bicycle, Pedestrian and Transit Network

The City of Huntington Beach provides an extensive bicycle network that connects the community. A north/south and east/west grid network of dedicated bicycle lanes and trails allows for bicycle travel to any part of the City. Class I, II and III bicycle facilities are provided throughout Huntington Beach, including adjacent to the Site. Class I bicycle facilities in Huntington Beach are dedicated right-of-way on off-street

~~**Table 4.10-2**~~

~~**Intersection Service Levels – Existing (2013) Conditions**~~

			~~A.M. Peak~~		~~P.M. Peak~~	
	~~Intersection~~	~~Control~~	~~Delay or V/C~~	~~LOS~~	~~Delay or V/C~~	~~LOS~~
~~1.~~	~~Beach Boulevard at Center Avenue[a]~~	~~Signal~~	~~14.4~~	~~B~~	~~21.2~~	~~C~~
~~2.~~	~~Beach Boulevard at Edinger Avenue[a]~~	~~Signal~~	~~33.4~~	~~C~~	~~36.6~~	~~D~~
~~3.~~	~~Beach Boulevard at Warner Avenue[a]~~	~~Signal~~	~~34.3~~	~~C~~	~~35.6~~	~~D~~
~~4.~~	~~Beach Boulevard at Talbert Avenue[a]~~	~~Signal~~	~~29.7~~	~~C~~	~~40.0~~	~~D~~
~~5.~~	~~Beach Boulevard at Main Street/Ellis Avenue[a]~~	~~Signal~~	~~35.5~~	~~D~~	~~46.8~~	~~D~~
~~6.~~	~~Beach Boulevard at Garfield Avenue[a]~~	~~Signal~~	~~44.5~~	~~D~~	~~58.3~~	~~E~~
~~7.~~	~~Beach Boulevard at Adams Avenue[a]~~	~~Signal~~	~~36.3~~	~~D~~	~~45.7~~	~~D~~
~~8.~~	~~Beach Boulevard at Atlanta Avenue[a]~~	~~Signal~~	~~29.6~~	~~C~~	~~49.0~~	~~D~~
~~9.~~	~~Beach Boulevard at Pacific Coast Highway[a]~~	~~Signal~~	~~30.0~~	~~C~~	~~28.5~~	~~C~~
~~10.~~	~~Newland Street at Atlanta Avenue[b]~~	~~Signal~~	~~0.428~~	~~A~~	~~0.477~~	~~A~~
~~11.~~	~~Newland Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.471~~	~~A~~	~~0.589~~	~~A~~
~~12.~~	~~Newland Street at Pacific Coast Highway[a]~~	~~Signal~~	~~23.1~~	~~C~~	~~25.4~~	~~C~~
~~13.~~	~~Magnolia Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.488~~	~~A~~	~~0.544~~	~~A~~
~~14.~~	~~Magnolia Street at Pacific Coast Highway[a]~~	~~Signal~~	~~12.1~~	~~B~~	~~17.6~~	~~B~~
~~15.~~	~~Brookhurst Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.672~~	~~B~~	~~0.619~~	~~B~~
~~16.~~	~~Brookhurst Street at Pacific Coast Highway[a]~~	~~Signal~~	~~12.1~~	~~B~~	~~27.8~~	~~C~~

~~[a] *Intersection is within Caltrans jurisdiction and evaluated according to HCM 2000 methodology. Average delay is reported for signalized intersections.*~~

~~[b] *Intersection is within Huntington Beach jurisdiction and evaluated according to ICU methodology. V/C ratio is reported for signalized intersections.*~~

~~*Note*~~

~~*Cells highlighted in gray represent intersections that are operating below acceptable thresholds.*~~

~~*Source: Fehr & Peers, 2013.*~~

trails designated specifically for bike and non-automotive uses. Class II bicycle facilities in Huntington Beach are typically painted bicycle lanes that share right-of-way with automobiles. Class III bicycle facilities in Huntington Beach are typically roadways that share right-of-way with bicycles and automobiles and contain "bike route" signs. Adjacent to the Site are Class II bicycle lanes along Hamilton Avenue and Magnolia Street. The City of Fountain Valley Trails Plan (Figure 3-4 of the General Plan Circulation Element) provides a grid of Class I and II bike paths in the City. No bike paths are located along Brookhurst Street, although Garfield Avenue and Ellis Avenue are identified as Class II bike paths that intersect with Brookhurst Avenue.

Pedestrian facilities throughout Huntington Beach are well developed along most major roadways. Hamilton Avenue adjacent to the Site contains a paved walkway (not standard sidewalk) on the south side of the street adjacent to the Site. A sidewalk is also located within Edison Community Park near the north side of Hamilton Avenue. Sidewalks are also located along Hamilton Avenue and Magnolia Street adjacent to Edison High School. Although a sidewalk is located along the east side of Magnolia Street, the west side of Magnolia

Table R4.10-2

Intersection Service Levels – Existing (2014) Conditions

			A.M.		Mid-Day		P.M.	
	Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
1.	Beach Blvd & McFadden Ave	Signal	53	D	34	C	**55**	**E**
2.	Beach Blvd & Center Ave	Signal	10	B	13	B	16	B
3.	Beach Blvd & Edinger Ave	Signal	34	C	33	C	52	D
4.	Beach Blvd & Stark Dr	Signal	9	A	15	B	15	B
5.	Beach Blvd & MacDonald Dr	Signal	11	B	14	B	10	B
6.	Beach Blvd & Heil Ave	Signal	34	C	30	C	52	D
7.	Beach Blvd & Terry Dr	Signal	5	A	8	A	10	B
8.	Beach Blvd & Warner Ave	Signal	47	D	33	C	**73**	**E**
9.	Beach Blvd & Slater Ave	Signal	38	D	32	C	50	D
10.	Beach Blvd & Newman Ave	Signal	5	A	7	A	9	A
11.	Beach Blvd & Talbert Ave	Signal	38	D	40	D	40	D
12.	Beach Blvd & Main St/Ellis Ave	Signal	33	C	28	C	33	C
13.	Beach Blvd & Garfield Ave	Signal	40	D	33	C	39	D
14.	Beach Blvd & Yorktown Ave	Signal	29	C	30	C	34	C
15.	Beach Blvd & Utica Ave	Signal	10	B	18	B	16	B
16.	Beach Blvd & Adams Ave	Signal	33	C	35	D	43	D
17.	Beach Blvd & Indianapolis Ave	Signal	26	C	21	C	20	C
18.	Beach Blvd & Atlanta Ave	Signal	32	C	30	C	49	D
19.	Beach Blvd & Pacific View Ave	Signal	7	A	7	A	8	A
20.	Beach Blvd & PCH (SR-1)	Signal	29	C	22	C	27	C
21.	Newland St & Atlanta Ave	Signal	0.49	A	0.42	A	0.54	A
22.	Newland St & Hamilton Ave	Signal	0.56	A	0.45	A	0.67	B
23.	PCH (SR-1) & Newland St	Signal	17	B	11	B	13	B
24.	Magnolia St & Hamilton Ave	Signal	0.53	A	0.39	A	0.59	A
25.	PCH (SR-1) & Magnolia St	Signal	25	C	20	C	27	C
26.	Brookhurst St & Hamilton Ave	Signal	0.7	C	0.4	A	0.64	B
27.	PCH (SR-1) & Brookhurst St	Signal	24	C	19	B	34	C
28.	Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-	-	-
29.	Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-	-	-
30.	Brookhurst St & Talbert Ave	Signal	0.79	C	0.62	B	0.77	C
31.	Brookhurst St & Stonefield Dr	Signal	0.35	A	0.49	A	0.49	A
32.	Brookhurst St & Quail Ave	Signal	0.4	A	0.59	A	0.58	A
33.	Brookhurst St & Ellis Ave	Signal	0.66	B	0.57	A	0.69	B
34.	Brookhurst St & Garfield Ave	Signal	0.52	A	0.59	A	0.6	B
35.	Brookhurst St & Yorktown Ave	Signal	0.52	A	0.52	A	0.58	A
36.	Brookhurst St & Adams Ave	Signal	0.74	C	0.52	A	0.75	C
37.	Brookhurst St & Indianapolis Ave	Signal	0.25	A	0.3	A	0.34	A

Table R4.10-2 (Continued)

Intersection Service Levels – Existing (2014) Conditions

Intersection	Control	A.M. Delay or ICU	A.M. LOS	Mid-Day Delay or ICU	Mid-Day LOS	P.M. Delay or ICU	P.M. LOS
38. Brookhurst St & Atlanta Ave	Signal	0.39	A	0.34	A	0.42	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.19	A	0.22	A
40. Brookhurst St & Bushard St	Signal	0.3	A	0.22	A	0.27	A

Notes:
1 Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2 Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3 Cells highlighted in grey represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

Street (the east edge of the Site) has no pedestrian facilities. This edge of the Site is occupied by a landscaped berm and other areas that extend into the city right-of-way along Magnolia Street.

The surrounding area to the Site is served by transit (buses). However, no bus stops are located immediately adjacent to the Site along Hamilton Avenue or Magnolia Street. The following bus routes are within the local project vicinity:

- Route 1 – Route 1 is a local fixed bus route that serves the communities of Long Beach, Huntington Beach, Laguna Beach and San Clemente, among others. It connects the VA Hospital and Cal State Long Beach to the Newport Transportation Center, Laguna Beach Bus Station, several schools and beaches along Pacific Coast Highway, and the San Clemente Metrolink Station, among others. Route 1 operates mostly along PCH, including near the Site. It operates on 30- to 60-minute headways during weekdays and on 60-minute headways on weekends.
- Route 29 – Route 29 is a local fixed bus route that serves the communities of La Habra, Anaheim, Westminster and Huntington Beach, among others. It connects the La Habra Marketplace, the Buena Park Metrolink Station and Civic Center, Knott's Berry Farm, West Anaheim Medical Center, Stanton Civic Center, the West County Courthouse, the Westminster Civic Center, the Goldenwest Transportation Center, Humana Hospital of Huntington Beach, several schools and Huntington City Beach, among others. This route operates mostly along Beach Boulevard, as well as PCH and Whittier Boulevard. Route 29 operates on 15- to 60-minute headways on weekdays and weekends.
- Route 33 – Route 33 is a local fixed bus route that serves the communities of Fullerton, Anaheim, Westminster and Huntington Beach, among others. It connects the Fullerton Park-and-Ride, Little Saigon, several schools and Huntington State Beach, among others. This route operates primarily on Magnolia Street. Route 33 operates on 30- to 45-minute headways on weekdays and 60- to 80-minute headways on weekends.

- Route 35 – Route 35 is a local fixed bus route that serves the communities of Fullerton, Anaheim, Westminster and Huntington Beach, among others. It connects the Fullerton Park-and-Ride, Garden Grove Promenade, Korea Town, the Fountain Valley Civic Center, the Mile Square Park Park-and-Ride, Talbert Medical Center, Huntington State Beach and several schools, among others. This route operates primarily on Brookhurst Street. Route 35 operates on 30- to 60-minute headways on weekdays and on 45- 60-minute headways on weekends.
- Route 173 – Route 173 is a community and shuttle route that serves the communities of Santa Ana, Costa Mesa, and Huntington Beach. It connects the Orange County Fair Grounds, South Coast Plaza, Vanguard University, Triangle Square, Huntington City Beach and several schools, among others. This route operates along Atlanta Avenue, Hamilton Avenue, Orange Avenue, Del Mar Avenue, and Bear Street, among others. Route 173 operates on 45-minute headways on weekdays and does not operate on the weekends.

2. ENVIRONMENTAL IMPACTS

Significance Criteria

For purposes of this EIR, DTSC has utilized the checklist questions in Appendix G of the *CEQA Guidelines* as significance criteria to determine whether a project would have a significant environmental impact regarding traffic and circulation. Based on the size and scope of the Project and the potential for traffic impacts, the criteria identified below are included for evaluation in this EIR. Please refer to Section 6.0, Other *Mandatory CEQA Considerations*, for a discussion of other issues associated with the evaluation of traffic where the characteristics of the Project made it clear that effects would not be significant and further evaluation in this section was not warranted.

Would the Project:

4.10-1 Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit (refer to Impact Statement 4.10-1);

4.10-2 Conflict with an applicable Congestion Management Program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways (refer to Impact Statement 4.10-2);

4.10-3 Result in inadequate emergency access (refer to Impact Statement 4.10-3); and

4.10-4 Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities (refer to Impact Statement 4.10-4).

Methodology

Intersections

Traffic Condition Scenarios

This traffic analysis evaluates "Existing Plus Project (~~2013~~2014) Conditions" and "Project Operating Year (~~2015~~ 2017) Plus Project Conditions." The "Existing Plus Project (~~2013~~2014) Conditions" scenario is the evaluation of the effects of Project relative to existing traffic conditions. This scenario includes existing traffic volumes plus Project volumes along the proposed haul route. Because the proposed construction activity would not occur during this period, this scenario is presented for informational purposes only.

The "Project Operating Year (~~2015~~2017) Plus Project Conditions" scenario is the evaluation of the effects of the Project relative to traffic conditions during the active implementation of the RAP. This scenario represents the ~~first year of RAP implementation~~ worse-case traffic conditions during the construction remediation activities due to ambient growth and related project traffic~~,~~ but does not represent long term operation of the closed capped Site. The traffic volumes for the "Project Operating Year (~~2015~~2017) Conditions" (With and Without the Project) incorporate one percent annual ambient traffic growth over the three-year period between the Existing and Operating Years, as well as traffic generated by related projects. The related projects expected to be completed by the Project operating year (~~2015~~2017) are included in this analysis. For purposes of the revised traffic analysis, ~~The~~ the list of related projects ~~is provided in **Table 3-1**, *Related Projects List*, in Section 3.0, *Basis for Cumulative Analysis*, of this EIR~~ was provided by City of Huntington Beach Staff. The City of Fountain Valley indicated that there were no Cumulative projects within our study area. Because the "Project Operating Year (~~2015~~2017) Conditions" scenario incorporates ambient growth and related projects' traffic, it represents the Projects' cumulative impact. Detailed operating year assumptions as well as estimated trip generation volumes for the related projects are provided in the Revised Traffic Study.[5]

In addition, the Project Operating Year 2017 conditions assume updated traffic signal timing parameters over the Existing 2014 Conditions parameters along Caltrans facilities, inclusive of Beach Boulevard and PCH. The updated traffic signal timing parameters assume the new pedestrian walk speed of 3.5 feet per second (fps) as required by the 2012 Manual on Uniform Traffic Control Devices (MUTCD). The existing parameters apply a walk speed of 4.0 fps. It is assumed that the implementation of the new pedestrian timings would be done concurrently with a reevaluation of the coordinated timing plans and other signal timing parameters, as recommended by Caltrans. The slower walk speed of 3.5 fps equates to increasing traffic signal timing parameters including flashing "don't walk," minimum green time, and coordinated cycle lengths. In this analysis, the increase in the flashing "don't walk" time was conducted by measuring ramp to ramp crossing distances and determining the minimum crossing time, not including the yellow clearance interval. The increased pedestrian flash "don't walk" time is assumed to be accompanied by an increase in the coordinated cycle length for all intersections that are Caltrans facilities (Beach Boulevard and PCH).

[5] *Appendix D, Pending and Approved Projects, in the Revised Traffic Study includes the trip generation estimates for the related projects.*

Intersection Impact Thresholds

As discussed in greater detail below, traffic impacts were evaluated by:

1. Determining the trip generation for the Project and the related projects;

2. Assigning the Project trips to the roadway network;

3. Evaluating the ~~2013~~2014 "Without Project" and "With Project" traffic conditions. The "Existing Plus Project (~~2013~~2014) Conditions" analysis, which does not take into consideration related projects, is for information purposes only;

4. Evaluating the ~~2015~~2017 "Without Project" and "With Project" traffic conditions (future conditions) (existing conditions plus ambient growth and growth from the related projects). Future conditions are the result of the Project and related projects. For the ~~16~~ 40 study intersections, these changes were compared to the thresholds of significance set forth by the City of Huntington Beach, City of Fountain Valley, Caltrans, and/or the Orange County CMP, as appropriate, to determine whether significant impacts would occur.

The City of Huntington Beach General Plan defines different LOS standards for different types of intersections to determine acceptable operations on their facilities. Intersections in the City of Huntington Beach are classified as either Critical, Principal, or Secondary Intersections. The LOS standards and performance criteria are different for each of the classifications as follows:

- Critical Intersections: LOS "E" or better is acceptable
- Principal Intersections: LOS "D" or better is acceptable
- Secondary Intersections: LOS "C" or better is acceptable

Based on the City of Huntington Beach LOS standards, the following impact thresholds are utilized to determine whether the Project would result in a significant intersection impact for intersections within ~~the~~ City's jurisdiction. ~~Table 4.10-2 identifies the intersections within the City's jurisdiction.~~

- Threshold #1: The Project would cause an intersection operating at ~~LOS D or better during the peak hour to move to LOS E or LOS F~~ an acceptable level of service to an unacceptable level of service.
- Threshold #2: The Project would increase delay at an intersection that ~~is forecasted to operate at LOS E or LOS F~~ operates at an unacceptable level of service.

Based on the City of Fountain Valley LOS standards, the following impact thresholds are utilized to determine whether the Project would result in a significant intersection impact for intersections within Fountain Valley's jurisdiction.

- Threshold #3: The Project would cause an intersection operating at LOS D or better during the peak hour to move to LOS E or LOS F.
- Threshold #4: The Project would increase delay at an intersection that is forecasted to operate at LOS E or LOS F.

The following impact threshold is utilized to determine whether the Project would result in a significant impact at intersections within Caltrans jurisdiction. All intersections along Beach Boulevard (SR 39) and Pacific Coast Highway (SR-1) are within Caltrans jurisdiction. ~~Table 4.10-2 identifies the intersections within Caltrans jurisdiction.~~

- Threshold ~~#3~~ 5: The Project would cause an intersection at LOS D to degrade to LOS E or F or, if the intersection were forecasted to operate at LOS E or worse without Project traffic, the Project would cause the average delay to increase. (Caltrans requires that any facilities within Caltrans Jurisdiction shall maintain a minimum LOS threshold of LOS D or less than 55 seconds of average delay)

The following impact threshold is utilized to determine whether a Project would result in a significant impact at intersections listed under the Orange County CMP.

- Threshold #4 6: The Project would worsen the LOS or increase ICU by more than 0.03 at an intersection forecasted to operate at LOS E or F.

Emergency Access

The analysis of emergency access first consists of a review of the ~~City's~~ City of Huntington Beach policies for providing the minimum number of emergency access points to/from the project site. Second, a determination is made whether the future traffic conditions in the immediate project area and at the nearest adjacent intersections would be subject to adverse traffic conditions, as well as potential lane closures. Based on the future traffic conditions, a determination is made whether emergency access to/from the project site would be adversely impacted. In addition, the Project's intersection impacts near Orange Coast Memorial Hospital in the City of Fountain Valley are evaluated to determine the Project's potential effects on emergency services at that facility, as well as along the Brookhurst Street Corridor.

Alternative Transportation Facilities

The analysis of impacts to alternative transportation considers whether the Project would substantially disrupt or alter existing or planned bicycle, pedestrian or transit (bus) facilities or services.

General Plan Circulation Elements

The City of Huntington Beach General Plan Circulation Element and City of Fountain Valley Circulation Elements contain~~s~~ policies that are applicable to traffic safety and the reduction of conflicts between motor vehicles, pedestrian, and cyclists. The Project is compared to ~~each~~ applicable ~~policy~~ policies to determine if any inconsistencies could result in environmental impacts.

Project Design Features

Project Design Features (PDFs) to be implemented by the Project would include traffic control measures set forth in a Project-specific Construction Traffic Management Plan subject to review and approval by the City of Huntington Beach, City of Fountain Valley and/or Caltrans, as necessary. The following PDFs have been identified for the Project:

PDF 10-1 Prior to the start of ~~construction~~ hauling activities, the project contractor, in coordination with DTSC, Caltrans, ~~and~~ City of Huntington Beach, and City of Fountain Valley, as necessary, would prepare a Construction Traffic Management/Haul Route Plan to be implemented during implementation of the RAP. The Plan would stipulate that all haul trucks contracted for export trips, regardless of point of origin or destination, use Beach Boulevard for access to/from the I-405 Freeway. Import and supply trucks could use either Beach Boulevard or Brookhurst Street for access to/from the I-405 Freeway. Up to a maximum of 100 trucks per day traveling to and from the Site could utilize Beach Boulevard, with the remaining trucks utilizing Brookhurst Street. The Plan would identify all traffic control measures, signs, and delineators to be implemented by the construction contractor through the duration of ~~construction~~ hauling activities associated with the RAP. The Construction Traffic Management Plan would require coordination with emergency providers regarding any lane closures or other construction effects that would impact emergency access. The Plan shall also consider construction traffic from nearby simultaneous construction activities and pedestrian safety related to school and bike routes. The Plan would be subject to final approval by the City of Huntington Beach Public Works Department and City of Fountain Valley Public Works Department, as necessary.

PDF 10-2 During RAP construction activities that encroach upon Magnolia Street or Hamilton Avenue, temporary barricades (e.g., "K rails") would be placed on the southbound side of Magnolia Street and/or the eastbound side of Hamilton Avenue to provide a buffer between construction activities and the public street. If a temporary lane closure is required along Hamilton Avenue, the Responsible Parties would coordinate with the City of Huntington Beach Public Works Department to identify appropriate traffic measures such as lane restriping or re-painting the directional lane arrows, if determined necessary in consultation with City Staff. This PDF to be verified as part of the Construction Traffic Management/Haul Route Plan subject to review and approval by the City of Huntington Beach Public Works Department.

PDF 10-3 During RAP construction activities, left turns by trucks entering or exiting the Site shall be limited to four or fewer axle, single-trailer trucks unless assisted by safety flagmen to direct vehicular traffic, pedestrians and bicyclists. This PDF to be verified as part of the Construction Traffic Management Plan subject to review and approval by the City of Huntington Beach Public Works Department.

PDF 10-4 During RAP construction activities, on-going communication would be maintained with school administration at Edison High School, providing sufficient notice to forewarn students and parents/guardians when existing pedestrian, bicycle and vehicle routes to the school may be affected to maintain school traffic, bicycle and pedestrian safety. This PDF to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

PDF 10-5 During RAP construction activities, to maintain school traffic, bicycle and pedestrian safety, haul trucks or trucks larger than four-axle, single trailer trucks would not be permitted to travel on Magnolia Street or Hamilton Avenue past Edison High School. This

PDF is to be verified within the haul route plan subject to approval by the City of Huntington Beach Public Works Department.

PDF 10-6 During RAP construction activities, temporary traffic control signage and flagmen would be present during import/export on Magnolia Street and Hamilton Avenue at the ingress/egress driveways to direct vehicular traffic, pedestrians and bicyclists around the construction site in order to maintain school traffic and pedestrian safety. This PDF to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

PDF 10-7 During RAP construction activities that encroach upon Magnolia Street or Hamilton Avenue, signage would be posted along the Site perimeter to notify pedestrians to use the sidewalks along the north side of Hamilton Avenue and the east side of Magnolia Street in place of the barricaded areas on the south side of Hamilton Avenue and the west side of Magnolia Street. This PDF to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

PDF 10-8 During RAP construction activities that encroach upon Magnolia Street or Hamilton Avenue, signage would be posted along the Site perimeter to notify cyclists of alternative routes that can be used in lieu of the eastbound Hamilton Avenue and the southbound Magnolia Street bike lanes. An alternative east-west bicycle route near the Site would be Banning Avenue. Alternative north-south bicycle routes include Newland Street, Bushard Street, and Brookhurst Street. These alternative routes provide connection to many of the same destinations as Hamilton Avenue and Magnolia Street, particularly to the Pacific Ocean. This PDF to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration in quarterly compliance certification reports submitted by the RPs.

Analysis of Project Impacts

Traffic Impacts

Impact 4.10-1: Would the Project conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

Short-Term Impacts

Project Trip Generation

Because of the unique aspect of the Project, trip generation is not classified under standard Institute of Transportation Engineers (ITE) rates. As such, the trip generation is based on the anticipated level and timing of truck, employee and visitor activity needed for implementation of the RAP within the estimated time frame. The various categories of vehicles associated with the Project and analyzed in this EIR are described below. For purposes of this traffic analysis, daily "one-way trips" are representative of the daily

directional trips on a given roadway segment (e.g., northbound on Beach Blvd.). Daily "two-way trips" represent the sum of the one-way daily trips along a given roadway segment in both directions (e.g., northbound plus southbound trips on Beach Blvd.).

- **Export Trucks** - Export trucks remove material from the site for off-site disposal. Upon arrival, trucks would be filled with material and, then, leave. ~~It is estimated that 20 export trucks per hour would enter and depart the Site between 7:00 A.M. and 1:00 P.M. and four (4) export trucks per hour would enter and depart the Site between 1:00 P.M. and 6:00 P.M.~~ A maximum of 20 export trucks per hour for the A.M., mid-day, and P.M. peak hours are proposed by the RAP. The maximum daily number of export trips would be 100 per day as one-way trips.
- **Import Trucks** – Import trucks are tasked with delivering clean fill to the Site. These trucks would enter and leave the Site throughout the day, between 7:00 A.M. and 6:00 P.M. The maximum number of trucks per hour would be 25 during the A.M., mid-day, and P.M. peak hours. The maximum daily number of import trucks would be 200 per day as one-way trips.
- **Supply Trucks** – Up to 10 supply trucks per day would deliver various supplies, including water, equipment, and other related items/services. A maximum of four (4) trucks per hour are assumed, with a maximum of two (2) trucks per hour the more likely condition. Four is assumed to provide a conservative estimate. These trucks would enter and leave the Site throughout the day between 7:00 A.M. and 4:00 P.M.
- **Private vehicles: Employees –** Approximately 37 employees would work at the Site, typically arriving ~~before~~ as early as 6:00 A.M. ~~and no later than~~, but are assumed to arrive between 7:00 A.M. and 9:00 A.M. to provide a conservative (i.e., A.M. peak hour) analysis; and departing between 4:00 P.M. and 6:00 P.M. ~~Employees would arrive to the Site prior to the A.M. peak hour.~~ Fifty percent of the employees are assumed to take trips during the mid-day peak hour (lunch break). ~~However,~~ Employee departures may coincide with the P.M. peak hour.
- **Private vehicles: Visitors** - It is anticipated that up to 10 visitors would access the Site during any given day throughout RAP implementation. Visitors include DTSC staff, RP representatives, or representatives of the City and other regulatory agencies. Although visitors could arrive and depart at any time during a work day, a conservative assumption for the purpose of analyses is that visitors would arrive at 7:00 A.M., potentially leave during the mid-day peak hour, and then depart at 5:00 P.M., coinciding with A.M., mid-day, and P.M. peak traffic periods. Fifty percent of visitors are assumed to take trips during the mid-day peak hour (lunch break). In addition, 10 additional daily visitor trips are assumed to occur from the travel of visitors during off-peak periods for miscellaneous reasons (i.e., meetings, tours, etc.).

Estimated traffic for the Project is presented in **Table R4.10-3**, *Short-Term Project Trip Generation Estimates*. For the purpose of the traffic impact analysis, estimated truck trips are based on passenger car equivalent (PCE) use.[6] Under this methodology, as shown in the table, implementation of the RAP would generate approximate ~~357~~ 380 total daily one-way trips or ~~1,954~~ 2,010 daily two-way trips (accounting for PCE factors for export, import and supply trucks, as well as employee and visitor trips).

[6] *PCE is a metric used in Transportation Engineering, to assess traffic-flow rate on a roadway. A Passenger Car Equivalent is essentially the impact that a mode of transport has on traffic variables (such as headway, speed, density) compared to a single car.*

~~**Table 4.10-3**~~

~~**Project Trip Generation Estimates**~~

~~Trip Type~~	~~PCE~~	~~Daily One-Way Trips[a]~~	~~Daily Two-Way Trips (PCE)[b]~~	~~Max Hourly Trips~~		~~A.M. Peak Passenger Car Equivalents~~			~~P.M. Peak Passenger Car Equivalents~~		
				~~A.M.~~	~~P.M.~~	~~In~~	~~Out~~	~~Total~~	~~In~~	~~Out~~	~~Total~~
~~Export Trucks~~	~~3~~	~~100~~	~~600~~	~~20~~	~~4~~	~~60~~	~~60~~	~~120~~	~~12~~	~~12~~	~~24~~
~~Import Trucks~~	~~3~~	~~200~~	~~1,200~~	~~25~~	~~25~~	~~75~~	~~75~~	~~150~~	~~75~~	~~75~~	~~150~~
~~Supply Trucks~~	~~3~~	~~10~~	~~60~~	~~4~~	~~0~~	~~12~~	~~12~~	~~24~~	~~0~~	~~0~~	~~0~~
~~Employee~~	~~1~~	~~37~~	~~74~~	~~0~~	~~37~~	~~0~~	~~0~~	~~0~~	~~0~~	~~37~~	~~37~~
~~Visitor~~	~~1~~	~~10~~	~~20~~	~~10~~	~~10~~	~~10~~	~~0~~	~~10~~	~~0~~	~~10~~	~~10~~
~~**Totals:**~~		~~**357**~~	~~**1,954**~~	~~**59**~~	~~**76**~~	~~**157**~~	~~**147**~~	~~**304**~~	~~**87**~~	~~**134**~~	~~**221**~~

~~[a] *Daily one-way trips do not account for PCE.*~~
~~[b] *Daily two-way trips do account for PCE.*~~
~~*Source: Fehr & Peers, 2013.*~~

Table R4.10-3

Project Trip Generation Estimates

Trip Type	PCE	Daily One-Way Trips	Daily Two-Way Trips (PCE)	Max Hourly Trips			A.M. Peak Passenger Car Equivalents			Mid-Day Passenger Car Equivalents			P.M. Peak Passenger Car Equivalents		
				A.M.	MID-DAY	P.M.	In	Out	Total	In	Out	Total	In	Out	Total
Export Trucks	3	100	600	20	20	20	60	60	120	60	60	120	60	60	120
Import Trucks	3	200	1,200	25	25	25	75	75	150	75	75	150	75	75	150
Supply Trucks	3	10	60	4	4	0	12	12	24	12	12	24	0	0	0
Employee	1	55	110	37	37	37	37	0	37	18	19	37	0	37	37
Visitor	1	15	40	10	10	10	10	0	10	5	5	10	0	10	10
Totals:		**380**	**2,010**	**96**	**96**	**92**	**194**	**147**	**341**	**170**	**171**	**341**	**135**	**182**	**317**

Notes:
1 PCE = Passenger Car Equivalent.
2 Daily one-way trips do not account for PCE. The number of trips are representative of daily directional trips on a given roadway segment (e.g., northbound on Beach Blvd.)
3 Daily two-way trips do account for PCE. The number of trips represents the sum of the one-way daily trips along a given roadway segment in both directions (e.g., northbound plus southbound trips on Beach Blvd.)
4 The numbers of "Export Trucks" trips are representative of trucks utilizing Beach Blvd. regardless of trip purpose.
5 The numbers of "Import Trucks" trips are representative of haul trucks utilizing Brookhurst Street.
6 The number of employee and visitor trips assumes 50% of employees and visitors take a mid-day trip (i.e., lunch break). Also, 10 additional daily visitor trips are assumed to occur from the travel of visitors during off-peak periods for miscellaneous reasons (i.e., meetings, tours, etc.).

Source: Fehr & Peers, 2014.

Project Trip Distribution and Assignment

Estimated trip generation volumes were applied to study area roadways and intersections. The Project truck trip distribution is based on the haul routes for the Project. In general, regional access to the Site would be provided by I-405 for trips not originating in the City of Huntington Beach or nearby communities. Workers

and visitors (DTSC or other agency staff, etc.) could approach the Site using Beach Boulevard, Magnolia Street, Brookhurst Street, or PCH, depending on point of origin. The Project will, during various phases, include a substantial daily number of trucks for export of material (contaminated, recyclable, general or green waste, etc.), import of clean fill, and delivery of cap construction materials and other supplies.

~~Trucks would arrive via I-405 to the Beach Boulevard interchange, travel south on Beach Boulevard, and left on Pacific Coast Highway.~~ Trucks are expected to utilize either Beach Boulevard or Brookhurst Street from the I-405. Both streets are designated truck routes by the City of Huntington Beach and, in the case of the northern portion of Brookhurst Street, the City of Fountain Valley. In-bound trucks utilizing Beach Boulevard would travel south to PCH, turn left on PCH to ~~Export trucks would then turn left onto~~ Newland Street, turn left (travel north) on Newland Street to Hamilton Avenue, and then turn right (go east) on Hamilton Avenue to access the Site, making a right-hand turn from Hamilton Avenue into the Site. The egress route have trucks exit from the Site's southeast gate on Magnolia Street, turn right (go south) onto Magnolia Street, turn right (go northwest) onto Pacific Coast Highway, turn right (go north) onto Beach Boulevard and continue north along Beach Boulevard back to I-405.

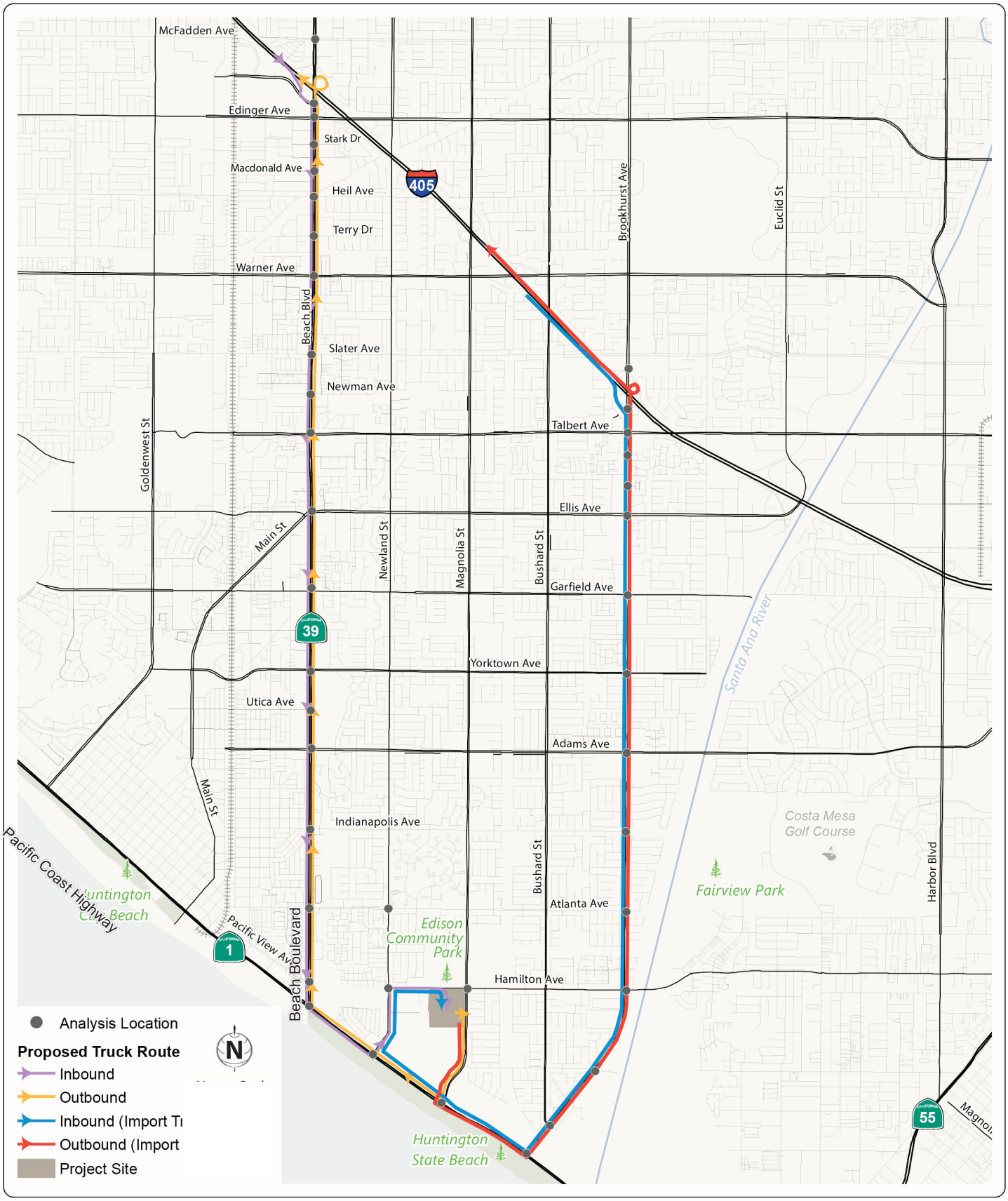
For in-bound trips utilizing Brookhurst Street, trucks would exit the I-405 and travel southbound on Brookhurst Street, turn right onto PCH and travel northwest along PCH, turn right onto Newland Street, travel north to Hamilton Avenue, and then turn right on Hamilton Avenue to the current Site entrance. For the egress route, import trucks would exit from the Site's southeast gate, travel south on Magnolia Street, travel southeast along PCH, turn left to travel north on Brookhurst Street to the northbound I-405 entrance or to turn right on Talbert Avenue to enter the southbound I-405.

The haul route for the Project is illustrated on **Figure R4.10-2**, *Truck Haul Route*. Trip generation volumes are applied to trip distribution percentages to obtain the volume of Project trips assigned to study area roadways and intersections. The assignment of "project only" trips is illustrated in Figure 4-2 of the Revised Traffic Study. The haul routes shown in Figure R4.10-2 are representative of the maximum daily traffic conditions, reflective of simultaneous import and export activities at the Site. Given the anticipated construction schedule, there may be periods during which there are either only export trucks or import trucks accessing the Site. All trucks contracted for export trips, regardless of point of origin or destination, are expected to use Beach Boulevard. Import and supply trucks could use either Beach Boulevard or Brookhurst Street. Up to a maximum of 100 trucks per day traveling to and from the Site are expected to utilize Beach Boulevard, with the remaining trucks utilizing Brookhurst Street.

The travel route of the employees and visitors is assumed to take a different route than the truck routes. They will primarily use Beach Boulevard, Magnolia Street, Brookhurst Street, and Pacific Coast Highway to access the Site, depending on their point of origin.

Existing (~~2013~~ 2014) Plus Project Conditions

As discussed in the methodology section above, the Existing (~~2013~~ 2014) Plus Project analysis is provided for information purposes only. Lane configurations and peak hour traffic volumes at study intersections for Existing (~~2013~~ 2014) Plus Project Conditions are shown on Figure 5-1 in the Revised Traffic Study. ~~**Table 4.10-4**, *Intersection Service Levels – Existing (2013) Plus Project Conditions,*~~ **Tables R4.10-4A** through **Table R4.10-4C** compare~~s~~ existing traffic conditions to existing plus Project traffic conditions under the A.M. peak, mid-day and P.M. peak hours, respectively. As shown in ~~Table 4.10-4~~ Tables R4.10-4A through R4.10-4c, ~~one~~



The haul route shown in this figure is representative of the worse-case traffic scenario, reflective of simultaneous import and export activities at the site. Given the anticipated construction schedule, there may be periods during which there are either only Export Trucks or Import Trucks accessing the site. During these periods of time, the following may apply to truck trips: 1) Export trucks will access the site and depart from the site to I-405 via Beach Boulevard; and 2) Import trucks may also use Beach Blvd. to access the site or when departing the site to I-405, if there are no Export trucks using the Beach Blvd. route. The total number of Import trucks on Beach Blvd. would be limited to no higher than the number of Export Trucks (100 per day or 20 per hour) evaluated in the project's traffic analysis, which is reflective of simultaneous import and export activities at the site.

PCR

N Not to scale

Truck Haul Route

RAP EIR - Ascon Landfill Site
Source: Fehr & Peers, 2014.

FIGURE
R4.10-2

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~~**Table 4.10-4**~~

~~**Intersection Service Levels – Existing (2013) Plus Project Conditions**~~

			~~A.M. Peak~~		~~P.M. Peak~~	
	~~Intersection~~	~~Control~~	~~Delay or V/C~~	~~LOS~~	~~Delay or V/C~~	~~LOS~~
~~1.~~	~~Beach Boulevard at Center Avenue[a]~~	~~Signal~~	~~18.3~~	~~B~~	~~22.7~~	~~C~~
~~2.~~	~~Beach Boulevard at Edinger Avenue[a]~~	~~Signal~~	~~34.0~~	~~C~~	~~36.6~~	~~D~~
~~3.~~	~~Beach Boulevard at Warner Avenue[a]~~	~~Signal~~	~~34.2~~	~~C~~	~~35.2~~	~~D~~
~~4.~~	~~Beach Boulevard at Talbert Avenue[a]~~	~~Signal~~	~~28.8~~	~~C~~	~~44.10~~	~~D~~
~~5.~~	~~Beach Boulevard at Main Street/Ellis Avenue[a]~~	~~Signal~~	~~35.0~~	~~C~~	~~47.4~~	~~D~~
~~6.~~	~~Beach Boulevard at Garfield Avenue[a]~~	~~Signal~~	~~45.4~~	~~D~~	~~59.0~~	~~E~~
~~7.~~	~~Beach Boulevard at Adams Avenue[a]~~	~~Signal~~	~~36.5~~	~~D~~	~~46.3~~	~~D~~
~~8.~~	~~Beach Boulevard at Atlanta Avenue[a]~~	~~Signal~~	~~30.7~~	~~C~~	~~52.1~~	~~D~~
~~9.~~	~~Beach Boulevard at Pacific Coast Highway[a]~~	~~Signal~~	~~53.0~~	~~D~~	~~33.1~~	~~C~~
~~10.~~	~~Newland Street at Atlanta Avenue[b]~~	~~Signal~~	~~0.431~~	~~A~~	~~0.506~~	~~A~~
~~11.~~	~~Newland Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.569~~	~~A~~	~~0.673~~	~~B~~
~~12.~~	~~Newland Street at Pacific Coast Highway[a]~~	~~Signal~~	~~30.1~~	~~D~~	~~36.4~~	~~D~~
~~13.~~	~~Magnolia Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.488~~	~~A~~	~~0.544~~	~~B~~
~~14.~~	~~Magnolia Street at Pacific Coast Highway[a]~~	~~Signal~~	~~13.4~~	~~B~~	~~18.8~~	~~B~~
~~15.~~	~~Brookhurst Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.672~~	~~B~~	~~0.619~~	~~B~~
~~16.~~	~~Brookhurst Street at Pacific Coast Highway[a]~~	~~Signal~~	~~23.4~~	~~C~~	~~27.9~~	~~C~~

~~[a] *Intersection is within Caltrans jurisdiction and evaluated according to HCM 2000 methodology. Average delay is reported for signalized intersections.*~~

~~[b] *Intersection is within Huntington Beach jurisdiction and evaluated according to ICU methodology. V/C ratio is reported for signalized intersections.*~~

~~*Note*~~

~~*Cells highlighted in gray represent intersections that are operating below acceptable thresholds.*~~

~~*Source: Fehr & Peers, 2013*~~

Table R4.10-4A

Intersection Level of Service: Existing (2014) Conditions For AM Peak Hour

		AM No Project		AM With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	53	D	53	D
2. Beach Blvd & Center Ave	Signal	10	B	10	B
3. Beach Blvd & Edinger Ave	Signal	34	C	34	C
4. Beach Blvd & Stark Dr	Signal	9	A	10	A
5. Beach Blvd & MacDonald Dr	Signal	11	B	12	B

Table 4.10-4A (Continued)

Intersection Level of Service: Existing (2014) Conditions For AM Peak Hour

Intersection	Control	AM No Project		AM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
6. Beach Blvd & Heil Ave	Signal	34	C	35	D
7. Beach Blvd & Terry Dr	Signal	5	A	5	A
8. Beach Blvd & Warner Ave	Signal	47	D	48	D
9. Beach Blvd & Slater Ave	Signal	38	D	38	D
10. Beach Blvd & Newman Ave	Signal	5	A	5	A
11. Beach Blvd & Talbert Ave	Signal	38	D	38	D
12. Beach Blvd & Main St/Ellis Ave	Signal	33	C	33	C
13. Beach Blvd & Garfield Ave	Signal	40	D	40	D
14. Beach Blvd & Yorktown Ave	Signal	29	C	28	C
15. Beach Blvd & Utica Ave	Signal	10	B	10	B
16. Beach Blvd & Adams Ave	Signal	33	C	33	C
17. Beach Blvd & Indianapolis Ave	Signal	26	C	26	C
18. Beach Blvd & Atlanta Ave	Signal	32	C	33	C
19. Beach Blvd & Pacific View Ave	Signal	7	A	7	A
20. Beach Blvd & PCH (SR-1)	Signal	29	C	37	D
21. Newland St & Atlanta Ave	Signal	0.49	A	0.5	A
22. Newland St & Hamilton Ave	Signal	0.56	A	0.65	B
23. PCH (SR-1) & Newland St	Signal	17	B	20	C
24. Magnolia St & Hamilton Ave	Signal	0.53	A	0.53	A
25. PCH (SR-1) & Magnolia St	Signal	25	C	26	C
26. Brookhurst St & Hamilton Ave	Signal	0.7	C	0.7	C
27. PCH (SR-1) & Brookhurst St	Signal	24	C	27	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.79	C	0.79	C
31. Brookhurst St & Stonefield Dr	Signal	0.35	A	0.36	A

Table 4.10-4A (Continued)

Intersection Level of Service: Existing (2014) Conditions For AM Peak Hour

Intersection	Control	AM No Project		AM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
32. Brookhurst St & Quail Ave	Signal	0.4	A	0.41	A
33. Brookhurst St & Ellis Ave	Signal	0.66	B	0.68	B
34. Brookhurst St & Garfield Ave	Signal	0.52	A	0.53	A
35. Brookhurst St & Yorktown Ave	Signal	0.52	A	0.54	A
36. Brookhurst St & Adams Ave	Signal	0.74	C	0.75	C
37. Brookhurst St & Indianapolis Ave	Signal	0.25	A	0.26	A
38. Brookhurst St & Atlanta Ave	Signal	0.39	A	0.4	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.26	A
40. Brookhurst St & Bushard St	Signal	0.3	A	0.32	A

Notes:

1 Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.

2 Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. volume-to-capacity (V/C) ratio is reported for signalized intersections.

3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

Table R4.10-4B

Intersection Level of Service: Existing (2014) Conditions for Mid-Day Peak Hour

		Mid-Day No Project		Mid-Day With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	34	C	33	C
2. Beach Blvd & Center Ave	Signal	13	B	13	B
3. Beach Blvd & Edinger Ave	Signal	33	C	34	C
4. Beach Blvd & Stark Dr	Signal	15	B	15	B
5. Beach Blvd & MacDonald Dr	Signal	14	B	14	B
6. Beach Blvd & Heil Ave	Signal	30	C	30	C
7. Beach Blvd & Terry Dr	Signal	8	A	8	A
8. Beach Blvd & Warner Ave	Signal	33	C	32	C
9. Beach Blvd & Slater Ave	Signal	32	C	32	C
10. Beach Blvd & Newman Ave	Signal	7	A	6	A
11. Beach Blvd & Talbert Ave	Signal	40	D	41	D
12. Beach Blvd & Main St/Ellis Ave	Signal	28	C	28	C
13. Beach Blvd & Garfield Ave	Signal	33	C	33	C
14. Beach Blvd & Yorktown Ave	Signal	30	C	30	C
15. Beach Blvd & Utica Ave	Signal	18	B	17	B
16. Beach Blvd & Adams Ave	Signal	35	D	34	C
17. Beach Blvd & Indianapolis Ave	Signal	21	C	20	C
18. Beach Blvd & Atlanta Ave	Signal	30	C	31	C
19. Beach Blvd & Pacific View Ave	Signal	7	A	7	A
20. Beach Blvd & PCH (SR-1)	Signal	22	C	24	C
21. Newland St & Atlanta Ave	Signal	0.42	A	0.43	A
22. Newland St & Hamilton Ave	Signal	0.45	A	0.54	A
23. PCH (SR-1) & Newland St	Signal	11	B	12	B
24. Magnolia St & Hamilton Ave	Signal	0.39	A	0.4	A
25. PCH (SR-1) & Magnolia St	Signal	20	C	22	C
26. Brookhurst St & Hamilton Ave	Signal	0.4	A	0.42	A

Table 4.10-4B (Continued)

Intersection Level of Service: Existing (2014) Conditions for Mid-Day Peak Hour

Intersection	Control	Mid-Day No Project		Mid-Day With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
27. PCH (SR-1) & Brookhurst St	Signal	19	B	22	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.62	B	0.62	B
31. Brookhurst St & Stonefield Dr	Signal	0.49	A	0.5	A
32. Brookhurst St & Quail Ave	Signal	0.59	A	0.61	B
33. Brookhurst St & Ellis Ave	Signal	0.57	A	0.59	A
34. Brookhurst St & Garfield Ave	Signal	0.59	A	0.6	B
35. Brookhurst St & Yorktown Ave	Signal	0.52	A	0.54	A
36. Brookhurst St & Adams Ave	Signal	0.52	A	0.54	A
37. Brookhurst St & Indianapolis Ave	Signal	0.3	A	0.32	A
38. Brookhurst St & Atlanta Ave	Signal	0.34	A	0.36	A
39. Brookhurst St & Banning Ave	Signal	0.19	A	0.2	A
40. Brookhurst St & Bushard St	Signal	0.22	A	0.23	A

Notes:

1 Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.

2 Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. volume-to-capacity (V/C) ratio is reported for signalized intersections.

3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

Table R4.10-4C

Intersection Level of Service: Existing (2014) Conditions for P.M. Peak Hour

Intersection	Control	P.M. No Project		P.M. With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**55**	**E**	**55**	**E**
2. Beach Blvd & Center Ave	Signal	16	B	16	B
3. Beach Blvd & Edinger Ave	Signal	52	D	54	D
4. Beach Blvd & Stark Dr	Signal	15	B	15	B
5. Beach Blvd & MacDonald Dr	Signal	10	B	10	B
6. Beach Blvd & Heil Ave	Signal	52	D	**56**	**E**
7. Beach Blvd & Terry Dr	Signal	10	B	10	B
8. Beach Blvd & Warner Ave	Signal	**73**	**E**	**72**	**E**
9. Beach Blvd & Slater Ave	Signal	50	D	51	D
10. Beach Blvd & Newman Ave	Signal	9	A	8	A
11. Beach Blvd & Talbert Ave	Signal	40	D	43	D
12. Beach Blvd & Main St/Ellis Ave	Signal	33	C	33	C
13. Beach Blvd & Garfield Ave	Signal	39	D	40	D
14. Beach Blvd & Yorktown Ave	Signal	34	C	35	D
15. Beach Blvd & Utica Ave	Signal	16	B	16	B
16. Beach Blvd & Adams Ave	Signal	43	D	43	D
17. Beach Blvd & Indianapolis Ave	Signal	20	C	19	B
18. Beach Blvd & Atlanta Ave	Signal	49	D	51	D
19. Beach Blvd & Pacific View Ave	Signal	8	A	8	A
20. Beach Blvd & PCH (SR-1)	Signal	27	C	29	C
21. Newland St & Atlanta Ave	Signal	0.54	A	0.55	A
22. Newland St & Hamilton Ave	Signal	0.67	B	0.76	C
23. PCH (SR-1) & Newland St	Signal	13	B	16	B
24. Magnolia St & Hamilton Ave	Signal	0.59	A	0.6	B
25. PCH (SR-1) & Magnolia St	Signal	27	C	33	C
26. Brookhurst St & Hamilton Ave	Signal	0.64	B	0.65	B

Table 4.10-4C (Continued)

Intersection Level of Service: Existing (2014) Conditions for P.M. Peak Hour

Intersection	Control	P.M. No Project		P.M. With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
27. PCH (SR-1) & Brookhurst St	Signal	34	C	**67**	**E**
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.77	C	0.79	C
31. Brookhurst St & Stonefield Dr	Signal	0.49	A	0.5	A
32. Brookhurst St & Quail Ave	Signal	0.58	A	0.59	A
33. Brookhurst St & Ellis Ave	Signal	0.69	B	0.7	C
34. Brookhurst St & Garfield Ave	Signal	0.6	B	0.62	B
35. Brookhurst St & Yorktown Ave	Signal	0.58	A	0.59	A
36. Brookhurst St & Adams Ave	Signal	0.75	C	0.77	C
37. Brookhurst St & Indianapolis Ave	Signal	0.34	A	0.35	A
38. Brookhurst St & Atlanta Ave	Signal	0.42	A	0.44	A
39. Brookhurst St & Banning Ave	Signal	0.22	A	0.23	A
40. Brookhurst St & Bushard St	Signal	0.27	A	0.29	A

Notes:

1 Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.

2 Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. volume-to-capacity (V/C) ratio is reported for signalized intersections.

3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

four study intersections ~~Beach Boulevard at Garfield Avenue (P.M. peak hour only)~~ would operate below acceptable thresholds during the P.M. peak hour. These intersections are listed below:

- Beach Boulevard and McFadden Avenue (LOS E)
- Beach Boulevard and Heil Avenue (LOS E)
- Beach Boulevard and Warner Avenue (LOS E)
- PCH and Brookhurst Street (LOS E)

During construction activity on the Site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, one temporary solution to accommodate traffic would be to reconfigure the eastbound approach to include a shared left-turn/through/right-turn lane. **Table R4.10-5**, *Intersection LOS Comparison - Existing Plus Project ~~Year~~ (2014~~3~~)Conditions – Magnolia & Hamilton*, documents the ICU and LOS results under Existing (~~2013~~ 2014) Plus Project Scenario. As shown in the table, the intersection remains at LOS A with the implementation of the lane closure during both the A.M. and ~~P.M.~~ mid-day peak hours; and LOS B during the P.M. peak hour. Implementation of this potential lane reconfiguration would need to be approved by the City of Huntington Beach Public Works Department.

Table R4.10-5

Intersection LOS Comparison: Existing Plus Project (~~2013~~ 2014) Conditions
Magnolia & Hamilton

	Without Lane Closure						With Lane Closure								
	A.M. Peak		Mid-Day Peak		P.M. Peak		A.M. Peak		Mid-Day Peak		P.M. Peak		Change in V/C		
Intersection	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**AM**	**MD**	**PM**
Magnolia St & Hamilton Ave	~~0.488~~ 0.53	A	0.4	A	~~0.544~~ 0.6	~~A~~ B	~~0.542~~ 0.57	A	0.4	A	~~0.544~~ 0.6	~~A~~ B	~~0.054~~ 0.04	0	0.0

Source: Fehr & Peers, ~~2013~~ 2014

Table R4.10-6, *Comparison of Intersection Level of Service: Existing (~~2013~~2014)* compares the changes in delay and LOS at the four intersections that operate at LOS E. The comparison shows the difference between the "base" LOS previously shown in Table R4.10-2 and "plus Project" scenarios for Existing Year (~~2013~~2014) shown in Tables R4.10-4A through R4.10-4C. As shown in Table R4.10-6, the following two intersections in the City of Huntington Beach would ~~meet~~ exceed ~~City of Huntington Beach~~ the Caltrans impact threshold criteria under the Existing Year Plus Project (~~2013~~ 2014) conditions:

- Beach Boulevard at ~~Garfield Avenue~~ Heil Avenue – P.M. peak hour (LOS E) (exceeds Threshold #~~3~~ 5 for a significant impact)
- PCH at Brookhurst Street – P.M. peak hour (LOS E) (exceeds Threshold #5 for a significant impact)

~~**Table R4.10-6**~~

~~**Comparison of Intersection Service Levels for Operating Year (2013)**~~

~~Intersection~~	~~Control~~	~~Peak~~	~~No Project Delay~~	~~No Project LOS~~	~~With Project Delay~~	~~With Project LOS~~	~~Δ Delay~~
~~6. Beach Boulevard at Garfield Avenue~~	~~Signal~~	~~A.M.~~	~~44.5~~	~~D~~	~~45.5~~	~~D~~	~~-~~
		~~P.M.~~	~~***58.3***~~	~~***E***~~	~~***59.0***~~	~~***E***~~	~~***0.7***~~

~~*Delay is measured in seconds, calculated using Synchro 8 software.*~~
~~*Bold-italicized and gray highlight type indicates project impact.*~~

~~*Source: Fehr & Peers, 2013*~~

Table R4.10-6

Comparison of Intersection Level of Service: Existing (2014)

Intersection	Control	Peak	No Project Delay or V/C	No Project LOS	With Project Delay or V/C	With Project LOS	Δ Delay or V/C
1. Beach Blvd & McFadden Ave	Signal	A.M.	53	D	53	D	0
		MD	34	C	33	C	-1
		P.M.	55	E	55	E	0
6. Beach Blvd & Heil Ave	Signal	A.M.	34	C	35	D	1
		MD	30	C	30	C	0
		P.M.	**52**	**D**	**56**	**E**	**4**
8. Beach Blvd & Warner Ave	Signal	A.M	47	D	48	D	1
		MD	33	C	32	C	-1
		P.M.	73	E	72	E	-1
27. PCH & Brookhurst St	Signal	A.M.	24	C	27	C	3
		MD	19	B	22	C	3
		P.M.	**34**	**C**	**67**	**E**	**33**

Notes:
1 Delay is measured in seconds. Calculated using Synchro 8 software package.
2. V/C ratios are calculated using Traffix 8.0 software package.
3 The minus (i.e., -1) indicates that overall intersection delay will improve at some locations in the Plus Project scenario because the project increases traffic to certain movements which have available capacity or "green time". For example, if volumes are increased at a coordinated through phase where actuated green time may be available, the intersection may operate more efficiently by utilizing the available capacity or "green time" allowing more vehicles to travel through the intersection. The added vehicles to the intersection in this case will actually experience less delay than the average of all vehicles already at the intersection. Since intersection delay is reported as a weighted average of all movements as provided for by the Highway Capacity Manual, this increase in traffic volume actually results in a reduction of overall intersection delay.
4 Cells highlighted in grey indicate potentially significant Project impact.

Source: Fehr & Peers, 2014

Because traffic at these two intersections ~~of Beach Boulevard at Garfield Avenue~~ would exceed the Caltrans impact threshold criteria, a mitigation measure ~~would be necessary~~ has been prescribed to address the impact. ~~The mitigation measure would utilize signal timing optimization to reduce delay time at the impacted intersection.~~

> ~~Beach Boulevard at Garfield Avenue (Caltrans jurisdiction) – P.M. Peak Hour. Under the Caltrans threshold, a project must not result in a net increase at an intersection operating at LOS E. Signal timing shall be optimized which would improve P.M. operations to LOS D and a delay of 54.5 seconds.~~

The prescribed Mitigation Measure RTRAF-1 involves decreasing the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) from 20 to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and from 25 to 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour). Supply truck, visitor and employee trips would remain the same. The implementation of mitigation would minimize traffic impacts to the extent feasible while still meeting the Project Objectives established for the Project. The resulting project trip generation with the mitigated truck volume intensity shown in **Table R4.10-7**, *Mitigated Project Trip Generation Estimates*, illustrates the proposed mitigation to address Project impacts. As shown in Table 4.10-7, export and import truck trips would be reduced during the P.M. peak hour only.

Table R4.10-7

Mitigated Project Trip Generation Estimates

Trip Type	PCE	Daily One-Way Trips	Daily Two-Way Trips	Max-Hourly one-Way Trips			A.M. Peak PCE			Mid-Day PCE			P.M. Peak PCE		
				AM	Mid Day	PM	In	Out	Total	In	Out	Total	In	Out	Total
Export Trucks	3	100	600	20	20	10	60	60	120	60	60	120	30	30	60
Import Trucks	3	200	1,200	25	25	15	75	75	150	75	75	150	45	45	90
Supply Trucks	3	10	60	4	4	0	12	12	24	12	12	24	0	0	0
Employees	1	55	110	37	37	37	37	0	37	18	19	37	0	37	37
Visitors	1	15	40	10	10	10	10	0	10	***5***	***5***	**10**	0	10	10
Totals		380	2,010	96	96	72	194	147	341	170	171	341	75	122	197

Notes:

1 PCE = Passenger Car Equivalent.

2 Daily one-way trips do not account for PCE. The number of trips are representative of daily directional trips on a given roadway segment (i.e., northbound on Beach Blvd.)

3 Daily two-way trips do account for PCE. The number of trips represents the sum of the one-way daily trips along a given roadway segment in both directions (i.e., northbound plus southbound trips on Beach Blvd.)

4 The numbers of "Export Trucks" trips are representative of trucks utilizing Beach Blvd. regardless of trip purpose.

5 The numbers of "Import Trucks" trips are representative of haul trucks utilizing Brookhurst Street.

6 The number of employee and visitor trips assumes 50% of employees and visitors take a mid-day trip (i.e., lunch break). Also, 10 additional daily visitor trips are assumed to occur from the travel of visitors during off-peak periods for miscellaneous reasons (i.e., meetings, tours, etc.).

Fehr & Peers, 2014.

~~**Table 4.10-7**, *Intersection Level of Service - Existing Conditions (2013) with Project with Signal Optimization*, shows the intersection delays after implementation of the traffic measures. As shown therein, the traffic measures would reduce delay times at the impacted intersections such that the intersection thresholds are not exceeded, and in the case of the P.M. peak hour at Beach Boulevard at Garfield Avenue, traffic would actually be improved over existing conditions for the duration of the Project.~~

~~While the above listed traffic mitigation measure would reduce delay times to acceptable levels, the Beach Boulevard and Garfield Avenue intersection would also be significantly impacted under the 2015 With Project conditions, as discussed below. As discussed therein, traffic conditions would be incrementally greater (more traffic) under the 2015 With Project scenario compared to the Existing (2013) Plus Project scenario. As such, Mitigation Measure TRAF-3 for this intersection under the 2015 With Project scenario would address traffic impacts under the Existing Plus Project scenario. It is not necessary for the Project to implement the traffic measure for the Existing (2013) Plus Project scenario listed above since this scenario is for informational purposes only and implementation of the RAP would not occur until 2015.~~

~~**Table 4.10-7**~~

~~**Intersection Level of Service - Existing Conditions (2013) with Project with Signal Optimization**~~

~~Intersection~~	~~Control~~	~~Peak~~	~~With Project Delay~~	~~With Project LOS~~	~~After Mitigation Delay~~	~~After Mitigation LOS~~
~~Beach Boulevard at Atlanta Avenue~~	~~Signal~~	~~A.M.~~	~~45.4~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***59.0***~~	~~***E***~~	~~54.5~~	~~D~~

~~*Notes*~~
~~*1. Bold italics and gray highlight indicate deficient location.*~~
~~*2. N/A indicates no mitigation required.*~~

~~*Source: Fehr & Peers, 2013.*~~

Table R4.10-8, *Intersection Level of Service - Existing Conditions (2014) with Project with Mitigation*, shows the intersection delays after implementation of the traffic mitigation measure. As shown therein, at the intersection of Beach Boulevard and Heil Avenue (P.M. peak hour), the decrease in P.M. peak hour truck trips identified as mitigation would improve the delay and LOS at this intersection from 56 seconds (LOS E) to 54 seconds (LOS D). Thus, implementation of the prescribed mitigation measure would result in an acceptable level of service at this intersection. As such, this potentially significant impact would be reduced to a less than significant level with implementation of the prescribed mitigation measure.

At the intersection of PCH and Brookhurst (P.M. peak hour), the decrease in P.M. peak hour import truck trips identified as mitigation would improve the delay and LOS at this intersection from 67 seconds (LOS E) to 46 seconds (LOS D). Thus, similar to the Beach/Heil intersection, implementation of the prescribed mitigation measure would result in an acceptable level of service at this intersection. As such, this potentially

Table R4.10-8

Intersection Level of Service - Existing Conditions (2014) with Project with Mitigation

Intersection	Control	Peak	With Project Delay or V/C	With Project LOS	After Mitigation Delay or V/C	After Mitigation LOS
Beach Blvd & Heil Ave	Signal	A.M.	35	D	N/A	N/A
		MD	30	C	N/A	
		P.M.	56	F	54	D
PCH & Brookhurst St	Signal	A.M.	27	C	N/A	N/A
		MD	27	C	N/A	N/A
		P.M.	67	E	46	D

Notes:
1. *Cells highlighted in grey indicate Project impact.*
2. *N/A indicates no mitigation required.*

Source: Fehr & Peers, 2014

significant impact would be reduced to a less than significant level with implementation of the prescribed mitigation measure.

As stated above, the Existing (2014) Plus Project scenario is for informational purposes only. Implementation of the RAP would not occur until mid-2016 based on the current anticipated Project schedule. Regardless, the mitigation measure prescribed for the Existing Conditions scenario would be applied to the Project operating year scenario, analyzed below.

Project Operating Year (~~2015~~2017) Base Conditions

~~The 2015 operating year accounts for a one percent annual growth in ambient traffic as well as traffic generated by related projects estimated to be operational by 2015.~~ The traffic volumes and roadway assumptions utilized to formulate the 2017 base traffic conditions are described in the Methodology section above. This base condition is used to evaluate the net change in traffic conditions and to identify potential impacts associated with the Project. Lane configurations and peak hour traffic volumes at study intersections for Project Operating Year (~~2015~~2017) Base Conditions are shown on Figure 6-2 of the Traffic Study. **Table ~~4.10-8~~R4.10-9**, *Intersection Service Levels – Project Operating Year (~~2015~~2017) Base Conditions*, provides a summary of forecasted conditions without the Project.

As shown in Table ~~4.10-~~8 R4.10-9, all of the study intersections would operate acceptably at LOS D or better during the peak hours under ~~2015~~ 2017 base conditions, with the exception of the following seven intersections~~:~~ along Beach Boulevard:

- Beach Boulevard and Talbert Avenue – mid-day and P.M. peak hour (LOS E)
- ~~Beach Boulevard and Garfield Avenue – P.M. peak hour (LOS E)~~

~~**Table 4.10-8**~~

~~**Intersection Service Levels – Project Operating Year (2015) Base Conditions**~~

			~~A.M. Peak~~		~~P.M. Peak~~	
	~~Intersection~~	~~Control~~	~~Delay or V/C~~	~~LOS~~	~~Delay or V/C~~	~~LOS~~
~~1.~~	~~Beach Boulevard at Center Avenue[a]~~	~~Signal~~	~~16.4~~	~~B~~	~~21.6~~	~~C~~
~~2.~~	~~Beach Boulevard at Edinger Avenue[a]~~	~~Signal~~	~~39.2~~	~~D~~	~~54.0~~	~~D~~
~~3.~~	~~Beach Boulevard at Warner Avenue[a]~~	~~Signal~~	~~36.3~~	~~D~~	~~38.9~~	~~D~~
~~4.~~	~~Beach Boulevard at Talbert Avenue[a]~~	~~Signal~~	~~31.4~~	~~C~~	~~60.3~~	~~E~~
~~5.~~	~~Beach Boulevard at Main Street/Ellis Avenue[a]~~	~~Signal~~	~~34.9~~	~~C~~	~~49.2~~	~~D~~
~~6.~~	~~Beach Boulevard at Garfield Avenue[a]~~	~~Signal~~	~~45.6~~	~~D~~	~~65.3~~	~~E~~
~~7.~~	~~Beach Boulevard at Adams Avenue[a]~~	~~Signal~~	~~36.8~~	~~D~~	~~48.1~~	~~D~~
~~8.~~	~~Beach Boulevard at Atlanta Avenue[a]~~	~~Signal~~	~~30.2~~	~~C~~	~~56.8~~	~~E~~
~~9.~~	~~Beach Boulevard at Pacific Coast Highway[a]~~	~~Signal~~	~~37.1~~	~~D~~	~~39.5~~	~~D~~
~~10.~~	~~Newland Street at Atlanta Avenue[b]~~	~~Signal~~	~~0.441~~	~~A~~	~~0.494~~	~~A~~
~~11.~~	~~Newland Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.485~~	~~A~~	~~0.614~~	~~B~~
~~12.~~	~~Newland Street at Pacific Coast Highway[a]~~	~~Signal~~	~~23.9~~	~~C~~	~~31.3~~	~~C~~
~~13.~~	~~Magnolia Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.501~~	~~A~~	~~0.569~~	~~A~~
~~14.~~	~~Magnolia Street at Pacific Coast Highway[a]~~	~~Signal~~	~~12.3~~	~~B~~	~~18.1~~	~~B~~
~~15.~~	~~Brookhurst Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.687~~	~~B~~	~~0.632~~	~~B~~
~~16.~~	~~Brookhurst Street at Pacific Coast Highway[a]~~	~~Signal~~	~~24.5~~	~~C~~	~~30.8~~	~~C~~

~~[a] *Intersection is within Caltrans jurisdiction and evaluated according to HCM 2000 methodology. Average delay is reported for signalized intersections.*~~

~~[b] *Intersection is within Huntington Beach jurisdiction and evaluated according to ICU methodology. V/C ratio is reported for signalized intersections.*~~

~~*Notes*~~

~~*1. Cells highlighted in gray represent intersections that are operating below acceptable thresholds.*~~

~~*2. 2015 base traffic conditions include a one percent annual ambient traffic growth over the three-year period between the Existing and 2015 Operating Year, as well as traffic generated by related projects.*~~

~~*Source: Fehr & Peers, 2013.*~~

- Beach Boulevard and Atlanta Avenue - P.M. peak hour (LOS E)
- Beach Boulevard at McFadden Avenue – A.M. peak hour (LOS E) and P.M. peak hour (LOS F)
- Beach Boulevard at Edinger Avenue – P.M. peak hour (LOS F)
- Beach Boulevard at Heil Avenue - P.M. peak hour (LOS F)
- Beach Boulevard at Warner Avenue – P.M. peak hour (LOS E)
- Beach Boulevard at Slater Avenue – P.M. peak hour (LOS E)

Table R4.10-9

Intersection Level of Service: Project Operating Year (2017) Base Conditions

Intersection	Control	A.M. Delay or ICU	A.M. LOS	Mid-Day Delay or ICU	Mid-Day LOS	P.M. Delay or ICU	P.M. LOS
1. Beach Blvd & McFadden Ave	Signal	**73**	**E**	36	D	**89**	**F**
2. Beach Blvd & Center Ave	Signal	9	A	15	B	15	B
3. Beach Blvd & Edinger Ave	Signal	51	D	45	D	**120**	**F**
4. Beach Blvd & Stark Dr	Signal	9	A	14	B	15	B
5. Beach Blvd & MacDonald Dr	Signal	15	B	17	B	15	B
6. Beach Blvd & Heil Ave	Signal	39	D	31	C	**93**	**F**
7. Beach Blvd & Terry Dr	Signal	6	A	10	B	12	B
8. Beach Blvd & Warner Ave	Signal	51	D	35	D	**77**	**E**
9. Beach Blvd & Slater Ave	Signal	43	D	36	D	**65**	**E**
10. Beach Blvd & Newman Ave	Signal	5	A	7	A	12	B
11. Beach Blvd & Talbert Ave	Signal	33	C	**58**	**E**	**65**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	36	D	32	C	39	D
13. Beach Blvd & Garfield Ave	Signal	45	D	36	D	51	D
14. Beach Blvd & Yorktown Ave	Signal	32	C	31	C	42	D
15. Beach Blvd & Utica Ave	Signal	10	B	19	B	23	C
16. Beach Blvd & Adams Ave	Signal	32	C	39	D	46	D
17. Beach Blvd & Indianapolis Ave	Signal	24	C	19	B	16	B
18. Beach Blvd & Atlanta Ave	Signal	40	D	37	D	**59**	**E**
19. Beach Blvd & Pacific View Ave	Signal	11	B	10	B	13	B
20. Beach Blvd & PCH (SR-1)	Signal	29	C	21	C	32	C
21. Newland St & Atlanta Ave	Signal	0.51	A	0.44	A	0.57	A
22. Newland St & Hamilton Ave	Signal	0.57	A	0.46	A	0.69	B
23. PCH (SR-1) & Newland St	Signal	14	B	11	B	12	B
24. Magnolia St & Hamilton Ave	Signal	0.54	A	0.4	A	0.61	B
25. PCH (SR-1) & Magnolia St	Signal	18	B	24	C	16	B
26. Brookhurst St & Hamilton Ave	Signal	0.72	C	0.41	A	0.65	B

Table R4.10-9 (Continued)

Intersection Level of Service: Project Operating Year (2017) Base Conditions

Intersection	Control	A.M. Delay or ICU	A.M. LOS	Mid-Day Delay or ICU	Mid-Day LOS	P.M. Delay or ICU	P.M. LOS
27. PCH (SR-1) & Brookhurst St	Signal	21	C	20	C	36	D
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.83	D	0.65	B	0.8	D
31. Brookhurst St & Stonefield Dr	Signal	0.36	A	0.52	A	0.51	A
32. Brookhurst St & Quail Ave	Signal	0.42	A	0.62	B	0.6	B
33. Brookhurst St & Ellis Ave	Signal	0.71	C	0.6	B	0.73	C
34. Brookhurst St & Garfield Ave	Signal	0.54	A	0.61	B	0.63	B
35. Brookhurst St & Yorktown Ave	Signal	0.54	A	0.55	A	0.61	B
36. Brookhurst St & Adams Ave	Signal	0.77	C	0.54	A	0.79	C
37. Brookhurst St & Indianapolis Ave	Signal	0.26	A	0.31	A	0.35	A
38. Brookhurst St & Atlanta Ave	Signal	0.4	A	0.36	A	0.45	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.19	A	0.22	A
40. Brookhurst St & Bushard St	Signal	0.31	A	0.22	A	0.28	A

Notes:
1 Delay is measured in seconds. Calculated using Synchro 8 software package.
2 V/C ratios are calculated using Traffix 8.0 software package.
3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

Project Operating Year (~~2015~~2017) With Project Conditions

The Operating Year Plus Project (~~2015~~2017) analysis is the evaluation of the effects of the Project relative to traffic conditions during the active implementation of the RAP. This scenario represents the ~~first year of RAP implementation~~ worse-case traffic conditions during the construction remediation activities due to ambient growth and related project traffic~~,~~ not long term operation of the closed capped Site. ~~The 2015 operating year accounts for a one percent annual growth in ambient traffic.~~ In order to determine the level of change caused by the Project, traffic volumes for Project Operating Year (~~2015~~2017) Plus Project Conditions were added to the Project Operating Year (~~2015~~2017) base conditions. The result of adding Project traffic to ~~2015~~2017 base conditions is presented in **Tables R4.10-10A through Table R4.10-10C ~~Table 4.10-9,~~**

~~**Table 4.10-9**~~

~~**Intersection Service Levels – Project Operating Year (2015) Plus Project Conditions**~~

		~~A.M. Peak~~		~~P.M. Peak~~	
~~**Intersection**~~	~~**Control**~~	~~**Delay or V/C**~~	~~**LOS**~~	~~**Delay or V/C**~~	~~**LOS**~~
~~1. Beach Boulevard at Center Avenue[a]~~	~~Signal~~	~~20.8~~	~~C~~	~~27.6~~	~~C~~
~~2. Beach Boulevard at Edinger Avenue[a]~~	~~Signal~~	~~40.1~~	~~D~~	~~55.1~~	~~E~~
~~3. Beach Boulevard at Warner Avenue[a]~~	~~Signal~~	~~37~~	~~D~~	~~38.8~~	~~D~~
~~4. Beach Boulevard at Talbert Avenue[a]~~	~~Signal~~	~~30.2~~	~~C~~	~~69.8~~	~~E~~
~~5. Beach Boulevard at Main Street/Ellis Avenue[a]~~	~~Signal~~	~~34.8~~	~~C~~	~~50.0~~	~~D~~
~~6. Beach Boulevard at Garfield Avenue[a]~~	~~Signal~~	~~47.4~~	~~D~~	~~74.4~~	~~E~~
~~7. Beach Boulevard at Adams Avenue[a]~~	~~Signal~~	~~36.7~~	~~D~~	~~49.1~~	~~D~~
~~8. Beach Boulevard at Atlanta Avenue[a]~~	~~Signal~~	~~31.4~~	~~C~~	~~59.7~~	~~E~~
~~9. Beach Boulevard at Pacific Coast Highway[a]~~	~~Signal~~	~~63.1~~	~~E~~	~~46.8~~	~~D~~
~~10. Newland Street at Atlanta Avenue[b]~~	~~Signal~~	~~0.441~~	~~A~~	~~0.494~~	~~A~~
~~11. Newland Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.485~~	~~A~~	~~0.614~~	~~B~~
~~12. Newland Street at Pacific Coast Highway[a]~~	~~Signal~~	~~31.3~~	~~D~~	~~47.9~~	~~D~~
~~13. Magnolia Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.501~~	~~A~~	~~0.569~~	~~A~~
~~14. Magnolia Street at Pacific Coast Highway[a]~~	~~Signal~~	~~13.5~~	~~B~~	~~19.3~~	~~B~~
~~15. Brookhurst Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.687~~	~~B~~	~~0.632~~	~~B~~
~~16. Brookhurst Street at Pacific Coast Highway[a]~~	~~Signal~~	~~24.6~~	~~C~~	~~30.9~~	~~C~~

~~[a] *Intersection is within Caltrans jurisdiction and evaluated according to HCM 2000 methodology. Average delay is reported for signalized intersections.*~~

~~[b] *Intersection is within Huntington Beach jurisdiction and evaluated according to ICU methodology. V/C ratio is reported for signalized intersections.*~~

~~*Notes*~~

~~*1. Cells highlighted in gray represent intersections that are operating below acceptable thresholds.*~~

~~*2. 2015 traffic conditions in this table include a one percent annual ambient traffic growth over the three-year period between the Existing and 2015 Operating Year, as well as traffic generated by related projects.*~~

~~*Source: Fehr & Peers, 2013*~~

~~*Intersection Service Levels – Project Operating Year (2015) Plus Project Conditions*~~. Figure 7-1 in the Traffic Study also illustrates the intersection volumes during this traffic scenario. ~~As shown in Table 4.10-9, for the P.M. peak hour, the intersections of Beach Boulevard at Edinger Avenue, Beach Boulevard at Talbert Avenue, Beach Boulevard at Garfield Avenue, Beach Boulevard at Atlanta Avenue would operate at LOS E, as would the intersection of Beach Boulevard and PCH during the A.M. peak hour.~~ As shown in Table R4.10-10A through R4.10-10C, nine (9) intersections on Beach Boulevard and the intersection at PCH/Brookhurst Street would operate below acceptable thresholds at various peak hour traffic times. These intersections are listed below and are identified with the "With Project" deficient peak hour LOS:

- Beach Boulevard and McFadden Avenue [A.M. peak hour (LOS E); and P.M. peak hour (LOS F)]
- Beach Boulevard and Edinger Avenue [A.M.. peak hour (LOS E); P.M. peak hour (LOS F)]

Table R4.10-10A

Intersection Level of Service: Project Operating Year (2017) Conditions for AM Peak Hour

Intersection	Control	AM No Project		AM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**73**	**E**	**73**	**E**
2. Beach Blvd & Center Ave	Signal	9	A	10	A
3. Beach Blvd & Edinger Ave	Signal	51	D	**55**	**E**
4. Beach Blvd & Stark Dr	Signal	9	A	9	A
5. Beach Blvd & MacDonald Dr	Signal	15	B	16	B
6. Beach Blvd & Heil Ave	Signal	39	D	40	D
7. Beach Blvd & Terry Dr	Signal	6	A	6	A
8. Beach Blvd & Warner Ave	Signal	51	D	54	D
9. Beach Blvd & Slater Ave	Signal	43	D	44	D
10. Beach Blvd & Newman Ave	Signal	5	A	5	A
11. Beach Blvd & Talbert Ave	Signal	33	C	33	C
12. Beach Blvd & Main St/Ellis Ave	Signal	36	D	36	D
13. Beach Blvd & Garfield Ave	Signal	45	D	45	D
14. Beach Blvd & Yorktown Ave	Signal	32	C	32	C
15. Beach Blvd & Utica Ave	Signal	10	B	10	B
16. Beach Blvd & Adams Ave	Signal	32	C	32	C
17. Beach Blvd & Indianapolis Ave	Signal	24	C	23	C
18. Beach Blvd & Atlanta Ave	Signal	40	D	39	D
19. Beach Blvd & Pacific View Ave	Signal	11	B	9	A
20. Beach Blvd & PCH (SR-1)	Signal	29	C	39	D
21. Newland St & Atlanta Ave	Signal	0.51	A	0.52	A
22. Newland St & Hamilton Ave	Signal	0.57	A	0.67	B
23. PCH (SR-1) & Newland St	Signal	14	B	14	B
24. Magnolia St & Hamilton Ave	Signal	0.54	A	0.54	A
25. PCH (SR-1) & Magnolia St	Signal	18	B	21	C
26. Brookhurst St & Hamilton Ave	Signal	0.72	C	0.72	C

Table 4.10-10A (Continued)

Intersection Level of Service: Project Operating Year (2017) Conditions for AM Peak Hour

		AM No Project		AM With Project	
Intersection	**Control**	**Delay or ICU**	**LOS**	**Delay or ICU**	**LOS**
27. PCH (SR-1) & Brookhurst St	Signal	21	C	23	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.83	D	0.83	D
31. Brookhurst St & Stonefield Dr	Signal	0.36	A	0.38	A
32. Brookhurst St & Quail Ave	Signal	0.42	A	0.43	A
33. Brookhurst St & Ellis Ave	Signal	0.71	C	0.72	C
34. Brookhurst St & Garfield Ave	Signal	0.54	A	0.56	A
35. Brookhurst St & Yorktown Ave	Signal	0.54	A	0.56	A
36. Brookhurst St & Adams Ave	Signal	0.77	C	0.78	C
37. Brookhurst St & Indianapolis Ave	Signal	0.26	A	0.28	A
38. Brookhurst St & Atlanta Ave	Signal	0.4	A	0.42	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.27	A
40. Brookhurst St & Bushard St	Signal	0.31	A	0.33	A

Notes:
1 Delay is measured in seconds. Calculated using Synchro 8 software package.
2 V/C ratios are calculated using Traffix 8.0 software package.
3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

Table R4.10-10B

Intersection Level of Service: Project Operating Year (2017) Conditions for Mid-Day Peak Hour

		Mid-Day No Project		Mid-Day With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	36	D	36	D
2. Beach Blvd & Center Ave	Signal	15	B	15	B
3. Beach Blvd & Edinger Ave	Signal	45	D	50	D
4. Beach Blvd & Stark Dr	Signal	14	B	14	B
5. Beach Blvd & MacDonald Dr	Signal	17	B	17	B
6. Beach Blvd & Heil Ave	Signal	31	C	32	C
7. Beach Blvd & Terry Dr	Signal	10	B	10	B
8. Beach Blvd & Warner Ave	Signal	35	D	35	D
9. Beach Blvd & Slater Ave	Signal	36	D	37	D
10. Beach Blvd & Newman Ave	Signal	7	A	6	A
11. Beach Blvd & Talbert Ave	Signal	**58**	**E**	**65**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	32	C	31	C
13. Beach Blvd & Garfield Ave	Signal	36	D	37	D
14. Beach Blvd & Yorktown Ave	Signal	31	C	31	C
15. Beach Blvd & Utica Ave	Signal	19	B	19	B
16. Beach Blvd & Adams Ave	Signal	39	D	38	D
17. Beach Blvd & Indianapolis Ave	Signal	19	B	18	B
18. Beach Blvd & Atlanta Ave	Signal	37	D	36	D
19. Beach Blvd & Pacific View Ave	Signal	10	B	10	B
20. Beach Blvd & PCH (SR-1)	Signal	21	C	21	C
21. Newland St & Atlanta Ave	Signal	0.44	A	0.44	A
22. Newland St & Hamilton Ave	Signal	0.46	A	0.55	A
23. PCH (SR-1) & Newland St	Signal	11	B	11	B
24. Magnolia St & Hamilton Ave	Signal	0.4	A	0.41	A
25. PCH (SR-1) & Magnolia St	Signal	24	C	24	C
26. Brookhurst St & Hamilton Ave	Signal	0.41	A	0.43	A

Table R4.10-10B (Continued)

Intersection Level of Service: Project Operating Year (2017) Conditions for Mid-Day Peak Hour

		Mid-Day No Project		Mid-Day With Project	
Intersection	**Control**	**Delay or ICU**	**LOS**	**Delay or ICU**	**LOS**
27. PCH (SR-1) & Brookhurst St	Signal	20	C	25	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.65	B	0.65	B
31. Brookhurst St & Stonefield Dr	Signal	0.52	A	0.53	A
32. Brookhurst St & Quail Ave	Signal	0.62	B	0.64	B
33. Brookhurst St & Ellis Ave	Signal	0.6	B	0.62	B
34. Brookhurst St & Garfield Ave	Signal	0.61	B	0.63	B
35. Brookhurst St & Yorktown Ave	Signal	0.55	A	0.57	A
36. Brookhurst St & Adams Ave	Signal	0.54	A	0.56	A
37. Brookhurst St & Indianapolis Ave	Signal	0.31	A	0.33	A
38. Brookhurst St & Atlanta Ave	Signal	0.36	A	0.37	A
39. Brookhurst St & Banning Ave	Signal	0.19	A	0.2	A
40. Brookhurst St & Bushard St	Signal	0.22	A	0.24	A

Notes:
1 Delay is measured in seconds. Calculated using Synchro 8 software package.
2 V/C ratios are calculated using Traffix 8.0 software package.
3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

Table R4.10-10C

Intersection Level of Service: Project Operating Year (2017) Conditions for P.M. Peak Hour

Intersection	Control	P.M. No Project		P.M. With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**89**	**F**	**89**	**F**
2. Beach Blvd & Center Ave	Signal	15	B	16	B
3. Beach Blvd & Edinger Ave	Signal	**120**	**F**	**128**	**F**
4. Beach Blvd & Stark Dr	Signal	15	B	16	B
5. Beach Blvd & MacDonald Dr	Signal	15	B	16	B
6. Beach Blvd & Heil Ave	Signal	**93**	**F**	**101**	**F**
7. Beach Blvd & Terry Dr	Signal	12	B	13	B
8. Beach Blvd & Warner Ave	Signal	**77**	**E**	**81**	**F**
9. Beach Blvd & Slater Ave	Signal	**65**	**E**	**71**	**E**
10. Beach Blvd & Newman Ave	Signal	12	B	12	B
11. Beach Blvd & Talbert Ave	Signal	**65**	**E**	**72**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	39	D	39	D
13. Beach Blvd & Garfield Ave	Signal	51	D	**56**	**E**
14. Beach Blvd & Yorktown Ave	Signal	42	D	43	D
15. Beach Blvd & Utica Ave	Signal	23	C	23	C
16. Beach Blvd & Adams Ave	Signal	46	D	47	D
17. Beach Blvd & Indianapolis Ave	Signal	16	B	16	B
18. Beach Blvd & Atlanta Ave	Signal	**59**	**E**	**59**	**E**
19. Beach Blvd & Pacific View Ave	Signal	13	B	12	B
20. Beach Blvd & PCH (SR-1)	Signal	32	C	39	D
21. Newland St & Atlanta Ave	Signal	0.57	A	0.57	A
22. Newland St & Hamilton Ave	Signal	0.69	B	0.78	C
23. PCH (SR-1) & Newland St	Signal	12	B	13	B
24. Magnolia St & Hamilton Ave	Signal	0.61	B	0.62	B
25. PCH (SR-1) & Magnolia St	Signal	16	B	18	B
26. Brookhurst St & Hamilton Ave	Signal	0.65	B	0.67	B

Table R4.10-10C (Continued)

Intersection Level of Service: Project Operating Year (2017) Conditions for P.M. Peak Hour

		P.M. No Project		P.M. With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
27. PCH (SR-1) & Brookhurst St	Signal	36	D	**64**	**E**
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.8	D	0.82	D
31. Brookhurst St & Stonefield Dr	Signal	0.51	A	0.52	A
32. Brookhurst St & Quail Ave	Signal	0.6	B	0.61	B
33. Brookhurst St & Ellis Ave	Signal	0.73	C	0.75	C
34. Brookhurst St & Garfield Ave	Signal	0.63	B	0.65	B
35. Brookhurst St & Yorktown Ave	Signal	0.61	B	0.62	B
36. Brookhurst St & Adams Ave	Signal	0.79	C	0.8	D
37. Brookhurst St & Indianapolis Ave	Signal	0.35	A	0.36	A
38. Brookhurst St & Atlanta Ave	Signal	0.45	A	0.46	A
39. Brookhurst St & Banning Ave	Signal	0.22	A	0.24	A
40. Brookhurst St & Bushard St	Signal	0.28	A	0.3	A

Notes:
1 Delay is measured in seconds. Calculated using Synchro 8 software package.
2 V/C ratios are calculated using Traffix 8.0 software package.
3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

- Beach Boulevard and Heil Avenue [P.M. peak hour (LOS F)]
- Beach Boulevard and Warner Avenue [P.M. peak hour (LOS F)]
- Beach Boulevard and Slater Avenue [P.M. peak hour (LOS E)]
- Beach Boulevard and Talbert Avenue [Mid-Day peak hour (LOS E); P.M. peak hour (LOS E)]
- Beach Boulevard and Garfield Avenue [P.M. peak hour (LOS E)]
- Beach Boulevard and Atlanta Avenue [P.M. peak hour (LOS E)]
- PCH and Brookhurst Street [P.M. peak hour (LOS E)]

During construction activities on the Site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, one temporary solution to accommodate traffic would be to reconfigure the eastbound approach to include a shared left-turn/through/right-turn lane. **Table ~~4.10-10~~ R4.10-11**, *Intersection LOS Comparison – ~~Existing~~ Operating Year Plus Project (~~2015~~2017) Conditions – Magnolia and Hamilton*, documents the ICU and LOS results with the implementation of this lane closure under Operating Year (~~2015~~2017) conditions with the Project. As shown in the table, the intersection remains at LOS A with the implementation of the lane closure during both the A.M. and ~~P.M.~~ mid-day peak hours; and LOS B during the P.M. peak hour. Implementation of this potential lane reconfiguration would need to be approved by the City of Huntington Beach Public Works Department.

Table ~~4.10-10~~ R4.10-11

Intersection LOS Comparison: ~~Existing Plus Project (2015) Conditions~~ Operating Year Plus Project (2017) Conditions Magnolia & Hamilton

	Without Lane Closure						With Lane Closure								
	A.M. Peak		Mid-Day Peak		P.M. Peak		A.M. Peak		Mid-Day Peak		P.M. Peak		Change in V/C		
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	MD	PM
Magnolia St & Hamilton Ave	~~0.501~~ 0.54	A	0.41	A	~~0.569~~ 0.62	~~A~~ B	~~0.557~~ 0.59	A	0.42	A	~~0.569~~ 0.62	~~A~~ B	~~0.056~~ 0.05	0.01	0.0

Source: Fehr & Peers, ~~2013~~ 2014

The changes in delay and LOS at intersections that operate at LOS E between the ~~2015~~2017 base conditions and the Plus Project conditions are presented in **Table ~~4.10-11~~ R4.10-12**, *Comparison of Intersection Service Levels for Operating Year ~~2015~~2017*. The information provided in Table ~~4.10-11~~ R4.10-12 illustrates the net changes in ~~traffic conditions and identifies the~~ delay, V/C and LOS at intersections that operate at LOS E or F between the "Base" (or Without Project) and With Project scenarios to determine potentially significant traffic impacts associated with the Project.

Based on Table ~~4.10-11~~ R4.10-12, the following ~~five~~ seven intersections would be significantly impacted under the Operating Year (~~2015~~ 2017) conditions prior to implementation of mitigation:

~~**Table 4.10-11**~~

~~**Comparison of Intersection Service Levels for Operating Year (2015)**~~

~~Intersection~~	~~Control~~	~~Peak~~	~~No Project Delay~~	~~No Project LOS~~	~~With Project Delay~~	~~With Project LOS~~	~~Δ Delay~~
~~2. Beach Boulevard at Edinger Avenue~~	~~Signal~~	~~A.M.~~	~~39.2~~	~~D~~	~~40.1~~	~~D~~	~~-~~
		~~P.M.~~	~~54.0~~	~~D~~	~~***55.2***~~	~~***E***~~	~~***1.1***~~
~~4. Beach Boulevard at Talbert Avenue~~	~~Signal~~	~~A.M.~~	~~31.4~~	~~C~~	~~30.2~~	~~C~~	~~-~~
		~~P.M.~~	~~***60.3***~~	~~***E***~~	~~***69.8***~~	~~***E***~~	~~***9.5***~~
~~6. Beach Boulevard at Garfield Avenue~~	~~Signal~~	~~A.M.~~	~~45.6~~	~~D~~	~~47.4~~	~~D~~	~~-~~
		~~P.M.~~	~~***65.3***~~	~~***E***~~	~~***74.4***~~	~~***E***~~	~~***9.1***~~
~~8. Beach Boulevard at Atlanta Avenue~~	~~Signal~~	~~A.M.~~	~~30.2~~	~~C~~	~~31.4~~	~~D~~	~~-~~
		~~P.M.~~	~~***56.8***~~	~~***E***~~	~~***59.7***~~	~~***E***~~	~~***2.9***~~
~~9. Beach Boulevard at Pacific Coast Highway~~	~~Signal~~	~~AM~~	~~37.1~~	~~D~~	~~***63.1***~~	~~***E***~~	~~***26.0***~~
		~~PM~~	~~39.5~~	~~D~~	~~46.8~~	~~D~~	~~-~~

~~*Notes*~~
~~*1. Delay is measured in seconds and calculated with the use of Synchro 8 software.*~~
~~*2. Bold-italicized type and gray highlight indicates project impact.*~~

~~*Source: Fehr & Peers, 2013*~~

- Beach Boulevard at Edinger Avenue - A.M. peak hour (LOS E) and P.M. peak hour (LOS ~~E~~F) (~~meets~~ exceeds Intersection Threshold #~~3~~ 5 for a significant impact)
- Beach Boulevard at Heil Avenue – P.M. peak hour (LOS F) (exceeds Intersection Threshold #5 for a significant impact)
- Beach Boulevard at Warner Avenue –P.M. peak hour (LOS F) (exceeds Intersection Threshold #5 for a significant impact)
- Beach Boulevard at Slater Avenue – P.M. peak hour (LOS E) (exceeds Intersection Threshold #5 for a significant impact)
- Beach Boulevard at Talbert Avenue - mid-day peak hour (LOS E) and P.M. peak hour (LOS E) (~~meets~~ exceeds Intersection Threshold #~~3~~ 5 for a significant impact)
- Beach Boulevard at Garfield Avenue - P.M. peak hour (LOS E) (~~meets~~ exceeds Intersection Threshold #~~3~~ 5 for a significant impact)
- ~~Beach Boulevard at Atlanta Avenue - P.M. peak hour (LOS E) (meets Intersection Threshold #3 for a significant impact)~~
- ~~Beach Boulevard at Pacific Coast Highway - A.M. peak hour (LOS E) (meets Intersection Threshold #3 for a significant impact)~~
- PCH at Brookhurst Street – P.M. peak hour (LOS E) (exceeds Intersection Threshold #5 for a significant impact)

Table R4.10-12

Comparison of Intersection Service Levels for Operating Year (2017)

Intersection	Control	Peak	No Project Delay or V/C	No Project LOS	With Project Delay or V/C	With Project LOS	Δ Delay or V/C
1. Beach Blvd & McFadden Ave	Signal	A.M.	73	E	73	E	0
		MD	36	D	36	D	0
		P.M.	89	F	89	F	0
3. Beach Blvd & Edinger Ave	Signal	**A.M.**	**51**	**D**	**55**	**E**	**4**
		MD	45	D	50	D	5
		P.M.	**120**	**F**	**128**	**F**	**8**
6. Beach Blvd & Heil Ave	Signal	A.M.	39	D	40	D	1
		MD	31	C	32	C	1
		P.M.	**93**	**F**	**101**	**F**	**8**
8. Beach Blvd & Warner Ave	Signal	A.M.	51	D	54	D	3
		MD	35	D	35	D	0
		P.M.	**77**	**E**	**81**	**F**	**4**
9. Beach Blvd & Slater Ave	Signal	A.M.	43	D	44	D	1
		MD	36	D	37	D	1
		P.M.	**65**	**E**	**71**	**E**	**6**
11. Beach Blvd & Talbert Ave	Signal	AM	33	C	33	C	0
		MD	**58**	**E**	**65**	**E**	**7**
		P.M.	**65**	**E**	**72**	**E**	**7**
13. Beach Blvd & Garfield Ave	Signal	A.M.	45	D	45	D	0
		MD	36	D	37	D	1
		P.M.	**51**	**D**	**56**	**E**	**5**
18. Beach Blvd & Atlanta Ave	Signal	A.M.	40	D	39	D	-1
		MD	37	D	36	D	-1
		P.M.	59	E	59	E	0
27. PCH & Brookhurst St	Signal	A.M.	21	C	23	C	2
		MD	20	C	25	C	5
		P.M.	**36**	**D**	**64**	**E**	**28**

Notes:

1 Delay is measured in seconds. Calculated using Synchro 8 software package.

2 V/C ratios are calculated using Traffix 8.0 software package.

3 The minus (i.e., -1) indicates that overall intersection delay will improve at some locations in the Plus Project scenario because the project increases traffic to certain movements which have available capacity or "green time". For example, if volumes are increased at a coordinated through phase where actuated green time may be available, the intersection may operate more efficiently by utilizing the available capacity or "green time" allowing more vehicles to travel through the intersection. The added vehicles to the intersection in this case will actually experience less delay than the average of all vehicles already at the intersection. Since intersection delay is report as a weighted average of all movements as provided for by the Highway Capacity Manual, this increase in traffic volume actually results in a reduction of overall intersection delay.

4 Cells highlighted in grey indicate potentially significant Project impact.

Source: Fehr & Peers, 2014

Because impacts to ~~the five~~ seven intersections would be potentially significant, Mitigation Measure~~s~~ RTRAF-1 ~~to TRAF-5 are~~ is prescribed. The prescribed Mitigation Measure RTRAF-1 involves decreasing the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) from 20 to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and from 25 to 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour). Supply truck, visitor and employee trips would remain the same. The implementation of mitigation would minimize traffic impacts to the extent feasible while still meeting the Project Objectives established for the Project. The resulting project trip generation with the mitigated truck volume intensity shown in Table R4.10-7 illustrates the proposed mitigation to address Project impacts. As shown in Table R4.10-7, export and import truck trips would be reduced during the P.M. peak hour. ~~These mitigation measures are listed below and consist of signal timing optimization to reduce delay times at the impacted intersections.~~

~~**Table 4.10-12**, *Intersection Level of Service – Operating Year (2015) with Project Mitigation*, shows the intersection delays after implementation of the prescribed mitigation measures. As shown therein, the prescribed mitigation measures would reduce delay times at the impacted intersections such that the intersection thresholds are not exceeded under planned conditions. The reduction in delay times could change, pending on changes in traffic planning and approval of DTSC and Caltrans. The affected intersections are within Caltrans jurisdiction, and the mitigation measures would require Caltrans approval. Caltrans would be responsible for updating the traffic signal timings to provide additional capacity. With the implementation of the mitigation measures to optimize signal timing, the Project would result is a less than significant impact to these intersections under Operating Year (2015) Plus Project Conditions.~~

~~**Table 4.10-12**~~

~~**Intersection Level of Service Operating Year (2015) with Project Mitigation**~~

~~Intersection~~	~~Control~~	~~Peak~~	~~With Project Delay~~	~~With Project LOS~~	~~After Mitigation Delay~~	~~After Mitigation LOS~~
~~Beach Boulevard at Edinger Avenue~~	~~Signal~~	~~A.M.~~	~~40.1~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***55.1***~~	~~***E***~~	~~45.8~~	~~D~~
~~Beach Boulevard at Talbert Avenue~~	~~Signal~~	~~A.M.~~	~~30.2~~	~~C~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***69.8***~~	~~***E***~~	~~51.8~~	~~E~~
~~Beach Boulevard at Garfield Avenue~~	~~Signal~~	~~A.M.~~	~~47.4~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***74.4***~~	~~***E***~~	~~53.0~~	~~E~~
~~Beach Boulevard at Atlanta Avenue~~	~~Signal~~	~~A.M.~~	~~31.4~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***59.7***~~	~~***E***~~	~~43.2~~	~~D~~
~~Beach Boulevard at Pacific Coast Highway~~	~~Signal~~	~~A.M.~~	~~***63.1***~~	~~***E***~~	~~34.2~~	~~C~~
		~~P.M.~~	~~46.8~~	~~D~~	~~N/A~~	~~N/A~~

~~*Notes*~~
~~*1. Bold italics and gray highlight indicate deficient location.*~~
~~*2. N/A indicates no mitigation required.*~~

~~*Source: Fehr & Peers, 2013.*~~

Table R4.10-13, *Intersection Level of Service – Operating Year (*2017*) with Project Mitigation*, shows the intersection delays after implementation of the traffic mitigation measure. The effects of the prescribed mitigation measure on the significantly impacted intersections are summarized below:

Table R4.10-13

Intersection Level of Service: Operating Year (2017) Plus Project Mitigation

Intersection	Control	Peak	With Project Delay or V/C	With Project LOS	After Mitigation Delay or V/C	After Mitigation LOS
		A.M.	**55**	**E**	**55**	**E**
Beach Blvd & Edinger Ave	Signal	MD	50	D	50	D
		P.M.	**128**	**F**	**124**	**F**
		A.M.	40	D	40	D
Beach Blvd & Heil Ave	Signal	MD	32	C	32	C
		P.M.	**101**	**F**	**97**	**F**
		A.M.	54	D	54	D
Beach Blvd & Warner Ave	Signal	MD	35	D	35	D
		P.M.	**81**	**F**	**79**	**E**
		A.M.	44	D	44	D
Beach Blvd & Slater Ave	Signal	MD	37	D	37	D
		P.M.	**71**	**E**	**68**	**E**
		A.M.	33	C	33	C
Beach Blvd & Talbert Ave	Signal	MD	**65**	**E**	**65**	**E**
		P.M.	**72**	**E**	**69**	**E**
		A.M.	45	D	45	D
Beach Blvd & Garfield Ave	Signal	MD	37	D	37	D
		P.M.	**56**	**E**	53	D
		A.M.	23	C	23	C
PCH & Brookhurst St	Signal	MD	25	C	25	C
		P.M.	**64**	**E**	53	D

Notes:
1 Bold and high-light indicate deficient location
2 N/A indicates no mitigation required

Source: Fehr & Peers, 2014

Beach Boulevard at Edinger Avenue – A.M. peak hour and P.M. peak hour:

- The A.M. peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the P.M. peak hour only.
- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 128 seconds (LOS F) to 124 seconds (LOS F).
- The mitigation measure would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Heil Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 101 seconds (LOS F) to 97 seconds (LOS F).
- Even with implementation of the mitigation measure the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Warner Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 81 seconds (LOS F) to 79 seconds (LOS E).
- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Slater Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 71 seconds (LOS E) to 68 seconds (LOS E).
- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Talbert Avenue – Mid-day peak hour and P.M. peak hour

- The mid-day peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the P.M. peak hour only.
- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 72 seconds (LOS E) to 69 seconds (LOS E).
- Even with implementation of the mitigation measure the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Garfield Avenue – p.m. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 56 seconds (LOS E) to 53 seconds (LOS D).
- The mitigation measure would result in an acceptable level of service at this intersection, thus the impact would be considered ***Less Than Significant***.

PCH at Brookhurst Street – p.m. peak hour

- The decrease in P.M. peak hour import trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 64 seconds (LOS E) to 53 seconds (LOS D).
- Implementation of the mitigation measure would result in an acceptable level of service at this intersection, thus the impact would be considered ***Less Than Significant***.

Mitigation Measures

RTRAF-1 The Project shall limit the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour). This mitigation measure to be verified through monthly compliance reports submitted by the RPs to the DTSC Unit Chief, Brownfields & Environmental Restoration.

~~**TRAF-1** Beach Boulevard at Edinger Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection to be consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS D and delay of 45.8 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per~~

~~this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~**TRAF-2** Beach Boulevard at Talbert Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS D and delay of 51.8 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~**TRAF-3** Beach Boulevard at Garfield Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOD D and delay of 53.0 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~**TRAF-4** Beach Boulevard at Atlanta Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS D and a delay of 43.2 seconds or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~**TRAF-5** Beach Boulevard at Pacific Coast Highway – A.M. Peak Hour. The Responsible Parties shall coordinate with Caltrans and the City of Huntington Beach Public Works Department to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix G of the Traffic Study. Signal timing at this intersection shall be optimized to improve A.M. operations to LOS C and delay of 34.2 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

Long-Term Impacts

Upon completion of the RAP construction activities at the Site, long-term periodic maintenance and monitoring activities would occur on the Site. These activities could generate between one and

approximately 10 daily trips to the Site. These trips would not occur on a daily basis, would be commensurate with as needed maintenance and monitoring activities, and would likely not be performed during peak hours alone. As such, these trips would result in a negligible increase on long-term traffic conditions, and impacts would be less than significant.

Conclusion. ~~Short-term construction activities associated with implementation of the RAP would impact four study intersections on Beach Boulevard during the P.M. peak hour and one study intersection on Beach Boulevard during the A.M. peak hour under Project Operating Year (2015) Plus Project Conditions. Implementation of the prescribed mitigation measures would reduce traffic impacts to a less than significant level under this scenario.~~ The prescribed mitigation measure would reduce delay times at two of the seven impacted intersections, Beach Boulevard at Garfield Avenue, and PCH at Brookhurst Street, such that intersection impact thresholds at these two intersections would not be exceeded under 2017 operational conditions. However, even with implementation of the mitigation measure, impacts at the remaining five intersections on Beach Boulevard would not be reduced to a less than significant level. Thus, impacts to five intersections would be significant and unavoidable during the P.M. peak hour under Operating Year (2017) Plus Project conditions, even with the inclusion of Project mitigation.

Long-term operation of the Site would result in a nominal effect on traffic conditions, and impacts would be less than significant.

CMP Intersections

Impact 4.10-2:	Would the Project conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

Short-Term Impacts

As indicated in the Methodology section above, per the Orange County Congestion Management Plan (CMP), an intersection is considered to be significantly impacted when a project reduces the LOS or increases the ICU by more than 0.03 at a location that is forecasted to operate at LOS E or F (refer to "Intersection Threshold #4). The Orange County CMP identifies four intersections along Beach Boulevard between I-405 and Pacific Coast Highway as CMP intersections, which include: Beach Boulevard at Edinger Avenue; Beach Boulevard at Warner Avenue; Beach Boulevard at Adams Avenue; and Beach Boulevard at Pacific Coast Highway. **Table ~~4.10-13~~ R4.10-14**, *CMP Analysis: No Project and With Project Comparison*, provides a summary of impacts at the CMP intersections according to the ICU method during short-term construction activities associated with implementation of the RAP. As shown in the table, Project traffic would not increase ICU by more than 0.03 at any of the study intersections operating at LOS E or F and, as such, would not exceed the significance criterion. Therefore, the Project would have a less than significant impact on the CMP intersections during short-term construction activities associated with implementation of the RAP.

Long-Term Impacts

Upon completion of the RAP construction activities at the Site, long-term maintenance and monitoring activities would occur. These activities could generate between one and up to approximately 10 weekly trips

~~Table 4.10-13~~

~~CMP Analysis: No Project and With Project Comparison~~

~~Intersection~~	~~Peak~~	~~Existing ICU~~	~~E + P ICU~~	~~Change~~	~~2015ICU~~	~~2015 ICU~~	~~Change~~
~~2. Beach Boulevard at Edinger Avenue~~	~~AM~~	~~0.864~~	~~0.886~~	~~0.022~~	~~**0.908**~~	~~**0.930**~~	~~**0.022**~~
	~~PM~~	~~**0.901**~~	~~**0.926**~~	~~**0.025**~~	~~**0.976**~~	~~**1.002**~~	~~**0.026**~~
~~3. Beach Boulevard at Warner Avenue~~	~~AM~~	~~0.847~~	~~0.870~~	~~0.023~~	~~0.886~~	~~**0.908**~~	~~**0.022**~~
	~~PM~~	~~**0.923**~~	~~**0.943**~~	~~**0.02**~~	~~**0.984**~~	~~**1.004**~~	~~**0.02**~~
~~7. Beach Boulevard at Adams Avenue~~	~~AM~~	~~0.708~~	~~0.736~~	~~0.028~~	~~0.733~~	~~0.761~~	~~0.028~~
	~~PM~~	~~0.798~~	~~0.824~~	~~0.026~~	~~0.851~~	~~0.877~~	~~0.026~~
~~9. Beach Boulevard at Pacific Coast Highway~~	~~AM~~	~~0.676~~	~~0.718~~	~~0.042~~	~~0.734~~	~~0.776~~	~~0.042~~
	~~PM~~	~~0.773~~	~~0.798~~	~~0.025~~	~~0.825~~	~~0.849~~	~~0.024~~

~~*Note*~~
~~*The LOS E or F intersections are shown in bold and gray highlight.*~~

~~*Source: Fehr & Peers, 2013*~~

to the Site. These trips would not occur on a daily basis, would be commensurate with as needed maintenance and monitoring activities, and would likely not be performed during peak hours alone. As such, these trips would result in a nominal increase CMP intersections and impacts would be less than significant.

Conclusion. The implementation of the RAP would not conflict with the applicable Orange County CMP level of service standards or travel demand measures for designated roads or highways along the proposed haul routes. Impacts to CMP intersections would be less than significant.

Emergency Access

Impact 4.10-3: Would the Project result in inadequate emergency access?

Short-Term Impacts

Construction activity would involve the movement of heavy trucks throughout the day that will ingress and egress the Site and travel along the proposed haul routes to reach I-405 for a period of approximately 11 months. The Project would implement several project design features that would limit the impacts of construction traffic on the adjacent roadways. These include:

- A Construction Traffic Management Plan, which would be reviewed and approved by the City of Huntington Beach and City of Fountain Valley, as necessary, prior to any hauling activity occurring, will be prepared. The Construction Traffic Management Plan will require coordination with emergency providers regarding any lane closures or other construction effects that would impact emergency access (PDF 10-1).

Table R4.10-14

CMP Analysis : No Project and With Project Comparison

		Existing Year (2014)					Operating Year (2017)				
Intersection	Peak	No Project ICU	LOS	With Project ICU	LOS	Change	No Project ICU	LOS	With Project ICU	LOS	Change
3. Beach Blvd & Edinger Ave	A.M.	0.72	C	0.73	C	0.01	0.79	C	0.8	D	0.01
	MD	0.69	B	0.7	C	0.01	0.76	C	0.77	C	0.01
	P.M.	0.88	D	0.89	D	0.01	**0.99**	**E**	**1.01**	**F**	0.02
8. Beach Blvd & Warner Ave	A.M.	0.74	C	0.75	C	0.01	0.81	D	0.82	D	0.01
	MD	0.66	B	0.67	B	0.01	0.7	C	0.71	C	0.01
	P.M.	0.84	D	0.85	D	0.01	**0.92**	**E**	**0.93**	**E**	0.01
16. Beach Blvd & Adams Ave	A.M.	0.55	A	0.56	A	0.01	0.61	B	0.63	B	0.02
	MD	0.56	A	0.57	A	0.01	0.6	B	0.62	B	0.02
	P.M.	0.69	B	0.7	C	0.01	0.78	C	0.79	C	0.01
20. Beach Blvd & PCH	A.M.	0.54	A	0.57	A	0.03	0.6	B	0.62	B	0.02
	MD	0.47	A	0.49	A	0.02	0.51	A	0.53	A	0.02
	P.M.	0.64	B	0.7	C	0.06	0.79	C	0.84	D	0.05

Notes
1. *Cells highlighted in grey represent intersections that are operating at LOS E or below.*

Source: Fehr & Peers, 2014

- Flagmen would be located at each of the Site driveways on Hamilton Avenue and Magnolia Street during hauling activities to direct haul trucks into and out of the site, which would limit further conflicts with any vehicles on these roadways during construction activity (PDF 10-6).
- Temporary barricades (e.g., "K"-rails) would be placed around the perimeter of the Site in areas where construction activities encroach upon the public streets to provide a buffer between the Project's construction activity and the adjacent street traffic on Hamilton Ave. and Magnolia St. (PDF 10-2).

~~As discussed above, the Project would also result in less than significant traffic impacts with implementation of the prescribed mitigation measures. Accordingly, the function of the street system would remain, and there would be available capacity to accommodate the projected traffic volumes, in addition to emergency vehicles.~~

~~In addition, d~~During construction activities on the Site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to include a shared left-turn/through/right-turn lane. This lane closure could potentially affect emergency access should the intersection operate at a deficient level of service. As discussed in the traffic impact analysis above, the intersection would remain at LOS A with the implementation of the lane closure during both the A.M. and P.M. peak hours. As such, the temporary lane closure would not result in substantial adverse emergency access impacts.

It is acknowledged that the Project would result in significant unavoidable impacts at five study intersections on Beach Boulevard. However, this impact would be temporary, occurring periodically during the approximate 11-month construction phase. Also, because emergency vehicles have priority access, the ability to use warning sirens at all intersections, and alternative routing flexibility, the Project's impacts on intersection capacity would not substantially diminish emergency access along Beach Boulevard.

The use of Brookhurst Street as a haul route for import trucks has the potential to impact emergency access at Orange Coast Memorial Hospital in the City of Fountain Valley. The hospital is located at the southwest corner of Brookhurst Street and Talbert Avenue, with primary emergency access being located at the intersection of Brookhurst Street and Stonefield Avenue. As shown in Tables R4.10-10A through 10C, the intersection of Brookhurst Street and Talbert Avenue (intersection #30) would operate at LOS D during the A.M. peak hour, LOS B during the mid-day peak hour, and LOS D during the P.M. peak hour under Operating Year (2017) Plus Project conditions. These are acceptable service levels that would not cause adverse impediment to emergency vehicles accessing the hospital vicinity. The hospital's emergency services driveway at the intersection of Brookhurst Street and Stonefield Avenue (intersection #31) would operate at LOS A during the A.M. peak hour, mid-day peak hour, and P.M. peak hour, under Operating Year (2017) Plus Project conditions. This favorable service level (LOS A) indicates that no significant impediments to emergency access at Orange Coast Memorial Hospital would occur as a result of the Project's haul truck traffic on Brookhurst Street. Further, because emergency vehicles have priority access, the ability to use warning sirens at all intersections, the Project would not substantially diminish emergency access to the Hospital. Therefore, based on the above, short-term impacts related to emergency access would be less than significant.

Long-Term Impacts

Upon completion of the RAP construction activities at the Site, long-term periodic maintenance and monitoring activities would occur. These activities could generate an average of approximately 10 weekly trips to the Site. These trips would not occur on a daily basis and would be commensurate with as needed maintenance and monitoring activities. As such, these trips would result in a negligible increase in traffic, and the function of the street system would remain with available capacity to accommodate the nominal increase in traffic, including emergency vehicles. Also, the Site's ingress and egress driveways would be designed to meet the City of Huntington Beach standards. All site access and circulation would be reviewed by the City of Huntington Beach Department of Public Works Road Division and Fire Department to ensure adequate emergency access to and within the Site. Further, similar to existing conditions, the Site would include two points of ingress/egress for emergency vehicles consistent with the City's emergency access standards. Overall, long-term emergency access impacts would be less than significant.

Alternative Transportation Facilities

Impact 4.10-4:	Would the Project conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

Short-Term Impacts

The construction activity on the Site would involve the travel of heavy duty trucks throughout the day, which has the potential to create conflicts as these vehicles enter the roadway travel lanes and travel along the designated routes to reach I-405. During the short-term construction phase of the RAP, the bicycle lanes on the southbound side of Magnolia Street and the eastbound side of Hamilton Avenue would be barricaded and unusable. Although bicyclists would not be prohibited from traveling along this street, the loss of the shoulder would not be conducive to comfortable riding. As such, most cyclists may choose to divert trips to other roadway facilities. This is considered to be a potentially significant short-term impact. However, PDF 10-8 would require signage to direct eastbound bicyclists on Hamilton Avenue and southbound cyclists on Magnolia Street to alternative routes (detours), such as eastbound Banning Avenues and southbound Newland, Bushard, and Brookhurst Streets. PDF 10-3 would limit left turns by trucks entering or exiting the Site to four of fewer axel, single-trailer trucks unless assisted by safety flagmen to direct vehicular traffic, pedestrians and bicyclists, and PDF 10-6 would require temporary traffic control signage and flagmen at both the ingress and egress points to the Site on Magnolia Street and Hamilton, Avenue during import/export, which serve as safety measures for bicyclists. In accordance with PDF 10-1, a Construction Traffic Management/Haul Route Plan would be developed and implemented during the construction phase of RAP implementation. The Plan would identify all traffic control measures, signs, and delineators to be implemented by the construction contractor through the duration of construction activities associated with the RAP. Further, given the proximity of the Site to Edison High School, PDF 10-4 would be implemented to provide on-going communication with school administration at Edison High School, providing sufficient notice to forewarn students and parents/guardians when existing, bicycle routes to the school may be impacted in order to maintain school traffic and pedestrian safety. In addition, PDF 10-5 would prohibit haul trucks from hauling past Edison High School. The implementation of the above described PDFs would ensure that impacts regarding bicycle facility performance and safety are less than significant.

With regard to pedestrian safety, the use of barricades to create a buffer between construction activities and the public street would impact the paved walkway along Hamilton Avenue adjacent to the Site. This would prevent pedestrians from walking along the south side of Hamilton Avenue. This is considered to be a potentially significant short-term impact. However, PDF 10-7 would be implemented to direct pedestrians to travel exclusively along the north side of Hamilton Avenue and the east side of Magnolia Street. The north side of Hamilton Avenue has an off-street pedestrian path that is slightly set back from Hamilton Avenue and connects to Edison Community Park. The east side of Magnolia Street has a paved sidewalk. In addition, PDFs 10-1, 10-4, 10-5, and 10-6, all of which are described above, would also serve to provide safety for pedestrians in the area, in a similar manner as for bicyclists. The implementation of the above described PDFs would ensure that impacts regarding pedestrian facility performance and safety are less than significant.

Finally, as indicated in the Existing Conditions section above, the area surrounding the Site is served by transit (buses). OCTA Route 173 has a transit stop in the eastbound direction on the far side of Hamilton

Avenue and Magnolia Street intersection.[7] OCTA Route 33 has a southbound stop at the far side of Bermuda Avenue and Magnolia Street intersection. No bus stops are located immediately adjacent to the Site along Hamilton Avenue or Magnolia Street. Because existing transit stops are not located adjacent to the Site, ~~Thus,~~ no bus stops or transit facilities would be directly impacted by implementation of the RAP. ~~In addition, as discussed in the analysis above, short-term traffic impacts would be reduced to a less than significant level with implementation of the prescribed mitigation measures. As such, transit services would not be adversely impacted by traffic delays resulting from the Project.~~ Thus, impacts on transit services and facilities would be less than significant.

The Project's consistency with policies regarding alternative transportation services and facilities in the City's Circulation Element are included in Table ~~4.10-14~~ R4.10-15, below. As discussed therein, the Project would be consistent with the applicable goals and policies of the City of Huntington Beach General Plan pertaining to alternative transportation services and facilities.

Long-Term Impacts

At the termination of short-term construction remediation activities, the use of existing bicycle paths along south side of Hamilton Avenue and west side of Magnolia Street would be restored. Also, access to the paved walkway along the south side of Hamilton Avenue would be restored. Thus, no long-term impacts to alternative transportation facilities would result from implementation of the RAP.

Conclusion. The implementation of the PDFs would ensure that impacts to alternative transportation facilities and services are less than significant.

Consistency With City of Huntington Beach and City of Fountain Valley General Plan Goals and Policies

City of Huntington Beach General Plan Circulation Element

The City's General Plan contains goals, objectives, and policies that are relevant to traffic and are presented in the General Plan Circulation Element. The applicable policies require projects to mitigate off-site traffic impacts and reduce potential conflicts with pedestrians, bicycles, and vehicular traffic. As discussed below in **Table ~~4.10-14~~ R4.10-15**, *Comparison of the Project to the Applicable Policies of the Huntington Beach General Plan Circulation Element*, implementation of the RAP would be generally consistent with most of the applicable goals and policies of the City of Huntington Beach General Plan pertaining to ~~traffic.~~ circulation and alternative transportation modes. However, the Project would not be consistent with the City's performance standards for acceptable levels of service at five study intersections on Beach Boulevard during the construction remediation activities. Because impacts would be reduced to the extent feasible, and Project impacts would only occur during the 11-month construction phase, the Project would not adversely impact the long-term goals of the Circulation Element. Nonetheless, because of the Project's short-term significant and unavoidable impacts, impacts regarding the Project's consistency with the Circulation Element are considered significant and unavoidable.

[7] *The term "far side" refers to whether a bus stop is after an intersection in the direction of travel, not its location with respect to a particular site. In this instance, the intersection is a far side stop since it is after the intersection in the direction the bus is traveling (eastbound).*

Table ~~4.10-14~~ R4.10-15

Comparison of the Project to the Applicable Policies of the Huntington Beach General Plan Circulation Element

Policy	Project Consistency Analysis
~~**CE 1.2:** Ensure adequate capacity for the City's circulation needs while minimizing significant negative environmental impacts.~~	~~**Consistent.** Because traffic impacts, including adequate capacity on local roadways, would be less than significant with implementation of the prescribed mitigation measures, the Project ensures adequate capacity for the City's circulation needs. Application of specific mitigation measures relating to traffic, as well as the other mitigation measures set forth in this EIR will ensure the minimization of significant negative environmental impacts.~~
CE 1.5: Provide adequate capacity for circulation needs while minimizing significant negative environmental impacts.	**Partially Consistent.** The Project would significantly impact five study intersections on Beach Boulevard during the short-term construction remediation activity period. The prescribed mitigation would reduce haul truck trips during the P.M. peak hour, but not eliminate significant impacts. However, the implementation of mitigation would minimize traffic impacts to the extent feasible while still meeting the Project Objectives established for the Project. The Project would not adversely affect the long-term circulation needs of the City.
CE 2.1: Comply with the city's performance standards for acceptable levels of service. **Objective 2.1:** Maintain the following citywide level of service (LOS) standards for traffic-signal controlled intersections during peak hours: ▪ Locations with specific characteristics identified as critical intersections: LOS E (ICU to not exceed 1.00) ▪ Principal Intersections: LOS D (0 .81-0.90 ICU) ▪ Secondary intersections: LOS C (0.71-0.80 ICU) LOS is to be determined during weekday morning and evening peak hours. Expanded timeframes may be applied to individual uses that generate high volumes of traffic during off-peak hours or weekends.	**Not Consistent.** The Project would exceed the City's performance standards for acceptable levels of service at five study intersections on Beach Boulevard during the short-term construction remediation activity period. The prescribed mitigation would reduce haul trucks during the P.M. peak hour, but not eliminate significant impacts. However, the implementation of mitigation would minimize traffic impacts to the extent feasible while still meeting the Project Objectives established for the Project. The Project would not adversely affect the long-term operation of the City's intersections. ~~With the implementation of the prescribed mitigation measures, the Project would be consistent with the City's performance standards for acceptable levels of service.~~
CE ~~2.3.1~~ 2.5: Require development projects to mitigate ~~off-site traffic impacts and pedestrian, bicycle, and vehicular conflicts to the maximum extent feasible~~ to the maximum extent feasible traffic impacts to adjacent land uses and neighborhoods as well as vehicular conflicts related to the project.	**Consistent:** ~~The Project would mitigate off-site traffic impacts at study intersections to a less than significant level.~~ As discussed under the consistency analysis for Policy CE 2.1, while the Project would result in significant and unavoidable short-term traffic impacts at five (5) intersections, mitigation has been prescribed that would reduce traffic impacts to the maximum extent feasible while still meeting the Project Objectives established for the Project. Further, ~~T~~the Project would implement numerous PDFs to minimize the potential for pedestrian, bicycle, and vehicular conflicts as discussed under Impact 4.3-4. The PDFs include preparation of a Construction Traffic Management/Haul Route Plan (PDF 10-1); placement of barricades around the site (PDF 10-2); prohibiting some left turns from the Site (PDF 10-3); providing on-going communication with Edison HS (PDF 10-4); prohibiting large trucks from passing Edison HS (PDF 10-5); and providing signage and flag persons around

Table ~~4.10-14~~ R4.10-15 (Continued)

Comparison of the Project to the Applicable Policies of the Huntington Beach General Plan Circulation Element

	the Site entrances and exits (PDFs 10-6 to 10-8). Implementation of these measures would mitigate ~~off-site traffic impacts and~~ pedestrian, bicycle, and vehicular conflicts to the maximum extent feasible.
~~**CE 2.3.2:** Limit driveway access points and requires adequate driveway widths onto arterial roadways and requires driveways is located to ensure the smooth and efficient flow of vehicles, bicycles, and pedestrians.~~ **CE 2.6:** Limit driveway access points, require driveways to be wide enough to accommodate traffic flow from and to arterial roadways, and establish mechanisms to consolidate driveways where feasible and necessary to improve traffic flow. **CE 2.7:** Require that driveways be located to minimize impacts to the smooth, efficient and controlled flow of vehicles bicycles and pedestrians.	**Consistent:** The Project would provide ~~only one~~ haul truck ingress ~~driveway~~ and ~~one~~ egress driveways which would be substantially set back from the nearest intersections. The Project would also use flagmen at each Site entrance and exit during import/export activities to ensure the smooth and efficient flow of vehicles. Signage would be placed along the Site perimeter to direct pedestrians to sidewalks on the north side of Hamilton Avenue and the east side of Magnolia Avenue and to direct cyclists along eastbound Hamilton Avenue and southbound Magnolia Street to alternative routes such as east-west bound Atlanta and Banning Avenues and north-south bound Newland and Brookhurst Streets. These measures would limit driveway access points and require adequate driveway widths onto arterial roadways and require driveways be located to ensure the smooth and efficient flow of vehicles, bicycles, and pedestrians.
~~**CE 2.3.4:** Require that any new development mitigate its impact on city streets, including but not limited to pedestrian, bicycle, and vehicular conflicts, to maintain adequate level of service.~~	~~**Consistent:** The Project would incorporate design features to reduce pedestrian, bicycle, and vehicular conflicts (see comparison to Policy CE 2.3.1, above) and mitigation measures to mitigate its impact on City streets.~~
CE 3: Protect residential neighborhoods from adverse conditions associated with cut-through and non-residential traffic.	**Consistent.** A single-family residential neighborhood is located to the east of the Site, at the southeast corner of Hamilton Avenue and Magnolia Street. Magnolia provides two (2) traffic lanes in each direction (north and south). For northbound traffic, both lanes would remain available throughout the remediation activities. Thus, cut-through traffic is not anticipated to occur within the adjacent neighborhood for vehicular traffic traveling north along Magnolia. Also, the intersection of Magnolia/Hamilton is forecast to operate at a LOS B, which indicates the intersection would operate at a low delay with good progression and/or short cycle lengths. As such, vehicles would not have a need to cut-through the neighborhood based on traffic delays at the intersection. Further, per PDF 10-1, prior to the start of hauling activities, the project contractor, in coordination with DTSC, Caltrans, and City of Huntington Beach, and/or City of Fountain Valley, as necessary, would prepare a Construction Traffic Management/Haul Route Plan to be implemented during implementation of the RAP. This Plan would require implementation of traffic control measures to further minimize traffic effects on nearby residential neighborhoods.

Table ~~4.10-14~~ R4.10-15 (Continued)

Comparison of the Project to the Applicable Policies of the Huntington Beach General Plan Circulation Element

CE ~~6.1.7~~ 7.5: Maintain existing pedestrian and bicycle facilities, and require ~~new development~~ developers to provide pedestrian walkways and/or bicycle ~~routes~~ pathways between ~~developments~~ new residences and~~,~~ schools, parks and public facilities.	**Consistent.** The Project would provide signage along the Site perimeter to direct cyclists and pedestrians to alternative routes during construction (see PDFs 10-8 and 10-8). At the termination of construction activities, the use of existing bicycle paths along south side of Hamilton Avenue and west side of Magnolia Street would be restored. Alternative bike routes would allow access to public facilities, including parks and schools. During short-term construction activities, pedestrian access to parks and schools would be available along the north side of Hamilton Avenue and the east side of Magnolia Street. Upon completion of short-term construction activities, the use of the paved walkway along the south side of Hamilton Avenue would be restored and the relocation of the berm along Magnolia Street (and out of the city's right-of-way) would be completed, which could enable future pedestrian access along this frontage. No new residences are proposed as part of the Project. Thus, this policy's requirements to provide pedestrian walkways and/or bicycle pathways between new residences and schools, parks and public facilities, is not applicable.
CE ~~6.1.10~~ 7.8: Implement and operate appropriate traffic control devices ~~and operational programs~~ throughout the community to ~~ensure that~~ reduce conflicts between pedestrian, bicycles, and motor vehicles, ~~are minimized and safety enhanced.~~	**Consistent.** The Project would incorporate design features to minimize pedestrian, bicycle, and vehicular conflicts (see comparison to Policy CE ~~2.3.1~~ 2.5, above) and improve safety.

Source: PCR Services, Inc., ~~2013~~2014.

City of Fountain Valley General Plan Circulation Element

The City of Fountain Valley General Plan Circulation Element sets forth intersection performance standards and contains a Circulation Plan comprising a local and regional roadway network, truck routes, parking policies, and a trails plan. The Project would use Brookhurst Street, a designated regional arterial and truck route in the City of Fountain Valley, as an inbound and outbound route for import trucks only. Because the Project would use Brookhurst Street and not traverse non-truck routes in the City, it would be consistent with the designated purpose of the street and the intent of the Circulation Element. Brookhurst Street does not contain designated bike paths to the south of I-405, the section of the street to be used as part of the Project's haul route. However, Class II bike paths are designated on Garfield Avenue and Ellis Avenue, which intersect Brookhurst Street. The Project would not adversely impact any Brookhurst Street intersections or cause any lane closures or other effects on Brookhurst Street. Therefore, no impacts to Class II bike paths at Garfield Avenue and Ellis Avenue, are anticipated. Also, because no intersections would be significantly impacted, the Project would have no adverse effects on bus routes in the area. No other direct effects

relative to the purpose of the Circulation Element, which is to efficiently move people and goods on the City's streets, are anticipated. Because the Project would not conflict with the objectives of the Circulation Element, impacts with respect to this policy document would be less than significant.

3. CUMULATIVE IMPACTS

The traffic analysis under Impact Statement 4.10-1 considers ambient traffic growth and traffic growth attributable to the identified related projects in the project study area anticipated to occur under the operating Year (~~2015~~2017) scenario. All cumulative projects are located within the City of Huntington Beach. No related projects are anticipated within the City of Fountain Valley in the portion of the project traffic study area. Related projects are listed in Appendix D of the Revised Traffic Study. ~~Therefore,~~ The cumulative impact analysis is incorporated into the analysis of Operating Year (2017) base conditions presented under Impact Statement 4.10-1. As discussed therein, under Operating Year (2017) Plus Project conditions, the Project would significantly impact five intersections. ~~short-term traffic impacts during would be less than significant with implementation of the prescribed mitigation measures (refer to Mitigation Measure TRAF-1 to TRAF-5).~~ With regard to construction-related traffic and pedestrian and bicycle safety, the Project would implement numerous PDFs during short-term construction activities at the Site (see PDFs 10-1 to 10-8). The Construction Traffic Management/Haul Plan (PDF 10-1) would be required to consider related project construction traffic, particularly those near the Site including the Poseidon Desalination Project ~~(Related Project No. 1)~~, Huntington Beach Energy Project (AES) and the Plains All American Pipeline Tanks (Removal) Project ~~(Related Project No. 2)~~. Because the Project, in combination with related projects, would significantly impact five study intersections during the Project's construction remediation activities, short-term cumulative traffic impacts would be significant and unavoidable.

With regard to emergency access, the Project would result in a less than significant impact as described above, particularly as it would meet the City's minimum number of required emergency access roads. All related projects would be responsible for providing the minimum number of required emergency access roads built to appropriate roadway standards, as required by the City of Huntington Beach. As such, a less than significant cumulative impact regarding emergency access would occur with Project implementation.

With regard to conflicts with alternative transportation facilities and programs, future related projects would be subject to appropriate City review on a project-by-project basis to ensure that no conflicts occur with alternative transportation facilities and programs. Therefore, cumulative impacts related to these issues would be less than significant.

Conclusion. The Project combined with the related projects would result in ~~less than~~ significant and unavoidable cumulative impacts ~~with implementation of the prescribed mitigation measures for the Project~~ to five study intersections on Beach Boulevard.

4. LEVEL OF SIGNIFICANCE AFTER MITIGATION

~~Implementation of the prescribed mitigation measures would reduce potentially significant traffic impacts to less than significant levels.~~

Under the Operating Year (2017) Plus Project scenario, the prescribed mitigation measure would reduce intersection delay times at two of the seven impacted intersections, Beach Boulevard at Garfield Avenue, and

PCH at Brookhurst Street, such that intersection impact thresholds at these two intersections would not be exceeded under 2017 operational conditions. However, even with implementation of the mitigation measure, impacts at the remaining five intersections on Beach Boulevard would not be reduced to a less than significant level. Thus, impacts to five intersections would be significant and unavoidable during the P.M. peak hour under Operating Year (2017) Plus Project conditions, even with the inclusion of Project mitigation. These intersections are listed below:

- Beach Boulevard at Edinger Avenue – A.M. and P.M. peak hours
- Beach Boulevard at Heil Avenue - P.M. peak hour
- Beach Boulevard at Warner Avenue - P.M. peak hour
- Beach Boulevard at Slater Avenue – P.M. peak hour
- Beach Boulevard at Talbert Avenue – mid-day and P.M. peak hours

All other impacts regarding CMP intersections, emergency access and alternative transportation would be less than significant.

R5.0 ALTERNATIVES

This Recirculated Draft EIR Alternatives section has been prepared pursuant to CEQA Guidelines Section 15088.5, *Recirculation of an EIR Prior to Certification*. Per Section 15088.5(b), "If the revision is limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified." The Project's proposed additional haul route and distribution of truck trips resulted in significant changes to the Draft EIR's construction noise and traffic analyses presented in Sections 4.9, *Noise*, and 4.10, *Transportation/Traffic*, respectively. The Project's proposed traffic-related modifications also resulted in changes to the short-term traffic and off-site traffic noise analyses presented in Chapter 5.0, *Alternatives*, of the Draft EIR. Consistent with CEQA Guidelines Section 15088.5(b), only the portions of Chapter 5.0 that have changed are presented in this Recirculated Draft EIR chapter. Accordingly, only the short-term traffic and off-site traffic noise portions of sub-section 4., *Alternatives Analysis*, within Chapter 5.0 are presented in this Recirculated Draft EIR chapter. In addition, the following sub-sections in Chapter 5.0 are presented in this Recirculated Draft EIR chapter for context: Introduction; sub-section 1, *Objectives of the Proposed Project*; sub-section 2, *Alternatives Considered and Rejected*; and sub-section 3, *Analysis Format*.

INTRODUCTION

Under CEQA, the identification and analysis of alternatives to a project is a fundamental part of the environmental review process. Public Resources Code Section 21002.1(a) establishes the need to address alternatives in an EIR by stating that in addition to determining a project's significant environmental impacts and indicating potential means of mitigating or avoiding those impacts, "the purpose of an environmental impact report is to identify the significant effects of a project on the environment, to identify alternatives to the project, and to indicate the manner in which those significant effects can be mitigated or avoided."

Direction regarding the definition of project alternatives is provided in the *CEQA Guidelines* as follows:

> *An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives.*[1]

The *CEQA Guidelines* emphasize that the selection of project alternatives should be based primarily on the ability to reduce impacts relative to the proposed project, "even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."[2] The *Guidelines* further direct that the range of alternatives be guided by a "rule of reason," such that only those alternatives necessary to permit a reasonable choice need be addressed.[3]

In selecting project alternatives for analysis, potential alternatives must pass a test of feasibility. *CEQA Guidelines* Section 15126.6(f)(1) states that:

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[1] *CEQA Guidelines Section 15126.6(a).*

[2] *CEQA Guidelines Section 15126.6(b).*

[3] *CEQA Guidelines Section 15126.6(f).*

> *Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site . . .*

Beyond these factors, *CEQA Guidelines* require the analysis of a "no project" alternative and an evaluation of alternative location(s) for the project, if feasible. Based on the alternatives analysis, an Environmentally Superior Alternative is to be designated. If the Environmentally Superior Alternative is the No Project Alternative, then the EIR shall identify an Environmentally Superior Alternative among the other alternatives.[4] In addition, *CEQA Guidelines* Section 15126.6(c) requires that an EIR identify any alternatives that were considered for analysis but rejected as infeasible and discuss the reasons for their rejection.

As discussed in detail in Section R2.0, *Project Description*, of this Recirculated Draft EIR, a Feasibility Study (FS) was performed in 2000 to identify and evaluate remedial alternatives for the Site. A Revised Feasibility Study (RFS) was later conducted in 2007 to further screen remediation alternatives for the Site. The RFS first identified remedial action objectives and requirements for the Site. Next, various treatment technologies and remediation processes were reviewed for their applicability to the Ascon wastes. To evaluate the effectiveness of candidate technologies, focused, low volume treatability studies were conducted on specific wastes. Based on the technology reviews, the treatability results, the conclusions of the 2000 FS report, and additional groundwater and soils investigations conducted from 2004 through 2007, six specific remedial alternatives were selected for detailed evaluation.

Since the RFS, the Interim Removal Measure (IRM) performed from July 2010 through March 2011 resulted in removal of approximately 70,000 cubic yards of tarry waste materials from Lagoons 1 and 2, and, to a lesser extent, from Lagoon 3. Also, the additional studies, knowledge, and experience gained since DTSC approval of the RFS have led to modifications and updates to the RFS-selected preferred alternative in addition to taking into account the changes to Site conditions. Furthermore, to enable a more accurate comparative study between alternatives, the other five remedial alternatives considered in the RFS have also been updated in the current Remedial Action Plan (RAP). The alternatives evaluated in the RAP are as follows:

- RAP Alternative 1 - No Action
- RAP Alternative 2 - Limited Waste Removal
- RAP Alternative 3 - Protective Cap
- RAP Alternative 4 - Partial Source Removal with Protective Cap
- RAP Alternative 5 - Source Removal with Off-site Disposal and SIT (Slurry Injection Technology)
- RAP Alternative 6 - Source Removal with Off-site Disposal

However, not all six of these RAP Alternatives warrant detailed analyses under CEQA, as discussed below in subsection 2.0, *Alternatives Considered and Rejected*. As discussed therein, Alternatives 2, 3 and 5 in the RAP have not been further evaluated in this EIR. Alternative 1, the No Action Alternative, is required to be

[4] *CEQA Guidelines Section 15126.6(e)(2).*

evaluated by CEQA. In addition, as explained below, the EIR may evaluate additional Alternatives not proposed by the Applicant (the RPs).

The significant elements of the alternatives are summarized in Table R2-1. Table R2-2 summarizes the present worth capital and Operations and Maintenance (O&M) costs, volumes of waste to be removed, volumes of import soils to be trucked in, estimated number of truck trips needed, and estimated duration of the construction for each alternative. Each of the updated alternatives was evaluated in the RAP based on the first seven criteria of the nine National Contingency Plan (NCP) criteria (the remaining two criteria, State Acceptance and Community Acceptance, are to be evaluated as part of the final RAP/Environmental Impact Report [EIR] process). Section R2.0 of this Recirculated Draft EIR provides a detailed discussion of alternatives evaluation with the NCP criteria. As discussed therein, based on the final evaluation and comparison of the alternatives, Alternative 4 was recommended as the preferred remedial alternative for the Site. Thus, the draft RAP presents an update of the RFS Alternative 4, which takes into account work performed since DTSC approved the RFS, current remedial practices, and updated volumes and costs. The updated Alternative 4 is the "Project" that is being evaluated in this Recirculated Draft EIR.

The analysis included in Section 4.0 of ~~this~~ the Draft EIR concluded that the Project would result in significant and unavoidable environmental impacts with regards to Air Quality during remedial construction. All other environmental issues were determined to be less than significant based on compliance with applicable regulatory requirements, implementation of the Project's Design Features (PDFs), and/or implementation of the prescribed mitigation measures. In consideration of the Project's significant and unavoidable short-term Air Quality impacts, a new Lower Intensity - Extended Schedule Alternative, as described below, was put forth by DTSC and is being evaluated in this Recirculated Draft EIR.

Based on the factors referenced above, the alternatives that were selected for further analysis in this Recirculated Draft EIR include the No Project Alternative, RAP Alternative 6 - Source Removal with Off-site Disposal (renumbered Alternative 2 in this EIR), and a new Lower Intensity - Extended Schedule Alternative. These alternatives are summarized as follows:

- **No Project Alternative:** The No Project Alternative is the baseline alternative presented in the 2007 RFS (RAP Alternative 1) because it represents a continuation of existing conditions and no removal of soil, material or debris. Under this Alternative, no further action would be taken to contain, treat, or remove the impacted on-site soils and waste beyond current monitoring, including groundwater monitoring, and maintenance activities. All existing Site features, such as the perimeter berms, fencing, vegetation, lagoons, pits, and other physical features would remain as under existing conditions.
- **Alternative 2: Source Removal with Off-Site Disposal:** Alternative 2 calls for bringing the Site to an unrestricted use condition. Alternative 2, as discussed in this section of this Recirculated Draft EIR, is evaluated as "Alternative 6, Source Removal with Off-site Disposal" in the RAP. Under this Alternative, nearly all waste materials would be removed, and the Site would be excavated as needed and backfilled with suitable import materials to street grade. The specific depth of excavation needed would be determined during excavation, based on the applicable remedial goals for unrestricted land uses (i.e, residential uses). If this alternative is implemented, risk-based concentrations (RBCs) for use as Soil Cleanup Levels (SCLs) for each of the Chemicals of Potential Concern (COPCs) consistent with residential land use would be developed. Waste materials, if any, found within the Site with concentrations of COPCs that exceed the RBCs for unrestricted uses would be removed and replaced with clean fill. The excavated materials would be disposed off-site at a

regulated disposal/landfill facility, as appropriate. To ensure the RBCs have been met during fieldwork, COPC concentrations in soils would be measured at the excavation bottoms during implementation of this Alternative, provided the excavation does not proceed down to groundwater. One confirmation sample would be collected at 100-ft centers within the Site from the bottom of the excavation. Analytical results would be compared to the RBCs (or to background concentrations for those higher than the RBC) for each COPC to determine if additional action is warranted.

Based on the above, while this Alternative would remove nearly all the waste from the Site, potentially small amounts of contaminated material[5] could remain so long as the materials in the soils and groundwater are not above naturally occurring levels and do not pose a threat to people or the environment. According to Table 5-2 of the RAP, this Alternative would remove approximately 1,000,000 bank cubic yards (BCY) of material from the Site. Construction activities under this Alternative would occur for approximately 41 months, which is approximately 2.5 years longer than the Project. This Alternative would generally involve a similar daily intensity of activities using a similar profile of construction equipment and same number of daily construction-related vehicle trips when compared to the Project. However, no cap would be installed under this Alternative. Similar to the Project, the City Parcel would be rendered usable by the City of Huntington Beach for future landscaping and streetscape improvements. This Alternative would result in a near flat, vacant Site suitable for unrestricted use. This Alternative anticipates that no restrictive covenant would be imposed on the Site for future land uses, but as Table 5-1 of the RAP indicates, pending field or post-remedy conditions, a long-term restrictive covenant may be necessary. Likewise, long-term groundwater monitoring is not expected to be required with implementation of this Alternative, but field conditions may dictate that a monitoring plan be developed and maintained for a 30-year period following completion of the clean-up, as determined appropriate based on consultation with the Santa Ana Regional Water Quality Control Board (SARWQCB).

- **Alternative 3: Lower Intensity - Extended Schedule Alternative**: This Alternative would remove the same amount of waste from the Site and provide the same cap system and long-term design as the Project, except that construction activities would be less intense compared to the Project, which would result in an extended construction schedule. This Alternative is not contemplated in the Draft RAP. The primary purpose of this Alternative is to address the Project's significant and unavoidable air quality impacts, while also reducing the extent of daily traffic impacts ~~(although traffic impacts would be less than significant for the Project after implementation of the prescribed mitigation measures)~~. Regional air quality impacts would be determined based on daily emission threshold levels established by the South Coast Air Quality Management District (SCAQMD). By decreasing the intensity of daily construction activities such that daily emission levels from construction activities would fall below applicable SCAQMD thresholds (after mitigation), the length of construction activities would be extended by approximately 25 months compared to the Project. Thus, rather than approximately 11 months of construction activities that would occur under the Project, this Alternative would result in approximately 36 months of construction activities.

  Under this Alternative, the daily one-way construction traffic would be approximately ~~one-third (35%)~~ 41 percent of the Project's construction traffic. The Project would generate approximately ~~357~~ 380 one-way daily truck trips, while this Alternative would generate approximately ~~127~~ 155 daily truck trips. The maximum daily amount of haul trucks (import and

[5] *In this EIR the term "contaminated material" is meant solely to denote material which may be or have had contact with a contaminant (i.e. non-native substance or chemical); it is not meant to indicate or imply that the material was found to meet any specific definition of hazardous waste, hazardous material, or similar characterization.*

export) would be approximately one-quarter (25%) of the Project or approximately 75 haul trips per day compared to 300 per day under the Project. For purposes of this analysis, although overall construction activities under this Alternative would be less intense than the Project, there could potentially be some construction days where peak hour traffic would be similar to that of the Project. Under these circumstances, construction activities would be at a similar intensity during the A.M. and P.M. peak hours, while construction activities in the afternoon (mid-day) would be less intense compared to the Project. Haul routes would be the same as for this Alternative and the Project.

Each of these alternatives is analyzed in subsection 4, below.

1. OBJECTIVES OF THE PROPOSED PROJECT

Section 15124(b) of the CEQA *Guidelines* states that the project Description shall contain "a statement of the objectives sought by the proposed project." As set forth by the CEQA *Guidelines*, the list of objectives that DTSC seeks to achieve for the Project is provided below.

1. To reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste.

2. To reduce the potential for short-term risks (during implementation activities) to life, property and the environment (inclusive of nearby residences, schools, parks, businesses, and on-site workers) from contaminated materials and waste through proper handling, treatment and disposal.

3. To ensure that contaminated materials and waste are transported in a safe, efficient and coordinated manner to minimize risks to sensitive uses (such as nearby residences and schools).

4. To reduce the potential for on-site contaminated materials to impact groundwater or migrate off-site.

5. To remediate the Site to enhance public health, safety and welfare and ultimately allow potential new uses of the site that will not endanger human health and the environment.

6. To remediate the Site in a timely, expedient, and cost effective manner.

2. ALTERNATIVES CONSIDERED AND REJECTED

In accordance with *CEQA Guidelines* Section 15126.6(c), an EIR should identify any alternatives that were considered for analysis but rejected as infeasible and briefly explain the reasons for their rejection. The following three Alternatives from the RAP were considered, but ultimately rejected, as detailed below.

RAP Alternative 2: Limited Waste Removal – RAP Alternative 2 would consist mainly of removal and off-site disposal of Pit F waste, covering the remaining lagoon materials with imported soils, and performance of long-term groundwater monitoring. No engineered cap would be constructed and the City parcel would not be remediated.

RAP Alternative 3: Protective Cap – RAP Alternative 3 would mainly consist of the removal and off-site disposal of Pit F waste. In addition, waste materials found near the streets in the City parcel would be moved to within the Site property boundaries, the remainder of the material in the lagoons would remain on-site, Lagoon 4 and 5 materials would be held in place with sheet piling, and a protective cap would be constructed over the Site to protect human health and the environment. Long-term groundwater monitoring and cap maintenance would be performed.

RAP Alternative 5: Source Removal with Off-site Disposal and Slurry Injection Technology (SIT) – RAP Alternative 5 consists of removal and off-site disposal and/or deep well injection of all waste materials, including the wastes from Pit F and the impacted soils and drilling muds from the current lagoons, former lagoons, pits, and the perimeter berm. Soils and drilling muds would be excavated until chemical concentrations reached levels either protective of human health and the environment or to within background levels. After the removal of wastes, the property would be re-graded by using on-site, usable excavated material and/or imported soil. Long-term groundwater monitoring would be performed, if groundwater impacts remained.

As discussed in greater detail in Section R2.0, RAP Alternative 2 does not provide adequate elimination of direct contact with the bulk of the waste because percolation to groundwater is neither minimized nor prevented. This Alternative therefore fails to meet the first NCP criterion, which to consider the "*overall protection of human health and the environment*." Also, RAP Alternative 2 fails the second NCP criterion regarding "*compliance with applicable or relevant and appropriate requirements (ARARs)*" because it does not provide protection of air and groundwater as mandated by regulation. Thus, this Alternative is not included in analysis below.

Section R2.0 also discusses and compares the two capping alternatives, RAP Alternatives 3 and 4. The primary advantage of RAP Alternative 4 over the other cap alternative, RAP Alternative 3, is the greater feasibility of constructing the buttress in Lagoons 4 and 5, using cement mixed with the lagoon materials called for in RAP Alternative 4 (the Project), to hold the material that would remain in place in Lagoons 4 and 5, over the installation of sheet piling called for in RAP Alternative 3. Because sheet piling in Lagoons 4 and 5, versus mixing material in Lagoons 4 and 5 with cement as would be done under the Project, is the only significant difference between RAP Alternatives 3 and 4, and the Project is preferable between them, Alternative 3 is not considered further in this Recirculated Draft EIR.

Finally, Section R2.0 discusses and compares the two complete removal alternatives, RAP Alternatives 5 and 6. RAP Alternative 6 was determined to be preferable due to the difficulty of implementing SIT as would be done under RAP Alternative 5. Aside from the greater waste removal to off-site facilities under Alternative 6, SIT is the sole distinguishing element between RAP Alternatives 5 and 6. Because RAP Alternative 6 is preferable as between RAP Alternatives 5 and 6, RAP Alternative 5 is not considered further in this Recirculated Draft EIR. Even though RAP Alternative 6 was not selected as the preferred alternative by DTSC, it is nonetheless being evaluated as an alternative to the Project in this Recirculated Draft EIR because it would reduce some long-term environmental impacts when compared to the Project.

Development of the Site with any projection as to the type of future land use is not discussed in this Section R5.0, *Alternatives*, nor anywhere else in this Recirculated Draft EIR. Remediation is a requirement under the Department of Toxic Substances Control (DTSC) Imminent and Substantial Endangerment Determination Consent Order (I&SE CO), Docket No. I&SE CO 02/03-007, and an Imminent and Substantial Endangerment

Determination and Order and Remedial Action Order (I&SE-RAO), Docket No. I&SE-RAO 02/03-018, between DTSC and ten Responsible Parties (RPs). As a result of these agreements, the RPs are required to finance implementation of remediation activities (clean-up plan) at the Site. Any future land use of the Site following completion of the RAP would be done under municipal jurisdiction and is not contemplated as part of this Recirculated Draft EIR or any of the alternatives, including the Project. However, any development of the Site after completion of remediation may be subject to a restrictive land use covenant implemented as part of the remediation. Thus, such development may require DTSC approval and a subsequent entitlement process, including environmental review as appropriate pursuant to CEQA. Accordingly, potential future land uses on the Site would require DTSC, as well as City of Huntington Beach, discretionary approval actions, as necessary.

3. ANALYSIS FORMAT

In accordance with *CEQA Guidelines* Section 15126.6(d), each alternative is evaluated in sufficient detail to determine whether the overall environmental impacts would be fewer, similar or greater than the corresponding impacts resulting from implementation of the Project. Furthermore, each alternative is evaluated to determine whether the project objectives, as stated above, will be substantially attained by the alternative. The evaluation of each of the alternatives follows the process described below:

a. The net environmental impacts of the alternative after implementation of reasonable mitigation measures are determined for the environmental issue areas analyzed in the Recirculated Draft EIR.

b. Post-mitigation significant and non-significant environmental impacts of the alternative and the Project are compared for each environmental issue area. Where the net impact of the alternative will be clearly less adverse or more beneficial than the impact resulting from the Project, the comparative impact is said to be "less." Where the alternative's net impact will be clearly more adverse or less beneficial than that of the Project, the comparative impact is said to be "greater." Where the impacts of the alternative and the project will be roughly equivalent, the comparative impact is said to be "similar."

c. Consistency with the City of Huntington Beach General Plan and City of Fountain Valley General Plan, or other appropriate plan, is assessed for each alternative, where applicable, and compared to the Project's consistency with the General Plan.

d. The comparative analysis of the impacts is followed by a general discussion of whether the underlying purpose and basic project objectives are substantially attained by the alternative.

4. ALTERNATIVE ANALYSIS

Alternative 1 – No Project Alternative

Environmental Impact Categories

Noise

Implementation of the No Project Alternative would not result in any physical changes to the environment, and therefore would not have any potential to generate short-term noise or vibration beyond what currently exists. Under existing conditions, no perceptible long-term sources of noise exist on the Site, with the

exception of minimal vehicular noise and weed abatement activities associated with O&M activities. These sources of noise would continue under the No Project Alternative. In comparison, the Project would include similar minimal vehicular noise sources associated with O&M activities. The Project would also include the use of mechanical fans/equipment for the LFG collection system, which would result in less than significant noise impacts with implementation of the prescribed mitigation measures. Since the No Project Alternative would not include the LFG collection system, it would avoid this less than significant Project impact. In light of this consideration, the No Project Alternative is considered to have less long-term operational noise impacts than the Project. As neither the Project nor the No Project Alternative would generate long-term sources of vibration, the No Project Alternative and the Project are similar in this regard.

Consistency with City of Huntington Beach ~~General Plan Goals and Policies~~ and City of Fountain Valley Plans and Policies

~~The City's General Plan contains goals, objectives, and policies that are relevant to noise and are presented in the General Plan Noise Element.~~ The No Project Alternative would be consistent with the applicable goals and policies of ~~the City of Huntington Beach~~ each City's General Plan pertaining to ~~N~~noise because implementation of the No Project Alternative would not result in any physical changes to the environment, and therefore would not have the potential to generate noise or vibration beyond what currently exists. Thus, because the No Project Alternative would not include any construction or other activities that would generate much, if any, noise, it would not conflict with the applicable ~~policies in the~~ General Plan ~~Noise Element~~ noise-related policies. Comparatively, implementation of the Project would generate construction noise in the short term. Thus, the No Project Alternative would be consistent with the applicable plans and policies to a greater degree than the Project.

Traffic/Circulation

The No Project Alternative would not result in generation of additional vehicle trips relative to existing conditions. On-going O&M activities at the Site generate a minimal amount of traffic, typically less than 10 trips per week. This pattern would continue under the No Project Alternative. As such, the No Project Alternative would have no potential to affect the function of the local and regional traffic network, result in inadequate emergency access, or conflict with plans, policies, or regulations related to alternative transportation. Comparatively, the Project would result in a considerable, short term increase in traffic resulting from haul trucks coming into and out of the Site during implementation. Thus, traffic and emergency impacts under the No Project Alternative would be less than under the Project.

With regards to alternative transportation facilities, the No Project Alternative would maintain the existing pedestrian and bike facilities adjacent to the Site. In the short-term, no bike or pedestrian facilities adjacent to the Site would be closed, which they would be under the Project. Although no pedestrian facilities currently exist along Magnolia Street adjacent to the Site, under the Project the City Parcel along Magnolia Street would be remediated and the right-of-way would be made available to the City to accommodate a future sidewalk facility and implement the design goals envisioned by the City's designation for this roadway segment as a Landscape Corridor. Therefore, even though short-term impacts would be greater under the Project, the inability to develop alternative transportation facilities under the No Project Alternative in the long-term results in this Alternative presenting greater impacts than the Project.

Consistency with City of Huntington Beach General Plan ~~Goals and Policies~~ Circulation Element

The City's General Plan contains goals, objectives, and policies that are relevant to traffic and are presented in the General Plan Circulation Element. The applicable policies require projects to mitigate off-site traffic impacts and reduce potential conflicts with pedestrians, bicycles, and vehicular traffic. As the No Project Alternative would not generate any new short-term traffic, it would avoid the Project's short-term, significant and unavoidable construction-related impacts regarding traffic, ~~(less than significant after mitigation),~~ as well as the Project's less than significant impacts regarding emergency access and alternative transportation facilities. Long-term traffic would be similar under the No Project Alternative and the Project, which would include negligible traffic impacts on the local circulation network. While the Project would enable new pedestrian facilities to occur adjacent to the Site, the avoidance of construction-related impacts under the No Project Alternative results in this Alternative being more consistent with the applicable policies than the Project.

Consistency with City of Fountain Valley General Plan Circulation Element

Alternative 1 would not generate any new short-term or long-term traffic and would not cause any traffic impacts to roadways in the City of Fountain Valley. Thus, the No Project Alternative would not conflict with any General Plan policies. The Project would generate traffic on Brookhurst Street in the City of Fountain Valley, but would not cause any significant traffic impacts to intersections along that route. The Project would also be consistent with policies of the Fountain Valley Circulation Element. However, because the No Project Alternative results in no new traffic effects, it would have less impact relative to traffic and circulation than under the Project.

Impact Summary

A comparative summary of the environmental impacts associated with the No Project Alternative with the environmental impacts anticipated under the Project is provided in Table ~~5-20~~ R5-22 at the end of this Recirculated Draft EIR section.

Relationship of the No Project Alternative to the Project Objectives

The following provides a description of the No Project Alternative's ability to meet the Project's objectives. As discussed below, the No Project Alternative would substantially fail to meet the objectives of the Project.

- Objective #1 - *To reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste:* The No Project Alternative would not result in Site remediation and, thus, would not reduce the potential for long-term risks to property and the environment. Thus, the No Project Alternative would not meet this objective.

- Objective #2 - *To reduce the potential for short-term risks (during implementation activities) to life, property and the environment (inclusive of nearby residences, schools, parks, businesses, and on-site workers) from contaminated materials and waste through proper handling, treatment and disposal*: Because no remediation action would take place, the No Project Alternative would not involve short-term risks associated with the excavation, handling and disposal of materials and waste. Thus, the No Project Alternative would not meet this objective.

- Objective #3 - *To ensure that contaminated materials and waste are transported in a safe, efficient and coordinated manner to minimize risks to sensitive uses (such as nearby residences and schools):* Because no remediation would take place under the No Project Alternative, this Alternative would not involve transport of hazardous materials or waste. However, because this Alternative would not involve any remediation, it does not meet the objective related to minimizing risks to sensitive uses. Thus, the No Project Alternative would not meet this objective

- Objective #4 - *To reduce the potential for on-site contaminated materials to impact groundwater or migrate off-site*: The No Project Alternative would not result in Site remediation and, thus, would not reduce the potential for contamination of groundwater or migration off-site. Therefore, the No Project Alternative would not meet this objective.

- Objective #5 - *To remediate the site to enhance public health, safety and welfare and ultimately allow potential new uses of the site that will not endanger human health and the environment*: The No Project Alternative would not result in Site remediation and, thus, would not provide for potential new uses of the Site. Thus, the No Project Alternative would not meet this objective.

- Objective #6 - *To remediate the site in a timely, expedient, and cost effective manner:* The No Project Alternative would not remediate the Site and, therefore, would not meet this objective.

Alternative 2 – Source Removal with Off-Site Disposal

Environmental Impact Categories

Noise

Noise Levels in Excess of Standards

Short-Term Impacts

Activities associated with implementation of Alternative 2 would temporarily increase the existing ambient noise levels above perceptible levels in close proximity of the Site. Certain phases of the Project would have construction equipment concentrated at locations closer to sensitive receptors. Excavation of the City Parcel during the Project would concentrate equipment at the Project boundary in the north-east corner, closest to Edison High School, the fire station, and residential receptors (Receptor R1, see Figure R4.9-1, *Noise Measurement Locations and Existing Noise Sensitive Uses*, in Section R4.9, *Noise*, of this Recirculated EIR). Alternative 2 would also require excavation of the City Parcel (Phase 4), but this would occur during phases where equipment would be spread out over a larger area. Similar to the Project, short-term construction-related noise levels during Alternative 2 as part of Phase 4, remediation of the City Parcel (the highest noise-generating phase), would result in the highest noise levels at the nearest noise sensitive receptor location, R1.

Construction related noise levels for Alternative 2 would be similar to the Project during various phases of construction. Similar to the Project, the short-term noise level experienced at the off-site sensitive land uses would be below the 80 dBA threshold established by the Federal Transit Administration (FTA) for construction-related noise impacts. Furthermore, during implementation of Alternative 2, activities would be temporary in nature and would be required to comply with the City's allowable hours. Thus, short-term construction equipment noise impacts would be less than significant under this Alternative.

Under Alternative 2, the maximum daily haul truck trips would be the same as the Project.

With the Community Noise Equivalent Level (CNEL), the maximum increase in Project-related traffic noise levels over existing traffic noise levels would be 0.8 dBA, which would occur along Newland Street, between Pacific Coast Highway and Hamilton Avenue; and along Newland Street, between PCH and Hamilton Avenue. With the equivalent sound level (L_{eq}), the maximum noise increase in Project-related traffic noise levels over existing traffic noise levels would be 0.9 dBA, CNEL, which would occur along Newland Street, between Pacific Coast Highway and Hamilton Avenue for Existing; and 0.8 dBA, CNEL along Newland Street, between PCH and Hamilton Avenue for Operation Year. All other roadway segments are predicted to experience traffic-related noise increases below these maxima. As these increases fall well below the more conservative 3-dBA CNEL significance threshold, roadway noise level increases would be less than significant, similar to the Project. ~~Similar to the Project, noise from truck trips would range from 62 dBA along Beach Boulevard to 64 dBA along Newland Street and Pacific Coast Highway. Based on the measured existing traffic noise level of 62 dBA along Pacific Coast Highway and 64 dBA along Newland Street, noise levels generated by haul truck trips would not result in a noticeable increase in off-site noise levels along the haul routes.[6]~~

Because temporary construction-related noise is exempt from the City's noise ordinance requirements, the levels projected to be experienced by off-site sensitive land uses due to on-site noise sources are below the FTA's recommended noise levels, and the change in noise levels along the haul routes from haul trucks would be below perceptible thresholds, implementation of Alternative 2 would result in less than significant short-term noise impacts. In addition, requirements set forth in the Project Design Features in Section R4.9, *Noise*, of this Recirculated EIR would further reduce construction noise impacts. All of these facts and considerations apply equally to the Project. Construction noise analysis would be evaluated based on daily construction activities. Thus, short-term noise impacts under both Alternative 2 and the Project would be less than significant. However, because construction activities would occur over a longer period of time (approximately 3 years) under Alternative 2 than under the Project (approximately one year), the less than significant impact would be relatively greater under Alternative 2.

Groundborne Vibration and Noise

Short-Term Impacts

Similar to the Project, Alternative 2 would result in ground vibration levels up to 0.01 inches per second PPV at the nearest residential uses (Receptor R1, see Figure R4.9-1, *Noise Measurement Locations and Existing Noise Sensitive Uses*, in Section R4.9, *Noise*, of this Recirculated EIR). Because this value is well below the 0.5 inches per second PPV significance threshold (potential building damage for older residential building), vibration impacts associated with Alternative 2 would be less than significant at the nearest residential building. As discussed in Section R4.9, *Noise*, of this Recirculated EIR, short-term groundborne vibration impacts are also less than significant at the nearest residential building under the Project.

In addition, the vibration velocity of 0.01 inches per second PPV would not exceed the 0.02 inches per second PPV significance threshold for potential human annoyance under either the Project or Alternative 2. Therefore, vibration impacts associated with implementation of both alternatives considered here would be similar and less than significant at the nearest single-family residential uses, R1.

~~[6] *U.S. Department of Transportation, Federal Highway Administration,* Highway Traffic Noise: Analysis and Abatement Guidance, *(2011).*~~

Substantial Temporary or Periodic Increase Above Existing Noise Levels

As stated above, the on-site construction activities proposed under Alternative 2 would result in increases in temporary and periodic noise above existing levels at nearby off-site sensitive land uses. Hauling activities are not expected to produce noise above existing ambient noise levels along the haul routes. The means by which temporary and periodic noise above existing levels would be generated under both Alternative 2 and the Project are the same. As such, the levels of these kinds of noise would also be similar. Thus, impacts under Alternative 2 and the Project are similar; however, because these impacts, even though minor, would persist for a longer period under Alternative 2, the impacts are greater under this alternative than under the Project. Nevertheless, as the temporary and periodic noise increases would not exceed thresholds under either Alternative 2 or the Project, they would be less than significant under both alternatives.

Consistency with City of Huntington Beach ~~General Plan Goals and Policies~~ and City of Fountain Valley Plans and Policies

~~The City's General Plan Noise Element contains goals, objectives, and policies that are relevant to noise. As discussed in this paragraph, Alternative 2 would be consistent with the applicable goals and policies of the City of Huntington Beach General Plan pertaining to noise impacts.~~

Under Alternative 2, short-term construction activities would take place throughout the Site, and equipment would generally be dispersed at various locations rather than concentrated in a single area. Similar to the Project, the short-term noise levels experienced at the off-site sensitive land uses would be below the 80 dBA threshold established by the FTA for construction-related noise impacts. Alternative 2 would result in generally the same number of haul truck trips per day as the Project, although the number of days with haul truck trips would increase considerably. Nonetheless, noise levels generated by haul truck trips would not result in a noticeable increase in off-site noise levels along the haul routes, and vibration levels would remain less than significant under Alternative 2, as they would under the Project. Completion of Alternative 2 would not include the installation of long-term noise-generating mechanical equipment. Noise associated with long-term maintenance trips and long-term O&M activities on-site would be minimal and similar under both Alternative 2, and the Project. As future development of the Site, if any, is not considered at this time for either Alternative 2 or the Project, it would be speculative and inappropriate to assess potential noise from any future uses that are not known or contemplated. Overall, this Alternative would be consistent with the applicable noise-related policies to a ~~greater~~ similar degree ~~than~~ as the Project. Given the above, both Alternative 2 and the Project are consistent with ~~the~~ each City's ~~of Huntington Beach~~ General Plan noise-related goals and policies ~~as stated in the Noise Element~~, and, therefore, impacts under both Alternative 2 and the Project would be less than significant.

Traffic/Circulation

Traffic Impacts

Short-Term Impacts

The Alternative would utilize the same haul routes as the Project, and the maximum daily trip generation for this Alternative would be the same as for the Project. The traffic analysis conducted for the Project evaluated traffic conditions for the "Existing Plus Project" and "Year ~~2015~~ 2017 Plus Project" traffic conditions to evaluate the traffic impacts from the Project. As discussed in Section R4.10, *Traffic and Circulation*, of this Recirculated EIR, mitigation measures were prescribed for the Project to reduce the potentially significant

intersection impacts (at ~~5~~ 2 intersections) to a less than significant level under the Existing Plus Project scenario (refer to Mitigation Measure~~s~~ RTRAF-1~~ to TRAF-5~~). Under the Year 2017 Plus Project Scenario, seven (7) intersections would be significantly impacted by the Project. Mitigation Measure RTRAF-1 would reduce impacts to a less than significant level at two (2) of the intersections, with five remaining with significant and unavoidable intersection impacts. ~~Under Alternative 2, t~~The same maximum daily traffic and intersection impacts would occur during ~~2015~~ the Existing Plus Alternative 2 scenario and 2017 Plus Alternative 2 scenarios when compared to the comparable Project scenarios. ~~to the same intersections as for the Project.~~ As with the Project, the intersection impacts at two intersections would be reduced to a less than significant level through implementation of Mitigation Measures RTRAF-1 under the Existing Plus Alternative 2 scenario, while five intersections would remain significantly impacted under the 2017 Plus Alternative 2 scenario. ~~TRAF(Alt. 2)-1 to TRAF(Alt.2)-5.~~ Therefore, traffic impacts during ~~2015~~ the "Existing" and "2017" Plus Alternative 2 scenarios would be similar to the "Existing" and "2017" Plus Project scenarios. ~~traffic conditions under Alternative 2 and the Project would be similar. It is noted that the traffic analysis for the Project included an evaluation of the Existing plus Project traffic conditions. The "Existing Plus Alternative 2" traffic conditions would be the same as the Project.~~

~~As Alternative 2 would include construction activities over a three-year time period, from 2015 to 2017 and an additional traffic analysis was prepared for this Alternative to evaluate the worse-case traffic conditions, which would occur in 2017 as a result of ambient growth and development of cumulative projects. A one percent (1 percent) ambient growth per year, over the four-year period between the Existing Year and Operating Year 2017 2020 was applied to the existing conditions volumes, indicates Cumulative projects within a one-mile radius of the Site, which were anticipated to be complete by 2017 were provided by City of Huntington Beach staff. (Operating year assumptions as well as estimated trip generation volumes are provided in Appendix D of the Traffic Study/Appendix G of this EIR).) Based on this information, there are several related projects which may be under construction or operating in 2017 that would not be operational in 2015. It is expected therefore, that ambient background traffic would be greater in 2017 than in 2015 (the construction period for the Project).~~

~~Trips were assigned to the roadway networks in a similar manner as the Project. **Table 5-13**, *Intersection Service Levels Project Operating Year (2017) Base Conditions*, provides a summary of forecasted conditions without Alternative 2.~~

~~**Table 5-13**~~

~~**Intersection Service Levels – Operating Year (2017) Base Conditions**~~

			~~A.M. Peak~~		~~P.M. Peak~~	
	~~Intersection~~	~~Control~~	~~Delay or V/C~~	~~LOS~~	~~Delay or V/C~~	~~LOS~~
~~1.~~	~~Beach Boulevard at Center Avenue[a]~~	~~Signal~~	~~20.3~~	~~C~~	~~34.9~~	~~C~~
~~2.~~	~~Beach Boulevard at Edinger Avenue[a]~~	~~Signal~~	~~42.4~~	~~D~~	~~60.1~~	~~E~~
~~3.~~	~~Beach Boulevard at Warner Avenue[a]~~	~~Signal~~	~~38.8~~	~~D~~	~~44.4~~	~~D~~
~~4.~~	~~Beach Boulevard at Talbert Avenue[a]~~	~~Signal~~	~~31.9~~	~~C~~	~~86~~	~~F~~
~~5.~~	~~Beach Boulevard at Main Street/Ellis Avenue[a]~~	~~Signal~~	~~36.6~~	~~D~~	~~69.8~~	~~E~~
~~6.~~	~~Beach Boulevard at Garfield Avenue[a]~~	~~Signal~~	~~49.5~~	~~D~~	~~98.2~~	~~F~~
~~7.~~	~~Beach Boulevard at Adams Avenue[a]~~	~~Signal~~	~~37.4~~	~~D~~	~~54.1~~	~~D~~
~~8.~~	~~Beach Boulevard at Atlanta Avenue[a]~~	~~Signal~~	~~34.2~~	~~C~~	~~68.3~~	~~E~~
~~9.~~	~~Beach Boulevard at Pacific Coast Highway[a]~~	~~Signal~~	~~41.4~~	~~D~~	~~85.4~~	~~F~~
~~10.~~	~~Newland Street at Atlanta Avenue[b]~~	~~Signal~~	~~0.452~~	~~A~~	~~0.514~~	~~A~~

~~11. Newland Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.494~~	~~A~~	~~0.626~~	~~B~~
~~12. Newland Street at Pacific Coast Highway[a]~~	~~Signal~~	~~25.3~~	~~C~~	~~49.3~~	~~D~~
~~13. Magnolia Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.51~~	~~A~~	~~0.579~~	~~A~~
~~14. Magnolia Street at Pacific Coast Highway[b]~~	~~Signal~~	~~17~~	~~B~~	~~20.3~~	~~C~~
~~15. Brookhurst Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.7~~	~~C~~	~~0.644~~	~~B~~
~~16. Brookhurst Street at Pacific Coast Highway[a]~~	~~Signal~~	~~26.9~~	~~C~~	~~46.7~~	~~D~~

~~[a] *Intersection is within Caltrans jurisdiction and evaluated according to HCM 2000 methodology. Average delay is reported for signalized intersections.*~~

~~[b] *Intersection is within Huntington Beach jurisdiction and evaluated according to ICU methodology. V/C ratio is reported for signalized intersections.*~~

~~*Note*~~

~~*Cells highlighted in gray represent intersections that are operating below acceptable thresholds.*~~

~~*Source: Fehr & Peers, 2013*~~

~~As shown in Table 5-13, all of the study intersections would operate acceptably at LOS D or better during the peak hours under 2017 base conditions, with the exception of the following six intersections:~~

- ~~Beach Boulevard at Edinger Avenue – P.M. peak hour (LOS E)~~
- ~~Beach Boulevard at Talbert Avenue – P.M. peak hour (LOS F)~~
- ~~Beach Boulevard at Main Street/Ellis Avenue – P.M. peak hour (LOS E)~~
- ~~Beach Boulevard at Garfield Avenue – P.M. peak hour (LOS F)~~
- ~~Beach Boulevard at Atlanta Avenue - P.M. peak hour (LOS E)~~
- ~~Beach Boulevard at Pacific Coast Highway - P.M. peak hour (LOS F)~~

~~In order to determine the level of change caused by Alternative 2, traffic volumes for Alternative 2 were added to the Operating Year (2017) base conditions. The result of adding Alternative 2 traffic to 2017 base conditions is presented in **Table 5-14**, *Intersection Service Levels –Operating Year (2017) Plus Alternative 2 Conditions*. Figure 9-1 in the Traffic Study also illustrates the intersection volumes during this traffic scenario.~~

~~Table 5-14~~

~~Intersection Service Levels –Operating Year (2017) Plus Alternative 2 Conditions~~

		~~A.M. Peak~~		~~P.M. Peak~~	
~~Intersection~~	~~Control~~	~~Delay or V/C~~	~~LOS~~	~~Delay or V/C~~	~~LOS~~
~~1. Beach Boulevard at Center Avenue[a]~~	~~Signal~~	~~28.3~~	~~C~~	~~38.5~~	~~D~~
~~2. Beach Boulevard at Edinger Avenue[a]~~	~~Signal~~	~~44.0~~	~~D~~	~~60.3~~	~~E~~
~~3. Beach Boulevard at Warner Avenue[a]~~	~~Signal~~	~~39.3~~	~~D~~	~~50.9~~	~~D~~
~~4. Beach Boulevard at Talbert Avenue[a]~~	~~Signal~~	~~31.8~~	~~C~~	~~96.6~~	~~F~~
~~5. Beach Boulevard at Main Street/Ellis Avenue[a]~~	~~Signal~~	~~36.7~~	~~D~~	~~81.8~~	~~F~~
~~6. Beach Boulevard at Garfield Avenue[a]~~	~~Signal~~	~~58.3~~	~~E~~	~~115.3~~	~~F~~

~~7. Beach Boulevard at Adams Avenue[a]~~	~~Signal~~	~~38.0~~	~~D~~	~~59.5~~	~~E~~
~~8. Beach Boulevard at Atlanta Avenue[a]~~	~~Signal~~	~~36.1~~	~~D~~	~~70.3~~	~~E~~
~~9. Beach Boulevard at Pacific Coast Highway[a]~~	~~Signal~~	~~66.9~~	~~E~~	~~95.0~~	~~F~~
~~10. Newland Street at Atlanta Avenue[b]~~	~~Signal~~	~~0.455~~	~~A~~	~~0.543~~	~~A~~
~~11. Newland Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.593~~	~~A~~	~~0.710~~	~~B~~
~~12. Newland Street at Pacific Coast Highway[a]~~	~~Signal~~	~~33.6~~	~~C~~	~~69.3~~	~~E~~
~~13. Magnolia Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.510~~	~~A~~	~~0.579~~	~~A~~
~~14. Magnolia Street at Pacific Coast Highway[a]~~	~~Signal~~	~~18.1~~	~~B~~	~~20.9~~	~~C~~
~~15. Brookhurst Street at Hamilton Avenue[b]~~	~~Signal~~	~~0.700~~	~~C~~	~~0.644~~	~~B~~
~~16. Brookhurst Street at Pacific Coast Highway[a]~~	~~Signal~~	~~27.0~~	~~C~~	~~46.7~~	~~D~~

~~[a] *Intersection is within Caltrans jurisdiction and evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.*~~
~~[b] *Intersection is within Huntington Beach jurisdiction and evaluated under ICU methodology. V/C ratio is reported for signalized intersections*~~
~~*Note*~~
~~*Cells highlighted in gray represent intersections that are operating below acceptable thresholds.*~~

~~*Source: Fehr & Peers, 2013*~~

~~The changes in delay and LOS at intersections that operate at LOS E between the 2017 Operating Conditions and the Alternative 2 conditions in 2017 are presented in **Table 5-15**, *Comparison of Intersection Service Levels – 2017 Base Conditions and Alternative 2*. The information provided in Table 5-15 illustrates the net change in traffic conditions and identifies the potential traffic impacts associated with Alternative 2.~~

~~**Table 5-15**~~

~~**Comparison of Intersection Service Levels**~~
~~**2017 Base Conditions and Alternative 2**~~

~~Intersection~~	~~Control~~	~~Peak~~	~~Operating Conditions Delay~~	~~Operating Conditions LOS~~	~~With Alt. 2 Delay~~	~~With Alt. 2 LOS~~	~~Δ Delay~~
~~2. Beach Boulevard at Edinger Avenue~~	~~Signal~~	~~A.M.~~	~~42.4~~	~~D~~	~~44~~	~~D~~	~~-~~
		~~P.M.~~	~~***60.1***~~	~~***E***~~	~~***60.3***~~	~~***E***~~	~~***0.2***~~
~~4. Beach Boulevard at Talbert Avenue~~	~~Signal~~	~~A.M.~~	~~31.9~~	~~C~~	~~31.8~~	~~C~~	~~-~~
		~~P.M.~~	~~***86***~~	~~***F***~~	~~***96.6***~~	~~***F***~~	~~***10.6***~~
~~5. Beach Boulevard at Main Street/Ellis Avenue~~	~~Signal~~	~~A.M.~~	~~36.6~~	~~D~~	~~36.7~~	~~D~~	~~-~~
		~~P.M.~~	~~***69.8***~~	~~***E***~~	~~***81.8***~~	~~***F***~~	~~***12.0***~~
~~6. Beach Boulevard at Garfield Avenue~~	~~Signal~~	~~A.M.~~	~~49.5~~	~~D~~	~~58.3~~	~~D~~	~~-~~
		~~P.M.~~	~~***98.2***~~	~~***F***~~	~~***115.3***~~	~~***F***~~	~~***17.1***~~
~~7. Beach Boulevard at Adams Avenue~~	~~Signal~~	~~A.M.~~	~~37.4~~	~~D~~	~~38~~	~~D~~	~~-~~
		~~P.M.~~	~~54.1~~	~~D~~	~~***59.5***~~	~~***E***~~	~~***5.4***~~
~~8. Beach Boulevard at Atlanta Avenue~~	~~Signal~~	~~A.M.~~	~~34.2~~	~~C~~	~~36.1~~	~~D~~	~~-~~
		~~P.M.~~	~~***68.3***~~	~~***E***~~	~~***70.3***~~	~~***E***~~	~~***2.0***~~
~~9. Beach Boulevard at Pacific Coast Highway~~	~~Signal~~	~~A.M.~~	~~41.4~~	~~D~~	~~***66.9***~~	~~***E***~~	~~***25.5***~~
		~~P.M.~~	~~***85.4***~~	~~***F***~~	~~***95***~~	~~***F***~~	~~***9.6***~~
~~12. Newland Street at Pacific Coast Highway~~	~~Signal~~	~~A.M.~~	~~25.3~~	~~C~~	~~33.6~~	~~C~~	~~-~~
		~~P.M.~~	~~49.3~~	~~D~~	~~***69.3***~~	~~***E***~~	~~***20.0***~~

~~*Notes*~~
~~*1. Delay is measured in seconds. Calculated using Synchro 8 software package.*~~
~~**2.** Bold italicized *and gray highlight type indicates significant impact.*~~

~~*Source: Fehr & Peers, 2013.*~~

~~Based on Table 5-14, the following eight intersections would be significantly impacted under the Operating Year (2017) conditions with implementation of Alternative 2. These intersections would all exceed Threshold #3 (intersections within Caltrans jurisdiction), described in Section 4.10, *Traffic and Circulation*, of this EIR. Under Threshold #3, a significant impact would occur if a project would cause an intersection at LOS D to degrade to LOS E or F or, if the intersection were forecasted to operate at LOS E or worse without Project traffic, the Project would cause the average delay to increase.~~

- ~~Beach Boulevard at Edinger Avenue – P.M. peak hour (LOS F)~~
- ~~Beach Boulevard at Talbert Avenue - P.M. peak hour (LOS F)~~
- ~~Beach Boulevard at Main Street/Ellis Avenue - P.M. peak hour (LOS F)~~
- ~~Beach Boulevard at Garfield Avenue – P.M. peak hours (LOS F)~~
- ~~Beach Boulevard at Adams Avenue - P.M. peak hour (LOS E)~~
- ~~Beach Boulevard at Atlanta Avenue – P.M. peak hour (LOS E)~~
- ~~Beach Boulevard at Pacific Coast Highway – A.M. peak hour (LOS E) and P.M. peak hour (LOS F)~~
- ~~Newland Street at Pacific Coast Highway - P.M. peak hour (LOS E)~~

~~Alternative 2 would be required to mitigate impacts to the eight study intersections. Mitigation measures, described below, consist of signal timing optimization to reduce delay times at the impacted intersections. **Table 5-16**, *Intersection Level of Service: 2017 Operating Year Plus Alternative 2 – After Mitigation*, shows the intersection delays after implementation of the prescribed mitigation measures. As shown therein, the prescribed mitigation measures would reduce delay times at all impacted intersections. The affected intersections are within Caltrans jurisdiction and the mitigation measures would require Caltrans approval. Caltrans would be responsible for updating the traffic signal timings to provide additional capacity as Caltrans sees fit. With the implementation of the mitigation measures to optimize signal timing, Alternative 2 would result in a less than significant impact to all of the affected intersections under 2017 Operating Conditions.~~

~~**Table 5-16**~~

~~**Intersection Level Of Service: 2017 Operating Year Plus Alternative 2 – After Mitigation**~~

~~Intersection~~	~~Control~~	~~Peak~~	~~With Alt 2 Delay~~	~~With Alt 2 LOS~~	~~After Mitigation Delay~~	~~After Mitigation LOS~~
~~Beach Boulevard at Edinger Avenue~~	~~Signal~~	~~A.M.~~	~~44.0~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***60.3***~~	~~***E***~~	~~54.8~~	~~D~~
~~Beach Boulevard at Talbert~~	~~Signal~~	~~A.M.~~	~~31.8~~	~~C~~	~~N/A~~	~~N/A~~

~~Avenue~~		~~P.M.~~	~~***96.6***~~	~~***F***~~	~~76.6~~	~~E~~
~~Beach Boulevard at Main Street/Ellis Avenue~~	~~Signal~~	~~A.M.~~	~~36.7~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***81.8***~~	~~***F***~~	~~62.3~~	~~E~~
~~Beach Boulevard at Garfield Avenue~~	~~Signal~~	~~A.M.~~	~~***58.3***~~	~~***E***~~	~~49.3~~	~~D~~
		~~P.M.~~	~~***115.3***~~	~~***F***~~	~~84.6~~	~~F~~
~~Beach Boulevard at Adams Avenue~~	~~Signal~~	~~A.M.~~	~~38.0~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***59.5***~~	~~***E***~~	~~53.7~~	~~D~~
~~Beach Boulevard at Atlanta Avenue~~	~~Signal~~	~~A.M.~~	~~36.1~~	~~D~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***70.3***~~	~~***E***~~	~~58.7~~	~~E~~
~~Beach Boulevard at Pacific Coast Highway~~	~~Signal~~	~~A.M.~~	~~***66.9***~~	~~***E***~~	~~37.3~~	~~C~~
		~~P.M.~~	~~***95.0***~~	~~***F***~~	~~78.2~~	~~E~~
~~Newland Street at Pacific Coast Highway~~	~~Signal~~	~~A.M.~~	~~33.6~~	~~C~~	~~N/A~~	~~N/A~~
		~~P.M.~~	~~***69.3***~~	~~***E***~~	~~38.1~~	~~D~~

~~*Notes*~~
~~*1. Bold and gray highlight indicates deficient location*~~
~~*2. N/A indicates no mitigation required*~~

~~*Source: Fehr & Peers, 2013*~~

~~Impact Due to Lane Closure on Hamilton Avenue~~

~~During construction remediation activities at the Site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to include a shared left-turn/through/right-turn lane. **Table 5-17**, *Intersection LOS Comparison – Existing Plus Alternative 2 (2017) Conditions: Hamilton Lane Closure*, documents the ICU and LOS results with the implementation of this lane closure under 2017 (with Alternative 2) conditions. As shown in the table, the intersection would remain at LOS A with the implementation of the lane closure during both the A.M. and P.M. peak hours.~~

~~**Table 5-17**~~

~~**Intersection LOS Comparison – Existing Plus Alternative 2 (2017) Conditions: Hamilton Lane Closure**~~

	~~Without Lane Closure~~				~~With Lane Closure~~					
	~~AM Peak~~		~~PM Peak~~		~~AM Peak~~		~~PM Peak~~		~~Change in V/C~~	
~~Intersection~~	~~V/C~~	~~LOS~~	~~V/C~~	~~LOS~~	~~V/C~~	~~LOS~~	~~V/C~~	~~LOS~~	~~AM~~	~~PM~~
~~Magnolia St & Hamilton Ave~~	~~0.510~~	~~A~~	~~0.579~~	~~A~~	~~0.566~~	~~A~~	~~0.579~~	~~A~~	~~0.056~~	~~0.0~~

~~*Source: Fehr & Peers, 2013.*~~

~~**Conclusion**. As under the Project, impacts at all intersections resulting from Alternative 2 traffic or the lane closure on Hamilton Avenue would be less than significant or reduced to less than significant levels with~~

~~mitigation. However, because the effects of traffic would occur over a longer period of time (approximately 3.5 years under Alternative 2 compared to approximately one year under the Project), the less than significant traffic impacts are considered to be incrementally greater under Alternative 2 than under the Project.~~

~~Mitigation Measures~~

~~TRAF(Alt. 2)-1~~ ~~Beach Boulevard at Edinger Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with the Caltrans and the City of Huntington Beach Public Works to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to a delay of 54.8 seconds and LOS D, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~TRAF(Alt. 2)-2~~ ~~Beach Boulevard at Talbert Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with the Caltrans and the City of Huntington Beach Public Works to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to a delay of 76.6 seconds and LOS E, or as determined appropriate by Caltrans. This would be less than the delay of 86.0 seconds the intersection would experience under 2017 base (without Project) operating conditions. The Responsible Parties shall reimburse the City and/or Caltrans, as required by their appropriate fee programs, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~TRAF(Alt. 2)-3~~ ~~Beach Boulevard at Main Street/Ellis Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with the Caltrans and the City of Huntington Beach Public Works to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to a delay of 62.3 seconds and LOS E, or as determined appropriate by Caltrans. This would be less than the delay of 69.8 seconds the intersection would experience under 2017 base (without Project) operating conditions. The Responsible Parties shall reimburse the City and/or Caltrans, as required by its appropriate fee program, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~TRAF(Alt. 2)-4~~ ~~Beach Boulevard at Garfield Avenue – A.M. and P.M. Peak Hours. The Responsible Parties shall coordinate with the Caltrans and the City of Huntington Beach Public Works to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing at this intersection shall be optimized to improve A.M. operations to LOS D and delay of 49.3 seconds, or as determined~~

~~appropriate by Caltrans. During the P.M. peak hour, signal timing shall be optimized to improve operations to a delay of 84.6 seconds and LOS F, or as determined appropriate by Caltrans. This would be less than the delay of 98.2 seconds the intersection would experience under 2017 base (without Project) operating conditions. The Responsible Parties shall reimburse the City and/or Caltrans, as required by its appropriate fee program, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of construction activities.~~

~~**TRAF(Alt. 2)-5** Beach Boulevard at Adams Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with the City of Huntington Beach Public Works Department and/or Caltrans to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to a delay of 53.7 seconds and LOS D, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by its appropriate fee program, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~**TRAF(Alt. 2)-6** Beach Boulevard at Atlanta Avenue – P.M. Peak Hour. The Responsible Parties shall coordinate with the Caltrans and the City of Huntington Beach Public Works to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS E and delay of 58.7 seconds, or as determined appropriate by Caltrans. This would be less than the delay of 68.3 seconds the intersection would experience under 2017 base (without Project) operating conditions. The Responsible Parties shall reimburse the City and/or Caltrans, as required by its appropriate fee program, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~**TRAF(Alt. 2)-7** Beach Boulevard at Pacific Coast Highway – A.M. and P.M. Peak Hours. The Responsible Parties shall coordinate with the Caltrans and the City of Huntington Beach Public Works to update the traffic signal timings to provide additional capacity at this intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing shall be optimized to improve A.M. operations to a delay of 37.3 seconds and LOS C. During the P.M. peak hour, signal timing at this intersection shall be optimized to improve operations to LOS E and delay of 56.3 seconds, or as determined appropriate by Caltrans. This would be less than the delay of 85.4 seconds the intersection would experience under 2017 base (without Project) operating conditions. The Responsible Parties shall reimburse the City and/or Caltrans, as required by its appropriate fee program, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

~~**TRAF(Alt. 2)-8** Newland Street at Pacific Coast Highway – P.M. Peak Hour. The Responsible Parties shall coordinate with the Caltrans and the City of Huntington Beach Public Works to update the traffic signal timings to provide additional capacity at this~~

~~intersection consistent with the detailed Synchro reports provided in Appendix I of the Traffic Study. Signal timing at this intersection shall be optimized to improve P.M. operations to LOS D and delay of 38.1 seconds, or as determined appropriate by Caltrans. The Responsible Parties shall reimburse the City and/or Caltrans, as required by its appropriate fee program, for updating traffic signal timings per this mitigation measure. This mitigation measure is to be verified by DTSC, Unit Chief, Brownfields & Environmental Restoration prior to initiation of hauling activities.~~

While the Project's "operating" year has been analyzed under 2017 traffic conditions to provide a worst-case assessment of traffic conditions, the traffic analysis of Alternative 2 has been similarly conducted to address worst-case traffic conditions under a Year 2020 scenario. It is assumed that, because of annual increase in ambient traffic and potential build-out of related projects, base traffic conditions would be incrementally higher during 2020 than during 2017 and prior years. **Table R5-13**, *Intersection Level of Service: Alternative 2 Operating Year (2020) Base Conditions,* illustrates the base conditions at the study intersections in 2020. As shown in Table R5-13, all of the study intersections will operate acceptably at LOS D or better during the peak hours, with exception of the following eight locations:

Table R5-13

Intersection Level of Service: Alternative 2 Operating Year (2020) Base Conditions

			AM		Mid-Day		PM	
	Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
1.	Beach Blvd & McFadden Ave	Signal	**83**	**F**	37	D	**99**	**F**
2.	Beach Blvd & Center Ave	Signal	9	A	15	B	16	B
3.	Beach Blvd & Edinger Ave	Signal	**55**	**E**	**55**	**E**	**130**	**F**
4.	Beach Blvd & Stark Dr	Signal	9	A	14	B	17	B
5.	Beach Blvd & MacDonald Dr	Signal	16	B	17	B	16	B
6.	Beach Blvd & Heil Ave	Signal	42	D	36	D	**104**	**F**
7.	Beach Blvd & Terry Dr	Signal	6	A	10	B	13	B
8.	Beach Blvd & Warner Ave	Signal	**56**	**E**	36	D	**85**	**F**
9.	Beach Blvd & Slater Ave	Signal	46	D	38	D	**74**	**E**
10.	Beach Blvd & Newman Ave	Signal	5	A	7	A	13	B
11.	Beach Blvd & Talbert Ave	Signal	35	D	**67**	**E**	**76**	**E**
12.	Beach Blvd & Main St/Ellis Ave	Signal	37	D	32	C	40	D
13.	Beach Blvd & Garfield Ave	Signal	46	D	38	D	**60**	**E**
14.	Beach Blvd & Yorktown Ave	Signal	33	C	32	C	44	D
15.	Beach Blvd & Utica Ave	Signal	10	B	19	B	24	C
16.	Beach Blvd & Adams Ave	Signal	33	C	39	D	49	D
17.	Beach Blvd & Indianapolis Ave	Signal	24	C	19	B	16	B
18.	Beach Blvd & Atlanta Ave	Signal	40	D	37	D	**61**	**E**
19.	Beach Blvd & Pacific View Ave	Signal	10	B	10	B	13	B
20.	Beach Blvd & PCH (SR-1)	Signal	32	C	21	C	35	D

Table R5-13 (Continued)

Intersection Level of Service: Alternative 2 Operating Year (2020) Base Conditions

Intersection	Control	AM Delay or ICU	AM LOS	Mid-Day Delay or ICU	Mid-Day LOS	PM Delay or ICU	PM LOS
21. Newland St & Atlanta Ave	Signal	0.53	A	0.45	A	0.58	A
22. Newland St & Hamilton Ave	Signal	0.59	A	0.47	A	0.71	C
23. PCH (SR-1) & Newland St	Signal	15	B	11	B	13	B
24. Magnolia St & Hamilton Ave	Signal	0.56	A	0.42	A	0.62	B
25. PCH (SR-1) & Magnolia St	Signal	20	C	23	C	17	B
26. Brookhurst St & Hamilton Ave	Signal	0.74	C	0.42	A	0.67	B
27. PCH (SR-1) & Brookhurst St	Signal	22	C	21	C	42	D
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.86	D	0.67	B	0.82	D
31. Brookhurst St & Stonefield Dr	Signal	0.37	A	0.53	A	0.52	A
32. Brookhurst St & Quail Ave	Signal	0.43	A	0.64	B	0.62	B
33. Brookhurst St & Ellis Ave	Signal	0.73	C	0.62	B	0.75	C
34. Brookhurst St & Garfield Ave	Signal	0.56	A	0.63	B	0.65	B
35. Brookhurst St & Yorktown Ave	Signal	0.56	A	0.57	A	0.62	B
36. Brookhurst St & Adams Ave	Signal	0.79	C	0.56	A	0.81	D
37. Brookhurst St & Indianapolis Ave	Signal	0.27	A	0.32	A	0.36	A
38. Brookhurst St & Atlanta Ave	Signal	0.41	A	0.37	A	0.46	A
39. Brookhurst St & Banning Ave	Signal	0.26	A	0.19	A	0.23	A
40. Brookhurst St & Bushard St	Signal	0.32	A	0.23	A	0.29	A

Notes

1. *Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.*
2. *Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. volume-to-capacity (V/C) ratio is reported for signalized intersections.*
3. *Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).*

Source: Fehr & Peers, 2014

- 1. Beach Boulevard at McFadden Avenue- A.M. peak hour (LOS F) and P.M. peak hour (LOS F)
- 3. Beach Boulevard at Edinger Avenue- A.M. peak hour (LOS E), mid-day peak hour (LOS E) and P.M. peak hour (LOS F)
- 6. Beach Boulevard at Heil Avenue- P.M. peak hour (LOS F)
- 8. Beach Boulevard at Warner Avenue- A.M. peak hour (LOS E) and P.M. peak hour (LOS F)
- 9. Beach Boulevard at Slater Avenue- P.M. peak hour (LOS E)
- 11. Beach Boulevard at Talbert Avenue- mid-day peak hour (LOS E) and P.M. peak hour (LOS E)

- 13. Beach Boulevard at Garfield Avenue- P.M. peak hour (LOS E)
- 18. Beach Boulevard at Atlanta Avenue- P.M. peak hour (LOS E)

Table R5-14, *Intersection Level of Service: Project Operating Year (2020) Conditions for A.M. Peak Hour*, **Table R5-15,** *Intersection Level of Service: Project Operating Year (2020) Conditions for Mid-Day Peak Hour*, and **Table R5-16,** *Intersection Level of Service: Project Operating Year (2020) Conditions for P.M. Peak Hour*, illustrate the conditions that would occur with Alternative 2 and without Alternative 2 for the A.M., mid-day, and P.M. peak hours in 2020, respectively.

Table R5-14

Intersection Level of Service: Alternative 2 Operating Year (2020) Conditions for AM Peak Hour

		AM No Alt. 2		AM With Alt. 2	
Intersection	**Control**	**Delay or ICU**	**LOS**	**Delay or ICU**	**LOS**
1. Beach Blvd & McFadden Ave	Signal	**83**	**F**	**83**	**F**
2. Beach Blvd & Center Ave	Signal	9	A	10	B
3. Beach Blvd & Edinger Ave	Signal	**55**	**E**	**60**	**E**
4. Beach Blvd & Stark Dr	Signal	9	A	10	B
5. Beach Blvd & MacDonald Dr	Signal	16	B	16	B
6. Beach Blvd & Heil Ave	Signal	42	D	44	D
7. Beach Blvd & Terry Dr	Signal	6	A	6	A
8. Beach Blvd & Warner Ave	Signal	**56**	**E**	**60**	**E**
9. Beach Blvd & Slater Ave	Signal	46	D	49	D
10. Beach Blvd & Newman Ave	Signal	5	A	5	A
11. Beach Blvd & Talbert Ave	Signal	35	D	35	D
12. Beach Blvd & Main St/Ellis Ave	Signal	37	D	37	D
13. Beach Blvd & Garfield Ave	Signal	46	D	46	D
14. Beach Blvd & Yorktown Ave	Signal	33	C	32	C
15. Beach Blvd & Utica Ave	Signal	10	B	10	B
16. Beach Blvd & Adams Ave	Signal	33	C	33	C
17. Beach Blvd & Indianapolis Ave	Signal	24	C	24	C
18. Beach Blvd & Atlanta Ave	Signal	40	D	39	D
19. Beach Blvd & Pacific View Ave	Signal	10	B	9	A
20. Beach Blvd & PCH (SR-1)	Signal	32	C	42	D

Table R5-14 (Continued)

Intersection Level of Service: Alternative 2 Operating Year (2020) Conditions for AM Peak Hour

Intersection	Control	AM No Alt. 2		AM With Alt. 2	
		Delay or ICU	LOS	Delay or ICU	LOS
21. Newland St & Atlanta Ave	Signal	0.53	A	0.53	A
22. Newland St & Hamilton Ave	Signal	0.59	A	0.69	B
23. PCH (SR-1) & Newland St	Signal	15	B	16	B
24. Magnolia St & Hamilton Ave	Signal	0.56	A	0.56	A
25. PCH (SR-1) & Magnolia St	Signal	20	C	23	C
26. Brookhurst St & Hamilton Ave	Signal	0.74	C	0.74	C
27. PCH (SR-1) & Brookhurst St	Signal	22	C	24	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.86	D	0.86	D
31. Brookhurst St & Stonefield Dr	Signal	0.37	A	0.39	A
32. Brookhurst St & Quail Ave	Signal	0.43	A	0.44	A
33. Brookhurst St & Ellis Ave	Signal	0.73	C	0.74	C
34. Brookhurst St & Garfield Ave	Signal	0.56	A	0.57	A
35. Brookhurst St & Yorktown Ave	Signal	0.56	A	0.57	A
36. Brookhurst St & Adams Ave	Signal	0.79	C	0.81	D
37. Brookhurst St & Indianapolis Ave	Signal	0.27	A	0.28	A
38. Brookhurst St & Atlanta Ave	Signal	0.41	A	0.42	A
39. Brookhurst St & Banning Ave	Signal	0.26	A	0.28	A
40. Brookhurst St & Bushard St	Signal	0.32	A	0.33	A

Notes:
1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3 Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).

Source: Fehr & Peers, 2014

Table R5-15

Intersection Level of Service: Alternative 2 Operating Year (2020) Conditions for Mid-Day Peak Hour

Intersection	Control	Mid-Day No Alt. 2		Mid-Day With Alt. 2	
		Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	37	D	37	D
2. Beach Blvd & Center Ave	Signal	15	B	15	B
3. Beach Blvd & Edinger Ave	Signal	**55**	**E**	**62**	**E**
4. Beach Blvd & Stark Dr	Signal	14	B	14	B
5. Beach Blvd & MacDonald Dr	Signal	17	B	18	B
6. Beach Blvd & Heil Ave	Signal	36	D	38	D
7. Beach Blvd & Terry Dr	Signal	10	B	10	B
8. Beach Blvd & Warner Ave	Signal	36	D	36	D
9. Beach Blvd & Slater Ave	Signal	38	D	39	D
10. Beach Blvd & Newman Ave	Signal	7	A	7	A
11. Beach Blvd & Talbert Ave	Signal	**67**	**E**	**75**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	32	C	32	C
13. Beach Blvd & Garfield Ave	Signal	38	D	38	D
14. Beach Blvd & Yorktown Ave	Signal	32	C	32	C
15. Beach Blvd & Utica Ave	Signal	19	B	19	B
16. Beach Blvd & Adams Ave	Signal	39	D	38	D
17. Beach Blvd & Indianapolis Ave	Signal	19	B	18	B
18. Beach Blvd & Atlanta Ave	Signal	37	D	37	D
19. Beach Blvd & Pacific View Ave	Signal	10	B	10	B
20. Beach Blvd & PCH (SR-1)	Signal	21	C	21	C
21. Newland St & Atlanta Ave	Signal	0.45	A	0.45	A
22. Newland St & Hamilton Ave	Signal	0.47	A	0.57	A
23. PCH (SR-1) & Newland St	Signal	11	B	11	B
24. Magnolia St & Hamilton Ave	Signal	0.42	A	0.42	A
25. PCH (SR-1) & Magnolia St	Signal	23	C	23	C
26. Brookhurst St & Hamilton Ave	Signal	0.42	A	0.44	A

Table R5-15 (Continued)

Intersection Level of Service: Alternative 2 Operating Year (2020) Conditions for Mid Day Peak Hour

Intersection	Control	Mid-Day No Alt. 2		Mid-Day With Alt. 2	
		Delay or ICU	LOS	Delay or ICU	LOS
27. PCH (SR-1) & Brookhurst St	Signal	21	C	25	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.67	B	0.67	B
31. Brookhurst St & Stonefield Dr	Signal	0.53	A	0.55	A
32. Brookhurst St & Quail Ave	Signal	0.64	B	0.65	B
33. Brookhurst St & Ellis Ave	Signal	0.62	B	0.63	B
34. Brookhurst St & Garfield Ave	Signal	0.63	B	0.64	B
35. Brookhurst St & Yorktown Ave	Signal	0.57	A	0.58	A
36. Brookhurst St & Adams Ave	Signal	0.56	A	0.57	A
37. Brookhurst St & Indianapolis Ave	Signal	0.32	A	0.33	A
38. Brookhurst St & Atlanta Ave	Signal	0.37	A	0.38	A
39. Brookhurst St & Banning Ave	Signal	0.19	A	0.21	A
40. Brookhurst St & Bushard St	Signal	0.23	A	0.24	A

Notes:

1. *Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.*
2. *Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.*
3. *Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).*

Source: Fehr & Peers, 2014

Table R5-16

Intersection Level of Service: Project Operating Year (2020) Conditions for PM Peak Hour

Intersection	Control	PM No Project Delay or ICU	PM No Project LOS	PM With Project Delay or ICU	PM With Project LOS
1. Beach Blvd & McFadden Ave	Signal	**99**	**F**	**99**	**F**
2. Beach Blvd & Center Ave	Signal	16	B	17	B
3. Beach Blvd & Edinger Ave	Signal	**130**	**F**	**138**	**F**
4. Beach Blvd & Stark Dr	Signal	17	B	17	B
5. Beach Blvd & MacDonald Dr	Signal	16	B	17	B
6. Beach Blvd & Heil Ave	Signal	**104**	**F**	**112**	**F**
7. Beach Blvd & Terry Dr	Signal	13	B	13	B
8. Beach Blvd & Warner Ave	Signal	**85**	**F**	**89**	**F**
9. Beach Blvd & Slater Ave	Signal	**74**	**E**	**81**	**F**
10. Beach Blvd & Newman Ave	Signal	13	B	13	B
11. Beach Blvd & Talbert Ave	Signal	**76**	**E**	**83**	**F**
12. Beach Blvd & Main St/Ellis Ave	Signal	40	D	39	D
13. Beach Blvd & Garfield Ave	Signal	**60**	**E**	**68**	**E**
14. Beach Blvd & Yorktown Ave	Signal	44	D	46	D
15. Beach Blvd & Utica Ave	Signal	24	C	24	C
16. Beach Blvd & Adams Ave	Signal	49	D	50	D
17. Beach Blvd & Indianapolis Ave	Signal	16	B	16	B
18. Beach Blvd & Atlanta Ave	Signal	**61**	**E**	**62**	**E**
19. Beach Blvd & Pacific View Ave	Signal	13	B	12	B
20. Beach Blvd & PCH (SR-1)	Signal	35	D	46	D
21. Newland St & Atlanta Ave	Signal	0.58	A	0.59	A
22. Newland St & Hamilton Ave	Signal	0.71	C	**0.8**	**D**
23. PCH (SR-1) & Newland St	Signal	13	B	13	B
24. Magnolia St & Hamilton Ave	Signal	0.62	B	0.63	B
25. PCH (SR-1) & Magnolia St	Signal	17	B	19	B
26. Brookhurst St & Hamilton Ave	Signal	0.67	B	0.69	B

Table R5-16 (Continued)

Intersection Level of Service: Alternative 2 Operating Year (2020) Conditions for PM Peak Hour

Intersection	Control	PM No Project		PM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
27. PCH (SR-1) & Brookhurst St	Signal	42	D	**71**	**E**
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.82	D	0.84	D
31. Brookhurst St & Stonefield Dr	Signal	0.52	A	0.54	A
32. Brookhurst St & Quail Ave	Signal	0.62	B	0.63	B
33. Brookhurst St & Ellis Ave	Signal	0.75	C	0.77	C
34. Brookhurst St & Garfield Ave	Signal	0.65	B	0.67	B
35. Brookhurst St & Yorktown Ave	Signal	0.62	B	0.64	B
36. Brookhurst St & Adams Ave	Signal	0.81	D	0.82	D
37. Brookhurst St & Indianapolis Ave	Signal	0.36	A	0.37	A
38. Brookhurst St & Atlanta Ave	Signal	0.46	A	0.47	A
39. Brookhurst St & Banning Ave	Signal	0.23	A	0.24	A
40. Brookhurst St & Bushard St	Signal	0.29	A	0.3	A

Notes:
1. *Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.*
2. *Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.*
3 *Cells highlighted in grey represent intersections that are deficient (exceed acceptable thresholds).*

Source: Fehr & Peers, 2014

Based on information provided in Tables R5-14 through R5-16, **Table R5-17**, *Intersection Level of Service: Alternative 2 Operating Year (2020) Comparison,* illustrates the net changes in delay, V/C and LOS at intersections that operate at LOS E or F between the "Base" (or Without Project) and With Alternative 2 scenarios to determine the potentially significant traffic impacts associated with Alternative 2.

Table R5-17

Intersection Level of Service: Alternative 2 Operating Year (2020) Comparison

Intersection	Control	Peak	No Alt. 2 Delay or V/C	No Alt. 2 LOS	With Alt. 2 Delay or V/C	With Alt. 2 LOS	Δ Delay or V/C
1. Beach Blvd & McFadden Ave	Signal	AM	83	F	83	F	0
		MD	37	D	37	D	0
		PM	99	F	99	F	0
3. Beach Blvd & Edinger Ave	Signal	**AM**	**55**	**E**	**60**	**E**	**5**
		MD	**55**	**E**	**62**	**E**	**7**
		PM	**130**	**F**	**138**	**F**	**8**
6. Beach Blvd & Heil Ave	Signal	AM	42	D	44	D	2
		MD	36	D	38	D	2
		PM	**104**	**F**	**112**	**F**	**8**
8. Beach Blvd & Warner Ave	Signal	AM	**56**	**E**	**60**	**E**	**4**
		MD	36	D	36	D	0
		PM	**85**	**F**	**89**	**F**	**4**
9. Beach Blvd & Slater Ave	Signal	AM	46	D	49	D	3
		MD	38	D	39	D	1
		PM	**74**	**E**	**81**	**F**	**7**
11. Beach Blvd & Talbert Ave	Signal	AM	35	D	35	D	0
		MD	**67**	**E**	**75**	**E**	**8**
		PM	**76**	**E**	**83**	**F**	**7**
13. Beach Blvd & Garfield Ave	Signal	AM	46	D	46	D	0
		MD	38	D	38	D	0
		PM	**60**	**E**	**68**	**E**	**8**
18. Beach Blvd & Atlanta Ave	Signal	AM	40	D	39	D	-1
		MD	37	D	37	D	0
		PM	**61**	**E**	**62**	**E**	**1**
22. Newland Blvd & Hamilton Ave	Signal	AM	0.59	A	0.69	B	0.1
		MD	0.47	A	0.57	A	0.1
		PM	**0.71**	**C**	**0.8**	**D**	**0.09**
27. PCH & Brookhurst St	Signal	AM	22	C	24	C	2
		MD	21	C	25	C	4
		PM	**42**	**D**	**71**	**E**	**29**

Notes:

1. *Delay is measured in seconds. Calculated using Synchro 8 software package.*
2. *V/C ratios are calculated using Traffix 8.0 software package.*
3. *Cells highlighted in grey indicate potentially significant Project impact.*
4. *The intersection of Newland and Hamilton is classified as a "Secondary intersection per City of Huntington Beach. Level of Service standard is LOS "C."*

Source: Fehr & Peers, 2014

As shown in Table R5-17, the overall intersection delay would improve or remain the same at some locations in the "with Alternative" scenario because the Alternative would increase traffic at certain movements which have available capacity or "green time." For example, if volumes are increased at a coordinated through phase where actuated green time may be available, the intersection may operate more efficiently by utilizing the available capacity or "green time," allowing more vehicles to travel through the intersection. The added vehicles to the intersection in this case will actually experience less delay than the average of all vehicles already at the intersection. Since intersection delay is reported as a weighted average of all movements as provided for by the Highway Capacity Manual, this increase in traffic volume actually results in a reduction or no change of overall intersection delay.

However, as indicated in Table R5-17, potentially significant impacts would occur at the following nine intersections under 2020 conditions:

- 3. Beach Boulevard at Edinger Avenue - A.M. peak hour (LOS E), mid-day peak hour (LOS E) and P.M. peak hour (LOS F)
- 6. Beach Boulevard at Heil Avenue - P.M. peak hour (LOS F)
- 8. Beach Boulevard at Warner Avenue - A.M. peak hour (LOS E) and P.M. peak hour (LOS F)
- 9. Beach Boulevard at Slater Avenue - P.M. peak hour (LOS E)
- 11. Beach Boulevard at Talbert Avenue - mid-day peak hour (LOS E) and P.M. peak hour (LOS E)
- 13. Beach Boulevard at Garfield Avenue – P.M. peak hour (LOS E)
- 18. Beach Boulevard at Atlanta Avenue - P.M. peak hour (LOS E)
- 22. Newland Boulevard and Hamilton Avenue - P.M. peak hour (LOS D)
- 27. Pacific Coast Highway at Brookhurst Street - P.M. peak hour (LOS E)

Because impacts to nine intersections would be significant, Mitigation Measure RTRAF-1, as implemented under the Project, is prescribed to reduce the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) from 20 to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and from 25 to 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour). The implementation of mitigation would minimize traffic impacts to the extent feasible while still meeting the established Project Objectives. **Table R5-18**, *Mitigated Project Trip Generation Estimates*, illustrates total anticipated trips with implementation to address Alternative 2's impacts. As shown in Table R5-18, export and import truck trips would be reduced during the P.M. peak hour only.

Table R5-19, *Intersection Level of Service: 2020 Operating Year Alternative 2 – After Mitigation*, shows the intersection delays after implementation of the prescribed mitigation measure~~s~~. The effects of the prescribed mitigation on impacted intersections are summarized below:

Beach Boulevard at Edinger Avenue – A.M. peak hour, Mid-Day peak hour, and P.M. peak hour

- The A.M. peak hour and mid-day peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the P.M. peak hour only.

Table R5-18

Mitigated Project Trip Generation Estimates

Trip Type	PCE	Daily One-Way Trips	Daily Two-Way Trips	Max-Hourly one-Way Trips			A.M. Peak PCE			Mid-Day PCE			P.M. Peak PCE		
				AM	Mid Day	PM	In	Out	Total	In	Out	Total	In	Out	Total
Export Trucks[d]	3	100	600	20	20	10	60	60	120	60	60	120	30	30	60
Import Trucks	3	200	1,200	25	25	15	75	75	150	75	75	150	45	45	90
Supply Trucks	3	10	60	4	4	0	12	12	24	12	12	24	0	0	0
Employees	1	55	110	376	37	37	37	0	37	18	19	37	0	37	37
Visitors	1	15	40	10	10	10	10	0	10	***5***	***5***	**10**	0	10	10
Totals		380	2,010	96	96	72	194	147	341	170	171	341	75	122	197

Notes:

1 PCE = Passenger Car Equivalent.

2 Daily one-way trips do not account for PCE. The number of trips are representative of daily directional trips on a given roadway segment (i.e., northbound on Beach Blvd.)

3 Daily two-way trips do account for PCE. The number of trips represents the sum of the one-way daily trips along a given roadway segment in both directions (i.e., northbound plus southbound trips on Beach Blvd.)

4 The numbers of "Export Trucks" trips are representative of trucks utilizing Beach Blvd. regardless of trip purpose.

5 The numbers of "Import Trucks" trips are representative of haul trucks utilizing Brookhurst Street.

6 The number of employee and visitor trips assumes 50% of employees and visitors take a mid-day trip (i.e., lunch break). Also, 10 additional daily visitor trips are assumed to occur from the travel of visitors during off-peak periods for miscellaneous reasons (i.e., meetings, tours, etc.).

Fehr & Peers, 2014.

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 138 seconds (LOS F) to 134 seconds (LOS F).

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Heil Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 112 seconds (LOS F) to 108 seconds (LOS F).

Table R5-19

Intersection Level of Service: Operating Year (2020) After Mitigation

Intersection	Control	Peak	With Alt. 2 Delay or V/C	With Alt. 2 LOS	After Mitigation Delay or V/C	After Mitigation LOS
Beach Blvd & Edinger Ave	Signal	AM	**60**	**E**	**60**	**E**
		MD	**62**	**E**	**62**	**E**
		PM	**138**	**F**	**134**	**F**
Beach Blvd & Heil Ave	Signal	AM	44	D	44	D
		MD	38	D	38	D
		PM	**112**	**F**	**108**	**F**
Beach Blvd & Warner Ave	Signal	AM	**60**	**E**	**60**	**E**
		MD	36	D	36	D
		PM	**89**	**F**	**87**	**F**
Beach Blvd & Slater Ave	Signal	AM	49	D	49	D
		MD	39	D	39	D
		PM	**81**	**F**	**78**	**E**
Beach Blvd & Talbert Ave	Signal	AM	35	D	35	D
		MD	**75**	**E**	**75**	**E**
		PM	**83**	**F**	**80**	**F**
Beach Blvd & Garfield Ave	Signal	AM	46	D	46	D
		MD	38	D	38	D
		PM	**68**	**E**	**64**	**E**
Beach Blvd & Atlanta Ave	Signal	AM	39	D	39	D
		MD	37	D	37	D
		PM	**62**	**E**	**61**	**E**
Newland Blvd & Hamilton Ave[c]	Signal	AM	0.69	B	0.69	B
		MD	0.57	A	0.57	A
		PM	**0.8**	**D**	0.76	C
PCH & Brookhurst St	Signal	AM	24	C	24	C
		MD	25	C	25	C
		PM	**71**	**E**	**62**	**E**

Notes

1. *Bold and high-light indicate deficient location*
2. *N/A indicates no mitigation required*
3. *The Newland and Hamilton intersection is classified as "Secondary" intersection per City of Huntington Beach. Level of Service standard is LOS "C."*

Source: Fehr & Peers, 2014

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Warner Avenue – A.M. peak hour and P.M. peak hour

- The A.M. peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the PM peak hour only.

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 89 seconds (LOS F) to 87 seconds (LOS F).

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable.***

Beach Boulevard at Slater Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 81 seconds (LOS F) to 78 seconds (LOS E).

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Talbert Avenue – Mid-Day peak hour and P.M. peak hour

- The mid-day peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the P.M. peak hour only.

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 83 seconds (LOS F) to 80 seconds (LOS F).

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Garfield Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 68 seconds (LOS E) to 64 seconds (LOS E).

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Beach Boulevard at Atlanta Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 62 seconds (LOS E) to 61 seconds (LOS E).

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Newland Boulevard at Hamilton Avenue – P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the V/C at this intersection from 0.80 (LOS D) to 0.76 seconds (LOS C).

- The implementation of the mitigation measure would result in an acceptable level of service at this intersection. Thus, the impact would be ***Less Than Significant.***

Pacific Coast Highway at Brookhurst Street - P.M. peak hour

- The decrease in P.M. peak hour export trucks resulting from implementation of Mitigation Measure RTRAF-1 would improve the delay at this intersection from 71 seconds (LOS E) to 62 seconds (LOS E).

- Even with implementation of the mitigation measure, the intersection would not operate at an acceptable level of service. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the Project cannot guarantee such measures, this impact would be considered ***Significant and Unavoidable***.

Impact Due to Lane Closure on Hamilton Avenue

During construction activities at the Site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current

Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to include a shared left-turn/through/right-turn lane. Because any lane closure would occur during the early construction phase, the impacts would be the same as under the Project and likely occur in or prior to Operating Year 2017. As shown in **Table R5-20**, *Intersection Level of Service: Alternative 2 (2020) Operating Conditions – Hamilton Lane Closure,* the intersection would operate at LOS A with the implementation of the lane closure during the mid-day peak hour; and LOS B during the A.M. and P.M. peak hours. Therefore, impacts resulting from lane closure would be less than significant. Implementation of this potential lane reconfiguration would need to be approved by the City of Huntington Beach Public Works Department.

Table R5-20

LOS Comparison – Existing Plus Alternative 2 (2020) Conditions
Hamilton Lane Closure

	Without Lane Closure						With Lane Closure						Change in V/C		
	AM Peak		MD Peak		PM Peak		AM Peak		MD Peak		PM Peak				
Intersection	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS	AM	MD	PM
Magnolia St & Hamilton Ave	0.56	A	0.42	A	0.63	B	0.6	B	0.42	A	0.63	B	0.04	0	0

Source: Fehr & Peers,.2014

Conclusion. As shown in Table R5-19, impacts at eight intersections could not be reduced through the implementation of the prescribed mitigation measures and would remain significant and unavoidable, compared to five such intersections under the Project. This is because of the higher base traffic under Year 2020 base operating conditions, compared to Year 2017 base operating conditions, which would be the final year of construction remediation activities under the Project. Because the effects of traffic would occur over a longer period of time (approximately 3.5 years under Alternative 2 compared to approximately one year under the Project) and would result in a greater number of impacted intersections, short-term-traffic impacts are considered to be greater under Alternative 2 than under the Project.

Mitigation Measures

RTRAF-1 The Project shall limit the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour). This mitigation measure to be verified through monthly compliance reports submitted by the RPs to the DTSC, Unit Chief, Brownfields & Environmental Restoration.

CMP Intersections

Short-Term Impacts

Per the Orange County Congestion Management Plan (CMP), an intersection is considered to be significantly impacted when a project reduces the LOS or increases the ICU by more than 0.03 at a location that is forecasted to operate at LOS "E" or "F" (referred to "Intersection Threshold #3" in Section R4.10, *Traffic and Circulation*, of this Recirculated Draft EIR). The Orange County CMP identifies four intersections along Beach Boulevard between I-405 and Pacific Coast Highway as CMP intersections. These include: Beach Boulevard at Edinger Avenue; Beach Boulevard at Warner Avenue; Beach Boulevard at Adams Avenue; and Beach Boulevard at Pacific Coast Highway. Table ~~**5-18**~~ **R5-21,** *CMP Analysis: No Project and with Alternative 2 Comparison,* provides a summary of impacts at CMP intersections according to the ICU method during construction activities under Alternative 2. As with the Project, Alternative 2 traffic would not increase ICU by more than 0.03 at any of the study intersections and, as such, would not exceed the significance criterion. As with the Project, Alternative 2 would have a less than significant impact on the CMP intersections during short-term construction activities. However, because the effects of traffic would occur over a longer period of time (approximately three years under Alternative 2 compared to approximately one year under the Project), the less-than-significant traffic impacts under Alternative 2 are considered to be greater than the less than significant impacts that would occur under the Project (see, section R4.10, *Traffic*, of this Recirculated Draft EIR for a discussion of the impacts under the Project).

~~**Table 5-18**~~

~~**CMP Analysis: No Project and With Alternative 2 Comparison**~~[a]

~~**Intersection**~~	~~**Peak**~~	~~**2017 ICU**~~	~~**2017 + Alt. 2 ICU**~~	~~**Change**~~
~~2. Beach Boulevard at Edinger Avenue~~	~~AM~~	~~**0.945**~~	~~**0.968**~~	~~**0.023**~~
	~~PM~~	~~**1.020**~~	~~**1.046**~~	~~**0.026**~~
~~3. Beach Boulevard at Warner Avenue~~	~~AM~~	~~**0.924**~~	~~**0.947**~~	~~**0.023**~~
	~~PM~~	~~**1.032**~~	~~**1.052**~~	~~**0.020**~~
~~7. Beach Boulevard at Adams Avenue~~	~~AM~~	~~0.778~~	~~0.807~~	~~0.029~~
	~~PM~~	~~**0.911**~~	~~**0.937**~~	~~**0.026**~~
~~9. Beach Boulevard at Pacific Coast Highway~~	~~AM~~	~~0.799~~	~~0.840~~	~~0.041~~
	~~PM~~	~~**0.906**~~	~~**0.931**~~	~~**0.025**~~

~~[a] *The LOS E or F intersections are shown in bold and gray highlight.*~~

~~*Source: Fehr & Peers, 2013.*~~

Emergency Access

Short-Term Impacts

Construction activity would involve the movement of heavy trucks throughout the day that will ingress and egress the Site and travel along the designated routes to reach I-405 for a period of approximately 3.5 years. Similar to the Project, this Alternative would implement several design features that would limit the impacts of construction traffic on the adjacent roadways including:

Table R5-21

CMP Analysis: No Project and with Alternative 2 Comparison

		Operating Year (2020)				
		No Project		With Project		
Intersection	Peak	ICU	LOS	ICU	LOS	Change
	AM	0.81	D	0.83	D	0.02
3. Beach Blvd & Edinger Ave	MD	0.78	C	0.79	C	0.01
	PM	**1.02**	**F**	**1.03**	**F**	0.01
	AM	0.83	D	0.84	D	0.01
8. Beach Blvd & Warner Ave	MD	0.72	C	0.73	C	0.01
	PM	**0.94**	**E**	**0.95**	**E**	0.01
	AM	0.63	B	0.64	B	0.01
16. Beach Blvd & Adams Ave	MD	0.62	B	0.64	B	0.02
	PM	0.8	D	0.81	D	0.01
	AM	0.61	B	0.63	B	0.02
20. Beach Blvd & Pacific Coast Highway	MD	0.53	A	0.55	A	0.02
	PM	0.8	D	0.86	D	0.06

Note: Cells highlighted in grey represent intersections that are operating at LOS E or greater.

Source: Fehr & Peers, 2014

- A Construction Traffic Management Plan will be prepared, which would be reviewed and approved by the City of Huntington Beach and the City of Fountain Valley, as necessary, prior to any hauling activity occurring. The Construction Traffic Management Plan will require coordination with emergency providers regarding any lane closures or other construction effects that would impact emergency access (PDF 10-1).

- Flagmen would be located at each of the Site driveways on Hamilton Avenue and Magnolia Street during hauling activities to direct haul trucks into and out of the site, which would limit further conflicts with any vehicles on these roadways during construction activity (PDF 10-6).

- Barricades would be placed around the perimeter of the Site in areas where construction activities encroach upon the public streets to provide a buffer between the Project's construction activity and the adjacent street traffic on Hamilton Ave. and Magnolia St. (PDF 10-2).

As with the Project, under Alternative 2 the Site's ingress and egress driveways would be designed to meet City of Huntington Beach standards. All site access and circulation would be reviewed by the City of Huntington Beach Department of Public Works Road Division and the City of Huntington Beach Fire Department to ensure that the Site provides adequate emergency access. ~~Signal timing optimization would improve base conditions on affected intersections along the Project's haul route.~~ Alternative 2 would result in significant and unavoidable impacts at seven study intersections on Beach Boulevard and at the intersection of Pacific Coast Highway at Brookhurst Street. These impacts would be temporary, occurring only during the approximate 3.5 year construction phase. Also, because emergency vehicles have priority access, the ability to use warning sirens at all intersections, and alternative routing flexibility, Alternative 2's impacts on intersection capacity would not substantially diminish emergency access along the haul routes

The use of Brookhurst Street as a haul route for import trucks has the potential to impact emergency access at Orange Coast Memorial Hospital in the City of Fountain Valley. The hospital is located at the southwest corner of Brookhurst Street and Talbert Avenue, with primary emergency access being located at the intersection of Brookhurst Street and Stonefield Avenue. As shown in Tables R5-14 through R5-16, the intersection of Brookhurst Street and Talbert Avenue (intersection #30) would operate at LOS D during the A.M. peak hour, LOS B during the mid-day peak hour, and LOS D during the P.M. peak hour under Operating Year (2020) Plus Alternative 2 conditions. These are acceptable service levels that would not cause adverse impediment to emergency vehicles accessing the hospital vicinity. The hospital's emergency services driveway at the intersection of Brookhurst Street and Stonefield Avenue (intersection #31) would operate at LOS A during the A.M. peak hour, mid-day peak hour, and P.M. peak hour, under Operating Year (2020) Plus Alternative 2 conditions. This favorable service level (LOS A) indicates that no significant impediments to emergency access at Orange Coast Memorial Hospital would also occur as a result of Alternative 2's haul truck traffic on Brookhurst Street. Further, because emergency vehicles have priority access, the ability to use warning sirens at all intersections, Alternative 2 would not substantially diminish emergency access to the Hospital.

During construction of both Alternative 2 and the Project it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to include a shared left-turn/through/right-turn lane. As discussed in the traffic impact analysis above, the intersection would remain at LOS A with the implementation of the lane closure during ~~both~~ the A.M. and mid-day peak hours and would not exceed LOS B during the P.M. peak hour~~s~~. As such, the temporary lane closure would not result in a substantial adverse emergency access impact at this intersection and impacts under both Alternative 2 and the Project would be less than significant. As the lane closure would generally occur over a similar amount of time under Alternative 2 as under the Project, the less than significant impact would be similar under Alternative 2 and the Project.

Alternative Transportation Facilities

Short-Term Impacts

Similar to the Project, construction remediation activities on the Site under Alternative 2 would involve the travel of heavy duty trucks throughout the day, which has the potential to create conflicts as these vehicles enter the roadway travel lanes and travel along the designated routes to reach I-405. During the construction phase of the Project and Alternative 2, the bicycle lanes on the southbound side of Magnolia

Street and the eastbound side of Hamilton Avenue would be barricaded and unusable. Although bicyclists would not be prohibited from traveling along this street, the loss of the shoulder would not be conducive to comfortable riding. As such, most cyclists would have to divert trips to other roadway facilities. This is considered to be a potentially significant short-term impact under both the Project and Alternative 2. However, as under the Project, signage would be required under Alternative 2 as a design feature to direct eastbound bicyclists on Hamilton Avenue and southbound cyclists on Magnolia Street to alternative routes (detours), such as eastbound Atlanta Avenue and southbound Newland and Brookhurst Streets. As with the Project, design features would also prohibit left turns by haul trucks or trucks larger than four or fewer axle, single-trailer trucks from the Site unless assisted by flagmen and temporary traffic control signage and flagmen at both the ingress and egress points to the Site which serve as safety measures for bicyclists. In addition, a Construction Traffic Management/Haul Plan would be developed and implemented during construction for both alternatives. The Plan would identify all traffic control measures, signs, and delineators to be implemented by the construction contractor through the duration of construction activities. Further, given the proximity of the Site to Edison High School, as with the Project, a design feature would be implemented to provide on-going communication with school administration at Edison High School, providing sufficient notice to forewarn students and parents/guardians when existing, bicycle routes to the school may be impacted in order to ensure school traffic and pedestrian safety. A design feature would also be incorporated into Alternative 2 to prohibit haul trucks from hauling past the High School. The implementation design features would ensure that impacts regarding bicycle facility performance and safety would be less than significant under both the Project and Alternative 2.

With regard to pedestrian safety, Alternative 2 and the Project would utilize barricades to create a buffer between construction activities and the public street that would impact the paved walkway along Hamilton Avenue adjacent to the Site. This feature would prevent pedestrians from walking along the south side of Hamilton Avenue. This is considered to be a potentially significant short-term impact under the Project and Alternative 2. However, a project design feature would be implemented to direct pedestrians to travel exclusively along the north side of Hamilton Avenue and the east side of Magnolia Street. The north side of Hamilton Avenue has an off-street pedestrian path that is slightly set back from Hamilton Avenue and connects to Edison Community Park. The east side of Magnolia Street has a paved sidewalk. In addition, as with the Project, design features of Alternative 2 would provide safety for pedestrians as well as for bicyclists. No bus stops are located immediately adjacent to the Site along Hamilton Avenue or Magnolia Street. Thus, no bus stops or transit facilities would be directly impacted by construction activities and the impacts under Alternative 2 and the Project would be less than significant.

As discussed above, both the Project and Alternative 2 present less than significant impacts to alternative transportation during construction activities. However, because the effects on bike lanes and pedestrian access would occur over a longer period of time (approximately 3.5 years under Alternative 2 compared to approximately one year under the Project), Alternative 2 would have a relatively greater impact to bicycles and pedestrians than the Project.

Consistency with City of Huntington Beach General Plan ~~Goals and Policies~~ Circulation Element

The City of Huntington Beach General Plan Circulation Element contains goals, objectives, and policies that are applicable to traffic. ~~Both the Project and Alternative 2 would be consistent with policies to achieve the city's performance standards for acceptable levels of service after implementation of the prescribed mitigation measures (Policy CE 2.1).~~ Both Alternative 2 and the Project would be ~~substantially~~ generally

consistent with most of the applicable goals and policies of the City of Huntington Beach General Plan pertaining to circulation and alternative transportation modes. However, Alternative 2 would not be consistent with the City's performance standards for acceptable levels of service at seven study intersections on Beach Boulevard and one intersection on PCH (PCH at Brookhurst) during the construction remediation activities. These impacts would be temporary during the 3.5 year construction phase and would be reduced to the extent feasible. The Alternative would not adversely impact the long-term goals of the Circulation Element. As with the Project, Alternative 2 would be substantially consistent with policies to mitigate off-site traffic impacts and pedestrian, bicycle, and vehicular conflicts to the maximum extent feasible (Policy CE 2.3.1) and to limit driveway access points and require adequate driveway widths onto arterial roadways and require driveways be located to ensure the smooth and efficient flow of vehicles, bicycles, and pedestrians (CE 2.3.2). Because of the Alternative's short-term significant and unavoidable impacts, as with the Project, impacts regarding consistency with the Circulation Element are considered significant and unavoidable. Further, because more intersections would be affected, Alternative 2 would have an incrementally greater impact than under the Project with respect to the policies of the Huntington Beach Circulation Element.

~~Because Alternative 2 would mitigate traffic impacts to the extent feasible, it would be considered substantially consistent with the General Plan Circulation Element. Overall, as Alternative 2 and the Project would mitigate all traffic impacts to below threshold standards during construction, they would both be consistent with the applicable General Policies, and the extent of the impacts is similar under both Alternative 2 and the Project.~~

Consistency with City of Fountain Valley General Plan Circulation Element

As with the Project, Alternative 2 would use Brookhurst Street, a designated regional arterial and truck route in the City of Fountain Valley, as an inbound and outbound route for import trucks only. This would be consistent with the designated purpose of the street and the intent of the Circulation Element, which designates Brookhurst Street as a truck route. Alternative 2 would not adversely impact any Brookhurst Street intersections or cause any lane closures or other effects on Brookhurst Street. Therefore, no impacts to Class II bike paths at Garfield Avenue and Ellis Avenue are anticipated. Because no intersections would be significantly impacted, Alternative 2 would have no adverse effect on bus routes in the area. No other direct effects relative to the purpose of the Circulation Element, which is to efficiently move people and goods on the City's streets, are anticipated. As with the Project, Alternative 2 would not conflict with the objectives of the Circulation Element, and impacts with respect to this policy document would be less than significant and the same as under the Project.

Impact Summary

A comparative summary of the environmental impacts associated with Alternative 2 and the environmental impacts anticipated under the Project is provided in Table ~~5-20~~ R5-22 at the end of this Recirculated Draft EIR section.

Relationship of the Alternative to Project Objectives

The following provides a description of Alternative 2 ability to meet the Project's objectives. As discussed below, Alternative 2 would substantially meet the objectives of the Project. The ability of Alternative 2 to meet the stated objectives of the Project is summarized in Table ~~5-21~~ R5-23 at the end of this Recirculated Draft EIR section.

- Objective # 1 - *To reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste*: As Alternative 2 would remove nearly all the waste materials from the Site, it would fully meet this objective to reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste. As the waste materials would be removed and there would be no potential for long-term risk from contaminated materials and waste, this Alternative would better meet this objective than the Project.

- Objective # 2 - *To reduce the potential for short-term risks (during implementation activities) to life, property and the environment (inclusive of nearby residences, schools, parks, businesses, and on-site workers) from contaminated materials and waste through proper handling, treatment and disposal*: Similar to the Project, this Alternative would implement numerous health and safety controls, many of which are identified as Project Design Features (PDFs), and comply with applicable regulations pertaining to the handling, treatment and disposal of contaminated materials and waste. But, that is not to say that all short-term risks would be eliminated. Rather, such risks would be reduced as technically feasible in accordance with the intent of this objective. Accordingly, both the Project and this Alternative would meet this objective. This Alternative would include higher intensity construction activities and would occur over a longer period of time than the Project. Due to the more intense construction activities, short-term air quality and health risks would be greater under this Alternative than under the Project. Due to the longer duration of construction activities, the potential for adverse impacts resulting from construction (e.g., traffic impacts, possible spills or releases during the export of materials, possible exposure of on-site workers) would be greater under Alternative 2 than under the Project. For these reasons, this Alternative is considered to meet this objective to a lesser extent than the Project.

- Objective #3 - *To ensure that contaminated materials and waste are transported in a safe, efficient and coordinated manner to minimize risks to sensitive uses (such as nearby residences and schools:* Both Alternative 2 and the Project would implement numerous health and safety controls, many of which are identified as PDFs, and comply with applicable regulations pertaining to the transport of hazardous materials and waste. Accordingly, hazardous waste would be transported in a safe, efficient and coordinated manner to minimize risks to sensitive uses under both the Project and this Alternative, despite the difference in durations. Thus, this Alternative would meet this objective to a similar extent as the Project.

- Objective #4 - *To reduce the potential for on-site contaminated materials to impact groundwater or migrate off-site*: Because contaminated soils are likely deeper near center of the Site, within the lagoon areas, the potential to impact groundwater during excavation is more widespread and thereby greater for Alternative 2 than for the Project. As such, groundwater quality could potentially be adversely impacted in the short-term to a greater degree than the Project. Although, it is acknowledged that the Project and this Alternative would implement numerous controls and BMPs to prevent short-term water quality impacts to the extent feasible, such that groundwater quality impacts would be less than significant. The Project would include a cap over most of the Site, with only the City Parcel, detention basins and perimeter access road being uncapped. However, contaminated materials in these areas would be excavated to at least street level and then, if necessary, to a depth achieving the acceptable risk-based concentrations (RBCs), background concentrations, or until groundwater is reached. While the cap would include a geomembrane layer to minimize surface water infiltration into the underlying material and the side slopes would be at

such an angle that would also minimize surface water intrusion, some water could permeate through the Site into the waste materials and percolate into the groundwater. The amounts of such water would be minimal, and much less than under existing conditions. Thus, long-term groundwater impacts would be less than significant under the Project. As Alternative 2 would remove nearly all the waste materials from the Site, there would be little to no potential for long-term groundwater impacts from contaminated materials on the Site. Overall, despite the fact that Alternative 2 could result in greater (less than significant) impacts than the Project in the short-term, the fact that this Alternative would essentially preclude the potential for long-term groundwater impacts from contaminated materials on the Site results in this Alternative better meeting this objective than the Project.

- Objective #5 - *To remediate the Site to enhance public health, safety and welfare and ultimately allow potential new uses of the Site that will not endanger human health and the environment*: As Alternative 2 would remove the waste materials from the Site and return the site to a near flat, vacant parcel suitable for unrestricted use, it would fully meet this objective. The cap system proposed under the Project would also provide an acceptable level of protection of public health, safety and welfare when compared to existing conditions. However, because the capped Site could only support a limited type of new uses such as some commercial or recreational uses, whereas Alternative 2 would allow for unrestricted use, Alternative 2 allows for a more varied extent of potential new uses than under the Project. As such, Alternative 2 better meets this objective than the Project.

- Objective #6 - *To remediate the site in a timely, expedient, and cost effective manner*. Under the Project, the construction remediation activities would occur for approximately one year. Under Alternative 2, remediation activities would occur for approximately 41 months (~3.5 years). As Alternative 2 would include highly intensive activities near sensitive uses (i.e., residential and school uses) for a longer duration than the Project, the length and intensity of construction activities under Alternative 2 would be more apparent and perceivable by the surrounding community as compared to the Project. For this reason, Alternative 2 is considered to only partially meet this objective. It is also noted that Alternative 2 would cost over five times as much as the Project (construction and operation costs). Accordingly, Alternative 2 would meet this objective to lesser extent than the Project.

Alternative 3 – Lower Intensity - Extended Schedule Alternative

Environmental Impact Categories

Noise

Noise Levels in Excess of Standards

Short-Term Impacts

Under this Alternative, short-term activities related to remediation and construction of the cap would proceed, only at a less intense pace. With fewer pieces of equipment operating simultaneously, less noise would be generated. Similar to the Project, activities associated with implementation of Alternative 3 would temporarily increase the existing ambient noise levels above perceptible levels in close proximity of the Site. However, similar to the Project, the short-term noise level experienced at the off-site sensitive land uses under Alternative 3 would be below the 80 dBA threshold established by FTA for construction impacts.

Furthermore, during implementation of Alternative 3, construction activities would be temporary in nature and would be required to comply with the City's allowable hours. Impacts would therefore be less than significant and similar under both alternatives. With respect to potential nighttime noise levels at nearby residences due to use of a blower associated with Pit F remediation, mitigation measure Noise-1 would reduce the impact to less than significant levels under Alternative 3, similar to the Project.

Under Alternative 3, the maximum daily haul truck trips would be fewer than with the Project, resulting in less noise impacts. However, similar to the Project, noise levels generated by haul truck trips would not result in a noticeable increase at noise-sensitive land uses along the haul routes.[7] Since temporary noise associated with construction of the cap is exempt from the City's noise ordinance requirements, the levels projected to be experienced by off-site sensitive land uses due to on-site noise sources are below the FTA's recommended noise levels, and the change in noise levels along the haul routes from haul trucks would be below perceptible thresholds, implementation of Alternative 3 would result in less than significant short-term noise impacts. In addition, requirements set forth in the Project Design Features in Chapter R4.9 of this ~~D~~ Recirculated Draft EIR would further reduce construction noise impacts.

Overall, the impacts would be less than significant and similar to those projected to occur under the Project because Alternative 3 would have similar pieces of construction equipment operating near receptors and same number of haul truck trips, albeit fewer per day, than the Project.

Groundborne Vibration and Noise

Short-Term Impacts

Because vibration dissipates quickly with distance, the maximum instantaneous vibration impacts expected to occur off-site result from any one piece of equipment operating nearest to the Site boundary. Therefore, fewer numbers of equipment operating concurrently under Alternative 3 would not noticeably lessen off-site vibration impacts. Alternative 3 would therefore result in ground vibration levels and vibration velocities similar to the Project, and well below the applicable significance thresholds. Therefore, vibration impacts associated with this Alternative would be less than significant and similar to those projected to occur under the Project.

Substantial Temporary or Periodic Increase Above Existing Noise Levels

As stated above, the on-site construction activities proposed under Alternative 3 and the Project would result in increases in temporary and periodic noise above existing levels at nearby off-site sensitive land uses. Hauling activities are not expected to produce noise above existing ambient noise levels along the haul routes. Also, similar to impacts under the Project, these increases would not exceed thresholds and would, therefore, be considered less than significant. Alternative 3 would result in similar pieces of construction equipment operating simultaneously over short-durations when compared to the Project and, as such, would result in similar short-term construction noise levels. Mitigation measure Noise-1 would reduce potential Pit F blower noise impacts to less than significant levels. For these reasons, impacts would be the same under this Alternative as compared to the Project.

[7] *U.S. Department of Transportation, Federal Highway Administration,* Highway Traffic Noise: Analysis and Abatement Guidance, *(2011).*

Consistency with City of Huntington Beach General Plan ~~General Plan Goals and Policies~~ and City of Fountain Valley Plans and Policies

~~The~~ Each City's General Plan Noise Elements contains goals, objectives, and/or policies that are relevant to noise. ~~and are presented in the General Plan Noise Element.~~ Alternative 3 would be consistent with the applicable goals, objectives and policies of the City of Huntington Beach and City of Fountain Valley General Plans pertaining to ~~N~~noise. Under this Alternative, short-term activities related to remediation and construction of the cap would proceed, only at a less intense pace, with fewer pieces of mechanized equipment operating simultaneously. Thus, similar to the Project, Alternative 3 would result in a temporary increase in existing ambient noise levels above perceptible levels in close proximity of the Site. However, similar to the Project, the short-term noise level experienced at the off-site sensitive land uses would be below the 80 dBA threshold established by the FTA for construction-related noise impacts. Alternative 3 would result in fewer maximum daily haul truck trips than compared to the Project. Consistent with the City of Huntington Beach General Plan, short-term construction activities would be limited to established hours (between 7:00 a.m. to 8:00 p.m. on weekdays and Saturdays). Under Alternative 3, the same cap and LFG collection and treatment system would be installed as under the Project. Under Alternative 3, mechanical equipment would be required to implement the same mitigation measures as the Project (see Mitigation Measures NOISE-1 and NOISE-2). Similar to the Project, Alternative 3 would result in negligible maintenance trips during long-term operations and would not contribute to roadway noise increases. Therefore, similar to the Project, mechanical noise under Alternative 3 would be minimized to a less than significant level. Because future development of the Site, if any, is not considered at this time, it would be highly speculative to assess potential noise from any future uses that are not known or contemplated. Overall, this Alternative would be consistent with the applicable General Plan goals, objectives and policies to a similar degree as the Project.

Transportation/Traffic

Traffic Impacts

Short-Term Impacts

Construction activities under Alternative 3 would occur for approximately three years, compared to approximately one-year under the Project. Under this Alternative, the daily amount of construction traffic would be approximately ~~one-third (35 percent)~~ 41 percent of the Project's construction traffic in terms of one-way trips. The Project would generate approximately ~~357~~ 380 one-way daily trips, while this Alternative would generate approximately ~~127~~ 155 daily trips (refer to **Table R5-22**, *Alternative 3 Trip Generation Estimates*). The maximum daily amount of haul trucks (import and export) would be approximately one-quarter (25 percent) of those under the Project or approximately 75 haul trips per day under Alternative 3 compared to 300 under the Project, though the total number of truck trips would be the same at the end of either alternative. For purposes of this analysis, although overall construction activities would be less intense under Alternative 3 than under the Project, there could potentially be some construction days where peak hour traffic would be similar to that of the Project. Under these circumstances, construction activities would be at a similar intensity during the A.M. and P.M. peak hours, while construction activities in the afternoon (mid-day) would be less than intense compared to the Project. Haul routes would be the same for Alternative 3 and the Project.

Table R5-22

Alternative 3 Trip Generation Estimates

Trip Type	PCE	Daily One-Way Trips	Daily Two-Way Trips	Max-Hourly one-Way Trips			A.M. Peak PCE			Mid-Day PCE			P.M. Peak PCE		
				AM	Mid Day	PM	In	Out	Total	In	Out	Total	In	Out	Total
Export Trucks	3	25	150	20	10	10	60	60	120	30	30	60	30	30	60
Import Trucks	3	50	300	25	10	15	75	75	150	30	30	60	45	45	90
Supply Trucks	3	10	60	4	4	0	12	12	24	12	12	24	0	0	0
Employees	1	55	110	37	37	37	37	0	37	18	19	37	0	37	37
Visitors	1	15	40	10	10	10	10	0	10	***5***	***5***	**10**	0	10	10
Totals		155	660	96	71	72	194	147	341	95	96	191	75	122	197

Notes:

1 PCE = Passenger Car Equivalent.

2 Daily one-way trips do not account for PCE. The number of trips are representative of daily directional trips on a given roadway segment (e.g., northbound on Beach Blvd.)

3 Daily two-way trips do account for PCE. The number of trips represents the sum of the one-way daily trips along a given roadway segment in both directions (e.g., northbound plus southbound trips on Beach Blvd.)

4 The numbers of "Export Trucks" trips are representative of trucks utilizing Beach Blvd. regardless of trip purpose.

5 The numbers of "Import Trucks" trips are representative of haul trucks utilizing Brookhurst Street.

6 The number of employee and visitor trips assumes 50% of employees and visitors take a mid-day trip (i.e., lunch break). Also, 10 additional daily visitor trips are assumed to occur from the travel of visitors during off-peak periods for miscellaneous reasons (i.e., meetings, tours, etc.).

Source: PCR, 2014.

~~Alternative 3 is estimated to be operational during 2015 to 2017, similar to Alternative 2.~~ Alternative 3 would be implemented over three years and would be estimated to begin as early as 2016, but could commence in 2017. The operational year assumed for assessing impacts under Alternative 3 is 2020, similar to Alternative 2, to provide a worse-case assessment of traffic impacts. As Alternative 3 would generate the same A.M. and P.M. peak hour traffic as under the Project and Alternative 2, the same eight intersections that would be significantly impacted under Alternative 2 would be impacted under Alternative 3 during the A.M. and/or P.M. peak hours. As described in Section R4.10, *Traffic and Circulation*, of this Recirculated Draft EIR and under the discussion of Alternative 2, above, the Project would result in significant and unavoidable impacts at five intersections during ~~2015~~ 2017. Alternative 3 would be required to implement the same mitigation as Alternative 2 to reduce its potentially significant impacts. However, as with Alternative 2, mitigation would not reduce the A.M. and P.M. peak hour impacts to less than significant levels. Also, with regards to the intersection at Beach Boulevard at Talbert Avenue, both the Project and this Alternative would increase the mid-day peak hour delay at this already deficient intersection (LOS E). Thus, both the Project and this Alternative would result in significant and unavoidable mid-day impacts at this intersection, although the impact would be proportionately less under this Alternative given the reduced amount of mid-day truck trips. Overall, Alternative 3 would result in eight (8) significant and unavoidable impacted intersections, compared to five (5) under the Project.

During hauling activities, it may also be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to include a shared left-turn/through/right-turn lane. However, as under the Project and Alternative 2 (see Table ~~5-18~~ R5-20, above), the intersection would remain at LOS A with the implementation of the lane closure during ~~both~~ the A.M. and mid-day peak hours and would not exceed LOS B during the P.M. peak hour.

Overall, while this Alternative would have a limited number of worst-case construction days where peak hour traffic would be similar to the Project, on most days, traffic during the peak hours would be less, and the daily overall amount of traffic would be less throughout this Alternative. However, it is acknowledged that traffic generated by this Alternative would occur for three years, as compared to one year under the Project; and that three (3) more intersections would be significantly impacted (significant and unavoidable) compared to the Project given the later 2020 year operational analysis. ~~Nonetheless, as this Alternative would result in less overall daily traffic, although for a longer duration, the traffic impact under this Alternative is concluded to be less than the Project.~~ Therefore, the traffic impact under this Alternative is concluded to be more than the Project, even though this Alternative would result in less overall daily traffic than the Project.

CMP Intersections

Short-Term Impacts

The Orange County CMP identifies four intersections along Beach Boulevard between I-405 and Pacific Coast Highway as CMP intersections. Because Alternative 3 would generate A.M. and P.M. peak hour trips similar to the Project, and fewer mid-day peak hour trips, it would not increase ICU by more than 0.03 at any of the CMP intersections (refer to **~~Table 5-19~~**, ~~*Alternative 3 Trip Generation Estimates*~~ Table R5-21, above). As with the Project, Alternative 3 would have a less than significant impact on the CMP intersections during short-term construction activities. While this Alternative would have a limited number of worst-case construction days where peak hour traffic would be similar to the Project, on most days traffic during the peak hour would be less, and the daily overall amount of traffic would be less throughout Alternative 3. However, traffic generated by this Alternative would occur for three years, as compared to approximately one year under the Project. Nonetheless, as this Alternative would result in less overall daily traffic, although for a longer duration, the traffic impacts under this Alternative are concluded to be less than those of the Project.

~~**Table 5-19**~~

~~**Alternative 3 Trip Generation Estimates**~~

~~Trip Type~~	~~PCE~~	~~Daily One-Way Trips~~	~~Daily Two Way Trips PCE~~	~~Max Hourly Trips~~		~~A.M. Peak Passenger Car Equivalents~~			~~P.M. Peak Passenger Car Equivalents~~		
				~~A.M.~~	~~P.M.~~	~~In~~	~~Out~~	~~Total~~	~~In~~	~~Out~~	~~Total~~
~~Export Trucks~~	~~3~~	~~25~~	~~150~~	~~20~~	~~4~~	~~60~~	~~60~~	~~120~~	~~12~~	~~12~~	~~24~~
~~Import Trucks~~	~~3~~	~~50~~	~~300~~	~~25~~	~~25~~	~~75~~	~~75~~	~~150~~	~~75~~	~~75~~	~~150~~
~~Supply Trucks~~	~~3~~	~~5~~	~~30~~	~~4~~	~~0~~	~~12~~	~~12~~	~~24~~	~~0~~	~~0~~	~~0~~
~~Employee~~	~~1~~	~~37[a]~~	~~37~~	~~0~~	~~37~~	~~0~~	~~0~~	~~0~~	~~0~~	~~37~~	~~37~~
~~Visitor~~	~~1~~	~~10~~	~~20~~	~~10~~	~~10~~	~~10~~	~~0~~	~~10~~	~~0~~	~~10~~	~~10~~
~~**Totals:**~~		~~**127**~~	~~**537**~~	~~**59**~~	~~**76**~~	~~**157**~~	~~**147**~~	~~**304**~~	~~**87**~~	~~**134**~~	~~**221**~~

~~[a] *The number of employees could be less than 37. However, for purposes of this traffic analysis, 37 has been assumed to provide a worse-*~~

~~*case assessment of traffic impacts.*~~

~~*Source: PCR Services Corporation, 2013*~~

Emergency Access

Short-Term Impacts

Construction activity would involve the movement of heavy trucks throughout the day that will ingress and egress the Site and travel along the designated routes to reach I-405 for a period of approximately 3 years. Similar to the Project and Alternative 2, this Alternative would implement several design features that would limit the impacts of construction traffic on the adjacent roadways including: implementation of a Construction Traffic Management Plan (PDF 10-1); use of flagmen at the Site driveways (PDF 10-6); and use of barricades to provide a buffer around the site (PDF 10-2)

As with the Project, under Alternative 3 the Site's ingress and egress driveways would be designed to meet the City of Huntington Beach standards. All Site access and circulation would be reviewed by the City of Huntington Beach Department of Public Works Road Division and Fire Department to ensure that the Site provides adequate emergency access. ~~Signal timing optimization would improve base conditions on affected intersections along the Project's haul route.~~ Alternative 3 would result in significant and unavoidable impacts at seven study intersections on Beach Boulevard and at the intersection of Pacific Coast Highway at Brookhurst Street. These impacts would be temporary, occurring only during the three (3) year construction phase. Also, because emergency vehicles have priority access, the ability to use warning sirens at all intersections, and alternative routing flexibility, Alternative 3's impacts on intersection capacity would not substantially diminish emergency access along the haul routes

The use of Brookhurst Street as a haul route for import trucks has the potential to impact emergency access at Orange Coast Memorial Hospital in the City of Fountain Valley. The hospital is located at the southwest corner of Brookhurst Street and Talbert Avenue, with primary emergency access being located at the intersection of Brookhurst Street and Stonefield Avenue. As shown in Tables R5-14 through R5-16, the intersection of Brookhurst Street and Talbert Avenue (intersection #30) would operate at LOS D during the A.M. peak hour, LOS B during the mid-day peak hour, and LOS D during the P.M. peak hour under Operating Year (2020) Plus Alternative 2 conditions. Alternative 3 would have similar maximum A.M. and P.M. peak hour traffic, and less mid-day peak hour traffic, compared to Alternative 2. Thus, per Tables R5-14 through R5-16, these are acceptable service levels that would not cause adverse impediment to emergency vehicles accessing the hospital vicinity. The hospital's emergency services driveway at the intersection of Brookhurst Street and Stonefield Avenue (intersection #31) would operate at LOS A during the A.M. peak hour, mid-day peak hour, and P.M. peak hour, under Operating Year (2020) Plus Alternative 2 conditions. This favorable service level (LOS A) indicates that no significant impediments to emergency access at Orange Coast Memorial Hospital would occur as a result of Alternative 3's haul truck traffic on Brookhurst Street. Further, because emergency vehicles have priority access, the ability to use warning sirens at all intersections, Alternative 3 would not substantially diminish emergency access to the Hospital.

During construction of either Alternative 3 or the Project, however, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the Site frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared

through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to include a shared left-turn/through/right-turn lane. As discussed in the traffic impact analysis above, the intersection would remain at LOS A with the implementation of the lane closure during ~~both~~ the A.M. and mid-day peak hours and would not exceed LOS B during the P.M. peak hour~~s~~. As such, the temporary lane closure would not result in a substantial adverse emergency access impact at this intersection. Because the volume of daily trips would be less than that experienced under the Project, less overall truck traffic would arrive at and leave the Site daily. This would result in less potential for conflict between haul trucks and emergency vehicles along the haul route on a daily basis. However, traffic generated by Alternative 3 would occur for three years, compared to approximately one year under the Project. Nonetheless, as this Alternative would result in less overall daily traffic, although for a longer duration, emergency access impacts under this Alternative are concluded to be less than those of the Project. Both alternatives present less than significant impacts.

Alternative Transportation Facilities

Short-Term Impacts

Similar to the Project, construction remediation activities on the Site under Alternative 3 would involve the travel of heavy duty trucks throughout the day, which has the potential to create conflicts as these vehicles enter the roadway travel lanes and travel along the designated routes to reach I-405. During part of the short-term construction phase of the Project and this Alternative, the bicycle lanes on the southbound side of Magnolia Street and the eastbound side of Hamilton Avenue would be barricaded and unusable. Although bicyclists would not be prohibited from traveling along this street, the loss of the shoulder would not be conducive to comfortable riding. As such, most cyclists would have to divert trips to other roadway facilities. This is considered to be a potentially significant short-term impact under the Project and Alternative 3. However, as under the Project, signage would be required as a design feature to direct eastbound bicyclists on Hamilton Avenue and southbound cyclists on Magnolia Street to alternative routes (detours), such as eastbound Atlanta Avenue and southbound Newland and Bushard Streets. As with the Project, design features would also prohibit left turns by haul trucks or trucks larger than four or fewer axle, single-trailer trucks from the Site unless assisted by flagmen and call for temporary traffic control signage and flagmen at both the ingress and egress points to the Site, which features serve as safety measures for bicyclists. In addition, a Construction Traffic Management/Haul Plan would be developed and implemented during construction. The Plan would identify all traffic control measures, signs, and delineators to be implemented by the construction contractor through the duration of construction activities associated with Alternative 3. Further, given the proximity of the Site to Edison High School, as with the Project, a design feature would be implemented to provide on-going communication with school administration at Edison High School, providing sufficient notice to forewarn students and parents/guardians when existing bicycle routes to the school may be impacted in order to ensure school traffic and pedestrian safety. A design feature would also be incorporated into Alternative 3 to prohibit haul trucks from hauling past the High School. The implementation of these design features would ensure that impacts regarding bicycle facility performance and safety would be less than significant under both Alternative 3 and the Project. However, because these impacts would last longer under Alternative 3 than under the Project, the impacts would be greater under Alternative 3.

With regard to pedestrian safety, Alternative 3 and the project would utilize barricades to create a buffer between construction activities and the public street and would impact the paved walkway along Hamilton Avenue adjacent to the Site. This feature would prevent pedestrians from walking along the south side of

Hamilton Avenue. This is considered to be a potentially significant short-term impact under the Project and this Alternative. However, a project design feature would be implemented to direct pedestrians to travel exclusively along the north side of Hamilton Avenue and the east side of Magnolia Street. The north side of Hamilton Avenue has an off-street pedestrian path that is slightly set back from Hamilton Avenue and connects to Edison Community Park. The east side of Magnolia Street has a paved sidewalk. In addition, as with the Project, design features would provide safety for pedestrians as well as for bicyclists. No bus stops are located immediately adjacent to the Site along Hamilton Avenue or Magnolia Street. Thus, no bus stops or transit facilities would be directly impacted by construction activities.

In light of the above, impacts under both Alternative 3 and the Project would be reduced to less than significant. However, because the effects on bike lanes and pedestrian access would occur over a longer period of time (approximately three years under Alternative 3 compared to approximately one year under the Project), Alternative 3 would have a relatively greater impact to bicycles and pedestrians than the Project.

Consistency with City of Huntington Beach General Plan ~~Goals and Policies~~ Circulation Element

The City's General Plan Circulation Element contains goals, objectives, and policies that are applicable to traffic. Both Alternative 3 and the Project would be generally consistent with most of the applicable goals and policies of the City of Huntington Beach General Plan pertaining to circulation and alternative transportation modes. However, Alternative 3 would not be consistent with the City's performance standards for acceptable levels of service at seven study intersections on Beach Boulevard and one intersection on PCH (PCH at Brookhurst) during the construction remediation activities. These impacts would be temporary during the three (3) year construction phase and would be reduced to the extent feasible. The Alternative would not adversely impact the long-term goals of the Circulation Element. As with the Project, Alternative 3 would be substantially consistent with policies to mitigate off-site traffic impacts and pedestrian, bicycle, and vehicular conflicts to the maximum extent feasible (Policy CE 2.3.1), to limit driveway access points and require adequate driveway widths onto arterial roadways, and require driveways be located to ensure the smooth and efficient flow of vehicles, bicycles, and pedestrians (CE 2.3.2). ~~Because neither the Project nor Alternative 3 would generate adverse traffic conditions, they are both equally consistent with the General Plan Circulation Element and impacts under both alternatives are equally less than significant with respect to the Plan.~~ Because of the Alternative's short-term significant and unavoidable impacts, as with the Project, impacts regarding consistency with the Circulation Element are considered significant and unavoidable. Further, because more intersections would be affected, Alternative 3 would have an incrementally greater impact than under the Project with respect to the policies of the Huntington Beach Circulation Element.

Consistency with City of Fountain Valley General Plan Circulation Element

As with the Project, Alternative 3 would use Brookhurst Street, a designated regional arterial and truck route in the City of Fountain Valley, as an inbound and outbound route for import trucks only. This would be consistent with the designated purpose of the street and the intent of the Circulation Element. Alternative 3 would not adversely impact any Brookhurst Street intersections in Fountain Valley or cause any lane closures or other effects on Brookhurst Street. Therefore, no impacts to Class II bike paths at Garfield Avenue and Ellis Avenue are anticipated. Because no intersections would be impacted, Alternative 3 would have no adverse effect on bus routes in Fountain Valley. No other direct effects relative to the purpose of the Circulation Element, which is to efficiently move people and goods on the City's streets, are anticipated. As

with the Project, Alternative 3 would not conflict with the objectives of the Circulation Element, and impacts with respect to this policy document would be less than significant and the same as under the Project.

Impact Summary

A comparative summary of the environmental impacts associated with Alternative 3 and the environmental impacts anticipated under the Project is provided in Table ~~5-20~~ R5-22 at the end of this Recirculated Draft EIR section.

Relationship of the Alternative to Project Objectives

The ability of the Lower Intensity - Extended Schedule Alternative (Alternative 3) to meet the stated objectives of the Project is summarized in Table ~~5-21~~ R5-23 at the end of this Recirculated Draft EIR section. The following provides a description of the Alternative's ability to meet the Project's objectives.

- Objective #1 - *To reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste*: Alternative 3 and the Project would ultimately result in the same capped system on the Site and would implement the same Operations and Maintenance (O&M) Plan. The capped site would reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste. As such, both the Project and this Alternative would meet this objective and would do so to a similar extent.

- Objective # 2 - *To reduce the potential for short-term risks (during implementation activities) to life, property and the environment (inclusive of nearby residences, schools, parks, businesses, and on-site workers) from contaminated materials and waste through proper handling, treatment and disposal*: Similar to the Project, Alternative 3 would implement numerous health and safety controls, many of which are identified as PDFs, and comply with applicable regulations pertaining to the handling, treatment and disposal of contaminated materials and waste. That is not to say that all short-term risks would be eliminated, but rather, such risks would be reduced as technically feasible in accordance with the intent of this objective. Accordingly, both the Project and this Alternative would meet this objective. However, Alternative 3 would include less intense daily construction activities, but would occur over a longer period of time than the Project, which would eliminate the Project's significant and unavoidable regional NO_X and PM_{10} air quality impact during construction activities. Under Alternative 3, therefore, regional NO_X and PM_{10} air quality impacts would be less than significant (although similar to the Project, localized 1-hour NO_2 impacts would be significant and unavoidable). Nonetheless, even at a lower intensity, Alternative 3 would result in significant and unavoidable localized 24-hour and annual PM_{10} impacts, but at a reduced level compared to the Project. ~~In addition, construction-related traffic impacts would be less under this Alternative than under the Project.~~ Unlike air quality~~ and traffic~~, COPC-related cancer health-risks are based on a cumulative lifetime exposure to COPCs. Thus, while Alternative 3 would take approximately 36 months, a similar total amount of construction activity (including hours of equipment operation, truck miles traveled, etc.) would occur under Alternative 3 as under the Project. As such, short-term health risks from exposure to TACs would be similar under Alternative 3 and the Project. Nonetheless, because short-term air quality~~, and to a lesser extent traffic,~~ would be reduced under Alternative 3 as compared to the Project, this Alternative would better meet this objective than the Project.

- Objective #3 - *To ensure that contaminated materials and waste are transported in a safe, efficient and coordinated manner to minimize risks to sensitive uses (such as nearby residences and schools)*. Both Alternative 3 and the Project would implement numerous health and safety controls, many of which are identified as PDFs, and comply with applicable regulations pertaining to the transport of hazardous materials and waste. Accordingly, hazardous waste would be transported in a safe manner to minimize risks to sensitive uses under both the Project and Alternative 3, despite the difference in durations. However, transport efficiency and ability to coordinate would suffer with an artificially extended schedule as would occur under Alternative 3, preventing transport coordinators from securing the optimal number of transport haulers dedicated to the project and thereby significantly reducing transport efficiency. Thus, Alternative 3 would meet this objective to a lesser extent than the Project.

- Objective #4 - *To reduce the potential for on-site contaminated materials to impact groundwater or migrate off-site*: The Project and this Alternative would include an impermeable cap system covering most of the Site, with only the City Parcel, detention basins and perimeter access road being uncapped. However, impacted materials in these areas would be excavated to at least street level and then, if necessary, to a depth achieving the acceptable RBCs, background concentrations, or until groundwater is reached. As such, groundwater quality would not be adversely impacted. As Alternative 3 and the Project would include the same cap system, both would meet this objective to ensure that on-site waste materials do not contaminate groundwater or migrate off-site in the long term. However, the longer Alternative 3 schedule would expose the Site under construction conditions for an additional two years and rain/wet seasons, increasing the chance of off-site migration of stormwater-related impacts from the Site. Therefore, Alternative 3 would meet this objective to a lesser extent than the Project.

- Objective #5 - *To remediate the site to enhance public health, safety and welfare and ultimately allow potential new uses of the site that will not endanger human health and the environment*: As Alternative 3 and the Project would implement the same cap system over the Site to enhance protection of public health, safety and welfare, both would meet this objective. Under Alternative 3 and the Project, the capped Site could potentially support a limited type of new uses such as some commercial or recreational uses that protect the cap and gradients of the Site. As the extent of potential new uses would be the same under the Project and this Alternative, both would meet this objective to a similar extent.

- Objective #6 - *To remediate the site in a timely, expedient, and cost effective manner*. Under the Project, the construction remediation activities would occur for approximately one year. Under Alternative 3, construction remediation activities would occur for approximately 36 months (~3 years), because Alternative 3 includes less intensive daily construction activities during its implementation. This greater duration of construction activities would be more apparent and perceivable by the surrounding community compared to the Project, even though the end result of the remediation activities (a capped Site) would be the same under Alternative 3 and the Project. However, because Alternative 3 is neither timely, expedient, nor cost-effective, this Alternative does not meet this objective.

Environmentally Superior Alternative

The following discussion supplements, but does not replace, the Environmentally Superior Alternative analysis presented in Section 5.0, *Alternatives*, of the Draft EIR.

Section 15126.6(e)(2) of the *CEQA Guidelines* requires an analysis of alternatives to a proposed project to identify an Environmentally Superior Alternative among the alternatives evaluated in an EIR. The *CEQA Guidelines* also state that, should it be determined that the No Project Alternative is the Environmentally Superior Alternative, the EIR shall identify another Environmentally Superior Alternative among the remaining alternatives. With respect to identifying an Environmentally Superior Alternative among those analyzed in this Recirculated Draft EIR, the range of feasible alternatives to be considered includes: Alternative 1, the No Project Alternative; Alternative 2, Source Removal with Off-Site Disposal; and Alternative 3, Lower Intensity - Extended Schedule Alternative.

Table R5-23, *Comparison of Impacts Associated with the Alternatives and Impacts of the Project*, provides a summary comparison of the short-term noise and traffic impacts associated with each of the proposed alternatives with the impacts of the Project as evaluated in this Recirculated Draft EIR. As shown therein, the comparison of short-term noise impacts has not materially changed from that presented in the Draft EIR, but greater "significant and unavoidable" impacts have been identified for Alternatives 2 and 3 compared to the Project relating to short-term traffic .

The ability of the Alternatives to meet the stated objectives of the Project is summarized in **Table R5-24**, *Project Alternatives' Ability to Meet Project Objectives*. As shown therein, the discussion of the Alternatives ability to meet the Project Objectives has not changed from that presented in the Draft EIR.

As discussed in the Draft EIR and this Recirculated Draft EIR, Alternative 3 would result in impacts similar to or better (reduced) than those for the Project for several of the environmental issue areas, with the notable exceptions of short-term traffic impacts wherein more intersections would have significant and unavoidable impacts than under the Project and short-term water quality impacts, wherein a longer construction schedule extending through three wet seasons slightly increases the chance of impacting groundwater. It is acknowledged that Alternative 3, due to the 2020 background conditions resulting from the longer duration in implementing Alternative 3, would produce eight (8) significant and unavoidable impacted traffic intersections, compared to five (5) under the Project. However, as mentioned above, Alternative 3 would result in less overall daily traffic, although for a longer duration. The lower intensity of this Alternative would reduce the Project's significant and unavoidable regional NOx and PM_{10} air quality impacts to less than significant levels. However, the Project's 1-hour localized NO_2 impact remains significant and unavoidable. Even with the lower daily and annual emissions of PM_{10} under this Alternative, it is expected to result in localized 24-hour and annual concentrations of PM_{10} that exceed applicable thresholds and impacts would remain significant and unavoidable. Overall, Alternative 3 would reduce, as well as increase, impacts under several environmental issues compared to the Project, with the majority of impacts under this Alternative being generally similar to the Project. However, this Alternative would eliminate the Project's significant and unavoidable short-term regional NOx air quality impact and have similar long-term impacts. For these reasons, Alternative 3 is selected as the Environmentally Superior Alternative.

While Alternative 3 is identified as the Environmentally Superior Alternative in this Recirculated Draft EIR, this does not mean it is selected as the remediation plan for the Site at this time by DTSC. DTSC will consider the analysis included within this Recirculated Draft EIR along with public input throughout the environmental review process in their decision-making process to select the remediation plan for the Site.

Table ~~5-20~~ R5-23

Comparison of Impacts Associated with the Alternatives and Impacts of the Project

	Project Impact	Alternative 1 No Project	Alternative 2 Source Removal with Off-Site Disposal	Alternative 3 Lower Intensity - Extended Schedule
A. Noise				
Short-Term - Noise Levels in Excess of Standards	Less Than Significant with Mitigation	Less (No Impact)	Greater (Less Than Significant)	Similar (Less Than Significant with Mitigation)
Short-Term - Groundborne Vibration and Noise	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Similar (Less Than Significant)
Substantial Temporary or Periodic Increase Above Existing Noise Levels	Less Than Significant with Mitigation	Less (No Impact)	Greater (Less Than Significant)	Similar (Less Than Significant with Mitigation)
B. Traffic/Transportation				
Short-Term - Traffic	~~Less Than Significant With Mitigation~~ Significant and Unavoidable	Less (No Impact)	Greater ~~(Less Than Significant With Mitigation)~~ (Significant and Unavoidable)	Greater ~~(Less Than Significant With Mitigation)~~ (Significant and Unavoidable)
Short-Term – CMP Intersections	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Less (Less Than Significant)
Short-Term – Emergency Access	Less Than Significant	Less (No Impact)	Similar (Less Than Significant)	Less (Less Than Significant)
Short-Term – Alternative Transportation Facilities	Less Than Significant	Less (No Impact)	Greater (Less Than Significant)	Greater (Less Than Significant)

Notes

1. *This table only addresses short-term noise and traffic impacts.*

Source: PCR Services Corporation, ~~2013~~ 2014.

Table ~~5-21~~ R5-24

Alternatives' Ability to Meet Project Objectives

Project Objective	Ability to Meet Project Objective			
	Project	Alternative 1 No Project	Alternative 2 Source Removal with Off-Site Disposal	Alternative 3 Lower Intensity - Extended Schedule
1. To reduce the potential for long-term risks to life, property and the environment (inclusive of nearby residences, schools, parks, and businesses) from contaminated materials and waste.	Meets Objective	Does Not Meet Objective	Meets Objective (Better meets Objective than Project)	Meets Objective (Similar to Project)
2. To reduce the potential for short-term risks (during implementation activities) to life, property and the environment (inclusive of nearby residences, schools, parks, businesses, and on-site workers) from contaminated materials and waste through proper handling, treatment and disposal.	Meets Objective	Does Not Meet Objective	Meets Objective (Meets Objective to lesser extent than Project)	Meets Objective (Better meets Objective than Project)
3. To ensure that contaminated materials and waste are transported in a safe, efficient and coordinated manner to minimize risks to sensitive uses (such as nearby residences and schools).	Meets Objective	Does Not Meet Objective	Meets Objective (Similar to Project)	Meets Objective (Meets Objective to lesser extent than Project)
4. To reduce the potential for on-site contaminated materials to impact groundwater or migrate off-site.	Meets Objective	Does Not Meet Objective	Meets Objective (Better Meets Objective than Project)	Meets Objective (Meets Objective to lesser extent than Project)
5. To remediate the site to enhance public health, safety and welfare and ultimately allow potential new uses of the site that will not endanger human health and the environment.	Meets Objective	Does Not Meet Objective	Meets Objective (Better Meets Objective than Project)	Meets Objective (Similar to Project)
6. To remediate the Site in a timely, expedient, and cost effective manner.	Meets Objective	Does Not Meet Objective	Partially Meets Objective (Meets Objective to lesser extent than Project)	Does not Meet Objective

Source: PCR Services Corporation, 2013

R6.0 OTHER MANDATORY CEQA CONSIDERATIONS

This Recirculated Draft EIR section has been prepared pursuant to CEQA Guidelines Section 15088.5, *Recirculation of an EIR Prior to Certification*. Per Section 15088.5(b), "If the revision is limited to a few chapters or portions of the EIR, the lead agency need only recirculate the chapters or portions that have been modified." The Project's proposed additional haul route and distribution of truck trips resulted in significant changes to the Draft EIR's construction noise and traffic analyses presented in Sections 4.9, *Noise*, and 4.10, *Transportation/Traffic*, respectively. The Project's proposed traffic-related modifications also resulted in changes to the short-term traffic impact conclusions and secondary effects discussions presented in Chapter 6.0, *Other Mandatory CEQA Considerations*, of the Draft EIR. Consistent with CEQA Guidelines Section 15088.5(b), only the portions of Chapter 6.0 that have changed are presented in this Recirculated Draft EIR chapter. The discussions of "Growth Inducing Impacts," "Significant Irreversible Changes," and "Less Than Significant Impacts" in the Draft EIR have not changed based on the revised analysis presented in this Recirculated Draft EIR. Accordingly, these sub-sections are not included in this Recirculated Draft EIR chapter.

1. CONSIDERATION AND DISCUSSION OF SIGNIFCIANT ENVIRONMENTAL IMPACTS

Section 15126.2(b) of the CEQA Guidelines requires an EIR to describe significant environmental impacts that cannot be avoided, including those impacts that can be mitigated but not reduced to a less than significant level. The following is a summary of impacts associated with the Project that were concluded to be significant and unavoidable. The following impacts are described in detail in ~~Section 4, *Environmental Impact Analysis*,~~ Section 4.2, *Air Quality*, of ~~this~~ the Draft EIR and in Section R4.10, *Traffic and Circulation*, of this Recirculated Draft EIR. ~~Several of t~~The significant and unavoidable impacts of the Project are ~~primarily~~ related to short-term construction activities.

As analyzed in Section 4.2, *Air Quality*, of the Draft EIR even with the incorporation of all project design features and a mitigation measure to implement best available control technology to the extent feasible, during construction the Project would exceed the SCAQMD regional threshold for NO_x as a result of intensive use of diesel powered heavy-duty construction equipment for most days throughout implementation of the RAP construction remediation activities. Emissions of PM_{10} would also exceed the SCAQMD regional threshold as a result of equipment and haul trucks. Worst-case hourly emissions of NO_x are predicted to result in localized concentrations of NO_2 in excess of the applicable local significance criterion (the state ambient air quality standard). In addition, 24-hour and annual emissions of PM_{10}, from dust and diesel exhaust, are predicted to result in localized concentrations in excess of the applicable significance criteria (the SCAQMD's allowable incremental increase concentrations). As such, implementation of the RAP would result in significant and unavoidable impacts with regards to regional NO_x emissions and its contribution to the formation of the non-attainment pollutant ozone, regional PM_{10} emissions, localized maximum 1-hour NO_2 concentrations, 24-hour and annual PM_{10} concentrations.

Please refer to Section 4.2, *Air Quality*, of ~~this~~ the Draft EIR for further discussion of this topic.

As analyzed in Section R4.10, *Traffic and Circulation*, of this Recirculated Draft EIR, even with the incorporation of Mitigation Measure RTRAF-1 to decrease the maximum hourly one-way haul truck trips

during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) from 20 to 10 utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and from 25 to 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour), the Project would exceed Caltrans threshold criteria at five intersections on Beach Boulevard during the A.M. and/or P.M. peak hours under Operating Year (2017) Plus Project conditions in the City of Huntington Beach. Under the worst-case scenario, these intersections, listed below, would have significant and unavoidable short-term impacts under Operating Year (2017) Plus Project conditions.

- Beach Boulevard at Edinger Avenue – A.M. and P.M. peak hours
- Beach Boulevard at Heil Avenue - P.M. peak hour
- Beach Boulevard at Warner Avenue - P.M. peak hour
- Beach Boulevard at Slater Avenue - P.M. peak hour
- Beach Boulevard at Talbert Avenue – mid-day and P.M. peak hours

Please refer to Section R4.10, *Traffic and Circulation*, of this Recirculated Draft EIR for further discussion of these impacts.

CEQA Guidelines Section 15126.2(b) also requires a description of the reasons why the Project is being proposed, despite the significant and unavoidable impacts associated with the Project. The reasons why this Project has been proposed are grounded in a comprehensive listing of Project objectives included in Section 2.0, *Project Description*, of this EIR. In 2003, DTSC entered into an Imminent and Substantial Endangerment Determination Consent Order (I&SE CO), Docket No. I&SE CO 02/03-007, and an Imminent and Substantial Endangerment Determination and Order and Remedial Action Order (I&SE-RAO), Docket No. I&SE-RAO 02/03-018, with ten Responsible Parties (RPs).

As discussed in Section R2.0, over the past approximately 30 years, there have been numerous and extensive investigations conducted at the Site, which led up to preparation of the RAP. These investigations included, but are not limited to, historic records review; several Remedial Investigations (RI) to define the nature and extent of contamination; two Baseline Health Risk Assessments (BHRA) to evaluate potential human health risks associated with the Site; and a Feasibility Study (FS) and Revised Feasibility Study (RFS) to evaluate several remedial action alternatives for the Site (summarized below) and present the rationale for selecting the preferred alternative. The stated objectives of the RFS were to evaluate remedial technologies available to address impacted media at the Site, to evaluate and confirm the appropriateness of process options to implement those technologies, to assemble remedial alternatives and evaluate them against the nine criteria set forth in the National Contingency Plan ("NCP") (summarized below), and to recommend a preferred alternative. The NCP, under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), describes the organizational structure and procedures for preparing for and responding to discharges of oil, hazardous substances, pollutants, and contaminants. The RFS concluded that the Project being proposed as part of the RAP is the preferred Alternative to remediate the Site. Accordingly, the Project is being considered by DTSC, notwithstanding the significant and unavoidable potential for short-term air quality and traffic impacts associated with the Project.

It is acknowledged that Section 5.0, *Alternatives*, of the Draft EIR includes analysis of "Alternative 3" to the Project, which would reduce the Project's potentially significant short-term regional air quality NO_x impact

and the annual localized PM_{10} impact to less than significant levels. However, worst-case hourly emissions under Alternative 3 would be similar to those under the Project, and are predicted to result in a significant and unavoidable localized NO_2 impact, even with incorporation of feasible mitigation measures and reduction strategies. Also, Alternative 3, due to the 2020 background conditions resulting from the longer duration in implementing Alternative 3, would produce eight (8) significant and unavoidable impacted traffic intersections, compared to five (5) under the Project. Rather than approximately 12 months of construction activities that would occur under the Project, Alternative 3 would result in approximately 36 months of construction activities. It is acknowledged that this Alternative would include less intensive daily construction activities during implementation. However, the length of construction activities would obviously be more apparent and perceivable by the surrounding community compared to the Project, and the end result of the remediation activities would be the same capped Site as the Project. For these reasons, this Alternative would not meet a key objective for the Project (Objective No. 5) which is, "*To remediate the site in a timely, expedient, and cost effective manner*." For this reason also, the Project is being considered by DTSC, notwithstanding the significant unavoidable impacts associated with the Project.

2. POTENTIAL SECONDARY EFFECTS

Section 15126.4(a)(1)(D) of the *CEQA Guidelines* requires that if mitigation measures would cause one or more significant effects in addition to those that would be caused by the Project as proposed, that the effects of the measures be discussed, but in less detail than the significant effects of the Project. With regard to this section of the *CEQA Guidelines*, the Project's proposed mitigation measures that could cause potential impacts were evaluated. The following provides a discussion of the potential secondary effects that could occur as a result of implementation of the Project mitigation measures, listed by environmental issue area. Only those EIR Sections that contain mitigation measures are addressed.

Noise

Mitigation Measure NOISE-1 requires the RPs to provide a temporary noise barrier to reduce noise levels at the nearby residences to acceptable nighttime levels and/or obtain an exemption to the City Noise Ordinance should a blower be temporarily utilized during nighttime hours during Pit F excavation activities. Mitigation Measure NOISE-2 requires the RPs to retain the services of a qualified acoustical engineer with expertise in design of sound isolations to ensure the mechanical fans and/or other related mechanical components to the cap system installed for long-term use is designed so as to meet the City's exterior noise limits. Implementation of these mitigation measures would not result in secondary environmental impacts.

Traffic/Transportation

~~Mitigation Measure TRAF-1 through TRAF-5 utilizes signal timing optimization to reduce delay times at the impacts intersections. These mitigation measures would result in beneficial effects on traffic/transportation, no secondary impacts would occur.~~ Mitigation Measure RTRAF-1 would limit the maximum hourly one-way haul truck trips during each of the P.M. peak hours (4:00 to 5:00 P.M. and 5:00 to 6:00 P.M.) to utilizing Beach Boulevard (10 in-bound trips per hour and 10 out-bound trips per hour) and 15 utilizing Brookhurst Street (15 in-bound trips per hour and 15 out-bound trips per hour). This mitigation measure would serve to minimize traffic impacts along the Project's proposed haul routes and would not result in any secondary environmental impacts.

Revised Appendix F

Noise Worksheets
(Off-Site Haul Truck Noise Calculations Only)

Appendix

- On-Site Implementation of RAP Noise Calculations

RAP – ASCON Landfill Site

DRAFT EIR

Noise Worksheets

Provided by PCR Services Corporation

- On-Site Implementation of RAP Noise Calculations
- Off-Site Haul Truck Noise Calculations

Project: RAP - ASCON Landfill Site

Phase 1 ***Mobilization***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	350	10
Graders	1	85	40%	350	10
Water Trucks	1	80	10%	350	10

Receptor: ***R1***

Results:

Hourly Leq: **56**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 2 ***Fit F***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	190	10
Backhoe	1	80	40%	190	10
Generator Sets	1	81	50%	190	10
Excavator	1	81	40%	190	10
Pumps	1	81	50%	190	10
Pickup Truck	1	75	40%	190	10
Pickup Truck	1	75	40%	190	10
Other Equipment (HVAC)	1	85	50%	190	10

Receptor: ***R1***

Results:

Hourly Leq: **65**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 3 ***Cut/Fill to Top of Waste***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	160	10
Excavator	1	81	40%	160	10
Rubber Tire Loaders	1	79	40%	160	10
Backhoe	1	80	40%	160	10
Other Equipment (Foam Applicator)	1	85	50%	310	10
Other Equipment (ODEX Applicator)	1	85	50%	310	10
Pickup Truck	1	75	40%	310	10
Water Trucks	1	80	10%	310	10
Dump/Haul Trucks	2	76	20%	460	10
Water Trucks	2	80	10%	460	10
Dozer	1	82	40%	460	10
Compactor (Ground)	1	83	20%	460	10
Rock Crushing	1	96	5%	800	10

Receptor: ***R1***

Results:

Hourly Leq: **64**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 4 ***Treatment Cell***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	600	10
Dozer	1	82	40%	600	10

Receptor: ***R1***

Results:

Hourly Leq: **49**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 5 ***Concrete debris***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	100	10
Dump/Haul Trucks	2	76	20%	100	10
Water Trucks	2	80	10%	100	10
Rock Crushing	1	96	5%	800	10

Receptor: ***R1***

Results:

Hourly Leq: **63**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 6 ***Fill to Final Grade***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	100	10
Dozer	1	82	40%	100	10
Water Trucks	3	80	10%	100	10

Receptor: ***R1***

Results:

Hourly Leq: **65**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 7 ***Surface Water Controls***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	100	10
Dozer	1	82	40%	100	10
Water Trucks	2	80	10%	100	10

Receptor: ***R1***

Results:

Hourly Leq: **65**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 8 ***City Parcel***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	100	10
Other Equipment (Foam Applicator)	1	85	50%	100	10
Other Equipment (ODEX Applicator)	1	85	50%	100	10
Pickup Truck	2	75	40%	100	10
Water Trucks	2	80	10%	100	10
Dump/Haul Trucks	2	76	20%	100	10

Receptor: ***R1***

Results:

Hourly Leq: **70**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 9 ***South Coast Oil Corporation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	1200	10
Rubber Tired Loader	1	79	50%	1200	10
Backhoe	1	80	40%	1200	10
Other Equipment (Foam Applicator)	1	85	50%	1200	10
Other Equipment (ODEX Applicator)	1	85	50%	1200	10
Pickup Truck	2	75	40%	1200	10
Dump/Haul Trucks	2	76	20%	1200	10
Water Trucks	1	80	10%	1200	10
Dozer	1	82	40%	1200	10

Receptor: ***R1***

Results:

Hourly Leq: **50**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 10 ***Site Restoration***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	100	10

Receptor: ***R1***

Results:

Hourly Leq: **60**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 1 ***Mobilization***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	1200	5
Graders	1	85	40%	1200	5
Water Trucks	1	80	10%	1200	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **50**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 2 ***Fit F***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	1200	5
Backhoe	1	80	40%	1200	5
Generator Sets	1	81	50%	1200	5
Excavator	1	81	40%	1200	5
Pumps	1	81	50%	1200	5
Pickup Truck	1	75	40%	1200	5
Pickup Truck	1	75	40%	1200	5
Other Equipment (HVAC)	1	85	50%	1200	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **54**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 3 ***Cut/Fill to Top of Waste***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	460	5
Excavator	1	81	40%	460	5
Rubber Tire Loaders	1	79	40%	460	5
Backhoe	1	80	40%	460	5
Other Equipment (Foam Applicator)	1	85	50%	610	5
Other Equipment (ODEX Applicator)	1	85	50%	610	5
Pickup Truck	1	75	40%	610	5
Water Trucks	1	80	10%	610	5
Dump/Haul Trucks	2	76	20%	760	5
Water Trucks	2	80	10%	760	5
Dozer	1	82	40%	760	5
Compactor (Ground)	1	83	20%	760	5
Rock Crushing	1	96	5%	800	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **63**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 4 ***Treatment Cell***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	1300	5
Dozer	1	82	40%	1300	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **47**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 5 ***Concrete debris***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	400	5
Dump/Haul Trucks	2	76	20%	400	5
Water Trucks	2	80	10%	400	5
Rock Crushing	1	96	5%	800	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **58**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 6 ***Fill to Final Grade***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	400	5
Dozer	1	82	40%	400	5
Water Trucks	3	80	10%	400	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **58**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 7 ***Surface Water Controls***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	1200	5
Dozer	1	82	40%	1200	5
Water Trucks	2	80	10%	1200	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **48**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 8 ***City Parcel***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	400	5
Other Equipment (Foam Applicator)	1	85	50%	400	5
Other Equipment (ODEX Applicator)	1	85	50%	400	5
Pickup Truck	2	75	40%	400	5
Water Trucks	2	80	10%	400	5
Dump/Haul Trucks	2	76	20%	400	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **63**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 9 ***South Coast Oil Corporation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	1800	5
Rubber Tired Loader	1	79	50%	1800	5
Backhoe	1	80	40%	1800	5
Other Equipment (Foam Applicator)	1	85	50%	1800	5
Other Equipment (ODEX Applicator)	1	85	50%	1800	5
Pickup Truck	2	75	40%	1800	5
Dump/Haul Trucks	2	76	20%	1800	5
Water Trucks	1	80	10%	1800	5
Dozer	1	82	40%	1800	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **51**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 10 ***Site Restoration***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	400	5

Receptor: ***R2: Edison High School***

Results:

Hourly Leq: **53**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 1 ***Mobilization***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	850	5
Graders	1	85	40%	850	5
Water Trucks	1	80	10%	850	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: **53**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 2 ***Fit F***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	1150	5
Backhoe	1	80	40%	1150	5
Generator Sets	1	81	50%	1150	5
Excavator	1	81	40%	1150	5
Pumps	1	81	50%	1150	5
Pickup Truck	1	75	40%	1150	5
Pickup Truck	1	75	40%	1150	5
Other Equipment (HVAC)	1	85	50%	1150	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: **54**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 3 ***Cut/Fill to Top of Waste***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	330	5
Excavator	1	81	40%	330	5
Rubber Tire Loaders	1	79	40%	330	5
Backhoe	1	80	40%	330	5
Other Equipment (Foam Applicator)	1	85	50%	480	5
Other Equipment (ODEX Applicator)	1	85	50%	480	5
Pickup Truck	1	75	40%	480	5
Water Trucks	1	80	10%	480	5
Dump/Haul Trucks	2	76	20%	630	5
Water Trucks	2	80	10%	630	5
Dozer	1	82	40%	630	5
Compactor (Ground)	1	83	20%	630	5
Rock Crushing	1	96	5%	800	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: **65**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 4 ***Treatment Cell***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	1150	5
Dozer	1	82	40%	1150	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: **48**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 5 ***Concrete debris***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	350	5
Dump/Haul Trucks	2	76	20%	350	5
Water Trucks	2	80	10%	350	5
Rock Crushing	1	96	5%	800	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: 59

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 6 ***Fill to Final Grade***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	350	5
Dozer	1	82	40%	350	5
Water Trucks	3	80	10%	350	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: 59

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 7 ***Surface Water Controls***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	850	5
Dozer	1	82	40%	850	5
Water Trucks	2	80	10%	850	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: 51

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 8 ***City Parcel***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	350	5
Other Equipment (Foam Applicator)	1	85	50%	350	5
Other Equipment (ODEX Applicator)	1	85	50%	350	5
Pickup Truck	2	75	40%	350	5
Water Trucks	2	80	10%	350	5
Dump/Haul Trucks	2	76	20%	350	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: 64

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 9 ***South Coast Oil Corporation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	1500	5
Rubber Tired Loader	1	79	50%	1500	5
Backhoe	1	80	40%	1500	5
Other Equipment (Foam Applicator)	1	85	50%	1500	5
Other Equipment (ODEX Applicator)	1	85	50%	1500	5
Pickup Truck	2	75	40%	1500	5
Dump/Haul Trucks	2	76	20%	1500	5
Water Trucks	1	80	10%	1500	5
Dozer	1	82	40%	1500	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: **53**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 10 ***Site Restoration***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	350	5

Receptor: ***R2: Fire Station***

Results:

Hourly Leq: **54**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 1 ***Mobilization***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	500	5
Graders	1	85	40%	500	5
Water Trucks	1	80	10%	500	5

Receptor: ***R3***

Results:

Hourly Leq: **57**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 2 ***Fit F***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	1500	5
Backhoe	1	80	40%	1500	5
Generator Sets	1	81	50%	1500	5
Excavator	1	81	40%	1500	5
Pumps	1	81	50%	1500	5
Pickup Truck	1	75	40%	1500	5
Pickup Truck	1	75	40%	1500	5
Other Equipment (HVAC)	1	85	50%	1500	5

Receptor: ***R3***

Results:

Hourly Leq: **52**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 3 ***Cut/Fill to Top of Waste***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	500	5
Excavator	1	81	40%	500	5
Rubber Tire Loaders	1	79	40%	500	5
Backhoe	1	80	40%	500	5
Other Equipment (Foam Applicator)	1	85	50%	650	5
Other Equipment (ODEX Applicator)	1	85	50%	650	5
Pickup Truck	1	75	40%	650	5
Water Trucks	1	80	10%	650	5
Dump/Haul Trucks	2	76	20%	800	5
Water Trucks	2	80	10%	800	5
Dozer	1	82	40%	800	5
Compactor (Ground)	1	83	20%	800	5
Rock Crushing	1	96	5%	800	5

Receptor: ***R3***

Results:

Hourly Leq: **62**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 4 ***Treatment Cell***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	1000	5
Dozer	1	82	40%	1000	5

Receptor: ***R3***

Results:

Hourly Leq: **49**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 5 ***Concrete debris***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	300	5
Dump/Haul Trucks	2	76	20%	300	5
Water Trucks	2	80	10%	300	5
Rock Crushing	1	96	5%	800	5

Receptor: ***R3***

Results:

Hourly Leq: **60**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 6 ***Fill to Final Grade***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	300	5
Dozer	1	82	40%	300	5
Water Trucks	3	80	10%	300	5

Receptor: ***R3***

Results:

Hourly Leq: **61**

Source for Ref. Noise Levels: FHWA, RCNM 2005

Project: RAP - ASCON Landfill Site

Phase 7 ***Surface Water Controls***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Compactor (Ground)	1	83	20%	300	5
Dozer	1	82	40%	300	5
Water Trucks	2	80	10%	300	5

Receptor: ***R3***

Results:

Hourly Leq: **60**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 8 ***City Parcel***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	300	5
Other Equipment (Foam Applicator)	1	85	50%	300	5
Other Equipment (ODEX Applicator)	1	85	50%	300	5
Pickup Truck	2	75	40%	300	5
Water Trucks	2	80	10%	300	5
Dump/Haul Trucks	2	76	20%	300	5

Receptor: ***R3***

Results:

Hourly Leq: **66**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 9 ***South Coast Oil Corporation***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Excavator	1	81	40%	900	5
Rubber Tired Loader	1	79	50%	900	5
Backhoe	1	80	40%	900	5
Other Equipment (Foam Applicator)	1	85	50%	900	5
Other Equipment (ODEX Applicator)	1	85	50%	900	5
Pickup Truck	2	75	40%	900	5
Dump/Haul Trucks	2	76	20%	900	5
Water Trucks	1	80	10%	900	5
Dozer	1	82	40%	900	5

Receptor: ***R3***

Results:

Hourly Leq: **57**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Project: RAP - ASCON Landfill Site

Phase 10 ***Site Restoration***

Equipment

Description	No. of Equip.	Reference Noise Level at 50ft, Lmax	Acoustical Usage Factor	Distance to Receptor, ft	Estimated Noise Shielding, dBA
Backhoe	1	80	40%	300	5

Receptor: ***R3***

Results:

Hourly Leq: **55**

Source for Ref. Noise Levels: FHWA, RCNM 2005

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Appendix

- Off-Site Haul Truck Noise Calculations

Roadway Traffic Noise Calculations
1

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Center Ave. and Edinger Ave.	45	5288	5997	0	75.9	73.7	72.2	77.2	74.9	73.5
Beach Boulevard between Edinger Ave. and Stark Dr.	45	4653	5614	0	75.9	73.5	72.0	77.1	74.8	73.3
Beach Boulevard between Stark Dr. and MacDonald Dr.	45	4571	5364	0	75.9	73.5	71.9	77.1	74.7	73.2
Beach Boulevard between MacDonald Dr. and Heil Ave.	45	4573	5406	0	75.9	73.5	72.0	77.1	74.7	73.2
Beach Boulevard between Heil Ave. and Terry Dr.	45	4579	4956	0	75.5	73.1	71.6	76.8	74.4	72.8
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Center Ave. and Edinger Ave.	45	5813	6696	0	76.4	74.2	72.7	77.6	75.4	73.9
Beach Boulevard between Edinger Ave. and Stark Dr.	45	5111	6202	0	76.3	74.0	72.5	77.5	75.2	73.7
Beach Boulevard between Stark Dr. and MacDonald Dr.	45	5027	5946	0	76.3	73.9	72.4	77.5	75.1	73.6
Beach Boulevard between MacDonald Dr. and Heil Ave.	45	5029	5988	0	76.4	74.0	72.4	77.6	75.2	73.6
Beach Boulevard between Heil Ave. and Terry Dr.	45	5035	5525	0	76.0	73.6	72.1	77.2	74.8	73.3
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Center Ave. and Edinger Ave.	45	5960	6819	0	76.5	74.3	72.8	77.7	75.5	74.0
Beach Boulevard between Edinger Ave. and Stark Dr.	45	5258	6325	0	76.4	74.1	72.6	77.6	75.3	73.8
Beach Boulevard between Stark Dr. and MacDonald Dr.	45	5173	6069	0	76.4	74.0	72.5	77.6	75.2	73.7
Beach Boulevard between MacDonald Dr. and Heil Ave.	45	5175	6111	0	76.5	74.0	72.5	77.7	75.3	73.7
Beach Boulevard between Heil Ave. and Terry Dr.	45	5181	5648	0	76.1	73.7	72.2	77.3	74.9	73.4

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Beach Boulevard between Center Ave. and Edinger Ave.	0.1	0.6	0.1	0.5
Beach Boulevard between Edinger Ave. and Stark Dr.	0.1	0.5	0.1	0.5
Beach Boulevard between Stark Dr. and MacDonald Dr.	0.1	0.5	0.1	0.5
Beach Boulevard between MacDonald Dr. and Heil Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Heil Ave. and Terry Dr.	0.1	0.5	0.1	0.5

	% of ADT			
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Terry Dr. and Warner Ave.	45	4580	4920	0	75.5	73.1	71.6	76.7	74.3	72.8
Beach Boulevard between Warner Ave. and Slater Ave.	45	4080	4739	0	75.3	72.9	71.4	76.6	74.2	72.6
Beach Boulevard between Slater Ave. and Newman Ave.	45	3774	4580	0	75.2	72.8	71.3	76.4	74.0	72.5
Beach Boulevard between Newman Ave. and Talbert Ave.	45	3686	4559	0	75.2	72.8	71.2	76.4	74.0	72.5
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	45	3437	4407	0	75.0	72.6	71.1	76.2	73.8	72.3
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Terry Dr. and Warner Ave.	45	5036	5488	0	76.0	73.6	72.0	77.2	74.8	73.3
Beach Boulevard between Warner Ave. and Slater Ave.	45	4560	5354	0	75.9	73.5	71.9	77.1	74.7	73.2
Beach Boulevard between Slater Ave. and Newman Ave.	45	4248	5196	0	75.7	73.3	71.8	77.0	74.6	73.0
Beach Boulevard between Newman Ave. and Talbert Ave.	45	4158	5174	0	75.7	73.3	71.8	76.9	74.5	73.0
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	45	3917	5052	0	75.6	73.2	71.7	76.8	74.4	72.9
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Terry Dr. and Warner Ave.	45	5182	5610	0	76.1	73.7	72.1	77.3	74.9	73.4
Beach Boulevard between Warner Ave. and Slater Ave.	45	4709	5477	0	76.0	73.6	72.0	77.2	74.8	73.2
Beach Boulevard between Slater Ave. and Newman Ave.	45	4398	5320	0	75.8	73.4	71.9	77.1	74.7	73.1
Beach Boulevard between Newman Ave. and Talbert Ave.	45	4309	5297	0	75.8	73.4	71.9	77.0	74.6	73.1
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	45	4068	5175	0	75.7	73.3	71.8	76.9	74.5	73.0

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Beach Boulevard between Terry Dr. and Warner Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Warner Ave. and Slater Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Slater Ave. and Newman Ave.	0.1	0.7	0.1	0.7
Beach Boulevard between Newman Ave. and Talbert Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	0.1	0.7	0.1	0.7

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	45	2842	3600	0	72.9	71.0	69.7	74.2	72.2	70.9
Beach Boulevard between Garfield Ave. and Yorktown Ave.	45	2675	3471	0	73.0	71.0	69.6	74.3	72.2	70.9
Beach Boulevard between Yorktown Ave. and Utica Ave.	45	2548	3362	0	74.4	71.8	70.1	75.6	73.0	71.3
Beach Boulevard between Utica Ave. and Adams Ave.	45	2356	3131	0	74.1	71.4	69.8	75.3	72.7	71.0
Beach Boulevard between Adams Ave. and Indianapolis Ave.	45	2059	2599	0	73.3	70.6	69.0	74.5	71.9	70.2
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	45	3248	4112	0	73.5	71.6	70.3	74.7	72.8	71.5
Beach Boulevard between Garfield Ave. and Yorktown Ave.	45	3054	3965	0	73.6	71.6	70.2	74.8	72.8	71.4
Beach Boulevard between Yorktown Ave. and Utica Ave.	45	2925	3858	0	75.0	72.4	70.7	76.2	73.6	71.9
Beach Boulevard between Utica Ave. and Adams Ave.	45	2752	3653	0	74.8	72.1	70.5	76.0	73.3	71.7
Beach Boulevard between Adams Ave. and Indianapolis Ave.	45	2378	3023	0	73.9	71.3	69.7	75.2	72.5	70.9
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	45	3401	4237	0	73.6	71.7	70.4	74.9	72.9	71.6
Beach Boulevard between Garfield Ave. and Yorktown Ave.	45	3208	4090	0	73.8	71.7	70.4	75.0	72.9	71.6
Beach Boulevard between Yorktown Ave. and Utica Ave.	45	3078	3982	0	75.1	72.5	70.9	76.3	73.7	72.1
Beach Boulevard between Utica Ave. and Adams Ave.	45	2906	3777	0	74.9	72.3	70.6	76.1	73.5	71.8
Beach Boulevard between Adams Ave. and Indianapolis Ave.	45	2533	3149	0	74.1	71.5	69.8	75.3	72.7	71.1

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	0.1	0.7	0.2	0.7
Beach Boulevard between Garfield Ave. and Yorktown Ave.	0.1	0.7	0.2	0.7
Beach Boulevard between Yorktown Ave. and Utica Ave.	0.1	0.7	0.1	0.7
Beach Boulevard between Utica Ave. and Adams Ave.	0.2	0.8	0.1	0.8
Beach Boulevard between Adams Ave. and Indianapolis Ave.	0.2	0.8	0.1	0.8

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	45	1637	2224	0	72.6	70.0	68.3	73.8	71.2	69.5
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	45	1049	1645	0	71.0	68.5	66.9	72.2	69.7	68.1
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	45	1000	1615	0	70.9	68.4	66.8	72.1	69.6	68.0
Pacific Coast Hwy between Beach Blvd. and Newland St.	45	3173	3572	0	74.7	72.0	70.4	75.9	73.2	71.6
Newland Street between Pacific Coast Hwy and Hamilton Ave.	35	552	660	0	67.4	63.3	61.3	68.6	64.6	62.5
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	45	1943	2636	0	73.3	70.7	69.1	74.6	71.9	70.3
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	45	1193	1813	0	71.4	68.9	67.3	72.6	70.1	68.5
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	45	1237	1941	0	71.7	69.2	67.6	72.9	70.4	68.8
Pacific Coast Hwy between Beach Blvd. and Newland St.	45	3585	4127	0	75.3	72.6	71.0	76.5	73.9	72.2
Newland Street between Pacific Coast Hwy and Hamilton Ave.	35	568	680	0	67.5	63.5	61.4	68.8	64.7	62.6
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	45	2098	2762	0	73.5	70.9	69.3	74.8	72.1	70.5
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	45	1337	1933	0	71.7	69.2	67.6	72.9	70.4	68.8
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	45	1381	2061	0	72.0	69.5	67.9	73.2	70.7	69.1
Pacific Coast Hwy between Beach Blvd. and Newland St.	45	3734	4251	0	75.4	72.8	71.1	76.6	74.0	72.4
Newland Street between Pacific Coast Hwy and Hamilton Ave.	35	720	817	0	68.3	64.3	62.2	69.6	65.5	63.4

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	0.2	0.9	0.2	1.0
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	0.3	0.7	0.3	0.7
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	0.3	1.1	0.3	1.1
Pacific Coast Hwy between Beach Blvd. and Newland St.	0.1	0.8	0.1	0.7
Newland Street between Pacific Coast Hwy and Hamilton Ave.	0.8	0.9	0.8	1.0

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Hamilton Avenue between Newland St. and Magnolia St.	30	870	923	0	65.8	62.9	61.1	67.0	64.1	62.3
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	40	575	604	0	66.4	63.4	61.7	67.6	64.7	62.9
Pacific Coast Hyw between Magnolia St and Brookhurst St.	45	3214	3777	0	75.2	72.4	70.8	76.5	73.7	72.0
Brookhurst Street between Pacific Coast Hwy and Bushard St.	45	1165	1321	0	68.8	66.8	65.4	70.1	68.0	66.7
Brookhurst Street between Bushard St. and Banning Ave.	45	1174	1280	0	68.7	66.7	65.3	69.9	67.9	66.5
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Hamilton Avenue between Newland St. and Magnolia St.	30	896	951	0	66.0	63.0	61.2	67.2	64.2	62.5
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	40	598	630	0	66.6	63.6	61.9	67.8	64.8	63.1
Pacific Coast Hyw between Magnolia St and Brookhurst St.	45	3632	4346	0	75.8	73.1	71.4	77.1	74.3	72.6
Brookhurst Street between Pacific Coast Hwy and Bushard St.	45	1203	1365	0	69.0	67.0	65.6	70.2	68.2	66.8
Brookhurst Street between Bushard St. and Banning Ave.	45	1212	1324	0	68.9	66.8	65.5	70.1	68.0	66.7
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Hamilton Avenue between Newland St. and Magnolia St.	30	991	1028	0	66.3	63.3	61.6	67.5	64.5	62.8
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	40	674	719	0	67.2	64.2	62.4	68.4	65.4	63.7
Pacific Coast Hyw between Magnolia St and Brookhurst St.	45	3784	4498	0	76.0	73.2	71.5	77.2	74.4	72.7
Brookhurst Street between Pacific Coast Hwy and Bushard St.	45	1353	1515	0	69.4	67.4	66.0	70.7	68.6	67.3
Brookhurst Street between Bushard St. and Banning Ave.	45	1362	1474	0	69.3	67.3	65.9	70.5	68.5	67.1

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Hamilton Avenue between Newland St. and Magnolia St.	0.3	0.4	0.3	0.5
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	0.6	0.7	0.6	0.8
Pacific Coast Hyw between Magnolia St and Brookhurst St.	0.1	0.7	0.1	0.7
Brookhurst Street between Pacific Coast Hwy and Bushard St.	0.4	0.6	0.5	0.6
Brookhurst Street between Bushard St. and Banning Ave.	0.5	0.6	0.4	0.6

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Banning Ave. and Hamilton Ave.	45	1232	1382	0	70.5	67.9	66.3	71.8	69.1	67.5
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	45	1644	2015	0	72.2	69.5	67.9	73.4	70.7	69.1
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	45	1644	2235	0	72.6	70.0	68.4	73.8	71.2	69.6
Brookhurst Street between Indianapolis Ave. and Adams Ave.	45	1837	2550	0	73.2	70.6	68.9	74.4	71.8	70.1
Brookhurst Street between Adams Ave. and Yorktown Ave.	45	2203	2937	0	73.8	71.2	69.5	75.0	72.4	70.8
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Banning Ave. and Hamilton Ave.	45	1272	1429	0	70.7	68.0	66.4	71.9	69.3	67.6
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	45	1696	2081	0	72.3	69.7	68.0	73.5	70.9	69.3
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	45	1696	2308	0	72.8	70.1	68.5	74.0	71.3	69.7
Brookhurst Street between Indianapolis Ave. and Adams Ave.	45	1895	2631	0	73.3	70.7	69.1	74.5	71.9	70.3
Brookhurst Street between Adams Ave. and Yorktown Ave.	45	2282	3040	0	74.0	71.3	69.7	75.2	72.5	70.9
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Banning Ave. and Hamilton Ave.	45	1422	1579	0	71.1	68.5	66.8	72.3	69.7	68.1
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	45	1850	2235	0	72.6	70.0	68.4	73.8	71.2	69.6
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	45	1850	2461	0	73.0	70.4	68.8	74.3	71.6	70.0
Brookhurst Street between Indianapolis Ave. and Adams Ave.	45	2049	2784	0	73.6	70.9	69.3	74.8	72.2	70.5
Brookhurst Street between Adams Ave. and Yorktown Ave.	45	2434	3193	0	74.2	71.5	69.9	75.4	72.7	71.1

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Brookhurst Street between Banning Ave. and Hamilton Ave.	0.4	0.6	0.4	0.5
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	0.3	0.5	0.3	0.4
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	0.3	0.4	0.3	0.5
Brookhurst Street between Indianapolis Ave. and Adams Ave.	0.3	0.4	0.3	0.4
Brookhurst Street between Adams Ave. and Yorktown Ave.	0.2	0.3	0.2	0.4

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Yorktown Ave. and Garfield Ave.	45	2153	3022	0	74.3	71.5	69.8	75.5	72.7	71.0
Brookhurst Street between Garfield Ave. and Ellis Ave.	45	2338	3128	0	74.1	71.4	69.8	75.3	72.7	71.0
Brookhurst Street between Ellis Ave. and Quail Ave.	45	2511	3234	0	74.2	71.6	70.0	75.4	72.8	71.2
Brookhurst Street between Quail Ave. and Stonefield Dr.	45	2698	3633	0	74.7	72.1	70.5	76.0	73.3	71.7
Brookhurst Street between Stonefield Dr. and Talbert Ave.	45	2839	3730	0	74.9	72.2	70.6	76.1	73.4	71.8
Future No Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Yorktown Ave. and Garfield Ave.	45	2272	3184	0	74.5	71.7	70.0	75.7	72.9	71.2
Brookhurst Street between Garfield Ave. and Ellis Ave.	45	2462	3293	0	74.3	71.7	70.0	75.5	72.9	71.3
Brookhurst Street between Ellis Ave. and Quail Ave.	45	2635	3396	0	74.4	71.8	70.2	75.7	73.0	71.4
Brookhurst Street between Quail Ave. and Stonefield Dr.	45	2828	3807	0	74.9	72.3	70.7	76.2	73.5	71.9
Brookhurst Street between Stonefield Dr. and Talbert Ave.	45	2973	3907	0	75.1	72.4	70.8	76.3	73.6	72.0
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Yorktown Ave. and Garfield Ave.	45	2424	3337	0	74.7	71.9	70.2	75.9	73.1	71.4
Brookhurst Street between Garfield Ave. and Ellis Ave.	45	2614	3446	0	74.5	71.9	70.2	75.7	73.1	71.4
Brookhurst Street between Ellis Ave. and Quail Ave.	45	2787	3548	0	74.6	72.0	70.4	75.8	73.2	71.6
Brookhurst Street between Quail Ave. and Stonefield Dr.	45	2980	3959	0	75.1	72.5	70.8	76.3	73.7	72.1
Brookhurst Street between Stonefield Dr. and Talbert Ave.	45	3125	4059	0	75.2	72.6	70.9	76.4	73.8	72.2

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Brookhurst Street between Yorktown Ave. and Garfield Ave.	0.2	0.4	0.2	0.4
Brookhurst Street between Garfield Ave. and Ellis Ave.	0.2	0.4	0.2	0.4
Brookhurst Street between Ellis Ave. and Quail Ave.	0.2	0.4	0.1	0.4
Brookhurst Street between Quail Ave. and Stonefield Dr.	0.2	0.4	0.1	0.3
Brookhurst Street between Stonefield Dr. and Talbert Ave.	0.2	0.4	0.1	0.3

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Center Ave. and Edinger Ave.	45	5288	5997	0	75.9	73.7	72.2	77.2	74.9	73.5
Beach Boulevard between Edinger Ave. and Stark Dr.	45	4653	5614	0	75.9	73.5	72.0	77.1	74.8	73.3
Beach Boulevard between Stark Dr. and MacDonald Dr.	45	4571	5364	0	75.9	73.5	71.9	77.1	74.7	73.2
Beach Boulevard between MacDonald Dr. and Heil Ave.	45	4573	5406	0	75.9	73.5	72.0	77.1	74.7	73.2
Beach Boulevard between Heil Ave. and Terry Dr.	45	4579	4956	0	75.5	73.1	71.6	76.8	74.4	72.8
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Center Ave. and Edinger Ave.	45	5434	6119	0	76.0	73.8	72.3	77.2	75.0	73.6
Beach Boulevard between Edinger Ave. and Stark Dr.	45	4799	5736	0	75.9	73.6	72.1	77.2	74.9	73.4
Beach Boulevard between Stark Dr. and MacDonald Dr.	45	4717	5486	0	76.0	73.6	72.0	77.2	74.8	73.3
Beach Boulevard between MacDonald Dr. and Heil Ave.	45	4719	5528	0	76.0	73.6	72.1	77.2	74.8	73.3
Beach Boulevard between Heil Ave. and Terry Dr.	45	4725	5078	0	75.6	73.2	71.7	76.9	74.5	72.9
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Center Ave. and Edinger Ave.	45	5960	6819	0	76.5	74.3	72.8	77.7	75.5	74.0
Beach Boulevard between Edinger Ave. and Stark Dr.	45	5258	6325	0	76.4	74.1	72.6	77.6	75.3	73.8
Beach Boulevard between Stark Dr. and MacDonald Dr.	45	5173	6069	0	76.4	74.0	72.5	77.6	75.2	73.7
Beach Boulevard between MacDonald Dr. and Heil Ave.	45	5175	6111	0	76.5	74.0	72.5	77.7	75.3	73.7
Beach Boulevard between Heil Ave. and Terry Dr.	45	5181	5648	0	76.1	73.7	72.2	77.3	74.9	73.4

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Beach Boulevard between Center Ave. and Edinger Ave.	0.1	0.6	0.0	0.5
Beach Boulevard between Edinger Ave. and Stark Dr.	0.1	0.5	0.1	0.5
Beach Boulevard between Stark Dr. and MacDonald Dr.	0.1	0.5	0.1	0.5
Beach Boulevard between MacDonald Dr. and Heil Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Heil Ave. and Terry Dr.	0.1	0.5	0.1	0.5

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Terry Dr. and Warner Ave.	45	4580	4920	0	75.5	73.1	71.6	76.7	74.3	72.8
Beach Boulevard between Warner Ave. and Slater Ave.	45	4080	4739	0	75.3	72.9	71.4	76.6	74.2	72.6
Beach Boulevard between Slater Ave. and Newman Ave.	45	3774	4580	0	75.2	72.8	71.3	76.4	74.0	72.5
Beach Boulevard between Newman Ave. and Talbert Ave.	45	3686	4559	0	75.2	72.8	71.2	76.4	74.0	72.5
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	45	3437	4407	0	75.0	72.6	71.1	76.2	73.8	72.3
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Terry Dr. and Warner Ave.	45	4726	5042	0	75.6	73.2	71.7	76.8	74.4	72.9
Beach Boulevard between Warner Ave. and Slater Ave.	45	4229	4861	0	75.5	73.1	71.5	76.7	74.3	72.7
Beach Boulevard between Slater Ave. and Newman Ave.	45	3925	4704	0	75.3	72.9	71.4	76.5	74.1	72.6
Beach Boulevard between Newman Ave. and Talbert Ave.	45	3837	4683	0	75.3	72.9	71.4	76.5	74.1	72.6
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	45	3588	4531	0	75.2	72.7	71.2	76.4	74.0	72.4
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Terry Dr. and Warner Ave.	45	5182	5610	0	76.1	73.7	72.1	77.3	74.9	73.4
Beach Boulevard between Warner Ave. and Slater Ave.	45	4709	5477	0	76.0	73.6	72.0	77.2	74.8	73.2
Beach Boulevard between Slater Ave. and Newman Ave.	45	4398	5320	0	75.8	73.4	71.9	77.1	74.7	73.1
Beach Boulevard between Newman Ave. and Talbert Ave.	45	4309	5297	0	75.8	73.4	71.9	77.0	74.6	73.1
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	45	4068	5175	0	75.7	73.3	71.8	76.9	74.5	73.0

CNEL

Summary	25 ft. from ROW		At ROW	
Roadway/Segment	Project Increment	Cumulative Increment	Project Increment	Cumulative Increment
Beach Boulevard between Terry Dr. and Warner Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Warner Ave. and Slater Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Slater Ave. and Newman Ave.	0.1	0.7	0.1	0.7
Beach Boulevard between Newman Ave. and Talbert Ave.	0.1	0.6	0.1	0.6
Beach Boulevard between Talbert Ave. and Main St./Ellis Ave.	0.2	0.7	0.2	0.7

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	45	2842	3600	0	72.9	71.0	69.7	74.2	72.2	70.9
Beach Boulevard between Garfield Ave. and Yorktown Ave.	45	2675	3471	0	73.0	71.0	69.6	74.3	72.2	70.9
Beach Boulevard between Yorktown Ave. and Utica Ave.	45	2548	3362	0	74.4	71.8	70.1	75.6	73.0	71.3
Beach Boulevard between Utica Ave. and Adams Ave.	45	2356	3131	0	74.1	71.4	69.8	75.3	72.7	71.0
Beach Boulevard between Adams Ave. and Indianapolis Ave.	45	2059	2599	0	73.3	70.6	69.0	74.5	71.9	70.2
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	45	2995	3725	0	73.1	71.2	69.8	74.3	72.4	71.0
Beach Boulevard between Garfield Ave. and Yorktown Ave.	45	2828	3596	0	73.2	71.2	69.8	74.4	72.4	71.0
Beach Boulevard between Yorktown Ave. and Utica Ave.	45	2701	3487	0	74.6	71.9	70.3	75.8	73.1	71.5
Beach Boulevard between Utica Ave. and Adams Ave.	45	2509	3256	0	74.3	71.6	70.0	75.5	72.8	71.2
Beach Boulevard between Adams Ave. and Indianapolis Ave.	45	2214	2725	0	73.5	70.8	69.2	74.7	72.1	70.4
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	45	3401	4237	0	73.6	71.7	70.4	74.9	72.9	71.6
Beach Boulevard between Garfield Ave. and Yorktown Ave.	45	3208	4090	0	73.8	71.7	70.4	75.0	72.9	71.6
Beach Boulevard between Yorktown Ave. and Utica Ave.	45	3078	3982	0	75.1	72.5	70.9	76.3	73.7	72.1
Beach Boulevard between Utica Ave. and Adams Ave.	45	2906	3777	0	74.9	72.3	70.6	76.1	73.5	71.8
Beach Boulevard between Adams Ave. and Indianapolis Ave.	45	2533	3149	0	74.1	71.5	69.8	75.3	72.7	71.1

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Beach Boulevard between Main St./Ellis Ave and Garfield Ave.	0.2	0.7	0.1	0.7
Beach Boulevard between Garfield Ave. and Yorktown Ave.	0.2	0.7	0.1	0.7
Beach Boulevard between Yorktown Ave. and Utica Ave.	0.1	0.7	0.2	0.7
Beach Boulevard between Utica Ave. and Adams Ave.	0.1	0.8	0.2	0.8
Beach Boulevard between Adams Ave. and Indianapolis Ave.	0.2	0.8	0.2	0.8

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	45	1637	2224	0	72.6	70.0	68.3	73.8	71.2	69.5
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	45	1049	1645	0	71.0	68.5	66.9	72.2	69.7	68.1
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	45	1000	1615	0	70.9	68.4	66.8	72.1	69.6	68.0
Pacific Coast Hwy between Beach Blvd. and Newland St.	45	3173	3572	0	74.7	72.0	70.4	75.9	73.2	71.6
Newland Street between Pacific Coast Hwy and Hamilton Ave.	35	552	660	0	67.4	63.3	61.3	68.6	64.6	62.5
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	45	1793	2350	0	72.8	70.2	68.6	74.1	71.4	69.8
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	45	1193	1765	0	71.3	68.8	67.2	72.5	70.0	68.4
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	45	1144	1735	0	71.2	68.7	67.1	72.5	69.9	68.4
Pacific Coast Hwy between Beach Blvd. and Newland St.	45	3322	3697	0	74.8	72.2	70.5	76.0	73.4	71.8
Newland Street between Pacific Coast Hwy and Hamilton Ave.	35	704	797	0	68.2	64.2	62.1	69.4	65.4	63.3
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	45	2098	2762	0	73.5	70.9	69.3	74.8	72.1	70.5
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	45	1337	1933	0	71.7	69.2	67.6	72.9	70.4	68.8
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	45	1381	2061	0	72.0	69.5	67.9	73.2	70.7	69.1
Pacific Coast Hwy between Beach Blvd. and Newland St.	45	3734	4251	0	75.4	72.8	71.1	76.6	74.0	72.4
Newland Street between Pacific Coast Hwy and Hamilton Ave.	35	720	817	0	68.3	64.3	62.2	69.6	65.5	63.4

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Beach Boulevard between Indianapolis Ave. and Atlanta Ave.	0.2	0.9	0.3	1.0
Beach Boulevard between Atlanta Ave. and Pacific View Ave.	0.3	0.7	0.3	0.7
Beach Boulevard between Pacific View Ave. and Pacific Coast Hw	0.3	1.1	0.4	1.1
Pacific Coast Hwy between Beach Blvd. and Newland St.	0.2	0.8	0.1	0.7
Newland Street between Pacific Coast Hwy and Hamilton Ave.	0.8	0.9	0.8	1.0

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Hamilton Avenue between Newland St. and Magnolia St.	30	870	923	0	65.8	62.9	61.1	67.0	64.1	62.3
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	40	575	604	0	66.4	63.4	61.7	67.6	64.7	62.9
Pacific Coast Hyw between Magnolia St and Brookhurst St.	45	3214	3777	0	75.2	72.4	70.8	76.5	73.7	72.0
Brookhurst Street between Pacific Coast Hwy and Bushard St.	45	1165	1321	0	68.8	66.8	65.4	70.1	68.0	66.7
Brookhurst Street between Bushard St. and Banning Ave.	45	1174	1280	0	68.7	66.7	65.3	69.9	67.9	66.5
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Hamilton Avenue between Newland St. and Magnolia St.	30	965	1000	0	66.2	63.2	61.5	67.4	64.4	62.7
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	40	650	693	0	67.0	64.0	62.3	68.2	65.3	63.5
Pacific Coast Hyw between Magnolia St and Brookhurst St.	45	3366	3929	0	75.4	72.6	70.9	76.6	73.8	72.1
Brookhurst Street between Pacific Coast Hwy and Bushard St.	45	1315	1471	0	69.3	67.3	65.9	70.5	68.5	67.1
Brookhurst Street between Bushard St. and Banning Ave.	45	1324	1430	0	69.2	67.2	65.8	70.4	68.4	67.0
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Hamilton Avenue between Newland St. and Magnolia St.	30	991	1028	0	66.3	63.3	61.6	67.5	64.5	62.8
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	40	674	719	0	67.2	64.2	62.4	68.4	65.4	63.7
Pacific Coast Hyw between Magnolia St and Brookhurst St.	45	3784	4498	0	76.0	73.2	71.5	77.2	74.4	72.7
Brookhurst Street between Pacific Coast Hwy and Bushard St.	45	1353	1515	0	69.4	67.4	66.0	70.7	68.6	67.3
Brookhurst Street between Bushard St. and Banning Ave.	45	1362	1474	0	69.3	67.3	65.9	70.5	68.5	67.1

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Hamilton Avenue between Newland St. and Magnolia St.	0.3	0.4	0.4	0.5
Magnolia Street between Hamilton Ave. and Pacific Coast Hwy	0.6	0.7	0.6	0.8
Pacific Coast Hyw between Magnolia St and Brookhurst St.	0.1	0.7	0.1	0.7
Brookhurst Street between Pacific Coast Hwy and Bushard St.	0.5	0.6	0.4	0.6
Brookhurst Street between Bushard St. and Banning Ave.	0.5	0.6	0.5	0.6

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Banning Ave. and Hamilton Ave.	45	1232	1382	0	70.5	67.9	66.3	71.8	69.1	67.5
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	45	1644	2015	0	72.2	69.5	67.9	73.4	70.7	69.1
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	45	1644	2235	0	72.6	70.0	68.4	73.8	71.2	69.6
Brookhurst Street between Indianapolis Ave. and Adams Ave.	45	1837	2550	0	73.2	70.6	68.9	74.4	71.8	70.1
Brookhurst Street between Adams Ave. and Yorktown Ave.	45	2203	2937	0	73.8	71.2	69.5	75.0	72.4	70.8
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Banning Ave. and Hamilton Ave.	45	1382	1532	0	71.0	68.3	66.7	72.2	69.6	67.9
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	45	1798	2169	0	72.5	69.9	68.2	73.7	71.1	69.4
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	45	1798	2389	0	72.9	70.3	68.6	74.1	71.5	69.9
Brookhurst Street between Indianapolis Ave. and Adams Ave.	45	1991	2703	0	73.5	70.8	69.2	74.7	72.0	70.4
Brookhurst Street between Adams Ave. and Yorktown Ave.	45	2355	3089	0	74.0	71.4	69.8	75.2	72.6	71.0
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Banning Ave. and Hamilton Ave.	45	1422	1579	0	71.1	68.5	66.8	72.3	69.7	68.1
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	45	1850	2235	0	72.6	70.0	68.4	73.8	71.2	69.6
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	45	1850	2461	0	73.0	70.4	68.8	74.3	71.6	70.0
Brookhurst Street between Indianapolis Ave. and Adams Ave.	45	2049	2784	0	73.6	70.9	69.3	74.8	72.2	70.5
Brookhurst Street between Adams Ave. and Yorktown Ave.	45	2434	3193	0	74.2	71.5	69.9	75.4	72.7	71.1

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Brookhurst Street between Banning Ave. and Hamilton Ave.	0.5	0.6	0.4	0.5
Brookhurst Street between Hamilton Ave. and Atlanta Ave.	0.4	0.5	0.3	0.4
Brookhurst Street between Atlanta Ave. and Indianapolis Ave.	0.3	0.4	0.3	0.5
Brookhurst Street between Indianapolis Ave. and Adams Ave.	0.2	0.4	0.3	0.4
Brookhurst Street between Adams Ave. and Yorktown Ave.	0.2	0.3	0.2	0.4

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Project: Remedial Action Plan Ascon Landfill Site

Existing										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Yorktown Ave. and Garfield Ave.	45	2153	3022	0	74.3	71.5	69.8	75.5	72.7	71.0
Brookhurst Street between Garfield Ave. and Ellis Ave.	45	2338	3128	0	74.1	71.4	69.8	75.3	72.7	71.0
Brookhurst Street between Ellis Ave. and Quail Ave.	45	2511	3234	0	74.2	71.6	70.0	75.4	72.8	71.2
Brookhurst Street between Quail Ave. and Stonefield Dr.	45	2698	3633	0	74.7	72.1	70.5	76.0	73.3	71.7
Brookhurst Street between Stonefield Dr. and Talbert Ave.	45	2839	3730	0	74.9	72.2	70.6	76.1	73.4	71.8
Existing With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Yorktown Ave. and Garfield Ave.	45	2305	3174	0	74.5	71.7	70.0	75.7	72.9	71.2
Brookhurst Street between Garfield Ave. and Ellis Ave.	45	2490	3280	0	74.3	71.6	70.0	75.5	72.9	71.2
Brookhurst Street between Ellis Ave. and Quail Ave.	45	2663	3386	0	74.4	71.8	70.2	75.6	73.0	71.4
Brookhurst Street between Quail Ave. and Stonefield Dr.	45	2850	3785	0	74.9	72.3	70.6	76.1	73.5	71.9
Brookhurst Street between Stonefield Dr. and Talbert Ave.	45	2991	3882	0	75.0	72.4	70.8	76.2	73.6	72.0
Future With Project										
	Speed	Traffic Volumes			Leq			CNEL		
Roadway/Segment	MPH	AM	PM	ADT	ROW	25 Feet	50 Feet	ROW	25 Feet	50 Feet
Brookhurst Street between Yorktown Ave. and Garfield Ave.	45	2424	3337	0	74.7	71.9	70.2	75.9	73.1	71.4
Brookhurst Street between Garfield Ave. and Ellis Ave.	45	2614	3446	0	74.5	71.9	70.2	75.7	73.1	71.4
Brookhurst Street between Ellis Ave. and Quail Ave.	45	2787	3548	0	74.6	72.0	70.4	75.8	73.2	71.6
Brookhurst Street between Quail Ave. and Stonefield Dr.	45	2980	3959	0	75.1	72.5	70.8	76.3	73.7	72.1
Brookhurst Street between Stonefield Dr. and Talbert Ave.	45	3125	4059	0	75.2	72.6	70.9	76.4	73.8	72.2

CNEL

Summary	25 ft. from ROW		At ROW	
	Project	Cumulative	Project	Cumulative
Roadway/Segment	Increment	Increment	Increment	Increment
Brookhurst Street between Yorktown Ave. and Garfield Ave.	0.2	0.4	0.2	0.4
Brookhurst Street between Garfield Ave. and Ellis Ave.	0.2	0.4	0.2	0.4
Brookhurst Street between Ellis Ave. and Quail Ave.	0.2	0.4	0.2	0.4
Brookhurst Street between Quail Ave. and Stonefield Dr.	0.2	0.4	0.1	0.3
Brookhurst Street between Stonefield Dr. and Talbert Ave.	0.2	0.4	0.1	0.3

% of ADT				
Vehicle Type	Day	Eve	Night	Sub total
Auto	77.6%	9.7%	9.7%	97.0%
Medium Truck	1.6%	0.2%	0.2%	2.0%
Heavy Truck	0.8%	0.1%	0.1%	1.0%
	80.0%	10.0%	10.0%	100.0%

Revised Appendix G

Revised Traffic Study

Remedial Action Plan
Ascon Landfill Site
Transportation Impact Study
Draft Report

Prepared for:
PCR

August 2014

Prepared By:
FEHR PEERS

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Appendix D: Pending And Approved Development Projects
Appendix E: Project Operating Year (2017) Base LOS Results
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Appendix H: Alternative 6 Project Operating Year (2020) Plus Project LOS
Appendix I: Mitigation Measures LOS Results

1.0 INTRODUCTION

The purpose of the report is to summarize the findings of the traffic analyses completed for the Ascon Landfill Remedial Action Plan (RAP) Project and to identify the mitigation measures necessary to mitigate project impacts. A brief description of the analyses scenarios will be given as well as the assumptions used.

This Traffic Impact Study (TIS) was developed based on the requirements within the City of Huntington Beach's General Plan and Circulation Element (2013) as well as requirements of the City of Fountain Valley General Plan and Circulation Element (2008).

1.1 PROJECT DESCRIPTION

The ASCON Landfill Site is a former hazardous waste disposal site. The State of California, through the Department of Toxic Substance Control (DTSC) and the Responsible Parties (RP's) is proposing to remediate the site through a partial removal and capping process. This process will include both the removal of contaminated material and the replacement of this material with clean fill, which will then cover the site. Following the completion of this partial removal and capping, the site will remain vacant for the conceivable future with periodic monitoring of the site by various agencies and parties. Truck and automobile traffic generated by this partial removing and capping process is analyzed by this Transportation Impact Study. As an alternative, we have also evaluated a second scenario which would entail a full removal of the material at the site.

Figure 1-1 shows the project study area in relation to the surrounding transportation network and Figure 1-2 shows the preliminary project site plan.

The current site has two access points. Inbound traffic is proposed to use an access point at the northwest corner of the site along Hamilton Avenue which would provide full access (allowing right and left turns). Outbound truck traffic is proposed to use an access point at the southeast corner of the site along Magnolia Street where a right-turn only out of the driveway is proposed. The precise access locations may be adjusted or shift during the construction process.

Two truck haul routes are analyzed in this traffic study. The first route generally uses Beach Boulevard (SR-39) and Pacific Coast Highway (SR-1) while the second uses Brookhurst Street and Pacific Coast Highway. Since some of the trucks may travel along state highways as well as City of Huntington Beach and City of Fountain Valley facilities, the traffic analysis has been performed using the Highway Capacity Manual methodology to satisfy Caltrans requirements and the Intersection Capacity Utilization methodology to satisfy City requirements.

1.2 PROJECT STUDY AREA

The project study area was established through consultation with the City of Huntington Beach, the City of Fountain Valley, and the California Department of Transportation. The study area is generally bounded by

Interstate 405 (I-405) to the north, Beach Boulevard (SR-39) to the west, Pacific Coast Highway (SR-1) to the south and Brookhurst Street to the east. A vicinity map which provides the project location, study area, and analysis locations is provided in Figure 1-1.

The following intersections were chosen for analysis:

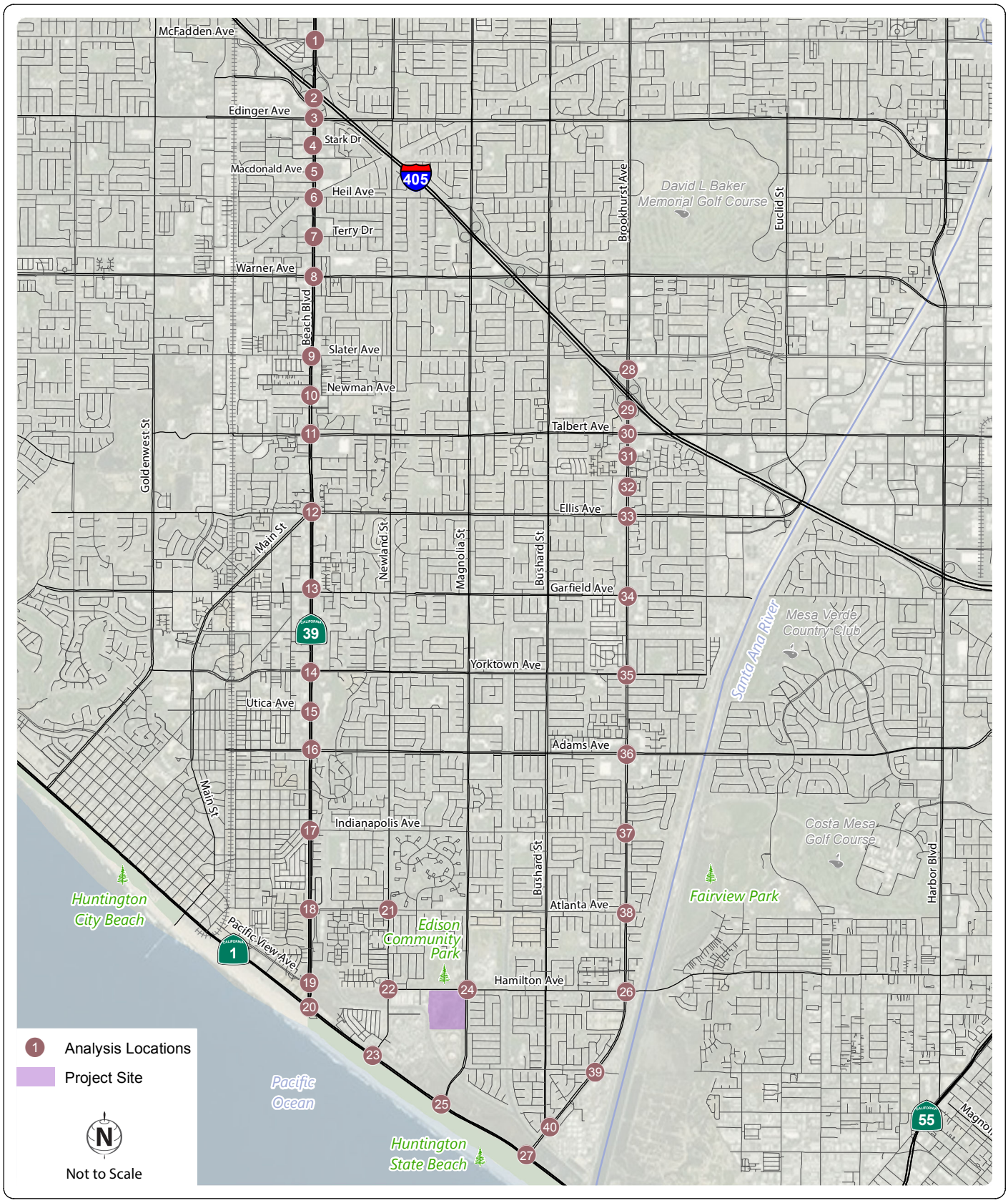
1. Beach Blvd & McFadden Ave
2. Beach Blvd & Center Ave
3. Beach Blvd & Edinger Ave
4. Beach Blvd & Stark Dr
5. Beach Blvd & MacDonald Dr
6. Beach Blvd & Heil Ave
7. Beach Blvd & Terry Dr
8. Beach Blvd & Warner Ave
9. Beach Blvd & Slater Ave
10. Beach Blvd & Newman Ave
11. Beach Blvd & Talbert Ave
12. Beach Blvd & Main St/Ellis Ave
13. Beach Blvd & Garfield Ave
14. Beach Blvd & Yorktown Ave
15. Beach Blvd & Utica Ave
16. Beach Blvd & Adams Ave
17. Beach Blvd & Indianapolis Ave
18. Beach Blvd & Atlanta Ave
19. Beach Blvd & Pacific View Ave
20. Beach Blvd & PCH (SR-1)
21. Newland St & Atlanta Ave
22. Newland St & Hamilton Ave
23. PCH (SR-1) & Newland St
24. Magnolia St & Hamilton Ave
25. PCH (SR-1) & Magnolia St
26. Brookhurst St & Hamilton Ave
27. PCH (SR-1) & Brookhurst St
28. Brookhurst St & I-405 Northbound Ramps

29. Brookhurst St & I-405 Southbound Ramps
30. Brookhurst St & Talbert Ave
31. Brookhurst St & Stonefield Dr
32. Brookhurst St & Quail Ave
33. Brookhurst St & Ellis Ave
34. Brookhurst St & Garfield Ave
35. Brookhurst St & Yorktown Ave
36. Brookhurst St & Adams Ave
37. Brookhurst St & Indianapolis Ave
38. Brookhurst St & Atlanta Ave
39. Brookhurst St & Banning Ave
40. Brookhurst St & Bushard St

1.3 ANALYSIS SCENARIOS

To identify significant project impacts, Fehr & Peers evaluated the following six scenarios for study area intersections as part of the proposed project:

- Existing Year (2014) Base Traffic Conditions– Consists of existing counts collected in the study area in 2014.
- Existing Year (2014) Plus Project Traffic Conditions– Consists of existing counts collected in the study area plus traffic generated from the proposed project.
- Operating Year (2017) Base Traffic Conditions – Consists of Existing (2014) Conditions traffic volumes plus an annual growth rate factor of one percent per year over the three-year period between the existing counts and the project opening year. In addition, traffic generated from pending and approved projects, provided by local jurisdictions, anticipated to be operational by 2017 in the vicinity of the proposed project are also included.
- Operating Year (2017) Plus Project Traffic Conditions– Consists of the Project Operating Year (2017) No Project Conditions traffic volumes plus traffic generated from the proposed project.
- Alternative 6 Operating Year (2020) Base Traffic Conditions – Consists of an annual growth rate factor of one percent per year over the three year period between 2017 and 2020.
- Alternative 6 Operating Year (2020) Plus Project Traffic Conditions– Consists of the Alternative 6 Operating Year (2020) Base Traffic Conditions traffic volumes plus traffic generated from alternative 6 of the proposed project.



FEHR PEERS

Project Study Area and Analysis Locations

Path: N:\Jobs\Active\OC Jobs\OC10_0154\Graphics\GIS\MXD\fig01_1_study_ints1-40.mxd

Figure 1-1

LEGEND

- EXISTING MAJOR GROUND CONTOUR
- EXISTING MINOR GROUND CONTOUR
- 25 PROPOSED MAJOR GROUND CONTOUR
- PROPOSED MINOR GROUND CONTOUR
- PROPERTY BOUNDARY
- CAP FOR TOP DECK AREA
- CAP FOR SIDE SLOPES
- STORM WATER DETENTION BASINS (NOTE 1)
- OIL LEASE PROPERTY (NOTE 2)
- PERIMETER ACCESS ROAD (NOTE 3)
- CITY OF HUNTINGTON BEACH (NOTE 3)

0 150' 300'

SCALE IN FEET

FEHR PEERS

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Project Site Plan

Figure 1-2

2.0 ANALYSIS METHODOLOGIES

At the direction of the City of Huntington Beach, City of Fountain Valley, and the California Department of Transportation, intersection analysis was performed to determine impacts to the study area. This chapter discusses analysis methodologies and assumptions approved by the various agencies, used to evaluate the project impacts.

2.1 LEVEL OF SERVICE ANALYSIS

Fehr & Peers' analysis of intersections employs a methodology based on empirical research conducted by the Transportation Research Board (TRB) and other authorities. Since the truck routes are proposed along state highways as well as City of Huntington Beach and City of Fountain Valley facilities, the traffic analysis has been performed using the Highway Capacity Manual (HCM) methodology to satisfy Caltrans requirements and the Intersection Capacity Utilization (ICU) methodology to satisfy City requirements. The HCM and ICU methodologies are considered the state-of-the-practice methodologies for evaluating intersection operations, and are consistent with Caltrans requirements, the City of Huntington Beach General Plan Circulation Element requirements, and the City of Fountain Valley.

The HCM 2000 Methodology estimates a quantitative delay at intersections while the ICU methodology measures a quantitative volume-to-capacity (V/C) ratio at intersections. After the quantitative delay or V/C ratio estimates are complete, the methodologies assign a qualitative letter grade that represents the operations of the intersection. These grades range from level of service (LOS) "A" (minimal delay) to LOS "F" (excessive congestion). LOS "E" represents at-capacity operations. Descriptions of the LOS letter grades for signalized and unsignalized intersections are provided in Table 2-1.

The HCM 2000 methodology for signalized intersections estimates the average control delay for the vehicle at the intersection. The HCM analysis is conducted with the Synchro 8 Software. The HCM analysis uses a lane capacity of 1,900 vehicles per hour per lane (vphpl) with a peak hour factor.

The ICU methodology assigns a qualitative letter grade that represents the operations of the intersection based off a V/C ratio instead of estimated delay. The ICU methodology bases the calculation procedure on critical movements at an intersection. The ICU methodology is conducted with the Traffix 8.0 Software. A capacity of 1,700 vphpl is assumed together with a 0.05 clearance interval, based upon the guidelines in the Orange County Congestion Management Plan (CMP).

TABLE 2-1 INTERSECTION LEVEL OF SERVICE CRITERIA			
Level of Service	**Description**	**ICU Signalized V/C**	**HCM Signalized Delay (Seconds)**
A	Operations with very low delay occurring with favorable progression and/or short cycle length.	0.00-0.60	≤10.0
B	Operations with low delay occurring with good progression and/or short cycle lengths.	0.61-0.70	>10.0-20.0
C	Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	0.71-0.80	>20.0-35.0
D	Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	0.81-0.90	>35.0-55.0
E	Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences.	0.91-1.00	>55.0-80.0
F	Operation with delays unacceptable to most drivers occurring due to oversaturation, poor progression, or very long cycle lengths.	>1.00	>80.0
Source: *Highway Capacity Manual* (Transportation Research Board, 2000).			

2.2 SIGNIFICANT IMPACT CRITERIA

The City of Huntington Beach General Plan defines different LOS standards for different types of intersections to determine acceptable operations on their facilities. Intersections in the City of Huntington Beach are classified as either Critical, Principal, or Secondary Intersections. The LOS standards and performance criteria are different for each of the classifications as follows:

- Critical Intersections: LOS "E" or better is acceptable
- Principal Intersections: LOS "D" or better is acceptable
- Secondary Intersections: LOS "C" or better is acceptable

A project will be deemed to create a significant impact if the project alone causes an intersection operating at an acceptable Level of Service to operate at an unacceptable Level of Service.

If a project impacts an intersection that already operates at an unacceptable Level of Service, this is also deemed a significant impact and mitigation would be required to bring the LOS back to where it was prior to the project.

All intersections under the Huntington Beach jurisdiction analyzed in the study are classified as "principal" intersections with LOS "D" criteria, except for the following intersections which are "secondary" intersections with LOS "C" criteria:

- Newland Street & Hamilton Avenue
- Newland Street & Atlanta Ave

The City of Fountain Valley sets LOS D (ICU of 0.90 or less) as the lowest acceptable LOS for peak hour intersection volumes in the City. Based on this standard, we defined the following significance criteria for intersections in the City of Fountain Valley.

- LOS "D" or better at intersections during the peak hour. A project will be deemed to create a significant impact if the project alone causes an intersection at Level of Service D or better to move to Level of Service E or F.

- If a project impacts an intersection that is already at LOS "E" or "F," this is also deemed a significant impact and mitigation would be required to bring the LOS back to where it was prior to the project.

The Orange County Congestion Management Plan (CMP) also requires that projects cannot be allowed to reduce the LOS or increase ICU by more than 0.03 at a location that is forecasted to operate at LOS "E" or "F." Since the City of Huntington Beach General Plan specifies that adding traffic to a facility already operating at LOS "E" or "F" is considered a significant impact, the City's General Plan criteria will typically be more stringent than the County CMP criteria and will satisfy most County CMP requirements.

Additionally, Caltrans requires that any facilities within Caltrans jurisdiction shall maintain a minimum LOS threshold of LOS "D," or less than 55 seconds of average delay. A project is deemed to create a significant impact if the project alone causes an intersection at LOS "D" or better to degrade to LOS "E" or worse. If the facility already operates at LOS "E" or worse before the addition of project traffic, and the project causes the average delay to increase, the project's impact may also be deemed significant by Caltrans. Mitigation measures to bring the facility back to acceptable operations need to be considered if a significant impact is identified.

3.0 Existing (2014) Conditions

This chapter discusses the existing transportation conditions in the project study area including the roadway, transit, and pedestrian networks.

3.1 EXISTING ROADWAY FACILITIES

Regional access to the Ascon project site is provided by Interstate 405 (I-405) and State Route 1 (Pacific Coast Highway) (SR-1). Local access is provided by State Route 39 (Beach Boulevard) (SR-39), Brookhurst Street, Newland Street, Magnolia Street, Atlanta Avenue and Hamilton Avenue. Roadways in the study area are classified per the City of Huntington Beach General Plan and described in detail below.

Regional Roads

- Interstate 405 (I-405) – I-405 is generally a north-south freeway that starts at Interstate 5 (I-5) in North Valley and reconnects to I-5 in Irvine. In the study area, I-405 generally contains ten lanes (four lanes and a high occupancy vehicle lane in each direction). Access to the project site is provided via Beach Boulevard or Brookhurst Avenue ramps.

- State Route 1 (Pacific Coast Highway) (SR-1) - Pacific Coast Highway is classified as a Congestion Management Plan (CMP) Highway in the 2011 Orange County CMP and in the City of Huntington Beach General Plan as a Smart Street Arterial. The roadway extends from State Route 101 in Leggett, California south along the Pacific Coast over 650 miles before terminating at Interstate 5 in Dana Point, California. Within the study area Pacific Coast Highway has an east-west orientation and is a six lane facility divided by a center median. On-street parking is generally not permitted within the study area. The posted speed limit along Pacific Coast Highway within the study limits is 50 miles per hour (mph).

Local Access Roads

- State Route 39 (Beach Boulevard) (SR-39) – Beach Boulevard is classified a CMP Highway in the 2011 Orange County CMP, is classified in the City of Huntington Beach General Plan a Smart Street Arterial, and is classified as a Smart Street Arterial in the Orange County Master Plan of Arterial highways (MPAH). Near the project site, Beach Boulevard is a six lane facility with a center median. North of Ellis Avenue the roadway contains eight lanes and is separated by a center median. On-street parking is not permitted along Beach Boulevard north of Ellis Avenue but is generally permitted south of Ellis Avenue. Beach Boulevard is oriented in the north-south direction and the posted speed limit ranges from 45 to 50 mph. Beach Boulevard provides direct access to State Route 90 (SR-90), I-5, State Route 91 (SR-91), State Route 22 (SR-22), and I-405.

- Brookhurst Street – Brookhurst Street is classified in the City of Huntington Beach General Plan, the City of Fountain Valley General Plan, and the MPAH as a Major Arterial. Brookhurst Street is a north-south street that contains six lanes and is typically separated by a center median. Some on-street parking is permitted south of Adams Avenue. Beach Boulevard contains bike lanes from

Bushard Street to Pacific Coast Highway and the posted speed limit ranges from 45 to 50 mph. Brookhurst Street provides direct access to I-405, SR-22, I-5 and SR-91.

- Newland Street – Newland Street is classified in the City of Huntington Beach General Plan, the City of Fountain Valley General Plan, and the MPAH as a Secondary Arterial. Newland Street is a north-south street that contains four lanes (divided) north of Hamilton Avenue and two lanes (undivided) south of Hamilton Avenue. On-street parking is generally not permitted on Newland Street due to the bike lanes present between Warner Avenue and Pacific Coast Highway, though some parking lanes are provided. The posted speed limit on Newland Street varies between 35 and 45 mph.

- Magnolia Street – Magnolia Street is classified in the City of Huntington Beach General Plan, the City of Fountain Valley General Plan, and the MPAH as a Primary Arterial. Magnolia Street is a four lane (divided) roadway oriented in the north-south direction. On-street parking is generally not permitted on Magnolia Street due to the bike lanes present between Slater Avenue and Pacific Coast Highway, though some parking lanes are provided. The posted speed limit on Magnolia Street varies between 35 and 45 mph. Magnolia Street provides direct access to the project site.

- Main Street – Main Street is classified in the Huntington Beach General Plan and the MPAH as a Primary Arterial. Main Street begins at Ellis Avenue and Beach Boulevard and stretches in the north-south direction to Pacific Coast Highway. The roadway contains six lanes (divided) between Beach Boulevard and Yorktown Avenue, four lanes (divided) between Yorktown Avenue and 17th Street and two lanes (undivided) south of 17th Street. Parking is generally permitted along Main Street and there are bike lanes between Beach Boulevard and Loma Avenue. The speed limit on Main Street ranges between 25 and 45 mph.

- Center Avenue – Center Avenue is classified in the City of Huntington Beach General Plan as a Secondary Arterial. Center Avenue is a four lane (divided) roadway oriented in the east-west direction. On-street parking is generally not permitted along Center Avenue and the posted speed limit is 35 mph.

- Edinger Avenue – Edinger Avenue is classified in the City of Huntington Beach General Plan as an Augmented Primary Arterial between Springdale Street and Newland Street, a Primary Arterial from Pacific Coast Highway to Springdale Street, and as a Primary Arterial in the MPAH. In the City of Fountain Valley General Plan, Edinger Avenue is classified as a Primary Arterial. Edinger Avenue is an east-west roadway that contains six lanes (divided) west of Newland Street and four lanes divided east of Newland Street. On-street parking is generally not permitted on Edinger Avenue. Edinger Avenue contains bike lanes east of Newland Street and the posted speed limit is 40 mph.

- Warner Avenue – Warner Avenue is classified in the City of Huntington Beach General Plan, the City of Fountain Valley General Plan, and the MPAH as a Major Arterial. Warner Avenue is an east-west roadway that contains six lanes (divided). On-street parking is generally not permitted on Warner Avenue due to the bike lanes present between Pacific Coast Highway and Newland Street, though some parking lanes are provided. The posted speed limit on Warner Avenue is 45 mph.

- Talbert Avenue – Talbert Avenue is classified in the City of Huntington Beach General Plan, City of Fountain Valley General Plan and the MPAH as a Primary Arterial. Talbert Avenue is an east-west roadway that contains four lanes (divided). On-street parking is generally not permitted on

Talbert Avenue due to the bike lanes present between Gothard Street and Bushard Street. The posted speed limit on Talbert Avenue is 45 mph.

- Ellis Avenue – Ellis Avenue from Edwards Street to Delaware Street is classified in the City of Huntington Beach General Plan as an Augmented Collector Arterial. In the MPAH and within the City of Fountain Valley, Ellis Avenue is classified as a Secondary Arterial. Ellis Avenue is four lane (divided) roadway oriented in the east-west direction. On-street parking is typically not permitted along Ellis Avenue due to the bike lanes present from Newland Street to Ward Street. The posted speed limit on Ellis Avenue ranges from 40 to 45 mph.

- Garfield Avenue – Garfield Avenue is classified in the City of Huntington Beach General Plan, City of Fountain Valley General Plan, and the MPAH as a Primary Arterial. Garfield is a four lane (divided) roadway oriented in the east-west direction. On-street parking is generally not permitted due to the bike lanes present between Seapoint Street and Ward Street. The posted speed limit on Garfield Avenue is 45 mph.

- Adams Avenue – Adams Avenue from Lake Street to Beach Boulevard is classified in the City of Huntington Beach General Plan and the MPAH as a Primary Arterial. East of Beach Boulevard it is classified as a Major Arterial. Adams Avenue is an east-west roadway that contains two lanes (undivided) between 17th Street and Lake Street, four lanes (divided) between Lake Street and Beach Boulevard, and six lanes (divided) east of Beach Boulevard. On-street parking is generally not permitted along Adams Avenue due to the bike lanes present from Lake Street to Magnolia Avenue. The posted speed limit on Adams Avenue ranges from 25 to 45 mph.

- Atlanta Avenue – Atlanta Avenue is classified in the City of Huntington Beach General Plan and the MPAH as a Primary Arterial. Atlanta Avenue is a four lane (divided) roadway oriented in the east-west direction. On-street parking is generally permitted where bike lanes are not present or where parking lanes are provided adjacent to bike lanes. Bike lanes are present on Atlanta Avenue between Beach Boulevard and the terminus of Atlanta Avenue at Surge Lane. The posted speed limit on Atlanta Avenue ranges between 40 and 45 mph.

- Hamilton Avenue – Hamilton Avenue is classified as a Primary Arterial in the City of Huntington Beach General Plan and in the MPAH. Hamilton Avenue is an east-west roadway that contains two lanes (undivided) between Newland Street and Magnolia Street and four lanes (divided) east of Magnolia Street. On-street parking is generally permitted and discontinuous bike lanes are present throughout the roadway. Hamilton Avenue provides direct access to the project site.

3.2 EXISTING BUS TRANSIT FACILITIES

The study area is serviced by Orange County Transit Authority (OCTA) and operates five bus routes near the Ascon Landfill project site. These routes are described below:

- Route 1 – Route 1 is a local fixed bus route that serves the communities of Long Beach, Huntington Beach, Laguna Beach and San Clemente, among others. It connects the VA Hospital and Cal State Long Beach to the Newport Transportation Center, Laguna Beach Bus Station, several schools and beaches along Pacific Coast Highway, and the San Clemente Metrolink Station, among others. Route 1 operates mostly along Pacific Coast Highway, including near the project site. It operates on 30- to 60-minute headways during weekdays and on 60-minute headways on weekends.

- Route 29 – Route 29 is a local fixed bus route that serves the communities of La Habra, Anaheim, Westminster and Huntington Beach, among others. It connects the La Habra Marketplace, the Buena Park Metrolink Station and Civic Center, Knott's Berry Farm, West Anaheim Medical Center, Stanton Civic Center, the West County Courthouse, the Westminster Civic Center, the Goldenwest Transportation Center, Humana Hospital of Huntington Beach, several schools and Huntington City Beach, among others. This route operates mostly along Beach Boulevard, as well as Pacific Coast Highway and Whittier Boulevard. Route 29 operates on 15- to 60-minute headways on weekdays and weekends.

- Route 33 – Route 33 is a local fixed bus route that serves the communities of Fullerton, Anaheim, Westminster and Huntington Beach, among others. It connects the Fullerton Park-and-Ride, Little Saigon, several schools and Huntington State Beach, among others. This route operates primarily on Magnolia Street. Route 33 operates on 30- to 45-minute headways on weekdays and 60- to 80-minute headways on weekends.

- Route 35 – Route 35 is a local fixed bus route that serves the communities of Fullerton, Anaheim, Westminster and Huntington Beach, among others. It connects the Fullerton Park-and-Ride, Garden Grove Promenade, Korea Town, the Fountain Valley Civic Center, the Mile Square Park Park-and-Ride, Talbert Medical Center, Huntington State beach and several schools, among others. This route operates primarily on Brookhurst Street. Route 35 operates on 30- to 60-minute headways on weekdays and on 45-60 minute headways on the weekends and holidays.

- Route 173 – Route 173 is a community and shuttle route that serves the communities of Santa Ana, Costa Mesa, and Huntington Beach. It connects the Orange County Fair Grounds, South Coast Plaza, Vanguard University, Triangle Square, Huntington City Beach and several schools, among others. This route operates along Atlanta Avenue, Hamilton Avenue, Orange Avenue, Del Mar Avenue, and Bear Street, among others. Route 173 operates on 45-minute headways on weekdays and does not operate on the weekends.

3.3 BICYCLE AND PEDESTRIAN NETWORK

The City of Huntington Beach provides an extensive bicycle network that connects the community. A north/south and east/west grid network of dedicated bicycle lanes and trails allows for bicycle travel to any part of the City. Class I, II and III bicycle facilities are provided throughout Huntington Beach, including adjacent to the project site.

Class I bicycle facilities in Huntington Beach are dedicated right-of-way on off street trails designated specifically for bike and non-automotive uses. Class II bicycle facilities in Huntington Beach are typically painted bicycle lanes that share right-of-way with automobiles. Class III bicycle facilities in Huntington Beach are typically roadways that share right-of-way with bicycles and automobiles and contain "bike route" signs.

Class I Bike Lanes in the study area are designated on:

- Pacific Coast Highway
- Santa Ana River Trail

Class II Bike Lanes in the study area are designated on:

- Warner Avenue
- Talbert Avenue
- Ellis Avenue
- Garfield Avenue
- Adams Avenue
- Atlanta Avenue
- Hamilton Avenue
- Newland Street
- Magnolia Street
- Brookhurst Street

Pedestrian facilities throughout Huntington Beach are well developed along most major roadways. Hamilton Avenue adjacent to the project site contains a paved walkway (not standard sidewalk) on the south side of the street and contains sidewalk through Edison Community Park on the north side. Magnolia Avenue adjacent to the project site only contains sidewalk on the east side of the street. Walking in Huntington Beach is relatively easy and the pedestrian network allows for connectivity to local activity centers. Sidewalks are also provided on Brookhurst Street and other roadways within Fountain Valley.

3.4 EXISTING TRAFFIC VOLUMES

Fehr & Peers collected existing traffic volume counts at study intersections in May 2014 during the morning (7:00 to 9:00 AM), mid-day (11:00 AM to 1:00 PM) and evening (4:00 to 6:00 PM) peak hours. Figure 3-1 summarizes the existing intersection turning movement volumes for the AM and PM peak hours and is used to represent Existing (2014) conditions. Existing traffic count data is provided in Appendix A.

3.5 INTERSECTION OPERATIONS

Existing traffic volumes described above, lane configurations collected in the field, and signal timing information provided by City staff and Caltrans were used to evaluate operations at the study intersections for existing AM, Mid-Day, and PM peak hour conditions. The results are summarized in Table 3-1. Lane configurations and peak hour traffic volumes at study intersections for Existing (2014) Conditions are shown on Figure 3-1. The Existing LOS reports are provided in Appendix B.

TABLE 3-1 INTERSECTION LEVEL OF SERVICE: EXISTING (2014) CONDITIONS							
		AM		Mid-Day		PM	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	53	D	34	C	**55**	**E**
2. Beach Blvd & Center Ave	Signal	10	B	13	B	16	B
3. Beach Blvd & Edinger Ave	Signal	34	C	33	C	52	D
4. Beach Blvd & Stark Dr	Signal	9	A	15	B	15	B
5. Beach Blvd & MacDonald Dr	Signal	11	B	14	B	10	B
6. Beach Blvd & Heil Ave	Signal	34	C	30	C	52	D
7. Beach Blvd & Terry Dr	Signal	5	A	8	A	10	B
8. Beach Blvd & Warner Ave	Signal	47	D	33	C	**73**	**E**
9. Beach Blvd & Slater Ave	Signal	38	D	32	C	50	D
10. Beach Blvd & Newman Ave	Signal	5	A	7	A	9	A
11. Beach Blvd & Talbert Ave	Signal	38	D	40	D	40	D
12. Beach Blvd & Main St/Ellis Ave	Signal	33	C	28	C	33	C
13. Beach Blvd & Garfield Ave	Signal	40	D	33	C	39	D
14. Beach Blvd & Yorktown Ave	Signal	29	C	30	C	34	C
15. Beach Blvd & Utica Ave	Signal	10	B	18	B	16	B
16. Beach Blvd & Adams Ave	Signal	33	C	35	D	43	D
17. Beach Blvd & Indianapolis Ave	Signal	26	C	21	C	20	C
18. Beach Blvd & Atlanta Ave	Signal	32	C	30	C	49	D
19. Beach Blvd & Pacific View Ave	Signal	7	A	7	A	8	A
20. Beach Blvd & PCH (SR-1)	Signal	29	C	22	C	27	C
21. Newland St & Atlanta Ave	Signal	0.49	A	0.42	A	0.54	A
22. Newland St & Hamilton Ave	Signal	0.56	A	0.45	A	0.67	B
23. PCH (SR-1) & Newland St	Signal	17	B	11	B	13	B
24. Magnolia St & Hamilton Ave	Signal	0.53	A	0.39	A	0.59	A

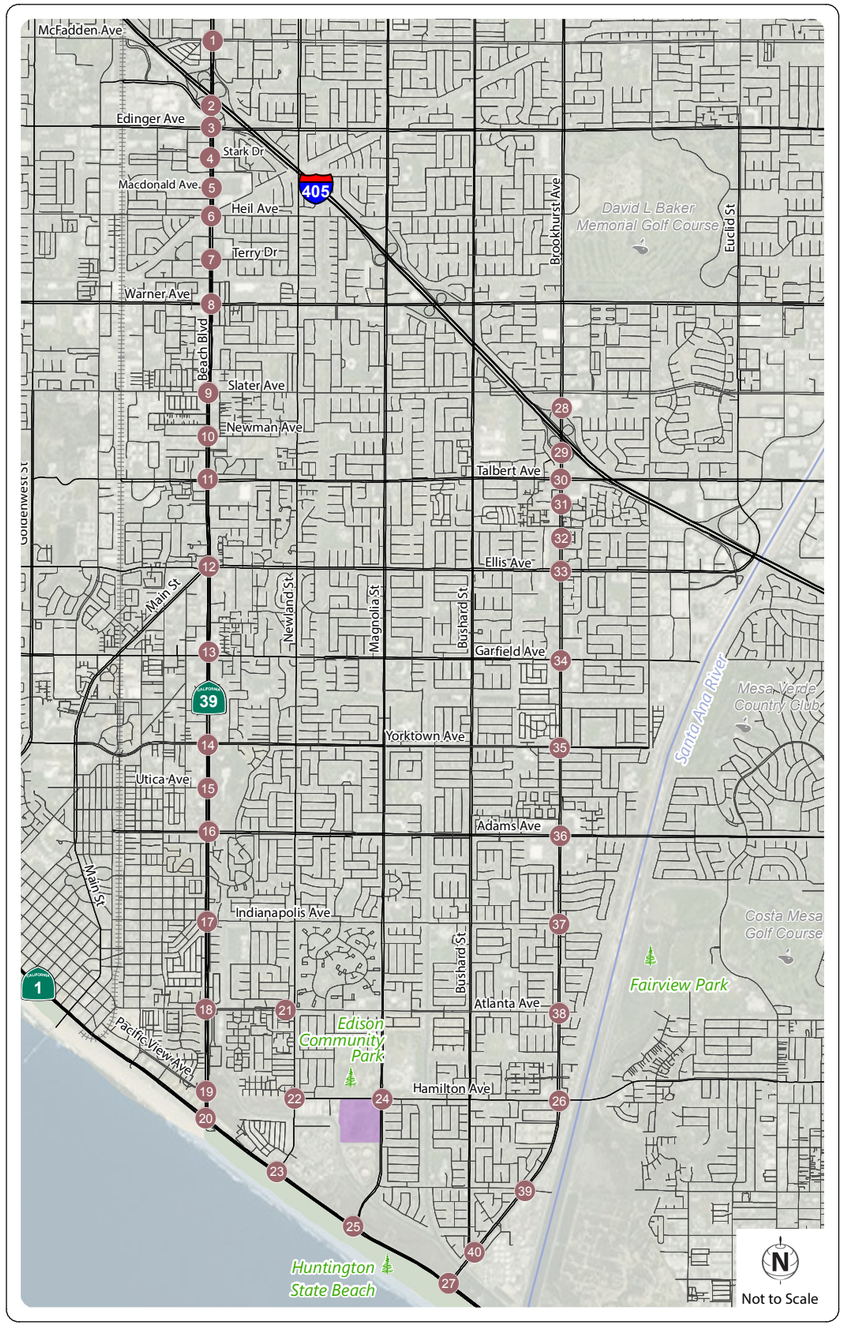
TABLE 3-1 INTERSECTION LEVEL OF SERVICE: EXISTING (2014) CONDITIONS							
		AM		Mid-Day		PM	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
25. PCH (SR-1) & Magnolia St	Signal	25	C	20	C	27	C
26. Brookhurst St & Hamilton Ave	Signal	0.7	C	0.4	A	0.64	B
27. PCH (SR-1) & Brookhurst St	Signal	24	C	19	B	34	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.79	C	0.62	B	0.77	C
31. Brookhurst St & Stonefield Dr	Signal	0.35	A	0.49	A	0.49	A
32. Brookhurst St & Quail Ave	Signal	0.4	A	0.59	A	0.58	A
33. Brookhurst St & Ellis Ave	Signal	0.66	B	0.57	A	0.69	B
34. Brookhurst St & Garfield Ave	Signal	0.52	A	0.59	A	0.6	B
35. Brookhurst St & Yorktown Ave	Signal	0.52	A	0.52	A	0.58	A
36. Brookhurst St & Adams Ave	Signal	0.74	C	0.52	A	0.75	C
37. Brookhurst St & Indianapolis Ave	Signal	0.25	A	0.3	A	0.34	A
38. Brookhurst St & Atlanta Ave	Signal	0.39	A	0.34	A	0.42	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.19	A	0.22	A
40. Brookhurst St & Bushard St	Signal	0.3	A	0.22	A	0.27	A

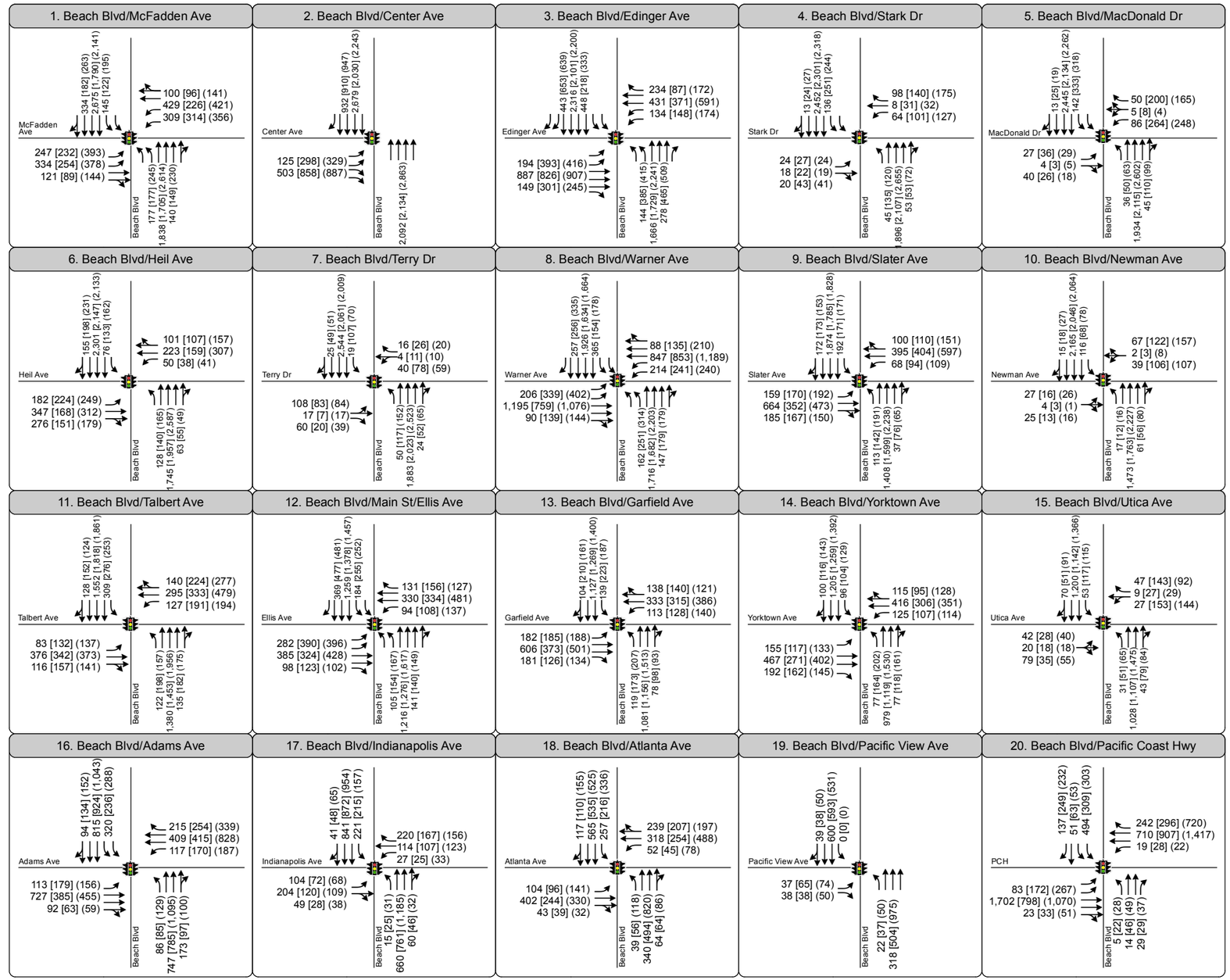
Notes:
1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

As shown in Table 3-1, all of the study intersections currently operate acceptably at LOS D or better during the peak hours, with exception to the following locations:

- Beach Boulevard at McFadden Avenue- PM Peak Hour (LOS E)
- Beach Boulevard at Warner Avenue- PM Peak Hour (LOS E)





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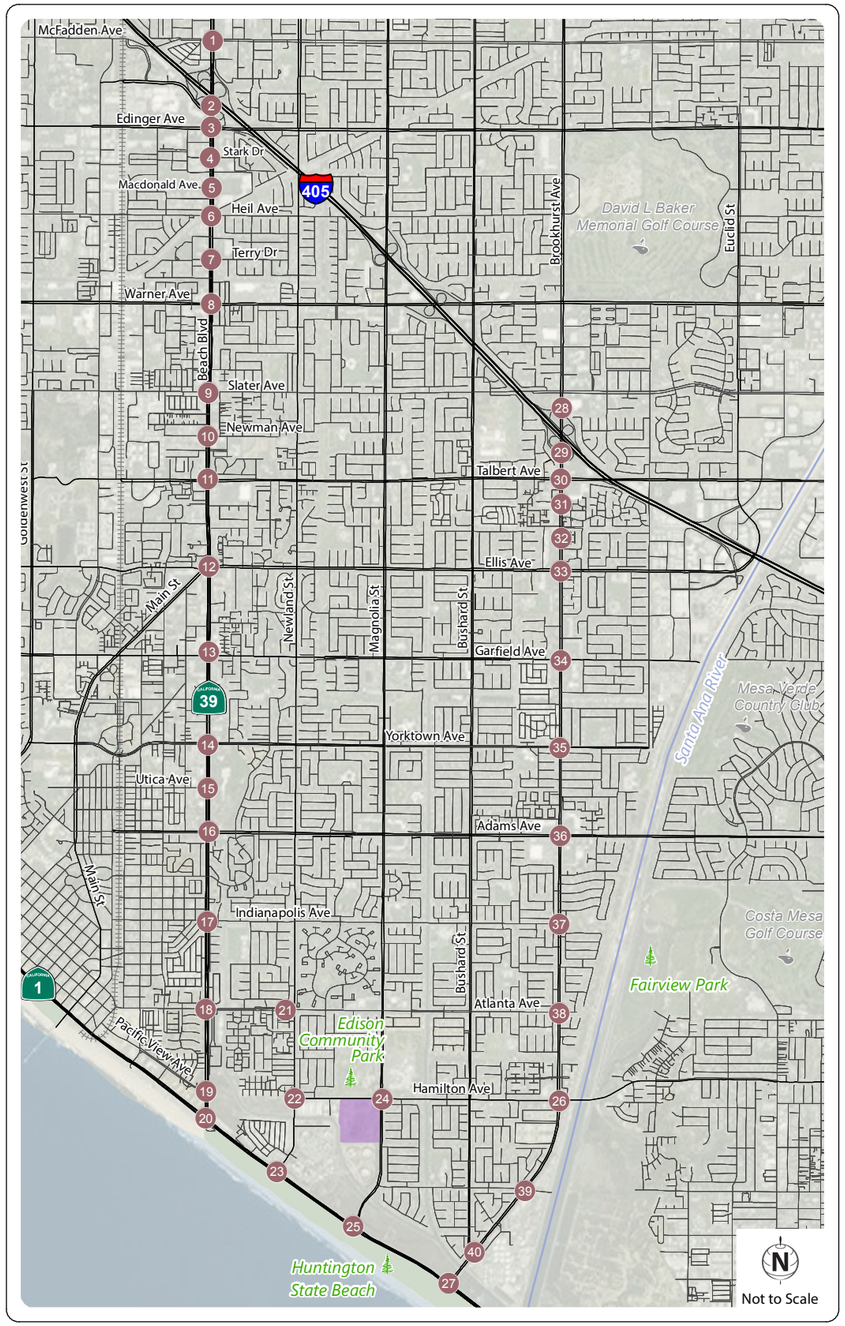
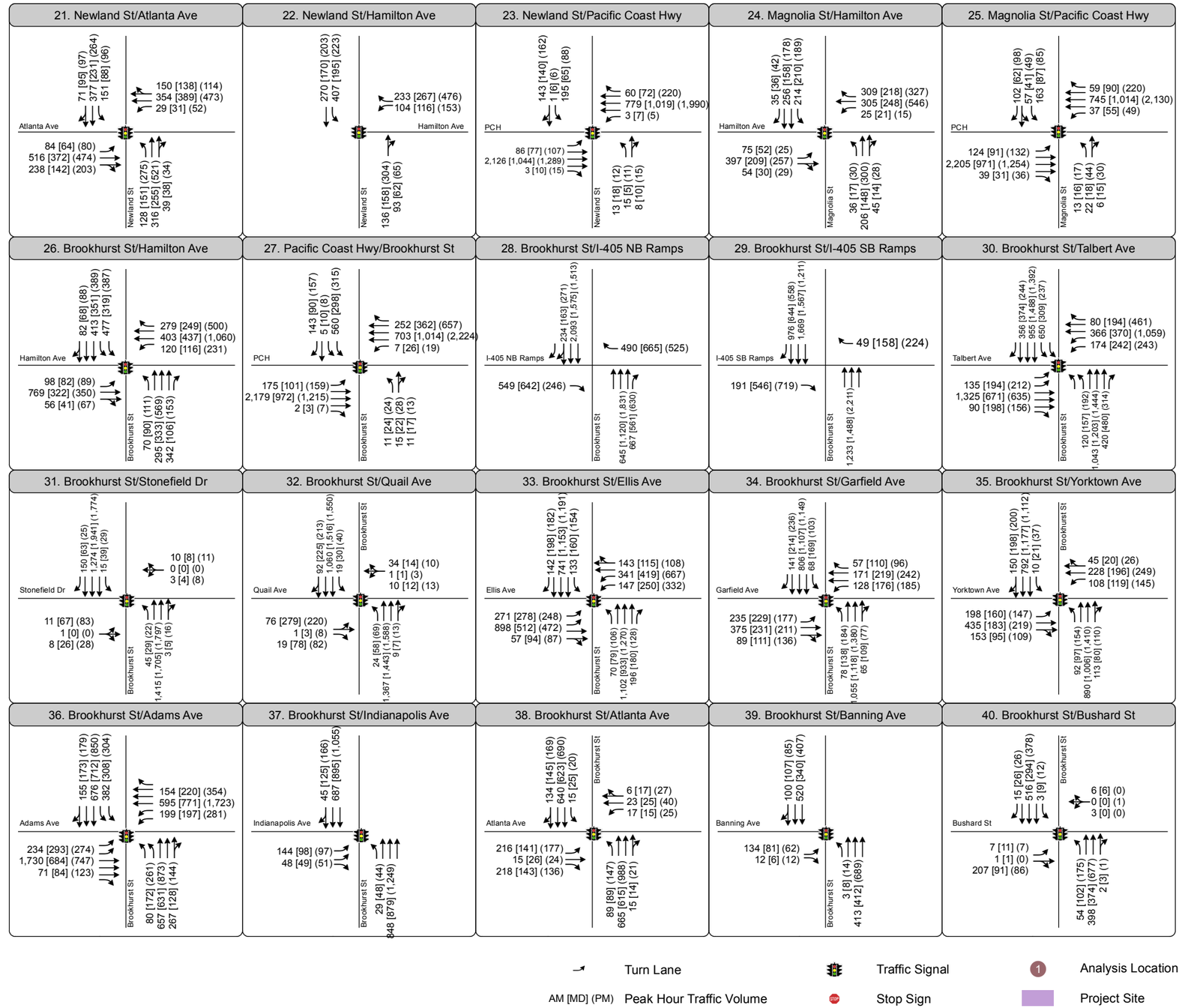
Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions (2014)

Figure 3-1





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Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions (2014)

Figure 3-1

4.0 Project Traffic Generation

This section discusses traffic associated with the construction activity at the site.

4.1 PROJECT OVERVIEW

The ASCON Landfill Site is a former hazardous waste disposal site. The State of California, through the Department of Toxic Substance Control (DTSC) and the Responsible Parties (RP's) is proposing to remediate the site through a partial removal and capping process. This process will include both the removal of contaminated material and the replacement of this material with clean fill, which will then cover the site. Following the completion of this Partial Removal and Capping, the site will remain vacant for the conceivable future with periodic monitoring of the site by various agencies and parties.

A key point to note is that the site will generate traffic only during construction activity. The site currently generates no traffic and would not generate traffic following the completion of the partial capping and removal or the full removal.

4.2 PROJECT TRIP GENERATION METHODOLOGY

This facility is a unique use which cannot be readily classified using standard Institute of Transportation Engineers (ITE) rates. As such, the trip generation is estimated using data regarding the level of truck, employee and visitor activity. The various categories of vehicles associated with the project are described below.

- Export trucks- These trucks are removing material from the site and delivering the material to disposal locations outside of Southern California. Each of these trucks arrives on the site, is filled with material, and then departs. Given the distance each truck needs to travel to dispose of the material, each truck makes the trip only once per day. These trucks would be traveling to the site at a maximum of 20 trucks per hour for all peak hours. The daily number of export trucks is 100 per day as one-way trips. For purposes of this discussion, a one-way trip is defined as a truck or vehicle traveling to and from the site once during the day. A two-way trip is one leg of that trip. Therefore, 100 one-way trips would produce 200 two-way trips.

- Import trucks- These trucks are tasked with delivering clean fill to the site. Therefore, each truck travels to the site, delivers its material, and then leaves the site. These trucks would arrive and depart at the site throughout the day, from 7:00 AM to 6:00 PM. The maximum number of trucks per hour would be 25 for the AM and PM peak hours. The total daily number of import trucks will be 200 as one-way trips.

- Supply Trucks- In addition to these other trucks, there may be as many as 10 trucks per day bringing various supplies to the site including water, equipment, and other related items. A maximum of 4 trucks per hour are assumed as a maximum with 2 trucks per hour the more likely

condition. 4 is assumed to provide a conservative estimate. These supply trucks will be traveling to and from the site during the day, from 7:00 AM to 4:00 PM.

- Employees- There are 37 employees assumed to work at the site throughout the day. These employees would arrive at the site between 7:00 AM and 9:00 AM. 50 percent of the employees are assumed to take trips during the mid-day peak hour. These workers would then depart the site during the PM peak period (any time from 4:00 PM to 6:00 PM).

- Visitors- It is anticipated that up to 10 visitors would access the Site during any given day throughout RAP implementation. Visitors include DTSC staff, RP representatives, or representatives of the City and other regulatory agencies. Although visitors could arrive and depart at any time during a work day, a conservative assumption for the purpose of analyses is that visitors would arrive at 7:00 A.M., potentially leave during the mid-day peak hour, and then depart at 5:00 P.M., coinciding with A.M., mid-day, and P.M. peak traffic periods. Fifty percent of visitors are assumed to take trips during the mid-day peak hour (lunch break). In addition, 10 additional daily visitor trips are assumed to occur from the travel of visitors during off-peak periods for miscellaneous reasons (i.e., meetings, tours, etc.).

4.3 PROJECT TRIP GENERATION ESTIMATES

One aspect of the Full Removal is that the construction activity occurs throughout 2015, 2016, and 2017. The peak trip generation occurs in 2017 based on the anticipated construction schedule. Both the Full Removal and Partial Removal and Capping Projects are expected to generate the same number of peak hour trips. However; the Full Removal alternative would require two additional years of construction activity at the levels identified below. The project trip generation estimates are provided in Table 4-1.

Table 4-1
Project Trip Generation Estimates

Trip Type	PCE[1]	Daily One-Way Trips	Daily Two - Way PCE	Max Hourly One -Way Trips			AM Peak PCE			Mid-Day PCE			PM Peak PCE		
				AM	Mid-Day	PM	In	Out	Total	In	Out	Total	In	Out	Total
Export Trucks	3	100	600	20	20	20	60	60	120	60	60	120	60	60	120
Import Trucks	3	200	1,200	25	25	25	75	75	150	75	75	150	75	75	150
Supply Trucks	3	10	60	4	4	0	12	12	24	12	12	24	0	0	0
Employee	1	55	110	37	37	37	37	0	37	18	19	37	0	37	37
Visitor	1	15	40	10	10	10	10	0	10	5	5	10	0	10	10
Totals		380	2,010	96	96	92	194	147	341	170	171	341	135	182	317

Notes:
1. PCE represents the passenger car equivalent used.
Source: PCR, 2014

4.4 PROJECT TRIP DISTRIBUTION

The analysis of impacts associated with the Proposed Project represents what is considered to be the worst case daily traffic scenario, reflective of simultaneous import and export activities at the site. Under this worst case daily scenario, the following truck trip distribution would apply.

- The project truck trip distribution will follow a specific haul route as shown in Figure 4-1 and the exact route will depend on the type of truck. In general, regional access to the project site will be provided by I-405. For the ingress route, Export Trucks and Supply Trucks will exit I-405 and travel south on Beach Boulevard and then turn left on PCH. Trucks would then turn left onto Newland Street, travel north to Hamilton Avenue, and then turn right on Hamilton Avenue to access the site. For the egress route, Export Trucks and Supply Trucks will exit from the project site's east gate, travel south on Magnolia Street, travel west along Pacific Coast Highway, and continue north along Beach Boulevard back to I-405.

- The truck route for Import Trucks will be different than the route for Export Trucks and Supply Trucks. For the ingress route, Import Trucks will exit I-405 and travel southbound on Brookhurst Street, turn right onto Pacific Coast Highway and travel north along Pacific Coast Highway, turn right onto Newland Street, travel north to Hamilton Avenue, and then turn right on Hamilton Avenue to access the site. For the egress route, Import Trucks will exit from the project site's east gate, travel south on Magnolia Street, travel east along Pacific Coast Highway, turn left to travel north on Brookhurst Avenue back to I-405.

Given the anticipated construction schedule, there may be periods during which there are either only Export Trucks or Import Trucks accessing and departing from the site. During these periods of time, the following may apply to truck trips:

- Export trucks will-access the site and depart from the site via Beach Boulevard.

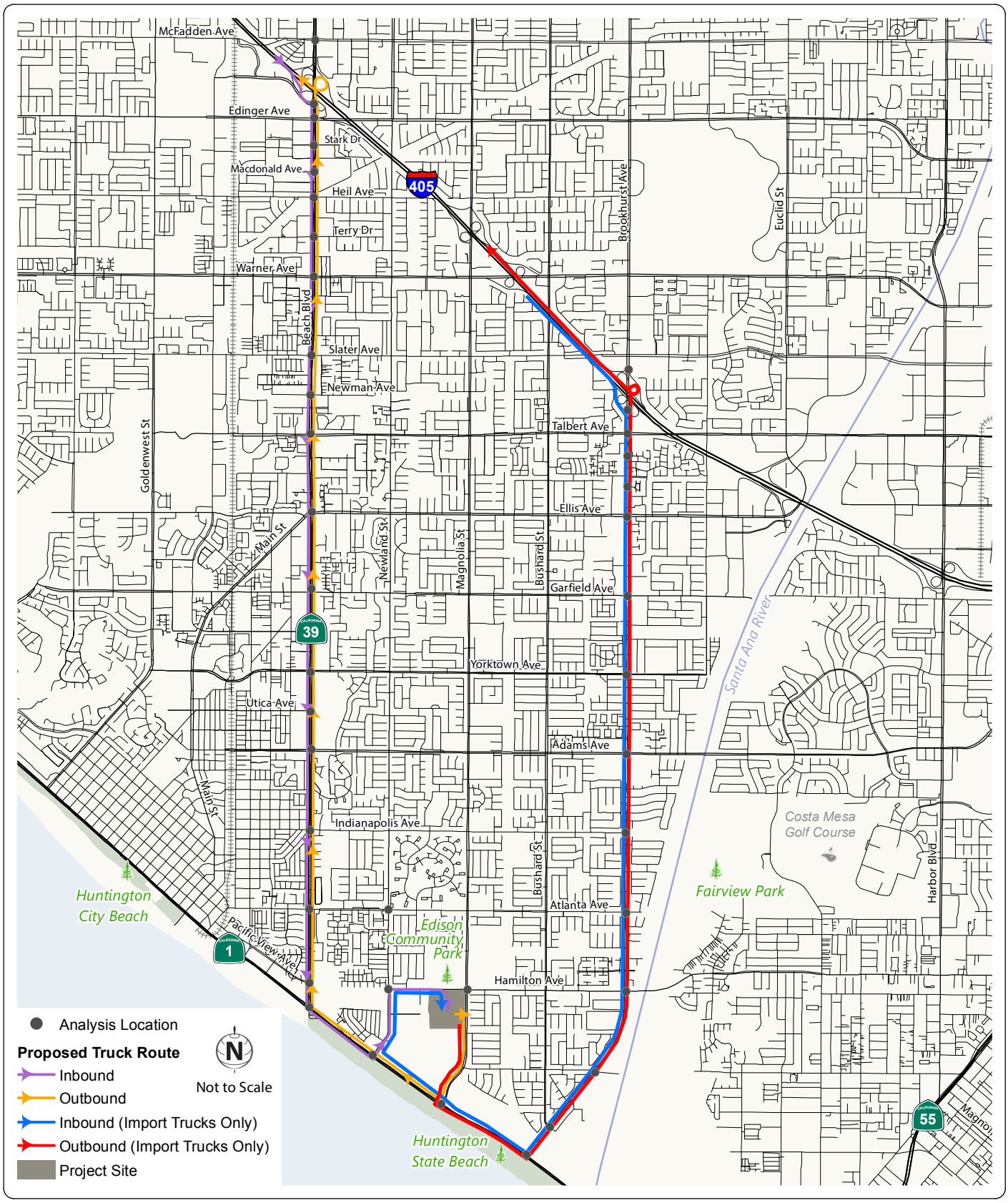
- Import trucks may also use Beach Boulevard to access the site or when departing the site to I-405, if there are no Export trucks using that route. The total number of Import trucks on Beach Boulevard will be limited to–no higher than the number of Export Trucks (100 per day or 20 per hour) evaluated in the project's traffic analysis, which is reflective of simultaneous import and export activities at the site.

These alternative routing scenarios were not quantitatively evaluated in this traffic study as the routing pattern above, under the simultaneous import and export activities scenario, represents the worst case daily scenario for purposes of identifying traffic impacts and mitigation measures.

The travel route of the employees and visitors is assumed to take a different route than the truck routes. They will primarily use Beach Boulevard, Magnolia Street, Brookhurst Street, and Pacific Coast Highway.

4.5 PROJECT TRIP ASSIGNMENT

Trip generation volumes were applied to trip distribution percentages to obtain the volume of project trips assigned to study area roadways and intersections. The assignment of "project only" trips is shown on Figure 4-2.



The haul route shown in this figure is representative of the worse-case traffic scenario, reflective of simultaneous import and export activities at the site. Given the anticipated construction schedule, there may be periods during which there are either only Export Trucks or Import Trucks accessing the site. During these periods of time, the following may apply to truck trips: 1) Export trucks will access the site and depart from the site to I-405 via Beach Boulevard; and 2) Import trucks may also use Beach Blvd. to access the site or when departing the site to I-405, if there are no Export trucks using the Beach Blvd. route. The total number of Import trucks on Beach Blvd. would be limited to no higher than the number of Export Trucks (100 per day or 20 per hour) evaluated in the project's traffic analysis, which is reflective of simultaneous import and export activities at the site.

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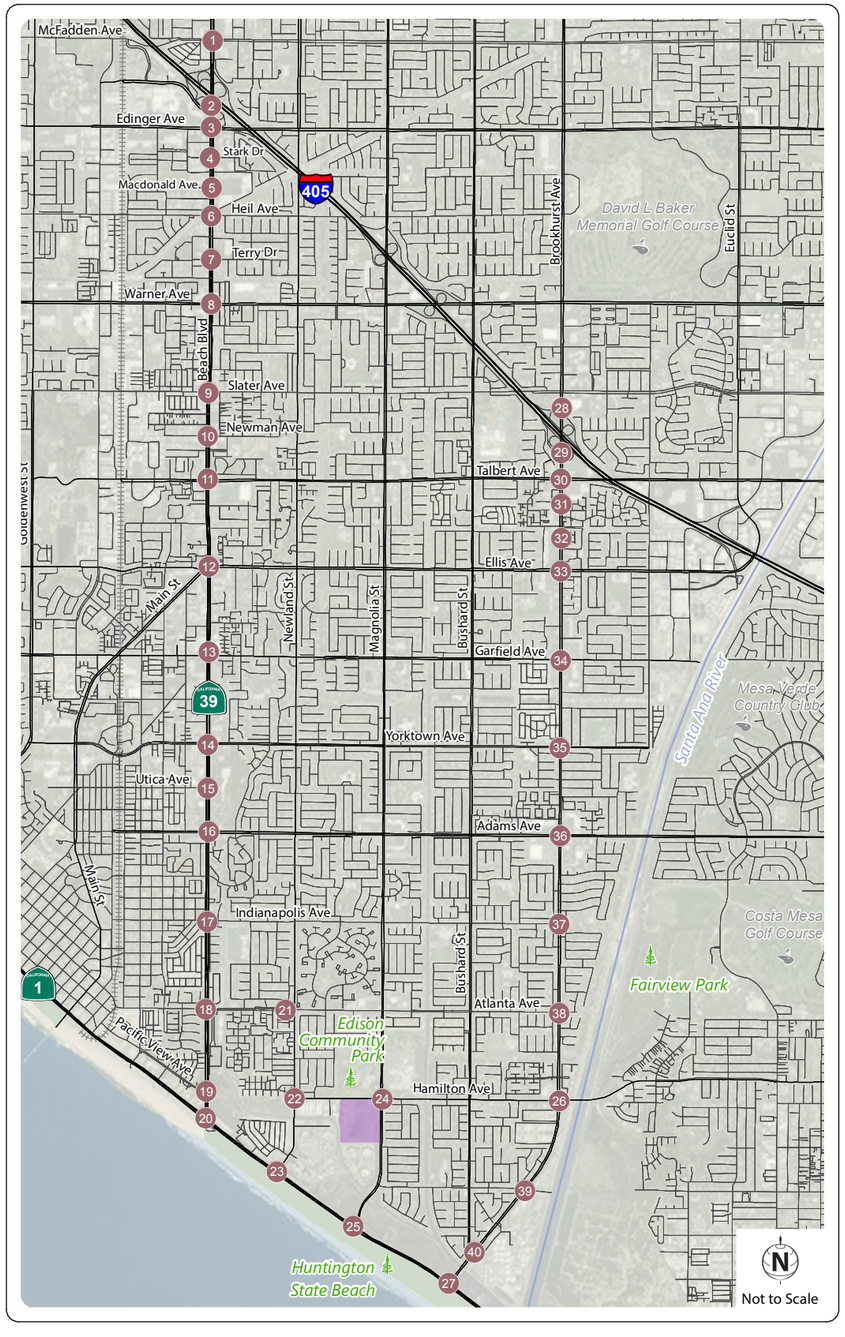
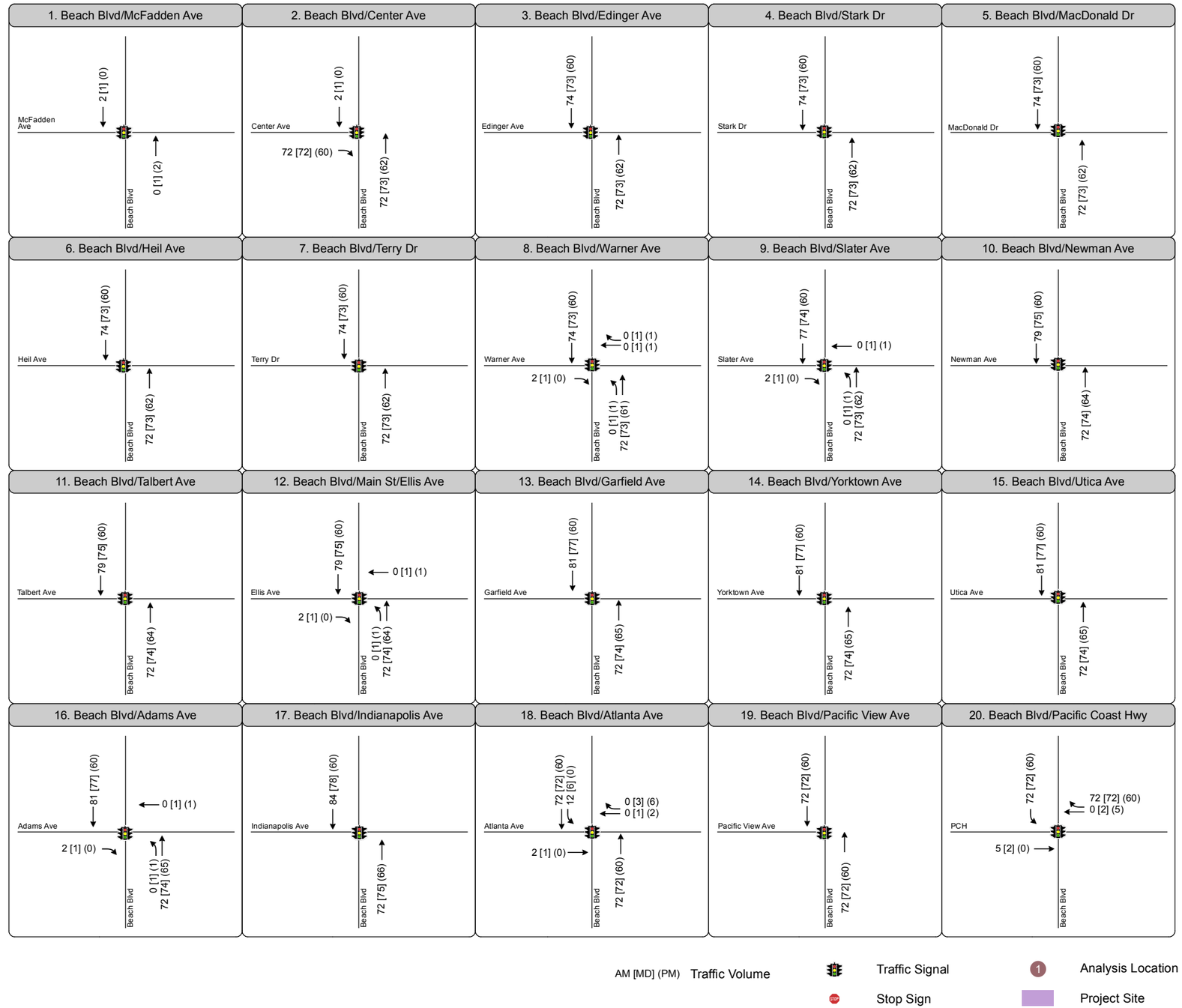
Truck Haul Route Under Worse-Case Traffic Conditions

Figure 4-1





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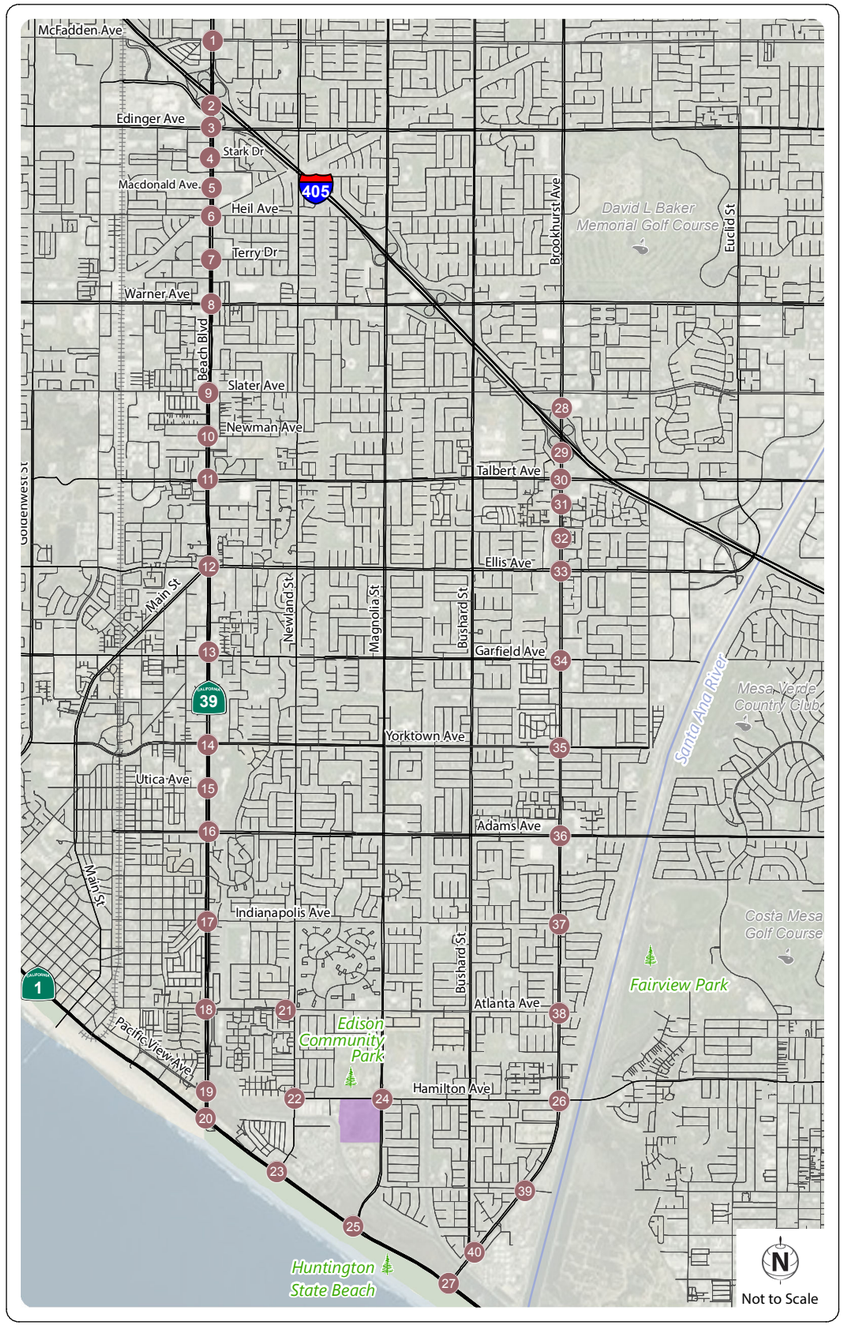
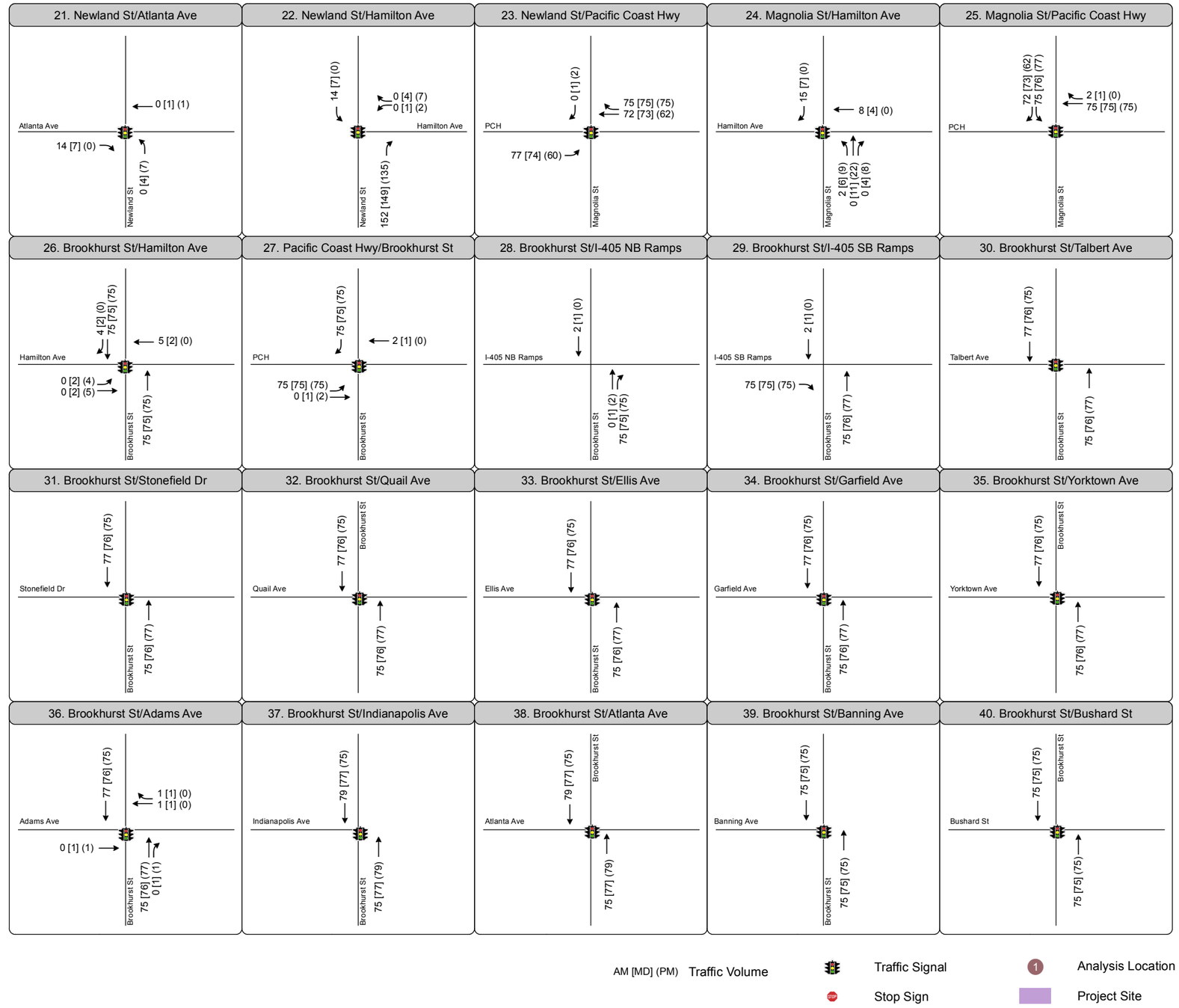
Peak Hour Project Only Traffic Volumes

Figure 4-2





AM [MD] (PM) Traffic Volume

Traffic Signal

Stop Sign

Analysis Location

Project Site

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Peak Hour Project Only Traffic Volumes

Figure 4-2

5.0 Existing Plus Project (2014) Analysis

This section documents the conditions of the Existing Plus Project (2014) Base scenario. While construction activity is not anticipated during this period, this scenario is presented for informational purposes.

5.1 TRAFFIC VOLUMES

As previously stated, traffic volumes for the Existing (2014) Plus Project scenario will include existing traffic volumes plus project volumes from the proposed haul route.

5.2 ROADWAY IMPROVEMENTS

Existing Plus Project lane configurations are assumed to include the same lane geometries as Existing Conditions. No roadway improvements, including neither within the project nor at project driveways are proposed.

5.3 INTERSECTION OPERATIONS

The intersection LOS results are summarized in Table 5-1, Table 5-2, and Table 5-3 for Existing Plus Project Conditions. Lane configurations and peak hour traffic volumes at study intersections for Existing Plus Project Conditions are shown on Figure 5-1. The Existing Plus Project LOS reports are provided in Appendix C.

TABLE 5-1 INTERSECTION LEVEL OF SERVICE: EXISTING (2014) CONDITIONS FOR AM PEAK HOUR					
		AM No Project		AM With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	53	D	53	D
2. Beach Blvd & Center Ave	Signal	10	B	10	B
3. Beach Blvd & Edinger Ave	Signal	34	C	34	C
4. Beach Blvd & Stark Dr	Signal	9	A	10	A
5. Beach Blvd & MacDonald Dr	Signal	11	B	12	B
6. Beach Blvd & Heil Ave	Signal	34	C	35	D
7. Beach Blvd & Terry Dr	Signal	5	A	5	A
8. Beach Blvd & Warner Ave	Signal	47	D	48	D
9. Beach Blvd & Slater Ave	Signal	38	D	38	D
10. Beach Blvd & Newman Ave	Signal	5	A	5	A
11. Beach Blvd & Talbert Ave	Signal	38	D	38	D
12. Beach Blvd & Main St/Ellis Ave	Signal	33	C	33	C
13. Beach Blvd & Garfield Ave	Signal	40	D	40	D
14. Beach Blvd & Yorktown Ave	Signal	29	C	28	C
15. Beach Blvd & Utica Ave	Signal	10	B	10	B
16. Beach Blvd & Adams Ave	Signal	33	C	33	C
17. Beach Blvd & Indianapolis Ave	Signal	26	C	26	C
18. Beach Blvd & Atlanta Ave	Signal	32	C	33	C
19. Beach Blvd & Pacific View Ave	Signal	7	A	7	A
20. Beach Blvd & PCH (SR-1)	Signal	29	C	37	D
21. Newland St & Atlanta Ave	Signal	0.49	A	0.5	A
22. Newland St & Hamilton Ave	Signal	0.56	A	0.65	B
23. PCH (SR-1) & Newland St	Signal	17	B	20	C
24. Magnolia St & Hamilton Ave	Signal	0.53	A	0.53	A

TABLE 5-1

INTERSECTION LEVEL OF SERVICE: EXISTING (2014) CONDITIONS FOR AM PEAK HOUR

Intersection	Control	AM No Project		AM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
25. PCH (SR-1) & Magnolia St	Signal	25	C	26	C
26. Brookhurst St & Hamilton Ave	Signal	0.7	C	0.7	C
27. PCH (SR-1) & Brookhurst St	Signal	24	C	27	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.79	C	0.79	C
31. Brookhurst St & Stonefield Dr	Signal	0.35	A	0.36	A
32. Brookhurst St & Quail Ave	Signal	0.4	A	0.41	A
33. Brookhurst St & Ellis Ave	Signal	0.66	B	0.68	B
34. Brookhurst St & Garfield Ave	Signal	0.52	A	0.53	A
35. Brookhurst St & Yorktown Ave	Signal	0.52	A	0.54	A
36. Brookhurst St & Adams Ave	Signal	0.74	C	0.75	C
37. Brookhurst St & Indianapolis Ave	Signal	0.25	A	0.26	A
38. Brookhurst St & Atlanta Ave	Signal	0.39	A	0.4	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.26	A
40. Brookhurst St & Bushard St	Signal	0.3	A	0.32	A

Notes:

1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. Cells highlighted in grey represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

Table 5-2 Intersection Level of Service: Existing (2014) Conditions for Mid-Day Peak Hour					
		Mid-Day No Project		Mid-Day With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	34	C	33	C
2. Beach Blvd & Center Ave	Signal	13	B	13	B
3. Beach Blvd & Edinger Ave	Signal	33	C	34	C
4. Beach Blvd & Stark Dr	Signal	15	B	15	B
5. Beach Blvd & MacDonald Dr	Signal	14	B	14	B
6. Beach Blvd & Heil Ave	Signal	30	C	30	C
7. Beach Blvd & Terry Dr	Signal	8	A	8	A
8. Beach Blvd & Warner Ave	Signal	33	C	32	C
9. Beach Blvd & Slater Ave	Signal	32	C	32	C
10. Beach Blvd & Newman Ave	Signal	7	A	6	A
11. Beach Blvd & Talbert Ave	Signal	40	D	41	D
12. Beach Blvd & Main St/Ellis Ave	Signal	28	C	28	C
13. Beach Blvd & Garfield Ave	Signal	33	C	33	C
14. Beach Blvd & Yorktown Ave	Signal	30	C	30	C
15. Beach Blvd & Utica Ave	Signal	18	B	17	B
16. Beach Blvd & Adams Ave	Signal	35	D	34	C
17. Beach Blvd & Indianapolis Ave	Signal	21	C	20	C
18. Beach Blvd & Atlanta Ave	Signal	30	C	31	C
19. Beach Blvd & Pacific View Ave	Signal	7	A	7	A
20. Beach Blvd & PCH (SR-1)	Signal	22	C	24	C
21. Newland St & Atlanta Ave	Signal	0.42	A	0.43	A
22. Newland St & Hamilton Ave	Signal	0.45	A	0.54	A
23. PCH (SR-1) & Newland St	Signal	11	B	12	B
24. Magnolia St & Hamilton Ave	Signal	0.39	A	0.4	A

Table 5-2

Intersection Level of Service: Existing (2014) Conditions for Mid-Day Peak Hour

Intersection	Control	Mid-Day No Project		Mid-Day With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
25. PCH (SR-1) & Magnolia St	Signal	20	C	22	C
26. Brookhurst St & Hamilton Ave	Signal	0.4	A	0.42	A
27. PCH (SR-1) & Brookhurst St	Signal	19	B	22	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.62	B	0.62	B
31. Brookhurst St & Stonefield Dr	Signal	0.49	A	0.5	A
32. Brookhurst St & Quail Ave	Signal	0.59	A	0.61	B
33. Brookhurst St & Ellis Ave	Signal	0.57	A	0.59	A
34. Brookhurst St & Garfield Ave	Signal	0.59	A	0.6	B
35. Brookhurst St & Yorktown Ave	Signal	0.52	A	0.54	A
36. Brookhurst St & Adams Ave	Signal	0.52	A	0.54	A
37. Brookhurst St & Indianapolis Ave	Signal	0.3	A	0.32	A
38. Brookhurst St & Atlanta Ave	Signal	0.34	A	0.36	A
39. Brookhurst St & Banning Ave	Signal	0.19	A	0.2	A
40. Brookhurst St & Bushard St	Signal	0.22	A	0.23	A

Notes:

1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

Table 5-3 Intersection Level of Service: Existing (2014) Conditions for PM Peak Hour					
		PM No Project		PM With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**55**	**E**	**55**	**E**
2. Beach Blvd & Center Ave	Signal	16	B	16	B
3. Beach Blvd & Edinger Ave	Signal	52	D	54	D
4. Beach Blvd & Stark Dr	Signal	15	B	15	B
5. Beach Blvd & MacDonald Dr	Signal	10	B	10	B
6. Beach Blvd & Heil Ave	Signal	52	D	**56**	**E**
7. Beach Blvd & Terry Dr	Signal	10	B	10	B
8. Beach Blvd & Warner Ave	Signal	**73**	**E**	**72**	**E**
9. Beach Blvd & Slater Ave	Signal	50	D	51	D
10. Beach Blvd & Newman Ave	Signal	9	A	8	A
11. Beach Blvd & Talbert Ave	Signal	40	D	43	D
12. Beach Blvd & Main St/Ellis Ave	Signal	33	C	33	C
13. Beach Blvd & Garfield Ave	Signal	39	D	40	D
14. Beach Blvd & Yorktown Ave	Signal	34	C	35	D
15. Beach Blvd & Utica Ave	Signal	16	B	16	B
16. Beach Blvd & Adams Ave	Signal	43	D	43	D
17. Beach Blvd & Indianapolis Ave	Signal	20	C	19	B
18. Beach Blvd & Atlanta Ave	Signal	49	D	51	D
19. Beach Blvd & Pacific View Ave	Signal	8	A	8	A
20. Beach Blvd & PCH (SR-1)	Signal	27	C	29	C
21. Newland St & Atlanta Ave	Signal	0.54	A	0.55	A
22. Newland St & Hamilton Ave	Signal	0.67	B	0.76	C
23. PCH (SR-1) & Newland St	Signal	13	B	16	B
24. Magnolia St & Hamilton Ave	Signal	0.59	A	0.6	B

Table 5-3

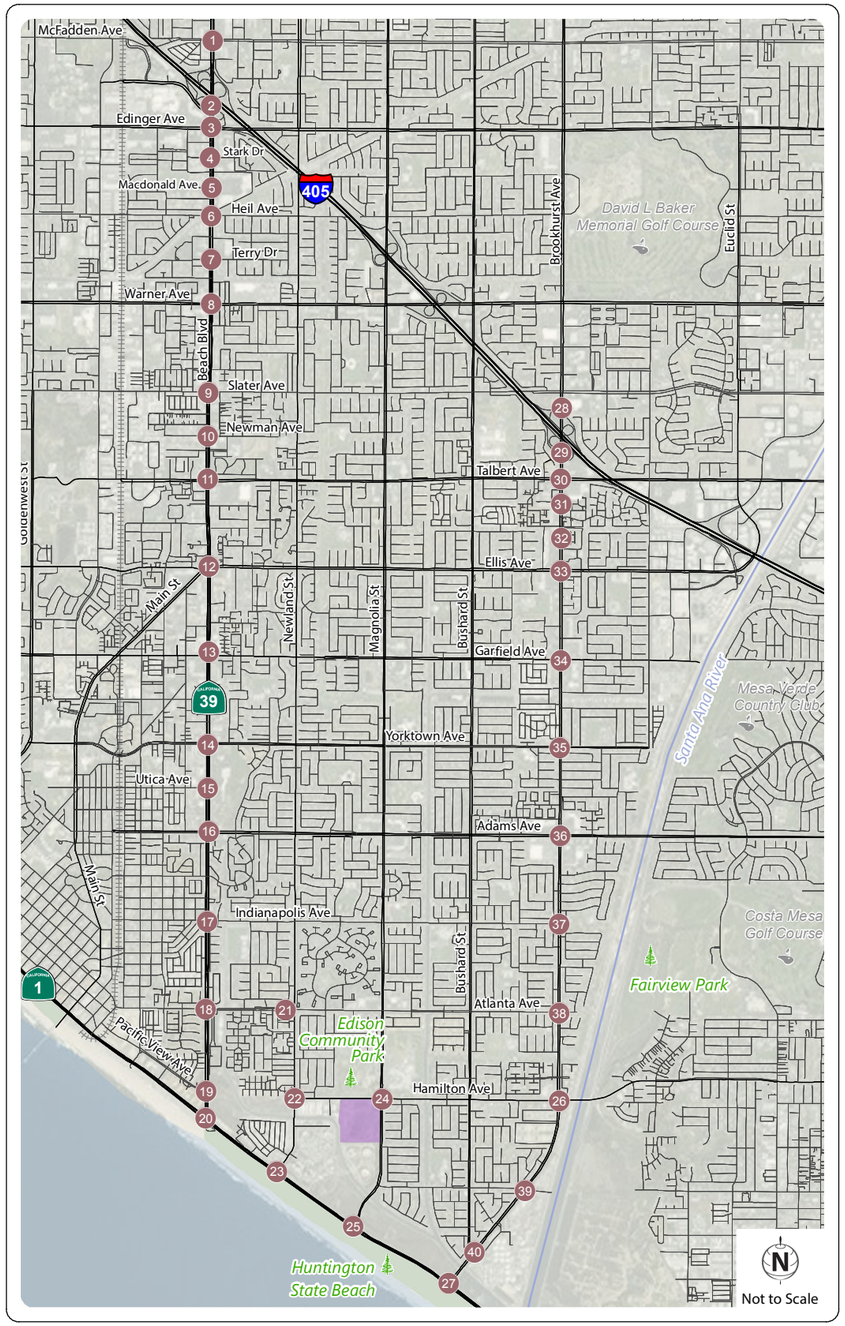
Intersection Level of Service: Existing (2014) Conditions for PM Peak Hour

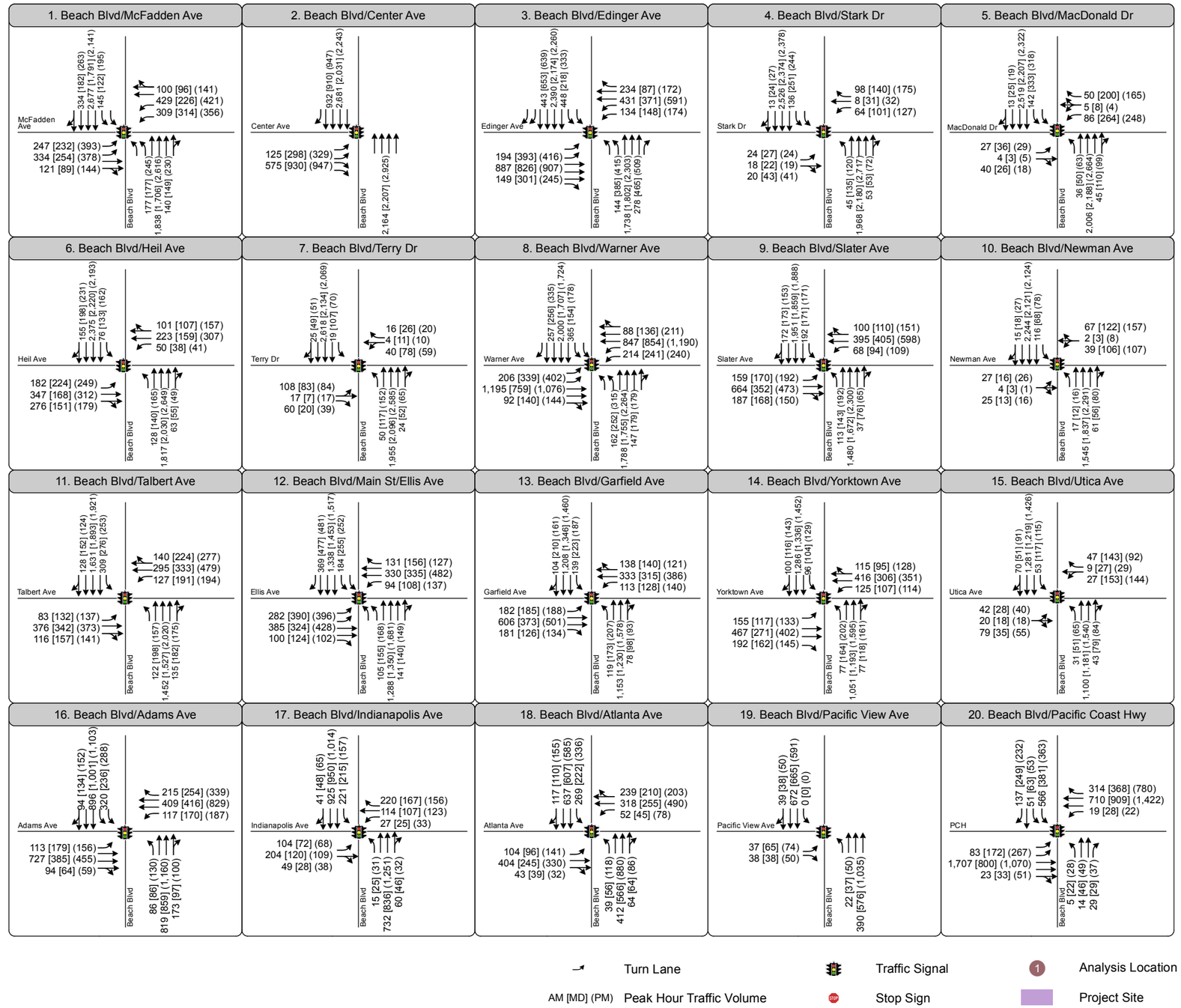
Intersection	Control	PM No Project		PM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
25. PCH (SR-1) & Magnolia St	Signal	27	C	33	C
26. Brookhurst St & Hamilton Ave	Signal	0.64	B	0.65	B
27. PCH (SR-1) & Brookhurst St	Signal	34	C	**67**	**E**
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.77	C	0.79	C
31. Brookhurst St & Stonefield Dr	Signal	0.49	A	0.5	A
32. Brookhurst St & Quail Ave	Signal	0.58	A	0.59	A
33. Brookhurst St & Ellis Ave	Signal	0.69	B	0.7	C
34. Brookhurst St & Garfield Ave	Signal	0.6	B	0.62	B
35. Brookhurst St & Yorktown Ave	Signal	0.58	A	0.59	A
36. Brookhurst St & Adams Ave	Signal	0.75	C	0.77	C
37. Brookhurst St & Indianapolis Ave	Signal	0.34	A	0.35	A
38. Brookhurst St & Atlanta Ave	Signal	0.42	A	0.44	A
39. Brookhurst St & Banning Ave	Signal	0.22	A	0.23	A
40. Brookhurst St & Bushard St	Signal	0.27	A	0.29	A

Notes:

1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014





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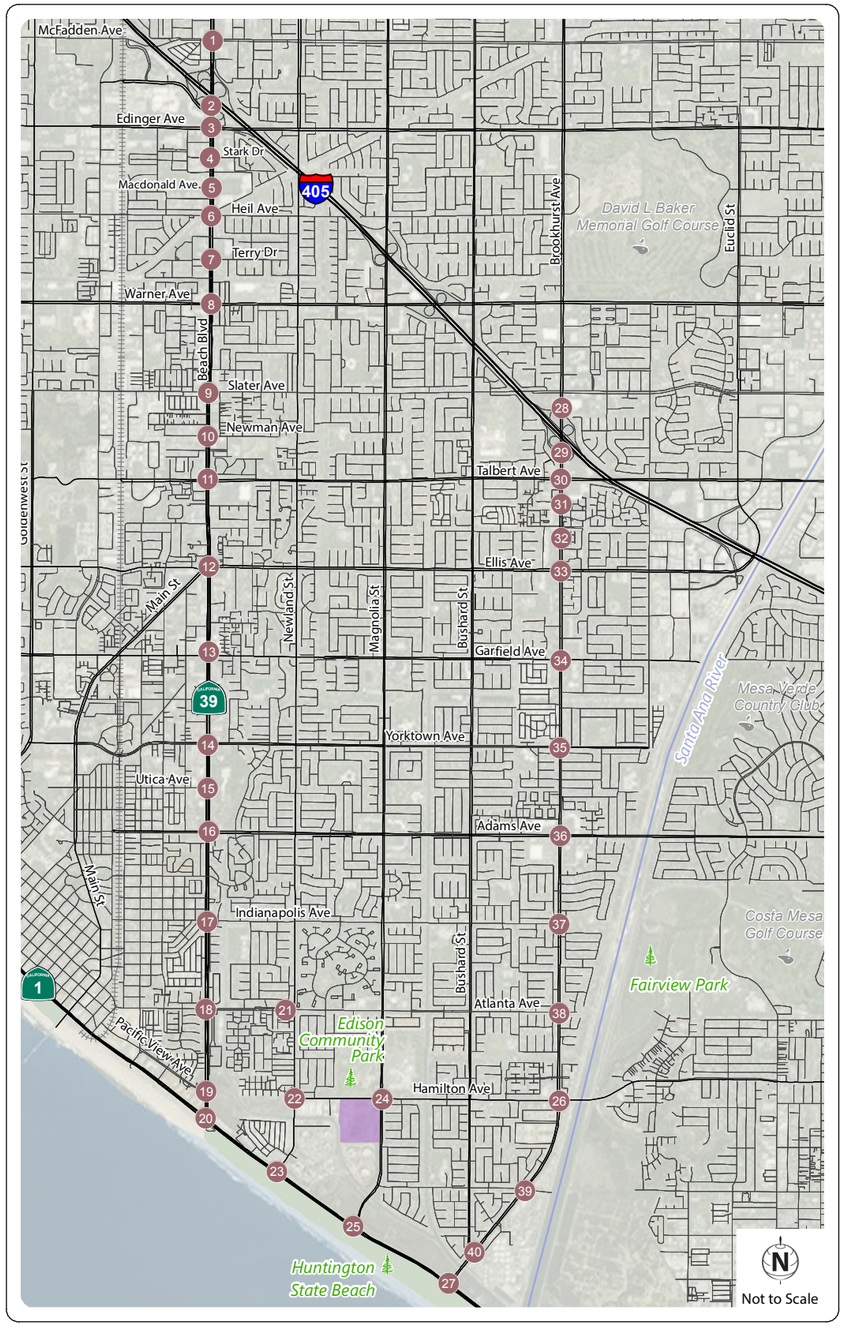
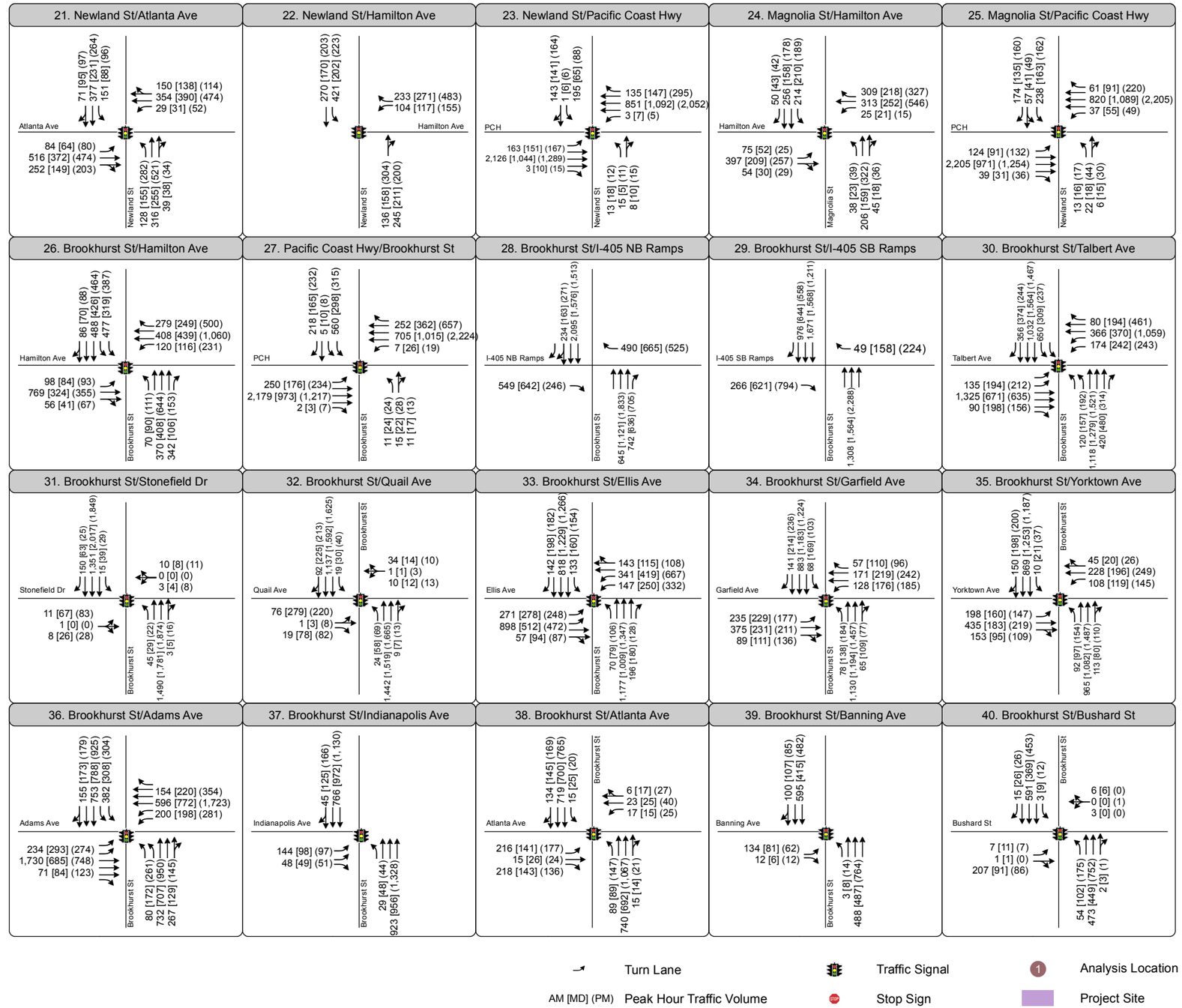
Peak Hour Traffic Volumes and Lane Configurations - Existing (2014) Plus Project Conditions

Figure 5-1





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Peak Hour Traffic Volumes and Lane Configurations - Existing (2014) Plus Project Conditions

Figure 5-1

5.4 INTERSECTION IMPACT ASSESSMENT

Table 5-4 compares the changes in delay, V/C, and LOS at intersections that operate at LOS E or F between "Base" and "Plus Project" scenarios of Existing Year (2014) to determine project impacts.

TABLE 5-4
INTERSECTION LEVEL OF SERVICE: EXISTING (2014) COMPARISON

Intersection	Control	Peak	No Project Delay or V/C	No Project LOS	With Project Delay or V/C	With Project LOS	Δ Delay or V/C
1. Beach Blvd & McFadden Ave	Signal	AM	53	D	53	D	0
		MD	34	C	33	C	-1
		PM	55	E	55	E	0
6. Beach Blvd & Heil Ave	Signal	AM	34	C	35	D	1
		MD	30	C	30	C	0
		PM	**52**	**D**	**56**	**E**	**4**
8. Beach Blvd & Warner Ave	Signal	AM	47	D	48	D	1
		MD	33	C	32	C	-1
		PM	73	E	72	E	-1
27. PCH & Brookhurst St	Signal	AM	24	C	27	C	3
		MD	19	B	22	C	3
		PM	**34**	**C**	**67**	**E**	**33**

Notes:

1. Delay is measured in seconds. Calculated using Synchro 8 software package.
2. V/C ratios are calculated using Traffix 8.0 software package.
3. **Cells highlighted in grey** indicates project impact.

Source: Fehr & Peers, 2014

As shown in the table, the overall intersection delay will improve or remain the same at some locations in the plus project scenario because the project increases traffic to certain movements which have available capacity or "green time". For example, if volumes are increased at a coordinated through phase where actuated green time may be available, the intersection may operate more efficiently by utilizing the available capacity or "green time" allowing more vehicles to travel through the intersection. The added vehicles to the intersection in this case will actually experience less delay than the average of all vehicles already at the intersection. Since intersection delay is report as a weighted average of all movements as

provided for by the Highway Capacity Manual, this increase in traffic volume actually results in a reduction or no change of overall intersection delay.

As shown in Table 5-4, the project traffic will impact the following intersections under the Existing Year (2014) Conditions:

6. Beach Boulevard at Heil Avenue – PM Peak Hour (LOS E)

27. PCH & Brookhurst Street – PM Peak Hour (LOS E)

Measures to mitigate the identified impacts are discussed in detail in Chapter 11.

5.5 HAMILTON AVENUE LANE CLOSURE

During construction activity on the site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the project frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to be a shared left-turn/through/right-turn lane. Table 5-5 documents the ICU and LOS results with the implementation of this lane closure under the Existing Plus Project Scenario. As shown in the table below, the intersection remains at an acceptable level of service with the implementation of the lane closure during all peak periods.

TABLE 5-5
INTERSECTION LOS COMPARISON – EXISTING PLUS PROJECT (2014) CONDITIONS

	Without Lane Closure						With Lane Closure						Change in V/C		
	AM Peak		MD Peak		PM Peak		AM Peak		MD Peak		PM Peak				
Intersection	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**AM**	**MD**	**PM**
Magnolia St & Hamilton Ave	0.53	A	0.4	A	0.6	B	0.57	A	0.4	A	0.6	B	0.04	0	0

Source: Fehr & Peers,.2014

6.0 Project Operating Year (2017) Base Traffic Conditions

This section documents the conditions of the Project Operating Year (2017) Base scenario. The project has an operating time frame from 2016 to 2017. This scenario analyzes the intersection conditions with the addition of ambient growth per year from the existing volumes to the project operating year (2017).

6.1 TRAFFIC VOLUMES

Traffic volumes for this scenario were calculated by applying an annual ambient growth and traffic from cumulative projects to existing volumes. A 1% ambient growth per year, over the three-year period between the Existing and Operating Year was applied to the existing conditions volumes. Cumulative projects in the vicinity of the project study area, to be completed by project operating year, were provided by City of Huntington Beach staff and are shown on Figure 6-1. This list of projects includes both development projects and several large construction efforts such as AES and Poseidon, which could be generating traffic during similar time periods as Ascon. The City of Fountain Valley indicated that there were no Cumulative projects within our study area. Operating year assumptions as well as estimated trip generation volumes are provided in Appendix D.

6.2 ROADWAY IMPROVEMENTS

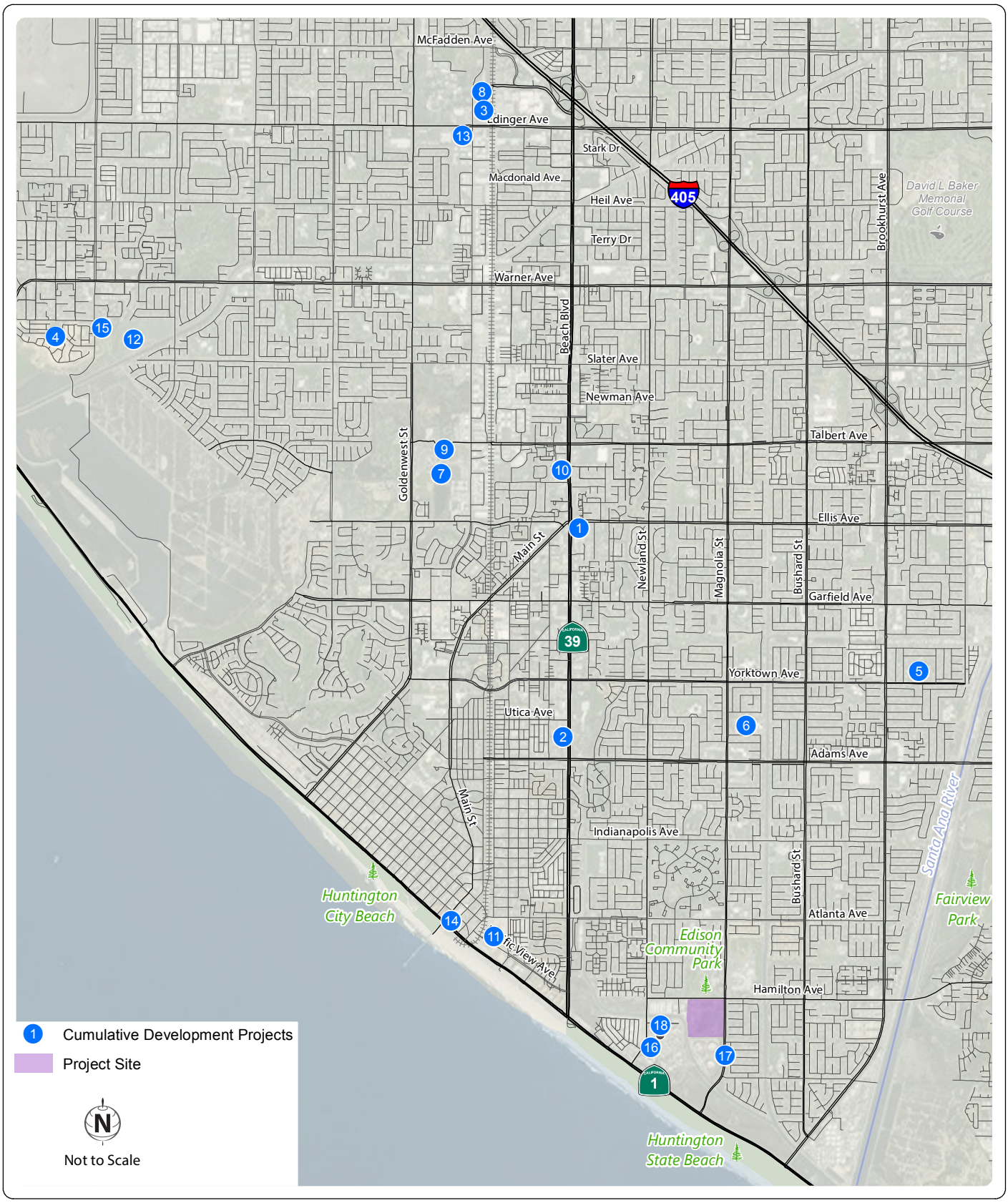
There are no roadway improvements planned and funded in the study area that will be completed by 2017.

6.3 TRAFFIC SIGNAL TIMING ASSUMPTIONS

The Project Operating Year 2017 conditions assume updated traffic signal timing parameters over the Existing 2014 Conditions parameters. The updated traffic signal timing parameters assume the new pedestrian walk speed of 3.5 feet per second (fps) as required by the 2012 Manual on Uniform Traffic Control Devices (MUTCD). The existing parameters apply a walk speed of 4.0 fps. Fehr and Peers assumed that the implementation of the new pedestrian timings would be done concurrently with a reevaluation of the coordinated timing plans and other signal timing parameters, as recommended by Caltrans. The slower walk speed of 3.5 fps equates to increasing traffic signal timing parameters including flashing don't walk, minimum green time, and coordinated cycle lengths. In this analysis, the increase in the flashing don't walk time was conducted by measuring ramp to ramp crossing distances and determining the minimum crossing time, not including the yellow clearance interval. The increased pedestrian flash don't walk time is assumed to be accompanied by an increase in the coordinated cycle length for all intersections that are Caltrans facilities including Beach Boulevard and Pacific Coast Highway.

6.4 INTERSECTION OPERATIONS

The intersection LOS results are summarized in Table 6-1 for Project Operating Year (2017) Base Conditions. Lane configurations and peak hour traffic volumes at study intersections for Project Operating Year (2017) Base Conditions are shown on Figure 6-2. The Project Operating Year (2017) Base Conditions LOS reports are provided in Appendix E.



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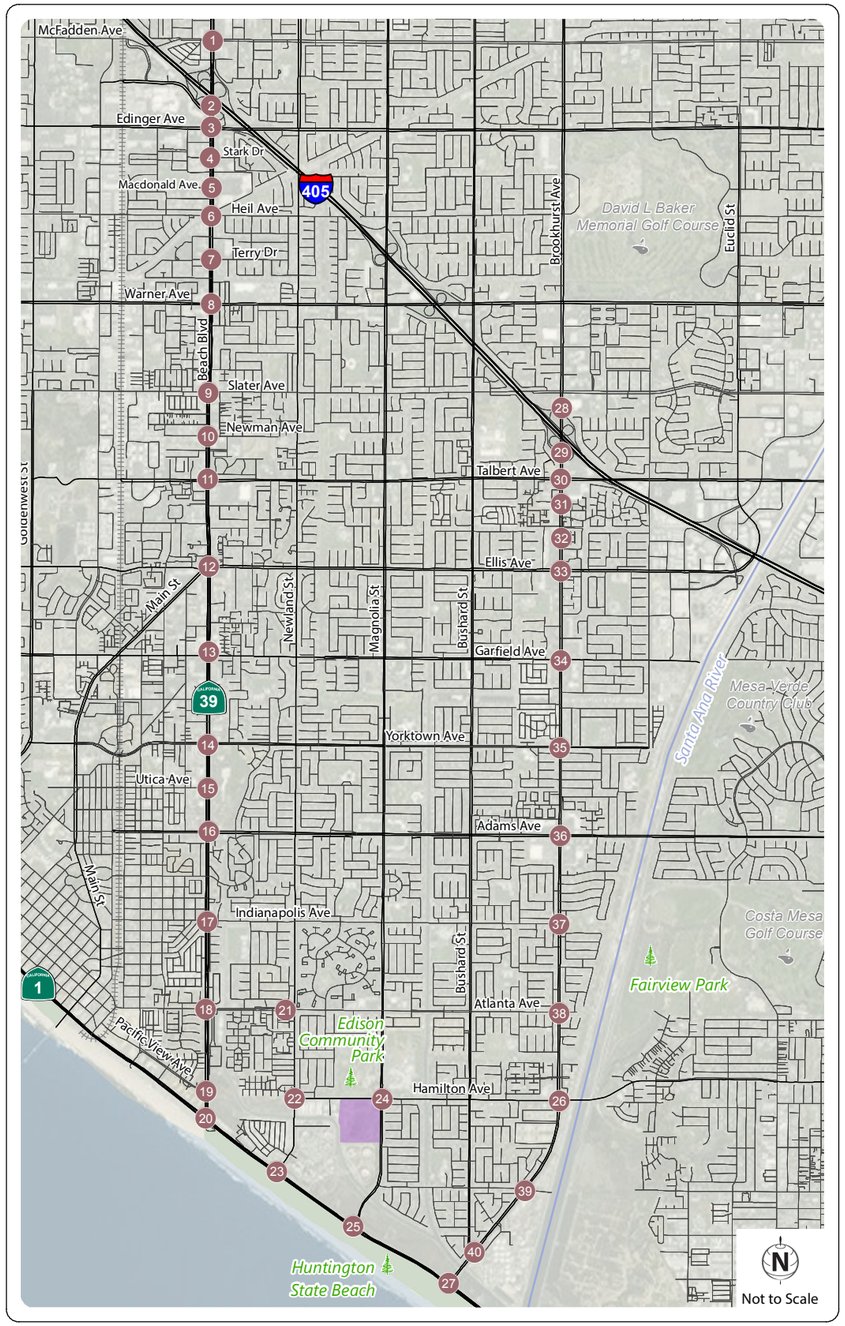
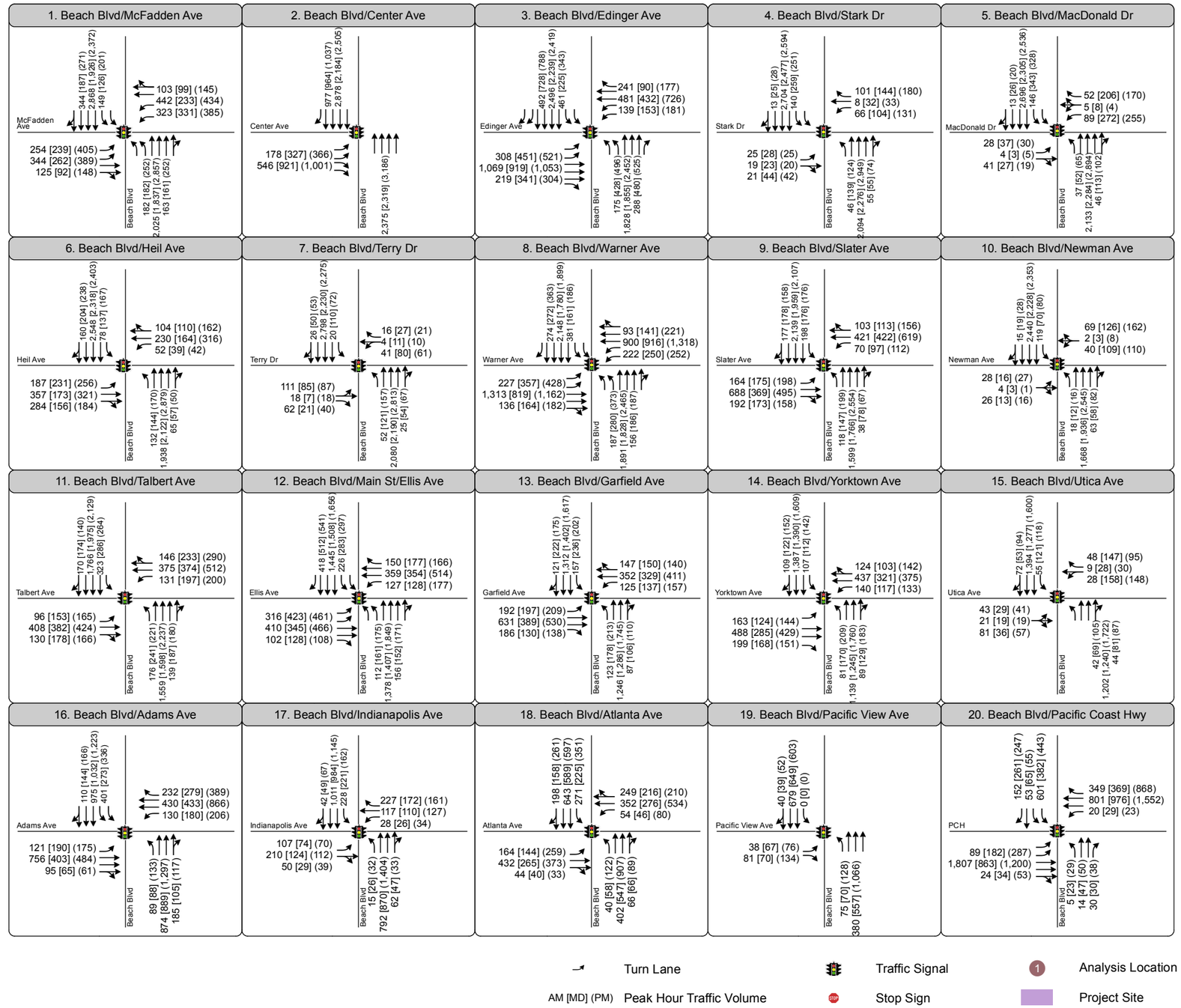
Cumulative Development Projects

Figure 6-1





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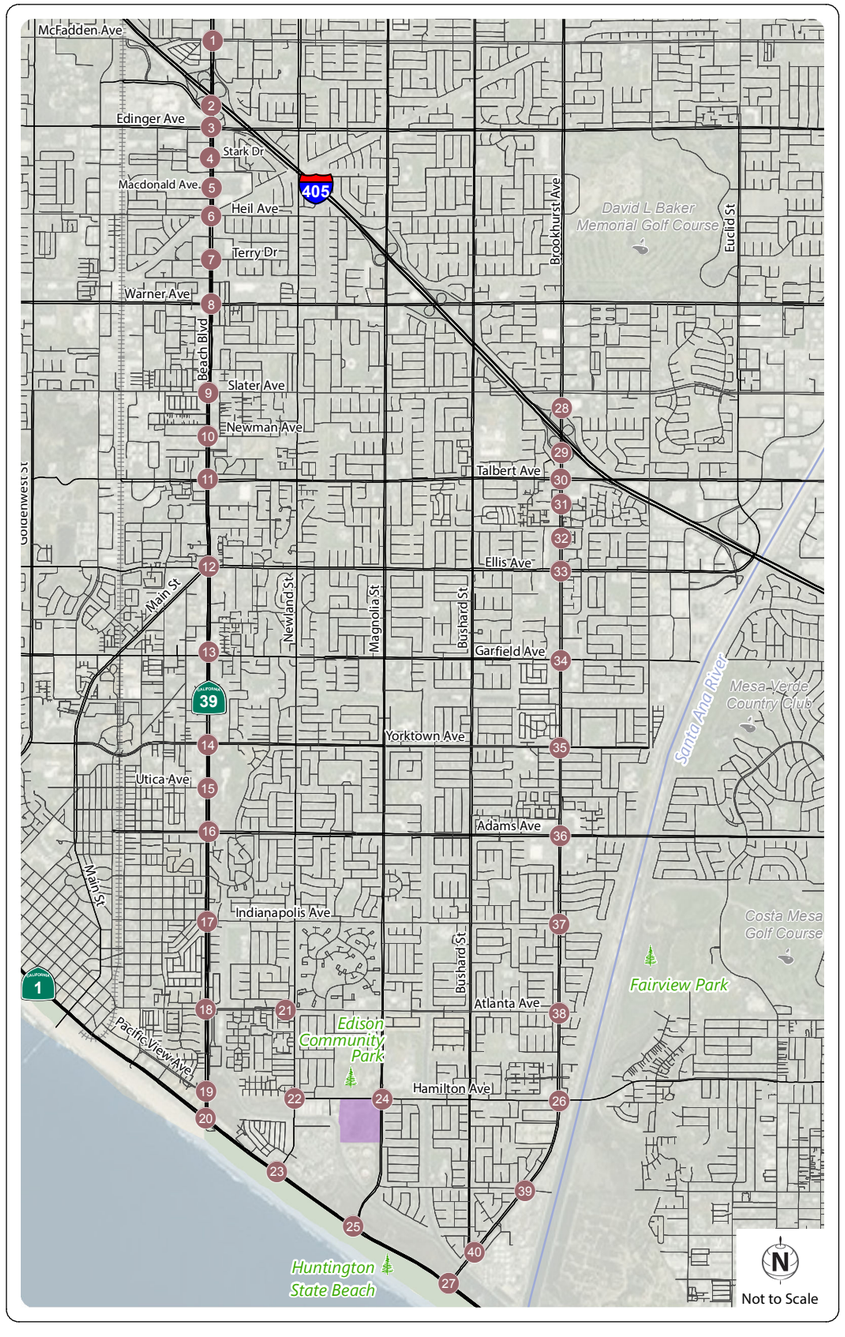
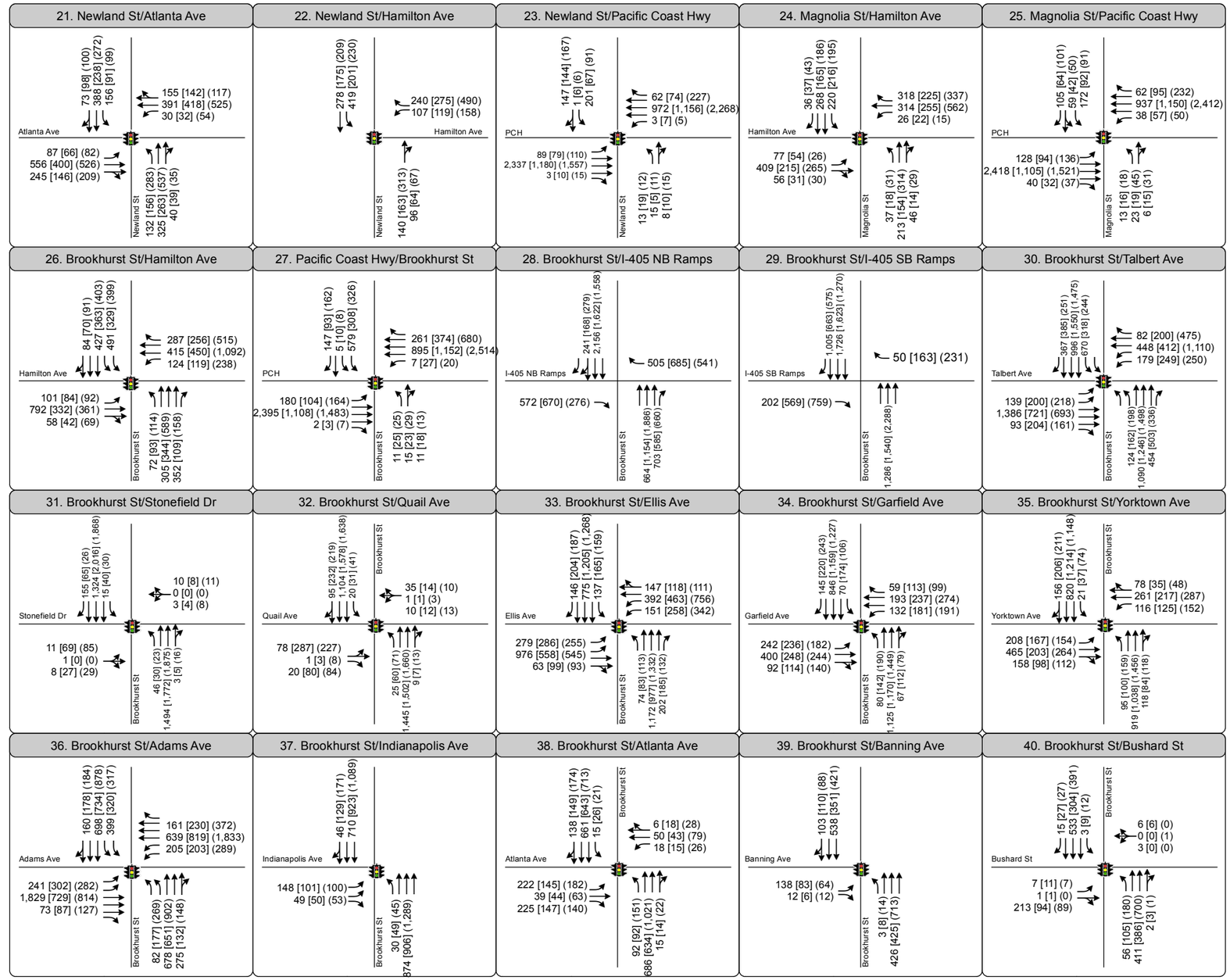
Peak Hour Traffic Volumes and Lane Configurations - Project Operating Year (2017) Base Conditions

Figure 6-2





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Peak Hour Traffic Volumes and Lane Configurations - Project Operating Year (2017) Base Conditions

Figure 6-2

TABLE 6-1

INTERSECTION LEVEL OF SERVICE: PROJECT OPERATING YEAR (2017) BASE CONDITIONS

Intersection	Control	AM		Mid-Day		PM	
		Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**73**	**E**	36	D	**89**	**F**
2. Beach Blvd & Center Ave	Signal	9	A	15	B	15	B
3. Beach Blvd & Edinger Ave	Signal	51	D	45	D	**120**	**F**
4. Beach Blvd & Stark Dr	Signal	9	A	14	B	15	B
5. Beach Blvd & MacDonald Dr	Signal	15	B	17	B	15	B
6. Beach Blvd & Heil Ave	Signal	39	D	31	C	**93**	**F**
7. Beach Blvd & Terry Dr	Signal	6	A	10	B	12	B
8. Beach Blvd & Warner Ave	Signal	51	D	35	D	**77**	**E**
9. Beach Blvd & Slater Ave	Signal	43	D	36	D	**65**	**E**
10. Beach Blvd & Newman Ave	Signal	5	A	7	A	12	B
11. Beach Blvd & Talbert Ave	Signal	33	C	**58**	**E**	**65**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	36	D	32	C	39	D
13. Beach Blvd & Garfield Ave	Signal	45	D	36	D	51	D
14. Beach Blvd & Yorktown Ave	Signal	32	C	31	C	42	D
15. Beach Blvd & Utica Ave	Signal	10	B	19	B	23	C
16. Beach Blvd & Adams Ave	Signal	32	C	39	D	46	D
17. Beach Blvd & Indianapolis Ave	Signal	24	C	19	B	16	B
18. Beach Blvd & Atlanta Ave	Signal	40	D	37	D	**59**	**E**
19. Beach Blvd & Pacific View Ave	Signal	11	B	10	B	13	B
20. Beach Blvd & PCH (SR-1)	Signal	29	C	21	C	32	C
21. Newland St & Atlanta Ave	Signal	0.51	A	0.44	A	0.57	A
22. Newland St & Hamilton Ave	Signal	0.57	A	0.46	A	0.69	B
23. PCH (SR-1) & Newland St	Signal	14	B	11	B	12	B
24. Magnolia St & Hamilton Ave	Signal	0.54	A	0.4	A	0.61	B

TABLE 6-1 INTERSECTION LEVEL OF SERVICE: PROJECT OPERATING YEAR (2017) BASE CONDITIONS							
		AM		Mid-Day		PM	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
25. PCH (SR-1) & Magnolia St	Signal	18	B	24	C	16	B
26. Brookhurst St & Hamilton Ave	Signal	0.72	C	0.41	A	0.65	B
27. PCH (SR-1) & Brookhurst St	Signal	21	C	20	C	36	D
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.83	D	0.65	B	0.8	D
31. Brookhurst St & Stonefield Dr	Signal	0.36	A	0.52	A	0.51	A
32. Brookhurst St & Quail Ave	Signal	0.42	A	0.62	B	0.6	B
33. Brookhurst St & Ellis Ave	Signal	0.71	C	0.6	B	0.73	C
34. Brookhurst St & Garfield Ave	Signal	0.54	A	0.61	B	0.63	B
35. Brookhurst St & Yorktown Ave	Signal	0.54	A	0.55	A	0.61	B
36. Brookhurst St & Adams Ave	Signal	0.77	C	0.54	A	0.79	C
37. Brookhurst St & Indianapolis Ave	Signal	0.26	A	0.31	A	0.35	A
38. Brookhurst St & Atlanta Ave	Signal	0.4	A	0.36	A	0.45	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.19	A	0.22	A
40. Brookhurst St & Bushard St	Signal	0.31	A	0.22	A	0.28	A

Notes:
1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

As shown in Table 6-1, all of the study intersections will operate acceptably at LOS D or better during the peak hours, with exception to the following locations:

- Beach Boulevard at McFadden Avenue- AM Peak Hour (LOS E) and PM Peak Hour (LOS F)
- Beach Boulevard at Edinger Avenue- PM Peak Hour (LOS F)

- Beach Boulevard at Heil Avenue- PM Peak Hour (LOS F)
- Beach Boulevard at Warner Avenue- PM Peak Hour (LOS E)
- Beach Boulevard at Slater Avenue- PM Peak Hour (LOS E)
- Beach Boulevard at Talbert Avenue- Mid-Day Peak Hour (LOS E) and PM Peak Hour (LOS E)
- Beach Boulevard at Atlanta Avenue- PM Peak Hour (LOS E)

7.0 Project Operating Year (2017) Plus Project Traffic Conditions

This section documents the conditions in the Project Operating Year (2017) Base Conditions plus traffic generated by the project. This condition is used to evaluate the net change in traffic conditions and to identify potential traffic impacts associated with the project.

7.1 TRAFFIC VOLUMES

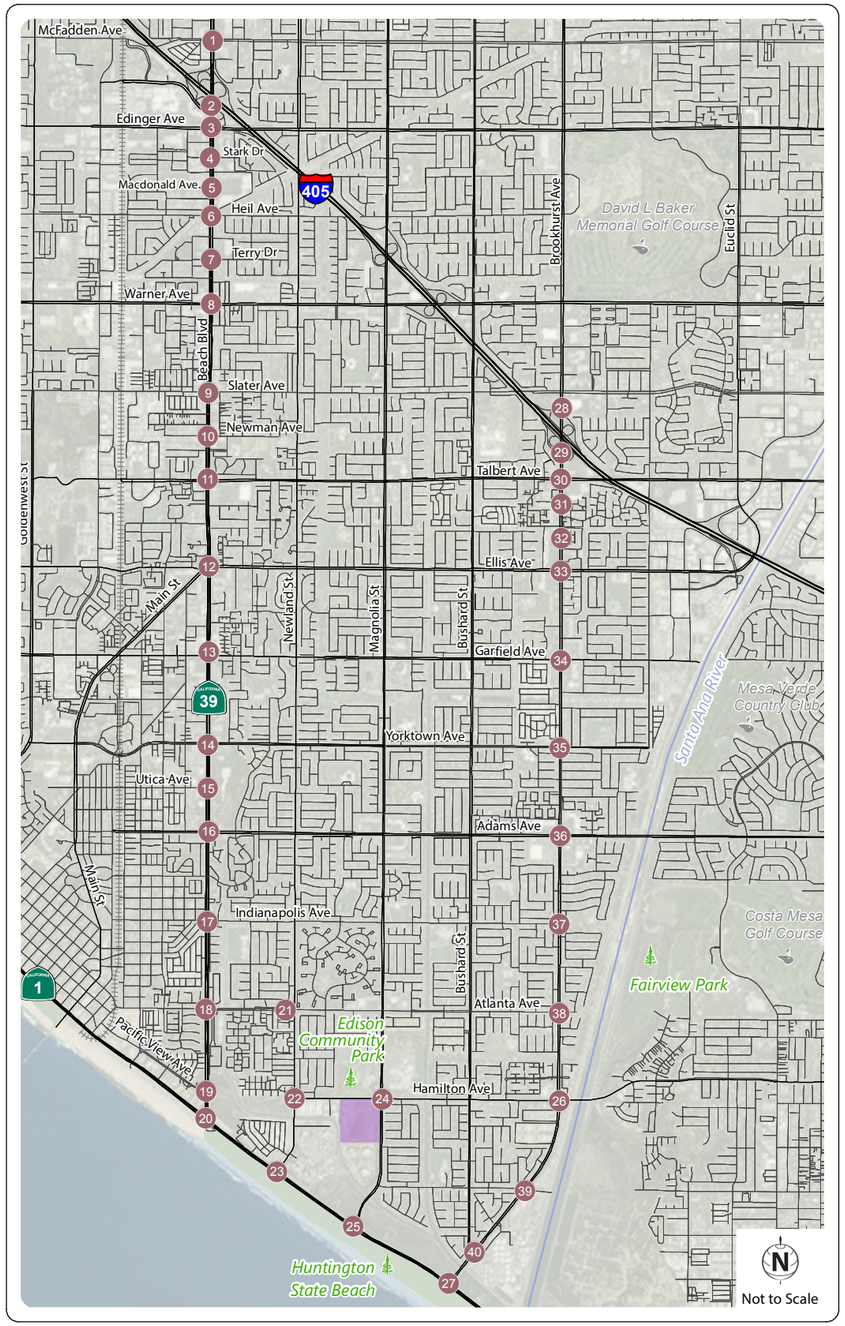
Traffic volumes for this scenario were calculated by adding volumes generated by the project to the Project Operating Year (2017) Base Conditions. The traffic volumes added to the Project Operating Year (2017) Base Conditions are the "project only" trips shown in Figure 4-2. Project Operating Year (2017) Plus Project traffic volumes for the study area are shown on Figure 7-1.

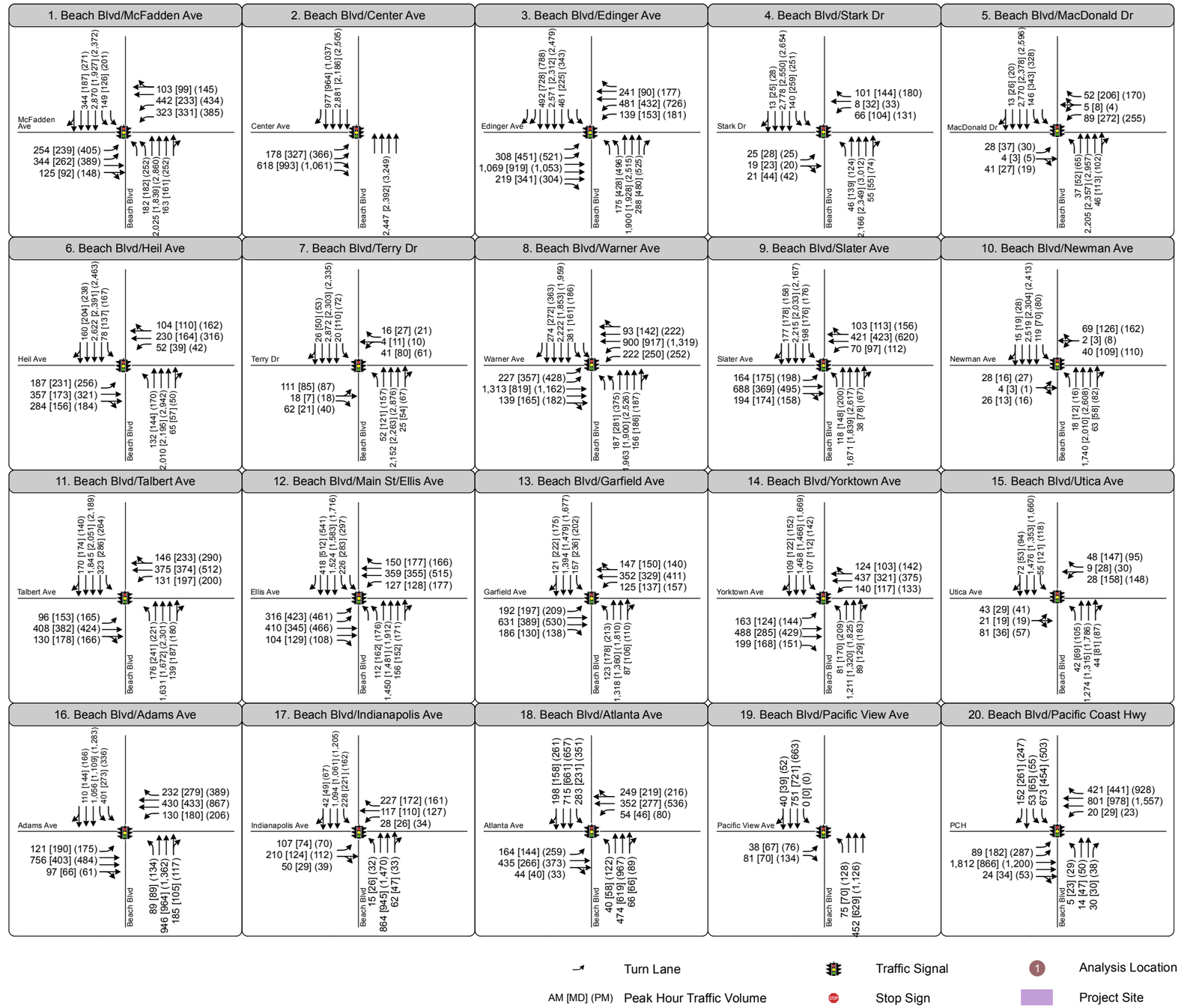
7.2 ROADWAY IMPROVEMENTS

No roadway improvements, except for within the project and at project driveways are proposed.

7.3 INTERSECTION OPERATIONS

The intersection LOS results are summarized in Table 7-1, Table 7-2, and Table 7-3 for Project Operating Year (2017) Plus Project Conditions. The intersection volumes are shown on Figure 7-1. The Project Operating Year (2017) Plus Project LOS reports are provided in Appendix F.





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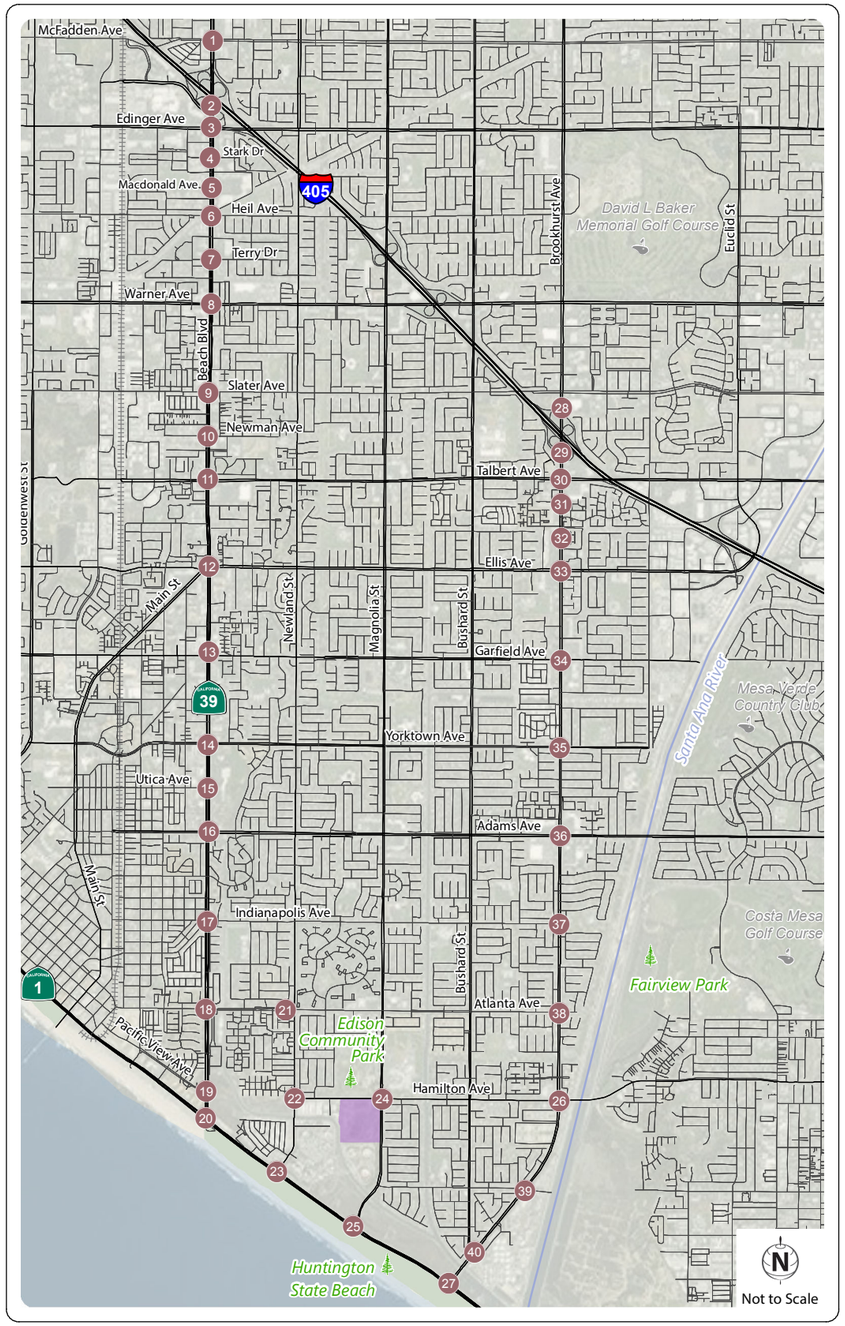
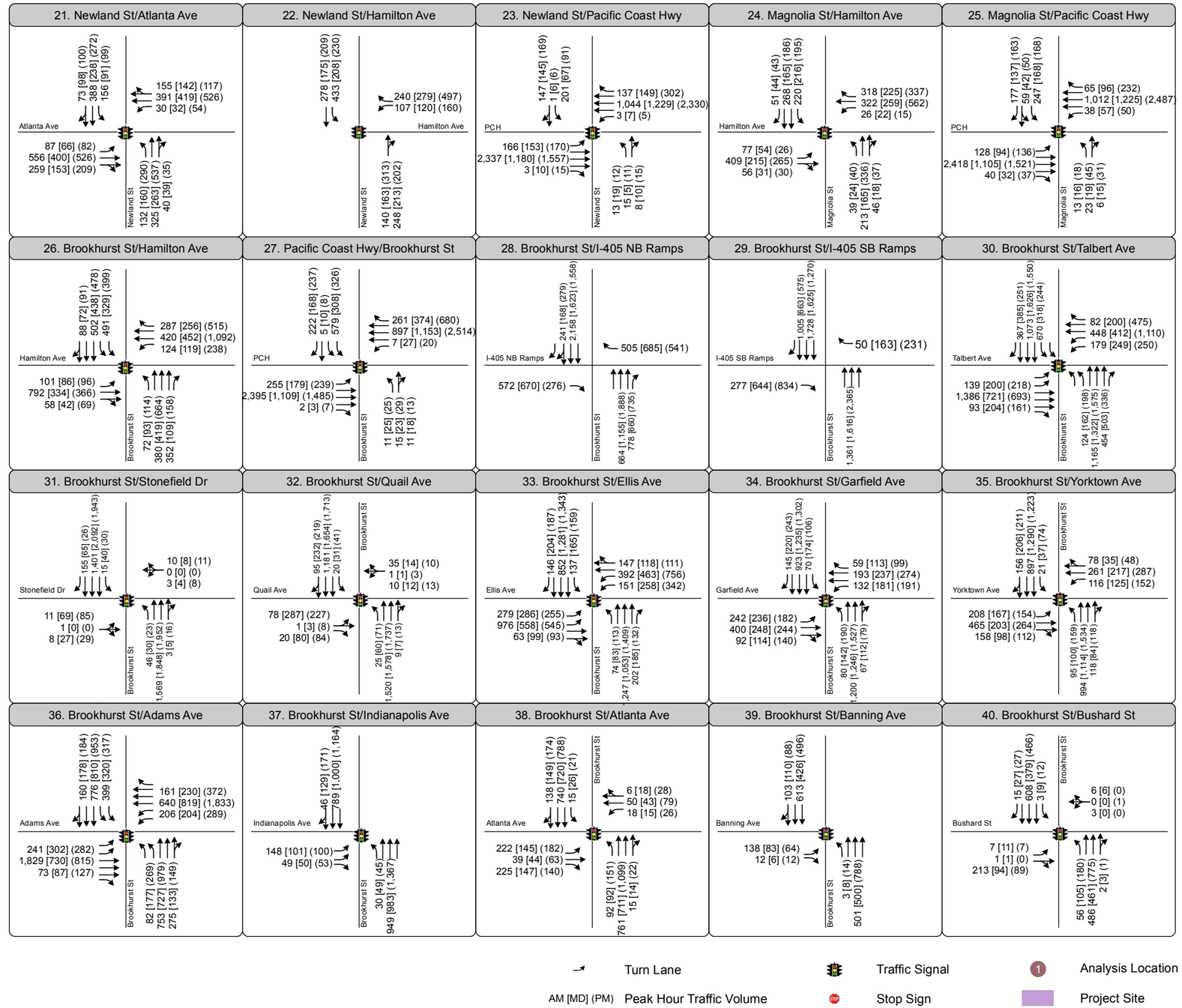
Peak Hour Traffic Volumes and Lane Configurations - Project Operating Year (2017) Plus Project Conditions

Figure 7-1





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Peak Hour Traffic Volumes and Lane Configurations - Project Operating Year (2017) Plus Project Conditions

Figure 7-1

TABLE 7-1 INTERSECTION LEVEL OF SERVICE: PROJECT OPERATING YEAR (2017) CONDITIONS FOR AM PEAK HOUR					
		AM No Project		AM With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**73**	**E**	**73**	**E**
2. Beach Blvd & Center Ave	Signal	9	A	10	A
3. Beach Blvd & Edinger Ave	Signal	51	D	**55**	**E**
4. Beach Blvd & Stark Dr	Signal	9	A	9	A
5. Beach Blvd & MacDonald Dr	Signal	15	B	16	B
6. Beach Blvd & Heil Ave	Signal	39	D	40	D
7. Beach Blvd & Terry Dr	Signal	6	A	6	A
8. Beach Blvd & Warner Ave	Signal	51	D	54	D
9. Beach Blvd & Slater Ave	Signal	43	D	44	D
10. Beach Blvd & Newman Ave	Signal	5	A	5	A
11. Beach Blvd & Talbert Ave	Signal	33	C	33	C
12. Beach Blvd & Main St/Ellis Ave	Signal	36	D	36	D
13. Beach Blvd & Garfield Ave	Signal	45	D	45	D
14. Beach Blvd & Yorktown Ave	Signal	32	C	32	C
15. Beach Blvd & Utica Ave	Signal	10	B	10	B
16. Beach Blvd & Adams Ave	Signal	32	C	32	C
17. Beach Blvd & Indianapolis Ave	Signal	24	C	23	C
18. Beach Blvd & Atlanta Ave	Signal	40	D	39	D
19. Beach Blvd & Pacific View Ave	Signal	11	B	9	A
20. Beach Blvd & PCH (SR-1)	Signal	29	C	39	D
21. Newland St & Atlanta Ave	Signal	0.51	A	0.52	A
22. Newland St & Hamilton Ave	Signal	0.57	A	0.67	B
23. PCH (SR-1) & Newland St	Signal	14	B	14	B

TABLE 7-1

INTERSECTION LEVEL OF SERVICE: PROJECT OPERATING YEAR (2017) CONDITIONS FOR AM PEAK HOUR

Intersection	Control	AM No Project		AM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
24. Magnolia St & Hamilton Ave	Signal	0.54	A	0.54	A
25. PCH (SR-1) & Magnolia St	Signal	18	B	21	C
26. Brookhurst St & Hamilton Ave	Signal	0.72	C	0.72	C
27. PCH (SR-1) & Brookhurst St	Signal	21	C	23	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.83	D	0.83	D
31. Brookhurst St & Stonefield Dr	Signal	0.36	A	0.38	A
32. Brookhurst St & Quail Ave	Signal	0.42	A	0.43	A
33. Brookhurst St & Ellis Ave	Signal	0.71	C	0.72	C
34. Brookhurst St & Garfield Ave	Signal	0.54	A	0.56	A
35. Brookhurst St & Yorktown Ave	Signal	0.54	A	0.56	A
36. Brookhurst St & Adams Ave	Signal	0.77	C	0.78	C
37. Brookhurst St & Indianapolis Ave	Signal	0.26	A	0.28	A
38. Brookhurst St & Atlanta Ave	Signal	0.4	A	0.42	A
39. Brookhurst St & Banning Ave	Signal	0.25	A	0.27	A
40. Brookhurst St & Bushard St	Signal	0.31	A	0.33	A

Notes:

1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

Table 7-2 Intersection Level of Service: Project Operating Year (2017) Conditions for Mid-Day Peak Hour					
		Mid-Day No Project		Mid-Day With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	36	D	36	D
2. Beach Blvd & Center Ave	Signal	15	B	15	B
3. Beach Blvd & Edinger Ave	Signal	45	D	50	D
4. Beach Blvd & Stark Dr	Signal	14	B	14	B
5. Beach Blvd & MacDonald Dr	Signal	17	B	17	B
6. Beach Blvd & Heil Ave	Signal	31	C	32	C
7. Beach Blvd & Terry Dr	Signal	10	B	10	B
8. Beach Blvd & Warner Ave	Signal	35	D	35	D
9. Beach Blvd & Slater Ave	Signal	36	D	37	D
10. Beach Blvd & Newman Ave	Signal	7	A	6	A
11. Beach Blvd & Talbert Ave	Signal	**58**	**E**	**65**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	32	C	31	C
13. Beach Blvd & Garfield Ave	Signal	36	D	37	D
14. Beach Blvd & Yorktown Ave	Signal	31	C	31	C
15. Beach Blvd & Utica Ave	Signal	19	B	19	B
16. Beach Blvd & Adams Ave	Signal	39	D	38	D
17. Beach Blvd & Indianapolis Ave	Signal	19	B	18	B
18. Beach Blvd & Atlanta Ave	Signal	37	D	36	D
19. Beach Blvd & Pacific View Ave	Signal	10	B	10	B
20. Beach Blvd & PCH (SR-1)	Signal	21	C	21	C
21. Newland St & Atlanta Ave	Signal	0.44	A	0.44	A
22. Newland St & Hamilton Ave	Signal	0.46	A	0.55	A
23. PCH (SR-1) & Newland St	Signal	11	B	11	B
24. Magnolia St & Hamilton Ave	Signal	0.4	A	0.41	A

Table 7-2

Intersection Level of Service: Project Operating Year (2017) Conditions for Mid-Day Peak Hour

Intersection	Control	Mid-Day No Project		Mid-Day With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
25. PCH (SR-1) & Magnolia St	Signal	24	C	24	C
26. Brookhurst St & Hamilton Ave	Signal	0.41	A	0.43	A
27. PCH (SR-1) & Brookhurst St	Signal	20	C	25	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.65	B	0.65	B
31. Brookhurst St & Stonefield Dr	Signal	0.52	A	0.53	A
32. Brookhurst St & Quail Ave	Signal	0.62	B	0.64	B
33. Brookhurst St & Ellis Ave	Signal	0.6	B	0.62	B
34. Brookhurst St & Garfield Ave	Signal	0.61	B	0.63	B
35. Brookhurst St & Yorktown Ave	Signal	0.55	A	0.57	A
36. Brookhurst St & Adams Ave	Signal	0.54	A	0.56	A
37. Brookhurst St & Indianapolis Ave	Signal	0.31	A	0.33	A
38. Brookhurst St & Atlanta Ave	Signal	0.36	A	0.37	A
39. Brookhurst St & Banning Ave	Signal	0.19	A	0.2	A
40. Brookhurst St & Bushard St	Signal	0.22	A	0.24	A

Notes:

1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

TABLE 7-3 INTERSECTION LEVEL OF SERVICE: PROJECT OPERATING YEAR (2017) CONDITIONS FOR PM PEAK HOUR					
		PM No Project		PM With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**89**	**F**	**89**	**F**
2. Beach Blvd & Center Ave	Signal	15	B	16	B
3. Beach Blvd & Edinger Ave	Signal	**120**	**F**	**128**	**F**
4. Beach Blvd & Stark Dr	Signal	15	B	16	B
5. Beach Blvd & MacDonald Dr	Signal	15	B	16	B
6. Beach Blvd & Heil Ave	Signal	**93**	**F**	**101**	**F**
7. Beach Blvd & Terry Dr	Signal	12	B	13	B
8. Beach Blvd & Warner Ave	Signal	**77**	**E**	**81**	**F**
9. Beach Blvd & Slater Ave	Signal	**65**	**E**	**71**	**E**
10. Beach Blvd & Newman Ave	Signal	12	B	12	B
11. Beach Blvd & Talbert Ave	Signal	**65**	**E**	**72**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	39	D	39	D
13. Beach Blvd & Garfield Ave	Signal	51	D	**56**	**E**
14. Beach Blvd & Yorktown Ave	Signal	42	D	43	D
15. Beach Blvd & Utica Ave	Signal	23	C	23	C
16. Beach Blvd & Adams Ave	Signal	46	D	47	D
17. Beach Blvd & Indianapolis Ave	Signal	16	B	16	B
18. Beach Blvd & Atlanta Ave	Signal	**59**	**E**	**59**	**E**
19. Beach Blvd & Pacific View Ave	Signal	13	B	12	B
20. Beach Blvd & PCH (SR-1)	Signal	32	C	39	D
21. Newland St & Atlanta Ave	Signal	0.57	A	0.57	A
22. Newland St & Hamilton Ave	Signal	0.69	B	0.78	C
23. PCH (SR-1) & Newland St	Signal	12	B	13	B

TABLE 7-3

INTERSECTION LEVEL OF SERVICE: PROJECT OPERATING YEAR (2017) CONDITIONS FOR PM PEAK HOUR

Intersection	Control	PM No Project		PM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
24. Magnolia St & Hamilton Ave	Signal	0.61	B	0.62	B
25. PCH (SR-1) & Magnolia St	Signal	16	B	18	B
26. Brookhurst St & Hamilton Ave	Signal	0.65	B	0.67	B
27. PCH (SR-1) & Brookhurst St	Signal	36	D	**64**	**E**
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.8	D	0.82	D
31. Brookhurst St & Stonefield Dr	Signal	0.51	A	0.52	A
32. Brookhurst St & Quail Ave	Signal	0.6	B	0.61	B
33. Brookhurst St & Ellis Ave	Signal	0.73	C	0.75	C
34. Brookhurst St & Garfield Ave	Signal	0.63	B	0.65	B
35. Brookhurst St & Yorktown Ave	Signal	0.61	B	0.62	B
36. Brookhurst St & Adams Ave	Signal	0.79	C	0.8	D
37. Brookhurst St & Indianapolis Ave	Signal	0.35	A	0.36	A
38. Brookhurst St & Atlanta Ave	Signal	0.45	A	0.46	A
39. Brookhurst St & Banning Ave	Signal	0.22	A	0.24	A
40. Brookhurst St & Bushard St	Signal	0.28	A	0.3	A

Notes:

1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

7.4 INTERSECTION IMPACT ASSESSMENT

Table 7-4 compares the changes in delay, V/C, and LOS at intersections that operate at LOS E or F between "Base" and "Plus Project" scenarios of Operating Year (2017) to determine project impacts.

TABLE 7-4
INTERSECTION LEVEL OF SERVICE: OPERATING YEAR (2017) COMPARISON

Intersection	Control	Peak	No Project Delay or V/C	No Project LOS	With Project Delay or V/C	With Project LOS	Δ Delay or V/C
1. Beach Blvd & McFadden Ave	Signal	AM	73	E	73	E	0
		MD	36	D	36	D	0
		PM	89	F	89	F	0
3. Beach Blvd & Edinger Ave	Signal	**AM**	**51**	**D**	**55**	**E**	**4**
		MD	45	D	50	D	5
		PM	**120**	**F**	**128**	**F**	**8**
6. Beach Blvd & Heil Ave	Signal	AM	39	D	40	D	1
		MD	31	C	32	C	1
		PM	**93**	**F**	**101**	**F**	**8**
8. Beach Blvd & Warner Ave	Signal	AM	51	D	54	D	3
		MD	35	D	35	D	0
		PM	**77**	**E**	**81**	**F**	**4**
9. Beach Blvd & Slater Ave	Signal	AM	43	D	44	D	1
		MD	36	D	37	D	1
		PM	**65**	**E**	**71**	**E**	**6**
11. Beach Blvd & Talbert Ave	Signal	AM	33	C	33	C	0
		MD	**58**	**E**	**65**	**E**	**7**
		PM	**65**	**E**	**72**	**E**	**7**
13. Beach Blvd & Garfield Ave	Signal	AM	45	D	45	D	0
		MD	36	D	37	D	1
		PM	**51**	**D**	**56**	**E**	**5**
18. Beach Blvd & Atlanta Ave	Signal	AM	40	D	39	D	-1
		MD	37	D	36	D	-1
		PM	59	E	59	E	0

TABLE 7-4
INTERSECTION LEVEL OF SERVICE: OPERATING YEAR (2017) COMPARISON

Intersection	Control	Peak	No Project Delay or V/C	No Project LOS	With Project Delay or V/C	With Project LOS	Δ Delay or V/C
27. PCH & Brookhurst St	Signal	AM	21	C	23	C	2
		MD	20	C	25	C	5
		PM	**36**	**D**	**64**	**E**	**28**

Notes:
1. Delay is measured in seconds. Calculated using Synchro 8 software package.
2. V/C ratios are calculated using Traffix 8.0 software package.
3. **Cells highlighted in grey** indicates project impact.

Source: Fehr & Peers, 2014

As shown in the table, the overall intersection delay will improve or remain the same at some locations in the plus project scenario because the project increases traffic to certain movements which have available capacity or "green time". For example, if volumes are increased at a coordinated through phase where actuated green time may be available, the intersection may operate more efficiently by utilizing the available capacity or "green time" allowing more vehicles to travel through the intersection. The added vehicles to the intersection in this case will actually experience less delay than the average of all vehicles already at the intersection. Since intersection delay is report as a weighted average of all movements as provided for by the Highway Capacity Manual, this increase in traffic volume actually results in a reduction or no change of overall intersection delay.

As shown in Table 7-4, the project traffic will impact the following intersection under the Operating Year (2017) Conditions:

3. Beach Boulevard at Edinger Avenue – AM Peak Hour (LOS E) and PM Peak Hour (LOS F)
6. Beach Boulevard at Heil Avenue – PM Peak Hour (LOS F)
8. Beach Boulevard at Warner Avenue – PM Peak Hour (LOS F)
9. Beach Boulevard at Slater Avenue – PM Peak Hour (LOS E)
11. Beach Boulevard at Talbert Avenue – Mid-Day Peak Hour (LOS E) and PM Peak Hour (LOS E)
13. Beach Boulevard at Garfield Avenue – PM Peak Hour (LOS E)
27. PCH at Brookhurst Street – PM Peak Hour (LOS E)

Measures to mitigate the identified impacts are discussed in detail in Chapter 11.

7.5 HAMILTON AVENUE LANE CLOSURE

During construction activity on the site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the project frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to be a shared left-turn/through/right-turn lane. Table 7-5 documents the ICU and LOS results with the implementation of this lane closure under the Operating Year (2017) Plus Project Scenario. As shown in the table below, the intersection remains at an acceptable level of service with the implementation of the lane closure during all peak periods.

TABLE 7-5
INTERSECTION LOS COMPARISON – OPERATING YEAR (2017) PLUS PROJECT CONDITIONS

	Without Lane Closure						With Lane Closure						Change in V/C		
	AM Peak		MD Peak		PM Peak		AM Peak		MD Peak		PM Peak				
Intersection	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**AM**	**MD**	**PM**
Magnolia St & Hamilton Ave	0.54	A	0.41	A	0.62	B	0.59	A	0.42	A	0.62	B	0.05	0.01	0

Source: Fehr & Peers,.2014

8.0 Project Alternative 6 Operating Year (2020) Base Traffic Conditions

This section documents the conditions of the Project Alternative 6 Operating Year (2020) Base Scenario which is the operating year for Project Alternative 6. This scenario analyzes the intersection conditions with the addition of ambient growth per year from the existing volumes to the Project Alternative 6 Operating Year (2020).

8.1 TRAFFIC VOLUMES

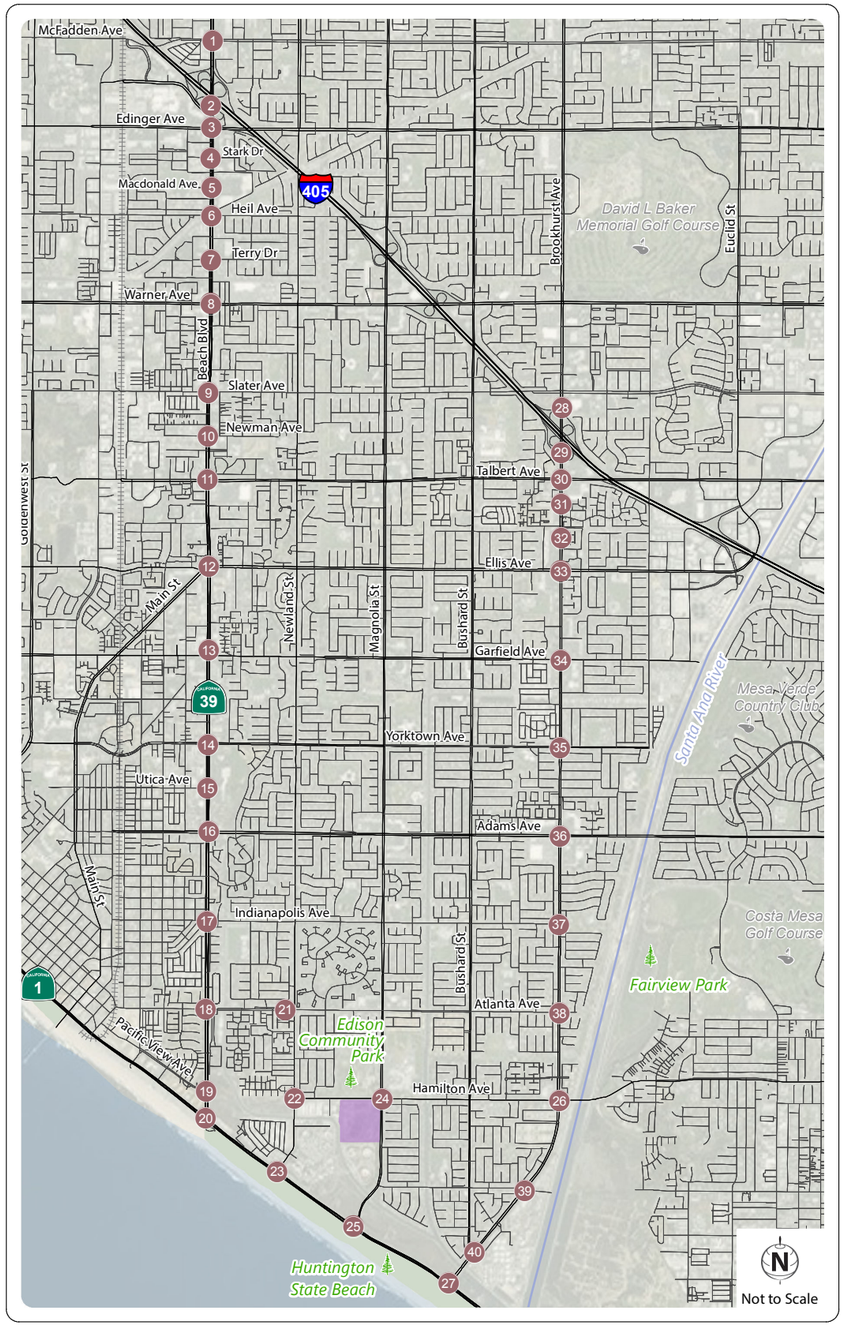
Traffic volumes for this scenario were calculated in the same way as the 2017 project operating year but includes an additional three years of ambient growth to result in 2020 volumes. Cumulative projects in the vicinity of the project study area remain the same.

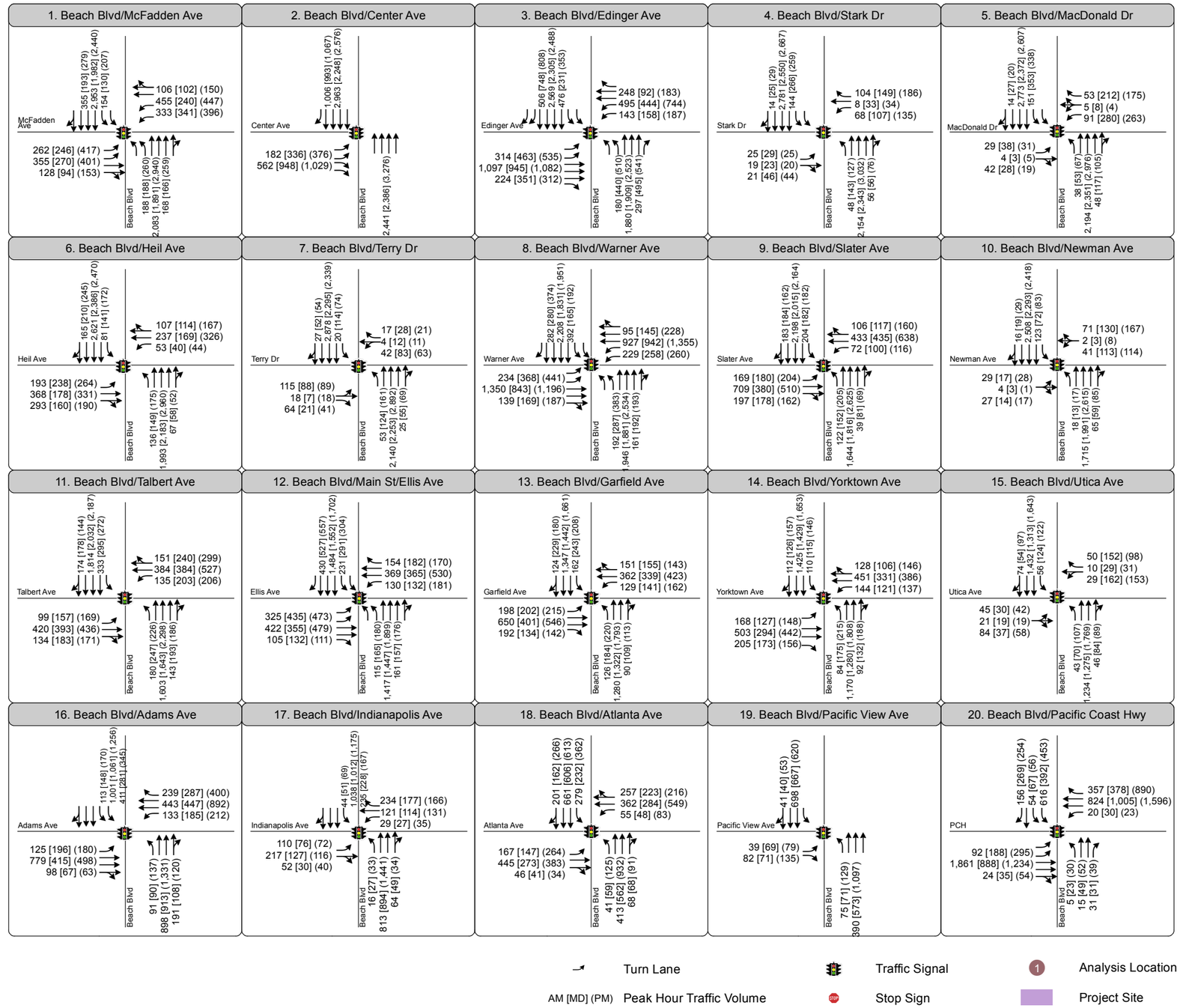
8.2 ROADWAY IMPROVEMENTS

There are no roadway improvements planned and funded in the study area that will be completed by 2020.

8.3 INTERSECTION OPERATIONS

The intersection LOS results are summarized in Table 8-1 for Project Alternative 6 Operating Year (2020) Base Conditions. Lane configurations and peak hour traffic volumes at study intersections for Project Alternative 6 Operating Year (2020) Base Conditions are shown on Figure 8-1.The corresponding LOS reports are provided in Appendix G.





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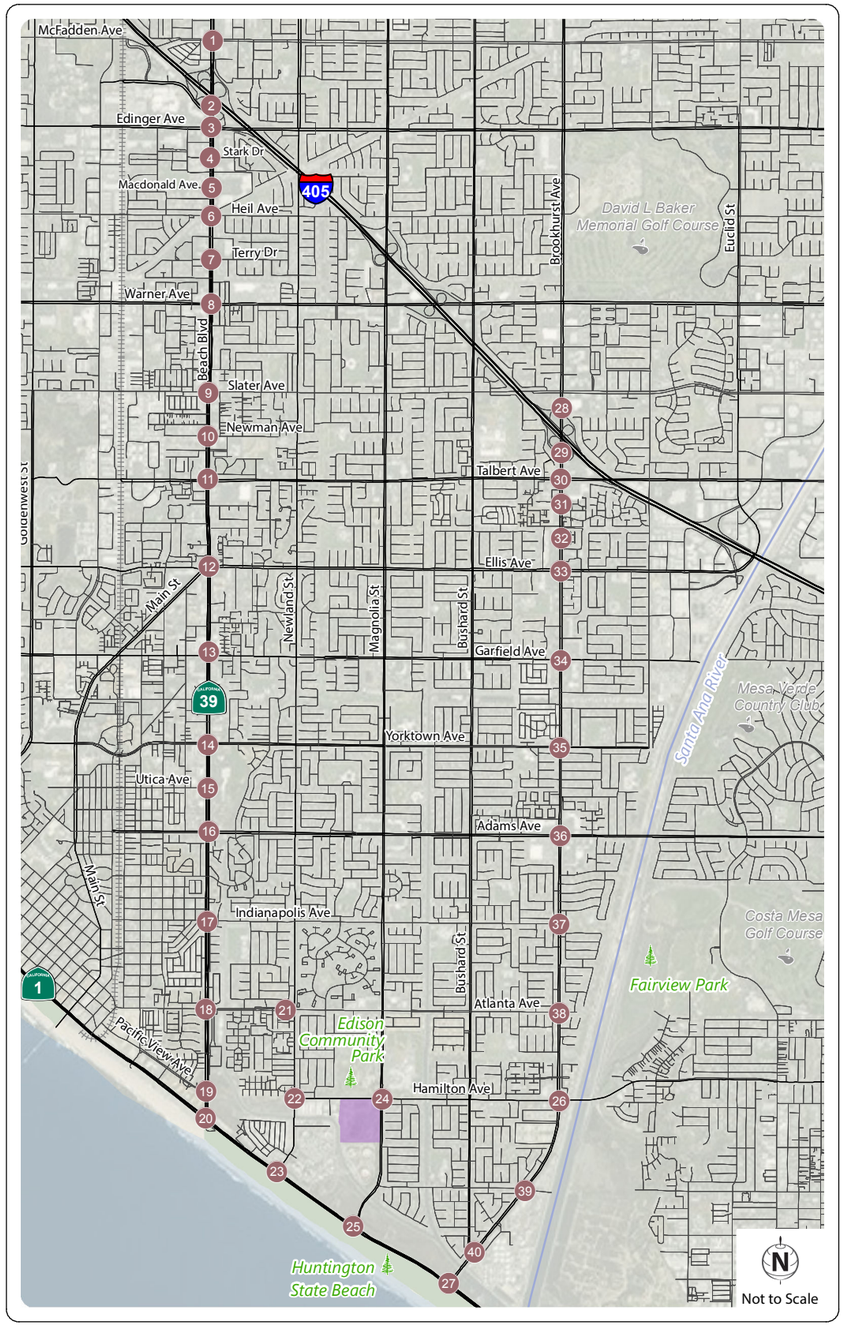
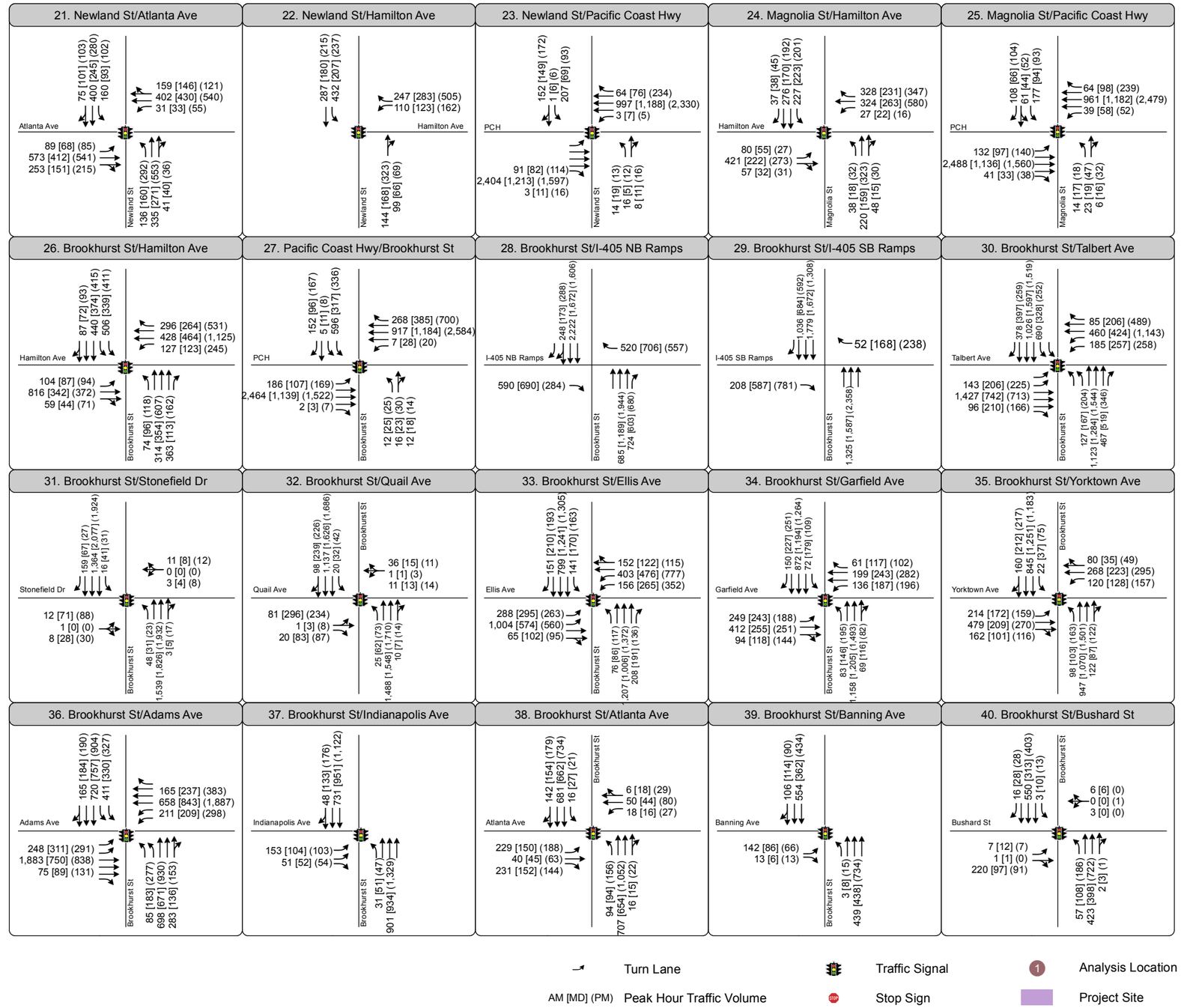
Peak Hour Traffic Volumes and Lane Configurations - Alternative 6 Operating Year (2020) Base Conditions

Figure 8-1





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Peak Hour Traffic Volumes and Lane Configurations - Alternative 6 Operating Year (2020) Base Conditions

Figure 8-1

TABLE 8-1
INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) BASE CONDITIONS

Intersection	Control	AM		Mid-Day		PM	
		Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**83**	**F**	37	D	**99**	**F**
2. Beach Blvd & Center Ave	Signal	9	A	15	B	16	B
3. Beach Blvd & Edinger Ave	Signal	**55**	**E**	**55**	**E**	**130**	**F**
4. Beach Blvd & Stark Dr	Signal	9	A	14	B	17	B
5. Beach Blvd & MacDonald Dr	Signal	16	B	17	B	16	B
6. Beach Blvd & Heil Ave	Signal	42	D	36	D	**104**	**F**
7. Beach Blvd & Terry Dr	Signal	6	A	10	B	13	B
8. Beach Blvd & Warner Ave	Signal	**56**	**E**	36	D	**85**	**F**
9. Beach Blvd & Slater Ave	Signal	46	D	38	D	**74**	**E**
10. Beach Blvd & Newman Ave	Signal	5	A	7	A	13	B
11. Beach Blvd & Talbert Ave	Signal	35	D	**67**	**E**	**76**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	37	D	32	C	40	D
13. Beach Blvd & Garfield Ave	Signal	46	D	38	D	**60**	**E**
14. Beach Blvd & Yorktown Ave	Signal	33	C	32	C	44	D
15. Beach Blvd & Utica Ave	Signal	10	B	19	B	24	C
16. Beach Blvd & Adams Ave	Signal	33	C	39	D	49	D
17. Beach Blvd & Indianapolis Ave	Signal	24	C	19	B	16	B
18. Beach Blvd & Atlanta Ave	Signal	40	D	37	D	**61**	**E**
19. Beach Blvd & Pacific View Ave	Signal	10	B	10	B	13	B
20. Beach Blvd & PCH (SR-1)	Signal	32	C	21	C	35	D
21. Newland St & Atlanta Ave	Signal	0.53	A	0.45	A	0.58	A
22. Newland St & Hamilton Ave	Signal	0.59	A	0.47	A	0.71	C
23. PCH (SR-1) & Newland St	Signal	15	B	11	B	13	B
24. Magnolia St & Hamilton Ave	Signal	0.56	A	0.42	A	0.62	B

TABLE 8-1
INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) BASE CONDITIONS

Intersection	Control	AM		Mid-Day		PM	
		Delay or ICU	LOS	Delay or ICU	LOS	Delay or ICU	LOS
25. PCH (SR-1) & Magnolia St	Signal	20	C	23	C	17	B
26. Brookhurst St & Hamilton Ave	Signal	0.74	C	0.42	A	0.67	B
27. PCH (SR-1) & Brookhurst St	Signal	22	C	21	C	42	D
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.86	D	0.67	B	0.82	D
31. Brookhurst St & Stonefield Dr	Signal	0.37	A	0.53	A	0.52	A
32. Brookhurst St & Quail Ave	Signal	0.43	A	0.64	B	0.62	B
33. Brookhurst St & Ellis Ave	Signal	0.73	C	0.62	B	0.75	C
34. Brookhurst St & Garfield Ave	Signal	0.56	A	0.63	B	0.65	B
35. Brookhurst St & Yorktown Ave	Signal	0.56	A	0.57	A	0.62	B
36. Brookhurst St & Adams Ave	Signal	0.79	C	0.56	A	0.81	D
37. Brookhurst St & Indianapolis Ave	Signal	0.27	A	0.32	A	0.36	A
38. Brookhurst St & Atlanta Ave	Signal	0.41	A	0.37	A	0.46	A
39. Brookhurst St & Banning Ave	Signal	0.26	A	0.19	A	0.23	A
40. Brookhurst St & Bushard St	Signal	0.32	A	0.23	A	0.29	A

Notes:
1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

As shown in Table 8-1, all of the study intersections will operate acceptably at LOS D or better during the peak hours, with exception to the following locations:

- Beach Boulevard at McFadden Avenue- AM Peak Hour (LOS F) and PM Peak Hour (LOS F)
- Beach Boulevard at Edinger Avenue- AM Peak Hour (LOS E), Mid-Day Peak Hour (LOS E), and PM Peak Hour (LOS F)

- Beach Boulevard at Heil Avenue- PM Peak Hour (LOS F)
- Beach Boulevard at Warner Avenue- AM Peak Hour (LOS E) and PM Peak Hour (LOS F)
- Beach Boulevard at Slater Avenue- PM Peak Hour (LOS E)
- Beach Boulevard at Talbert Avenue- Mid-Day Peak Hour (LOS E) and PM Peak Hour (LOS E)
- Beach Boulevard at Garfield Avenue- PM Peak Hour (LOS E)
- Beach Boulevard at Atlanta Avenue- PM Peak Hour (LOS E)

9.0 Project Alternative 6 Operating Year (2020) Plus Project Traffic Conditions

9.1 TRAFFIC VOLUMES

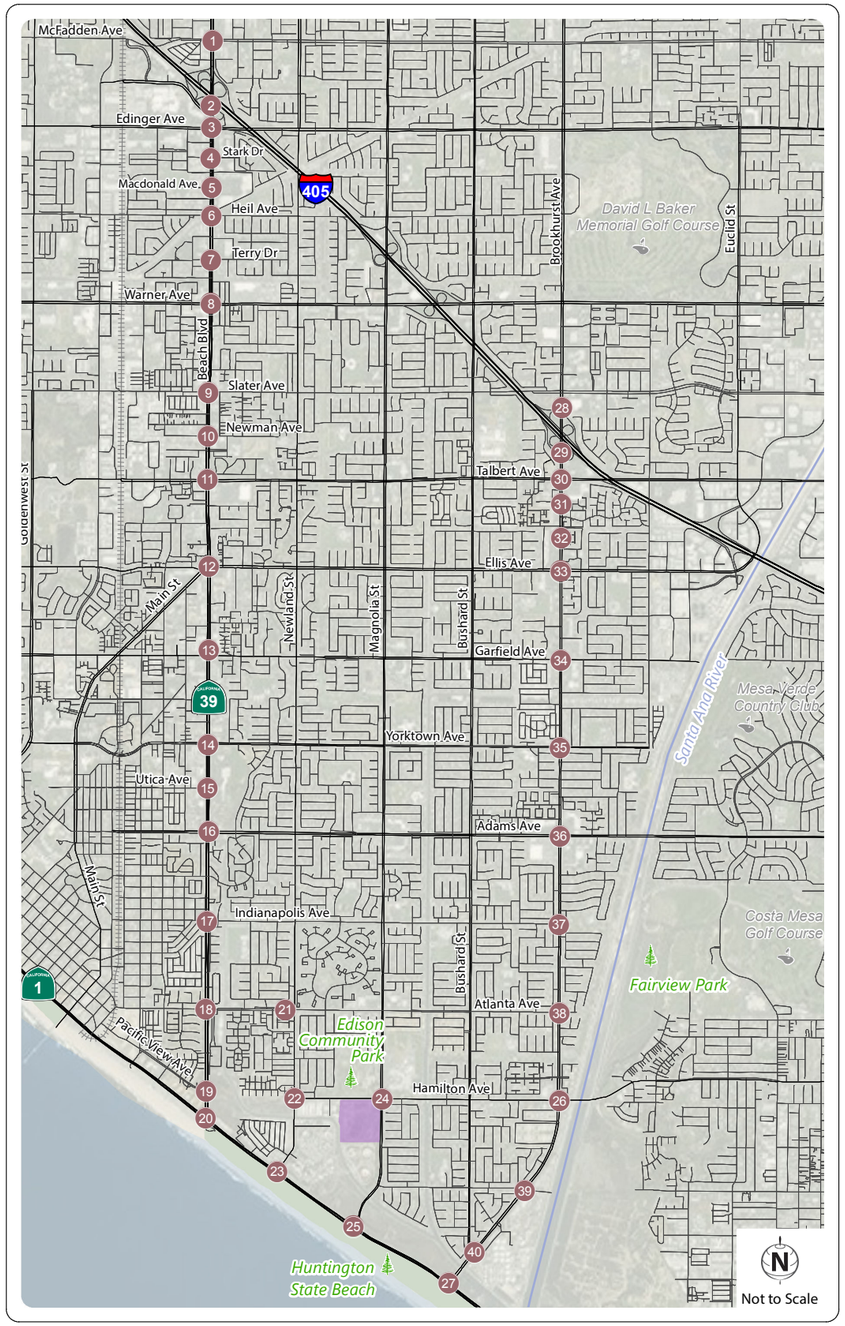
Traffic volumes for this scenario were calculated by adding volumes generated by the project to the Project Alternative 6 Operating Year (2020) Base Conditions. The project only trips added are those as described in Chapter 4 and assumes a worst case scenario for Alternative 6.

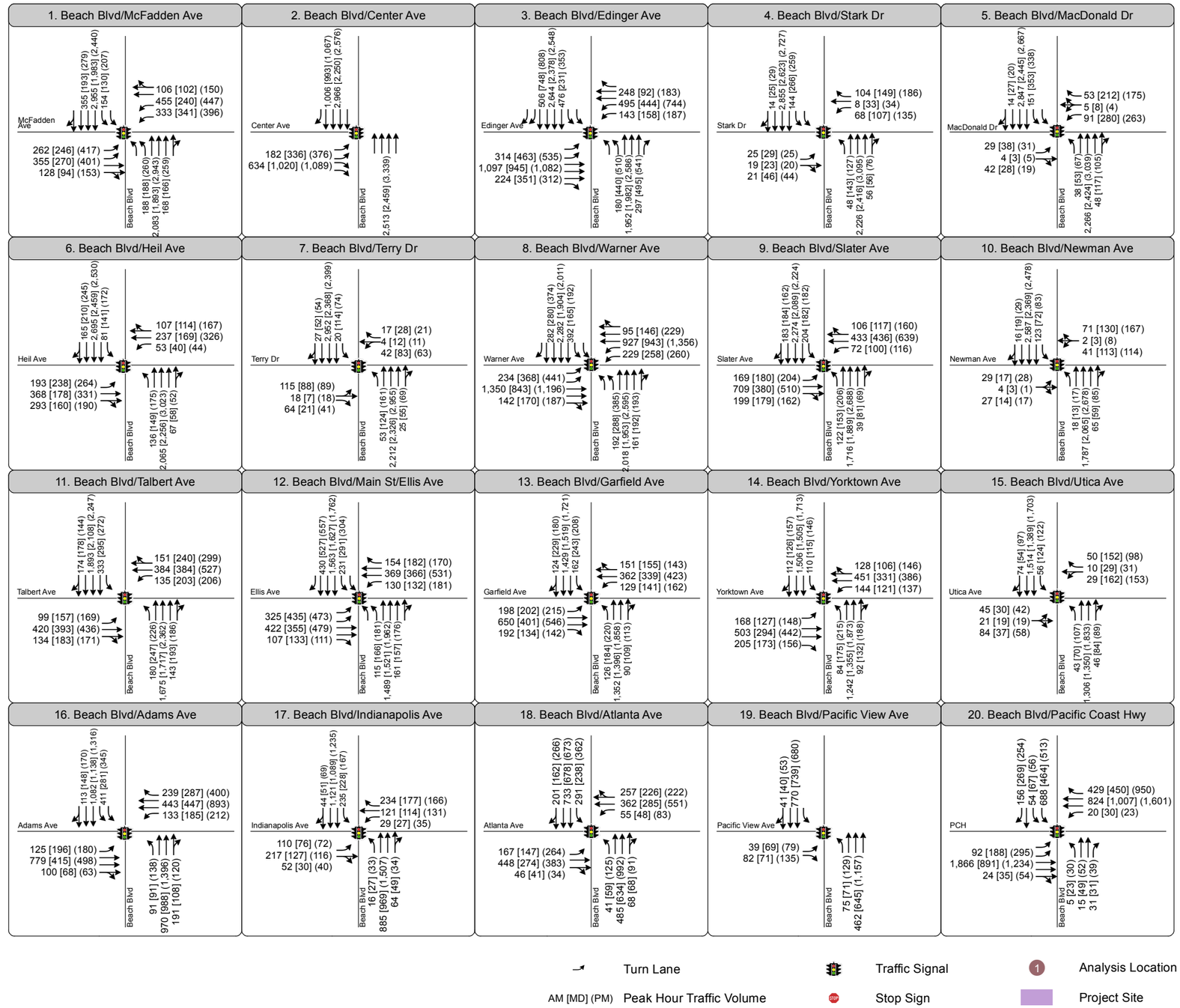
9.2 ROADWAY IMPROVEMENTS

No roadway improvements, except for within the project and at project driveways are proposed.

9.3 INTERSECTION OPERATIONS

The intersection LOS results are summarized in Table 9-1, Table 9-2, and Table 9-3 for Project Alternative 6 Operating Year (2020) Plus Project Conditions. The intersection volumes are shown on Figure 9-1. The Project Alternative 6 Operating Year (2020) Plus Project LOS reports are provided in Appendix H.





Turn Lane
AM [MD] (PM) Peak Hour Traffic Volume
Traffic Signal
Stop Sign
Analysis Location
Project Site

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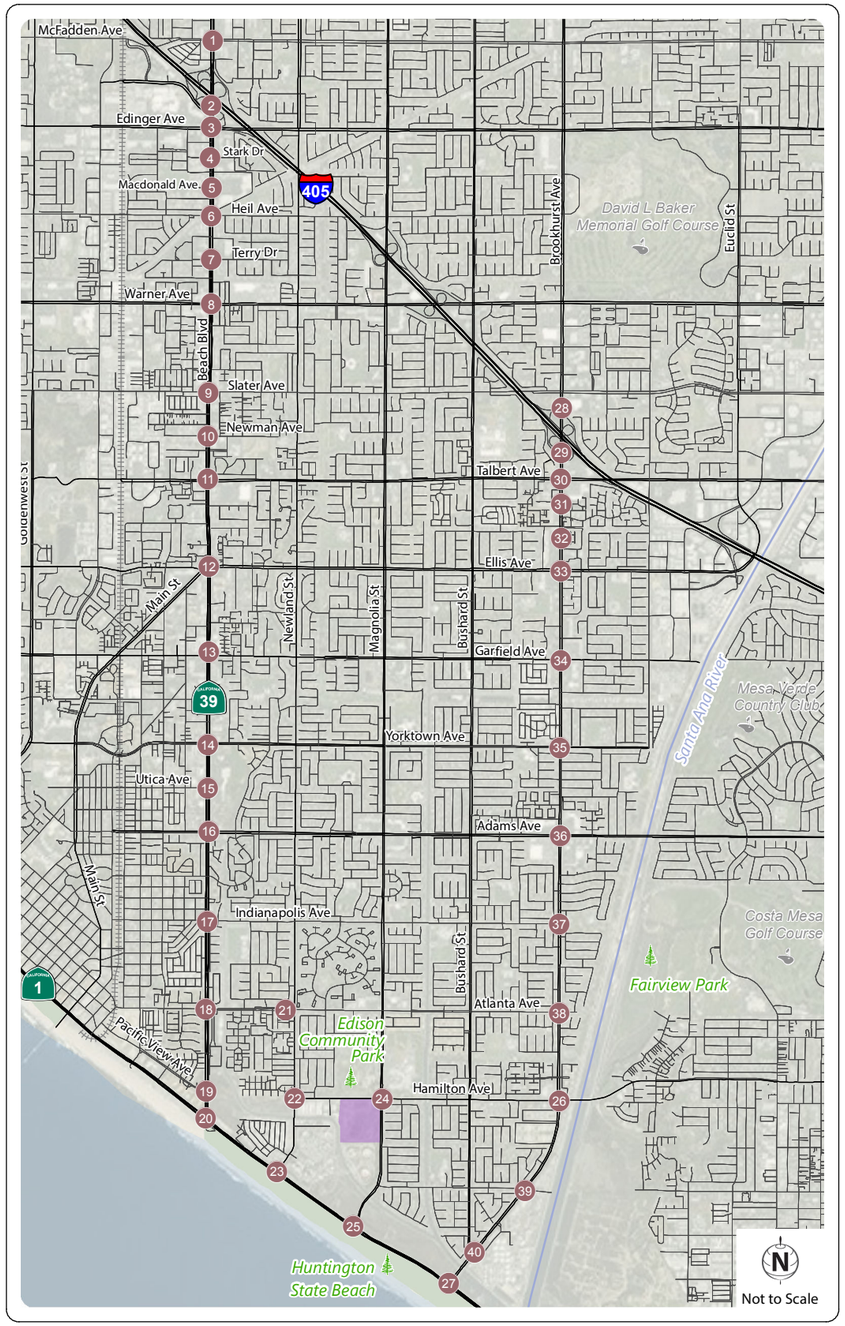
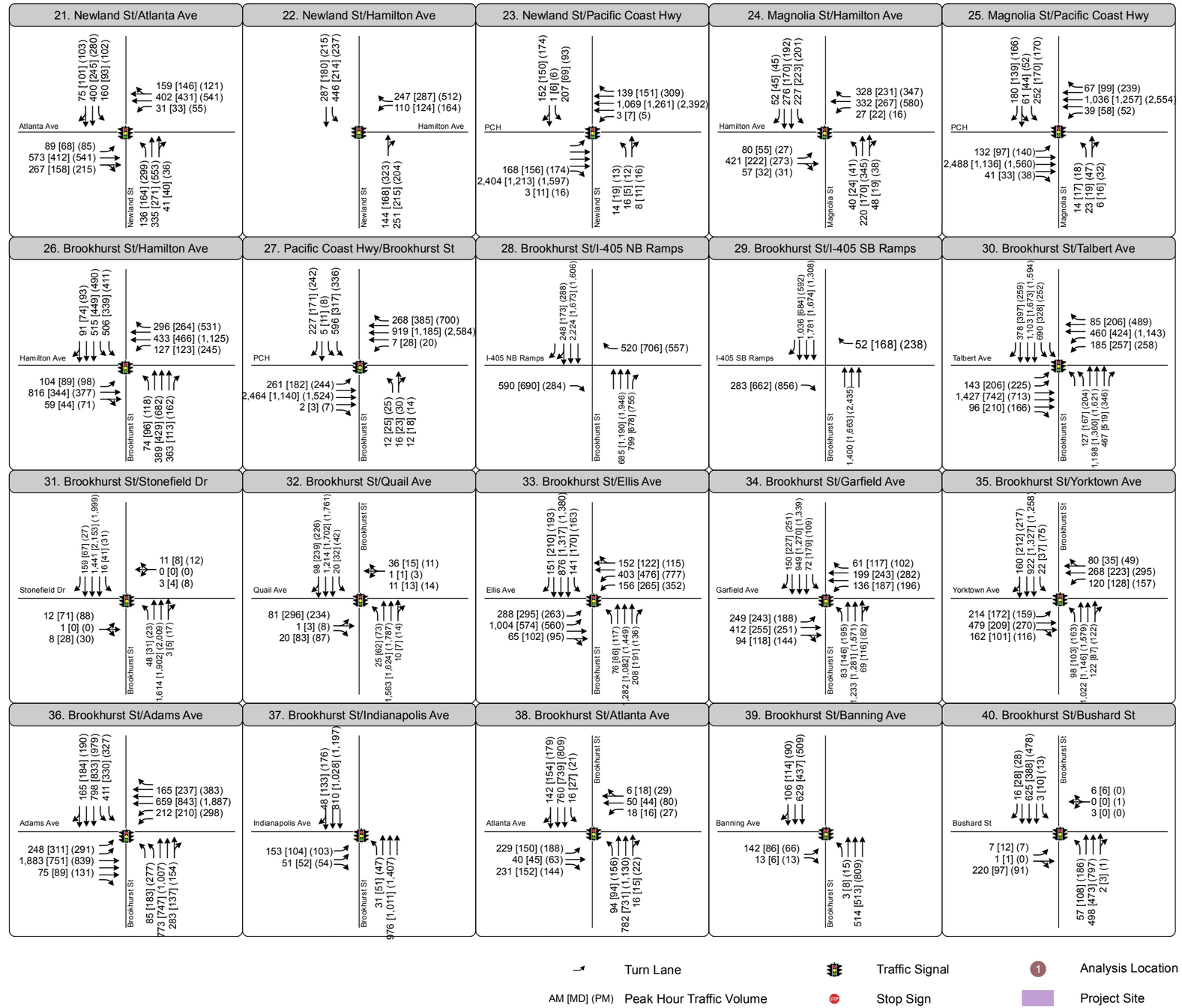
Peak Hour Traffic Volumes and Lane Configurations - Alternative 6 Operating Year (2020) Plus Project Conditions

Figure 9-1





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Peak Hour Traffic Volumes and Lane Configurations - Alternative 6 Operating Year (2020) Plus Project Conditions

Figure 9-1

TABLE 9-1 INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) CONDITIONS FOR AM PEAK HOUR					
		AM No Project		AM With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**83**	**F**	**83**	**F**
2. Beach Blvd & Center Ave	Signal	9	A	10	B
3. Beach Blvd & Edinger Ave	Signal	**55**	**E**	**60**	**E**
4. Beach Blvd & Stark Dr	Signal	9	A	10	B
5. Beach Blvd & MacDonald Dr	Signal	16	B	16	B
6. Beach Blvd & Heil Ave	Signal	42	D	44	D
7. Beach Blvd & Terry Dr	Signal	6	A	6	A
8. Beach Blvd & Warner Ave	Signal	**56**	**E**	**60**	**E**
9. Beach Blvd & Slater Ave	Signal	46	D	49	D
10. Beach Blvd & Newman Ave	Signal	5	A	5	A
11. Beach Blvd & Talbert Ave	Signal	35	D	35	D
12. Beach Blvd & Main St/Ellis Ave	Signal	37	D	37	D
13. Beach Blvd & Garfield Ave	Signal	46	D	46	D
14. Beach Blvd & Yorktown Ave	Signal	33	C	32	C
15. Beach Blvd & Utica Ave	Signal	10	B	10	B
16. Beach Blvd & Adams Ave	Signal	33	C	33	C
17. Beach Blvd & Indianapolis Ave	Signal	24	C	24	C
18. Beach Blvd & Atlanta Ave	Signal	40	D	39	D
19. Beach Blvd & Pacific View Ave	Signal	10	B	9	A
20. Beach Blvd & PCH (SR-1)	Signal	32	C	42	D
21. Newland St & Atlanta Ave	Signal	0.53	A	0.53	A
22. Newland St & Hamilton Ave	Signal	0.59	A	0.69	B
23. PCH (SR-1) & Newland St	Signal	15	B	16	B

TABLE 9-1
INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) CONDITIONS FOR AM PEAK HOUR

Intersection	Control	AM No Project		AM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
24. Magnolia St & Hamilton Ave	Signal	0.56	A	0.56	A
25. PCH (SR-1) & Magnolia St	Signal	20	C	23	C
26. Brookhurst St & Hamilton Ave	Signal	0.74	C	0.74	C
27. PCH (SR-1) & Brookhurst St	Signal	22	C	24	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.86	D	0.86	D
31. Brookhurst St & Stonefield Dr	Signal	0.37	A	0.39	A
32. Brookhurst St & Quail Ave	Signal	0.43	A	0.44	A
33. Brookhurst St & Ellis Ave	Signal	0.73	C	0.74	C
34. Brookhurst St & Garfield Ave	Signal	0.56	A	0.57	A
35. Brookhurst St & Yorktown Ave	Signal	0.56	A	0.57	A
36. Brookhurst St & Adams Ave	Signal	0.79	C	0.81	D
37. Brookhurst St & Indianapolis Ave	Signal	0.27	A	0.28	A
38. Brookhurst St & Atlanta Ave	Signal	0.41	A	0.42	A
39. Brookhurst St & Banning Ave	Signal	0.26	A	0.28	A
40. Brookhurst St & Bushard St	Signal	0.32	A	0.33	A

Notes:
1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

TABLE 9-2 INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) CONDITIONS FOR MID-DAY PEAK HOUR					
		Mid-Day No Project		Mid-Day With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	37	D	37	D
2. Beach Blvd & Center Ave	Signal	15	B	15	B
3. Beach Blvd & Edinger Ave	Signal	**55**	**E**	**62**	**E**
4. Beach Blvd & Stark Dr	Signal	14	B	14	B
5. Beach Blvd & MacDonald Dr	Signal	17	B	18	B
6. Beach Blvd & Heil Ave	Signal	36	D	38	D
7. Beach Blvd & Terry Dr	Signal	10	B	10	B
8. Beach Blvd & Warner Ave	Signal	36	D	36	D
9. Beach Blvd & Slater Ave	Signal	38	D	39	D
10. Beach Blvd & Newman Ave	Signal	7	A	7	A
11. Beach Blvd & Talbert Ave	Signal	**67**	**E**	**75**	**E**
12. Beach Blvd & Main St/Ellis Ave	Signal	32	C	32	C
13. Beach Blvd & Garfield Ave	Signal	38	D	38	D
14. Beach Blvd & Yorktown Ave	Signal	32	C	32	C
15. Beach Blvd & Utica Ave	Signal	19	B	19	B
16. Beach Blvd & Adams Ave	Signal	39	D	38	D
17. Beach Blvd & Indianapolis Ave	Signal	19	B	18	B
18. Beach Blvd & Atlanta Ave	Signal	37	D	37	D
19. Beach Blvd & Pacific View Ave	Signal	10	B	10	B
20. Beach Blvd & PCH (SR-1)	Signal	21	C	21	C
21. Newland St & Atlanta Ave	Signal	0.45	A	0.45	A
22. Newland St & Hamilton Ave	Signal	0.47	A	0.57	A
23. PCH (SR-1) & Newland St	Signal	11	B	11	B

TABLE 9-2
INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) CONDITIONS FOR MID-DAY PEAK HOUR

Intersection	Control	Mid-Day No Project		Mid-Day With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
24. Magnolia St & Hamilton Ave	Signal	0.42	A	0.42	A
25. PCH (SR-1) & Magnolia St	Signal	23	C	23	C
26. Brookhurst St & Hamilton Ave	Signal	0.42	A	0.44	A
27. PCH (SR-1) & Brookhurst St	Signal	21	C	25	C
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.67	B	0.67	B
31. Brookhurst St & Stonefield Dr	Signal	0.53	A	0.55	A
32. Brookhurst St & Quail Ave	Signal	0.64	B	0.65	B
33. Brookhurst St & Ellis Ave	Signal	0.62	B	0.63	B
34. Brookhurst St & Garfield Ave	Signal	0.63	B	0.64	B
35. Brookhurst St & Yorktown Ave	Signal	0.57	A	0.58	A
36. Brookhurst St & Adams Ave	Signal	0.56	A	0.57	A
37. Brookhurst St & Indianapolis Ave	Signal	0.32	A	0.33	A
38. Brookhurst St & Atlanta Ave	Signal	0.37	A	0.38	A
39. Brookhurst St & Banning Ave	Signal	0.19	A	0.21	A
40. Brookhurst St & Bushard St	Signal	0.23	A	0.24	A

Notes:
1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

TABLE 9-3 INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) CONDITIONS FOR PM PEAK HOUR					
		PM No Project		PM With Project	
Intersection	Control	Delay or ICU	LOS	Delay or ICU	LOS
1. Beach Blvd & McFadden Ave	Signal	**99**	**F**	**99**	**F**
2. Beach Blvd & Center Ave	Signal	16	B	17	B
3. Beach Blvd & Edinger Ave	Signal	**130**	**F**	**138**	**F**
4. Beach Blvd & Stark Dr	Signal	17	B	17	B
5. Beach Blvd & MacDonald Dr	Signal	16	B	17	B
6. Beach Blvd & Heil Ave	Signal	**104**	**F**	**112**	**F**
7. Beach Blvd & Terry Dr	Signal	13	B	13	B
8. Beach Blvd & Warner Ave	Signal	**85**	**F**	**89**	**F**
9. Beach Blvd & Slater Ave	Signal	**74**	**E**	**81**	**F**
10. Beach Blvd & Newman Ave	Signal	13	B	13	B
11. Beach Blvd & Talbert Ave	Signal	**76**	**E**	**83**	**F**
12. Beach Blvd & Main St/Ellis Ave	Signal	40	D	39	D
13. Beach Blvd & Garfield Ave	Signal	**60**	**E**	**68**	**E**
14. Beach Blvd & Yorktown Ave	Signal	44	D	46	D
15. Beach Blvd & Utica Ave	Signal	24	C	24	C
16. Beach Blvd & Adams Ave	Signal	49	D	50	D
17. Beach Blvd & Indianapolis Ave	Signal	16	B	16	B
18. Beach Blvd & Atlanta Ave	Signal	**61**	**E**	**62**	**E**
19. Beach Blvd & Pacific View Ave	Signal	13	B	12	B
20. Beach Blvd & PCH (SR-1)	Signal	35	D	46	D
21. Newland St & Atlanta Ave	Signal	0.58	A	0.59	A
22. Newland St & Hamilton Ave	Signal	0.71	C	**0.8**	**D**
23. PCH (SR-1) & Newland St	Signal	13	B	13	B

TABLE 9-3
INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) CONDITIONS FOR PM PEAK HOUR

Intersection	Control	PM No Project		PM With Project	
		Delay or ICU	LOS	Delay or ICU	LOS
24. Magnolia St & Hamilton Ave	Signal	0.62	B	0.63	B
25. PCH (SR-1) & Magnolia St	Signal	17	B	19	B
26. Brookhurst St & Hamilton Ave	Signal	0.67	B	0.69	B
27. PCH (SR-1) & Brookhurst St	Signal	42	D	**71**	**E**
28. Brookhurst St & I-405 Northbound Ramps	Free	-	-	-	-
29. Brookhurst St & I-405 Southbound Ramps	Free	-	-	-	-
30. Brookhurst St & Talbert Ave	Signal	0.82	D	0.84	D
31. Brookhurst St & Stonefield Dr	Signal	0.52	A	0.54	A
32. Brookhurst St & Quail Ave	Signal	0.62	B	0.63	B
33. Brookhurst St & Ellis Ave	Signal	0.75	C	0.77	C
34. Brookhurst St & Garfield Ave	Signal	0.65	B	0.67	B
35. Brookhurst St & Yorktown Ave	Signal	0.62	B	0.64	B
36. Brookhurst St & Adams Ave	Signal	0.81	D	0.82	D
37. Brookhurst St & Indianapolis Ave	Signal	0.36	A	0.37	A
38. Brookhurst St & Atlanta Ave	Signal	0.46	A	0.47	A
39. Brookhurst St & Banning Ave	Signal	0.23	A	0.24	A
40. Brookhurst St & Bushard St	Signal	0.29	A	0.3	A

Notes:
1. Intersections within Caltrans jurisdiction are evaluated under HCM 2000 methodology. Average delay is reported for signalized intersections.
2. Intersections within Huntington Beach and Fountain Valley jurisdiction are evaluated under ICU methodology. V/C ratio is reported for signalized intersections.
3. **Cells highlighted in grey** represent intersections that are operating below acceptable thresholds.

Source: Fehr & Peers, 2014

9.4 INTERSECTION IMPACT ASSESSMENT

Table 9-4 compares the changes in delay, V/C, and LOS at intersections that operate at LOS E or F between "Base" and "Plus Project" scenarios of Project Alternative 6 Operating Year (2020) to determine project impacts.

TABLE 9-4
INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) COMPARISON

Intersection	Control	Peak	No Project Delay or V/C	No Project LOS	With Project Delay or V/C	With Project LOS	Δ Delay or V/C
1. Beach Blvd & McFadden Ave	Signal	AM	83	F	83	F	0
		MD	37	D	37	D	0
		PM	99	F	99	F	0
3. Beach Blvd & Edinger Ave	Signal	**AM**	**55**	**E**	**60**	**E**	**5**
		MD	**55**	**E**	**62**	**E**	**7**
		PM	**130**	**F**	**138**	**F**	**8**
6. Beach Blvd & Heil Ave	Signal	AM	42	D	44	D	2
		MD	36	D	38	D	2
		PM	**104**	**F**	**112**	**F**	**8**
8. Beach Blvd & Warner Ave	Signal	**AM**	**56**	**E**	**60**	**E**	**4**
		MD	36	D	36	D	0
		PM	**85**	**F**	**89**	**F**	**4**
9. Beach Blvd & Slater Ave	Signal	AM	46	D	49	D	3
		MD	38	D	39	D	1
		PM	**74**	**E**	**81**	**F**	**7**
11. Beach Blvd & Talbert Ave	Signal	AM	35	D	35	D	0
		MD	**67**	**E**	**75**	**E**	**8**
		PM	**76**	**E**	**83**	**F**	**7**
13. Beach Blvd & Garfield Ave	Signal	AM	46	D	46	D	0
		MD	38	D	38	D	0
		PM	**60**	**E**	**68**	**E**	**8**

TABLE 9-4 INTERSECTION LEVEL OF SERVICE: PROJECT ALTERNATIVE 6 OPERATING YEAR (2020) COMPARISON							
Intersection	**Control**	**Peak**	**No Project Delay or V/C**	**No Project LOS**	**With Project Delay or V/C**	**With Project LOS**	**Δ Delay or V/C**
18. Beach Blvd & Atlanta Ave	Signal	AM	40	D	39	D	-1
		MD	37	D	37	D	0
		PM	**61**	**E**	**62**	**E**	**1**
22. Newland Blvd & Hamilton Ave[4]	Signal	AM	0.59	A	0.69	B	0.1
		MD	0.47	A	0.57	A	0.1
		PM	**0.71**	**C**	**0.8**	**D**	**0.09**
27. PCH & Brookhurst St	Signal	AM	22	C	24	C	2
		MD	21	C	25	C	4
		PM	**42**	**D**	**71**	**E**	**29**

Notes:

1. Delay is measured in seconds. Calculated using Synchro 8 software package.
2. V/C ratios are calculated using Traffix 8.0 software package.
3. **Cells highlighted in grey** indicates project impact.
4. Classified as a "Secondary" intersection per City of Huntington Beach, Level of Service standard is LOS "C".

Source: Fehr & Peers, 2014

As shown in the table, the overall intersection delay will improve or remain the same at some locations in the plus project scenario because the project increases traffic to certain movements which have available capacity or "green time". For example, if volumes are increased at a coordinated through phase where actuated green time may be available, the intersection may operate more efficiently by utilizing the available capacity or "green time" allowing more vehicles to travel through the intersection. The added vehicles to the intersection in this case will actually experience less delay than the average of all vehicles already at the intersection. Since intersection delay is report as a weighted average of all movements as provided for by the Highway Capacity Manual, this increase in traffic volume actually results in a reduction or no change of overall intersection delay.

As shown in Table 9-4, the project traffic will impact the following intersection under the Operating Year (2020) Conditions:

3. Beach Boulevard at Edinger Avenue – AM Peak Hour (LOS E), Mid-Day Peak Hour (LOS E), and PM Peak Hour (LOS F)
6. Beach Boulevard at Heil Avenue – PM Peak Hour (LOS F)
8. Beach Boulevard at Warner Avenue – AM Peak Hour (LOS E) and PM Peak Hour (LOS F)
9. Beach Boulevard at Slater Avenue – PM Peak Hour (LOS F)

11. Beach Boulevard at Talbert Avenue – Mid-Day Peak Hour (LOS E) and PM Peak Hour (LOS F)
13. Beach Boulevard at Garfield Avenue – PM Peak Hour (LOS E)
18. Beach Boulevard at Atlanta Avenue – PM Peak Hour (LOS E)
22. Newland Boulevard at Hamilton Avenue – PM Peak Hour (LOS D)
27. Pacific Coast Highway and Brookhurst Street – PM Peak Hour (LOS E)

Measures to mitigate the identified impacts are discussed in detail in Chapter 11.

9.5 HAMILTON AVENUE LANE CLOSURE

During construction activity on the site, it may be necessary to close the shared parking/bicycle lane on eastbound Hamilton Avenue along the project frontage. This lane closure could potentially affect the current Magnolia Street/Hamilton Avenue intersection by closing the existing shared through/right-turn lane. With this temporary closure, the eastbound approach would be reconfigured to be a shared left-turn/through/right-turn lane. Table 9-5 documents the ICU and LOS results with the implementation of this lane closure under the Alternative 6 Operating Year (2020) Plus Project Scenario. As shown in the table below, the intersection remains at an acceptable level of service with the implementation of the lane closure during all peak periods.

TABLE 9-5
INTERSECTION LOS COMPARISON – ALTERNATIVE 6 OPERATING YEAR (2020) PLUS PROJECT CONDITIONS

	Without Lane Closure						With Lane Closure						Change in V/C		
	AM Peak		MD Peak		PM Peak		AM Peak		MD Peak		PM Peak				
Intersection	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**V/C**	**LOS**	**AM**	**MD**	**PM**
Magnolia St & Hamilton Ave	0.56	A	0.42	A	0.63	B	0.6	B	0.42	A	0.63	B	0.04	0	0

Source: Fehr & Peers,.2014

10.0 CMP Analysis

This chapter provides the impact analysis for OCTA CMP intersection locations.

10.1 CMP INTERSECTION ANALYSIS

The Orange County Congestion Management Plan (CMP) requires that projects cannot be allowed to reduce the LOS or increase ICU by more than 0.03 at a location that is forecasted to operate at LOS "E" or "F." These intersections are analyzed using the ICU methodology in compliance with the requirements of OCTA. Four CMP intersections are located in the study area as noted below. As shown in Table 10-1, Table 10-2, and Table 10-3 the ICU V/C ratio does not increase by 0.03 or more for intersections forecasted to operate at E or F. Thus, no impact is noted.

TABLE 10-1
CMP ANALYSIS: EXISTING (2014)
NO PROJECT AND WITH PROJECT COMPARISON

Intersection	Peak	Existing Year (2014)				
		No Project ICU	LOS	With Project ICU	LOS	Change
3. Beach Blvd & Edinger Ave	AM	0.72	C	0.73	C	0.01
	MD	0.69	B	0.7	C	0.01
	PM	0.88	D	0.89	D	0.01
8. Beach Blvd & Warner Ave	AM	0.74	C	0.75	C	0.01
	MD	0.66	B	0.67	B	0.01
	PM	0.84	D	0.85	D	0.01
16. Beach Blvd & Adams Ave	AM	0.55	A	0.56	A	0.01
	MD	0.56	A	0.57	A	0.01
	PM	0.69	B	0.7	C	0.01
20. Beach Blvd & PCH	AM	0.54	A	0.57	A	0.03
	MD	0.47	A	0.49	A	0.02
	PM	0.64	B	0.7	C	0.06

Notes: Cells highlighted in grey represent intersections that are operating at LOS E or below.
Source: Fehr & Peers, 2014

TABLE 10-2
CMP ANALYSIS: OPERATING YEAR (2017)
NO PROJECT AND WITH PROJECT COMPARISON

Intersection	Peak	Operating Year (2017)				
		No Project ICU	LOS	With Project ICU	LOS	Change
3. Beach Blvd & Edinger Ave	AM	0.79	C	0.8	D	0.01
	MD	0.76	C	0.77	C	0.01
	PM	**0.99**	**E**	**1.01**	**F**	0.02
8. Beach Blvd & Warner Ave	AM	0.81	D	0.82	D	0.01
	MD	0.7	C	0.71	C	0.01
	PM	**0.92**	**E**	**0.93**	**E**	0.01
16. Beach Blvd & Adams Ave	AM	0.61	B	0.63	B	0.02
	MD	0.6	B	0.62	B	0.02
	PM	0.78	C	0.79	C	0.01
20. Beach Blvd & PCH	AM	0.6	B	0.62	B	0.02
	MD	0.51	A	0.53	A	0.02
	PM	0.79	C	0.84	D	0.05

Notes: Cells highlighted in grey represent intersections that are operating at LOS E or below.

Source: Fehr & Peers, 2014

TABLE 10-3
CMP ANALYSIS: ALTERNATIVE 6 OPERATING YEAR (2020)
NO PROJECT AND WITH PROJECT COMPARISON

Intersection	Peak	Alternative 6 Operating Year (2020)				
		No Project ICU	LOS	With Project ICU	LOS	Change
3. Beach Blvd & Edinger Ave	AM	0.81	D	0.83	D	0.02
	MD	0.78	C	0.79	C	0.01
	PM	**1.02**	**F**	**1.03**	**F**	0.01
8. Beach Blvd & Warner Ave	AM	0.83	D	0.84	D	0.01
	MD	0.72	C	0.73	C	0.01
	PM	**0.94**	**E**	**0.95**	**E**	0.01
16. Beach Blvd & Adams Ave	AM	0.63	B	0.64	B	0.01
	MD	0.62	B	0.64	B	0.02
	PM	0.8	D	0.81	D	0.01
20. Beach Blvd & PCH	AM	0.61	B	0.63	B	0.02
	MD	0.53	A	0.55	A	0.02
	PM	0.8	D	0.86	D	0.06

Notes: Cells highlighted in grey represent intersections that are operating at LOS E or below.

Source: Fehr & Peers, 2014

11.0 Findings and Mitigation Measures

This chapter provides a summary of the key findings and project impacts for each scenario analyzed, and recommended mitigation measures to mitigate these impacts.

11.1 SUMMARY OF PROJECT IMPACTS AT INTERSECTIONS

As previously stated in Chapter 2, the City of Huntington Beach General Plan defines the following LOS standards for determining acceptable operations on their facilities:

- Critical Intersections: LOS "E" or better is acceptable
- Principal Intersections: LOS "D" or better is acceptable
- Secondary Intersections: LOS "C" or better is acceptable

A project will be deemed to create a significant impact if the project alone causes an intersection operating at an acceptable Level of Service to operate at an unacceptable Level of Service.

If a project impacts an intersection that already operates at an unacceptable Level of Service, this is also deemed a significant impact and mitigation would be required to bring the LOS back to where it was prior to the project.

All intersections under the Huntington Beach jurisdiction analyzed in the study are classified as "principal" intersections with LOS "D" criteria, except for the following intersections which are "secondary" intersections with LOS "C" criteria:

- Newland Street & Hamilton Avenue
- Newland Street & Atlanta Ave

Additionally, the City of Fountain Valley sets LOS D (ICU of 0.90 or less) as the lowest acceptable LOS for peak hour intersection volumes in the City. Based on this standard, we defined the following significance criteria for intersections in the City of Fountain Valley.

- LOS "D" or better at intersections during the peak hour. A project will be deemed to create a significant impact if the project alone causes an intersection at Level of Service D or better to move to Level of Service E or F.
- If a project impacts an intersection that is already at LOS "E" or "F," this is also deemed a significant impact and mitigation would be required to bring the LOS back to where it was prior to the project.

Finally, Caltrans requires that any facilities within Caltrans Jurisdiction shall maintain a minimum LOS threshold of LOS "D," or less than 55 seconds of average delay. A project is deemed to create a significant impact if the project alone causes an intersection at LOS "D" or better to degrade to LOS "E" or worse. If the facility already operates at LOS "E" or worse before the addition of project traffic, and the project causes the average delay to increase, the project's impact may also be deemed significant by Caltrans.

Mitigation measures to bring the facility back to acceptable operations need to be considered if a significant impact is identified.

Based upon these significance criteria, the addition of the project will significantly impact the following locations under each analyzed scenario:

Existing (2014) Plus Project Conditions

- Beach Boulevard at Heil Avenue – PM Peak Hour
  - Project causes intersection operating at LOS D to operate at LOS E
- PCH & Brookhurst Street – PM Peak Hour
  - Project causes intersection operating at LOS C to operate at LOS E

Operating Year (2017) Plus Project Conditions

- Beach Boulevard at Edinger Avenue – AM Peak Hour and PM Peak Hour
  - Project causes intersection operating at LOS D to operate at LOS E (AM Peak Hour)
  - Project increases delay on an intersection already operating at LOS F (PM Peak Hour)
- Beach Boulevard at Heil Avenue – PM Peak Hour
  - Project increases delay at intersection already operating at LOS F
- Beach Boulevard at Warner Avenue – PM Peak Hour
  - Project increases delay at intersection already operating at LOS E
- Beach Boulevard at Slater Avenue – PM Peak Hour
  - Project increases delay at intersection already operating at LOS E
- Beach Boulevard at Talbert Avenue – Mid-Day Peak Hour and PM Peak Hour
  - Project increase delay at intersection already operating at LOS E
- Beach Boulevard at Garfield Avenue – PM Peak Hour
  - Project causes intersection operating at LOS D to operate at LOS E
- PCH at Brookhurst Street – PM Peak Hour
  - Project causes intersection operating at LOS D to operate at LOS E

Alternative 6 Operating Year (2020) Plus Project Conditions

- Beach Boulevard at Edinger Avenue – AM Peak Hour, Mid-Day Peak Hour, and PM Peak Hour
  - Project increases delay on an intersection already operating at LOS E (AM Peak Hour)
  - Project increases delay on an intersection already operating at LOS E (Mid-Day Peak Hour)
  - Project increases delay on an intersection already operating at LOS F (PM Peak Hour)
- Beach Boulevard at Heil Avenue – PM Peak Hour
  - Project increases delay at intersection already operating at LOS F
- Beach Boulevard at Warner Avenue – AM Peak Hour and PM Peak Hour
  - Project increases delay on an intersection already operating at LOS E (AM Peak Hour)
  - Project increases delay on an intersection already operating at LOS F (PM Peak Hour)
- Beach Boulevard at Slater Avenue – PM Peak Hour
  - Project increases delay at intersection already operating at LOS E
- Beach Boulevard at Talbert Avenue – Mid-Day Peak Hour and PM Peak Hour

    - Project increase delay at intersection already operating at LOS E
- Beach Boulevard at Garfield Avenue – PM Peak Hour
    - Project increases delay at intersection already operating at LOS E
- Beach Boulevard at Atlanta Avenue – PM Peak Hour
    - Project increases delay at intersection already operating at LOS E
- Newland Boulevard at Hamilton Avenue – PM Peak Hour
    - Project causes intersection operating at LOS C to operate at LOS D
- Pacific Coast Highway at Brookhurst Street – PM Peak Hour
    - Project causes intersection operating at LOS D to operate at LOS E

11.2 RECOMMENDED MITIGATION MEASURES

Mitigation measures were identified to reduce the impact of the project on the study area. The mitigation measure identified for all scenarios involves decreasing the amount of project truck trips during the PM Peak Hour. More specifically, the mitigation measure reduces maximum hourly one way trips during the PM Peak Hour from 20 export trucks to 10 export trucks and from 25 import trucks to 15 import trucks. Supply truck, visitor and employee trips would remain the same. The resulting project trip generation with the mitigated truck volume intensity is shown in Table 11-1.

Table 11-1 Mitigated Project Trip Generation Estimates															
Trip Type	PCE[1]	Daily One-Way Trips	Daily Two - Way PCE	Max Hourly One -Way Trips			AM Peak PCE			Mid-Day PCE			PM Peak PCE		
				AM	Mid-Day	PM	In	Out	Total	In	Out	Total	In	Out	Total
Export Trucks	3	100	600	20	20	10	60	60	120	60	60	120	30	30	60
Import Trucks	3	200	1,200	25	25	15	75	75	150	75	75	150	45	45	90
Supply Trucks	3	10	60	4	4	0	12	12	24	12	12	24	0	0	0
Employee	1	55	110	37	37	37	37	0	37	18	19	37	0	37	37
Visitor	1	15	40	10	10	10	10	0	10	5	5	10	0	10	10
Totals		380	2,010	96	96	72	194	147	341	170	171	341	75	122	197

Notes:
1. PCE represents the passenger car equivalent used.
2. Decreased truck volume intensity as part of the mitigation measure identified is highlighted grey.
Source: PCR, 2014

The following sections discuss the effect the mitigation measure has on the project impacts that were identified earlier in Section 11.1.

11.2.1 EXISTING PLUS PROJECT CONDITIONS

Table 11-2 summarizes the project impacts, delay, and level of service for the Existing Plus Project scenario with mitigation.

TABLE 11-2
INTERSECTION LEVEL OF SERVICE: EXISTING PLUS PROJECT MITIGATION

Intersection	Control	Peak	With Project Delay or V/C	With Project LOS	After Mitigation Delay or V/C	After Mitigation LOS
Beach Blvd & Heil Ave	Signal	AM	35	D	N/A	N/A
		MD	30	C	N/A	N/A
		PM	**56**	**E**	54	D
PCH & Brookhurst St	Signal	AM	27	C	N/A	N/A
		MD	22	C	N/A	N/A
		PM	**67**	**E**	46	D

Notes:
1. **Cells highlighted in grey** indicates deficient location
2. N/A indicates no mitigation required
3. Source: Fehr & Peers, 2014*Source: Fehr & Peers, 2014*

Beach Boulevard at Heil Avenue – PM Peak Hour:

- The decrease in PM peak hour export truck trips identified as mitigation will improve the delay and LOS at this intersection from 56 seconds (LOS E) to 54 seconds (LOS D).
- The mitigation measure identified would result in an acceptable level of service at this intersection, thus the impact would be considered ***less than significant.***

PCH & Brookhurst Street – PM Peak Hour:

- The decrease in PM Peak Hour import truck trips identified as mitigation will improve the delay and LOS at this intersection from 67 seconds (LOS E) to 46 seconds (LOS D).
- The mitigation measure identified would result in an acceptable level of service at this intersection, thus the impact would be considered ***less than significant.***

11.2.2 OPERATING YEAR (2017) PLUS PROJECT CONDITIONS

Table 11-3 summarizes the project impacts, delay, and level of service for the Operating Year Plus Project scenario with mitigation.

Table 11-3
Intersection Level of Service: Operating Year Plus Project Mitigation

Intersection	Control	Peak	With Project Delay or V/C	With Project LOS	After Mitigation Delay or V/C	After Mitigation LOS
Beach Blvd & Edinger Ave	Signal	AM	**55**	**E**	**55**	**E**
		MD	50	D	50	D
		PM	**128**	**F**	**124**	**F**
Beach Blvd & Heil Ave	Signal	AM	40	D	40	D
		MD	32	C	32	C
		PM	**101**	**F**	**97**	**F**
Beach Blvd & Warner Ave	Signal	AM	54	D	54	D
		MD	35	D	35	D
		PM	**81**	**F**	**79**	**E**
Beach Blvd & Slater Ave	Signal	AM	44	D	44	D
		MD	37	D	37	D
		PM	**71**	**E**	**68**	**E**

Table 11-3
Intersection Level of Service: Operating Year Plus Project Mitigation

Intersection	Control	Peak	With Project Delay or V/C	With Project LOS	After Mitigation Delay or V/C	After Mitigation LOS
Beach Blvd & Talbert Ave	Signal	AM	33	C	33	C
		MD	**65**	**E**	**65**	**E**
		PM	**72**	**E**	**69**	**E**
Beach Blvd & Garfield Ave	Signal	AM	45	D	45	D
		MD	37	D	37	D
		PM	**56**	**E**	53	D
PCH & Brookhurst St	Signal	AM	23	C	23	C
		MD	25	C	25	C
		PM	**64**	**E**	53	D

Notes:
1. Bold indicates deficient location
2. N/A indicates no mitigation required
3. Source: Fehr & Peers, 2014*Source: Fehr & Peers, 2014*

Beach Boulevard at Edinger Avenue – AM Peak Hour and PM Peak Hour

- The AM peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the PM peak hour only.
- The decrease in PM peak hour export trucks would improve the delay at this intersection from 128 seconds (LOS F) to 124 seconds (LOS F).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Heil Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 101 seconds (LOS F) to 97 seconds (LOS F).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Warner Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 81 seconds (LOS F) to 79 seconds (LOS E).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Slater Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 71 seconds (LOS E) to 68 seconds (LOS E).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Talbert Avenue – Mid-Day Peak Hour and PM Peak Hour

- The Mid-Day peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the PM peak hour only.
- The decrease in PM peak hour export trucks would improve the delay at this intersection from 72 seconds (LOS E) to 69 seconds (LOS E).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Garfield Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 56 seconds (LOS E) to 53 seconds (LOS D).
- The mitigation measure identified would result in an acceptable level of service at this intersection, thus the impact would be considered ***less than significant.***

PCH at Brookhurst Street – PM Peak Hour

- The decrease in PM peak hour import trucks would improve the delay at this intersection from 64 seconds (LOS E) to 53 seconds (LOS D).
- The mitigation measure identified would result in an acceptable level of service at this intersection, thus the impact would be considered ***less than significant.***

11.2.3 ALTERNATIVE 6 OPERATING YEAR (2020) PLUS PROJECT CONDITIONS

The mitigation Table 11-4 summarizes the project impacts, delay, and level of service for the Alternative 6 Operating Year Plus Project scenario with mitigation.

TABLE 11-4
INTERSECTION LEVEL OF SERVICE: ALTERNATIVE 6 OPERATING YEAR PLUS PROJECT MITIGATION

Intersection	Control	Peak	With Project Delay or V/C	With Project LOS	After Mitigation Delay or V/C	After Mitigation LOS
Beach Blvd & Edinger Ave	Signal	AM	**60**	**E**	**60**	**E**
		MD	**62**	**E**	**62**	**E**
		PM	**138**	**F**	**134**	**F**
Beach Blvd & Heil Ave	Signal	AM	44	D	44	D
		MD	38	D	38	D
		PM	**112**	**F**	**108**	**F**
Beach Blvd & Warner Ave	Signal	AM	**60**	**E**	**60**	**E**
		MD	36	D	36	D
		PM	**89**	**F**	**87**	**F**
Beach Blvd & Slater Ave	Signal	AM	49	D	49	D
		MD	39	D	39	D
		PM	**81**	**F**	**78**	**E**
Beach Blvd & Talbert Ave	Signal	AM	35	D	35	D
		MD	**75**	**E**	**75**	**E**
		PM	**83**	**F**	**80**	**F**
Beach Blvd & Garfield Ave	Signal	AM	46	D	46	D
		MD	38	D	38	D
		PM	**68**	**E**	**64**	**E**
Beach Blvd & Atlanta Ave	Signal	AM	39	D	39	D
		MD	37	D	37	D
		PM	**62**	**E**	**61**	**E**

TABLE 11-4 INTERSECTION LEVEL OF SERVICE: ALTERNATIVE 6 OPERATING YEAR PLUS PROJECT MITIGATION						
Intersection	**Control**	**Peak**	**With Project Delay or V/C**	**With Project LOS**	**After Mitigation Delay or V/C**	**After Mitigation LOS**
Newland Blvd & Hamilton Ave[4]	Signal	AM	0.69	B	0.69	B
		MD	0.57	A	0.57	A
		PM	**0.8**	**D**	0.76	C
PCH & Brookhurst St	Signal	AM	24	C	24	C
		MD	25	C	25	C
		PM	**71**	**E**	**62**	**E**

Notes:

1. Bold indicates deficient location
2. N/A indicates no mitigation required
3. Source: Fehr & Peers, 2014*Source: Fehr & Peers, 2014*
4. Classified as a "Secondary" intersection per City of Huntington Beach, Level of Service standard is LOS "C".

Beach Boulevard at Edinger Avenue – AM Peak Hour, Mid-Day Peak Hour, and PM Peak Hour

- The AM peak hour and Mid-Day peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the PM peak hour only.
- The decrease in PM peak hour export trucks would improve the delay at this intersection from 138 seconds (LOS F) to 134 seconds (LOS F).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Heil Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 112 seconds (LOS F) to 108 seconds (LOS F).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Warner Avenue – AM Peak Hour and PM Peak Hour

- The AM peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the PM peak hour only.

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 89 seconds (LOS F) to 87 seconds (LOS F).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Slater Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 81 seconds (LOS F) to 78 seconds (LOS E).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Talbert Avenue – Mid-Day Peak Hour and PM Peak Hour

- The Mid-Day peak hour delay and LOS remain unchanged under the mitigated scenario because the identified mitigation measure applies to the PM peak hour only.
- The decrease in PM peak hour export trucks would improve the delay at this intersection from 83 seconds (LOS F) to 80 seconds (LOS F).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Garfield Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 68 seconds (LOS E) to 64 seconds (LOS E).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Beach Boulevard at Atlanta Avenue – PM Peak Hour

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 62 seconds (LOS E) to 61 seconds (LOS E).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since

the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

Newland Boulevard at Hamilton Avenue

- The decrease in PM peak hour export trucks would improve the V/C at this intersection from 0.80 (LOS D) to 0.76 (LOS C).
- The mitigation measure identified would result in an acceptable level of service at this intersection, thus the impact would be considered ***less than significant.***

Pacific Coast Highway at Brookhurst Street

- The decrease in PM peak hour export trucks would improve the delay at this intersection from 71 seconds (LOS E) to 62 seconds (LOS E).
- The mitigation measure identified would not result in an acceptable level of service at this intersection. Other mitigation measures such as roadway improvements or traffic signal timing adjustments would require approval from Caltrans, the owner and operator of this facility. Since the project cannot guarantee such improvements, this impact would be considered ***significant and unavoidable.***

11.3 SUMMARY OF OTHER PROJECT IMPACTS

This discussion focuses on traffic impacts at transit, bicycle, and pedestrian facilities during the interim construction period for the project. This section also addresses potential safety impacts that will occur during construction.

11.3.1 ALTERNATIVE MODE SIGNIFICANCE CRITERIA

The following significance criteria were applied to determine if the project would disrupt existing alternative transportation services or facilities:

> An impact would be considered significant for alternative forms of transportation if the project conflicts with adopted policies, plans, or programs supporting alternative transportation.

11.3.2 PROJECT IMPACT - TRANSIT

11.3.2.1 Existing and Future Transit Service

There is existing transit service along both Hamilton Avenue and Magnolia Street. OCTA Route 173 has a transit stop in the eastbound direction on the far side of the Hamilton Avenue & Magnolia Street intersection. OCTA Route 33 has a southbound stop at the far side of the Bermuda Drive & Magnolia Street intersection. Neither bus stop would be affected by the closure of the parking and bicycle lanes on Hamilton Avenue and Magnolia Street. Furthermore, there are no planned transit lines or bus stops that would be affected by the lane closures on Hamilton Avenue and Magnolia Street. The project does not conflict with any of the aforementioned policies. Therefore the project impact is less than significant and no mitigation is required.

11.3.2.2 Adopted Transit System Plans, Guidelines, Policies or Standards

The City of Huntington Beach General Plan Circulation Element (2013) has several general plan policies related to transit:

- Encourage and support the various public transit agencies and companies, ride-sharing programs, and other incentive programs that provide forms of transportation other than the private automobile. (CE 4.1)
- Continue to reserve abandoned rail rights-of-way for future transportation uses such as transit and bicycle facilities. (CE 4.2)
- Explore the possibility of locating a transportation center in or near Downtown. (CE 4.3)
- Pursue an urban transit system that serves Huntington Beach. (CE 4.4)

- Maintain a system of transit and para-transit services that assist seniors and persons with disabilities. (CE 4.5)
- Require developers to incorporate design features that reduce air pollution from motor vehicles, such as transit facilities and park-and-ride sites; bus benches, shelters, pads, or turnouts; bicycle racks and lockers; and preferred parking for ride sharers. (CE 5.1)

The project does not conflict with any of the aforementioned policies. Therefore the project impact is less than significant and no mitigation is required.

11.3.2.3 Demand for Public Transit Services Above Capacity

In determining the adequacy of public transit capacity, Fehr & Peers considered two factors:

- What is the likely transit demand created by the site?
- What is the residual capacity of services that would likely be used by persons traveling to/from the site?

If the likely transit demand exceeds capacity, then a significant impact occurs. This type of project lends itself to workers arriving and departing by private automobile instead of transit. Since the project would generate no transit trips Fehr & Peers would expect the impact to be less than significant and no mitigation would be required.

11.3.3 PROJECT IMPACT - BICYCLE

11.3.3.1 Disruptions to Existing Bicycle Facilities

There are existing bicycle lanes on Magnolia Street and Hamilton Avenue adjacent to the project site. During the construction phase of the project, the bicycle lanes on the southbound side of Magnolia Street and the eastbound side of Hamilton Avenue will be barricaded by a "K" rail or other similar device. As such, cyclists will not be able to utilize this lane. Although bicyclists will not be prohibited from traveling along this street, the heavy traffic and loss of the shoulder would not be conducive to comfortable riding. As such, most cyclists will have to divert trips to other roadway facilities. Therefore, the impact is potentially significant.

11.3.3.1.1 Analysis

The impact is temporary as the "K" rails will be removed at the completion of construction, thus restoring the bicycle facilities. Cycling trips will nonetheless likely be diverted elsewhere during construction. The Project would include a design feature to notify cyclists of the detour through signage which will be in place during construction. This signage will notify cyclists of alternative routes that can be used instead of the facilities along Hamilton and Magnolia. Alternative east-west routes include Banning Avenue and

Atlanta Avenue. Alternative north-south routes include Newland Street and Brookhurst Street. These alternative routes provide connectivity to many of the same destinations as Hamilton and Magnolia. Therefore, placing this detour signage will ensure impacts on bicycle facilities are less than significant.

11.3.3.2 Project interferes with Planned Bicycle Facilities

The City of Huntington Beach has yet to adopt a Bicycle Master Plan. There is an adopted OCTA Commuter Bikeways Strategic Plan, which identifies existing and planned bicycle facilities within the City of Huntington Beach. There are no planned facilities adjacent to the project site. Therefore, the impact is less than significant.

11.3.3.3 Conflicts with Adopted Bicycle System Plans, Guidelines, Policies, or Standards

The City of Huntington Beach General Plan notes the following policies related to bicycling:

- Explore the possibility of increasing bicycle parking in or near downtown. (CE 6.4)
- Coordinate the planning of equestrian, bicycle, bus and pedestrian routes and facilities to promote an interconnected system. (CE 7.1)
- Coordinate with neighboring jurisdictions to ensure that bicycle routes within the City connect to and are consistent with routes in adjacent jurisdictions. (CE 7.2)
- Coordinate with the County to ensure that new routes identified in the City's Bike Route Plan are incorporated within the County's Master Plan of Bikeways. (CE 7.3)
- Encourage the use of easements and/or rights-of-way along flood control channels, public utilities, railroads, and streets, for use by bicyclists and/or pedestrians, where safe and appropriate. (CE 7.4)
- Maintain existing pedestrian and bicycle facilities, and require developers to provide pedestrian walkways and/or bicycle pathways between new residences and schools, parks, and public facilities. (CE 7.5)
- Implement and operate appropriate traffic control devices throughout the community to reduce conflicts between pedestrians, bicycles, and motor vehicles. (CE 7.8)

The project does not conflict with any of the aforementioned policies. Therefore the project impact is less than significant and no mitigation is required.

11.3.4 PROJECT IMPACT - PEDESTRIAN

11.3.4.1 Disruptions to Existing Pedestrian Facilities

There is an existing paved sidewalk along Hamilton Avenue adjacent to the project site and a raised soil shoulder along Magnolia Street adjacent to the project site. During the construction phase of the project, the sidewalk and soil shoulder will be barricaded. As such, pedestrians will not be able to walk along the south side of Hamilton Avenue or the west side of Magnolia Street. Pedestrians will therefore have to travel exclusively along the north side of Hamilton Avenue and the east side of Magnolia Street. The

north side of Hamilton Avenue has an off-street pedestrian path that is slightly set back from Hamilton Avenue and connects to Edison Community Park. The east side of Magnolia Street has a paved sidewalk. Both of these facilities provide more comfortable walking environments than the pedestrian facilities barricaded. Nonetheless, since the existing facilities will be disrupted, the impact is potentially significant.

11.3.4.1.1 Analysis

The impact is temporary as the "K" rails will be removed at the completion of construction, thus restoring the pedestrian facilities. Pedestrians will nonetheless need to cross the street to travel along the non-barricaded sidewalks and walkways. The Project would include a design feature to provide detour signage for pedestrians notifying them of the closure along the project perimeter. With the implementation of this detour signage, the impact will be less than significant.

11.3.4.2 Project interferes with Planned Pedestrian Facilities

The City of Huntington Beach has yet to adopt a Pedestrian Master Plan. Although the west side of Magnolia Avenue lacks a sidewalk, the soil shoulder operates as one. There are no new planned facilities adjacent to the project site. Therefore, the impact is less than significant.

11.3.4.3 Conflicts with Adopted Bicycle System Plans, Guidelines, Policies, or Standards

The City of Huntington Beach General Plan notes the following policies related to pedestrians:

- Coordinate the planning of equestrian, bicycle, bus and pedestrian routes and facilities to promote an interconnected system. (CE 7.1)
- Encourage the use of easements and/or rights-of-way along flood control channels, public utilities, railroads, and streets, for use by bicyclists and/or pedestrians, where safe and appropriate. (CE 7.4)
- Maintain existing pedestrian and bicycle facilities, and require developers to provide pedestrian walkways and/or bicycle pathways between new residences and schools, parks, and public facilities. (CE 7.5)
- Designate and improve Pedestrian Enhancement Zones (PEZs) at appropriate locations.
- Implement and operate appropriate traffic control devices throughout the community to reduce conflicts between pedestrians, bicycles, and motor vehicles. (CE 7.8)

The project does not conflict with any of the aforementioned policies. Therefore the project impact is less than significant and no mitigation is required.

11.3.5 HAZARDS SIGNIFICANCE CRITERIA

The following significance criteria were applied to determine if the project create a significant impact related to hazards:

An impact will be considered significant if the project substantially increase hazards due to a design feature or incompatible uses.

11.3.6 PROJECT IMPACT

The construction activity on the site will involve the travel of heavy trucks throughout the day, which has the potential to create conflicts as these vehicles enter the roadways and travel along the designated routes to reach I-405. The Project would implement several design features that would limit the impacts of this construction traffic on the adjacent roadways including:

- The Project would prepare a Construction Traffic Management Plan, which would be reviewed and approved by the City prior to any construction activity occurring
- As noted above, "K"-rails would be placed around the perimeter of the project to provide a buffer between the construction activity and the adjacent street traffic on Hamilton and Magnolia
- The project would place flagmen at each of the project driveways on Hamilton and Magnolia to direct trucks into and out of the site, which would limit further conflicts with any vehicles on these roadways during construction activity.

Given the items above, the project impact would be less than significant.

APPENDIX A: EXISTING TRAFFIC COUNTS

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-001 **Day:** Thursday

City: Westminster **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			McFadden Ave			McFadden Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 4	NR 0	SL 2	ST 4	SR 0	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL
7:00 AM	32	363	15	24	568	49	67	48	26	73	46	21	1332
7:15 AM	33	509	19	31	637	55	50	56	27	75	47	11	1550
7:30 AM	48	433	23	37	662	95	61	78	38	79	114	22	1690
7:45 AM	46	498	35	38	720	103	75	89	33	72	123	16	1848
8:00 AM	43	400	24	34	640	67	61	105	24	88	116	35	1637
8:15 AM	40	507	58	36	653	69	50	62	26	70	76	27	1674
8:30 AM	36	407	45	43	635	61	31	75	22	109	83	28	1575
8:45 AM	34	365	37	36	553	77	61	65	30	97	89	24	1468
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	312	3482	256	279	5068	576	456	578	226	663	694	184	12774
APPROACH %'s :	7.70%	85.98%	6.32%	4.71%	85.56%	9.72%	36.19%	45.87%	17.94%	43.02%	45.04%	11.94%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	177	1838	140	145	2675	334	247	334	121	309	429	100	6849
PEAK HR FACTOR :		0.890			0.916			0.891			0.877		0.927

UTURNS			
NB	SB	EB	WB
8	1		
16	1		
17	1		
7	0		
8	2		
4	3		
10	2		
12	2		
NB	SB	EB	WB
82	12	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-001 **Day:** Thursday

City: Westminster **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			McFadden Ave			McFadden Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 2	NT 4	NR 0	SL 2	ST 4	SR 0	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL	NB	SB	EB	WB
10:30 AM	46	363	41	18	403	31	54	37	27	81	76	33	1210	10	0		
10:45 AM	51	375	22	29	473	62	63	56	19	71	71	22	1314	14	4		
11:00 AM	42	427	52	31	413	43	82	51	26	54	66	27	1314	18	8		
11:15 AM	40	410	37	26	446	47	42	49	19	73	51	22	1262	17	2		
11:30 AM	40	406	40	34	424	36	50	41	29	83	53	25	1261	15	4		
11:45 AM	50	419	37	28	430	47	41	37	24	67	58	24	1262	18	5		
12:00 PM	37	428	37	38	451	42	46	51	19	87	50	24	1310	9	7		
12:15 PM	45	403	32	29	462	44	51	48	19	67	54	27	1281	11	4		
12:30 PM	57	485	37	27	419	54	69	84	25	87	61	19	1424	19	3		
12:45 PM	38	389	43	28	458	42	66	71	26	73	61	26	1321	13	6		
1:00 PM	60	431	44	19	410	40	60	61	17	71	63	20	1296	21	2		
1:15 PM	53	412	37	23	378	33	57	43	20	78	54	18	1206	14	3		
1:30 PM	47	459	49	30	481	48	58	59	23	78	59	19	1410	15	4		
1:45 PM	49	420	57	29	415	42	63	57	27	56	52	20	1287	12	2		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	655	5827	565	389	6063	611	802	745	320	1026	829	326	18158	206	54	0	0
APPROACH %'s :	9.29%	82.69%	8.02%	5.51%	85.84%	8.65%	42.96%	39.90%	17.14%	47.04%	38.01%	14.95%					

PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	177	1705	149	122	1790	182	232	254	89	314	226	96	5336
PEAK HR FACTOR :		0.877			0.979			0.808			0.952		0.937

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-001 **Day:** Thursday

City: Westminster **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			McFadden Ave			McFadden Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 2	NT 4	NR 0	SL 2	ST 4	SR 0	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL	NB	SB	EB	WB
4:00 PM	55	535	55	59	481	44	86	98	40	102	89	38	1682	9	4		
4:15 PM	75	623	60	27	475	39	78	88	29	84	81	30	1689	12	4		
4:30 PM	42	596	51	42	524	49	74	111	37	95	83	36	1740	8	7		
4:45 PM	64	635	65	31	475	54	87	106	39	69	86	25	1736	11	1		
5:00 PM	40	638	67	47	555	64	118	96	26	98	83	35	1867	11	6		
5:15 PM	61	630	57	50	514	58	100	117	48	82	116	35	1868	17	6		
5:30 PM	81	669	66	45	586	75	87	83	37	88	112	33	1962	20	7		
5:45 PM	63	677	40	53	486	66	88	82	33	88	110	38	1824	18	6		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	481	5003	461	354	4096	449	718	781	289	706	760	270	14368	106	41	0	0
APPROACH %'s :	8.09%	84.15%	7.75%	7.23%	83.61%	9.17%	40.16%	43.68%	16.16%	40.67%	43.78%	15.55%					

PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	245	2614	230	195	2141	263	393	378	144	356	421	141	7521
PEAK HR FACTOR :		0.946			0.920			0.863			0.972		0.958

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-002 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Center Ave			Center Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 4	NR 0	SL 0	ST 4	SR 1	EL 2	ET 0	ER 2	WL 0	WT 0	WR 0	TOTAL
7:00 AM		542			528	254	28		88				1440
7:15 AM		517			478	234	47		93				1369
7:30 AM		545			748	217	24		109				1643
7:45 AM		512			625	270	40		135				1582
8:00 AM		505			741	214	26		122				1608
8:15 AM		530			565	231	35		137				1498
8:30 AM		431			639	157	35		111				1373
8:45 AM		441			600	231	45		177				1494
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4023	0	0	4924	1808	280	0	972	0	0	0	12007
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	73.14%	26.86%	22.36%	0.00%	77.64%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	2092	0	0	2679	932	125	0	503	0	0	0	6331
PEAK HR FACTOR :		0.960			0.935			0.897			0.000		0.963

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-002 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Center Ave			Center Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 4	NR 0	SL 0	ST 4	SR 1	EL 2	ET 0	ER 2	WL 0	WT 0	WR 0	TOTAL
10:30 AM		490			476	219	57		179				1421
10:45 AM		431			495	238	51		181				1396
11:00 AM		461			447	186	60		246				1400
11:15 AM		502			476	209	46		214				1447
11:30 AM		541			475	209	106		234				1565
11:45 AM		562			528	199	68		209				1566
12:00 PM		489			544	178	57		185				1453
12:15 PM		489			585	222	60		203				1559
12:30 PM		542			511	200	55		224				1532
12:45 PM		504			519	278	44		214				1559
1:00 PM		549			517	215	67		194				1542
1:15 PM		517			525	219	86		214				1561
1:30 PM		530			468	259	60		231				1548
1:45 PM		538			520	217	85		219				1579
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	7145	0	0	7086	3048	902	0	2947	0	0	0	21128
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	69.92%	30.08%	23.43%	0.00%	76.57%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	0	2134	0	0	2030	910	298	0	858	0	0	0	6230
PEAK HR FACTOR :		0.972			0.988			0.951			0.000		0.986

UTURNS

NB	SB	EB	WB
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-002 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Center Ave			Center Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 4	NR 0	SL 0	ST 4	SR 1	EL 2	ET 0	ER 2	WL 0	WT 0	WR 0	TOTAL
4:00 PM		652			540	216	67		240				1715
4:15 PM		638			440	205	62		246				1591
4:30 PM		644			625	243	91		232				1835
4:45 PM		676			506	215	62		262				1721
5:00 PM		701			506	209	91		219				1726
5:15 PM		839			509	233	61		213				1855
5:30 PM		606			629	256	96		238				1825
5:45 PM		717			599	249	81		217				1863
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	5473	0	0	4354	1826	611	0	1867	0	0	0	14131
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	70.45%	29.55%	24.66%	0.00%	75.34%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	2863	0	0	2243	947	329	0	887	0	0	0	7269
PEAK HR FACTOR :		0.853			0.901			0.910			0.000		0.975

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-003 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Edinger Ave			Edinger Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 1	SL 2	ST 4	SR 2	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
7:00 AM	16	388	50	100	428	68	63	171	26	13	64	68	1455
7:15 AM	24	409	77	95	410	70	42	234	14	28	77	66	1546
7:30 AM	30	451	54	111	641	113	33	241	25	20	107	55	1881
7:45 AM	34	396	55	87	563	128	59	240	32	53	128	69	1844
8:00 AM	39	399	78	144	600	106	50	187	39	28	91	50	1811
8:15 AM	41	420	91	106	512	96	52	219	53	33	105	60	1788
8:30 AM	40	326	63	104	566	107	44	168	49	43	105	42	1657
8:45 AM	55	347	65	76	552	136	50	134	33	46	107	31	1632
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	279	3136	533	823	4272	824	393	1594	271	264	784	441	13614
APPROACH %'s :	7.07%	79.43%	13.50%	13.90%	72.17%	13.92%	17.40%	70.59%	12.00%	17.73%	52.65%	29.62%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	144	1666	278	448	2316	443	194	887	149	134	431	234	7324
PEAK HR FACTOR :		0.946			0.927			0.929			0.799		0.973

UTURNS			
NB	SB	EB	WB
3	2	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-003 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Edinger Ave			Edinger Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 1	SL 2	ST 4	SR 2	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
10:30 AM	66	374	107	55	421	157	67	164	59	36	85	36	1627
10:45 AM	75	335	100	72	467	160	82	163	54	32	97	29	1666
11:00 AM	81	316	98	67	469	131	82	173	62	30	96	30	1635
11:15 AM	88	386	129	57	493	147	72	201	69	32	89	32	1795
11:30 AM	107	400	140	63	476	147	90	179	101	38	73	29	1843
11:45 AM	88	381	112	62	535	150	88	195	59	41	99	32	1842
12:00 PM	104	378	116	45	497	164	68	212	63	31	101	38	1817
12:15 PM	96	411	109	53	556	176	100	223	82	40	99	26	1971
12:30 PM	82	460	123	53	497	184	96	228	72	29	90	16	1930
12:45 PM	101	397	110	65	519	145	88	205	83	44	97	22	1876
1:00 PM	106	461	123	47	529	148	109	170	64	35	85	23	1900
1:15 PM	114	421	141	50	514	145	90	208	93	27	82	15	1900
1:30 PM	103	406	144	77	469	158	105	223	58	27	82	27	1879
1:45 PM	108	414	124	72	515	127	137	239	55	38	88	29	1946
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	1319	5540	1676	838	6957	2139	1274	2783	974	480	1263	384	25627
APPROACH %'s :	15.45%	64.91%	19.64%	8.44%	70.03%	21.53%	25.32%	55.32%	19.36%	22.57%	59.38%	18.05%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	385	1729	465	218	2101	653	393	826	301	148	371	87	7677
PEAK HR FACTOR :		0.934			0.946			0.938			0.918		0.974

UTURNS	NB	SB	EB	WB
	0	0	0	
	1	2	0	
	2	0	1	
	0	0	0	
	0	0	0	
	1	0	0	
	2	0	1	
	0	0	0	
	0	1	0	
	0	0	0	
	1	0	2	
	0	0	0	
	0	0	1	
	0	0	0	
	NB	SB	EB	WB
	7	3	5	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-003 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Edinger Ave			Edinger Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 1	SL 2	ST 4	SR 2	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
4:00 PM	90	534	144	69	551	149	90	140	69	41	68	37	1982
4:15 PM	66	457	132	64	480	152	136	306	79	55	159	49	2135
4:30 PM	88	472	172	79	628	159	93	248	58	40	125	43	2205
4:45 PM	98	554	108	77	525	142	111	246	51	38	160	33	2143
5:00 PM	90	536	121	82	545	149	129	235	37	42	122	36	2124
5:15 PM	110	637	131	72	506	148	102	206	63	51	165	51	2242
5:30 PM	104	508	135	98	565	187	102	258	78	37	171	54	2297
5:45 PM	111	560	122	81	584	155	83	208	67	44	133	31	2179
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	757	4258	1065	622	4384	1241	846	1847	502	348	1103	334	17307
APPROACH %'s :	12.45%	70.03%	17.52%	9.96%	70.18%	19.87%	26.48%	57.81%	15.71%	19.50%	61.79%	18.71%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	415	2241	509	333	2200	639	416	907	245	174	591	172	8842
PEAK HR FACTOR :		0.901			0.933			0.895			0.877		0.962

UTURNS	NB	SB	EB	WB
	0	0	1	0
	0	0	0	0
	0	0	0	0
	1	0	0	0
	0	0	0	0
	1	0	0	0
	0	0	0	1
	1	2	0	0
	NB	SB	EB	WB
	3	2	1	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-004 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Stark Dr			Stark Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 2	ST 4	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
7:00 AM	5	404	5	26	458	1	4	0	7	5	3	22	940
7:15 AM	9	485	7	20	427	1	5	3	4	9	1	24	995
7:30 AM	9	505	3	19	661	3	7	6	8	19	1	29	1270
7:45 AM	7	428	13	23	622	2	6	4	3	13	4	23	1148
8:00 AM	13	488	21	36	629	2	3	3	1	19	1	20	1236
8:15 AM	16	475	16	58	540	6	8	5	8	13	2	26	1173
8:30 AM	17	397	13	53	582	7	3	5	7	11	1	23	1119
8:45 AM	11	387	22	61	587	8	5	4	3	14	0	26	1128
TOTAL VOLUMES :	NL 87	NT 3569	NR 100	SL 296	ST 4506	SR 30	EL 41	ET 30	ER 41	WL 103	WT 13	WR 193	TOTAL 9009
APPROACH %'s :	2.32%	95.02%	2.66%	6.13%	93.25%	0.62%	36.61%	26.79%	36.61%	33.33%	4.21%	62.46%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	45	1896	53	136	2452	13	24	18	20	64	8	98	4827
PEAK HR FACTOR :		0.955			0.952			0.738			0.867		0.950

UTURNS	NB	SB	EB	WB
	1	9		
	4	5		
	2	3		
	1	6		
	7	14		
	5	15		
	6	15		
	2	23		
	NB 28	SB 90	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-004 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Stark Dr			Stark Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 2	ST 4	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
10:30 AM	17	473	10	46	486	7	9	7	10	22	3	29	1119
10:45 AM	27	440	16	52	508	3	10	5	7	17	5	28	1118
11:00 AM	25	413	19	67	517	5	5	4	5	23	4	31	1118
11:15 AM	24	517	6	74	524	4	6	3	10	31	6	34	1239
11:30 AM	35	511	14	74	570	3	10	4	9	30	6	36	1302
11:45 AM	21	529	10	65	538	4	8	7	33	23	4	39	1281
12:00 PM	45	499	16	58	551	2	7	5	14	41	7	36	1281
12:15 PM	31	531	14	69	578	7	4	4	7	19	7	28	1299
12:30 PM	39	529	19	59	549	6	6	2	10	24	8	42	1293
12:45 PM	35	510	10	57	594	7	9	5	13	30	9	35	1314
1:00 PM	30	537	10	66	580	4	8	11	13	28	7	35	1329
1:15 PM	35	515	7	68	554	4	6	6	15	33	4	41	1288
1:30 PM	34	544	20	64	522	3	5	7	21	18	9	39	1286
1:45 PM	26	541	16	62	553	0	6	7	7	25	5	32	1280
TOTAL VOLUMES :	NL 424	NT 7089	NR 187	SL 881	ST 7624	SR 59	EL 99	ET 77	ER 174	WL 364	WT 84	WR 485	TOTAL 17547
APPROACH %'s :	5.51%	92.06%	2.43%	10.29%	89.02%	0.69%	28.29%	22.00%	49.71%	39.01%	9.00%	51.98%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	135	2107	53	251	2301	24	27	22	43	101	31	140	5235
PEAK HR FACTOR :		0.977			0.979			0.719			0.919		0.985

UTURNS	NB	SB	EB	WB
	3	19		
	8	21		
	6	33		
	8	38		
	12	44		
	7	29		
	21	33		
	15	37		
	12	24		
	9	22		
	11	37		
	16	30		
	9	30		
	12	23		
	NB 149	SB 420	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-004 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Stark Dr			Stark Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 2	ST 4	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
4:00 PM	23	630	19	65	622	9	9	3	8	36	10	28	1462
4:15 PM	41	612	18	81	534	7	4	7	9	33	8	47	1401
4:30 PM	23	604	17	76	632	4	8	4	16	38	10	47	1479
4:45 PM	38	619	16	55	569	7	10	10	9	21	10	31	1395
5:00 PM	20	660	24	55	572	5	10	4	8	29	15	48	1450
5:15 PM	38	647	17	63	551	9	3	5	11	40	6	43	1433
5:30 PM	34	679	11	63	583	6	7	4	13	26	5	45	1476
5:45 PM	28	669	20	63	612	7	4	6	9	32	6	39	1495
TOTAL VOLUMES :	NL 245	NT 5120	NR 142	SL 521	ST 4675	SR 54	EL 55	ET 43	ER 83	WL 255	WT 70	WR 328	TOTAL 11591
APPROACH %'s :	4.45%	92.97%	2.58%	9.92%	89.05%	1.03%	30.39%	23.76%	45.86%	39.05%	10.72%	50.23%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	120	2655	72	244	2318	27	24	19	41	127	32	175	5854
PEAK HR FACTOR :		0.983			0.949			0.875			0.908		0.979

UTURNS	NB	SB	EB	WB
	3	29		
	13	32		
	10	32		
	12	17		
	6	18		
	8	16		
	11	29		
	10	22		
	NB 73	SB 195	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-005 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			McDonald Dr			McDonald Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 2	ST 4	SR 0	EL 1	ET 1	ER 0	WL 1.3	WT 0.3	WR 1.3	TOTAL
7:00 AM	9	382	4	26	468	0	9	0	6	11	1	8	924
7:15 AM	5	476	6	23	453	2	9	3	8	19	2	7	1013
7:30 AM	6	507	6	31	655	3	5	2	10	17	1	11	1254
7:45 AM	17	414	13	27	622	2	9	1	9	28	4	17	1163
8:00 AM	6	501	11	45	618	7	10	1	12	19	0	9	1239
8:15 AM	7	512	15	39	550	1	3	0	9	22	0	13	1171
8:30 AM	5	418	22	42	530	2	8	1	8	33	2	13	1084
8:45 AM	11	378	9	46	555	3	9	0	10	28	2	12	1063
TOTAL VOLUMES :	NL 66	NT 3588	NR 86	SL 279	ST 4451	SR 20	EL 62	ET 8	ER 72	WL 177	WT 12	WR 90	TOTAL 8911
APPROACH %'s :	1.76%	95.94%	2.30%	5.87%	93.71%	0.42%	43.66%	5.63%	50.70%	63.44%	4.30%	32.26%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	36	1934	45	142	2445	13	27	4	40	86	5	50	4827
PEAK HR FACTOR :		0.943			0.943			0.772			0.719		0.962

UTURNS	NB	SB	EB	WB
	5	19		
	2	14		
	3	15		
	6	10		
	1	22		
	3	15		
	1	13		
	4	11		
	NB 25	SB 119	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-005 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			McDonald Dr			McDonald Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 2	ST 4	SR 0	EL 1	ET 1	ER 0	WL 1.3	WT 0.3	WR 1.3	TOTAL
10:30 AM	8	472	13	49	420	2	4	0	8	40	0	22	1038
10:45 AM	13	469	11	65	461	2	3	0	12	41	2	41	1120
11:00 AM	24	416	19	58	478	4	6	0	6	73	0	36	1120
11:15 AM	9	536	14	62	501	2	6	2	3	38	1	44	1218
11:30 AM	8	490	20	77	502	3	8	1	9	54	0	35	1207
11:45 AM	12	560	27	92	476	7	5	1	8	62	0	48	1298
12:00 PM	15	489	26	93	540	10	4	1	6	53	2	48	1287
12:15 PM	11	590	28	87	526	5	8	2	10	68	2	48	1385
12:30 PM	10	497	36	74	517	1	13	0	4	61	3	52	1268
12:45 PM	14	539	20	79	551	9	11	0	6	82	1	52	1364
1:00 PM	10	501	17	95	524	1	8	2	7	61	3	42	1271
1:15 PM	11	500	18	73	518	3	4	0	11	75	2	42	1257
1:30 PM	18	510	15	65	494	5	5	3	11	64	1	47	1238
1:45 PM	14	531	19	73	520	3	7	1	12	69	0	57	1306
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	177	7100	283	1042	7028	57	92	13	113	841	17	614	17377
APPROACH %'s :	2.34%	93.92%	3.74%	12.82%	86.48%	0.70%	42.20%	5.96%	51.83%	57.13%	1.15%	41.71%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	50	2115	110	333	2134	25	36	3	26	264	8	200	5304
PEAK HR FACTOR :		0.904			0.969			0.813			0.874		0.957

UTURNS

	NB	SB	EB	WB
10:30 AM	5	7		
10:45 AM	8	15		
11:00 AM	18	9		
11:15 AM	6	14		
11:30 AM	0	18		
11:45 AM	8	19		
12:00 PM	8	21		
12:15 PM	6	17		
12:30 PM	7	16		
12:45 PM	9	20		
1:00 PM	6	27		
1:15 PM	6	20		
1:30 PM	15	21		
1:45 PM	10	19		
TOTAL	112	243	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-005 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			McDonald Dr			McDonald Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 2	ST 4	SR 0	EL 1	ET 1	ER 0	WL 1.3	WT 0.3	WR 1.3	TOTAL
4:00 PM	17	581	13	91	491	8	11	1	5	64	1	49	1332
4:15 PM	16	598	16	68	553	3	7	0	0	67	1	49	1378
4:30 PM	12	551	18	80	566	5	10	3	3	51	2	45	1346
4:45 PM	9	623	22	57	559	5	3	0	5	65	0	51	1399
5:00 PM	13	641	31	80	588	2	9	0	2	61	1	35	1463
5:15 PM	21	662	22	81	543	9	9	0	5	68	0	37	1457
5:30 PM	20	682	23	73	564	3	5	2	5	51	1	48	1477
5:45 PM	9	617	23	84	567	5	6	3	6	68	2	45	1435
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	117	4955	168	614	4431	40	60	9	31	495	8	359	11287
APPROACH %'s :	2.23%	94.56%	3.21%	12.07%	87.14%	0.79%	60.00%	9.00%	31.00%	57.42%	0.93%	41.65%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	63	2602	99	318	2262	19	29	5	18	248	4	165	5832
PEAK HR FACTOR :		0.953			0.970			0.867			0.907		0.987

UTURNS

	NB	SB	EB	WB
4:00 PM	9	26		
4:15 PM	11	17		
4:30 PM	8	22		
4:45 PM	7	12		
5:00 PM	8	12		
5:15 PM	12	23		
5:30 PM	13	11		
5:45 PM	7	18		
TOTAL	75	141	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-006 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Heil Ave			Heil Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1.5	WR 0.5	TOTAL
7:00 AM	11	352	4	11	430	35	45	59	39	5	25	22	1038
7:15 AM	20	474	24	19	434	25	45	76	49	9	35	21	1231
7:30 AM	24	446	11	13	543	33	36	79	83	5	76	28	1377
7:45 AM	44	384	14	8	679	51	45	83	74	14	77	20	1493
8:00 AM	37	438	13	23	527	32	47	96	60	13	31	20	1337
8:15 AM	23	477	25	32	552	39	54	89	59	18	39	33	1440
8:30 AM	30	380	13	14	530	38	38	51	56	8	49	36	1243
8:45 AM	36	336	6	13	522	41	69	77	52	8	36	22	1218
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	225	3287	110	133	4217	294	379	610	472	80	368	202	10377
APPROACH %'s :	6.21%	90.75%	3.04%	2.86%	90.81%	6.33%	25.94%	41.75%	32.31%	12.31%	56.62%	31.08%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	128	1745	63	76	2301	155	182	347	276	50	223	101	5647
PEAK HR FACTOR :		0.922			0.858			0.991			0.842		0.946

UTURNS

NB	SB	EB	WB
1	2		
3	8		
1	4		
4	1		
5	4		
3	7		
1	4		
1	1		
NB	SB	EB	WB
19	31	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-006 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Heil Ave			Heil Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1.5	WR 0.5	TOTAL
10:30 AM	36	446	4	17	438	39	52	35	23	9	27	20	1146
10:45 AM	33	427	8	19	451	41	54	36	41	7	33	27	1177
11:00 AM	32	398	8	27	496	56	46	46	42	8	33	22	1214
11:15 AM	33	458	9	28	481	47	55	52	33	4	33	21	1254
11:30 AM	32	454	11	25	502	29	53	39	46	11	26	23	1251
11:45 AM	34	448	10	27	505	46	50	41	48	8	31	21	1269
12:00 PM	39	444	7	30	497	54	60	45	48	8	48	27	1307
12:15 PM	30	493	14	33	534	44	64	49	37	12	40	30	1380
12:30 PM	45	512	22	32	498	45	67	51	41	12	33	16	1374
12:45 PM	39	463	12	29	566	56	39	38	35	7	49	34	1367
1:00 PM	26	489	7	39	549	53	54	30	38	7	37	27	1356
1:15 PM	31	494	8	26	515	71	48	37	25	14	37	24	1330
1:30 PM	43	463	3	27	508	45	45	48	39	5	40	22	1288
1:45 PM	40	507	7	30	543	42	47	61	48	15	46	26	1412
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	493	6496	130	389	7083	668	734	608	544	127	513	340	18125
APPROACH %'s :	6.93%	91.25%	1.83%	4.78%	87.01%	8.21%	38.92%	32.24%	28.84%	12.96%	52.35%	34.69%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	140	1957	55	133	2147	198	224	168	151	38	159	107	5477
PEAK HR FACTOR :		0.929			0.952			0.854			0.844		0.992

UTURNS

NB	SB	EB	WB
5	4		
3	8		
4	6		
4	10		
3	8		
6	8		
2	15		
7	13		
3	11		
3	9		
2	11		
0	7		
5	11		
3	10		
NB	SB	EB	WB
50	131	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-006 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Hell Ave			Hell Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 1.5	WR 0.5	TOTAL
4:00 PM	45	624	10	25	545	52	49	57	41	11	61	16	1536
4:15 PM	36	536	6	35	523	48	53	59	36	13	62	31	1438
4:30 PM	58	582	14	41	578	53	63	48	47	5	69	28	1586
4:45 PM	41	554	9	48	530	65	54	65	48	12	87	35	1548
5:00 PM	40	660	12	35	505	52	84	94	49	8	63	33	1635
5:15 PM	31	643	13	48	555	56	63	68	44	12	62	33	1628
5:30 PM	43	716	8	42	503	53	57	77	44	12	98	48	1701
5:45 PM	51	568	16	37	570	70	45	73	42	9	84	43	1608
TOTAL VOLUMES :	NL 345	NT 4883	NR 88	SL 311	ST 4309	SR 449	EL 468	ET 541	ER 351	WL 82	WT 586	WR 267	TOTAL 12680
APPROACH %'s :	6.49%	91.85%	1.66%	6.14%	85.01%	8.86%	34.41%	39.78%	25.81%	8.77%	62.67%	28.56%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	165	2587	49	162	2133	231	249	312	179	41	307	157	6572
PEAK HR FACTOR :		0.913			0.933			0.815			0.799		0.966

UTURNS	NB	SB	EB	WB
4:00 PM	0	3		
4:15 PM	1	8		
4:30 PM	1	14		
4:45 PM	1	7		
5:00 PM	1	10		
5:15 PM	0	12		
5:30 PM	4	11		
5:45 PM	2	6		
TOTAL	NB 10	SB 71	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-007 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Terry Dr			Terry Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	12	370	4	2	437	4	23	0	9	7	1	2	871
7:15 AM	9	461	3	3	469	4	15	2	12	8	1	3	990
7:30 AM	13	481	1	3	604	7	29	8	14	9	2	4	1175
7:45 AM	10	448	7	6	764	5	33	0	24	8	2	4	1311
8:00 AM	16	478	7	7	573	7	20	4	19	12	0	4	1147
8:15 AM	11	476	9	3	603	6	26	5	3	11	0	4	1157
8:30 AM	22	399	18	7	564	9	13	2	6	19	2	6	1067
8:45 AM	13	373	8	5	572	4	7	9	10	12	1	3	1017
TOTAL VOLUMES :	NL 106	NT 3486	NR 57	SL 36	ST 4586	SR 46	EL 166	ET 30	ER 97	WL 86	WT 9	WR 30	TOTAL 8735
APPROACH %'s :	2.90%	95.53%	1.56%	0.77%	98.24%	0.99%	56.66%	10.24%	33.11%	68.80%	7.20%	24.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	50	1883	24	19	2544	25	108	17	60	40	4	16	4790
PEAK HR FACTOR :		0.977			0.835			0.811			0.938		0.913

UTURNS	NB	SB	EB	WB
7:00 AM	6	2		
7:15 AM	8	0		
7:30 AM	9	1		
7:45 AM	9	2		
8:00 AM	5	5		
8:15 AM	8	0		
8:30 AM	15	2		
8:45 AM	7	1		
TOTAL	NB 67	SB 13	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-007 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Terry Dr			Terry Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
10:30 AM	18	448	8	10	435	8	17	1	12	13	1	7	978
10:45 AM	10	435	8	7	433	7	15	2	6	22	0	6	951
11:00 AM	21	469	14	10	437	10	19	0	4	18	1	4	1007
11:15 AM	21	494	11	12	485	8	14	5	9	20	0	6	1085
11:30 AM	36	526	11	9	516	8	10	10	7	19	1	7	1160
11:45 AM	33	492	9	17	444	8	16	2	9	18	1	1	1050
12:00 PM	24	461	12	9	486	4	8	6	9	33	1	1	1054
12:15 PM	17	482	8	9	504	7	9	0	6	14	0	4	1060
12:30 PM	31	533	16	32	545	12	15	0	3	14	0	4	1205
12:45 PM	34	476	6	29	504	10	20	4	7	16	7	11	1124
1:00 PM	24	498	15	22	490	12	26	1	3	27	1	5	1124
1:15 PM	28	516	15	24	522	15	22	2	7	21	3	6	1181
1:30 PM	23	485	7	14	471	13	23	15	12	30	5	1	1099
1:45 PM	29	518	21	13	548	16	32	1	7	22	3	7	1217
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	349	6833	161	217	6820	138	246	49	101	287	24	70	15295
APPROACH %'s :	4.75%	93.05%	2.19%	3.02%	95.05%	1.92%	62.12%	12.37%	25.51%	75.33%	6.30%	18.37%	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	117	2023	52	107	2061	49	83	7	20	78	11	26	4634
PEAK HR FACTOR :		0.945			0.941			0.887			0.846		0.961

UTURNS			
NB	SB	EB	WB
13	5		
5	6		
10	6		
16	8		
24	4		
27	10		
11	6		
8	1		
18	16		
22	21		
16	13		
15	12		
12	9		
15	6		
NB	SB	EB	WB
212	123	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-007 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Terry Dr			Terry Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	32	598	17	15	512	13	33	2	5	36	3	5	1271
4:15 PM	32	651	16	12	532	15	24	4	6	18	3	6	1319
4:30 PM	43	564	15	21	517	9	20	2	6	26	3	4	1230
4:45 PM	42	616	14	19	501	9	15	0	5	12	3	3	1239
5:00 PM	32	616	14	13	499	17	25	3	13	12	3	3	1250
5:15 PM	31	674	17	19	497	15	17	10	10	16	0	9	1315
5:30 PM	47	617	20	19	512	10	27	4	11	19	4	5	1295
5:45 PM	43	572	14	22	494	9	21	3	6	20	5	6	1215
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	302	4908	127	140	4064	97	182	28	62	159	24	41	10134
APPROACH %'s :	5.66%	91.96%	2.38%	3.26%	94.49%	2.26%	66.91%	10.29%	22.79%	70.98%	10.71%	18.30%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	152	2523	65	70	2009	51	84	17	39	59	10	20	5099
PEAK HR FACTOR :		0.949			0.984			0.833			0.795		0.969

UTURNS			
NB	SB	EB	WB
16	10		
22	7		
25	13		
26	6		
16	9		
16	6		
21	10		
19	8		
NB	SB	EB	WB
161	69	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-008 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Warner Ave			Warner Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 4	NR 0	SL 2	ST 4	SR 1	EL 2	ET 3	ER 0	WL 2	WT 3	WR 0	TOTAL
7:00 AM	16	296	25	68	335	32	60	339	21	46	127	15	1380
7:15 AM	17	420	46	82	435	51	38	328	16	28	152	17	1630
7:30 AM	36	426	41	95	413	58	50	339	14	58	203	16	1749
7:45 AM	45	415	37	89	603	102	41	274	32	73	260	28	1999
8:00 AM	33	432	28	96	511	52	69	302	19	33	188	21	1784
8:15 AM	48	443	41	85	399	45	46	280	25	50	196	23	1681
8:30 AM	19	326	19	81	508	52	60	243	19	39	169	29	1564
8:45 AM	38	295	43	53	545	35	57	224	15	32	214	42	1593
TOTAL VOLUMES :	252	3053	280	649	3749	427	421	2329	161	359	1509	191	13380
APPROACH %'s :	7.03%	85.16%	7.81%	13.45%	77.70%	8.85%	14.46%	80.01%	5.53%	17.44%	73.29%	9.28%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	162	1716	147	365	1926	257	206	1195	90	214	847	88	7213
PEAK HR FACTOR :		0.952			0.802			0.925			0.796		0.902

UTURNS

NB	SB	EB	WB
	5	1	
	1	2	
	1	1	
	0	0	
	1	4	
	6	1	
	1	0	
	1	1	
NB	SB	EB	WB
0	16	10	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-008 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Warner Ave			Warner Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 4	NR 0	SL 2	ST 4	SR 1	EL 2	ET 3	ER 0	WL 2	WT 3	WR 0	TOTAL
10:30 AM	33	376	39	45	375	62	72	200	32	54	193	39	1520
10:45 AM	42	348	44	34	342	63	81	171	24	50	188	26	1413
11:00 AM	54	370	48	30	392	55	61	155	39	39	165	42	1450
11:15 AM	47	419	72	30	386	63	88	169	15	68	184	41	1582
11:30 AM	58	398	70	35	370	74	81	178	40	60	158	47	1569
11:45 AM	52	373	31	34	372	80	93	212	36	71	174	49	1577
12:00 PM	53	367	39	39	419	65	90	230	46	60	174	24	1606
12:15 PM	57	387	42	27	442	57	76	211	26	55	219	31	1630
12:30 PM	56	452	43	51	378	67	96	204	41	55	176	29	1648
12:45 PM	79	414	50	44	421	75	71	169	44	64	230	35	1696
1:00 PM	59	429	44	32	393	57	96	175	28	67	228	40	1648
1:15 PM	48	434	45	27	482	39	69	129	25	64	183	41	1586
1:30 PM	42	369	42	55	409	78	79	214	31	74	208	34	1635
1:45 PM	53	396	63	50	452	92	89	178	34	60	224	38	1729
TOTAL VOLUMES :	733	5532	672	533	5633	927	1142	2595	461	841	2704	516	22289
APPROACH %'s :	10.57%	79.75%	9.69%	7.51%	79.42%	13.07%	27.20%	61.82%	10.98%	20.71%	66.58%	12.71%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	251	1682	179	154	1634	256	339	759	139	241	853	135	6622
PEAK HR FACTOR :		0.958			0.946			0.907			0.917		0.976

UTURNS

NB	SB	EB	WB
	3	2	
	7	7	
	3	1	
	3	3	
	5	5	
	8	10	
	4	7	
	4	5	
	7	4	
	4	1	
	3	2	
	0	6	
	9	8	
	9	8	
NB	SB	EB	WB
0	69	69	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-008 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Warner Ave			Warner Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 4	NR 0	SL 2	ST 4	SR 1	EL 2	ET 3	ER 0	WL 2	WT 3	WR 0	TOTAL
4:00 PM	65	534	43	38	442	73	112	208	45	46	246	52	1904
4:15 PM	77	524	24	44	494	102	76	156	32	42	239	39	1849
4:30 PM	62	517	50	66	430	67	78	246	11	56	296	44	1923
4:45 PM	86	559	47	57	447	77	79	225	22	37	292	36	1964
5:00 PM	61	516	51	49	407	83	108	272	34	67	258	30	1936
5:15 PM	67	600	46	48	420	62	91	232	39	62	311	65	2043
5:30 PM	84	588	47	48	458	101	105	296	34	41	272	59	2133
5:45 PM	102	499	35	33	379	89	98	276	37	70	348	56	2022
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	604	4337	343	383	3477	654	747	1911	254	421	2262	381	15774
APPROACH %'s :	11.43%	82.08%	6.49%	8.48%	77.03%	14.49%	25.65%	65.63%	8.72%	13.74%	73.83%	12.43%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	314	2203	179	178	1664	335	402	1076	144	240	1189	210	8134
PEAK HR FACTOR :		0.937			0.897			0.932			0.864		0.953

UTURNS			
NB	SB	EB	WB
	4	8	
	7	4	
	4	2	
	8	6	
	12	16	
	5	6	
	6	15	
	1	18	
NB	SB	EB	WB
0	47	75	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-009 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Slater Ave			Slater Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	16	289	7	24	364	42	30	126	35	18	59	19	1029
7:15 AM	18	378	3	40	345	32	40	150	24	9	70	15	1124
7:30 AM	21	331	12	58	445	48	26	170	37	13	108	24	1293
7:45 AM	28	367	9	57	545	48	41	160	40	16	118	28	1457
8:00 AM	30	361	7	39	492	52	42	178	49	23	99	31	1403
8:15 AM	34	349	9	38	392	24	50	156	59	16	70	17	1214
8:30 AM	22	339	11	40	512	23	28	120	43	13	52	27	1230
8:45 AM	38	314	6	32	436	24	34	139	50	16	77	24	1190
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	207	2728	64	328	3531	293	291	1199	337	124	653	185	9940
APPROACH %'s :	6.90%	90.96%	2.13%	7.90%	85.04%	7.06%	15.93%	65.63%	18.45%	12.89%	67.88%	19.23%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	113	1408	37	192	1874	172	159	664	185	68	395	100	5367
PEAK HR FACTOR :		0.964			0.861			0.937			0.869		0.921

UTURNS			
NB	SB	EB	WB
3	1		
2	8		
1	6		
4	7		
6	14		
4	8		
2	3		
7	13		
NB	SB	EB	WB
29	60	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-009 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Slater Ave			Slater Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
10:30 AM	30	360	16	40	405	24	24	84	44	16	51	24	1118
10:45 AM	34	381	17	31	385	36	31	69	41	24	53	20	1122
11:00 AM	37	366	13	35	384	34	35	73	37	23	49	26	1112
11:15 AM	47	423	15	26	405	50	42	76	52	22	76	25	1259
11:30 AM	33	380	19	29	407	38	35	73	38	17	74	15	1158
11:45 AM	32	391	23	30	402	47	44	105	50	19	96	30	1269
12:00 PM	43	414	24	34	450	48	43	105	48	19	61	31	1320
12:15 PM	52	367	18	45	281	43	41	84	36	23	89	29	1108
12:30 PM	47	421	25	31	393	43	42	81	51	21	73	23	1251
12:45 PM	34	427	19	44	450	41	48	91	47	23	75	27	1326
1:00 PM	37	376	19	42	429	46	52	83	41	22	90	28	1265
1:15 PM	28	391	22	59	442	45	35	80	33	25	105	26	1291
1:30 PM	42	403	15	36	449	43	37	109	44	23	100	26	1327
1:45 PM	35	429	20	34	465	39	46	80	49	24	109	30	1360
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	531	5529	265	516	5747	577	555	1193	611	301	1101	360	17286
APPROACH %'s :	8.40%	87.42%	4.19%	7.54%	84.02%	8.44%	23.53%	50.57%	25.90%	17.08%	62.49%	20.43%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	142	1599	76	171	1785	173	170	352	167	94	404	110	5243
PEAK HR FACTOR :		0.939			0.975			0.907			0.933		0.964

UTURNS	NB	SB	EB	WB
	2	10		
	4	6		
	8	11		
	5	12		
	6	6		
	4	7		
	6	11		
	8	8		
	8	2		
	7	9		
	7	10		
	5	13		
	6	6		
	3	14		
	NB	SB	EB	WB
	79	125	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-009 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Slater Ave			Slater Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	50	571	15	41	488	34	48	131	31	28	138	35	1610
4:15 PM	41	499	15	52	472	43	36	86	37	25	130	38	1474
4:30 PM	42	559	21	28	433	38	67	135	42	30	126	35	1556
4:45 PM	56	550	16	45	451	40	48	117	42	34	135	44	1578
5:00 PM	49	550	14	45	469	40	49	112	41	22	140	24	1555
5:15 PM	47	531	20	34	432	39	47	117	37	26	171	47	1548
5:30 PM	39	607	15	47	476	34	48	127	30	27	151	36	1637
5:45 PM	47	539	16	33	406	43	29	98	46	22	177	32	1488
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	371	4406	132	325	3627	311	372	923	306	214	1168	291	12446
APPROACH %'s :	7.56%	89.75%	2.69%	7.62%	85.08%	7.30%	23.24%	57.65%	19.11%	12.79%	69.81%	17.39%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	191	2238	65	171	1828	153	192	473	150	109	597	151	6318
PEAK HR FACTOR :		0.943			0.966			0.984			0.878		0.965

UTURNS	NB	SB	EB	WB
	3	13		
	4	5		
	4	1		
	7	13		
	5	11		
	6	6		
	2	8		
	4	10		
	NB	SB	EB	WB
	35	67	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-010 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Newman Ave			Newman Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	1	371	6	15	427	2	5	2	5	4	1	2	841
7:15 AM	3	332	14	18	349	2	5	3	4	8	3	9	750
7:30 AM	1	362	11	14	534	4	11	2	6	8	0	19	972
7:45 AM	7	350	13	35	573	4	9	1	5	11	2	16	1026
8:00 AM	4	381	17	38	536	5	2	0	7	12	0	14	1016
8:15 AM	5	380	20	29	522	2	5	1	7	8	0	18	997
8:30 AM	1	332	12	26	455	1	4	0	7	9	0	13	860
8:45 AM	4	331	20	28	433	4	6	4	7	14	0	14	865
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	26	2839	113	203	3829	24	47	13	48	74	6	105	7327
APPROACH %'s :	0.87%	95.33%	3.79%	5.00%	94.40%	0.59%	43.52%	12.04%	44.44%	40.00%	3.24%	56.76%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	17	1473	61	116	2165	15	27	4	25	39	2	67	4011
PEAK HR FACTOR :		0.957			0.938			0.737			0.931		0.977

UTURNS

NB	SB	EB	WB
	1		0
	9		0
	6		0
	9		0
	8		0
	4		0
	1		0
	6		1
NB	SB	EB	WB
0	44	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-010 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Newman Ave			Newman Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
10:30 AM	5	387	10	29	413	6	4	1	4	21	2	25	907
10:45 AM	3	367	17	28	454	4	4	0	5	28	0	36	946
11:00 AM	6	372	16	27	451	4	5	0	8	25	0	28	942
11:15 AM	2	450	21	13	471	4	4	0	2	15	0	34	1016
11:30 AM	4	396	17	20	456	6	8	0	8	18	0	26	959
11:45 AM	4	396	11	22	482	5	4	0	6	27	1	30	988
12:00 PM	6	430	18	18	539	4	4	1	3	31	1	42	1097
12:15 PM	0	421	7	8	506	1	3	0	3	34	0	28	1011
12:30 PM	3	455	15	24	476	5	5	1	3	19	2	31	1039
12:45 PM	3	457	16	18	525	8	4	1	4	22	0	21	1079
1:00 PM	4	396	18	19	485	5	5	0	5	20	0	17	974
1:15 PM	9	431	16	25	468	3	5	0	10	18	0	11	996
1:30 PM	8	433	13	20	491	6	7	0	6	16	0	21	1021
1:45 PM	3	426	34	18	509	4	5	1	2	29	4	28	1063
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	60	5817	229	289	6726	65	67	5	69	323	10	378	14038
APPROACH %'s :	0.98%	95.27%	3.75%	4.08%	95.00%	0.92%	47.52%	3.55%	48.94%	45.43%	1.41%	53.16%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	12	1763	56	68	2046	18	16	3	13	106	3	122	4226
PEAK HR FACTOR :		0.962			0.950			0.889			0.780		0.963

UTURNS

NB	SB	EB	WB
	5		
	6		
	6		
	2		
	6		
	5		
	7		
	2		
	4		
	5		
	6		
	8		
	7		
	2		
NB	SB	EB	WB
0	71	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-010 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Newman Ave			Newman Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	1	572	27	21	533	8	3	0	3	34	1	36	1239
4:15 PM	5	521	16	18	532	8	3	0	2	19	3	36	1163
4:30 PM	3	559	22	19	496	5	9	1	6	21	1	36	1178
4:45 PM	7	575	15	20	503	6	11	0	5	33	3	49	1227
5:00 PM	8	539	9	14	534	8	1	3	2	27	1	22	1168
5:15 PM	5	603	7	8	497	7	6	0	7	16	1	28	1185
5:30 PM	7	558	11	11	510	12	4	3	3	13	1	24	1157
5:45 PM	6	582	15	20	470	9	5	0	12	15	0	18	1152
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	42	4509	122	131	4075	63	42	7	40	178	11	249	9469
APPROACH %'s :	0.90%	96.49%	2.61%	3.07%	95.46%	1.48%	47.19%	7.87%	44.94%	40.64%	2.51%	56.85%	
PEAK HR START TIME :	400 PM												TOTAL
PEAK HR VOL :	16	2227	80	78	2064	27	26	1	16	107	8	157	4807
PEAK HR FACTOR :		0.968			0.965			0.672			0.800		0.970

UTURNS			
NB	SB	EB	WB
	5		
	4		
	9		
	7		
	6		
	6		
	5		
	2		
NB	SB	EB	WB
0	44	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-011 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Talbert Ave			Talbert Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	18	321	28	60	310	25	18	61	16	19	44	26	946
7:15 AM	15	296	22	58	335	23	25	96	9	26	51	20	976
7:30 AM	32	340	38	81	361	28	17	86	22	20	56	37	1118
7:45 AM	30	332	30	79	469	34	23	97	30	38	75	26	1263
8:00 AM	35	388	31	66	356	38	23	97	39	38	101	41	1253
8:15 AM	25	320	36	83	366	28	20	96	25	31	63	36	1129
8:30 AM	32	300	40	78	339	30	25	88	33	33	71	20	1089
8:45 AM	48	299	28	69	336	36	20	53	27	28	76	34	1054
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	235	2596	253	574	2872	242	171	674	201	233	537	240	8828
APPROACH %'s :	7.62%	84.18%	8.20%	15.56%	77.87%	6.56%	16.35%	64.44%	19.22%	23.07%	53.17%	23.76%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	122	1380	135	309	1552	128	83	376	116	127	295	140	4763
PEAK HR FACTOR :		0.901			0.854			0.904			0.781		0.943

UTURNS			
NB	SB	EB	WB
2	1	0	0
6	1	0	1
14	0	0	0
8	0	1	0
11	0	0	0
9	2	0	0
13	0	1	0
14	6	0	0
NB	SB	EB	WB
77	10	2	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-011 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Talbert Ave			Talbert Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
10:30 AM	37	346	45	39	326	34	28	67	28	39	53	49	1091
10:45 AM	33	316	40	65	352	37	31	57	31	36	70	54	1122
11:00 AM	25	364	46	63	426	46	32	73	33	50	61	44	1263
11:15 AM	44	368	34	62	366	30	27	59	34	31	43	45	1143
11:30 AM	51	323	32	58	396	40	36	65	41	55	76	45	1218
11:45 AM	44	335	46	70	442	36	35	94	31	50	76	33	1292
12:00 PM	55	356	49	82	483	40	34	116	49	50	98	43	1455
12:15 PM	50	348	38	62	430	31	32	66	33	46	84	50	1270
12:30 PM	53	358	40	66	450	37	38	81	45	42	73	60	1343
12:45 PM	40	391	55	66	455	44	28	79	30	53	78	71	1390
1:00 PM	47	371	51	66	416	34	35	72	35	60	88	46	1321
1:15 PM	49	378	46	63	407	27	41	53	31	51	71	62	1279
1:30 PM	56	408	49	62	404	32	39	63	30	57	98	52	1350
1:45 PM	40	388	35	61	420	28	30	70	37	51	77	62	1299
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	624	5050	606	885	5773	496	466	1015	488	671	1046	716	17836
APPROACH %'s :	9.94%	80.41%	9.65%	12.37%	80.70%	6.93%	23.67%	51.55%	24.78%	27.58%	42.99%	29.43%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	198	1453	182	276	1818	152	132	342	157	191	333	224	5458
PEAK HR FACTOR :		0.943			0.928			0.793			0.926		0.938

UTURNS			
NB	SB	EB	WB
14	4	0	0
10	16	0	3
8	4	0	1
18	4	0	0
16	7	1	2
20	3	0	2
19	3	1	2
13	4	1	1
25	4	1	1
16	4	0	2
19	1	1	7
27	8	0	1
25	3	0	4
15	6	0	0
NB	SB	EB	WB
245	71	5	26

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-011 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Talbert Ave			Talbert Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 4	NR 0	SL 1	ST 4	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	44	497	43	62	470	25	32	98	29	47	109	53	1509
4:15 PM	42	438	39	56	444	26	26	74	38	58	138	73	1452
4:30 PM	37	513	53	45	458	33	40	77	31	40	111	80	1518
4:45 PM	37	472	30	86	460	38	29	96	40	50	109	61	1508
5:00 PM	39	474	43	56	461	25	39	105	34	55	111	61	1503
5:15 PM	44	497	49	66	482	28	29	95	36	49	148	75	1598
5:30 PM	42	508	47	62	438	18	24	67	43	52	130	68	1499
5:45 PM	46	506	38	69	439	25	15	64	41	50	84	62	1439
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	331	3905	342	502	3652	218	234	676	292	401	940	533	12026
APPROACH %'s :	7.23%	85.30%	7.47%	11.48%	83.53%	4.99%	19.47%	56.24%	24.29%	21.40%	50.16%	28.44%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	157	1956	175	253	1861	124	137	373	141	194	479	277	6127
PEAK HR FACTOR :		0.949			0.958			0.914			0.873		0.959

UTURNS			
NB	SB	EB	WB
13	4	0	2
10	4	0	1
13	2	0	1
11	8	0	1
12	1	0	1
11	2	0	1
14	4	0	0
19	4	1	1
NB	SB	EB	WB
103	29	1	8

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-012 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Main St/Ellis Ave			Main St/Ellis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 4	NR 0	SL 2	ST 3	SR 1	EL 2	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
7:00 AM	17	251	39	33	234	74	62	99	10	20	45	17	901
7:15 AM	18	283	41	34	224	67	56	88	8	23	62	28	932
7:30 AM	24	265	27	53	269	81	71	122	32	14	69	29	1056
7:45 AM	16	310	32	53	361	117	53	96	26	23	94	36	1217
8:00 AM	30	314	37	43	289	98	77	112	19	25	96	38	1178
8:15 AM	23	273	36	56	306	81	75	99	22	26	82	30	1109
8:30 AM	36	319	36	32	303	73	77	78	31	20	58	27	1090
8:45 AM	28	214	18	31	298	82	74	97	22	38	101	38	1041
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	192	2229	266	335	2284	673	545	791	170	189	607	243	8524
APPROACH %'s :	7.15%	82.95%	9.90%	10.18%	69.38%	20.44%	36.19%	52.52%	11.29%	18.19%	58.42%	23.39%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	105	1216	141	184	1259	369	282	385	98	94	330	131	4594
PEAK HR FACTOR :		0.935			0.853			0.919			0.873		0.944

UTURNS

	NB	SB	EB	WB
7:00 AM	1	7		
7:15 AM	2	6		
7:30 AM	0	10		
7:45 AM	0	9		
8:00 AM	4	6		
8:15 AM	2	10		
8:30 AM	5	5		
8:45 AM	2	4		
TOTAL	16	57	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-012 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Main St/Ellis Ave			Main St/Ellis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 4	NR 0	SL 2	ST 3	SR 1	EL 2	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
10:30 AM	30	267	20	42	273	98	89	93	21	19	80	25	1057
10:45 AM	25	300	22	38	263	98	92	70	20	28	88	24	1068
11:00 AM	39	259	29	51	344	122	92	76	18	16	68	25	1139
11:15 AM	45	317	30	59	283	98	98	78	26	20	85	39	1178
11:30 AM	28	251	22	55	331	100	94	84	29	34	85	31	1144
11:45 AM	34	332	22	45	338	105	83	62	15	26	74	25	1161
12:00 PM	40	293	22	75	369	124	97	62	34	30	75	39	1260
12:15 PM	29	311	30	66	329	121	81	88	32	27	65	22	1201
12:30 PM	40	306	46	57	364	125	99	81	35	29	81	40	1303
12:45 PM	36	359	28	76	344	119	86	77	23	28	78	42	1296
1:00 PM	38	291	34	64	352	109	117	76	34	22	83	40	1260
1:15 PM	40	320	32	58	318	124	88	90	31	29	92	34	1256
1:30 PM	37	284	27	66	314	121	110	89	37	24	91	30	1230
1:45 PM	29	327	11	42	394	72	78	91	21	25	82	25	1197
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	490	4217	375	794	4616	1536	1304	1117	376	357	1127	441	16750
APPROACH %'s :	9.64%	82.98%	7.38%	11.43%	66.46%	22.11%	46.62%	39.94%	13.44%	18.55%	58.55%	22.91%	
PEAK HR START TIME :	1230 PM												TOTAL
PEAK HR VOL :	154	1276	140	255	1378	477	390	324	123	108	334	156	5115
PEAK HR FACTOR :		0.928			0.966			0.922			0.965		0.981

UTURNS

	NB	SB	EB	WB
10:30 AM	1	12	0	
10:45 AM	5	12	0	
11:00 AM	2	14	0	
11:15 AM	7	15	1	
11:30 AM	3	16	0	
11:45 AM	4	10	0	
12:00 PM	4	24	0	
12:15 PM	1	18	0	
12:30 PM	2	18	0	
12:45 PM	4	19	0	
1:00 PM	1	19	0	
1:15 PM	4	20	0	
1:30 PM	3	19	0	
1:45 PM	0	11	0	
TOTAL	41	227	1	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-012 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Main St/Ellis Ave			Main St/Ellis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 4	NR 0	SL 2	ST 3	SR 1	EL 2	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
4:00 PM	41	377	37	62	309	112	105	78	24	27	116	32	1320
4:15 PM	15	454	16	39	416	81	56	48	17	21	62	12	1237
4:30 PM	31	414	16	51	370	74	101	106	25	27	117	26	1358
4:45 PM	49	375	12	67	418	80	70	78	10	24	110	24	1317
5:00 PM	54	398	48	58	351	140	100	117	27	33	110	38	1474
5:15 PM	30	433	29	70	375	127	95	103	22	37	118	26	1465
5:30 PM	40	420	42	63	346	105	120	103	20	26	125	35	1445
5:45 PM	43	366	30	61	385	109	81	105	33	41	128	28	1410
TOTAL VOLUMES :	NL 303	NT 3237	NR 230	SL 471	ST 2970	SR 828	EL 728	ET 738	ER 178	WL 236	WT 886	WR 221	TOTAL 11026
APPROACH %'s :	8.04%	85.86%	6.10%	11.03%	69.57%	19.40%	44.28%	44.89%	10.83%	17.57%	65.97%	16.46%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	167	1617	149	252	1457	481	396	428	102	137	481	127	5794
PEAK HR FACTOR :		0.963			0.957			0.949			0.945		0.983

UTURNS	NB	SB	EB	WB
4:00 PM	4	21		0
4:15 PM	1	11		1
4:30 PM	2	13		0
4:45 PM	1	14		0
5:00 PM	6	12		0
5:15 PM	2	20		0
5:30 PM	2	19		0
5:45 PM	5	17		0
TOTAL VOLUMES :	NB 23	SB 127	EB 0	WB 1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-013 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Garfield Ave			Garfield Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	19	227	19	27	206	17	41	78	21	11	46	24	736
7:15 AM	13	221	11	29	186	4	40	114	35	14	48	32	747
7:30 AM	31	248	13	34	264	13	48	156	46	20	85	35	993
7:45 AM	35	250	21	43	300	31	48	158	41	20	92	30	1069
8:00 AM	25	316	15	24	287	21	45	160	52	33	102	34	1114
8:15 AM	21	250	20	42	272	29	44	146	44	30	75	39	1012
8:30 AM	38	265	22	30	268	23	45	142	44	30	64	35	1006
8:45 AM	34	216	26	37	306	27	48	126	27	24	77	43	991
TOTAL VOLUMES :	NL 216	NT 1993	NR 147	SL 266	ST 2089	SR 165	EL 359	ET 1080	ER 310	WL 182	WT 589	WR 272	TOTAL 7668
APPROACH %'s :	9.17%	84.59%	6.24%	10.56%	82.90%	6.55%	20.53%	61.75%	17.72%	17.45%	56.47%	26.08%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	119	1081	78	139	1127	104	182	606	181	113	333	138	4201
PEAK HR FACTOR :		0.897			0.916			0.943			0.864		0.943

UTURNS	NB	SB	EB	WB
7:00 AM	2	7		0
7:15 AM	4	7		0
7:30 AM	4	7		0
7:45 AM	4	11		0
8:00 AM	11	5		1
8:15 AM	5	13		0
8:30 AM	10	10		0
8:45 AM	7	12		0
TOTAL VOLUMES :	NB 47	SB 72	EB 0	WB 1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-013 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Garfield Ave			Garfield Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
10:30 AM	40	244	23	41	246	23	45	98	23	24	67	31	905	18	13	0	0
10:45 AM	33	262	16	43	258	20	32	78	33	37	66	29	907	13	18	0	0
11:00 AM	36	250	17	34	292	23	48	78	24	31	56	35	924	14	10	0	0
11:15 AM	54	282	14	49	289	31	36	91	26	44	98	36	1050	15	21	0	0
11:30 AM	39	234	18	54	278	39	39	108	28	42	81	34	994	13	18	0	0
11:45 AM	51	297	20	54	301	36	41	98	29	35	88	40	1090	17	17	0	0
12:00 PM	40	287	26	56	319	44	48	107	26	35	70	33	1091	15	14	0	0
12:15 PM	31	259	21	52	331	68	43	95	32	31	89	39	1091	8	17	0	0
12:30 PM	53	314	25	55	312	49	43	99	37	31	75	26	1119	19	21	0	0
12:45 PM	49	296	26	60	307	49	51	72	31	31	81	42	1095	15	12	0	0
1:00 PM	41	281	26	47	295	46	48	88	31	30	103	31	1067	10	13	0	0
1:15 PM	34	268	24	38	321	45	46	89	37	42	93	43	1080	11	12	0	0
1:30 PM	46	266	24	39	316	37	57	94	36	26	74	35	1050	15	14	0	0
1:45 PM	38	290	20	42	322	56	39	82	40	33	75	38	1075	11	17	0	0
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	585	3830	300	664	4187	566	616	1277	433	472	1116	492	14538	194	217	0	0
APPROACH %'s :	12.41%	81.23%	6.36%	12.26%	77.29%	10.45%	26.48%	54.90%	18.62%	22.69%	53.65%	23.65%					
PEAK HR START TIME :	1200 PM												TOTAL				
PEAK HR VOL :	173	1156	98	223	1269	210	185	373	126	128	315	140	4396				
PEAK HR FACTOR :		0.910			0.943			0.945			0.917		0.982				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-013 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Garfield Ave			Garfield Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
4:00 PM	54	380	28	34	310	35	47	109	32	22	83	20	1154	14	16		
4:15 PM	52	360	17	48	317	41	63	116	36	37	103	25	1215	12	21		
4:30 PM	40	354	21	46	367	43	47	134	28	27	80	25	1212	13	17		
4:45 PM	59	366	23	41	341	41	42	121	39	38	114	27	1252	15	15		
5:00 PM	52	371	35	52	346	37	46	135	38	40	84	33	1269	8	16		
5:15 PM	56	422	14	48	346	40	53	111	29	35	108	36	1298	14	21		
5:30 PM	51	346	26	50	314	39	50	103	21	29	117	39	1185	14	19		
5:45 PM	49	395	25	47	349	33	38	105	34	30	108	38	1251	6	12		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	413	2994	189	366	2690	309	386	934	257	258	797	243	9836	96	137	0	0
APPROACH %'s :	11.48%	83.26%	5.26%	10.88%	79.94%	9.18%	24.48%	59.23%	16.30%	19.88%	61.40%	18.72%					
PEAK HR START TIME :	430 PM												TOTAL				
PEAK HR VOL :	207	1513	93	187	1400	161	188	501	134	140	386	121	5031				
PEAK HR FACTOR :		0.921			0.958			0.939			0.904		0.969				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-014 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Yorktown Ave			Yorktown Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	18	184	14	9	177	22	35	64	33	12	80	16	664
7:15 AM	9	215	12	14	237	16	39	79	28	7	54	22	732
7:30 AM	22	193	9	17	280	24	42	98	28	16	74	18	821
7:45 AM	22	267	25	27	276	29	36	137	42	24	130	28	1043
8:00 AM	9	229	26	29	319	29	41	113	46	37	136	40	1054
8:15 AM	22	246	8	14	297	23	40	127	54	29	80	20	960
8:30 AM	24	237	18	26	313	19	38	90	50	35	70	27	947
8:45 AM	30	261	30	19	301	25	32	62	52	22	64	14	912
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	156	1832	142	155	2200	187	303	770	333	182	688	185	7133
APPROACH %'s :	7.32%	86.01%	6.67%	6.10%	86.55%	7.36%	21.55%	54.77%	23.68%	17.25%	65.21%	17.54%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	77	979	77	96	1205	100	155	467	192	125	416	115	4004
PEAK HR FACTOR :		0.902			0.929			0.921			0.770		0.950

UTURNS			
NB	SB	EB	WB
1	2		
0	1		
1	2		
3	2		
0	3		
4	2		
2	2		
2	3		
NB	SB	EB	WB
13	17	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-014 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Yorktown Ave			Yorktown Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
4:00 PM	41	355	38	27	300	28	31	76	37	25	70	21	1049
4:15 PM	39	375	28	32	345	34	25	91	33	35	87	26	1150
4:30 PM	49	410	45	29	318	38	30	95	29	24	68	30	1165
4:45 PM	43	331	33	37	356	32	31	96	38	37	90	25	1149
5:00 PM	66	408	46	30	309	32	39	111	44	29	93	38	1245
5:15 PM	44	381	37	33	409	41	33	100	34	24	100	35	1271
5:30 PM	58	398	32	30	285	33	45	104	33	27	94	18	1157
5:45 PM	37	374	31	35	316	39	42	85	32	22	89	21	1123
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	377	3032	290	253	2638	277	276	758	280	223	691	214	9309
APPROACH %'s :	10.19%	81.97%	7.84%	7.99%	83.27%	8.74%	21.00%	57.69%	21.31%	19.77%	61.26%	18.97%	
PEAK HR START TIME :	430 PM												TOTAL
PEAK HR VOL :	202	1530	161	129	1392	143	133	402	145	114	351	128	4830
PEAK HR FACTOR :		0.910			0.861			0.876			0.927		0.950

UTURNS			
NB	SB	EB	WB
10	4		
7	6		
8	8		
5	13		
13	7		
6	9		
6	6		
5	8		
NB	SB	EB	WB
60	61	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-014 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Yorktown Ave			Yorktown Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 0	TOTAL
10:30 AM	28	263	21	14	244	16	27	52	32	21	43	18	779
10:45 AM	37	262	28	27	246	20	34	47	37	24	42	17	821
11:00 AM	34	266	24	22	272	22	24	50	26	12	49	28	829
11:15 AM	33	275	34	21	296	22	29	59	37	16	48	25	895
11:30 AM	32	262	31	30	297	29	33	69	32	21	56	16	908
11:45 AM	42	265	33	27	292	35	38	77	30	30	56	26	951
12:00 PM	27	259	36	29	299	32	40	65	44	23	74	36	964
12:15 PM	35	266	21	26	306	38	36	54	34	24	58	18	916
12:30 PM	40	311	24	34	305	35	41	68	27	18	67	14	984
12:45 PM	33	276	30	29	288	31	27	72	37	19	67	20	929
1:00 PM	51	299	31	25	273	35	21	70	50	22	80	37	994
1:15 PM	42	286	29	30	335	37	33	77	32	27	69	32	1029
1:30 PM	27	264	36	25	301	20	32	60	45	32	82	12	936
1:45 PM	44	270	22	24	350	24	31	64	35	26	75	14	979
TOTAL VOLUMES :	NL 505	NT 3824	NR 400	SL 363	ST 4104	SR 396	EL 446	ET 884	ER 498	WL 315	WT 866	WR 313	TOTAL 12914
APPROACH %'s :	10.68%	80.86%	8.46%	7.46%	84.39%	8.14%	24.40%	48.36%	27.24%	21.08%	57.97%	20.95%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	164	1119	118	104	1259	116	117	271	162	107	306	95	3938
PEAK HR FACTOR :		0.919			0.920			0.968			0.914		0.957

UTURNS	NB	SB	EB	WB
	2	3		
	4	9		
	7	7		
	2	2		
	7	5		
	7	1		
	6	4		
	7	3		
	4	4		
	5	6		
	6	5		
	3	7		
	1	6		
	6	4		
	NB 67	SB 66	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-015 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Utica Ave			Utica Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
7:00 AM	5	199	6	2	198	5	13	0	11	4	2	4	449
7:15 AM	8	208	10	10	224	7	19	5	13	14	1	3	522
7:30 AM	9	292	6	5	268	15	14	1	16	13	0	5	644
7:45 AM	9	206	6	9	306	29	25	11	16	9	1	10	637
8:00 AM	7	240	7	10	290	16	18	2	21	9	2	9	631
8:15 AM	8	250	7	13	312	18	9	5	24	5	1	10	662
8:30 AM	8	250	7	13	312	18	9	5	24	5	1	10	662
8:45 AM	8	288	22	17	286	18	6	8	10	8	5	18	694
TOTAL VOLUMES :	NL 62	NT 1933	NR 71	SL 79	ST 2196	SR 126	EL 113	ET 37	ER 135	WL 67	WT 13	WR 69	TOTAL 4901
APPROACH %'s :	3.00%	93.56%	3.44%	3.29%	91.46%	5.25%	39.65%	12.98%	47.37%	44.97%	8.72%	46.31%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	31	1028	43	53	1200	70	42	20	79	27	9	47	2649
PEAK HR FACTOR :		0.866			0.964			0.860			0.669		0.954

UTURNS	NB	SB	EB	WB
	1	0		
	3	1		
	2	0		
	0	1		
	0	2		
	1	1		
	1	1		
	2	2		
	NB 10	SB 8	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-015 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Utica Ave			Utica Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
10:30 AM	5	250	17	27	219	11	14	9	8	29	5	21	615
10:45 AM	9	259	14	37	246	8	4	6	7	19	5	27	641
11:00 AM	14	254	10	26	224	12	9	9	12	24	10	25	629
11:15 AM	9	272	18	30	285	13	10	4	7	33	7	23	711
11:30 AM	9	242	13	41	262	13	6	2	4	27	2	31	652
11:45 AM	15	246	23	31	282	19	9	2	13	19	7	28	694
12:00 PM	9	251	21	37	315	13	22	9	15	47	7	30	776
12:15 PM	5	244	21	33	282	11	4	3	9	37	5	29	683
12:30 PM	14	270	11	35	283	12	12	1	6	24	8	35	711
12:45 PM	10	241	27	33	268	12	6	6	9	33	8	38	691
1:00 PM	7	292	16	39	256	10	4	5	6	31	5	49	720
1:15 PM	13	282	23	19	302	15	4	2	8	45	5	37	755
1:30 PM	11	268	19	30	301	14	8	8	12	34	4	31	740
1:45 PM	20	265	21	29	283	12	12	3	9	43	13	26	736
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	150	3636	254	447	3808	175	124	69	125	445	91	430	9754
APPROACH %'s :	3.71%	90.00%	6.29%	10.09%	85.96%	3.95%	38.99%	21.70%	39.31%	46.07%	9.42%	44.51%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	51	1107	79	117	1142	51	28	18	35	153	27	143	2951
PEAK HR FACTOR :		0.972			0.949			0.723			0.928		0.977

UTURNS			
NB	SB	EB	WB
5	6		
7	4		
7	5		
7	10		
4	11		
4	10		
1	5		
3	7		
7	12		
4	4		
3	7		
6	2		
8	5		
8	4		
NB	SB	EB	WB
74	92	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-015 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Utica Ave			Utica Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 0	ET 1	ER 0	WL 0	WT 1	WR 0	TOTAL
4:00 PM	10	340	20	34	265	12	14	14	8	40	11	32	800
4:15 PM	8	378	15	24	336	22	7	11	9	29	9	23	871
4:30 PM	23	374	11	26	277	18	8	13	10	34	9	30	833
4:45 PM	10	322	19	29	371	23	13	2	15	30	7	20	861
5:00 PM	14	391	19	37	316	26	9	6	16	34	8	28	904
5:15 PM	19	349	24	27	364	24	14	6	9	39	6	24	905
5:30 PM	22	413	22	22	315	18	4	4	15	41	8	20	904
5:45 PM	16	360	22	22	296	17	14	8	5	33	13	23	829
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	122	2927	152	221	2540	160	83	64	87	280	71	200	6907
APPROACH %'s :	3.81%	91.44%	4.75%	7.57%	86.96%	5.48%	35.47%	27.35%	37.18%	50.82%	12.89%	36.30%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	65	1475	84	115	1366	91	40	18	55	144	29	92	3574
PEAK HR FACTOR :		0.888			0.929			0.911			0.946		0.987

UTURNS			
NB	SB	EB	WB
6	4		
4	4		
6	4		
6	6		
7	19		
12	10		
6	2		
7	4		
NB	SB	EB	WB
54	53	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-016 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Adams Ave			Adams Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 2	ST 3	SR 0	EL 1	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
7:00 AM	14	159	40	51	147	9	20	136	11	8	58	37	690
7:15 AM	10	137	48	51	163	15	54	201	9	10	54	44	796
7:30 AM	13	165	48	96	213	24	32	184	11	21	57	48	912
7:45 AM	21	200	47	74	175	24	28	184	12	28	116	57	966
8:00 AM	19	169	43	84	219	32	26	155	29	33	106	52	967
8:15 AM	21	174	43	78	188	27	29	220	16	33	94	46	969
8:30 AM	25	204	40	84	233	11	30	168	35	23	93	60	1006
8:45 AM	45	226	48	78	179	13	29	158	16	28	89	52	961
TOTAL VOLUMES :	NL 168	NT 1434	NR 357	SL 596	ST 1517	SR 155	EL 248	ET 1406	ER 139	WL 184	WT 667	WR 396	TOTAL 7267
APPROACH %'s :	8.58%	73.20%	18.22%	26.28%	66.89%	6.83%	13.83%	78.42%	7.75%	14.76%	53.49%	31.76%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	86	747	173	320	815	94	113	727	92	117	409	215	3908
PEAK HR FACTOR :		0.935			0.917			0.879			0.922		0.971

UTURNS

	NB	SB	EB	WB
7:00 AM	0	0	2	3
7:15 AM	1	0	8	2
7:30 AM	0	1	2	1
7:45 AM	2	2	2	7
8:00 AM	6	0	3	8
8:15 AM	3	0	2	7
8:30 AM	2	0	1	5
8:45 AM	4	0	4	3
TOTAL	NB 18	SB 3	EB 24	WB 36

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-016 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Adams Ave			Adams Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 2	ST 3	SR 0	EL 1	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
10:30 AM	12	200	33	67	187	18	27	76	9	27	76	49	781
10:45 AM	15	192	21	56	153	24	35	98	7	30	78	51	760
11:00 AM	10	172	20	56	175	31	48	91	6	32	82	64	787
11:15 AM	14	194	19	69	224	17	34	82	8	23	85	65	834
11:30 AM	16	188	30	56	205	33	30	90	9	51	85	52	845
11:45 AM	12	190	24	61	210	27	37	90	17	38	92	56	854
12:00 PM	19	187	23	74	264	24	35	94	25	34	79	52	910
12:15 PM	16	182	33	55	230	32	36	85	16	47	108	52	892
12:30 PM	20	226	34	73	215	32	41	93	16	51	105	55	961
12:45 PM	20	160	28	74	181	28	37	93	20	44	113	57	855
1:00 PM	25	203	23	59	198	35	31	82	7	51	107	73	894
1:15 PM	22	217	28	69	240	36	46	105	13	36	107	59	978
1:30 PM	18	167	26	54	253	32	55	102	23	44	105	62	941
1:45 PM	20	198	20	54	233	31	47	96	20	39	96	60	914
TOTAL VOLUMES :	NL 239	NT 2676	NR 362	SL 877	ST 2968	SR 400	EL 539	ET 1277	ER 196	WL 547	WT 1318	WR 807	TOTAL 12206
APPROACH %'s :	7.29%	81.66%	11.05%	20.66%	69.92%	9.42%	26.79%	63.47%	9.74%	20.47%	49.33%	30.20%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	85	785	97	236	924	134	179	385	63	170	415	254	3727
PEAK HR FACTOR :		0.905			0.938			0.871			0.908		0.953

UTURNS

	NB	SB	EB	WB
10:30 AM	0	1	3	7
10:45 AM	2	3	4	8
11:00 AM	0	2	3	8
11:15 AM	0	0	3	5
11:30 AM	2	1	4	14
11:45 AM	2	1	7	14
12:00 PM	4	1	1	4
12:15 PM	1	3	3	8
12:30 PM	3	1	4	18
12:45 PM	6	2	3	6
1:00 PM	2	1	5	7
1:15 PM	2	2	4	5
1:30 PM	1	0	9	6
1:45 PM	1	0	3	10
TOTAL	NB 26	SB 18	EB 56	WB 120

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-016 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Adams Ave			Adams Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 2	ST 3	SR 0	EL 1	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
4:00 PM	27	266	28	60	211	27	33	104	14	44	140	65	1019
4:15 PM	25	301	23	80	287	32	30	89	18	48	161	77	1171
4:30 PM	35	253	38	67	217	29	43	116	12	62	191	88	1151
4:45 PM	35	231	32	83	274	41	39	108	17	53	158	72	1143
5:00 PM	38	293	25	79	254	36	40	110	19	49	160	81	1184
5:15 PM	35	239	23	75	281	41	41	108	12	47	235	84	1221
5:30 PM	25	315	23	69	290	29	34	135	17	41	200	103	1281
5:45 PM	31	248	29	65	218	46	41	102	11	50	233	71	1145
TOTAL VOLUMES :	NL 251	NT 2146	NR 221	SL 578	ST 2032	SR 281	EL 301	ET 872	ER 120	WL 394	WT 1478	WR 641	TOTAL 9315
APPROACH %'s :	9.59%	81.97%	8.44%	19.99%	70.29%	9.72%	23.28%	67.44%	9.28%	15.68%	58.81%	25.51%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	129	1095	100	288	1043	152	156	455	59	187	828	339	4831
PEAK HR FACTOR :		0.912			0.934			0.901			0.925		0.943

UTURNS	NB	SB	EB	WB
4:00 PM	6	1	4	16
4:15 PM	2	0	6	7
4:30 PM	0	1	8	16
4:45 PM	2	1	3	7
5:00 PM	3	0	11	12
5:15 PM	0	1	5	8
5:30 PM	3	0	5	10
5:45 PM	0	2	3	7
TOTAL	NB 16	SB 6	EB 45	WB 83

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-017 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Indianapolis Ave			Indianapolis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
7:00 AM	3	115	7	19	161	8	27	19	9	2	8	15	393
7:15 AM	4	115	8	26	156	6	23	21	7	3	10	31	410
7:30 AM	2	126	12	42	211	4	25	64	12	7	23	39	567
7:45 AM	6	188	11	43	205	4	30	36	12	3	28	49	615
8:00 AM	4	160	14	42	226	13	21	41	16	7	34	33	611
8:15 AM	4	148	15	62	194	8	27	63	13	7	19	45	605
8:30 AM	2	175	26	86	215	11	26	72	10	7	25	52	707
8:45 AM	5	177	5	31	206	9	30	28	10	6	36	90	633
TOTAL VOLUMES :	NL 30	NT 1204	NR 98	SL 351	ST 1574	SR 63	EL 209	ET 344	ER 89	WL 42	WT 183	WR 354	TOTAL 4541
APPROACH %'s :	2.25%	90.39%	7.36%	17.66%	79.18%	3.17%	32.55%	53.58%	13.86%	7.25%	31.61%	61.14%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	15	660	60	221	841	41	104	204	49	27	114	220	2556
PEAK HR FACTOR :		0.905			0.884			0.826			0.684		0.904

UTURNS	NB	SB	EB	WB
7:00 AM	0	6		
7:15 AM	0	3		
7:30 AM	0	8		
7:45 AM	2	15		
8:00 AM	0	9		
8:15 AM	0	9		
8:30 AM	0	9		
8:45 AM	0	9		
TOTAL	NB 2	SB 68	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-017 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Indianapolis Ave			Indianapolis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
10:30 AM	1	187	7	28	170	13	22	22	9	7	13	30	509
10:45 AM	9	174	5	30	154	9	22	23	12	7	12	34	491
11:00 AM	3	163	6	12	178	8	5	14	4	6	14	26	439
11:15 AM	5	167	5	28	202	7	20	16	7	10	19	26	512
11:30 AM	7	193	7	42	206	8	20	11	8	2	13	24	541
11:45 AM	5	170	6	39	192	10	14	20	6	7	15	35	519
12:00 PM	5	162	5	45	252	14	13	27	9	8	14	30	594
12:15 PM	4	189	7	55	211	12	19	18	10	6	21	33	585
12:30 PM	5	203	7	28	214	18	22	27	6	6	34	48	618
12:45 PM	9	171	3	41	208	11	15	25	6	7	17	22	535
1:00 PM	5	192	11	51	192	11	26	20	2	10	19	39	578
1:15 PM	6	186	13	44	225	13	21	34	6	4	22	36	610
1:30 PM	5	187	13	67	236	12	14	42	7	5	28	31	647
1:45 PM	9	196	9	53	219	12	11	24	13	6	38	61	651
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	78	2540	104	563	2859	158	244	323	105	91	279	475	7819
APPROACH %'s :	2.87%	93.31%	3.82%	15.73%	79.86%	4.41%	36.31%	48.07%	15.63%	10.77%	33.02%	56.21%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	25	761	46	215	872	48	72	120	28	25	107	167	2486
PEAK HR FACTOR :		0.972			0.901			0.873			0.712		0.955

UTURNS			
NB	SB	EB	WB
0	8		
0	9		
0	4		
0	9		
0	17		
1	16		
0	15		
1	17		
0	10		
0	9		
0	17		
0	7		
1	12		
0	8		
NB	SB	EB	WB
3	158	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-017 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Indianapolis Ave			Indianapolis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
4:00 PM	8	265	9	30	203	8	24	22	4	6	31	26	636
4:15 PM	11	310	6	34	227	16	21	24	10	4	19	31	713
4:30 PM	9	303	6	45	232	19	14	27	3	3	33	20	714
4:45 PM	5	279	5	43	218	24	15	21	11	4	26	32	683
5:00 PM	10	293	7	43	251	18	17	27	10	6	32	42	756
5:15 PM	7	290	8	41	237	17	20	26	10	8	29	31	724
5:30 PM	7	274	11	38	238	16	17	34	6	12	35	46	734
5:45 PM	7	328	6	35	228	14	14	22	12	7	27	37	737
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	64	2342	58	309	1834	132	142	203	66	50	232	265	5697
APPROACH %'s :	2.60%	95.05%	2.35%	13.58%	80.62%	5.80%	34.55%	49.39%	16.06%	9.14%	42.41%	48.45%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	31	1185	32	157	954	65	68	109	38	33	123	156	2951
PEAK HR FACTOR :		0.915			0.942			0.943			0.839		0.976

UTURNS			
NB	SB	EB	WB
1	5		
0	8		
0	11		
0	6		
0	6		
0	8		
0	2		
0	8		
NB	SB	EB	WB
1	54	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-018 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	2	58	10	40	111	18	12	57	11	5	36	31	391
7:15 AM	7	70	19	38	104	24	28	81	9	9	51	31	471
7:30 AM	7	78	18	65	156	17	20	95	9	13	58	34	570
7:45 AM	3	110	13	62	121	21	21	84	6	8	69	47	565
8:00 AM	12	101	18	65	161	36	23	87	8	10	61	42	624
8:15 AM	6	74	16	75	139	21	21	111	14	14	74	51	616
8:30 AM	12	80	13	63	141	33	32	109	13	13	90	82	681
8:45 AM	9	85	17	54	124	27	28	95	8	15	93	64	619
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	58	656	124	462	1057	197	185	719	78	87	532	382	4537
APPROACH %'s :	6.92%	78.28%	14.80%	26.92%	61.60%	11.48%	18.84%	73.22%	7.94%	8.69%	53.15%	38.16%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	39	340	64	257	565	117	104	402	43	52	318	239	2540
PEAK HR FACTOR :		0.845			0.896			0.891			0.823		0.932

UTURNS	NB	SB	EB	WB
	1	1		0
	0	0		1
	0	1		0
	1	0		0
	1	2		0
	0	1		0
	5	3		0
	0	2		0
	NB	SB	EB	WB
	8	10	0	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-018 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
10:30 AM	13	125	20	54	105	19	26	46	4	11	55	51	529
10:45 AM	14	100	14	55	100	22	25	56	14	12	43	47	502
11:00 AM	14	89	17	51	112	21	23	59	8	8	50	36	488
11:15 AM	16	91	9	52	148	23	27	50	10	12	50	38	526
11:30 AM	9	107	11	52	121	27	31	55	9	7	46	59	534
11:45 AM	14	111	17	57	119	32	22	67	5	5	54	48	551
12:00 PM	13	109	19	70	147	32	18	64	9	13	58	35	587
12:15 PM	20	118	23	64	137	26	20	65	8	11	49	46	587
12:30 PM	17	113	13	70	129	30	30	71	7	17	62	56	615
12:45 PM	21	96	19	69	102	29	20	63	4	5	65	61	554
1:00 PM	16	123	20	42	109	31	26	65	10	9	63	48	562
1:15 PM	12	109	10	55	129	29	21	57	10	14	57	52	555
1:30 PM	15	116	16	69	164	21	28	55	10	10	65	46	615
1:45 PM	13	146	18	50	133	29	21	67	9	12	69	61	628
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	207	1553	226	810	1755	371	338	840	117	146	786	684	7833
APPROACH %'s :	10.42%	78.20%	11.38%	27.59%	59.78%	12.64%	26.10%	64.86%	9.03%	9.03%	48.64%	42.33%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	56	494	64	216	535	110	96	244	39	45	254	207	2360
PEAK HR FACTOR :		0.867			0.847			0.938			0.891		0.939

UTURNS	NB	SB	EB	WB
	2	3	0	0
	3	1	0	0
	0	5	0	0
	1	1	1	0
	2	2	0	0
	1	1	1	0
	4	5	0	1
	4	1	0	0
	2	7	0	0
	3	1	0	0
	2	1	0	0
	3	0	0	0
	2	2	0	0
	2	3	0	0
	NB	SB	EB	WB
	31	33	2	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-018 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	11	197	25	67	126	33	38	77	9	9	55	56	703
4:15 PM	23	188	22	93	135	26	27	85	7	11	82	56	755
4:30 PM	22	241	29	63	123	42	32	63	12	12	65	44	748
4:45 PM	25	204	21	88	125	25	37	66	7	11	80	59	748
5:00 PM	20	221	17	98	129	28	31	81	7	12	84	51	779
5:15 PM	36	205	23	90	149	42	37	71	6	25	104	58	846
5:30 PM	37	229	22	95	134	34	25	69	12	15	115	52	839
5:45 PM	25	165	24	53	113	51	48	109	7	26	185	36	842
TOTAL VOLUMES :	NL 199	NT 1650	NR 183	SL 647	ST 1034	SR 281	EL 275	ET 621	ER 67	WL 121	WT 770	WR 412	TOTAL 6260
APPROACH %'s :	9.79%	81.20%	9.01%	32.98%	52.70%	14.32%	28.56%	64.49%	6.96%	9.29%	59.09%	31.62%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	118	820	86	336	525	155	141	330	32	78	488	197	3306
PEAK HR FACTOR :		0.889			0.904			0.767			0.772		0.977

UTURNS	NB	SB	EB	WB
	2	2	0	0
	2	1	0	0
	3	4	0	0
	4	5	0	1
	4	7	0	0
	2	2	0	0
	4	5	0	0
	2	4	1	0
	NB 23	SB 30	EB 1	WB 1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-019 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			Pacific View Ave			Pacific View Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 0	ER 1	WL 0	WT 0	WR 0	TOTAL
7:00 AM	1	39			135	6	4		14				199
7:15 AM	4	64			141	5	6		11				231
7:30 AM	6	66			163	18	3		6				262
7:45 AM	7	94			128	16	11		16				272
8:00 AM	4	87			159	12	10		8				280
8:15 AM	4	70			139	4	7		7				231
8:30 AM	7	67			174	7	9		7				271
8:45 AM	4	81			141	11	6		8				251
TOTAL VOLUMES :	NL 37	NT 568	NR 0	SL 0	ST 1180	SR 79	EL 56	ET 0	ER 77	WL 0	WT 0	WR 0	TOTAL 1997
APPROACH %'s :	6.12%	93.88%	0.00%	0.00%	93.73%	6.27%	42.11%	0.00%	57.89%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	22	318	0	0	600	39	37	0	38	0	0	0	1054
PEAK HR FACTOR :		0.842			0.883			0.694			0.000		0.941

UTURNS	NB	SB	EB	WB
	0	0		
	0	0		
	1	0		
	1	5		
	2	1		
	0	0		
	0	0		
	0	0		
	NB 4	SB 6	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-019 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			Pacific View Ave			Pacific View Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 0	ER 1	WL 0	WT 0	WR 0	TOTAL
10:30 AM	8	115			115	11	10		12				271
10:45 AM	4	99			122	12	15		10				262
11:00 AM	4	119			141	7	11		12				294
11:15 AM	4	106			140	12	10		5				277
11:30 AM	10	115			132	3	14		17				291
11:45 AM	8	109			114	9	12		6				258
12:00 PM	9	117			154	16	14		7				317
12:15 PM	9	120			114	10	14		10				277
12:30 PM	7	116			148	17	18		13				319
12:45 PM	6	86			133	9	13		13				260
1:00 PM	8	115			142	4	18		13				300
1:15 PM	8	122			180	8	12		9				339
1:30 PM	6	132			140	10	16		7				311
1:45 PM	15	135			131	16	19		9				325
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	106	1606	0	0	1906	144	196	0	143	0	0	0	4101
APPROACH %'s :	6.19%	93.81%	0.00%	0.00%	92.98%	7.02%	57.82%	0.00%	42.18%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	37	504	0	0	593	38	65	0	38	0	0	0	1275
PEAK HR FACTOR :		0.902			0.839			0.831			0.000		0.940

UTURNS			
NB	SB	EB	WB
0	4	1	
0	0	0	
1	0	0	
2	2	1	
4	0	0	
2	0	0	
0	1	3	
3	0	1	
3	0	0	
1	0	2	
1	0	1	
1	0	0	
1	0	0	
2	1	0	
NB	SB	EB	WB
21	8	9	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-019 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			Pacific View Ave			Pacific View Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 0	ER 1	WL 0	WT 0	WR 0	TOTAL
4:00 PM	10	200			109	5	18		11				353
4:15 PM	8	239			140	18	21		10				436
4:30 PM	12	209			116	17	47		10				411
4:45 PM	13	205			126	9	21		18				392
5:00 PM	10	230			123	11	24		13				411
5:15 PM	17	225			134	13	19		15				423
5:30 PM	12	250			130	13	18		11				434
5:45 PM	11	270			144	13	13		11				462
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	93	1828	0	0	1022	99	181	0	99	0	0	0	3322
APPROACH %'s :	4.84%	95.16%	0.00%	0.00%	91.17%	8.83%	64.64%	0.00%	35.36%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	50	975	0	0	531	50	74	0	50	0	0	0	1730
PEAK HR FACTOR :		0.912			0.925			0.838			0.000		0.936

UTURNS			
NB	SB	EB	WB
0	2	2	
2	1	0	
1	0	0	
3	1	0	
0	0	0	
2	3	1	
1	2	1	
0	2	1	
NB	SB	EB	WB
9	11	5	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-020 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Beach Blvd			Beach Blvd			PCH (SR-1)			PCH (SR-1)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 2	ST 1	SR 1	EL 2	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
7:00 AM	1	3	3	89	4	14	7	310	4	4	126	21	586
7:15 AM	0	5	4	99	12	27	18	404	4	5	141	34	753
7:30 AM	1	4	5	126	13	32	18	411	4	5	147	56	822
7:45 AM	0	3	10	115	18	23	26	451	3	6	181	51	887
8:00 AM	0	3	10	124	13	40	13	404	6	6	173	60	852
8:15 AM	2	2	4	124	10	34	20	444	5	3	173	65	886
8:30 AM	3	6	5	131	10	40	24	403	9	4	183	66	884
8:45 AM	2	4	8	89	19	45	26	363	5	3	200	64	828
TOTAL VOLUMES :	NL 9	NT 30	NR 49	SL 897	ST 99	SR 255	EL 152	ET 3190	ER 40	WL 36	WT 1324	WR 417	TOTAL 6498
APPROACH %'s :	10.23%	34.09%	55.68%	71.70%	7.91%	20.38%	4.49%	94.32%	1.18%	2.03%	74.51%	23.47%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	5	14	29	494	51	137	83	1702	23	19	710	242	3509
PEAK HR FACTOR :		0.857			0.942			0.942			0.959		0.989

UTURNS

	NB	SB	EB	WB
7:00 AM			1	
7:15 AM			0	
7:30 AM			0	
7:45 AM			0	
8:00 AM			0	
8:15 AM			0	
8:30 AM			0	
8:45 AM			0	
TOTAL	0	0	1	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-020 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Beach Blvd			Beach Blvd			PCH (SR-1)			PCH (SR-1)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 2	ST 1	SR 1	EL 2	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
10:30 AM	5	14	5	73	9	44	37	210	6	5	171	58	637
10:45 AM	5	7	9	71	16	56	37	184	11	11	205	68	680
11:00 AM	2	5	8	66	13	79	36	179	2	6	176	77	649
11:15 AM	5	6	2	67	20	39	43	204	5	2	216	72	681
11:30 AM	2	5	9	62	11	68	39	176	4	5	228	90	699
11:45 AM	4	8	2	75	16	59	36	167	5	2	194	74	642
12:00 PM	12	2	9	81	14	66	49	193	7	7	180	87	707
12:15 PM	6	3	6	57	16	53	31	200	4	7	228	81	692
12:30 PM	6	2	8	73	18	81	38	182	7	7	235	52	709
12:45 PM	9	10	7	69	13	59	47	197	8	7	201	72	699
1:00 PM	4	14	4	77	16	64	25	163	13	6	218	70	674
1:15 PM	7	9	6	102	22	74	53	205	4	8	243	72	805
1:30 PM	6	12	9	54	11	58	45	222	12	6	248	81	764
1:45 PM	5	11	10	76	14	53	49	208	4	8	198	73	709
TOTAL VOLUMES :	NL 78	NT 108	NR 94	SL 1003	ST 209	SR 853	EL 565	ET 2690	ER 92	WL 87	WT 2941	WR 1027	TOTAL 9747
APPROACH %'s :	27.86%	38.57%	33.57%	48.57%	10.12%	41.31%	16.88%	80.37%	2.75%	2.15%	72.53%	25.33%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	22	46	29	309	63	249	172	798	33	28	907	296	2952
PEAK HR FACTOR :		0.898			0.784			0.899			0.919		0.917

UTURNS

	NB	SB	EB	WB
10:30 AM		0	0	
10:45 AM		0	0	
11:00 AM		0	0	
11:15 AM		0	0	
11:30 AM		0	2	
11:45 AM		0	0	
12:00 PM		0	0	
12:15 PM		1	1	
12:30 PM		0	0	
12:45 PM		0	0	
1:00 PM		0	0	
1:15 PM		2	0	
1:30 PM		0	0	
1:45 PM		1	0	
TOTAL	0	4	3	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-020 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Beach Blvd			Beach Blvd			PCH (SR-1)			PCH (SR-1)			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 1	SL 2	ST 1	SR 1	EL 2	ET 3	ER 0	WL 1	WT 2	WR 1	TOTAL
4:00 PM	7	10	3	51	19	55	65	269	14	1	316	139	949
4:15 PM	9	15	6	87	21	49	60	217	4	15	348	165	996
4:30 PM	3	10	4	62	8	54	76	286	7	4	347	138	999
4:45 PM	4	8	8	71	13	54	60	216	9	9	336	143	931
5:00 PM	3	10	13	83	11	51	79	275	10	7	396	161	1099
5:15 PM	8	10	6	71	17	46	63	256	13	5	339	159	993
5:30 PM	7	17	11	70	14	75	65	275	15	1	370	185	1105
5:45 PM	10	12	7	79	11	60	60	264	13	9	312	215	1052
TOTAL VOLUMES :	NL 51	NT 92	NR 58	SL 574	ST 114	SR 444	EL 528	ET 2058	ER 85	WL 51	WT 2764	WR 1305	TOTAL 8124
APPROACH %'s :	25.37%	45.77%	28.86%	50.71%	10.07%	39.22%	19.77%	77.05%	3.18%	1.24%	67.09%	31.67%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	28	49	37	303	53	232	267	1070	51	22	1417	720	4249
PEAK HR FACTOR :	0.814			0.925			0.953			0.957			0.961

UTURNS			
NB	SB	EB	WB
	1	1	
	2	1	
	2	0	
	0	0	
	0	0	
	1	0	
	1	0	
	4	0	
NB 0	SB 11	EB 2	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-021 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Newland St			Newland St			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
7:00 AM	21	43	7	11	63	11	17	79	51	3	55	11	372
7:15 AM	24	56	10	13	69	4	11	93	53	6	57	9	405
7:30 AM	25	64	4	19	63	14	21	114	56	4	53	9	446
7:45 AM	28	85	8	38	83	17	33	127	61	3	74	46	603
8:00 AM	31	73	7	53	106	25	16	131	62	6	87	34	631
8:15 AM	32	76	11	28	117	17	23	141	52	8	79	41	625
8:30 AM	37	82	13	32	71	12	12	117	63	12	114	29	594
8:45 AM	26	66	8	15	76	16	8	78	49	8	84	20	454
TOTAL VOLUMES :	NL 224	NT 545	NR 68	SL 209	ST 648	SR 116	EL 141	ET 880	ER 447	WL 50	WT 603	WR 199	TOTAL 4130
APPROACH %'s :	26.76%	65.11%	8.12%	21.48%	66.60%	11.92%	9.60%	59.95%	30.45%	5.87%	70.77%	23.36%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	128	316	39	151	377	71	84	516	238	29	354	150	2453
PEAK HR FACTOR :	0.915			0.814			0.948			0.860			0.972

UTURNS			
NB	SB	EB	WB
		1	
		0	
		0	
		0	
		0	
		0	
		0	
		0	
NB 0	SB 0	EB 1	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-021 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Newland St			Newland St			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
10:30 AM	30	62	9	18	46	20	14	67	32	8	68	17	391
10:45 AM	39	55	7	12	64	20	11	74	30	4	94	18	428
11:00 AM	22	59	12	16	56	16	13	89	40	7	74	22	426
11:15 AM	33	45	7	11	46	14	21	89	27	8	73	26	400
11:30 AM	37	83	9	16	47	21	12	89	31	3	81	29	458
11:45 AM	42	53	8	19	61	26	15	78	42	8	90	18	460
12:00 PM	38	57	7	26	57	22	15	101	35	3	92	28	481
12:15 PM	36	83	11	23	58	23	18	100	29	10	115	59	565
12:30 PM	35	62	12	20	55	24	16	93	36	10	92	33	488
12:45 PM	40	63	5	27	54	10	6	86	37	5	88	21	442
1:00 PM	39	67	8	18	45	20	22	107	31	7	82	28	474
1:15 PM	36	59	6	18	35	6	19	95	47	9	81	26	437
1:30 PM	44	53	7	18	73	17	16	81	46	7	89	31	482
1:45 PM	42	103	10	28	63	25	17	99	31	6	94	31	549
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	513	904	118	270	760	264	215	1248	494	95	1213	387	6481
APPROACH %'s :	33.42%	58.89%	7.69%	20.87%	58.73%	20.40%	10.99%	63.77%	25.24%	5.60%	71.56%	22.83%	
PEAK HR START TIME :	1145 AM												TOTAL
PEAK HR VOL :	151	255	38	88	231	95	64	372	142	31	389	138	1994
PEAK HR FACTOR :		0.854			0.976			0.957			0.758		0.882

UTURNS

NB	SB	EB	WB
		0	
		0	
		0	
		0	
		1	
		1	
		0	
		0	
		1	
		0	
		1	
		0	
		0	
		0	
NB	SB	EB	WB
0	0	4	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-021 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Newland St			Newland St			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	47	88	5	30	78	27	24	87	53	6	110	39	594
4:15 PM	59	106	11	24	71	21	15	109	41	15	117	33	622
4:30 PM	78	117	8	31	77	26	21	123	52	6	111	37	687
4:45 PM	68	110	10	23	72	21	23	130	56	16	125	35	689
5:00 PM	73	128	8	22	61	25	20	106	46	8	115	25	637
5:15 PM	57	142	8	24	71	27	19	117	53	15	113	18	664
5:30 PM	77	141	8	27	60	24	18	121	48	13	120	36	693
5:45 PM	57	113	14	22	74	24	20	124	44	15	120	35	662
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	516	945	72	203	564	195	160	917	393	94	931	258	5248
APPROACH %'s :	33.66%	61.64%	4.70%	21.10%	58.63%	20.27%	10.88%	62.38%	26.73%	7.33%	72.56%	20.11%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	275	521	34	96	264	97	80	474	203	52	473	114	2683
PEAK HR FACTOR :		0.918			0.936			0.906			0.908		0.968

UTURNS

NB	SB	EB	WB
		0	
		0	
		0	
		0	
		1	
		0	
		0	
		0	
NB	SB	EB	WB
0	0	1	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-022 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Newland St			Newland St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0	ET 0	ER 0	WL 1	WT 0	WR 1	TOTAL
7:00 AM		24	12	80	57					23		33	229
7:15 AM		24	21	75	59					16		37	232
7:30 AM		32	21	79	55					20		43	250
7:45 AM		30	19	87	61					25		43	265
8:00 AM		31	32	103	74					24		56	320
8:15 AM		36	25	118	59					22		60	320
8:30 AM		39	17	99	76					33		74	338
8:45 AM		20	15	65	42					28		49	219
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	236	162	706	483	0	0	0	0	191	0	395	2173
APPROACH %'s :	0.00%	59.30%	40.70%	59.38%	40.62%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	32.59%	0.00%	67.41%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	0	136	93	407	270	0	0	0	0	104	0	233	1243
PEAK HR FACTOR :		0.909			0.956			0.000			0.787		0.919

UTURNS			
NB	SB	EB	WB
		0	
		0	
		0	
		0	
		1	
		0	
		0	
		0	
NB	SB	EB	WB
0	0	1	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-022 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Newland St			Newland St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0	ET 0	ER 0	WL 1	WT 0	WR 1	TOTAL
10:30 AM		38	13	40	40					10		54	195
10:45 AM		26	17	47	46					28		40	204
11:00 AM		34	12	55	39					24		35	199
11:15 AM		41	21	37	33					28		41	201
11:30 AM		45	19	44	31					28		57	224
11:45 AM		38	15	52	43					20		53	221
12:00 PM		34	19	65	43					27		66	254
12:15 PM		36	16	44	39					26		92	253
12:30 PM		40	10	52	52					19		51	224
12:45 PM		39	17	45	37					25		56	219
1:00 PM		33	19	38	35					33		68	226
1:15 PM		31	14	49	42					32		57	225
1:30 PM		38	15	55	47					23		66	244
1:45 PM		56	14	53	46					28		76	273
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	529	221	676	573	0	0	0	0	351	0	812	3162
APPROACH %'s :	0.00%	70.53%	29.47%	54.12%	45.88%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	30.18%	0.00%	69.82%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	0	158	62	195	170	0	0	0	0	116	0	267	968
PEAK HR FACTOR :		0.786			0.895			0.000			0.921		0.886

UTURNS			
NB	SB	EB	WB
		0	
		0	
		0	
		0	
		1	
		0	
		0	
		1	
		0	
		0	
		0	
		0	
		0	
NB	SB	EB	WB
0	0	2	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-022 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Newland St			Newland St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 1	NR 0	SL 1	ST 1	SR 0	EL 0	ET 0	ER 0	WL 1	WT 0	WR 1	TOTAL
4:00 PM		54	15	61	48					31		86	295
4:15 PM		76	21	47	53					34		99	330
4:30 PM		66	16	59	56					37		117	351
4:45 PM		74	17	61	66					43		110	371
5:00 PM		69	19	52	35					46		119	340
5:15 PM		76	13	50	53					25		124	341
5:30 PM		85	16	60	49					39		123	372
5:45 PM		85	23	53	58					44		103	366
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	585	140	443	418	0	0	0	0	299	0	881	2766
APPROACH %'s :	0.00%	80.69%	19.31%	51.45%	48.55%	0.00%	#DIV/0!	#DIV/0!	#DIV/0!	25.34%	0.00%	74.66%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	304	65	223	203	0	0	0	0	153	0	476	1424
PEAK HR FACTOR :		0.913			0.839			0.000			0.953		0.957

UTURNS			
NB	SB	EB	WB
		0	
		0	
		1	
		1	
		0	
		0	
		1	
		0	
NB	SB	EB	WB
0	0	3	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-023 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Pacific Coast Hwy			Pacific Coast Hwy			Newland St			Newland St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
7:00 AM	1	0	0	32	0	39	12	392	0	0	125	4	605
7:15 AM	2	0	0	53	0	29	11	475	1	0	134	10	715
7:30 AM	1	5	1	49	0	29	17	538	0	0	178	12	830
7:45 AM	3	5	2	46	0	37	18	548	1	1	188	14	863
8:00 AM	3	4	3	39	0	36	30	503	1	1	202	11	833
8:15 AM	1	3	0	56	0	35	20	548	0	1	178	16	858
8:30 AM	6	3	3	54	1	35	18	527	1	0	211	19	878
8:45 AM	2	1	0	35	0	36	21	425	0	0	226	10	756
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	19	21	9	364	1	276	147	3956	4	3	1442	96	6338
APPROACH %'s :	38.78%	42.86%	18.37%	56.79%	0.16%	43.06%	3.58%	96.32%	0.10%	0.19%	93.58%	6.23%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	13	15	8	195	1	143	86	2126	3	3	779	60	3432
PEAK HR FACTOR :		0.750			0.931			0.975			0.915		0.977

UTURNS			
NB	SB	EB	WB
		1	0
		0	0
		1	0
		1	0
		0	0
		0	1
		0	0
		1	0
NB	SB	EB	WB
0	0	4	1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-023 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Pacific Coast Hwy			Pacific Coast Hwy			Newland St			Newland St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
10:30 AM	0	1	1	24	0	21	26	267	1	1	187	15	544
10:45 AM	3	0	3	20	0	35	21	234	1	1	224	15	557
11:00 AM	1	2	1	21	0	29	16	227	1	1	249	26	574
11:15 AM	4	0	1	18	0	40	28	253	0	1	224	13	582
11:30 AM	1	3	0	15	0	30	16	238	0	2	267	20	592
11:45 AM	4	5	2	26	1	34	16	229	2	0	246	21	586
12:00 PM	5	4	2	18	1	38	25	260	2	2	210	10	577
12:15 PM	4	0	2	17	0	41	21	230	1	4	271	25	616
12:30 PM	1	2	0	23	0	31	13	252	0	0	254	14	590
12:45 PM	6	2	3	14	2	29	24	249	2	5	255	18	609
1:00 PM	9	2	1	12	3	25	20	210	3	4	248	19	556
1:15 PM	2	0	1	15	0	33	13	305	2	0	266	16	653
1:30 PM	6	2	3	14	2	46	21	259	2	2	263	19	639
1:45 PM	1	1	5	24	1	36	23	270	3	1	242	18	625
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	47	24	25	261	10	468	283	3483	20	24	3406	249	8300
APPROACH %'s :	48.96%	25.00%	26.04%	35.32%	1.35%	63.33%	7.47%	92.00%	0.53%	0.65%	92.58%	6.77%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	18	5	10	65	6	140	77	1044	10	7	1019	72	2473
PEAK HR FACTOR :		0.688			0.851			0.884			0.967		0.947

UTURNS			
NB	SB	EB	WB
		3	0
		2	0
		1	1
		3	0
		2	1
		1	0
		3	1
		2	2
		3	0
		0	0
		2	1
		0	0
		1	2
		4	0
NB	SB	EB	WB
0	0	27	8

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-023 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Pacific Coast Hwy			Pacific Coast Hwy			Newland St			Newland St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1	ST 1	SR 0	EL 1	ET 2	ER 1	WL 1	WT 2	WR 1	TOTAL
4:00 PM	3	3	2	27	2	49	25	280	3	3	433	36	866
4:15 PM	2	2	5	25	1	40	32	264	7	1	449	67	895
4:30 PM	2	3	2	25	0	41	30	321	3	2	438	39	906
4:45 PM	5	1	4	24	3	53	23	270	3	3	425	48	862
5:00 PM	4	1	3	19	0	37	23	351	5	1	525	47	1016
5:15 PM	3	3	1	25	1	30	23	299	3	0	452	59	899
5:30 PM	3	5	6	18	2	47	31	311	7	0	508	49	987
5:45 PM	2	2	5	26	3	48	30	328	0	4	505	65	1018
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	24	20	28	189	12	345	217	2424	31	14	3735	410	7449
APPROACH %'s :	33.33%	27.78%	38.89%	34.62%	2.20%	63.19%	8.12%	90.72%	1.16%	0.34%	89.81%	9.86%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	12	11	15	88	6	162	107	1289	15	5	1990	220	3920
PEAK HR FACTOR :		0.679			0.831			0.931			0.965		0.963

UTURNS			
NB	SB	EB	WB
		2	1
		4	0
		1	1
		3	1
		1	1
		3	0
		0	0
		5	2
NB	SB	EB	WB
0	0	19	6

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-024 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Magnolia St			Magnolia St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
7:00 AM	8	23	5	27	46	3	4	102	3	6	36	28	291
7:15 AM	0	28	5	34	55	3	6	93	5	3	62	31	325
7:30 AM	5	40	5	38	67	3	11	108	5	3	45	31	361
7:45 AM	4	42	8	41	57	7	18	75	8	7	69	60	396
8:00 AM	4	42	8	62	65	15	23	120	5	2	79	91	516
8:15 AM	11	54	14	59	75	7	31	96	25	10	71	110	563
8:30 AM	17	68	15	52	59	6	3	106	16	6	86	48	482
8:45 AM	12	43	6	35	44	2	6	60	12	5	58	29	312
TOTAL VOLUMES :	NL 61	NT 340	NR 66	SL 348	ST 468	SR 46	EL 102	ET 760	ER 79	WL 42	WT 506	WR 428	TOTAL 3246
APPROACH %'s :	13.06%	72.81%	14.13%	40.37%	54.29%	5.34%	10.84%	80.77%	8.40%	4.30%	51.84%	43.85%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	36	206	45	214	256	35	75	397	54	25	305	309	1957
PEAK HR FACTOR :		0.718			0.889			0.865			0.836		0.869

UTURNS	NB	SB	EB	WB
		0		0
		0		0
		0		1
		2		0
		1		0
		1		0
		1		1
		0		0
	NB 0	SB 5	EB 0	WB 2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-024 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Magnolia St			Magnolia St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
10:30 AM	6	32	4	31	30	3	1	52	1	2	39	31	232
10:45 AM	3	28	4	22	34	4	2	48	4	5	55	35	244
11:00 AM	5	37	8	27	26	7	4	41	3	2	46	27	233
11:15 AM	8	40	4	34	40	8	3	34	4	3	45	24	247
11:30 AM	6	49	4	29	30	6	2	52	3	5	50	36	272
11:45 AM	4	36	7	38	33	7	8	43	5	6	52	56	295
12:00 PM	4	34	2	45	29	6	14	53	6	7	59	61	320
12:15 PM	6	43	3	78	52	11	18	69	7	5	63	60	415
12:30 PM	3	29	5	37	42	9	10	52	6	5	62	52	312
12:45 PM	4	42	4	50	35	10	10	35	11	4	64	45	314
1:00 PM	6	39	5	25	34	8	9	50	2	3	63	41	285
1:15 PM	6	34	0	36	36	8	5	40	6	5	61	40	277
1:30 PM	3	49	11	25	31	9	2	45	4	3	58	32	272
1:45 PM	7	35	4	34	43	3	4	31	14	4	63	44	286
TOTAL VOLUMES :	NL 71	NT 527	NR 65	SL 511	ST 495	SR 99	EL 92	ET 645	ER 76	WL 59	WT 780	WR 584	TOTAL 4004
APPROACH %'s :	10.71%	79.49%	9.80%	46.24%	44.80%	8.96%	11.32%	79.34%	9.35%	4.15%	54.81%	41.04%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	17	148	14	210	158	36	52	209	30	21	248	218	1361
PEAK HR FACTOR :		0.861			0.716			0.774			0.951		0.820

UTURNS	NB	SB	EB	WB
		0		0
		0		1
		0		0
		0		0
		1		0
		0		0
		1		0
		1		0
		0		0
		0		1
		1		0
		0		0
		0		0
		0		0
	NB 0	SB 4	EB 0	WB 2

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-024 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Magnolia St			Magnolia St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 2	NR 0	SL 1	ST 2	SR 1	EL 1	ET 1	ER 0	WL 1	WT 1	WR 1	TOTAL
4:00 PM	8	80	4	50	26	8	7	61	11	5	105	48	413
4:15 PM	8	61	13	39	35	14	6	68	6	4	99	59	412
4:30 PM	5	63	6	34	40	12	8	61	12	5	135	74	455
4:45 PM	5	59	6	41	39	9	3	64	13	7	123	80	449
5:00 PM	10	74	8	43	55	11	11	51	6	2	117	73	461
5:15 PM	7	85	7	52	45	11	7	62	4	8	145	72	505
5:30 PM	6	65	6	38	33	9	3	78	9	4	141	89	481
5:45 PM	7	76	7	56	45	11	4	66	10	1	143	93	519
TOTAL VOLUMES :	NL 56	NT 563	NR 57	SL 353	ST 318	SR 85	EL 49	ET 511	ER 71	WL 36	WT 1008	WR 588	TOTAL 3695
APPROACH %'s :	8.28%	83.28%	8.43%	46.69%	42.06%	11.24%	7.77%	80.98%	11.25%	2.21%	61.76%	36.03%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	30	300	28	189	178	42	25	257	29	15	546	327	1966
PEAK HR FACTOR :		0.904			0.913			0.864			0.937		0.947

UTURNS			
NB	SB	EB	WB
			1
			0
			0
			0
			0
			0
			0
			0
NB 0	SB 0	EB 0	WB 1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-025 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Magnolia St			Magnolia St			Pacific Coast Hwy			Pacific Coast Hwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1.5	ST 0.5	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL
7:00 AM	0	3	1	24	8	14	11	397	11	6	112	9	596
7:15 AM	4	5	1	28	5	15	14	511	7	10	131	10	741
7:30 AM	3	10	3	39	8	19	14	516	4	4	161	20	801
7:45 AM	3	8	3	41	13	21	26	550	8	1	185	20	879
8:00 AM	5	7	1	42	12	22	29	536	10	12	188	11	875
8:15 AM	2	5	0	44	11	19	48	546	10	9	185	16	895
8:30 AM	3	2	2	36	21	40	21	573	11	15	187	12	923
8:45 AM	4	7	5	33	16	21	30	439	14	11	218	11	809
TOTAL VOLUMES :	NL 24	NT 47	NR 16	SL 287	ST 94	SR 171	EL 193	ET 4068	ER 75	WL 68	WT 1367	WR 109	TOTAL 6519
APPROACH %'s :	27.59%	54.02%	18.39%	51.99%	17.03%	30.98%	4.45%	93.82%	1.73%	4.40%	88.54%	7.06%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	13	22	6	163	57	102	124	2205	39	37	745	59	3572
PEAK HR FACTOR :		0.732			0.830			0.979			0.982		0.967

UTURNS			
NB	SB	EB	WB
		0	0
		0	0
		0	0
		0	0
		0	0
		0	1
		0	0
		1	0
NB 0	SB 0	EB 1	WB 1

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-025 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Magnolia St			Magnolia St			Pacific Coast Hwy			Pacific Coast Hwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1.5	ST 0.5	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL
10:30 AM	4	5	6	25	11	10	20	247	6	16	195	21	566
10:45 AM	4	7	5	23	6	16	10	245	14	6	218	20	574
11:00 AM	3	8	3	14	9	15	10	255	8	9	264	18	616
11:15 AM	5	5	13	14	8	13	27	261	4	10	217	16	593
11:30 AM	6	8	1	21	9	21	18	221	4	17	266	8	600
11:45 AM	3	4	4	16	8	11	15	232	5	14	243	20	575
12:00 PM	3	3	3	24	8	18	20	241	9	17	215	27	588
12:15 PM	4	5	6	20	13	13	12	232	7	22	265	23	622
12:30 PM	2	4	3	29	4	31	24	231	9	20	243	28	628
12:45 PM	4	5	5	21	12	12	22	217	12	22	247	15	594
1:00 PM	5	2	4	28	12	18	20	208	8	14	266	13	598
1:15 PM	3	4	2	22	11	17	19	270	5	15	239	19	626
1:30 PM	3	4	4	19	12	11	23	237	8	16	266	31	634
1:45 PM	5	8	5	18	6	16	29	256	10	10	243	27	633
TOTAL VOLUMES :	NL 54	NT 72	NR 64	SL 294	ST 129	SR 222	EL 269	ET 3353	ER 109	WL 208	WT 3387	WR 286	TOTAL 8447
APPROACH %'s :	28.42%	37.89%	33.68%	45.58%	20.00%	34.42%	7.21%	89.87%	2.92%	5.36%	87.27%	7.37%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	16	18	15	87	41	62	91	971	31	55	1014	90	2491
PEAK HR FACTOR :	0.681			0.819			0.926			0.926			0.982

UTURNS			
NB	SB	EB	WB
		1	2
		0	1
		1	0
		3	1
		0	1
		1	1
		1	1
		0	1
		1	2
		0	0
		0	0
		3	0
		0	2
		1	0
NB 0	SB 0	EB 12	WB 12

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-025 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Magnolia St			Magnolia St			Pacific Coast Hwy			Pacific Coast Hwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 1.5	ST 0.5	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL
4:00 PM	2	8	12	17	10	24	34	264	9	26	467	46	919
4:15 PM	6	10	11	24	12	19	25	258	9	17	485	41	917
4:30 PM	1	9	5	14	9	20	35	314	5	9	462	47	930
4:45 PM	4	8	1	22	18	27	37	252	6	26	442	49	892
5:00 PM	2	14	6	16	14	16	35	348	6	11	571	60	1099
5:15 PM	4	8	10	28	10	29	32	262	9	12	472	48	924
5:30 PM	6	11	4	23	11	23	33	319	7	10	542	53	1042
5:45 PM	5	11	10	18	14	30	32	325	14	16	545	59	1079
TOTAL VOLUMES :	NL 30	NT 79	NR 59	SL 162	ST 98	SR 188	EL 263	ET 2342	ER 65	WL 127	WT 3986	WR 403	TOTAL 7802
APPROACH %'s :	17.86%	47.02%	35.12%	36.16%	21.88%	41.96%	9.85%	87.72%	2.43%	2.81%	88.26%	8.92%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	17	44	30	85	49	98	132	1254	36	49	2130	220	4144
PEAK HR FACTOR :	0.875			0.866			0.914			0.934			0.943

UTURNS			
NB	SB	EB	WB
		0	0
		1	1
		0	0
		0	3
		1	2
		0	1
		1	0
		0	0
NB 0	SB 0	EB 3	WB 7

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-037 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 1	SL 2	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
7:00 AM	7	45	51	72	52	7	16	188	9	24	53	30	554
7:15 AM	8	55	85	111	78	11	28	175	9	28	78	45	711
7:30 AM	8	43	82	124	94	10	21	192	13	19	79	59	744
7:45 AM	15	72	70	122	96	17	21	168	8	28	81	78	776
8:00 AM	26	67	90	95	102	28	26	188	12	26	101	60	821
8:15 AM	18	81	82	141	116	31	26	202	17	35	113	57	919
8:30 AM	11	75	100	119	99	6	25	211	19	31	108	84	888
8:45 AM	13	64	60	92	91	25	29	121	10	34	97	47	683
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	106	502	620	876	728	135	192	1445	97	225	710	460	6096
APPROACH %'s :	8.63%	40.88%	50.49%	50.37%	41.86%	7.76%	11.07%	83.33%	5.59%	16.13%	50.90%	32.97%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	70	295	342	477	413	82	98	769	56	120	403	279	3404
PEAK HR FACTOR :		0.950			0.844			0.905			0.899		0.926

UTURNS			
NB	SB	EB	WB
0	4		0
1	5		1
0	3		1
0	2		0
1	7		1
0	12		1
1	5		1
0	7		0
NB	SB	EB	WB
3	45	0	5

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-037 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 1	SL 2	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
10:30 AM	13	67	35	61	67	18	31	78	10	21	64	60	525
10:45 AM	17	56	27	75	73	14	24	76	7	22	78	47	516
11:00 AM	15	88	25	60	66	12	20	80	8	25	81	52	532
11:15 AM	9	78	28	67	66	20	24	66	8	14	81	48	509
11:30 AM	11	92	28	69	76	14	22	83	6	21	73	67	562
11:45 AM	14	74	22	65	89	26	16	78	9	28	72	49	542
12:00 PM	23	77	34	67	76	19	25	85	7	18	108	55	594
12:15 PM	22	90	36	78	77	25	22	81	24	23	113	44	635
12:30 PM	17	93	34	82	65	21	23	100	12	31	93	51	622
12:45 PM	21	77	37	68	78	23	28	77	15	28	94	65	611
1:00 PM	22	92	26	86	90	21	23	82	10	31	104	54	641
1:15 PM	30	80	23	79	75	15	19	83	9	30	108	72	623
1:30 PM	22	92	32	76	94	15	20	78	16	21	102	57	625
1:45 PM	16	69	25	78	92	17	20	79	6	34	123	66	625
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	252	1125	412	1011	1084	260	317	1126	147	347	1294	787	8162
APPROACH %'s :	14.09%	62.88%	23.03%	42.93%	46.03%	11.04%	19.94%	70.82%	9.25%	14.29%	53.29%	32.41%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	90	333	106	319	351	68	82	322	41	116	437	249	2514
PEAK HR FACTOR :		0.906			0.937			0.967			0.899		0.980

UTURNS			
NB	SB	EB	WB
0	4		1
0	9		0
3	12		0
1	9		0
1	7		1
4	11		0
3	10		0
3	12		0
1	15		1
0	15		0
4	15		0
5	17		0
4	10		0
2	18		0
NB	SB	EB	WB
31	164	0	3

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-037 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Hamilton Ave			Hamilton Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 1	SL 2	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
4:00 PM	18	125	39	79	74	22	29	101	17	42	207	103	856
4:15 PM	21	123	35	69	107	18	27	88	14	44	194	85	825
4:30 PM	27	140	38	81	76	28	32	75	12	50	196	82	837
4:45 PM	24	133	28	95	91	20	36	99	12	49	273	136	996
5:00 PM	31	143	45	93	97	19	19	71	16	51	221	116	922
5:15 PM	32	135	35	106	92	21	19	98	15	74	301	138	1066
5:30 PM	24	158	45	93	109	28	15	82	24	57	265	110	1010
5:45 PM	36	121	23	88	94	34	20	102	20	66	256	129	989
TOTAL VOLUMES :	NL 213	NT 1078	NR 288	SL 704	ST 740	SR 190	EL 197	ET 716	ER 130	WL 433	WT 1913	WR 899	TOTAL 7501
APPROACH %'s :	13.49%	68.27%	18.24%	43.08%	45.29%	11.63%	18.89%	68.65%	12.46%	13.34%	58.95%	27.70%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	111	569	153	387	389	88	89	350	67	231	1060	500	3994
PEAK HR FACTOR :		0.917			0.939			0.861			0.873		0.937

UTURNS	NB	SB	EB	WB
	1	13	0	
	2	9	0	
	1	13	1	
	2	10	0	
	5	10	0	
	2	13	0	
	0	13	0	
	4	18	0	
	NB 17	SB 99	EB 1	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-040 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Pacific Coast Hwy			Pacific Coast Hwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 2	ST 1	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL
7:00 AM	6	5	3	78	0	34	36	390	2	3	77	22	656
7:15 AM	20	19	1	96	1	23	39	495	1	0	115	48	858
7:30 AM	3	14	1	134	1	29	47	521	0	0	151	69	970
7:45 AM	5	4	2	115	1	21	38	547	0	3	191	82	1009
8:00 AM	0	6	3	150	2	43	33	552	1	1	163	63	1017
8:15 AM	5	2	5	136	1	39	52	541	0	2	179	57	1019
8:30 AM	1	3	1	159	1	40	52	539	1	1	170	50	1018
8:45 AM	5	2	3	122	2	41	30	456	1	3	179	61	905
TOTAL VOLUMES :	NL 45	NT 55	NR 19	SL 990	ST 9	SR 270	EL 327	ET 4041	ER 6	WL 13	WT 1225	WR 452	TOTAL 7452
APPROACH %'s :	37.82%	46.22%	15.97%	78.01%	0.71%	21.28%	7.48%	92.39%	0.14%	0.77%	72.49%	26.75%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	11	15	11	560	5	143	175	2179	2	7	703	252	4063
PEAK HR FACTOR :		0.771			0.885			0.993			0.871		0.997

UTURNS	NB	SB	EB	WB
			1	3
			0	0
			0	0
			0	2
			0	1
			0	2
			1	1
			0	2
	NB 0	SB 0	EB 2	WB 11

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-040 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Pacific Coast Hwy			Pacific Coast Hwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 2	ST 1	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL
10:30 AM	3	8	1	84	1	23	24	259	2	2	220	68	695
10:45 AM	3	6	2	70	2	20	19	232	3	2	210	70	639
11:00 AM	5	2	5	65	2	19	15	241	1	6	225	84	670
11:15 AM	7	4	3	90	0	21	23	231	2	5	230	59	675
11:30 AM	8	8	2	92	2	33	17	220	1	5	253	76	717
11:45 AM	3	9	4	54	0	30	29	225	1	7	234	89	685
12:00 PM	2	5	6	68	2	36	16	259	2	3	286	94	779
12:15 PM	6	4	3	58	3	22	21	230	1	5	248	74	675
12:30 PM	3	4	2	72	1	29	23	243	2	6	236	80	701
12:45 PM	9	6	3	62	2	24	23	239	1	6	242	77	694
1:00 PM	2	8	7	61	2	22	25	229	1	2	260	82	701
1:15 PM	8	7	7	70	2	20	23	256	0	10	252	107	762
1:30 PM	12	4	0	93	4	20	26	233	1	9	266	81	749
1:45 PM	2	3	3	74	2	28	27	254	1	5	236	92	727
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	73	78	48	1013	25	347	311	3351	19	73	3398	1133	9869
APPROACH %'s :	36.68%	39.20%	24.12%	73.14%	1.81%	25.05%	8.45%	91.04%	0.52%	1.59%	73.81%	24.61%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	24	22	17	298	10	90	101	972	3	26	1014	362	2939
PEAK HR FACTOR :	0.716			0.850			0.954			0.950			0.964

UTURNS			
NB	SB	EB	WB
	0	0	1
	0	1	1
	0	0	3
	0	0	4
	1	1	0
	0	0	6
	0	1	2
	0	1	3
	0	0	4
	0	1	3
	0	0	1
	0	1	4
	0	0	5
	0	0	3
NB	SB	EB	WB
0	1	6	40

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-040 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Pacific Coast Hwy			Pacific Coast Hwy			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 0.5	NR 0.5	SL 2	ST 1	SR 1	EL 1	ET 3	ER 1	WL 1	WT 3	WR 1	TOTAL
4:00 PM	5	4	2	79	0	41	28	268	0	9	478	167	1081
4:15 PM	2	6	0	69	2	29	26	262	0	9	522	147	1074
4:30 PM	6	11	3	87	7	24	25	314	1	2	476	160	1116
4:45 PM	2	2	2	70	0	36	22	248	0	2	489	142	1015
5:00 PM	3	5	1	93	2	36	37	339	3	4	596	179	1298
5:15 PM	11	5	7	78	3	31	44	264	0	3	500	174	1120
5:30 PM	6	10	4	69	3	45	37	301	3	8	568	156	1210
5:45 PM	4	8	1	75	0	45	41	311	1	4	560	148	1198
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	39	51	20	620	17	287	260	2307	8	41	4189	1273	9112
APPROACH %'s :	35.45%	46.36%	18.18%	67.10%	1.84%	31.06%	10.10%	89.59%	0.31%	0.75%	76.12%	23.13%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	24	28	13	315	8	157	159	1215	7	19	2224	657	4826
PEAK HR FACTOR :	0.707			0.916			0.911			0.931			0.930

UTURNS			
NB	SB	EB	WB
		0	2
		2	5
		2	0
		0	1
		1	0
		1	3
		1	3
		1	1
NB	SB	EB	WB
0	0	8	15

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-026 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			I-405 NB Ramps			I-405 NB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 3	NR 1	SL 0	ST 2.5	SR 1.5	EL 0	ET 0	ER 1	WL 0	WT 0	WR 1	TOTAL
7:00 AM		127	141		420	35			124			96	943
7:15 AM		143	164		528	55			127			115	1132
7:30 AM		133	178		555	63			151			137	1217
7:45 AM		165	167		537	50			150			129	1198
8:00 AM		180	171		477	45			128			113	1114
8:15 AM		167	151		524	76			120			111	1149
8:30 AM		156	154		471	50			126			118	1075
8:45 AM		159	126		455	38			135			115	1028
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	1230	1252	0	3967	412	0	0	1061	0	0	934	8856
APPROACH %'s :	0.00%	49.56%	50.44%	0.00%	90.59%	9.41%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	645	667	0	2093	234	0	0	549	0	0	490	4678
PEAK HR FACTOR :		0.934			0.941			0.909			0.894		0.961

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-026 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			I-405 NB Ramps			I-405 NB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 3	NR 1	SL 0	ST 2.5	SR 1.5	EL 0	ET 0	ER 1	WL 0	WT 0	WR 1	TOTAL
10:30 AM		210	104		338	33			170			127	982
10:45 AM		205	125		326	45			144			110	955
11:00 AM		228	137		296	39			124			145	969
11:15 AM		235	123		391	27			175			141	1092
11:30 AM		225	127		326	33			159			137	1007
11:45 AM		264	154		404	37			166			146	1171
12:00 PM		282	128		336	51			162			161	1120
12:15 PM		252	133		429	59			161			140	1174
12:30 PM		298	137		360	51			180			143	1169
12:45 PM		260	122		346	34			145			156	1063
1:00 PM		269	147		383	51			143			163	1156
1:15 PM		285	135		407	34			148			160	1169
1:30 PM		285	137		372	30			161			157	1142
1:45 PM		281	142		413	48			190			185	1259
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	3579	1851	0	5127	572	0	0	2228	0	0	2071	15428
APPROACH %'s :	0.00%	65.91%	34.09%	0.00%	89.96%	10.04%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	0	1120	561	0	1575	163	0	0	642	0	0	665	4726
PEAK HR FACTOR :		0.993			0.943			0.845			0.899		0.938

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-026 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			I-405 NB Ramps			I-405 NB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 3	NR 1	SL 0	ST 2.5	SR 1.5	EL 0	ET 0	ER 1	WL 0	WT 0	WR 1	TOTAL
4:00 PM		382	167		339	70			70			132	1160
4:15 PM		377	157		331	65			67			118	1115
4:30 PM		428	150		351	83			60			141	1213
4:45 PM		388	151		353	69			63			113	1137
5:00 PM		452	184		379	69			69			146	1299
5:15 PM		475	173		394	71			51			125	1289
5:30 PM		502	148		375	61			60			129	1275
5:45 PM		402	125		365	70			66			125	1153
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	3406	1255	0	2887	558	0	0	506	0	0	1029	9641
APPROACH %'s :	0.00%	73.07%	26.93%	0.00%	83.80%	16.20%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	0	1831	630	0	1513	271	0	0	246	0	0	525	5016
PEAK HR FACTOR :		0.947			0.959			0.891			0.899		0.965

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-027 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			I-405 SB Ramps			I-405 SB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 3	NR 0	SL 0	ST 3	SR 1	EL 0	ET 0	ER 1	WL 0	WT 0	WR 1	TOTAL
7:00 AM		262			281	242			48			16	849
7:15 AM		286			385	253			34			13	971
7:30 AM		297			451	259			46			14	1067
7:45 AM		298			446	250			53			12	1059
8:00 AM		342			363	234			43			14	996
8:15 AM		296			409	233			49			9	996
8:30 AM		304			358	236			57			11	966
8:45 AM		265			360	215			68			10	918
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	2350	0	0	3053	1922	0	0	398	0	0	99	7822
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	61.37%	38.63%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	0	1233	0	0	1669	976	0	0	191	0	0	49	4118
PEAK HR FACTOR :		0.901			0.931			0.901			0.875		0.965

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-027 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			I-405 SB Ramps			I-405 SB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 3	NR 0	SL 0	ST 3	SR 1	EL 0	ET 0	ER 1	WL 0	WT 0	WR 1	TOTAL
4:00 PM		513			262	142			157			40	1114
4:15 PM		485			273	134			174			46	1112
4:30 PM		514			276	132			188			65	1175
4:45 PM		475			308	130			196			45	1154
5:00 PM		581			306	137			178			65	1267
5:15 PM		582			302	155			176			62	1277
5:30 PM		573			295	136			169			52	1225
5:45 PM		457			324	118			183			50	1132
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4180	0	0	2346	1084	0	0	1421	0	0	425	9456
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	68.40%	31.60%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	0	2211	0	0	1211	558	0	0	719	0	0	224	4923
PEAK HR FACTOR :		0.950			0.968			0.917			0.862		0.964

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-027 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			I-405 SB Ramps			I-405 SB Ramps			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 0	NT 3	NR 0	SL 0	ST 3	SR 1	EL 0	ET 0	ER 1	WL 0	WT 0	WR 1	TOTAL
10:30 AM		277			341	165			126			25	934
10:45 AM		311			310	140			153			35	949
11:00 AM		311			305	134			138			34	922
11:15 AM		322			389	133			125			35	1004
11:30 AM		326			384	134			126			30	1000
11:45 AM		372			388	157			124			30	1071
12:00 PM		394			401	121			109			26	1051
12:15 PM		350			396	163			119			29	1057
12:30 PM		419			407	160			116			33	1135
12:45 PM		333			358	124			157			37	1009
1:00 PM		389			372	164			137			42	1104
1:15 PM		347			399	154			135			43	1078
1:30 PM		395			389	155			133			38	1110
1:45 PM		357			407	171			141			35	1111
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	0	4903	0	0	5246	2075	0	0	1839	0	0	472	14535
APPROACH %'s :	0.00%	100.00%	0.00%	0.00%	71.66%	28.34%	0.00%	0.00%	100.00%	0.00%	0.00%	100.00%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	0	1488	0	0	1567	644	0	0	546	0	0	158	4403
PEAK HR FACTOR :		0.942			0.956			0.968			0.919		0.991

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : No control

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-028 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Talbert Ave			Talbert Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
7:00 AM	25	245	118	124	125	70	31	345	15	34	60	23	1215
7:15 AM	23	246	124	137	218	63	24	352	13	35	55	19	1309
7:30 AM	52	295	99	151	205	110	38	327	17	39	127	22	1482
7:45 AM	36	229	86	157	279	108	47	349	22	39	113	14	1479
8:00 AM	12	269	117	153	209	55	31	335	28	49	67	26	1351
8:15 AM	20	250	118	189	262	83	19	314	23	47	59	18	1402
8:30 AM	23	263	120	143	243	63	35	311	23	46	53	19	1342
8:45 AM	25	209	105	129	245	91	28	301	38	40	52	17	1280
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	216	2006	887	1183	1786	643	253	2634	179	329	586	158	10860
APPROACH %'s :	6.95%	64.52%	28.53%	32.75%	49.45%	17.80%	8.25%	85.91%	5.84%	30.66%	54.61%	14.73%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	120	1043	420	650	955	356	135	1325	90	174	366	80	5714
PEAK HR FACTOR :		0.887			0.901			0.927			0.824		0.964

UTURNS			
NB	SB	EB	WB
0	3	0	9
1	3	0	18
2	6	0	9
1	7	0	8
0	8	0	7
0	8	2	7
1	5	0	4
NB	SB	EB	WB
5	40	2	62

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-028 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Talbert Ave			Talbert Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
10:30 AM	21	246	103	65	294	84	46	179	39	43	63	17	1200
10:45 AM	26	222	96	65	317	61	51	189	42	56	80	34	1239
11:00 AM	24	244	82	50	334	79	30	128	24	37	72	31	1135
11:15 AM	28	216	87	83	338	72	44	164	46	64	96	41	1279
11:30 AM	36	274	93	80	422	84	49	139	43	81	87	47	1435
11:45 AM	43	254	100	76	354	87	47	152	41	78	95	49	1376
12:00 PM	32	291	93	60	420	104	47	154	45	72	90	61	1469
12:15 PM	45	245	95	82	362	83	48	175	47	72	98	64	1416
12:30 PM	37	337	127	74	373	92	41	137	59	59	88	37	1461
12:45 PM	41	277	125	74	338	99	66	205	50	61	96	49	1481
1:00 PM	34	344	133	79	415	100	39	154	42	50	88	44	1522
1:15 PM	51	273	99	74	356	108	32	192	39	64	88	36	1412
1:30 PM	37	322	117	67	379	94	53	158	28	43	77	40	1415
1:45 PM	54	288	101	61	333	110	37	181	46	64	116	45	1436
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	509	3833	1451	990	5035	1257	630	2307	591	844	1234	595	19276
APPROACH %'s :	8.79%	66.17%	25.05%	13.60%	69.14%	17.26%	17.86%	65.39%	16.75%	31.58%	46.17%	22.26%	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	157	1203	480	309	1488	374	194	671	198	242	370	194	5880
PEAK HR FACTOR :		0.900			0.914			0.828			0.861		0.966

UTURNS			
NB	SB	EB	WB
2	19	3	3
3	15	1	4
5	10	1	1
4	16	1	2
7	15	2	7
6	19	1	3
4	19	0	5
6	19	0	7
4	20	0	6
4	23	1	5
2	19	0	5
5	11	0	8
2	15	2	5
8	10	3	4
NB	SB	EB	WB
62	230	15	65

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-028 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Talbert Ave			Talbert Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 1	SL 2	ST 3	SR 1	EL 2	ET 3	ER 1	WL 2	WT 2	WR 1	TOTAL
4:00 PM	59	381	92	50	363	55	60	160	29	54	241	110	1654
4:15 PM	44	321	82	61	344	61	53	176	36	45	271	129	1623
4:30 PM	48	372	73	48	313	61	56	149	42	53	249	120	1584
4:45 PM	36	311	78	63	366	64	42	151	33	71	283	102	1600
5:00 PM	49	370	89	56	336	67	70	148	45	53	238	114	1635
5:15 PM	53	375	69	56	324	56	46	182	41	71	285	133	1691
5:30 PM	54	388	78	62	366	57	54	154	37	48	253	112	1663
5:45 PM	36	312	71	58	358	67	47	135	43	59	285	111	1582
TOTAL VOLUMES :	NL 379	NT 2830	NR 632	SL 454	ST 2770	SR 488	EL 428	ET 1255	ER 306	WL 454	WT 2105	WR 931	TOTAL 13032
APPROACH %'s :	9.87%	73.68%	16.45%	12.23%	74.62%	13.15%	21.52%	63.10%	15.38%	13.01%	60.32%	26.68%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	192	1444	314	237	1392	244	212	635	156	243	1059	461	6589
PEAK HR FACTOR :		0.938			0.950			0.932			0.901		0.974

UTURNS	NB	SB	EB	WB
4:00 PM	5	11		
4:15 PM	3	13		
4:30 PM	3	16		
4:45 PM	2	17		
5:00 PM	3	21		
5:15 PM	1	8		
5:30 PM	7	19		
5:45 PM	2	18		
TOTAL	NB 26	SB 123	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-029 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Stonefield Dr			Stonefield Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 0.3	ET 0.3	ER 0.3	WL 0	WT 1	WR 0	TOTAL
7:00 AM	3	311	0	2	182	24	0	0	0	3		8	533
7:15 AM	6	443	1	1	208	34	3	0	1	1		6	704
7:30 AM	4	406	1	5	235	19	17	0	7	2		7	703
7:45 AM	8	367	0	5	308	27	7	0	7	1		5	735
8:00 AM	16	340	2	2	313	36	0	1	3	0		2	715
8:15 AM	8	410	1	7	302	41	2	0	2	2		5	780
8:30 AM	7	323	0	2	276	37	5	0	1	1		1	653
8:45 AM	14	342	0	4	383	36	4	0	2	0		2	787
TOTAL VOLUMES :	NL 66	NT 2942	NR 5	SL 28	ST 2207	SR 254	EL 38	ET 1	ER 23	WL 10	WT 0	WR 36	TOTAL 5610
APPROACH %'s :	2.19%	97.64%	0.17%	1.12%	88.67%	10.20%	61.29%	1.61%	37.10%	21.74%	0.00%	78.26%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	45	1415	3	15	1274	150	11	1	8	3	0	10	2935
PEAK HR FACTOR :		0.873			0.850			0.833			0.464		0.932

UTURNS	NB	SB	EB	WB
7:00 AM	0	1		
7:15 AM	0	1		
7:30 AM	1	5		
7:45 AM	0	2		
8:00 AM	5	2		
8:15 AM	0	5		
8:30 AM	0	1		
8:45 AM	0	2		
TOTAL	NB 6	SB 19	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-029 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Stonefield Dr			Stonefield Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 0.3	ET 0.3	ER 0.3	WL 0	WT 1	WR 0	TOTAL
10:30 AM	4	287	2	5	390	20	8		5	0		1	722
10:45 AM	8	278	1	9	399	21	10		5	0		2	733
11:00 AM	12	321	1	9	407	24	15		4	0		6	799
11:15 AM	8	404	0	11	423	18	7		4	2		1	878
11:30 AM	8	385	0	17	448	21	17		10	1		3	910
11:45 AM	10	368	0	12	500	10	16		8	2		1	927
12:00 PM	8	413	0	7	533	17	17		5	2		1	1003
12:15 PM	5	431	0	17	478	17	7		9	0		4	968
12:30 PM	6	409	2	8	442	13	21		6	2		2	911
12:45 PM	10	452	3	7	488	16	22		6	0		1	1005
1:00 PM	5	419	4	14	448	12	14		3	1		2	922
1:15 PM	7	416	2	8	431	18	9		7	1		3	902
1:30 PM	5	427	2	10	457	10	16		6	2		0	935
1:45 PM	10	419	3	14	464	14	15		7	0		3	949
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	106	5429	20	148	6308	231	194	0	85	13	0	30	12564
APPROACH %'s :	1.91%	97.73%	0.36%	2.21%	94.33%	3.45%	69.53%	0.00%	30.47%	30.23%	0.00%	69.77%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	29	1705	5	39	1941	63	67	0	26	4	0	8	3887
PEAK HR FACTOR :		0.935			0.917			0.830			0.750		0.967

UTURNS			
NB	SB	EB	WB
2	5		
4	8		
1	7		
3	10		
1	14		
1	8		
3	6		
1	11		
1	8		
0	7		
0	9		
1	6		
2	5		
3	9		
NB	SB	EB	WB
23	113	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-029 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Stonefield Dr			Stonefield Dr			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 0.3	ET 0.3	ER 0.3	WL 0	WT 1	WR 0	TOTAL
4:00 PM	8	397	2	7	402	4	26		13	2		1	862
4:15 PM	4	448	1	11	432	5	14		8	1		2	926
4:30 PM	2	393	1	12	400	4	29		12	1		0	854
4:45 PM	4	448	0	13	443	3	18		4	3		3	939
5:00 PM	0	438	2	5	397	4	32		2	4		2	886
5:15 PM	4	468	1	11	459	7	19		9	1		1	980
5:30 PM	9	425	6	5	465	9	15		10	3		6	953
5:45 PM	9	466	7	8	453	5	17		7	0		2	974
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	40	3483	20	72	3451	41	170	0	65	15	0	17	7374
APPROACH %'s :	1.13%	98.31%	0.56%	2.02%	96.83%	1.15%	72.34%	0.00%	27.66%	46.88%	0.00%	53.13%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	22	1797	16	29	1774	25	83	0	28	8	0	11	3793
PEAK HR FACTOR :		0.952			0.954			0.816			0.528		0.968

UTURNS			
NB	SB	EB	WB
2	5		
2	5		
0	6		
2	5		
0	3		
2	8		
6	3		
5	3		
NB	SB	EB	WB
19	38	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-030 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Quail Ave			Quail Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 0.5	ET 0.5	ER 1	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	4	293	1	4	163	10	11	0	2	0	1	7	496	0	1		
7:15 AM	1	408	2	2	199	4	7	1	2	2	1	17	646	0	1		
7:30 AM	1	338	0	3	234	12	20	0	5	2	0	12	627	0	2		
7:45 AM	5	344	0	4	284	17	12	0	7	4	0	7	684	0	0		
8:00 AM	6	319	2	4	280	30	26	0	4	3	1	7	682	0	2		
8:15 AM	6	390	2	7	220	25	11	1	2	5	0	8	677	0	2		
8:30 AM	7	337	3	3	245	17	21	0	6	1	0	12	652	1	2		
8:45 AM	5	321	2	5	315	20	18	0	7	1	0	7	701	2	4		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	35	2750	12	32	1940	135	126	2	35	18	3	77	5165	3	14	0	0
APPROACH %'s :	1.25%	98.32%	0.43%	1.52%	92.07%	6.41%	77.30%	1.23%	21.47%	18.37%	3.06%	78.57%					
PEAK HR START TIME :	800 AM												TOTAL				
PEAK HR VOL :	24	1367	9	19	1060	92	76	1	19	10	1	34	2712				
PEAK HR FACTOR :		0.879			0.861			0.800			0.865		0.967				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-030 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Quail Ave			Quail Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 0.5	ET 0.5	ER 1	WL 0	WT 1	WR 0	TOTAL	NB	SB	EB	WB
10:30 AM	9	305	0	6	284	40	38	2	18	0	0	0	702	1	4		
10:45 AM	9	297	2	6	308	59	31	0	13	3	0	7	735	1	2		
11:00 AM	12	267	1	3	320	40	44	0	15	2	0	3	707	2	3		
11:15 AM	11	306	2	6	352	55	45	1	17	2	0	3	800	1	3		
11:30 AM	11	324	3	7	397	80	31	1	25	1	1	5	886	2	4		
11:45 AM	20	315	1	7	385	65	65	1	18	1	0	3	881	4	3		
12:00 PM	15	334	8	11	427	72	53	2	18	3	0	4	947	3	10		
12:15 PM	16	304	3	7	387	65	60	0	28	1	0	5	876	2	3		
12:30 PM	14	379	2	7	406	57	52	0	17	3	0	3	940	3	4		
12:45 PM	14	340	3	5	369	55	82	0	17	2	1	4	892	5	5		
1:00 PM	15	375	1	9	394	57	74	1	18	4	0	5	953	5	3		
1:15 PM	15	349	1	9	347	56	71	2	26	3	0	2	881	4	7		
1:30 PM	15	361	4	8	363	35	59	1	28	1	0	8	883	5	3		
1:45 PM	8	344	1	9	353	56	53	0	20	0	1	3	848	3	5		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	184	4600	32	100	5092	792	758	11	278	26	3	55	11931	41	59	0	0
APPROACH %'s :	3.82%	95.51%	0.66%	1.67%	85.09%	13.24%	72.40%	1.05%	26.55%	30.95%	3.57%	65.48%					
PEAK HR START TIME :	1230 PM												TOTAL				
PEAK HR VOL :	58	1443	7	30	1516	225	279	3	78	12	1	14	3666				
PEAK HR FACTOR :		0.954			0.942			0.909			0.750		0.962				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-030 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Quail Ave			Quail Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 0.5	ET 0.5	ER 1	WL 0	WT 1	WR 0	TOTAL
4:00 PM	15	360	3	9	385	44	45	3	8	4	0	4	880
4:15 PM	15	399	2	8	369	44	52	2	14	2	1	0	908
4:30 PM	9	360	1	8	365	41	45	1	15	3	1	4	853
4:45 PM	18	384	1	3	370	63	46	3	27	3	0	3	921
5:00 PM	22	373	2	8	414	51	52	2	27	2	0	1	954
5:15 PM	17	461	5	6	339	51	58	2	19	5	1	3	967
5:30 PM	16	369	3	15	403	65	58	3	21	2	1	3	959
5:45 PM	14	385	3	11	394	46	52	1	15	4	1	3	929
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	126	3091	20	68	3039	405	408	17	146	25	5	21	7371
APPROACH %'s :	3.89%	95.49%	0.62%	1.94%	86.53%	11.53%	71.45%	2.98%	25.57%	49.02%	9.80%	41.18%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	69	1588	13	40	1550	213	220	8	82	13	3	10	3809
PEAK HR FACTOR :		0.864			0.933			0.945			0.722		0.985

UTURNS	NB	SB	EB	WB
4:00 PM	2	6		
4:15 PM	4	3		
4:30 PM	2	3		
4:45 PM	1	2		
5:00 PM	4	3		
5:15 PM	4	2		
5:30 PM	2	3		
5:45 PM	2	2		
TOTAL	NB 21	SB 24	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-031 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Ellis Ave			Ellis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 1	SL 1	ST 3	SR 1	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL
7:00 AM	7	227	35	15	128	19	70	217	11	16	42	24	811
7:15 AM	11	292	47	17	133	23	59	185	17	21	73	26	904
7:30 AM	24	284	49	26	183	33	66	229	17	28	70	34	1043
7:45 AM	18	286	48	36	203	47	64	232	22	49	94	25	1124
8:00 AM	10	256	49	51	186	30	67	230	3	36	66	42	1026
8:15 AM	18	276	50	20	169	32	74	207	15	34	111	42	1048
8:30 AM	11	245	43	22	170	41	71	188	23	21	70	39	944
8:45 AM	17	302	29	12	195	28	55	144	17	49	72	23	943
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	116	2168	350	199	1367	253	526	1632	125	254	598	255	7843
APPROACH %'s :	4.40%	82.31%	13.29%	10.94%	75.15%	13.91%	23.04%	71.48%	5.48%	22.94%	54.02%	23.04%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	70	1102	196	133	741	142	271	898	57	147	341	143	4241
PEAK HR FACTOR :		0.958			0.888			0.964			0.844		0.943

UTURNS	NB	SB	EB	WB
4:00 AM	0	0		
7:15 AM	0	1		
7:30 AM	1	3		
7:45 AM	1	2		
8:00 AM	0	6		
8:15 AM	3	3		
8:30 AM	0	3		
8:45 AM	2	2		
TOTAL	NB 7	SB 20	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-031 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Ellis Ave			Ellis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 1	SL 1	ST 3	SR 1	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL
10:30 AM	18	193	26	24	257	43	70	128	19	39	90	15	922
10:45 AM	26	188	24	25	204	49	46	164	38	24	120	17	925
11:00 AM	22	223	31	19	250	36	73	106	23	58	88	33	962
11:15 AM	17	210	36	28	292	57	50	101	24	44	81	22	962
11:30 AM	21	206	33	44	297	49	57	99	17	50	100	39	1012
11:45 AM	25	246	35	22	290	41	74	89	21	57	100	31	1031
12:00 PM	18	243	45	40	263	42	52	120	17	74	116	32	1062
12:15 PM	19	209	60	36	325	55	73	124	19	59	98	30	1107
12:30 PM	21	229	35	40	277	45	93	133	31	66	111	29	1110
12:45 PM	21	252	40	44	288	56	60	135	27	51	94	24	1092
1:00 PM	25	207	45	40	293	35	51	128	14	62	99	31	1030
1:15 PM	25	248	45	46	321	43	69	104	11	53	104	30	1099
1:30 PM	36	241	34	32	276	47	73	109	23	61	100	25	1057
1:45 PM	16	265	36	51	336	58	50	116	23	48	100	22	1121
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	310	3160	525	491	3969	656	891	1656	307	746	1401	380	14492
APPROACH %'s :	7.76%	79.10%	13.14%	9.60%	77.58%	12.82%	31.22%	58.02%	10.76%	29.52%	55.44%	15.04%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	79	933	180	160	1153	198	278	512	94	250	419	115	4371
PEAK HR FACTOR :		0.952			0.908			0.860			0.883		0.984

UTURNS			
NB	SB	EB	WB
1	6		
4	4		
2	4		
0	6		
0	12		
1	9		
2	5		
3	7		
1	10		
1	9		
1	14		
3	9		
3	12		
0	10		
NB	SB	EB	WB
22	117	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-031 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Ellis Ave			Ellis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 1	SL 1	ST 3	SR 1	EL 2	ET 2	ER 0	WL 2	WT 2	WR 0	TOTAL
4:00 PM	30	273	33	48	264	38	68	122	23	59	174	26	1158
4:15 PM	27	313	31	40	272	36	64	98	26	54	143	27	1131
4:30 PM	27	257	33	36	279	49	65	143	20	67	174	34	1184
4:45 PM	27	308	27	28	294	49	58	110	23	70	164	24	1182
5:00 PM	22	291	32	41	296	50	69	127	24	87	148	30	1217
5:15 PM	27	349	27	38	272	57	50	126	15	92	161	29	1243
5:30 PM	33	298	36	37	328	38	73	118	26	77	190	26	1280
5:45 PM	24	332	33	38	295	37	56	101	22	76	168	23	1205
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	217	2421	252	306	2300	354	503	945	179	582	1322	219	9600
APPROACH %'s :	7.51%	83.77%	8.72%	10.34%	77.70%	11.96%	30.92%	58.08%	11.00%	27.41%	62.27%	10.32%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	106	1270	128	154	1191	182	248	472	87	332	667	108	4945
PEAK HR FACTOR :		0.933			0.947			0.917			0.945		0.966

UTURNS			
NB	SB	EB	WB
0	7		
1	2		
3	6		
2	6		
2	7		
1	4		
1	9		
1	2		
NB	SB	EB	WB
11	43	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-032 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Garfield Ave			Garfield Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
7:00 AM	9	234	15	6	107	22	48	53	5	18	22	8	547
7:15 AM	8	219	10	15	130	21	48	70	16	22	19	16	594
7:30 AM	20	267	11	4	173	20	52	83	17	30	25	22	724
7:45 AM	21	296	33	18	221	25	53	80	22	32	33	13	847
8:00 AM	11	245	19	13	207	33	63	102	23	34	57	11	818
8:15 AM	18	280	12	15	203	32	63	118	20	41	45	22	869
8:30 AM	25	254	16	21	164	39	50	76	19	25	29	14	732
8:45 AM	24	276	18	19	232	37	59	79	27	28	40	10	849
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	136	2071	134	111	1437	229	436	661	149	230	270	116	5980
APPROACH %'s :	5.81%	88.47%	5.72%	6.25%	80.87%	12.89%	34.99%	53.05%	11.96%	37.34%	43.83%	18.83%	
PEAK HR START TIME :	800 AM												TOTAL
PEAK HR VOL :	78	1055	65	68	806	141	235	375	89	128	171	57	3268
PEAK HR FACTOR :		0.942			0.881			0.869			0.824		0.940

UTURNS	NB	SB	EB	WB
	2	0	1	
	0	4	2	
	2	1	0	
	1	5	0	
	2	0	1	
	1	0	1	
	6	0	2	
	4	4	2	
	NB	SB	EB	WB
	18	14	9	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-032 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Garfield Ave			Garfield Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL
10:30 AM	26	177	12	13	218	44	47	71	18	29	33	12	700
10:45 AM	23	171	16	17	231	44	55	57	23	29	31	14	711
11:00 AM	22	257	21	21	229	44	61	48	26	31	35	20	815
11:15 AM	15	168	14	20	148	27	19	32	9	15	25	13	505
11:30 AM	25	322	22	34	263	42	47	61	14	35	33	18	916
11:45 AM	32	254	25	34	249	60	42	52	30	36	38	33	885
12:00 PM	34	298	26	30	272	48	60	65	35	57	60	21	1006
12:15 PM	24	291	25	48	288	55	49	49	26	37	41	34	967
12:30 PM	43	249	31	49	249	58	67	63	28	39	65	33	974
12:45 PM	37	280	27	42	298	53	53	54	22	43	53	22	984
1:00 PM	30	255	19	43	315	50	36	58	28	51	44	23	952
1:15 PM	38	271	22	29	279	51	55	75	24	45	43	22	954
1:30 PM	21	252	21	32	297	59	44	64	27	44	42	19	922
1:45 PM	44	269	19	34	283	51	38	64	28	36	42	27	935
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	414	3514	300	446	3619	686	673	813	338	527	585	311	12226
APPROACH %'s :	9.79%	83.11%	7.10%	9.39%	76.17%	14.44%	36.90%	44.57%	18.53%	37.03%	41.11%	21.86%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	138	1118	109	169	1107	214	229	231	111	176	219	110	3931
PEAK HR FACTOR :		0.953			0.948			0.892			0.915		0.977

UTURNS	NB	SB	EB	WB
	8	1	4	0
	4	2	2	0
	5	3	1	0
	5	7	1	0
	4	13	1	0
	8	14	2	0
	10	9	1	1
	7	15	4	0
	12	15	3	0
	9	9	4	0
	8	17	4	0
	5	9	1	0
	6	11	3	1
	4	10	0	1
	NB	SB	EB	WB
	95	135	31	3

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-032 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Garfield Ave			Garfield Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 1	ET 2	ER 0	WL 1	WT 2	WR 1	TOTAL	NB	SB	EB	WB
4:00 PM	34	325	19	15	262	50	48	35	20	40	43	24	915	9	1	2	
4:15 PM	49	307	26	21	271	45	30	51	33	46	67	19	965	9	5	0	
4:30 PM	35	316	19	28	259	56	36	39	33	47	54	29	951	5	8	1	
4:45 PM	42	320	18	26	252	47	46	61	33	46	63	19	973	8	4	1	
5:00 PM	49	354	19	29	305	57	39	47	25	46	62	34	1066	10	10	3	
5:15 PM	48	354	22	24	272	64	47	60	40	40	60	20	1051	7	3	4	
5:30 PM	45	352	18	24	320	68	45	43	38	53	57	23	1086	3	7	3	
5:45 PM	53	354	27	14	254	43	40	46	23	42	38	29	963	6	7	4	
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	355	2682	168	181	2195	430	331	382	245	360	444	197	7970	57	45	18	0
APPROACH %'s :	11.08%	83.68%	5.24%	6.45%	78.23%	15.32%	34.55%	39.87%	25.57%	35.96%	44.36%	19.68%					
PEAK HR START TIME :	445 PM												TOTAL				
PEAK HR VOL :	184	1380	77	103	1149	236	177	211	136	185	242	96	4176				
PEAK HR FACTOR :		0.968			0.903			0.891			0.921		0.961				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-033 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Yorktown Ave			Yorktown Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL	NB	SB	EB	WB
7:00 AM	8	215	21	2	117	17	41	79	23	13	35	11	582	1	0		
7:15 AM	7	217	17	1	168	22	38	86	27	19	32	8	642	0	1		
7:30 AM	23	228	27	2	174	36	44	108	39	19	34	9	743	0	0		
7:45 AM	20	208	22	3	211	34	51	96	32	29	81	16	803	0	0		
8:00 AM	31	223	32	2	201	40	54	113	34	28	63	8	829	1	0		
8:15 AM	18	231	32	3	206	40	49	118	48	32	50	12	839	0	3		
8:30 AM	12	219	27	5	195	27	42	80	24	27	26	11	695	0	2		
8:45 AM	16	239	28	6	227	40	38	52	34	22	34	4	740	0	2		
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	135	1780	206	24	1499	256	357	732	261	189	355	79	5873	2	8	0	0
APPROACH %'s :	6.36%	83.92%	9.71%	1.35%	84.26%	14.39%	26.44%	54.22%	19.33%	30.34%	56.98%	12.68%					
PEAK HR START TIME :	730 AM												TOTAL				
PEAK HR VOL :	92	890	113	10	792	150	198	435	153	108	228	45	3214				
PEAK HR FACTOR :		0.957			0.956			0.914			0.756		0.958				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-033 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Yorktown Ave			Yorktown Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
10:30 AM	12	156	14	7	221	31	29	53	23	30	31	6	613
10:45 AM	17	158	8	0	222	38	36	43	20	30	35	9	616
11:00 AM	19	252	21	2	213	41	33	34	17	22	40	3	697
11:15 AM	13	260	17	6	224	34	38	54	19	22	26	5	718
11:30 AM	27	251	18	5	231	43	45	50	23	26	37	7	763
11:45 AM	21	241	15	5	247	47	40	31	21	23	44	7	742
12:00 PM	17	260	19	6	267	40	46	64	38	28	48	9	842
12:15 PM	19	265	30	7	271	36	38	50	19	38	42	8	823
12:30 PM	18	227	17	5	225	46	36	55	32	30	41	5	737
12:45 PM	26	251	19	8	287	37	43	41	24	28	40	11	815
1:00 PM	21	238	10	7	297	57	42	57	30	32	31	7	829
1:15 PM	20	288	29	2	305	43	41	40	21	22	42	6	859
1:30 PM	26	228	22	5	298	51	40	48	18	34	38	3	811
1:45 PM	30	252	19	7	277	47	37	38	26	31	85	4	853
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	286	3327	258	72	3585	591	544	658	331	396	580	90	10718
APPROACH %'s :	7.39%	85.95%	6.66%	1.69%	84.39%	13.91%	35.49%	42.92%	21.59%	37.15%	54.41%	8.44%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	97	1006	80	21	1177	198	160	183	95	119	196	20	3352
PEAK HR FACTOR :		0.878			0.967			0.849			0.698		0.976

UTURNS			
NB	SB	EB	WB
0	3		
0	0		
0	0		
1	4		
1	2		
1	1		
2	3		
3	2		
0	2		
3	3		
1	1		
0	0		
1	1		
2	3		
NB	SB	EB	WB
15	25	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-033 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Yorktown Ave			Yorktown Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 2	ER 0	WL 1	WT 2	WR 0	TOTAL
4:00 PM	26	296	24	10	268	35	43	55	42	26	59	7	891
4:15 PM	48	365	29	9	289	55	39	54	30	30	62	4	1014
4:30 PM	22	320	26	11	264	36	32	53	27	36	69	7	903
4:45 PM	46	383	34	7	274	52	35	47	24	35	58	7	1002
5:00 PM	38	342	21	10	285	57	41	65	28	44	60	8	999
5:15 PM	38	331	29	5	254	44	31	51	34	31	67	9	924
5:30 PM	42	325	23	7	265	47	35	59	30	37	70	10	950
5:45 PM	46	330	27	10	270	44	36	57	37	32	66	6	961
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	306	2692	213	69	2169	370	292	441	252	271	511	58	7644
APPROACH %'s :	9.53%	83.84%	6.63%	2.65%	83.17%	14.19%	29.64%	44.77%	25.58%	32.26%	60.83%	6.90%	
PEAK HR START TIME :	415 PM												TOTAL
PEAK HR VOL :	154	1410	110	37	1112	200	147	219	109	145	249	26	3918
PEAK HR FACTOR :		0.904			0.955			0.886			0.938		0.966

UTURNS			
NB	SB	EB	WB
0	3		
1	2		
0	5		
0	2		
0	3		
2	1		
0	0		
0	0		
NB	SB	EB	WB
3	16	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-034 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Adams Ave			Adams Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 0	SL 2	ST 3	SR 0	EL 2	ET 3	ER 1	WL 2	WT 3	WR 1	TOTAL
7:00 AM	7	139	44	51	99	8	44	325	8	20	86	29	860
7:15 AM	9	157	76	62	111	20	49	384	10	23	98	42	1041
7:30 AM	16	151	63	89	156	20	44	479	13	39	140	52	1262
7:45 AM	21	181	83	91	165	36	55	448	13	53	150	28	1324
8:00 AM	21	154	47	107	177	65	57	381	18	49	187	46	1309
8:15 AM	22	171	74	95	178	34	78	422	27	58	118	28	1305
8:30 AM	25	150	55	84	140	26	58	428	23	38	123	39	1189
8:45 AM	27	153	74	77	150	31	63	363	33	30	130	38	1169
TOTAL VOLUMES :	NL 148	NT 1256	NR 516	SL 656	ST 1176	SR 240	EL 448	ET 3230	ER 145	WL 310	WT 1032	WR 302	TOTAL 9459
APPROACH %'s :	7.71%	65.42%	26.88%	31.66%	56.76%	11.58%	11.72%	84.49%	3.79%	18.86%	62.77%	18.37%	
PEAK HR START TIME :	730 AM												TOTAL
PEAK HR VOL :	80	657	267	382	676	155	234	1730	71	199	595	154	5200
PEAK HR FACTOR :		0.881			0.869			0.949			0.840		0.982

UTURNS	NB	SB	EB	WB
7:00 AM	0	1	0	3
7:15 AM	0	0	0	1
7:30 AM	0	1	2	2
7:45 AM	2	0	0	1
8:00 AM	1	1	0	2
8:15 AM	1	1	1	4
8:30 AM	1	2	0	1
8:45 AM	1	0	0	2
TOTAL	NB 6	SB 6	EB 3	WB 16

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-034 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Adams Ave			Adams Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 0	SL 2	ST 3	SR 0	EL 2	ET 3	ER 1	WL 2	WT 3	WR 1	TOTAL
10:30 AM	35	130	40	53	133	30	62	187	21	39	107	49	886
10:45 AM	32	103	34	74	142	29	48	232	24	52	144	37	951
11:00 AM	44	153	27	54	150	33	56	167	16	45	153	44	942
11:15 AM	51	138	27	55	133	36	58	172	19	36	142	47	914
11:30 AM	50	156	34	61	160	35	59	191	27	57	169	48	1047
11:45 AM	47	138	26	69	156	41	70	174	23	50	182	32	1008
12:00 PM	55	152	28	77	187	42	70	158	20	43	198	57	1087
12:15 PM	43	171	31	71	161	43	79	179	20	40	167	44	1049
12:30 PM	38	177	42	80	165	40	69	175	25	55	201	63	1130
12:45 PM	36	131	27	80	199	48	75	172	19	59	205	56	1107
1:00 PM	50	141	26	75	186	47	51	144	26	44	204	51	1045
1:15 PM	51	135	32	57	194	57	65	185	14	53	185	48	1076
1:30 PM	29	163	35	82	215	33	83	198	18	54	160	54	1124
1:45 PM	44	147	29	69	176	28	43	200	22	41	195	55	1049
TOTAL VOLUMES :	NL 605	NT 2035	NR 438	SL 957	ST 2357	SR 542	EL 888	ET 2534	ER 294	WL 668	WT 2412	WR 685	TOTAL 14415
APPROACH %'s :	19.66%	66.11%	14.23%	24.82%	61.13%	14.06%	23.90%	68.19%	7.91%	17.74%	64.06%	18.19%	
PEAK HR START TIME :	1200 PM												TOTAL
PEAK HR VOL :	172	631	128	308	712	173	293	684	84	197	771	220	4373
PEAK HR FACTOR :		0.906			0.912			0.954			0.928		0.967

UTURNS	NB	SB	EB	WB
10:30 AM	10	7	0	2
10:45 AM	1	11	2	4
11:00 AM	3	4	2	0
11:15 AM	5	6	0	2
11:30 AM	5	4	0	4
11:45 AM	8	4	0	4
12:00 PM	3	9	1	0
12:15 PM	9	7	1	4
12:30 PM	3	4	0	3
12:45 PM	4	7	1	3
1:00 PM	1	4	2	0
1:15 PM	6	1	0	2
1:30 PM	2	5	3	5
1:45 PM	6	3	0	3
TOTAL	NB 66	SB 76	EB 12	WB 36

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-034 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Adams Ave			Adams Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 2	NT 3	NR 0	SL 2	ST 3	SR 0	EL 2	ET 3	ER 1	WL 2	WT 3	WR 1	TOTAL
4:00 PM	50	199	40	60	195	30	60	184	25	74	380	106	1403
4:15 PM	74	211	31	84	208	46	60	141	26	52	401	78	1412
4:30 PM	50	219	36	67	177	46	64	188	31	56	388	100	1422
4:45 PM	50	199	30	82	182	36	59	195	21	54	431	100	1439
5:00 PM	51	235	40	63	224	52	68	155	27	60	402	82	1459
5:15 PM	45	221	36	88	199	45	68	210	35	68	458	109	1582
5:30 PM	78	222	37	81	222	43	70	195	31	81	395	77	1532
5:45 PM	87	195	31	72	205	39	68	187	30	72	468	86	1540
TOTAL VOLUMES :	NL 485	NT 1701	NR 281	SL 597	ST 1612	SR 337	EL 517	ET 1455	ER 226	WL 517	WT 3323	WR 738	TOTAL 11789
APPROACH %'s :	19.66%	68.95%	11.39%	23.45%	63.32%	13.24%	23.52%	66.20%	10.28%	11.29%	72.59%	16.12%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	261	873	144	304	850	179	274	747	123	281	1723	354	6113
PEAK HR FACTOR :		0.948			0.963			0.914			0.928		0.966

UTURNS	NB	SB	EB	WB
	3	1	0	0
	9	1	2	0
	10	1	3	0
	2	0	1	0
	6	1	0	0
	9	0	1	5
	12	0	0	0
	4	0	2	0
	NB 55	SB 4	EB 9	WB 5

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1162-001 **Day:** Tuesday

City: Huntington Beach **Date:** 6/24/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Indianapolis Ave			Indianapolis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 0	ST 3	SR 0	EL 2	ET 0	ER 1	WL 0	WT 0	WR 0	TOTAL
7:00 AM	1	135			109	6	19		4				274
7:15 AM	2	181			132	5	23		7				350
7:30 AM	5	184			163	7	38		7				404
7:45 AM	5	214			184	13	32		7				455
8:00 AM	4	211			153	8	45		12				433
8:15 AM	11	210			162	10	30		11				434
8:30 AM	9	213			188	14	37		18				479
8:45 AM	5	214			161	11	28		9				428
TOTAL VOLUMES :	NL 42	NT 1562	NR 0	SL 0	ST 1252	SR 74	EL 252	ET 0	ER 75	WL 0	WT 0	WR 0	TOTAL 3257
APPROACH %'s :	2.62%	97.38%	0.00%	0.00%	94.42%	5.58%	77.06%	0.00%	22.94%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	29	848	0	0	687	45	144	0	48	0	0	0	1801
PEAK HR FACTOR :		0.988			0.906			0.842			0.000		0.940

UTURNS	NB	SB	EB	WB
	NB 0	SB 0	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1162-001 **Day:** Tuesday

City: Huntington Beach **Date:** 6/24/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Indianapolis Ave			Indianapolis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 0	ST 3	SR 0	EL 2	ET 0	ER 1	WL 0	WT 0	WR 0	TOTAL
10:30 AM	6	173			135	15	26		10				365
10:45 AM	13	194			174	18	15		7				421
11:00 AM	7	193			171	16	19		11				417
11:15 AM	5	189			212	27	24		10				467
11:30 AM	12	201			204	23	25		6				471
11:45 AM	6	204			223	27	28		9				497
12:00 PM	8	234			192	22	21		9				486
12:15 PM	12	246			202	29	25		13				527
12:30 PM	12	204			248	27	30		16				537
12:45 PM	12	209			229	34	22		9				515
1:00 PM	12	220			216	35	21		11				515
1:15 PM	9	204			239	20	22		16				510
1:30 PM	5	195			224	23	19		3				469
1:45 PM	6	156			213	36	20		10				441
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	125	2822	0	0	2882	352	317	0	140	0	0	0	6638
APPROACH %'s :	4.24%	95.76%	0.00%	0.00%	89.12%	10.88%	69.37%	0.00%	30.63%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	1215 PM												TOTAL
PEAK HR VOL :	48	879	0	0	895	125	98	0	49	0	0	0	2094
PEAK HR FACTOR :		0.898			0.927			0.799			0.000		0.975

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1162-001 **Day:** Tuesday

City: Huntington Beach **Date:** 6/24/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Indianapolis Ave			Indianapolis Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 0	ST 3	SR 0	EL 2	ET 0	ER 1	WL 0	WT 0	WR 0	TOTAL
4:00 PM	14	250			217	36	16		13				546
4:15 PM	13	272			201	32	18		14				550
4:30 PM	11	307			239	42	20		8				627
4:45 PM	12	314			244	25	22		10				627
5:00 PM	11	323			266	50	21		16				687
5:15 PM	9	321			251	47	22		9				659
5:30 PM	17	280			262	38	24		12				633
5:45 PM	7	325			276	31	30		14				683
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	94	2392	0	0	1956	301	173	0	96	0	0	0	5012
APPROACH %'s :	3.78%	96.22%	0.00%	0.00%	86.66%	13.34%	64.31%	0.00%	35.69%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	44	1249	0	0	1055	166	97	0	51	0	0	0	2662
PEAK HR FACTOR :		0.968			0.966			0.841			0.000		0.969

UTURNS			
NB	SB	EB	WB
0	0	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-036 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 1	WL 1	WT 2	WR 0	TOTAL
7:00 AM	10	98	0	0	95	14	32	3	31	1	2	1	287
7:15 AM	9	136	0	1	130	24	32	3	41	6	3	2	387
7:30 AM	22	165	5	0	145	34	58	4	44	6	6	4	493
7:45 AM	23	177	2	4	157	45	46	4	53	7	6	2	526
8:00 AM	16	150	0	4	155	40	53	6	50	1	5	0	480
8:15 AM	24	156	7	4	191	23	49	3	51	6	8	1	523
8:30 AM	26	182	6	3	137	26	68	2	64	3	4	3	524
8:45 AM	13	166	3	9	147	22	47	6	58	6	3	4	484
TOTAL VOLUMES :	NL 143	NT 1230	NR 23	SL 25	ST 1157	SR 228	EL 385	ET 31	ER 392	WL 36	WT 37	WR 17	TOTAL 3704
APPROACH %'s :	10.24%	88.11%	1.65%	1.77%	82.06%	16.17%	47.65%	3.84%	48.51%	40.00%	41.11%	18.89%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	89	665	15	15	640	134	216	15	218	17	23	6	2053
PEAK HR FACTOR :		0.898			0.905			0.838			0.767		0.976

UTURNS

NB	SB	EB	WB
0	0		
0	1		
0	0		
1	2		
0	2		
0	3		
0	1		
0	5		
NB 1	SB 14	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-036 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 1	WL 1	WT 2	WR 0	TOTAL
10:30 AM	18	139	4	0	128	20	44	2	24	5	4	0	388
10:45 AM	10	124	8	2	133	24	32	3	28	1	4	4	373
11:00 AM	6	154	7	1	123	41	36	2	20	6	8	6	410
11:15 AM	12	143	6	2	131	35	30	4	33	4	4	3	407
11:30 AM	16	153	7	2	140	32	24	2	24	4	2	4	410
11:45 AM	21	139	3	9	145	37	29	0	26	10	3	3	425
12:00 PM	15	139	8	7	140	31	38	4	20	6	6	2	416
12:15 PM	12	151	4	3	140	30	53	10	32	9	6	2	452
12:30 PM	21	140	4	5	130	22	33	6	24	5	8	1	399
12:45 PM	24	150	4	1	123	31	39	6	35	6	7	4	430
1:00 PM	24	148	2	3	167	39	37	4	37	2	7	6	476
1:15 PM	27	166	6	10	128	32	36	5	34	2	5	6	457
1:30 PM	15	147	3	4	166	41	30	8	41	7	7	2	471
1:45 PM	23	154	3	8	162	33	38	9	31	4	6	3	474
TOTAL VOLUMES :	NL 244	NT 2047	NR 69	SL 57	ST 1956	SR 448	EL 499	ET 65	ER 409	WL 71	WT 77	WR 46	TOTAL 5988
APPROACH %'s :	10.34%	86.74%	2.92%	2.32%	79.48%	18.20%	51.28%	6.68%	42.03%	36.60%	39.69%	23.71%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	89	615	14	25	623	145	141	26	143	15	25	17	1878
PEAK HR FACTOR :		0.902			0.940			0.981			0.891		0.986

UTURNS

NB	SB	EB	WB
1	0		
0	0		
0	1		
0	0		
0	0		
3	3		
0	7		
1	2		
2	4		
0	1		
2	3		
1	3		
0	1		
0	6		
NB 10	SB 31	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-036 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Atlanta Ave			Atlanta Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 0	EL 1	ET 1	ER 1	WL 1	WT 2	WR 0	TOTAL
4:00 PM	29	226	6	10	159	41	44	5	15	5	12	6	558
4:15 PM	25	189	4	9	163	54	45	6	33	8	14	5	555
4:30 PM	36	235	3	6	160	41	42	8	34	4	5	3	577
4:45 PM	36	255	7	6	163	37	49	7	27	6	11	15	619
5:00 PM	44	250	5	6	174	43	46	9	31	8	10	5	631
5:15 PM	23	261	4	4	173	46	36	4	49	1	14	3	618
5:30 PM	44	222	5	4	180	43	46	4	29	10	5	4	596
5:45 PM	35	258	9	4	177	48	33	2	28	6	7	2	609
TOTAL VOLUMES :	NL 272	NT 1896	NR 43	SL 49	ST 1349	SR 353	EL 341	ET 45	ER 246	WL 48	WT 78	WR 43	TOTAL 4763
APPROACH %'s :	12.30%	85.75%	1.94%	2.80%	77.04%	20.16%	53.96%	7.12%	38.92%	28.40%	46.15%	25.44%	
PEAK HR START TIME :	445 PM												TOTAL
PEAK HR VOL :	147	988	21	20	690	169	177	24	136	25	40	27	2464
PEAK HR FACTOR :		0.967			0.968			0.947			0.719		0.976

UTURNS	NB	SB	EB	WB
	0	3		
	2	6		
	1	2		
	0	3		
	0	1		
	0	4		
	0	2		
	0	1		
	NB 3	SB 22	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-038 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Banning Ave			Banning Ave			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 0	ST 3	SR 0	EL 1	ET 1	ER 0	WL 0	WT 0	WR 0	TOTAL
7:00 AM	0	63			93	8	16		2				182
7:15 AM	1	96			88	9	31		3				228
7:30 AM	2	112			114	11	22		1				262
7:45 AM	1	118			112	12	21		5				269
8:00 AM	0	91			148	16	22		4				281
8:15 AM	1	105			126	48	38		3				321
8:30 AM	1	99			134	24	53		0				311
8:45 AM	2	77			125	11	32		1				248
TOTAL VOLUMES :	NL 8	NT 761	NR 0	SL 0	ST 940	SR 139	EL 235	ET 0	ER 19	WL 0	WT 0	WR 0	TOTAL 2102
APPROACH %'s :	1.04%	98.96%	0.00%	0.00%	87.12%	12.88%	92.52%	0.00%	7.48%	#DIV/0!	#DIV/0!	#DIV/0!	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	3	413	0	0	520	100	134	0	12	0	0	0	1182
PEAK HR FACTOR :		0.874			0.891			0.689			0.000		0.921

UTURNS	NB	SB	EB	WB
	NB 0	SB 0	EB 0	WB 0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-038 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Banning Ave			Banning Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 0	ST 3	SR 0	EL 1	ET 1	ER 0	WL 0	WT 0	WR 0	TOTAL	NB	SB	EB	WB
10:30 AM	1	90			82	14	14		0				201	0			
10:45 AM	3	79			75	15	12		2				186	1			
11:00 AM	2	85			73	6	10		3				179	0			
11:15 AM	2	82			87	15	18		3				207	0			
11:30 AM	4	88			94	10	15		3				214	1			
11:45 AM	1	103			90	14	18		3				229	1			
12:00 PM	1	96			98	10	7		2				214	0			
12:15 PM	2	96			79	22	12		0				211	0			
12:30 PM	3	84			74	15	20		1				197	2			
12:45 PM	4	94			76	13	20		5				212	1			
1:00 PM	1	105			71	19	19		1				216	0			
1:15 PM	2	111			82	31	16		0				242	0			
1:30 PM	4	92			105	30	18		3				252	0			
1:45 PM	1	104			82	27	28		2				244	0			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	31	1309	0	0	1168	241	227	0	28	0	0	0	3004	6	0	0	0
APPROACH %'s :	2.31%	97.69%	0.00%	0.00%	82.90%	17.10%	89.02%	0.00%	10.98%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	100 PM												TOTAL				
PEAK HR VOL :	8	412	0	0	340	107	81	0	6	0	0	0	954				
PEAK HR FACTOR :		0.929			0.828			0.725			0.000		0.946				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-038 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Banning Ave			Banning Ave				UTURNS			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND							
LANES:	NL 1	NT 3	NR 0	SL 0	ST 3	SR 0	EL 1	ET 1	ER 0	WL 0	WT 0	WR 0	TOTAL	NB	SB	EB	WB
4:00 PM	4	175			100	16	12		0				307	1			
4:15 PM	3	173			80	28	15		1				300	0			
4:30 PM	7	176			85	23	13		4				308	2			
4:45 PM	6	145			91	32	11		1				286	0			
5:00 PM	6	170			101	20	16		1				314	0			
5:15 PM	2	193			85	19	16		4				319	0			
5:30 PM	4	164			115	27	15		5				330	0			
5:45 PM	2	162			106	19	15		2				306	0			
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL	NB	SB	EB	WB
TOTAL VOLUMES :	34	1358	0	0	763	184	113	0	18	0	0	0	2470	3	0	0	0
APPROACH %'s :	2.44%	97.56%	0.00%	0.00%	80.57%	19.43%	86.26%	0.00%	13.74%	#DIV/0!	#DIV/0!	#DIV/0!					
PEAK HR START TIME :	500 PM												TOTAL				
PEAK HR VOL :	14	689	0	0	407	85	62	0	12	0	0	0	1269				
PEAK HR FACTOR :		0.901			0.866			0.925			0.000		0.961				

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-039 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

AM

NS/EW Streets:	Brookhurst St			Brookhurst St			Bushard St			Bushard St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 1	ET 0	ER 1	WL 0	WT 1	WR 0	TOTAL
7:00 AM	9	49	0	0	91	0	2	0	33	1	0	4	189
7:15 AM	14	94	0	1	84	0	5	1	36	0	0	0	235
7:30 AM	19	112	0	2	107	0	3	0	51	0	0	1	295
7:45 AM	13	106	0	0	106	4	2	1	47	0	0	2	281
8:00 AM	17	98	0	0	150	4	1	0	40	1	0	1	312
8:15 AM	7	91	1	1	126	4	2	0	56	0	0	2	290
8:30 AM	17	103	1	2	134	3	2	0	64	2	0	1	329
8:45 AM	17	71	1	4	124	5	2	0	35	0	1	1	261
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	113	724	3	10	922	20	19	2	362	4	1	12	2192
APPROACH %'s :	13.45%	86.19%	0.36%	1.05%	96.85%	2.10%	4.96%	0.52%	94.52%	23.53%	5.88%	70.59%	
PEAK HR START TIME :	745 AM												TOTAL
PEAK HR VOL :	54	398	2	3	516	15	7	1	207	3	0	6	1212
PEAK HR FACTOR :		0.938			0.867			0.814			0.750		0.921

UTURNS			
NB	SB	EB	WB
	0		
	0		
	2		
	0		
	0		
	0		
	2		
	3		
NB	SB	EB	WB
0	7	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-039 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

NOON

NS/EW Streets:	Brookhurst St			Brookhurst St			Bushard St			Bushard St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 1	ET 0	ER 1	WL 0	WT 1	WR 0	TOTAL
10:30 AM	19	87	0	2	73	6	2	0	36	0	0	0	225
10:45 AM	18	75	0	4	69	5	4	0	23	0	1	0	199
11:00 AM	22	80	0	3	66	3	2	1	23	0	0	3	203
11:15 AM	20	64	0	3	85	4	3	0	29	1	0	7	216
11:30 AM	17	85	0	4	84	8	4	1	33	1	1	0	238
11:45 AM	24	102	1	8	69	4	2	0	19	0	1	0	230
12:00 PM	23	89	2	2	89	5	2	0	17	1	0	0	230
12:15 PM	17	90	0	3	71	4	6	3	18	0	0	4	216
12:30 PM	29	82	0	2	70	5	5	0	34	0	0	1	228
12:45 PM	23	77	0	2	64	2	4	0	27	0	0	1	200
1:00 PM	20	91	1	1	67	8	2	0	20	0	0	4	214
1:15 PM	25	107	0	3	63	6	0	0	23	0	0	1	228
1:30 PM	27	90	2	1	91	6	7	0	29	0	0	0	253
1:45 PM	30	86	0	4	73	6	2	1	19	0	0	1	222
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	314	1205	6	42	1034	72	45	6	350	3	3	22	3102
APPROACH %'s :	20.59%	79.02%	0.39%	3.66%	90.07%	6.27%	11.22%	1.50%	87.28%	10.71%	10.71%	78.57%	
PEAK HR START TIME :	100 PM												TOTAL
PEAK HR VOL :	102	374	3	9	294	26	11	1	91	0	0	6	917
PEAK HR FACTOR :		0.907			0.839			0.715			0.375		0.906

UTURNS			
NB	SB	EB	WB
0	1		
0	2		
1	1		
0	1		
0	2		
2	6		
1	0		
0	2		
0	1		
0	1		
0	1		
0	2		
0	1		
0	0		
NB	SB	EB	WB
4	21	0	0

CONTROL : Signalized

Intersection Turning Movement

Prepared by:

National Data & Surveying Services

Project ID: 14-1094-039 **Day:** Thursday

City: Huntington Beach **Date:** 5/1/2014

PM

NS/EW Streets:	Brookhurst St			Brookhurst St			Bushard St			Bushard St			
	NORTHBOUND			SOUTHBOUND			EASTBOUND			WESTBOUND			
LANES:	NL 1	NT 3	NR 0	SL 1	ST 3	SR 1	EL 1	ET 0	ER 1	WL 0	WT 1	WR 0	TOTAL
4:00 PM	38	158	0	1	96	4	4	0	22	0	0	0	323
4:15 PM	41	138	0	5	82	2	5	0	31	0	0	0	304
4:30 PM	44	157	0	2	90	7	3	0	26	0	0	0	329
4:45 PM	37	131	0	2	85	3	4	0	26	0	0	0	288
5:00 PM	38	171	1	4	99	6	0	0	28	0	1	0	348
5:15 PM	41	191	0	3	83	3	2	0	21	0	0	0	344
5:30 PM	56	158	0	2	95	10	2	0	17	0	0	0	340
5:45 PM	40	157	0	3	101	7	3	0	20	0	0	0	331
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
TOTAL VOLUMES :	335	1261	1	22	731	42	23	0	191	0	1	0	2607
APPROACH %'s :	20.98%	78.96%	0.06%	2.77%	91.95%	5.28%	10.75%	0.00%	89.25%	0.00%	100.00%	0.00%	
PEAK HR START TIME :	500 PM												TOTAL
PEAK HR VOL :	175	677	1	12	378	26	7	0	86	0	1	0	1363
PEAK HR FACTOR :		0.919			0.937			0.830			0.250		0.979

UTURNS			
NB	SB	EB	WB
2	1		
0	5		
0	2		
1	2		
0	4		
0	3		
0	2		
0	3		
NB	SB	EB	WB
3	22	0	0

CONTROL : Signalized

APPENDIX B: EXISTING LOS RESULTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	247	334	121	309	429	100	177	1838	140	145	2675	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3398		3433	3438		3433	6340		3433	6301	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3398		3433	3438		3433	6340		3433	6301	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	266	359	130	332	461	108	190	1976	151	156	2876	359
RTOR Reduction (vph)	0	28	0	0	15	0	0	8	0	0	15	0
Lane Group Flow (vph)	266	461	0	332	554	0	190	2119	0	156	3220	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.7	26.7		15.0	27.0		11.2	68.9		11.0	68.7	
Effective Green, g (s)	14.7	26.7		15.0	27.0		11.2	68.9		11.0	68.7	
Actuated g/C Ratio	0.10	0.19		0.11	0.19		0.08	0.49		0.08	0.49	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	360	648		367	663		274	3120		269	3091	
v/s Ratio Prot	0.08	c0.14		0.10	c0.16		0.06	c0.33		0.05	c0.51	
v/s Ratio Perm												
v/c Ratio	0.74	0.71		0.90	0.84		0.69	0.68		0.58	1.04	
Uniform Delay, d1	60.8	53.1		61.8	54.4		62.7	27.1		62.3	35.6	
Progression Factor	1.00	1.00		1.00	1.00		0.73	0.93		1.00	1.00	
Incremental Delay, d2	7.7	3.7		24.8	8.9		6.9	1.1		3.0	28.4	
Delay (s)	68.5	56.8		86.6	63.3		52.9	26.4		65.3	64.0	
Level of Service	E	E		F	E		D	C		E	E	
Approach Delay (s)		60.9			71.9			28.6			64.1	
Approach LOS		E			E			C			E	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	94.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	125	503	0	2092	2679	932
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	130	524	0	2179	2791	971
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	130	524	0	2179	2791	971
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	13.3	50.3		116.9	73.9	140.0
Effective Green, g (s)	13.3	50.3		116.9	73.9	140.0
Actuated g/C Ratio	0.10	0.36		0.84	0.53	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	326	1090		5350	3382	1583
v/s Ratio Prot	0.04	0.13		0.34	c0.44	
v/s Ratio Perm		0.06		0.00		c0.61
v/c Ratio	0.40	0.48		0.41	0.83	0.61
Uniform Delay, d1	59.6	34.7		2.9	27.6	0.0
Progression Factor	1.00	1.00		0.08	0.46	1.00
Incremental Delay, d2	1.1	0.4		0.0	1.0	0.7
Delay (s)	60.7	35.2		0.3	13.8	0.7
Level of Service	E	D		A	B	A
Approach Delay (s)	40.2			0.3	10.4	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	887	149	134	431	234	144	1666	278	448	2316	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	200	914	154	138	444	241	148	1718	287	462	2388	457
RTOR Reduction (vph)	0	0	68	0	0	173	0	0	128	0	0	49
Lane Group Flow (vph)	200	914	86	138	444	68	148	1718	159	462	2388	408
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.4	27.5	38.7	13.0	28.1	28.1	11.2	58.8	58.8	20.4	67.6	80.0
Effective Green, g (s)	12.4	27.5	38.7	13.0	28.1	28.1	11.2	58.8	58.8	20.4	67.6	80.0
Actuated g/C Ratio	0.09	0.20	0.28	0.09	0.20	0.20	0.08	0.42	0.42	0.15	0.48	0.57
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	304	998	437	318	710	317	274	2135	664	500	3094	1592
v/s Ratio Prot	c0.06	c0.18	0.02	0.04	0.13		0.04	c0.34		c0.13	0.37	0.02
v/s Ratio Perm			0.04			0.04			0.10			0.12
v/c Ratio	0.66	0.92	0.20	0.43	0.63	0.21	0.54	0.80	0.24	0.92	0.77	0.26
Uniform Delay, d1	61.7	55.1	38.8	60.0	51.1	46.7	61.9	35.6	26.2	59.0	29.8	15.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.33	0.42	0.59	1.43	0.46	0.35
Incremental Delay, d2	3.9	12.6	0.1	0.3	1.7	0.3	1.0	2.9	0.8	15.8	1.2	0.0
Delay (s)	65.6	67.7	38.8	60.4	52.9	47.1	83.4	17.9	16.2	100.3	15.1	5.3
Level of Service	E	E	D	E	D	D	F	B	B	F	B	A
Approach Delay (s)		63.9			52.4			22.2			25.6	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	18	20	64	8	98	45	1896	53	136	2452	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1716		1770	1863	1583	1770	6382		3433	6403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1716		1770	1863	1583	1770	6382		3433	6403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	19	21	67	8	103	47	1996	56	143	2581	14
RTOR Reduction (vph)	0	19	0	0	0	90	0	2	0	0	0	0
Lane Group Flow (vph)	25	21	0	67	8	13	47	2050	0	143	2595	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.0		9.9	18.1	18.1	8.1	82.5		12.0	86.4	
Effective Green, g (s)	7.8	16.0		9.9	18.1	18.1	8.1	82.5		12.0	86.4	
Actuated g/C Ratio	0.06	0.11		0.07	0.13	0.13	0.06	0.59		0.09	0.62	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	196		125	240	204	102	3760		294	3951	
v/s Ratio Prot	0.01	c0.01		c0.04	0.00		0.03	c0.32		0.04	c0.41	
v/s Ratio Perm						0.01						
v/c Ratio	0.26	0.11		0.54	0.03	0.07	0.46	0.55		0.49	0.66	
Uniform Delay, d1	63.3	55.6		62.8	53.3	53.5	63.8	17.4		61.1	17.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.55	0.27		0.70	0.29	
Incremental Delay, d2	1.4	0.2		4.4	0.1	0.1	2.9	0.5		0.9	0.6	
Delay (s)	64.7	55.9		67.2	53.4	53.7	101.9	5.1		43.6	5.6	
Level of Service	E	E		E	D	D	F	A		D	A	
Approach Delay (s)		59.3			58.7			7.3			7.6	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	4	40	86	5	50	36	1934	45	142	2445	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.98	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1608		1681	1602	1504	1770	6386		3433	6403	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1608		1681	1602	1504	1770	6386		3433	6403	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	28	4	42	90	5	52	38	2015	47	148	2547	14
RTOR Reduction (vph)	0	39	0	0	4	43	0	2	0	0	0	0
Lane Group Flow (vph)	28	7	0	50	47	3	38	2060	0	148	2561	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	10.6	10.6		8.3	8.3	8.3	8.2	87.4		15.8	95.0	
Effective Green, g (s)	10.6	10.6		8.3	8.3	8.3	8.2	87.4		15.8	95.0	
Actuated g/C Ratio	0.08	0.08		0.06	0.06	0.06	0.06	0.62		0.11	0.68	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	121		99	94	89	103	3986		387	4344	
v/s Ratio Prot	c0.02	0.00		c0.03	0.03		0.02	c0.32		0.04	c0.40	
v/s Ratio Perm						0.00						
v/c Ratio	0.21	0.06		0.51	0.50	0.03	0.37	0.52		0.38	0.59	
Uniform Delay, d1	60.8	60.1		63.9	63.8	62.1	63.4	14.6		57.6	12.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.94	1.09		0.61	0.11	
Incremental Delay, d2	0.8	0.2		4.0	4.2	0.1	1.8	0.4		0.5	0.5	
Delay (s)	61.5	60.3		67.9	68.0	62.2	61.2	16.3		35.4	1.9	
Level of Service	E	E		E	E	E	E	B		D	A	
Approach Delay (s)		60.8			66.1			17.1			3.7	
Approach LOS		E			E			B			A	

Intersection Summary				
HCM 2000 Control Delay	11.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9	
Intersection Capacity Utilization	65.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

6: Beach Blvd & Heil Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	347	276	50	223	101	128	1745	63	76	2301	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3304		1770	3374		1770	6375		1770	6347	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3304		1770	3374		1770	6375		1770	6347	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	192	365	291	53	235	106	135	1837	66	80	2422	163
RTOR Reduction (vph)	0	99	0	0	41	0	0	4	0	0	7	0
Lane Group Flow (vph)	192	557	0	53	300	0	135	1899	0	80	2578	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.0	32.1		8.8	18.9		13.0	69.3		11.0	67.3	
Effective Green, g (s)	22.0	32.1		8.8	18.9		13.0	69.3		11.0	67.3	
Actuated g/C Ratio	0.16	0.23		0.06	0.13		0.09	0.49		0.08	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	278	757		111	455		164	3155		139	3051	
v/s Ratio Prot	0.11	c0.17		0.03	c0.09		c0.08	0.30		0.05	c0.41	
v/s Ratio Perm												
v/c Ratio	0.69	0.74		0.48	0.66		0.82	0.60		0.58	0.84	
Uniform Delay, d1	55.8	50.0		63.4	57.5		62.4	25.4		62.2	31.8	
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.69		0.83	0.96	
Incremental Delay, d2	7.2	3.7		3.2	3.6		25.0	0.8		4.8	2.6	
Delay (s)	63.0	53.7		66.6	61.1		69.8	18.2		56.7	33.1	
Level of Service	E	D		E	E		E	B		E	C	
Approach Delay (s)		55.8			61.8			21.6			33.8	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	87.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

7: Beach Blvd & Terry Dr

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	17	60	40	4	16	50	1883	24	19	2544	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667	1478		1662	1478	1770	6396		1770	6399	
Flt Permitted		0.72	1.00		0.56	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1254	1478		968	1478	1770	6396		1770	6399	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	119	19	66	44	4	18	55	2069	26	21	2796	27
RTOR Reduction (vph)	0	0	56	0	0	15	0	1	0	0	1	0
Lane Group Flow (vph)	0	138	10	0	48	3	55	2094	0	21	2822	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		20.9	20.9		20.9	20.9	8.9	98.3		5.5	94.9	
Effective Green, g (s)		20.9	20.9		20.9	20.9	8.9	98.3		5.5	94.9	
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.06	0.70		0.04	0.68	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		187	220		144	220	112	4490		69	4337	
v/s Ratio Prot							c0.03	c0.33		0.01	c0.44	
v/s Ratio Perm		c0.11	0.01		0.05	0.00						
v/c Ratio		0.74	0.04		0.33	0.01	0.49	0.47		0.30	0.65	
Uniform Delay, d1		56.9	51.0		53.3	50.8	63.4	9.2		65.4	13.0	
Progression Factor		1.00	1.00		1.00	1.00	1.04	0.16		1.19	0.08	
Incremental Delay, d2		14.1	0.1		1.4	0.0	2.1	0.2		1.4	0.4	
Delay (s)		71.0	51.1		54.7	50.8	68.2	1.7		79.3	1.4	
Level of Service		E	D		D	D	E	A		E	A	
Approach Delay (s)		64.6			53.6			3.4			2.0	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

8: Beach Blvd & Warner Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	206	1195	90	214	847	88	162	1716	147	365	1926	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	5032		3433	5013		3433	6332		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	5032		3433	5013		3433	6332		3433	6408	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	1328	100	238	941	98	180	1907	163	406	2140	286
RTOR Reduction (vph)	0	6	0	0	8	0	0	9	0	0	0	120
Lane Group Flow (vph)	229	1422	0	238	1031	0	180	2061	0	406	2140	166
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.7	36.0		11.6	32.9		13.0	57.4		16.0	60.4	60.4
Effective Green, g (s)	14.7	36.0		11.6	32.9		13.0	57.4		16.0	60.4	60.4
Actuated g/C Ratio	0.10	0.26		0.08	0.23		0.09	0.41		0.11	0.43	0.43
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	360	1293		284	1178		318	2596		392	2764	682
v/s Ratio Prot	0.07	c0.28		0.07	c0.21		0.05	c0.33		c0.12	0.33	
v/s Ratio Perm												0.10
v/c Ratio	0.64	1.10		0.84	0.87		0.57	0.79		1.04	0.77	0.24
Uniform Delay, d1	60.1	52.0		63.3	51.6		60.8	36.1		62.0	34.0	25.3
Progression Factor	1.00	1.00		1.00	1.00		1.06	0.57		0.61	0.43	0.33
Incremental Delay, d2	2.7	57.0		18.2	7.5		1.2	2.2		49.6	1.7	0.7
Delay (s)	62.8	109.0		81.5	59.0		65.7	22.7		87.5	16.3	9.0
Level of Service	E	F		F	E		E	C		F	B	A
Approach Delay (s)		102.6			63.2			26.1			25.7	
Approach LOS		F			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	47.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	88.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

9: Beach Blvd & Slater Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	664	185	68	395	100	113	1408	37	192	1874	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.97		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3424		1770	3432		1770	6383		1770	6327	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3424		1770	3432		1770	6383		1770	6327	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	722	201	74	429	109	123	1530	40	209	2037	187
RTOR Reduction (vph)	0	17	0	0	16	0	0	3	0	0	10	0
Lane Group Flow (vph)	173	906	0	74	522	0	123	1567	0	209	2214	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	21.2	36.5		10.4	25.7		18.0	52.4		20.0	54.4	
Effective Green, g (s)	21.2	36.5		10.4	25.7		18.0	52.4		20.0	54.4	
Actuated g/C Ratio	0.15	0.26		0.07	0.18		0.13	0.37		0.14	0.39	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	268	892		131	630		227	2389		252	2458	
v/s Ratio Prot	0.10	c0.26		0.04	c0.15		0.07	c0.25		0.12	c0.35	
v/s Ratio Perm												
v/c Ratio	0.65	1.02		0.56	0.83		0.54	0.66		0.83	0.90	
Uniform Delay, d1	55.9	51.8		62.6	55.0		57.1	36.3		58.3	40.3	
Progression Factor	1.00	1.00		1.00	1.00		0.60	0.43		0.84	0.47	
Incremental Delay, d2	5.3	34.1		5.5	8.8		2.5	1.4		12.5	3.6	
Delay (s)	61.1	85.9		68.1	63.8		36.8	16.9		61.6	22.5	
Level of Service	E	F		E	E		D	B		E	C	
Approach Delay (s)		82.0			64.3			18.4			25.9	
Approach LOS		F			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	38.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	89.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	4	25	39	2	67	17	1473	61	116	2165	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1677		1770	6370		1770	6401	
Flt Permitted		0.72			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1264			1473		1770	6370		1770	6401	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	4	26	40	2	68	17	1503	62	118	2209	15
RTOR Reduction (vph)	0	23	0	0	47	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	35	0	0	63	0	17	1562	0	118	2224	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		14.7			14.7		4.0	95.8		13.6	105.4	
Effective Green, g (s)		14.7			14.7		4.0	95.8		13.6	105.4	
Actuated g/C Ratio		0.10			0.10		0.03	0.68		0.10	0.75	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		132			154		50	4358		171	4819	
v/s Ratio Prot							0.01	0.25		c0.07	c0.35	
v/s Ratio Perm		0.03			c0.04							
v/c Ratio		0.26			0.41		0.34	0.36		0.69	0.46	
Uniform Delay, d1		57.7			58.6		66.7	9.2		61.2	6.6	
Progression Factor		1.00			1.00		1.24	0.12		1.16	0.07	
Incremental Delay, d2		1.1			1.7		3.3	0.2		5.5	0.1	
Delay (s)		58.7			60.3		86.2	1.3		76.6	0.6	
Level of Service		E			E		F	A		E	A	
Approach Delay (s)		58.7			60.3			2.2			4.5	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	376	116	127	295	140	122	1380	135	309	1552	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3414		1770	3368		1770	6322		1770	6335	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3414		1770	3368		1770	6322		1770	6335	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	88	400	123	135	314	149	130	1468	144	329	1651	136
RTOR Reduction (vph)	0	21	0	0	42	0	0	11	0	0	9	0
Lane Group Flow (vph)	88	502	0	135	421	0	130	1601	0	329	1778	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.0	25.5		12.0	25.5		12.5	60.7		21.1	69.3	
Effective Green, g (s)	12.0	25.5		12.0	25.5		12.5	60.7		21.1	69.3	
Actuated g/C Ratio	0.09	0.18		0.09	0.18		0.09	0.43		0.15	0.49	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	151	621		151	613		158	2741		266	3135	
v/s Ratio Prot	0.05	c0.15		c0.08	0.13		c0.07	c0.25		c0.19	0.28	
v/s Ratio Perm												
v/c Ratio	0.58	0.81		0.89	0.69		0.82	0.58		1.24	0.57	
Uniform Delay, d1	61.6	54.9		63.4	53.5		62.7	30.1		59.5	24.8	
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.58		0.53	0.46	
Incremental Delay, d2	3.7	7.8		42.6	3.3		24.6	0.8		132.5	0.7	
Delay (s)	65.2	62.7		106.0	56.9		77.9	18.3		164.3	12.0	
Level of Service	E	E		F	E		E	B		F	B	
Approach Delay (s)		63.1			67.9			22.8			35.7	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	80.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	282	385	98	94	330	131	105	1216	141	184	1259	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6308		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6308		3433	5085	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	300	410	104	100	351	139	112	1294	150	196	1339	393
RTOR Reduction (vph)	0	0	87	0	0	122	0	12	0	0	0	31
Lane Group Flow (vph)	300	410	17	100	351	17	112	1432	0	196	1339	362
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	23.5	23.5	23.5	17.5	17.5	17.5	11.0	64.4		11.9	65.3	88.8
Effective Green, g (s)	23.5	23.5	23.5	17.5	17.5	17.5	11.0	64.4		11.9	65.3	88.8
Actuated g/C Ratio	0.17	0.17	0.17	0.12	0.12	0.12	0.08	0.46		0.09	0.47	0.63
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	576	594	265	221	442	197	269	2901		291	2371	1004
v/s Ratio Prot	0.09	c0.12		0.06	c0.10		0.03	c0.23		c0.06	c0.26	0.23
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.52	0.69	0.07	0.45	0.79	0.09	0.42	0.49		0.67	0.56	0.36
Uniform Delay, d1	53.1	54.8	49.0	56.8	59.5	54.2	61.4	26.4		62.2	27.1	12.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.18	0.45	0.66
Incremental Delay, d2	0.5	2.9	0.1	0.5	8.9	0.1	0.4	0.6		3.9	0.8	0.1
Delay (s)	53.6	57.8	49.1	57.3	68.4	54.3	61.8	27.0		77.4	13.0	8.1
Level of Service	D	E	D	E	E	D	E	C		E	B	A
Approach Delay (s)		55.1			63.2			29.5			18.5	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

13: Beach Blvd & Garfield Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	606	181	113	333	138	119	1081	78	139	1127	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3383		1770	5034		1770	5021	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3383		1770	5034		1770	5021	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	194	645	193	120	354	147	127	1150	83	148	1199	111
RTOR Reduction (vph)	0	0	149	0	41	0	0	6	0	0	8	0
Lane Group Flow (vph)	194	645	44	120	460	0	127	1227	0	148	1302	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	16.9	27.2	27.2	12.2	22.5		12.9	47.3		12.1	46.5	
Effective Green, g (s)	16.9	27.2	27.2	12.2	22.5		12.9	47.3		12.1	46.5	
Actuated g/C Ratio	0.14	0.23	0.23	0.10	0.19		0.11	0.39		0.10	0.39	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	249	802	358	179	634		190	1984		178	1945	
v/s Ratio Prot	0.11	c0.18		0.07	c0.14		0.07	c0.24		c0.08	c0.26	
v/s Ratio Perm			0.03									
v/c Ratio	0.78	0.80	0.12	0.67	0.73		0.67	0.62		0.83	0.67	
Uniform Delay, d1	49.7	43.9	36.9	52.0	45.9		51.5	29.1		52.9	30.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.61	1.02		1.00	1.00	
Incremental Delay, d2	13.1	6.2	0.2	7.5	4.4		5.8	1.3		25.8	1.9	
Delay (s)	62.8	50.1	37.1	59.5	50.3		37.3	31.0		78.8	32.2	
Level of Service	E	D	D	E	D		D	C		E	C	
Approach Delay (s)		50.1			52.0			31.6			37.0	
Approach LOS		D			D			C			D	

Intersection Summary				
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	75.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	467	192	125	416	115	77	979	77	96	1205	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3424		1770	5030		1770	5027	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3424		1770	5030		1770	5027	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	492	202	132	438	121	81	1031	81	101	1268	105
RTOR Reduction (vph)	0	0	159	0	22	0	0	7	0	0	7	0
Lane Group Flow (vph)	163	492	43	132	537	0	81	1105	0	101	1366	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	16.2	25.7	25.7	14.8	24.3		9.1	48.2		10.9	50.0	
Effective Green, g (s)	16.2	25.7	25.7	14.8	24.3		9.1	48.2		10.9	50.0	
Actuated g/C Ratio	0.13	0.21	0.21	0.12	0.20		0.08	0.40		0.09	0.42	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	757	339	218	693		134	2020		160	2094	
v/s Ratio Prot	c0.09	0.14		0.07	c0.16		0.05	c0.22		0.06	c0.27	
v/s Ratio Perm			0.03									
v/c Ratio	0.68	0.65	0.13	0.61	0.77		0.60	0.55		0.63	0.65	
Uniform Delay, d1	49.5	43.0	38.1	49.8	45.3		53.7	27.5		52.6	28.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.90	0.59		0.72	0.47	
Incremental Delay, d2	7.9	1.9	0.2	4.7	5.4		7.2	1.0		6.2	1.3	
Delay (s)	57.4	45.0	38.3	54.5	50.7		55.4	17.4		43.9	14.4	
Level of Service	E	D	D	D	D		E	B		D	B	
Approach Delay (s)		45.8			51.4			20.0			16.4	
Approach LOS		D			D			B			B	

Intersection Summary				
HCM 2000 Control Delay	29.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	76.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	20	79	27	9	47	31	1028	43	53	1200	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1696			1795	1583	1770	5055		1770	5043	
Flt Permitted		0.89			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1532			1161	1583	1770	5055		1770	5043	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	21	83	28	9	49	33	1082	45	56	1263	74
RTOR Reduction (vph)	0	44	0	0	0	43	0	3	0	0	4	0
Lane Group Flow (vph)	0	104	0	0	37	6	33	1124	0	56	1333	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		15.6			15.6	15.6	6.1	80.3		8.9	83.1	
Effective Green, g (s)		15.6			15.6	15.6	6.1	80.3		8.9	83.1	
Actuated g/C Ratio		0.13			0.13	0.13	0.05	0.67		0.07	0.69	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		199			150	205	89	3382		131	3492	
v/s Ratio Prot							0.02	c0.22		c0.03	c0.26	
v/s Ratio Perm		c0.07			0.03	0.00						
v/c Ratio		0.52			0.25	0.03	0.37	0.33		0.43	0.38	
Uniform Delay, d1		48.7			46.9	45.6	55.1	8.4		53.1	7.7	
Progression Factor		1.00			1.00	1.00	1.03	0.42		0.67	0.85	
Incremental Delay, d2		2.4			0.9	0.1	2.4	0.2		1.8	0.3	
Delay (s)		51.2			47.8	45.7	59.0	3.8		37.1	6.8	
Level of Service		D			D	D	E	A		D	A	
Approach Delay (s)		51.2			46.6			5.4			8.0	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	60.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	113	727	92	117	409	215	86	747	173	320	815	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4999		1770	3539	1583	1770	4942		3433	5006	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4999		1770	3539	1583	1770	4942		3433	5006	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	116	749	95	121	422	222	89	770	178	330	840	97
RTOR Reduction (vph)	0	14	0	0	0	84	0	31	0	0	11	0
Lane Group Flow (vph)	116	830	0	121	422	138	89	917	0	330	926	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	11.6	27.3		11.3	27.0	41.5	11.0	45.1		14.5	48.6	
Effective Green, g (s)	11.6	27.3		11.3	27.0	41.5	11.0	45.1		14.5	48.6	
Actuated g/C Ratio	0.10	0.23		0.09	0.22	0.35	0.09	0.38		0.12	0.41	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	171	1137		166	796	547	162	1857		414	2027	
v/s Ratio Prot	0.07	c0.17		c0.07	0.12	0.03	c0.05	c0.19		c0.10	0.18	
v/s Ratio Perm						0.06						
v/c Ratio	0.68	0.73		0.73	0.53	0.25	0.55	0.49		0.80	0.46	
Uniform Delay, d1	52.4	42.9		52.9	40.9	28.1	52.1	28.7		51.3	26.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.85	0.71		0.84	0.69	
Incremental Delay, d2	8.1	3.0		12.7	1.2	0.1	2.0	0.9		9.1	0.7	
Delay (s)	60.5	45.9		65.5	42.2	28.2	46.3	21.2		52.1	18.7	
Level of Service	E	D		E	D	C	D	C		D	B	
Approach Delay (s)		47.7			41.8			23.3			27.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	204	49	27	114	220	15	660	60	221	841	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1809		1770	1863	1583	1770	5021		1770	5049	
Flt Permitted	0.62	1.00		0.27	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1157	1809		505	1863	1583	1770	5021		1770	5049	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	227	54	30	127	244	17	733	67	246	934	46
RTOR Reduction (vph)	0	7	0	0	0	197	0	9	0	0	4	0
Lane Group Flow (vph)	116	274	0	30	127	47	17	791	0	246	976	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	23.1	23.1		23.1	23.1	23.1	4.0	62.6		17.9	76.5	
Effective Green, g (s)	23.1	23.1		23.1	23.1	23.1	4.0	62.6		17.9	76.5	
Actuated g/C Ratio	0.19	0.19		0.19	0.19	0.19	0.03	0.52		0.15	0.64	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	222	348		97	358	304	59	2619		264	3218	
v/s Ratio Prot		c0.15			0.07		0.01	c0.16		c0.14	c0.19	
v/s Ratio Perm	0.10			0.06		0.03						
v/c Ratio	0.52	0.79		0.31	0.35	0.15	0.29	0.30		0.93	0.30	
Uniform Delay, d1	43.5	46.1		41.6	42.0	40.3	56.6	16.3		50.4	9.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.60	0.77	
Incremental Delay, d2	2.2	11.1		1.8	0.6	0.2	2.7	0.3		35.3	0.2	
Delay (s)	45.7	57.2		43.4	42.6	40.6	59.3	16.6		65.5	7.7	
Level of Service	D	E		D	D	D	E	B		E	A	
Approach Delay (s)		53.9			41.4			17.5			19.3	
Approach LOS		D			D			B			B	

Intersection Summary				
HCM 2000 Control Delay	26.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4	
Intersection Capacity Utilization	62.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

18: Beach Blvd & Atlanta Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	402	43	52	318	239	39	340	64	257	565	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3488		1770	3311		1770	4964		1770	4954	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3488		1770	3311		1770	4964		1770	4954	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	112	432	46	56	342	257	42	366	69	276	608	126
RTOR Reduction (vph)	0	4	0	0	85	0	0	23	0	0	20	0
Lane Group Flow (vph)	112	474	0	56	514	0	42	412	0	276	714	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.0	26.1		8.0	21.1		5.6	20.5		23.0	37.9	
Effective Green, g (s)	13.0	26.1		8.0	21.1		5.6	20.5		23.0	37.9	
Actuated g/C Ratio	0.13	0.26		0.08	0.21		0.06	0.21		0.23	0.38	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	233	922		143	707		100	1031		412	1902	
v/s Ratio Prot	c0.06	0.14		0.03	c0.16		0.02	0.08		c0.16	c0.14	
v/s Ratio Perm												
v/c Ratio	0.48	0.51		0.39	0.73		0.42	0.40		0.67	0.38	
Uniform Delay, d1	39.7	30.9		43.0	36.1		45.0	33.8		34.4	21.9	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.2		0.6	3.2		1.0	0.5		3.2	0.3	
Delay (s)	40.3	31.1		43.7	39.3		46.0	34.3		37.6	22.1	
Level of Service	D	C		D	D		D	C		D	C	
Approach Delay (s)		32.8			39.7			35.3			26.4	
Approach LOS		C			D			D			C	

Intersection Summary				
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.59			
Actuated Cycle Length (s)	98.7	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	70.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

19: Beach Blvd & Pacific View Ave

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	0	38	0	0	0	22	318	0	0	600	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5039	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5039	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	39	0	40	0	0	0	23	338	0	0	638	41
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	39	0	6	0	0	0	23	338	0	0	673	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	8.1		8.1				1.1	32.4			26.4	
Effective Green, g (s)	8.1		8.1				1.1	32.4			26.4	
Actuated g/C Ratio	0.16		0.16				0.02	0.63			0.51	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	278		248				37	3199			2583	
v/s Ratio Prot							c0.01	0.07			c0.13	
v/s Ratio Perm	c0.02		0.00									
v/c Ratio	0.14		0.03				0.62	0.11			0.26	
Uniform Delay, d1	18.7		18.4				25.0	3.8			7.1	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	0.2		0.0				28.2	0.0			0.1	
Delay (s)	18.9		18.4				53.2	3.8			7.1	
Level of Service	B		B				D	A			A	
Approach Delay (s)		18.7			0.0			7.0			7.1	
Approach LOS		B			A			A			A	

Intersection Summary				
HCM 2000 Control Delay	7.9	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.24			
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	30.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	1702	23	19	710	242	5	14	29	494	51	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	84	1719	23	19	717	244	5	14	29	499	52	138
RTOR Reduction (vph)	0	1	0	0	0	137	0	0	27	0	0	0
Lane Group Flow (vph)	84	1741	0	19	717	107	5	14	2	499	52	138
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	11.4	52.2		2.9	43.7	43.7	1.1	8.2	8.2	15.0	22.1	100.0
Effective Green, g (s)	11.4	52.2		2.9	43.7	43.7	1.1	8.2	8.2	15.0	22.1	100.0
Actuated g/C Ratio	0.11	0.52		0.03	0.44	0.44	0.01	0.08	0.08	0.15	0.22	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	2.0	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	391	2649		51	1546	691	19	290	129	514	411	1583
v/s Ratio Prot	0.02	c0.34		0.01	c0.20		0.00	0.00		c0.15	c0.03	
v/s Ratio Perm						0.07			0.00			0.09
v/c Ratio	0.21	0.66		0.37	0.46	0.15	0.26	0.05	0.02	0.97	0.13	0.09
Uniform Delay, d1	40.2	17.4		47.7	19.9	17.0	49.0	42.3	42.2	42.3	31.2	0.0
Progression Factor	1.00	1.00		0.59	0.98	3.18	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.3		1.6	1.0	0.5	2.7	0.0	0.0	32.0	0.1	0.1
Delay (s)	40.3	18.7		29.6	20.4	54.5	51.7	42.3	42.2	74.3	31.3	0.1
Level of Service	D	B		C	C	D	D	D	D	E	C	A
Approach Delay (s)		19.7			29.1			43.2			56.2	
Approach LOS		B			C			D			E	

Intersection Summary				
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	67.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

23: Huntington Beach Parking/Newland St & Pacific Coast Highway

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	86	2126	3	3	779	60	13	15	8	195	1	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1766		1770	1585	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.56	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1048	1766		1383	1585	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	88	2169	3	3	795	61	13	15	8	199	1	146
RTOR Reduction (vph)	0	0	1	0	0	25	0	6	0	0	118	0
Lane Group Flow (vph)	88	2169	2	3	795	36	13	17	0	199	29	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	7.8	64.2	64.2	2.4	58.8	58.8	19.5	19.5		19.5	19.5	
Effective Green, g (s)	7.8	64.2	64.2	2.4	58.8	58.8	19.5	19.5		19.5	19.5	
Actuated g/C Ratio	0.08	0.64	0.64	0.02	0.59	0.59	0.20	0.20		0.20	0.20	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	138	3264	1016	42	2989	930	204	344		269	309	
v/s Ratio Prot	0.05	c0.43		0.00	c0.16			0.01			0.02	
v/s Ratio Perm			0.00			0.02	0.01			c0.14		
v/c Ratio	0.64	0.66	0.00	0.07	0.27	0.04	0.06	0.05		0.74	0.10	
Uniform Delay, d1	44.7	11.2	6.4	47.7	10.1	8.7	32.8	32.7		37.9	33.0	
Progression Factor	1.25	1.15	1.00	1.11	1.40	1.88	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.1	0.8	0.0	0.3	0.2	0.1	0.0	0.0		8.8	0.0	
Delay (s)	61.2	13.6	6.4	53.2	14.3	16.4	32.9	32.7		46.7	33.1	
Level of Service	E	B	A	D	B	B	C	C		D	C	
Approach Delay (s)		15.5			14.6			32.8			40.9	
Approach LOS		B			B			C			D	

Intersection Summary				
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	75.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

25: Magnolia Ave & Pacific Coast Highway

Existing AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	2205	39	37	745	59	13	22	6	163	57	102
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1805		1681	1728	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1805		1681	1728	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	128	2273	40	38	768	61	13	23	6	168	59	105
RTOR Reduction (vph)	0	0	18	0	0	32	0	5	0	0	0	90
Lane Group Flow (vph)	128	2273	22	38	768	29	13	24	0	113	114	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.5	53.8	53.8	4.5	47.8	47.8	9.0	9.0		13.9	13.9	13.9
Effective Green, g (s)	10.5	53.8	53.8	4.5	47.8	47.8	9.0	9.0		13.9	13.9	13.9
Actuated g/C Ratio	0.10	0.54	0.54	0.04	0.48	0.48	0.09	0.09		0.14	0.14	0.14
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	185	2735	851	79	2430	756	159	162		233	240	220
v/s Ratio Prot	c0.07	c0.45		0.02	0.15		0.01	c0.01		c0.07	0.07	
v/s Ratio Perm			0.01			0.02						0.01
v/c Ratio	0.69	0.83	0.03	0.48	0.32	0.04	0.08	0.15		0.48	0.47	0.07
Uniform Delay, d1	43.2	19.3	10.8	46.6	16.0	13.9	41.7	42.0		39.7	39.7	37.4
Progression Factor	1.12	0.67	1.00	0.61	1.61	16.51	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	2.5	0.0	1.6	0.3	0.1	0.1	0.2		0.6	0.5	0.0
Delay (s)	55.5	15.5	10.9	30.1	26.1	229.3	41.8	42.1		40.3	40.2	37.5
Level of Service	E	B	B	C	C	F	D	D		D	D	D
Approach Delay (s)		17.5			40.6			42.0			39.4	
Approach LOS		B			D			D			D	

Intersection Summary				
HCM 2000 Control Delay	25.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	71.9%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	2179	2	7	703	252	11	15	11	560	5	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	175	2179	2	7	703	252	11	15	11	560	5	143
RTOR Reduction (vph)	0	0	1	0	0	101	0	11	0	0	0	111
Lane Group Flow (vph)	175	2179	1	7	703	151	11	15	0	560	5	32
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	15.5	52.2	52.2	1.1	37.8	60.0	3.8	3.8		22.2	22.2	22.2
Effective Green, g (s)	15.5	52.2	52.2	1.1	37.8	60.0	3.8	3.8		22.2	22.2	22.2
Actuated g/C Ratio	0.16	0.52	0.52	0.01	0.38	0.60	0.04	0.04		0.22	0.22	0.22
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	274	2654	826	19	1922	949	67	66		762	413	351
v/s Ratio Prot	0.10	c0.43		0.00	c0.14	0.04	0.01	c0.01		c0.16	0.00	
v/s Ratio Perm			0.00			0.06						0.02
v/c Ratio	0.64	0.82	0.00	0.37	0.37	0.16	0.16	0.23		0.73	0.01	0.09
Uniform Delay, d1	39.6	20.0	11.4	49.1	22.4	8.8	46.6	46.7		36.2	30.3	30.9
Progression Factor	0.92	0.98	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.3	2.0	0.0	4.4	0.5	0.0	0.4	0.7		3.2	0.0	0.0
Delay (s)	38.9	21.6	11.4	53.5	23.0	8.9	47.0	47.4		39.4	30.4	30.9
Level of Service	D	C	B	D	C	A	D	D		D	C	C
Approach Delay (s)		22.9			19.5			47.2			37.6	
Approach LOS		C			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	81.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				


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EX-AM                    Tue Jul 8, 2014 13:23:02                Page 1-1
--------------------------------------------------------------------------
                ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
                          EXISTING CONDITIONS (2014)
                               AM PEAK HOUR
--------------------------------------------------------------------------
                                Scenario Report
Scenario:             EX-AM

Command:              EX-AM
Volume:               EX-AM
Geometry:             EX
Impact Fee:           Default Impact Fee
Trip Generation:      None
Trip Distribution:    NONE
Paths:                Default Path
Routes:               Default Route
Configuration:        EX-AM

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.722	C	xxxxx	0.722	+ 0.000
# 8 Beach Blvd & Warner Ave	C	xxxxx	0.746	C	xxxxx	0.746	+ 0.000
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.554	A	xxxxx	0.554	+ 0.000
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.549	A	xxxxx	0.549	+ 0.000
# 21 Newland St & Atlanta Ave	A	xxxxx	0.496	A	xxxxx	0.496	+ 0.000
# 22 Newland St & Hamilton Ave	A	xxxxx	0.561	A	xxxxx	0.561	+ 0.000
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.530	A	xxxxx	0.530	+ 0.000
# 26 Brookhurst St & Hamilton Ave	C	xxxxx	0.705	C	xxxxx	0.705	+ 0.000
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.799	C	xxxxx	0.799	+ 0.000
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.351	A	xxxxx	0.351	+ 0.000
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.402	A	xxxxx	0.402	+ 0.000
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.668	B	xxxxx	0.668	+ 0.000
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.521	A	xxxxx	0.521	+ 0.000
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.525	A	xxxxx	0.525	+ 0.000
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.741	C	xxxxx	0.741	+ 0.000
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.259	A	xxxxx	0.259	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.390	A	xxxxx	0.390	+ 0.000
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.252	A	xxxxx	0.252	+ 0.000
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.307	A	xxxxx	0.307	+ 0.000

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.722
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0	1	2	0	4	0	2	2	0	3	0	1	2	0	2	0	1
Volume Module:																
Base Vol:	144	1666	278		448	2316	443		194	887	149		134	431	234	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	144	1666	278		448	2316	443		194	887	149		134	431	234	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	144	1666	278		448	2316	443		194	887	149		134	431	234	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	144	1666	278		448	2316	443		194	887	149		134	431	234	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	144	1666	278		448	2316	443		194	887	149		134	431	234	
OvlAdjVol:							249				77					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.33	0.16		0.13	0.34	0.13		0.06	0.17	0.09		0.04	0.13	0.14	
OvlAdjV/S:							0.07				0.05					
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.746
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.68	0.32		2.00	4.00	1.00		2.00	2.79	0.21		2.00	2.72	0.28	
Final Sat.:	3400	6263	537		3400	6800	1700		3400	4743	357		3400	4620	480	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.27	0.27		0.11	0.28	0.15		0.06	0.25	0.25		0.06	0.18	0.18	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.554
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	86	747	173		320	815	94		113	727	92		117	409	215	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	86	747	173		320	815	94		113	727	92		117	409	215	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	86	747	173		320	815	94		113	727	92		117	409	215	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	86	747	173		320	815	94		113	727	92		117	409	215	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	86	747	173		320	815	94		113	727	92		117	409	215	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.44	0.56		2.00	2.69	0.31		1.00	2.66	0.34		1.00	2.00	1.00	
Final Sat.:	1700	4141	959		3400	4573	527		1700	4527	573		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.18		0.09	0.18	0.18		0.07	0.16	0.16		0.07	0.12	0.13	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	5	14	29	494	51	137	83	1702	23	19	710	242				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	5	14	29	494	51	137	83	1702	23	19	710	242				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	5	14	0	494	51	0	83	1702	23	19	710	242				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	5	14	0	494	51	0	83	1702	23	19	710	242				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	5	14	0	494	51	0	83	1702	23	19	710	242				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.96	0.04	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	5032	68	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.15	0.03	0.00	0.02	0.34	0.34	0.01	0.21	0.14				
Crit Moves:	****			****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.496
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	128	316	39	151	377	71	84	516	238	29	354	150				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	128	316	39	151	377	71	84	516	238	29	354	150				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	128	316	39	151	377	71	84	516	238	29	354	150				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	128	316	39	151	377	71	84	516	238	29	354	150				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	128	316	39	151	377	71	84	516	238	29	354	150				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.78	0.22	1.00	1.68	0.32	1.00	1.37	0.63	1.00	1.40	0.60				
Final Sat.:	1700	3026	374	1700	2861	539	1700	2327	1073	1700	2388	1012				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.10	0.10	0.09	0.13	0.13	0.05	0.22	0.22	0.02	0.15	0.15				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.561
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	136	93		407	270	0		0	0	0		104	0	233	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	136	93		407	270	0		0	0	0		104	0	233	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	136	93		407	270	0		0	0	0		104	0	233	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	136	93		407	270	0		0	0	0		104	0	233	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	136	93		407	270	0		0	0	0		104	0	233	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.59	0.41		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1010	690		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.13	0.13		0.24	0.16	0.00		0.00	0.00	0.00		0.06	0.00	0.14	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.530
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	36	206	45		214	256	35		75	397	54		25	305	309	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	36	206	45		214	256	35		75	397	54		25	305	309	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	36	206	45		214	256	35		75	397	54		25	305	309	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	36	206	45		214	256	35		75	397	54		25	305	309	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	36	206	45		214	256	35		75	397	54		25	305	309	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.64	0.36		1.00	2.00	1.00		1.00	0.88	0.12		1.00	1.00	1.00	
Final Sat.:	1700	2790	610		1700	3400	1700		1700	1496	204		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.07	0.07		0.13	0.08	0.02		0.04	0.27	0.27		0.01	0.18	0.18	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.705
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	70	295	342		477	413	82		98	769	56		120	403	279	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	70	295	342		477	413	82		98	769	56		120	403	279	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	70	295	342		477	413	82		98	769	56		120	403	279	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	70	295	342		477	413	82		98	769	56		120	403	279	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	70	295	342		477	413	82		98	769	56		120	403	279	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.50	0.50		1.00	1.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4255	845		1700	3169	231		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.06	0.20		0.14	0.10	0.10		0.06	0.24	0.24		0.07	0.12	0.16	
Crit Moves:			****		****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.799
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	120	1043	420		650	955	356		135	1325	90		174	366	80	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	120	1043	420		650	955	356		135	1325	90		174	366	80	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	120	1043	420		650	955	356		135	1325	90		174	366	80	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	120	1043	420		650	955	356		135	1325	90		174	366	80	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	120	1043	420		650	955	356		135	1325	90		174	366	80	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.20	0.25		0.19	0.19	0.21		0.04	0.26	0.05		0.05	0.11	0.05	
Crit Moves:			****		****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.351
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	45	1415	3		15	1274	150		11	1	8		3	0	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	45	1415	3		15	1274	150		11	1	8		3	0	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	45	1415	3		15	1274	0		11	1	8		3	0	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	45	1415	3		15	1274	0		11	1	8		3	0	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	45	1415	3		15	1274	0		11	1	8		3	0	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		0.55	0.05	0.40		0.23	0.00	0.77	
Final Sat.:	1700	5089	11		1700	5100	1700		935	85	680		392	0	1308	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.28	0.28		0.01	0.25	0.00		0.01	0.01	0.01		0.00	0.00	0.01	
Crit Moves:	****				****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.402
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	24	1367	9		19	1060	92		76	1	19		10	1	34	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.76	0.24		0.99	0.01	1.00		0.22	0.02	0.76	
Final Sat.:	1700	5067	33		1700	4693	407		1678	22	1700		378	38	1284	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.27	0.27		0.01	0.23	0.23		0.04	0.05	0.01		0.01	0.03	0.03	
Crit Moves:	****				****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.668
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	70	1102	196		133	741	142		271	898	57		147	341	143	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	70	1102	196		133	741	142		271	898	57		147	341	143	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	70	1102	196		133	741	142		271	898	57		147	341	143	
OvlAdjVol:			122				6									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.88	0.12		2.00	1.41	0.59	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	3197	203		3400	2395	1005	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.22	0.12		0.08	0.15	0.08		0.08	0.28	0.28		0.04	0.14	0.14	
OvlAdjV/S:			0.07				0.00									
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.521
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	78	1055	65		68	806	141		235	375	89		128	171	57	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	78	1055	65		68	806	141		235	375	89		128	171	57	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	78	1055	65		68	806	141		235	375	89		128	171	57	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.83	0.17		1.00	3.00	1.00		1.00	1.62	0.38		1.00	2.00	1.00	
Final Sat.:	1700	4804	296		1700	5100	1700		1700	2748	652		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.22	0.22		0.04	0.16	0.08		0.14	0.14	0.14		0.08	0.05	0.03	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.525
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	92	890	113	10	792	150	198	435	153	108	228	45				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	92	890	113	10	792	150	198	435	153	108	228	45				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	92	890	113	10	792	150	198	435	153	108	228	45				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	92	890	113	10	792	150	198	435	153	108	228	45				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	92	890	113	10	792	150	198	435	153	108	228	45				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.66	0.34	1.00	2.52	0.48	1.00	1.48	0.52	1.00	1.67	0.33				
Final Sat.:	1700	4525	575	1700	4288	812	1700	2515	885	1700	2840	560				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.20	0.20	0.01	0.18	0.18	0.12	0.17	0.17	0.06	0.08	0.08				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.741
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	80	657	267	382	676	155	234	1730	71	199	595	154				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	80	657	267	382	676	155	234	1730	71	199	595	154				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	80	657	267	382	676	155	234	1730	71	199	595	154				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.13	0.87	2.00	2.44	0.56	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	3626	1474	3400	4149	951	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.18	0.18	0.11	0.16	0.16	0.07	0.34	0.04	0.06	0.12	0.09				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.259
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	29	848	0	0	687	45	144	0	48	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	29	848	0	0	687	45	144	0	48	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	29	848	0	0	687	45	144	0	48	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.82	0.18	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4786	314	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.17	0.00	0.00	0.14	0.14	0.04	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****			****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.390
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	89	665	15	15	640	134	216	15	218	17	23	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	89	665	15	15	640	134	216	15	218	17	23	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	89	665	15	15	640	134	216	15	218	17	23	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.48	0.52	1.00	1.00	1.00	1.00	1.59	0.41				
Final Sat.:	1700	4988	113	1700	4217	883	1700	1700	1700	1700	2697	703				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.13	0.13	0.01	0.15	0.15	0.13	0.01	0.13	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.252
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	3	413	0	0	520	100	134	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	3	413	0	0	520	100	134	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	3	413	0	0	520	100	134	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.52	0.48	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4277	823	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00	0.00	0.12	0.12	0.08	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.307
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1!	0 0
Volume Module:																
Base Vol:	54	398	2	3	516	15	7	1	207	3	0	6				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	54	398	2	3	516	15	7	1	207	3	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	54	398	2	3	516	15	7	1	207	3	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	54	398	2	3	516	15	7	1	207	3	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	54	398	2	3	516	15	7	1	207	3	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.33	0.00	0.67				
Final Sat.:	1700	5075	26	1700	5100	1700	1700	8	1692	567	0	1133				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.08	0.08	0.00	0.10	0.01	0.00	0.12	0.12	0.00	0.00	0.01				
Crit Moves:	****				****			****		****						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	232	254	89	314	226	96	177	1705	149	122	1790	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3401		3433	3381		3433	6330		3433	6319	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3401		3433	3381		3433	6330		3433	6319	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	247	270	95	334	240	102	188	1814	159	130	1904	194
RTOR Reduction (vph)	0	30	0	0	39	0	0	9	0	0	11	0
Lane Group Flow (vph)	247	335	0	334	303	0	188	1964	0	130	2087	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.5	19.2		17.0	21.7		12.4	62.4		13.0	63.0	
Effective Green, g (s)	14.5	19.2		17.0	21.7		12.4	62.4		13.0	63.0	
Actuated g/C Ratio	0.11	0.15		0.13	0.17		0.10	0.48		0.10	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	502		448	564		327	3038		343	3062	
v/s Ratio Prot	0.07	c0.10		c0.10	0.09		0.05	c0.31		0.04	c0.33	
v/s Ratio Perm												
v/c Ratio	0.65	0.67		0.75	0.54		0.57	0.65		0.38	0.68	
Uniform Delay, d1	55.3	52.4		54.4	49.6		56.3	25.5		54.7	25.8	
Progression Factor	1.00	1.00		1.00	1.00		1.00	0.89		1.00	1.00	
Incremental Delay, d2	3.7	3.4		6.6	1.0		2.2	1.0		0.7	1.2	
Delay (s)	59.0	55.7		61.0	50.5		58.6	23.6		55.4	27.0	
Level of Service	E	E		E	D		E	C		E	C	
Approach Delay (s)		57.1			55.7			26.6			28.7	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	298	858	0	2134	2030	910
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	301	867	0	2156	2051	919
RTOR Reduction (vph)	0	2	0	0	0	0
Lane Group Flow (vph)	301	865	0	2156	2051	919
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	17.2	54.2		103.0	60.0	130.0
Effective Green, g (s)	17.2	54.2		103.0	60.0	130.0
Actuated g/C Ratio	0.13	0.42		0.79	0.46	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	454	1258		5077	2957	1583
v/s Ratio Prot	0.09	c0.20		0.33	c0.32	
v/s Ratio Perm		0.11		0.00		0.58
v/c Ratio	0.66	0.69		0.42	0.69	0.58
Uniform Delay, d1	53.6	31.0		4.2	27.7	0.0
Progression Factor	1.00	1.00		0.24	0.56	1.00
Incremental Delay, d2	4.0	1.7		0.0	1.2	1.3
Delay (s)	57.6	32.7		1.1	16.8	1.3
Level of Service	E	C		A	B	A
Approach Delay (s)	39.1			1.1	12.0	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	826	301	148	371	87	385	1729	465	218	2101	653
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	405	852	310	153	382	90	397	1782	479	225	2166	673
RTOR Reduction (vph)	0	0	68	0	0	76	0	0	174	0	0	52
Lane Group Flow (vph)	405	852	242	153	382	14	397	1782	305	225	2166	621
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.9	28.0	43.0	13.0	20.1	20.1	15.0	56.4	56.4	12.3	53.3	74.2
Effective Green, g (s)	20.9	28.0	43.0	13.0	20.1	20.1	15.0	56.4	56.4	12.3	53.3	74.2
Actuated g/C Ratio	0.16	0.22	0.33	0.10	0.15	0.15	0.12	0.43	0.43	0.09	0.41	0.57
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	551	1095	523	343	547	244	396	2206	686	324	2627	1689
v/s Ratio Prot	0.12	c0.17	0.05	0.04	c0.11		c0.12	c0.35		0.07	c0.34	0.06
v/s Ratio Perm			0.10			0.01			0.19			0.16
v/c Ratio	0.74	0.78	0.46	0.45	0.70	0.06	1.00	0.81	0.44	0.69	0.82	0.37
Uniform Delay, d1	51.9	48.1	34.4	55.1	52.1	46.9	57.5	32.1	25.8	57.0	34.2	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.57	0.32	1.05	0.72	0.58
Incremental Delay, d2	4.4	3.6	0.2	0.3	3.9	0.1	42.6	2.9	1.8	3.9	2.3	0.0
Delay (s)	56.3	51.6	34.6	55.4	56.0	47.0	81.7	21.1	10.1	63.9	27.0	8.8
Level of Service	E	D	C	E	E	D	F	C	B	E	C	A
Approach Delay (s)		49.5			54.5			28.2			25.7	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	22	43	101	31	140	135	2107	53	251	2301	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1676		1770	1863	1583	1770	6384		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1676		1770	1863	1583	1770	6384		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	22	44	103	32	143	138	2150	54	256	2348	24
RTOR Reduction (vph)	0	39	0	0	0	122	0	2	0	0	1	0
Lane Group Flow (vph)	28	27	0	103	32	21	138	2202	0	256	2371	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	13.5		13.4	19.1	19.1	14.4	69.2		14.3	69.1	
Effective Green, g (s)	7.8	13.5		13.4	19.1	19.1	14.4	69.2		14.3	69.1	
Actuated g/C Ratio	0.06	0.10		0.10	0.15	0.15	0.11	0.53		0.11	0.53	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	106	174		182	273	232	196	3398		377	3400	
v/s Ratio Prot	0.02	c0.02		c0.06	0.02		c0.08	0.34		0.07	c0.37	
v/s Ratio Perm						0.01						
v/c Ratio	0.26	0.15		0.57	0.12	0.09	0.70	0.65		0.68	0.70	
Uniform Delay, d1	58.4	53.0		55.5	48.1	47.9	55.7	21.7		55.6	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.27	0.25		1.30	0.31	
Incremental Delay, d2	1.3	0.4		4.0	0.2	0.2	8.1	0.7		3.0	0.8	
Delay (s)	59.7	53.5		59.5	48.3	48.1	79.1	6.2		75.4	7.8	
Level of Service	E	D		E	D	D	E	A		E	A	
Approach Delay (s)		55.3			52.4			10.5			14.4	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	66.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	3	26	264	8	200	50	2115	110	333	2134	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.95	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1611		1681	1564	1504	1770	6360		3433	6397	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1611		1681	1564	1504	1770	6360		3433	6397	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	38	3	27	275	8	208	52	2203	115	347	2223	26
RTOR Reduction (vph)	0	25	0	0	13	130	0	5	0	0	1	0
Lane Group Flow (vph)	38	5	0	170	154	24	52	2313	0	347	2248	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	10.9	10.9		19.9	19.9	19.9	8.3	65.5		15.8	73.0	
Effective Green, g (s)	10.9	10.9		19.9	19.9	19.9	8.3	65.5		15.8	73.0	
Actuated g/C Ratio	0.08	0.08		0.15	0.15	0.15	0.06	0.50		0.12	0.56	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	135		257	239	230	113	3204		417	3592	
v/s Ratio Prot	c0.02	0.00		c0.10	0.10		0.03	c0.36		c0.10	0.35	
v/s Ratio Perm						0.02						
v/c Ratio	0.26	0.04		0.66	0.65	0.10	0.46	0.72		0.83	0.63	
Uniform Delay, d1	55.8	54.7		51.9	51.7	47.4	58.7	25.1		55.8	19.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.37	0.25		0.56	0.22	
Incremental Delay, d2	0.9	0.1		6.3	5.9	0.2	2.1	1.0		10.5	0.6	
Delay (s)	56.7	54.9		58.1	57.6	47.6	82.6	7.3		41.7	4.9	
Level of Service	E	D		E	E	D	F	A		D	A	
Approach Delay (s)		55.9			54.6			8.9			9.8	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	168	151	38	159	107	140	1957	55	133	2147	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.94		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3288		1770	3326		1770	6381		1770	6327	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3288		1770	3326		1770	6381		1770	6327	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	226	170	153	38	161	108	141	1977	56	134	2169	200
RTOR Reduction (vph)	0	115	0	0	95	0	0	3	0	0	11	0
Lane Group Flow (vph)	226	208	0	38	174	0	141	2030	0	134	2358	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	25.6	32.1		8.8	15.3		13.2	56.3		14.0	57.1	
Effective Green, g (s)	25.6	32.1		8.8	15.3		13.2	56.3		14.0	57.1	
Actuated g/C Ratio	0.20	0.25		0.07	0.12		0.10	0.43		0.11	0.44	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	348	811		119	391		179	2763		190	2779	
v/s Ratio Prot	c0.13	0.06		0.02	c0.05		0.08	c0.32		0.08	c0.37	
v/s Ratio Perm												
v/c Ratio	0.65	0.26		0.32	0.44		0.79	0.73		0.71	0.85	
Uniform Delay, d1	48.1	39.4		57.7	53.4		57.0	30.6		56.0	32.6	
Progression Factor	1.00	1.00		1.00	1.00		0.57	1.19		0.61	0.38	
Incremental Delay, d2	4.1	0.2		1.6	0.8		17.9	1.6		9.1	2.8	
Delay (s)	52.2	39.5		59.3	54.2		50.7	37.9		43.1	15.0	
Level of Service	D	D		E	D		D	D		D	B	
Approach Delay (s)		44.7			54.8			38.7			16.6	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	7	20	78	11	26	117	2023	52	107	2061	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1662	1478		1665	1478	1770	6384		1770	6386	
Flt Permitted		0.64	1.00		0.64	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1106	1478		1117	1478	1770	6384		1770	6386	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	86	7	21	81	11	27	122	2107	54	111	2147	51
RTOR Reduction (vph)	0	0	18	0	0	23	0	2	0	0	2	0
Lane Group Flow (vph)	0	93	3	0	92	4	122	2159	0	111	2196	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		17.6	17.6		17.6	17.6	17.0	84.6		12.5	80.1	
Effective Green, g (s)		17.6	17.6		17.6	17.6	17.0	84.6		12.5	80.1	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.13	0.65		0.10	0.62	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		149	200		151	200	231	4154		170	3934	
v/s Ratio Prot							0.07	c0.34		c0.06	c0.34	
v/s Ratio Perm		c0.08	0.00		0.08	0.00						
v/c Ratio		0.62	0.01		0.61	0.02	0.53	0.52		0.65	0.56	
Uniform Delay, d1		53.1	48.7		53.0	48.7	52.8	12.0		56.7	14.6	
Progression Factor		1.00	1.00		1.00	1.00	0.70	0.15		1.21	0.25	
Incremental Delay, d2		7.9	0.0		6.8	0.0	1.5	0.3		5.1	0.3	
Delay (s)		61.0	48.7		59.8	48.7	38.4	2.2		73.5	3.9	
Level of Service		E	D		E	D	D	A		E	A	
Approach Delay (s)		58.7			57.3			4.1			7.3	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	63.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	339	759	139	241	853	135	251	1682	179	154	1634	256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4967		3433	4981		3433	6315		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4967		3433	4981		3433	6315		3433	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	346	774	142	246	870	138	256	1716	183	157	1667	261
RTOR Reduction (vph)	0	20	0	0	17	0	0	14	0	0	0	150
Lane Group Flow (vph)	346	896	0	246	991	0	256	1885	0	157	1667	111
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.1	32.4		10.8	29.1		13.0	55.8		12.0	54.8	54.8
Effective Green, g (s)	14.1	32.4		10.8	29.1		13.0	55.8		12.0	54.8	54.8
Actuated g/C Ratio	0.11	0.25		0.08	0.22		0.10	0.43		0.09	0.42	0.42
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	372	1237		285	1114		343	2710		316	2701	667
v/s Ratio Prot	c0.10	0.18		0.07	c0.20		0.07	c0.30		0.05	c0.26	
v/s Ratio Perm												0.07
v/c Ratio	0.93	0.72		0.86	0.89		0.75	0.70		0.50	0.62	0.17
Uniform Delay, d1	57.5	44.7		58.9	48.9		56.9	30.2		56.1	29.4	23.4
Progression Factor	1.00	1.00		1.00	1.00		1.30	0.31		0.70	0.39	0.72
Incremental Delay, d2	29.2	2.1		22.0	8.9		5.9	1.2		0.4	0.9	0.5
Delay (s)	86.7	46.8		80.8	57.8		80.0	10.4		39.6	12.4	17.4
Level of Service	F	D		F	E		E	B		D	B	B
Approach Delay (s)		57.8			62.3			18.6			15.1	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

9: Beach Blvd & Slater Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	352	167	94	404	110	142	1599	76	171	1785	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3368		1770	3425		1770	6364		1770	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3368		1770	3425		1770	6364		1770	6323	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	367	174	98	421	115	148	1666	79	178	1859	180
RTOR Reduction (vph)	0	43	0	0	20	0	0	5	0	0	12	0
Lane Group Flow (vph)	177	498	0	98	516	0	148	1740	0	178	2027	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.1	29.9		12.0	24.8		18.0	51.0		16.4	49.4	
Effective Green, g (s)	17.1	29.9		12.0	24.8		18.0	51.0		16.4	49.4	
Actuated g/C Ratio	0.13	0.23		0.09	0.19		0.14	0.39		0.13	0.38	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	774		163	653		245	2496		223	2402	
v/s Ratio Prot	c0.10	0.15		0.06	c0.15		0.08	c0.27		0.10	c0.32	
v/s Ratio Perm												
v/c Ratio	0.76	0.64		0.60	0.79		0.60	0.70		0.80	0.84	
Uniform Delay, d1	54.5	45.2		56.7	50.1		52.6	33.0		55.2	36.8	
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.53		0.58	0.66	
Incremental Delay, d2	13.8	1.8		6.1	6.3		3.7	1.5		14.6	3.1	
Delay (s)	68.3	47.1		62.8	56.4		36.3	19.0		46.9	27.5	
Level of Service	E	D		E	E		D	B		D	C	
Approach Delay (s)		52.3			57.4			20.4			29.1	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	79.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	3	13	106	3	122	12	1763	56	68	2046	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.93		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716			1691		1770	6378		1770	6399	
Flt Permitted		0.78			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1380			1447		1770	6378		1770	6399	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	17	3	14	110	3	127	12	1836	58	71	2131	19
RTOR Reduction (vph)	0	12	0	0	33	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	22	0	0	207	0	12	1891	0	71	2149	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		22.8			22.8		4.0	81.8		9.5	87.3	
Effective Green, g (s)		22.8			22.8		4.0	81.8		9.5	87.3	
Actuated g/C Ratio		0.18			0.18		0.03	0.63		0.07	0.67	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		242			253		54	4013		129	4297	
v/s Ratio Prot							0.01	0.30		c0.04	c0.34	
v/s Ratio Perm		0.02			c0.14							
v/c Ratio		0.09			0.82		0.22	0.47		0.55	0.50	
Uniform Delay, d1		44.9			51.6		61.5	12.7		58.2	10.6	
Progression Factor		1.00			1.00		1.23	0.14		1.17	0.10	
Incremental Delay, d2		0.2			18.2		1.3	0.3		3.0	0.2	
Delay (s)		45.1			69.8		76.7	2.0		71.3	1.3	
Level of Service		D			E		E	A		E	A	
Approach Delay (s)		45.1			69.8			2.5			3.5	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	342	157	191	333	224	198	1453	182	276	1818	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3372		1770	3326		1770	6301		1770	6334	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3372		1770	3326		1770	6301		1770	6334	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	140	364	167	203	354	238	211	1546	194	294	1934	162
RTOR Reduction (vph)	0	43	0	0	89	0	0	17	0	0	10	0
Lane Group Flow (vph)	140	488	0	203	503	0	211	1723	0	294	2086	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.2	24.1		18.4	29.3		16.5	46.8		20.0	50.3	
Effective Green, g (s)	13.2	24.1		18.4	29.3		16.5	46.8		20.0	50.3	
Actuated g/C Ratio	0.10	0.19		0.14	0.23		0.13	0.36		0.15	0.39	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	179	625		250	749		224	2268		272	2450	
v/s Ratio Prot	0.08	c0.14		c0.11	0.15		c0.12	0.27		c0.17	c0.33	
v/s Ratio Perm												
v/c Ratio	0.78	0.78		0.81	0.67		0.94	0.76		1.08	0.85	
Uniform Delay, d1	57.0	50.4		54.1	46.0		56.3	36.6		55.0	36.4	
Progression Factor	1.00	1.00		1.00	1.00		0.74	0.64		0.70	0.64	
Incremental Delay, d2	18.3	6.5		17.0	2.5		40.5	2.2		75.1	3.6	
Delay (s)	75.3	56.9		71.2	48.4		82.3	25.7		113.4	27.0	
Level of Service	E	E		E	D		F	C		F	C	
Approach Delay (s)		60.7			54.2			31.8			37.6	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	83.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	324	123	108	334	156	154	1276	140	255	1378	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6313		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6313		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	398	331	126	110	341	159	157	1302	143	260	1406	487
RTOR Reduction (vph)	0	0	104	0	0	139	0	12	0	0	0	23
Lane Group Flow (vph)	398	331	22	110	341	20	157	1433	0	260	1406	464
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	23.1	23.1	23.1	16.3	16.3	16.3	10.6	54.9		13.0	57.3	86.4
Effective Green, g (s)	23.1	23.1	23.1	16.3	16.3	16.3	10.6	54.9		13.0	57.3	86.4
Actuated g/C Ratio	0.18	0.18	0.18	0.13	0.13	0.13	0.08	0.42		0.10	0.44	0.66
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	610	628	281	221	443	198	279	2666		343	2241	1052
v/s Ratio Prot	c0.12	0.09		0.06	c0.10		0.05	0.23		c0.08	c0.28	0.29
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.65	0.53	0.08	0.50	0.77	0.10	0.56	0.54		0.76	0.63	0.44
Uniform Delay, d1	49.7	48.5	44.6	53.0	55.0	50.4	57.5	28.1		57.0	28.1	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.51		1.42	0.34	0.47
Incremental Delay, d2	2.0	0.5	0.1	0.6	7.1	0.1	1.2	0.6		4.4	0.7	0.1
Delay (s)	51.8	49.0	44.6	53.7	62.2	50.4	82.1	15.0		85.4	10.1	4.9
Level of Service	D	D	D	D	E	D	F	B		F	B	A
Approach Delay (s)		49.6			57.6			21.6			18.0	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	28.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	74.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	185	373	126	128	315	140	173	1156	98	223	1269	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3376		1770	5026		1770	4977	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3376		1770	5026		1770	4977	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	189	381	129	131	321	143	177	1180	100	228	1295	214
RTOR Reduction (vph)	0	0	102	0	41	0	0	7	0	0	16	0
Lane Group Flow (vph)	189	381	27	131	423	0	177	1273	0	228	1493	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.3	26.9	26.9	12.9	22.5		21.0	50.0		19.0	48.0	
Effective Green, g (s)	17.3	26.9	26.9	12.9	22.5		21.0	50.0		19.0	48.0	
Actuated g/C Ratio	0.13	0.21	0.21	0.10	0.17		0.16	0.38		0.15	0.37	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	235	732	327	175	584		285	1933		258	1837	
v/s Ratio Prot	c0.11	0.11		0.07	c0.13		0.10	c0.25		0.13	c0.30	
v/s Ratio Perm			0.02									
v/c Ratio	0.80	0.52	0.08	0.75	0.72		0.62	0.66		0.88	0.81	
Uniform Delay, d1	54.7	45.8	41.6	57.0	50.8		50.8	33.0		54.4	36.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.47	0.27		0.57	0.73	
Incremental Delay, d2	16.9	0.9	0.1	14.2	4.7		2.6	1.5		24.0	3.4	
Delay (s)	71.6	46.7	41.7	71.1	55.5		26.3	10.3		55.0	30.5	
Level of Service	E	D	D	E	E		C	B		D	C	
Approach Delay (s)		52.5			59.0			12.3			33.8	
Approach LOS		D			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	79.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	271	162	107	306	95	164	1119	118	104	1259	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3413		1770	5013		1770	5021	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3413		1770	5013		1770	5021	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	122	282	169	111	319	99	171	1166	123	108	1311	121
RTOR Reduction (vph)	0	0	139	0	24	0	0	9	0	0	8	0
Lane Group Flow (vph)	122	282	30	111	394	0	171	1280	0	108	1424	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.9	22.8	22.8	12.0	20.9		16.8	60.8		14.0	58.0	
Effective Green, g (s)	13.9	22.8	22.8	12.0	20.9		16.8	60.8		14.0	58.0	
Actuated g/C Ratio	0.11	0.18	0.18	0.09	0.16		0.13	0.47		0.11	0.45	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	189	620	277	163	548		228	2344		190	2240	
v/s Ratio Prot	c0.07	0.08		0.06	c0.12		c0.10	0.26		0.06	c0.28	
v/s Ratio Perm			0.02									
v/c Ratio	0.65	0.45	0.11	0.68	0.72		0.75	0.55		0.57	0.64	
Uniform Delay, d1	55.7	48.0	45.0	57.1	51.8		54.6	24.7		55.1	27.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.66	0.96		0.58	0.48	
Incremental Delay, d2	7.4	0.5	0.2	11.1	4.5		12.4	0.9		2.5	0.9	
Delay (s)	63.0	48.6	45.2	68.3	56.2		48.3	24.6		34.5	14.2	
Level of Service	E	D	D	E	E		D	C		C	B	
Approach Delay (s)		50.7			58.8			27.4			15.6	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	30.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	74.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	18	35	153	27	143	51	1107	79	117	1142	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.94			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1724			1787	1583	1770	5034		1770	5053	
Flt Permitted		0.76			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1327			1272	1583	1770	5034		1770	5053	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	29	18	36	156	28	146	52	1130	81	119	1165	52
RTOR Reduction (vph)	0	23	0	0	0	120	0	5	0	0	3	0
Lane Group Flow (vph)	0	60	0	0	184	26	52	1206	0	119	1214	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		23.1			23.1	23.1	12.8	77.4		14.3	78.9	
Effective Green, g (s)		23.1			23.1	23.1	12.8	77.4		14.3	78.9	
Actuated g/C Ratio		0.18			0.18	0.18	0.10	0.60		0.11	0.61	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		235			226	281	174	2997		194	3066	
v/s Ratio Prot							0.03	c0.24		c0.07	0.24	
v/s Ratio Perm		0.05			c0.14	0.02						
v/c Ratio		0.26			0.81	0.09	0.30	0.40		0.61	0.40	
Uniform Delay, d1		46.0			51.4	44.7	54.4	14.0		55.2	13.2	
Progression Factor		1.00			1.00	1.00	0.93	0.76		0.99	0.49	
Incremental Delay, d2		0.6			19.7	0.1	0.9	0.4		4.5	0.3	
Delay (s)		46.6			71.0	44.8	51.7	11.0		59.1	6.7	
Level of Service		D			E	D	D	B		E	A	
Approach Delay (s)		46.6			59.4			12.7			11.4	
Approach LOS		D			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.51			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	60.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	179	385	63	170	415	254	85	785	97	236	924	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4978		1770	3539	1583	1770	5001		3433	4989	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4978		1770	3539	1583	1770	5001		3433	4989	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	188	405	66	179	437	267	89	826	102	248	973	141
RTOR Reduction (vph)	0	19	0	0	0	57	0	10	0	0	13	0
Lane Group Flow (vph)	188	452	0	179	437	210	89	918	0	248	1101	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	16.7	24.6		15.5	23.4	36.8	11.1	54.7		13.4	57.0	
Effective Green, g (s)	16.7	24.6		15.5	23.4	36.8	11.1	54.7		13.4	57.0	
Actuated g/C Ratio	0.13	0.19		0.12	0.18	0.28	0.09	0.42		0.10	0.44	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	227	941		211	637	448	151	2104		353	2187	
v/s Ratio Prot	c0.11	0.09		0.10	c0.12	0.05	0.05	0.18		c0.07	c0.22	
v/s Ratio Perm						0.08						
v/c Ratio	0.83	0.48		0.85	0.69	0.47	0.59	0.44		0.70	0.50	
Uniform Delay, d1	55.3	47.0		56.1	49.9	38.5	57.3	26.7		56.4	26.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.80	0.82		1.50	0.19	
Incremental Delay, d2	20.4	0.8		24.9	3.9	0.3	3.6	0.6		4.7	0.8	
Delay (s)	75.7	47.8		81.0	53.8	38.8	49.7	22.5		89.3	5.9	
Level of Service	E	D		F	D	D	D	C		F	A	
Approach Delay (s)		55.8			54.8			24.9			21.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	68.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	120	28	25	107	167	25	761	46	215	872	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	5042		1770	5045	
Flt Permitted	0.61	1.00		0.47	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1136	1810		870	1863	1583	1770	5042		1770	5045	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	75	125	29	26	111	174	26	793	48	224	908	50
RTOR Reduction (vph)	0	7	0	0	0	151	0	5	0	0	3	0
Lane Group Flow (vph)	75	147	0	26	111	23	26	836	0	224	955	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	17.3	17.3		17.3	17.3	17.3	6.0	72.3		24.0	90.3	
Effective Green, g (s)	17.3	17.3		17.3	17.3	17.3	6.0	72.3		24.0	90.3	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.05	0.56		0.18	0.69	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	240		115	247	210	81	2804		326	3504	
v/s Ratio Prot		c0.08			0.06		0.01	c0.17		c0.13	0.19	
v/s Ratio Perm	0.07			0.03		0.01						
v/c Ratio	0.50	0.61		0.23	0.45	0.11	0.32	0.30		0.69	0.27	
Uniform Delay, d1	52.3	53.2		50.4	52.0	49.6	60.0	15.4		49.5	7.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.77	0.19	
Incremental Delay, d2	2.6	4.6		1.0	1.3	0.2	2.3	0.3		5.1	0.2	
Delay (s)	54.9	57.8		51.4	53.3	49.8	62.3	15.6		43.3	1.6	
Level of Service	D	E		D	D	D	E	B		D	A	
Approach Delay (s)		56.8			51.2			17.0			9.5	
Approach LOS		E			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	62.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	244	39	45	254	207	56	494	64	216	535	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.93		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3467		1770	3301		1770	4998		1770	4955	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3467		1770	3301		1770	4998		1770	4955	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	102	260	41	48	270	220	60	526	68	230	569	117
RTOR Reduction (vph)	0	7	0	0	93	0	0	13	0	0	22	0
Lane Group Flow (vph)	102	294	0	48	397	0	60	581	0	230	664	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.0	23.1		7.8	17.9		7.9	22.6		17.2	31.9	
Effective Green, g (s)	13.0	23.1		7.8	17.9		7.9	22.6		17.2	31.9	
Actuated g/C Ratio	0.14	0.25		0.08	0.19		0.09	0.25		0.19	0.35	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	250	872		150	643		152	1230		331	1721	
v/s Ratio Prot	c0.06	0.08		0.03	c0.12		0.03	c0.12		c0.13	0.13	
v/s Ratio Perm												
v/c Ratio	0.41	0.34		0.32	0.62		0.39	0.47		0.69	0.39	
Uniform Delay, d1	35.9	28.1		39.5	33.8		39.7	29.5		34.8	22.6	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.5	1.2		0.6	0.6		5.0	0.3	
Delay (s)	36.3	28.2		40.0	35.1		40.3	30.1		39.9	22.9	
Level of Service	D	C		D	D		D	C		D	C	
Approach Delay (s)		30.2			35.5			31.1			27.1	
Approach LOS		C			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.55			
Actuated Cycle Length (s)	91.8	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	64.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

19: Beach Blvd & Pacific View Ave

Existing MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	0	38	0	0	0	37	504	0	0	593	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5040	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5040	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	69	0	40	0	0	0	39	536	0	0	631	40
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	0	0	6	0
Lane Group Flow (vph)	69	0	6	0	0	0	39	536	0	0	665	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	7.9		7.9				3.0	33.3			25.4	
Effective Green, g (s)	7.9		7.9				3.0	33.3			25.4	
Actuated g/C Ratio	0.15		0.15				0.06	0.64			0.49	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	267		239				101	3243			2452	
v/s Ratio Prot							c0.02	0.11			c0.13	
v/s Ratio Perm	c0.04		0.00									
v/c Ratio	0.26		0.03				0.39	0.17			0.27	
Uniform Delay, d1	19.6		18.9				23.7	3.8			7.9	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	0.5		0.0				2.4	0.0			0.1	
Delay (s)	20.1		18.9				26.2	3.8			8.0	
Level of Service	C		B				C	A			A	
Approach Delay (s)		19.7			0.0			5.4			8.0	
Approach LOS		B			A			A			A	

Intersection Summary				
HCM 2000 Control Delay	7.8	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.28			
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	36.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	172	798	33	28	907	296	22	46	29	309	63	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5055		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5055		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	867	36	30	986	322	24	50	32	336	68	271
RTOR Reduction (vph)	0	2	0	0	0	136	0	0	29	0	0	0
Lane Group Flow (vph)	187	901	0	30	986	186	24	50	3	336	68	271
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	10.6	44.9		4.1	38.4	38.4	3.7	8.3	8.3	15.8	20.4	94.8
Effective Green, g (s)	10.6	44.9		4.1	38.4	38.4	3.7	8.3	8.3	15.8	20.4	94.8
Actuated g/C Ratio	0.11	0.47		0.04	0.41	0.41	0.04	0.09	0.09	0.17	0.22	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	383	2394		76	1433	641	69	309	138	572	400	1583
v/s Ratio Prot	c0.05	0.18		0.02	c0.28		0.01	0.01		c0.10	0.04	
v/s Ratio Perm						0.12			0.00			c0.17
v/c Ratio	0.49	0.38		0.39	0.69	0.29	0.35	0.16	0.02	0.59	0.17	0.17
Uniform Delay, d1	39.6	16.0		44.1	23.3	19.0	44.4	40.0	39.5	36.5	30.3	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2		1.2	1.6	0.4	1.1	0.1	0.0	1.0	0.1	0.2
Delay (s)	39.9	16.2		45.4	24.9	19.5	45.5	40.1	39.6	37.5	30.4	0.2
Level of Service	D	B		D	C	B	D	D	D	D	C	A
Approach Delay (s)		20.2			24.0			41.2			21.8	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	22.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	94.8	Sum of lost time (s)	21.7
Intersection Capacity Utilization	59.4%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	77	1044	10	7	1019	72	18	5	10	65	6	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1671		1770	1594	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.63	1.00		0.75	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1175	1671		1392	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	81	1099	11	7	1073	76	19	5	11	68	6	147
RTOR Reduction (vph)	0	0	5	0	0	40	0	9	0	0	117	0
Lane Group Flow (vph)	81	1099	6	7	1073	36	19	7	0	68	36	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	6.5	36.8	36.8	0.8	31.1	31.1	13.4	13.4		13.4	13.4	
Effective Green, g (s)	6.5	36.8	36.8	0.8	31.1	31.1	13.4	13.4		13.4	13.4	
Actuated g/C Ratio	0.10	0.57	0.57	0.01	0.48	0.48	0.21	0.21		0.21	0.21	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	177	2883	897	21	2436	758	242	345		287	329	
v/s Ratio Prot	c0.05	0.22		0.00	c0.21			0.00			0.02	
v/s Ratio Perm			0.00			0.02	0.02			c0.05		
v/c Ratio	0.46	0.38	0.01	0.33	0.44	0.05	0.08	0.02		0.24	0.11	
Uniform Delay, d1	27.5	7.8	6.1	31.8	11.2	9.0	20.8	20.5		21.5	20.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.7	0.2	0.0	3.4	0.2	0.0	0.1	0.0		0.2	0.1	
Delay (s)	28.2	7.9	6.1	35.2	11.4	9.1	20.8	20.5		21.6	21.0	
Level of Service	C	A	A	D	B	A	C	C		C	C	
Approach Delay (s)		9.3			11.4			20.7			21.2	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.39		
Actuated Cycle Length (s)	64.9	Sum of lost time (s)	13.9
Intersection Capacity Utilization	51.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	971	31	55	1014	90	16	18	15	87	41	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1736		1681	1737	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1736		1681	1737	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	991	32	56	1035	92	16	18	15	89	42	63
RTOR Reduction (vph)	0	0	15	0	0	45	0	13	0	0	0	56
Lane Group Flow (vph)	93	991	17	56	1035	47	16	20	0	64	67	7
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	9.8	58.4	58.4	6.3	54.9	54.9	12.7	12.7		11.4	11.4	11.4
Effective Green, g (s)	9.8	58.4	58.4	6.3	54.9	54.9	12.7	12.7		11.4	11.4	11.4
Actuated g/C Ratio	0.09	0.54	0.54	0.06	0.51	0.51	0.12	0.12		0.11	0.11	0.11
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	161	2759	859	103	2594	807	208	204		178	184	167
v/s Ratio Prot	c0.05	c0.19		0.03	c0.20		0.01	c0.01		0.04	c0.04	
v/s Ratio Perm			0.01			0.03						0.00
v/c Ratio	0.58	0.36	0.02	0.54	0.40	0.06	0.08	0.10		0.36	0.36	0.04
Uniform Delay, d1	46.9	14.0	11.4	49.3	16.2	13.3	42.2	42.3		44.7	44.7	43.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.1	0.4	0.0	3.1	0.2	0.1	0.1	0.1		0.5	0.4	0.0
Delay (s)	50.0	14.3	11.4	52.4	16.4	13.4	42.3	42.4		45.2	45.2	43.2
Level of Service	D	B	B	D	B	B	D	D		D	D	D
Approach Delay (s)		17.2			17.9			42.4			44.5	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.36			
Actuated Cycle Length (s)	107.6	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	50.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	101	972	3	26	1014	362	24	22	17	298	10	90
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1740		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1740		3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	105	1012	3	27	1056	377	25	23	18	310	10	94
RTOR Reduction (vph)	0	0	2	0	0	170	0	16	0	0	0	76
Lane Group Flow (vph)	105	1012	1	27	1056	207	25	25	0	310	10	18
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	10.4	35.3	35.3	3.5	28.4	43.9	4.9	4.9		15.5	15.5	15.5
Effective Green, g (s)	10.4	35.3	35.3	3.5	28.4	43.9	4.9	4.9		15.5	15.5	15.5
Actuated g/C Ratio	0.13	0.44	0.44	0.04	0.36	0.55	0.06	0.06		0.19	0.19	0.19
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	230	2246	699	77	1807	869	108	106		665	361	307
v/s Ratio Prot	c0.06	0.20		0.02	c0.21	0.05	0.01	c0.01		c0.09	0.01	
v/s Ratio Perm			0.00			0.08						0.01
v/c Ratio	0.46	0.45	0.00	0.35	0.58	0.24	0.23	0.24		0.47	0.03	0.06
Uniform Delay, d1	32.1	15.5	12.5	37.1	20.9	9.3	35.7	35.7		28.5	26.1	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.5	0.3	0.0	1.0	0.7	0.1	0.4	0.4		0.2	0.0	0.0
Delay (s)	32.7	15.8	12.5	38.1	21.6	9.4	36.1	36.1		28.7	26.1	26.3
Level of Service	C	B	B	D	C	A	D	D		C	C	C
Approach Delay (s)		17.4			18.8			36.1			28.1	
Approach LOS		B			B			D			C	

Intersection Summary				
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.50			
Actuated Cycle Length (s)	79.9	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	53.9%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Scenario Report

Scenario:	EX-MD
Command:	EX-MD
Volume:	EX-MD
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	None
Trip Distribution:	NONE
Paths:	Default Path
Routes:	Default Route
Configuration:	EX-MD

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/C	Future LOS	Future Del/ Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	B	xxxxx	0.697	B	xxxxx	0.697	+ 0.000
# 8 Beach Blvd & Warner Ave	B	xxxxx	0.662	B	xxxxx	0.662	+ 0.000
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.562	A	xxxxx	0.562	+ 0.000
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.472	A	xxxxx	0.472	+ 0.000
# 21 Newland St & Atlanta Ave	A	xxxxx	0.427	A	xxxxx	0.427	+ 0.000
# 22 Newland St & Hamilton Ave	A	xxxxx	0.451	A	xxxxx	0.451	+ 0.000
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.398	A	xxxxx	0.398	+ 0.000
# 26 Brookhurst St & Hamilton Ave	A	xxxxx	0.404	A	xxxxx	0.404	+ 0.000
# 30 Brookhurst Street & Talbert Av	B	xxxxx	0.626	B	xxxxx	0.626	+ 0.000
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.494	A	xxxxx	0.494	+ 0.000
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.598	A	xxxxx	0.598	+ 0.000
# 33 Brookhurst Street & Ellis Aven	A	xxxxx	0.574	A	xxxxx	0.574	+ 0.000
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.594	A	xxxxx	0.594	+ 0.000
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.528	A	xxxxx	0.528	+ 0.000
# 36 Brookhurst Street & Adams Aven	A	xxxxx	0.527	A	xxxxx	0.527	+ 0.000
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.307	A	xxxxx	0.307	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.348	A	xxxxx	0.348	+ 0.000
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.190	A	xxxxx	0.190	+ 0.000
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.222	A	xxxxx	0.222	+ 0.000

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.697
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	385	1729	465	218	2101	653	393	826	301	148	371	87				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	385	1729	465	218	2101	653	393	826	301	148	371	87				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	385	1729	465	218	2101	653	393	826	301	148	371	87				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	385	1729	465	218	2101	653	393	826	301	148	371	87				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	385	1729	465	218	2101	653	393	826	301	148	371	87				
OvlAdjVol:						260			109							
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	4.00	2.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	6800	3400	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.11	0.34	0.27	0.06	0.31	0.19	0.12	0.16	0.18	0.04	0.11	0.05				
OvlAdjV/S:						0.08			0.06							
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.662
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	251	1682	179	154	1634	256	339	759	139	241	853	135				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.62	0.38	2.00	4.00	1.00	2.00	2.54	0.46	2.00	2.59	0.41				
Final Sat.:	3400	6146	654	3400	6800	1700	3400	4311	789	3400	4403	697				
Capacity Analysis Module:																
Vol/Sat:	0.07	0.27	0.27	0.05	0.24	0.15	0.10	0.18	0.18	0.07	0.19	0.19				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.562
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	85	785	97	236	924	134	179	385	63	170	415	254				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	85	785	97	236	924	134	179	385	63	170	415	254				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	85	785	97	236	924	134	179	385	63	170	415	254				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.67	0.33	2.00	2.62	0.38	1.00	2.58	0.42	1.00	2.00	1.00				
Final Sat.:	1700	4539	561	3400	4454	646	1700	4383	717	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.17	0.17	0.07	0.21	0.21	0.11	0.09	0.09	0.10	0.12	0.15				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec):	100	Critical Vol./Cap.(X):	0.472
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	22	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	22	46	29	309	63	249	172	798	33	28	907	296				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	22	46	29	309	63	249	172	798	33	28	907	296				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	22	46	0	309	63	0	172	798	33	28	907	296				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	22	46	0	309	63	0	172	798	33	28	907	296				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	22	46	0	309	63	0	172	798	33	28	907	296				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.88	0.12	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4897	203	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01	0.00	0.09	0.04	0.00	0.05	0.16	0.16	0.02	0.27	0.17				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.427
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	151	255	38	88	231	95	64	372	142	31	389	138				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	151	255	38	88	231	95	64	372	142	31	389	138				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	151	255	38	88	231	95	64	372	142	31	389	138				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	151	255	38	88	231	95	64	372	142	31	389	138				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	151	255	38	88	231	95	64	372	142	31	389	138				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.74	0.26	1.00	1.42	0.58	1.00	1.45	0.55	1.00	1.48	0.52				
Final Sat.:	1700	2959	441	1700	2409	991	1700	2461	939	1700	2510	890				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.09	0.09	0.05	0.10	0.10	0.04	0.15	0.15	0.02	0.15	0.16				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	158	62	195	170	0	0	0	0	116	0	267				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	158	62	195	170	0	0	0	0	116	0	267				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	158	62	195	170	0	0	0	0	116	0	267				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	158	62	195	170	0	0	0	0	116	0	267				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	158	62	195	170	0	0	0	0	116	0	267				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.72	0.28	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1221	479	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.13	0.13	0.11	0.10	0.00	0.00	0.00	0.00	0.07	0.00	0.16				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.398
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	17	148	14	210	158	36	52	209	30	21	248	218				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	17	148	14	210	158	36	52	209	30	21	248	218				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	17	148	14	210	158	36	52	209	30	21	248	218				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	17	148	14	210	158	36	52	209	30	21	248	218				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	17	148	14	210	158	36	52	209	30	21	248	218				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.83	0.17	1.00	2.00	1.00	1.00	0.87	0.13	1.00	1.00	1.00				
Final Sat.:	1700	3106	294	1700	3400	1700	1700	1487	213	1700	1700	1700				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.05	0.05	0.12	0.05	0.02	0.03	0.14	0.14	0.01	0.15	0.13				
Crit Moves:	****			****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.404
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	90	333	106	319	351	68	82	322	41	116	437	249				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	90	333	106	319	351	68	82	322	41	116	437	249				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	90	333	106	319	351	68	82	322	41	116	437	249				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	90	333	106	319	351	68	82	322	41	116	437	249				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	90	333	106	319	351	68	82	322	41	116	437	249				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	2.00	2.51	0.49	1.00	1.77	0.23	1.00	2.00	1.00				
Final Sat.:	1700	5100	1700	3400	4272	828	1700	3016	384	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.07	0.06	0.09	0.08	0.08	0.05	0.11	0.11	0.07	0.13	0.15				
Crit Moves:	****			****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.626
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	31	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	157	1203	480		309	1488	374		194	671	198		242	370	194	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.24	0.28		0.09	0.29	0.22		0.06	0.13	0.12		0.07	0.11	0.11	
Crit Moves:			****		****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.494
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	23	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	29	1705	5		39	1941	63		67	0	26		4	0	8	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	29	1705	5		39	1941	63		67	0	26		4	0	8	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	29	1705	5		39	1941	0		67	0	26		4	0	8	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	29	1705	5		39	1941	0		67	0	26		4	0	8	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	29	1705	5		39	1941	0		67	0	26		4	0	8	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		0.72	0.00	0.28		0.33	0.00	0.67	
Final Sat.:	1700	5085	15		1700	5100	1700		1225	0	475		567	0	1133	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.34	0.34		0.02	0.38	0.00		0.04	0.00	0.05		0.00	0.00	0.01	
Crit Moves:	****					****			****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.598
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	58	1443	7		30	1516	225		279	3	78		12	1	14	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	58	1443	7		30	1516	225		279	3	78		12	1	14	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	2.61	0.39		0.99	0.01	1.00		0.44	0.04	0.52	
Final Sat.:	1700	5075	25		1700	4441	659		1682	18	1700		756	63	881	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.28	0.28		0.02	0.34	0.34		0.16	0.17	0.05		0.01	0.02	0.02	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.574
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	79	933	180		160	1153	198		278	512	94		250	419	115	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	79	933	180		160	1153	198		278	512	94		250	419	115	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	79	933	180		160	1153	198		278	512	94		250	419	115	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	79	933	180		160	1153	198		278	512	94		250	419	115	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	79	933	180		160	1153	198		278	512	94		250	419	115	
OvlAdjVol:			55				59									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.57	0.43	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2873	527		3400	2668	732	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.11		0.09	0.23	0.12		0.08	0.18	0.18		0.07	0.16	0.16	
OvlAdjV/S:			0.03				0.03									
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	138	1118	109		169	1107	214		229	231	111		176	219	110	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	138	1118	109		169	1107	214		229	231	111		176	219	110	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	138	1118	109		169	1107	214		229	231	111		176	219	110	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	138	1118	109		169	1107	214		229	231	111		176	219	110	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	138	1118	109		169	1107	214		229	231	111		176	219	110	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.73	0.27		1.00	3.00	1.00		1.00	1.35	0.65		1.00	2.00	1.00	
Final Sat.:	1700	4647	453		1700	5100	1700		1700	2296	1104		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.24	0.24		0.10	0.22	0.13		0.13	0.10	0.10		0.10	0.06	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.528
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	97	1006	80		21	1177	198		160	183	95		119	196	20	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	97	1006	80		21	1177	198		160	183	95		119	196	20	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	97	1006	80		21	1177	198		160	183	95		119	196	20	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	97	1006	80		21	1177	198		160	183	95		119	196	20	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	97	1006	80		21	1177	198		160	183	95		119	196	20	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.57	0.43		1.00	1.32	0.68		1.00	1.81	0.19	
Final Sat.:	1700	4724	376		1700	4366	734		1700	2238	1162		1700	3085	315	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.21	0.21		0.01	0.27	0.27		0.09	0.08	0.08		0.07	0.06	0.06	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.527
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	172	631	128	308	712	173	293	684	84	197	771	220				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	172	631	128	308	712	173	293	684	84	197	771	220				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	172	631	128	308	712	173	293	684	84	197	771	220				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	172	631	128	308	712	173	293	684	84	197	771	220				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	172	631	128	308	712	173	293	684	84	197	771	220				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.49	0.51	2.00	2.41	0.59	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4240	860	3400	4103	997	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.15	0.15	0.09	0.17	0.17	0.09	0.13	0.05	0.06	0.15	0.13				
Crit Moves:	****			****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.307
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	48	879	0	0	895	125	98	0	49	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	48	879	0	0	895	125	98	0	49	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	48	879	0	0	895	125	98	0	49	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	48	879	0	0	895	125	98	0	49	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	48	879	0	0	895	125	98	0	49	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.63	0.37	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4475	625	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.17	0.00	0.00	0.20	0.20	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.348
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	19	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	615	14		25	623	145		141	26	143		15	25	17	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	89	615	14		25	623	145		141	26	143		15	25	17	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	89	615	14		25	623	145		141	26	143		15	25	17	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	89	615	14		25	623	145		141	26	143		15	25	17	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	89	615	14		25	623	145		141	26	143		15	25	17	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.93	0.07		1.00	2.43	0.57		1.00	1.00	1.00		1.00	1.19	0.81	
Final Sat.:	1700	4986	114		1700	4137	963		1700	1700	1700		1700	2024	1376	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.12	0.12		0.01	0.15	0.15		0.08	0.02	0.08		0.01	0.01	0.01	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.190
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	15	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	8	412	0		0	340	107		81	0	6		0	0	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	8	412	0		0	340	107		81	0	6		0	0	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	8	412	0		0	340	107		81	0	6		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	8	412	0		0	340	107		81	0	6		0	0	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	8	412	0		0	340	107		81	0	6		0	0	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	0.00		0.00	2.28	0.72		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	1700	5100	0		0	3879	1221		1700	0	1700		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00		0.00	0.09	0.09		0.05	0.00	0.00		0.00	0.00	0.00	
Crit Moves:	****					****			****							

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.222
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	16	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	0	0 1
Volume Module:																
Base Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	102	374	3	9	294	26	11	1	91	0	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	102	374	3	9	294	26	11	1	91	0	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	102	374	3	9	294	26	11	1	91	0	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.00	0.00	1.00				
Final Sat.:	1700	5059	41	1700	5100	1700	1700	18	1682	0	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.07	0.07	0.01	0.06	0.02	0.01	0.05	0.05	0.00	0.00	0.00				
Crit Moves:	****				****			****		****						

1: Beach Blvd & McFadden Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	378	144	356	421	141	245	2614	230	195	2141	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6303	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6303	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	409	394	150	371	439	147	255	2723	240	203	2230	274
RTOR Reduction (vph)	0	28	0	0	24	0	0	10	0	0	15	0
Lane Group Flow (vph)	409	516	0	371	562	0	255	2953	0	203	2489	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.8	29.2		16.9	27.3		12.1	64.5		11.0	63.4	
Effective Green, g (s)	18.8	29.2		16.9	27.3		12.1	64.5		11.0	63.4	
Actuated g/C Ratio	0.13	0.21		0.12	0.20		0.09	0.46		0.08	0.45	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	461	707		414	664		296	2916		269	2854	
v/s Ratio Prot	c0.12	0.15		0.11	c0.16		0.07	c0.47		0.06	c0.39	
v/s Ratio Perm												
v/c Ratio	0.89	0.73		0.90	0.85		0.86	1.01		0.75	0.87	
Uniform Delay, d1	59.6	51.7		60.7	54.3		63.1	37.8		63.2	34.6	
Progression Factor	1.00	1.00		1.00	1.00		0.83	1.07		1.00	1.00	
Incremental Delay, d2	18.3	3.8		21.2	9.7		18.4	18.3		11.4	4.0	
Delay (s)	77.8	55.5		81.9	64.1		70.8	58.5		74.6	38.6	
Level of Service	E	E		F	E		E	E		E	D	
Approach Delay (s)		65.1			71.0			59.5			41.3	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	55.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

2: Beach Blvd & Center Ave

Existing PM Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	329	887	0	2863	2243	947
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	336	905	0	2921	2289	966
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	336	904	0	2921	2289	966
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	18.5	65.5		111.7	58.7	140.0
Effective Green, g (s)	18.5	65.5		111.7	58.7	140.0
Actuated g/C Ratio	0.13	0.47		0.80	0.42	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	453	1393		5112	2686	1583
v/s Ratio Prot	0.10	c0.22		0.45	c0.36	
v/s Ratio Perm		0.11		0.01		c0.61
v/c Ratio	0.74	0.65		0.57	0.85	0.61
Uniform Delay, d1	58.5	28.5		5.3	36.7	0.0
Progression Factor	1.00	1.00		0.59	0.66	1.00
Incremental Delay, d2	6.9	1.1		0.0	2.5	1.2
Delay (s)	65.3	29.6		3.2	26.7	1.2
Level of Service	E	C		A	C	A
Approach Delay (s)	39.3			3.2	19.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	416	907	245	174	591	172	415	2241	509	333	2200	639
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	433	945	255	181	616	179	432	2334	530	347	2292	666
RTOR Reduction (vph)	0	0	65	0	0	144	0	0	155	0	0	45
Lane Group Flow (vph)	433	945	190	181	616	35	432	2334	375	347	2292	621
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.9	29.0	43.0	13.0	27.1	27.1	14.0	63.7	63.7	14.0	63.3	78.2
Effective Green, g (s)	14.9	29.0	43.0	13.0	27.1	27.1	14.0	63.7	63.7	14.0	63.3	78.2
Actuated g/C Ratio	0.11	0.21	0.31	0.09	0.19	0.19	0.10	0.46	0.46	0.10	0.45	0.56
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	365	1053	486	318	685	306	343	2313	720	343	2897	1648
v/s Ratio Prot	c0.13	c0.19	0.04	0.05	c0.17		c0.13	c0.46		c0.10	0.36	0.04
v/s Ratio Perm			0.08			0.02			0.24			0.18
v/c Ratio	1.19	0.90	0.39	0.57	0.90	0.11	1.26	1.01	0.52	1.01	0.79	0.38
Uniform Delay, d1	62.5	54.1	38.2	60.8	55.1	46.5	63.0	38.1	27.3	63.0	32.7	17.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.59	0.41	1.35	0.59	0.65
Incremental Delay, d2	108.2	10.1	0.2	1.4	14.6	0.2	133.5	18.5	2.0	41.2	1.4	0.0
Delay (s)	170.7	64.2	38.4	62.2	69.7	46.7	179.8	41.0	13.2	126.5	20.6	11.2
Level of Service	F	E	D	E	E	D	F	D	B	F	C	B
Approach Delay (s)		88.4			64.1			54.7			29.8	
Approach LOS		F			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	52.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	19	41	127	32	175	120	2655	72	244	2318	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1670		1770	1863	1583	1770	6383		3433	6397	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1670		1770	1863	1583	1770	6383		3433	6397	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	19	42	130	33	179	122	2709	73	249	2365	28
RTOR Reduction (vph)	0	38	0	0	0	152	0	2	0	0	1	0
Lane Group Flow (vph)	24	23	0	130	33	27	122	2780	0	249	2392	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	12.6		16.0	20.8	20.8	15.1	77.0		14.8	76.7	
Effective Green, g (s)	7.8	12.6		16.0	20.8	20.8	15.1	77.0		14.8	76.7	
Actuated g/C Ratio	0.06	0.09		0.11	0.15	0.15	0.11	0.55		0.11	0.55	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	150		202	276	235	190	3510		362	3504	
v/s Ratio Prot	c0.01	c0.01		c0.07	0.02		0.07	c0.44		c0.07	0.37	
v/s Ratio Perm						0.02						
v/c Ratio	0.24	0.15		0.64	0.12	0.11	0.64	0.79		0.69	0.68	
Uniform Delay, d1	63.3	58.8		59.3	51.7	51.6	59.9	25.1		60.4	22.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.28	0.21		1.34	0.34	
Incremental Delay, d2	1.3	0.5		6.9	0.2	0.2	4.8	1.3		3.5	0.7	
Delay (s)	64.6	59.2		66.1	51.9	51.8	81.6	6.6		84.1	8.6	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		60.8			57.3			9.7			15.7	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	5	18	248	4	165	63	2602	99	318	2262	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1644		1681	1576	1504	1770	6373		3433	6400	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1644		1681	1576	1504	1770	6373		3433	6400	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	29	5	18	251	4	167	64	2628	100	321	2285	19
RTOR Reduction (vph)	0	17	0	0	8	116	0	3	0	0	0	0
Lane Group Flow (vph)	29	6	0	146	136	17	64	2725	0	321	2304	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	10.6	10.6		17.5	17.5	17.5	8.7	74.1		19.9	85.3	
Effective Green, g (s)	10.6	10.6		17.5	17.5	17.5	8.7	74.1		19.9	85.3	
Actuated g/C Ratio	0.08	0.08		0.12	0.12	0.12	0.06	0.53		0.14	0.61	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	124		210	197	188	109	3373		487	3899	
v/s Ratio Prot	c0.02	0.00		c0.09	0.09		0.04	c0.43		c0.09	0.36	
v/s Ratio Perm						0.01						
v/c Ratio	0.22	0.05		0.70	0.69	0.09	0.59	0.81		0.66	0.59	
Uniform Delay, d1	60.8	60.0		58.7	58.7	54.2	63.9	27.1		56.8	16.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.38	0.10		0.63	0.12	
Incremental Delay, d2	0.8	0.2		9.6	10.0	0.2	0.7	0.2		2.5	0.5	
Delay (s)	61.6	60.2		68.3	68.6	54.4	88.8	2.9		38.5	2.6	
Level of Service	E	E		E	E	D	F	A		D	A	
Approach Delay (s)		61.0			64.1			4.9			7.0	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	312	179	41	307	157	165	2587	49	162	2133	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3359		1770	6390		1770	6314	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3359		1770	6390		1770	6314	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	257	322	185	42	316	162	170	2667	51	167	2199	238
RTOR Reduction (vph)	0	56	0	0	48	0	0	2	0	0	13	0
Lane Group Flow (vph)	257	451	0	42	430	0	170	2716	0	167	2424	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	21.7	36.1		8.8	23.2		14.0	56.3		20.0	62.3	
Effective Green, g (s)	21.7	36.1		8.8	23.2		14.0	56.3		20.0	62.3	
Actuated g/C Ratio	0.15	0.26		0.06	0.17		0.10	0.40		0.14	0.44	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	862		111	556		177	2569		252	2809	
v/s Ratio Prot	c0.15	0.13		0.02	c0.13		0.10	c0.43		0.09	c0.38	
v/s Ratio Perm												
v/c Ratio	0.94	0.52		0.38	0.77		0.96	1.06		0.66	0.86	
Uniform Delay, d1	58.5	44.6		63.0	55.9		62.7	41.9		56.8	35.0	
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.87		0.73	0.57	
Incremental Delay, d2	37.6	0.6		2.2	6.6		50.7	34.0		5.3	3.2	
Delay (s)	96.1	45.1		65.1	62.5		103.3	70.6		46.9	23.2	
Level of Service	F	D		E	E		F	E		D	C	
Approach Delay (s)		62.3			62.7			72.5			24.7	
Approach LOS		E			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	52.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	90.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	17	39	59	10	20	152	2523	65	70	2009	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1669	1478		1667	1478	1770	6384		1770	6384	
Flt Permitted		0.71	1.00		0.59	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1241	1478		1027	1478	1770	6384		1770	6384	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	87	18	40	61	10	21	157	2601	67	72	2071	53
RTOR Reduction (vph)	0	0	35	0	0	18	0	2	0	0	2	0
Lane Group Flow (vph)	0	105	5	0	71	3	157	2666	0	72	2122	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		18.5	18.5		18.5	18.5	22.9	97.0		9.2	83.3	
Effective Green, g (s)		18.5	18.5		18.5	18.5	22.9	97.0		9.2	83.3	
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.16	0.69		0.07	0.59	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		163	195		135	195	289	4423		116	3798	
v/s Ratio Prot							0.09	c0.42		0.04	c0.33	
v/s Ratio Perm		c0.08	0.00		0.07	0.00						
v/c Ratio		0.64	0.03		0.53	0.01	0.54	0.60		0.62	0.56	
Uniform Delay, d1		57.6	52.9		56.7	52.8	53.7	11.3		63.7	17.2	
Progression Factor		1.00	1.00		1.00	1.00	0.64	0.50		1.20	0.33	
Incremental Delay, d2		8.4	0.1		3.7	0.0	0.6	0.2		5.5	0.3	
Delay (s)		66.1	53.0		60.3	52.9	35.0	5.8		81.9	6.1	
Level of Service		E	D		E	D	C	A		F	A	
Approach Delay (s)		62.4			58.6			7.4			8.5	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	70.1%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

8: Beach Blvd & Warner Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	1076	144	240	1189	210	314	2203	179	178	1664	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4995		3433	4971		3433	6336		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4995		3433	4971		3433	6336		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	423	1133	152	253	1252	221	331	2319	188	187	1752	353
RTOR Reduction (vph)	0	12	0	0	18	0	0	9	0	0	0	182
Lane Group Flow (vph)	423	1273	0	253	1455	0	331	2498	0	187	1752	171
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	16.0	33.0		15.0	32.0		13.0	61.0		12.0	60.0	60.0
Effective Green, g (s)	16.0	33.0		15.0	32.0		13.0	61.0		12.0	60.0	60.0
Actuated g/C Ratio	0.11	0.24		0.11	0.23		0.09	0.44		0.09	0.43	0.43
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	392	1177		367	1136		318	2760		294	2746	678
v/s Ratio Prot	0.12	c0.25		0.07	c0.29		c0.10	c0.39		0.05	0.27	
v/s Ratio Perm												0.11
v/c Ratio	1.08	1.08		0.69	1.28		1.04	0.91		0.64	0.64	0.25
Uniform Delay, d1	62.0	53.5		60.3	54.0		63.5	36.8		61.9	31.5	25.6
Progression Factor	1.00	1.00		1.00	1.00		1.22	0.59		1.38	0.40	0.61
Incremental Delay, d2	68.3	51.2		4.3	133.3		43.4	2.4		2.9	1.0	0.8
Delay (s)	130.3	104.7		64.5	187.3		120.7	24.0		88.1	13.4	16.5
Level of Service	F	F		E	F		F	C		F	B	B
Approach Delay (s)		111.0			169.3			35.3			20.0	
Approach LOS		F			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	73.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	100.1%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

9: Beach Blvd & Slater Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	473	150	109	597	151	191	2238	65	171	1828	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3412		1770	3432		1770	6381		1770	6334	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3412		1770	3432		1770	6381		1770	6334	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	200	493	156	114	622	157	199	2331	68	178	1904	159
RTOR Reduction (vph)	0	22	0	0	16	0	0	2	0	0	10	0
Lane Group Flow (vph)	200	627	0	114	763	0	199	2397	0	178	2053	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.0	29.3		15.7	29.0		18.0	55.8		18.5	56.3	
Effective Green, g (s)	16.0	29.3		15.7	29.0		18.0	55.8		18.5	56.3	
Actuated g/C Ratio	0.11	0.21		0.11	0.21		0.13	0.40		0.13	0.40	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	202	714		198	710		227	2543		233	2547	
v/s Ratio Prot	0.11	c0.18		0.06	c0.22		0.11	c0.38		0.10	c0.32	
v/s Ratio Perm												
v/c Ratio	0.99	0.88		0.58	1.07		0.88	0.94		0.76	0.81	
Uniform Delay, d1	61.9	53.6		59.0	55.5		59.9	40.6		58.6	37.0	
Progression Factor	1.00	1.00		1.00	1.00		0.76	0.70		0.52	0.75	
Incremental Delay, d2	60.3	11.8		4.0	55.7		25.2	7.4		10.7	2.2	
Delay (s)	122.2	65.4		63.0	111.2		70.9	35.7		41.5	30.1	
Level of Service	F	E		E	F		E	D		D	C	
Approach Delay (s)		78.8			105.0			38.4			31.0	
Approach LOS		E			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	50.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	92.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	1	16	107	8	157	16	2227	80	78	2064	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719			1684		1770	6375		1770	6395	
Flt Permitted		0.66			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1177			1485		1770	6375		1770	6395	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	1	16	110	8	162	16	2296	82	80	2128	28
RTOR Reduction (vph)	0	13	0	0	37	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	31	0	0	243	0	16	2375	0	80	2155	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		26.1			26.1		4.0	88.0		10.0	94.0	
Effective Green, g (s)		26.1			26.1		4.0	88.0		10.0	94.0	
Actuated g/C Ratio		0.19			0.19		0.03	0.63		0.07	0.67	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		219			276		50	4007		126	4293	
v/s Ratio Prot							0.01	c0.37		c0.05	0.34	
v/s Ratio Perm		0.03			c0.16							
v/c Ratio		0.14			0.88		0.32	0.59		0.63	0.50	
Uniform Delay, d1		47.6			55.4		66.7	15.4		63.2	11.4	
Progression Factor		1.00			1.00		1.30	0.17		1.36	0.16	
Incremental Delay, d2		0.3			26.3		1.0	0.2		6.2	0.3	
Delay (s)		47.9			81.8		87.8	2.8		92.2	2.0	
Level of Service		D			F		F	A		F	A	
Approach Delay (s)		47.9			81.8			3.3			5.3	
Approach LOS		D			F			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	72.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	373	141	194	479	277	157	1956	175	253	1861	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	3345		1770	6329		1770	6348	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3394		1770	3345		1770	6329		1770	6348	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	143	389	147	202	499	289	164	2038	182	264	1939	129
RTOR Reduction (vph)	0	29	0	0	59	0	0	10	0	0	7	0
Lane Group Flow (vph)	143	507	0	202	729	0	164	2210	0	264	2061	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.0	25.7		20.3	32.0		14.3	49.3		24.0	59.0	
Effective Green, g (s)	14.0	25.7		20.3	32.0		14.3	49.3		24.0	59.0	
Actuated g/C Ratio	0.10	0.18		0.15	0.23		0.10	0.35		0.17	0.42	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	177	623		256	764		180	2228		303	2675	
v/s Ratio Prot	0.08	c0.15		0.11	c0.22		0.09	c0.35		c0.15	0.32	
v/s Ratio Perm												
v/c Ratio	0.81	0.81		0.79	0.95		0.91	0.99		0.87	0.77	
Uniform Delay, d1	61.7	54.9		57.8	53.3		62.2	45.1		56.5	34.7	
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.60		0.44	0.23	
Incremental Delay, d2	21.9	8.3		13.8	22.1		36.2	15.3		20.3	2.0	
Delay (s)	83.5	63.1		71.6	75.4		82.8	42.3		45.3	10.0	
Level of Service	F	E		E	E		F	D		D	B	
Approach Delay (s)		67.4			74.6			45.1			14.0	
Approach LOS		E			E			D			B	

Intersection Summary				
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	94.6%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

12: Beach Blvd & Main St/Ellis Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	396	428	102	137	481	127	167	1617	149	252	1457	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6327		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6327		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	404	437	104	140	491	130	170	1650	152	257	1487	491
RTOR Reduction (vph)	0	0	85	0	0	109	0	10	0	0	0	21
Lane Group Flow (vph)	404	437	19	140	491	21	170	1792	0	257	1487	470
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	25.6	25.6	25.6	22.3	22.3	22.3	10.5	55.6		13.8	58.9	90.5
Effective Green, g (s)	25.6	25.6	25.6	22.3	22.3	22.3	10.5	55.6		13.8	58.9	90.5
Actuated g/C Ratio	0.18	0.18	0.18	0.16	0.16	0.16	0.08	0.40		0.10	0.42	0.65
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	627	647	289	281	563	252	257	2512		338	2139	1023
v/s Ratio Prot	0.12	c0.12		0.08	c0.14		0.05	0.28		c0.07	c0.29	0.30
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.64	0.68	0.07	0.50	0.87	0.08	0.66	0.71		0.76	0.70	0.46
Uniform Delay, d1	53.0	53.3	47.3	53.7	57.5	50.1	63.0	35.5		61.5	33.2	12.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.49		1.28	0.43	0.62
Incremental Delay, d2	1.8	2.3	0.0	0.5	13.5	0.1	3.0	1.1		5.5	1.2	0.1
Delay (s)	54.8	55.7	47.4	54.2	71.0	50.2	91.7	18.6		84.4	15.5	7.8
Level of Service	D	E	D	D	E	D	F	B		F	B	A
Approach Delay (s)		54.4			64.3			24.9			21.8	
Approach LOS		D			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	33.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	80.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	188	501	134	140	386	121	207	1513	93	187	1400	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3412		1770	5041		1770	5007	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3412		1770	5041		1770	5007	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	194	516	138	144	398	125	213	1560	96	193	1443	166
RTOR Reduction (vph)	0	0	108	0	22	0	0	5	0	0	10	0
Lane Group Flow (vph)	194	516	30	144	501	0	213	1651	0	193	1599	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.5	30.5	30.5	12.8	25.8		19.5	57.0		18.5	56.0	
Effective Green, g (s)	17.5	30.5	30.5	12.8	25.8		19.5	57.0		18.5	56.0	
Actuated g/C Ratio	0.12	0.22	0.22	0.09	0.18		0.14	0.41		0.13	0.40	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	221	770	344	161	628		246	2052		233	2002	
v/s Ratio Prot	c0.11	0.15		0.08	c0.15		c0.12	c0.33		0.11	c0.32	
v/s Ratio Perm			0.02									
v/c Ratio	0.88	0.67	0.09	0.89	0.80		0.87	0.80		0.83	0.80	
Uniform Delay, d1	60.2	50.1	43.7	62.9	54.6		59.0	36.6		59.2	37.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.57	0.45		0.49	0.92	
Incremental Delay, d2	29.3	2.5	0.2	40.8	7.4		15.4	1.9		16.2	2.7	
Delay (s)	89.5	52.7	43.8	103.8	62.0		48.8	18.5		45.2	36.8	
Level of Service	F	D	D	F	E		D	B		D	D	
Approach Delay (s)		59.6			71.0			21.9			37.7	
Approach LOS		E			E			C			D	

Intersection Summary				
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	84.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	133	402	145	114	351	128	202	1530	161	129	1392	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3397		1770	5013		1770	5014	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3397		1770	5013		1770	5014	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	140	423	153	120	369	135	213	1611	169	136	1465	151
RTOR Reduction (vph)	0	0	123	0	28	0	0	9	0	0	8	0
Lane Group Flow (vph)	140	423	30	120	476	0	213	1771	0	136	1608	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.2	27.7	27.7	12.0	24.5		20.8	58.9		21.0	59.1	
Effective Green, g (s)	15.2	27.7	27.7	12.0	24.5		20.8	58.9		21.0	59.1	
Actuated g/C Ratio	0.11	0.20	0.20	0.09	0.18		0.15	0.42		0.15	0.42	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	192	700	313	151	594		262	2109		265	2116	
v/s Ratio Prot	c0.08	0.12		0.07	c0.14		0.12	c0.35		0.08	c0.32	
v/s Ratio Perm			0.02									
v/c Ratio	0.73	0.60	0.10	0.79	0.80		0.81	0.84		0.51	0.76	
Uniform Delay, d1	60.4	51.2	45.9	62.8	55.4		57.7	36.3		54.8	34.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.73	0.75		0.49	0.34	
Incremental Delay, d2	13.0	1.5	0.1	24.3	7.7		16.3	4.0		1.1	1.8	
Delay (s)	73.4	52.6	46.1	87.1	63.1		58.1	31.3		27.8	13.3	
Level of Service	E	D	D	F	E		E	C		C	B	
Approach Delay (s)		55.3			67.7			34.2			14.4	
Approach LOS		E			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	34.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	82.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	18	55	144	29	92	65	1475	84	115	1366	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5044		1770	5038	
Flt Permitted		0.69			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1200			1154	1583	1770	5044		1770	5038	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	18	56	145	29	93	66	1490	85	116	1380	92
RTOR Reduction (vph)	0	26	0	0	0	77	0	4	0	0	5	0
Lane Group Flow (vph)	0	88	0	0	174	16	66	1571	0	116	1467	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		24.6			24.6	24.6	9.6	86.4		13.8	90.6	
Effective Green, g (s)		24.6			24.6	24.6	9.6	86.4		13.8	90.6	
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.62		0.10	0.65	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		210			202	278	121	3112		174	3260	
v/s Ratio Prot							c0.04	c0.31		c0.07	0.29	
v/s Ratio Perm		0.07			c0.15	0.01						
v/c Ratio		0.42			0.86	0.06	0.55	0.50		0.67	0.45	
Uniform Delay, d1		51.3			56.0	48.1	63.1	14.9		60.9	12.3	
Progression Factor		1.00			1.00	1.00	0.70	0.52		0.97	0.62	
Incremental Delay, d2		1.3			29.3	0.1	3.7	0.4		6.4	0.3	
Delay (s)		52.7			85.3	48.1	47.9	8.2		65.4	7.9	
Level of Service		D			F	D	D	A		E	A	
Approach Delay (s)		52.7			72.4			9.8			12.1	
Approach LOS		D			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	455	59	187	828	339	129	1095	100	288	1043	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4997		1770	3539	1583	1770	5022		3433	4988	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4997		1770	3539	1583	1770	5022		3433	4988	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	166	484	63	199	881	361	137	1165	106	306	1110	162
RTOR Reduction (vph)	0	12	0	0	0	69	0	7	0	0	14	0
Lane Group Flow (vph)	166	535	0	199	881	292	137	1264	0	306	1258	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	16.0	35.5		17.3	36.8	52.5	17.0	49.7		15.7	48.4	
Effective Green, g (s)	16.0	35.5		17.3	36.8	52.5	17.0	49.7		15.7	48.4	
Actuated g/C Ratio	0.11	0.25		0.12	0.26	0.38	0.12	0.36		0.11	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	202	1267		218	930	593	214	1782		384	1724	
v/s Ratio Prot	0.09	0.11		c0.11	c0.25	0.06	0.08	c0.25		0.09	c0.25	
v/s Ratio Perm						0.13						
v/c Ratio	0.82	0.42		0.91	0.95	0.49	0.64	0.71		0.80	0.73	
Uniform Delay, d1	60.6	43.7		60.6	50.6	33.5	58.6	38.9		60.6	40.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.84	0.77		1.16	0.31	
Incremental Delay, d2	21.8	0.5		37.2	18.4	0.2	4.6	2.3		9.3	2.5	
Delay (s)	82.4	44.2		97.8	69.1	33.8	53.8	32.2		79.7	14.9	
Level of Service	F	D		F	E	C	D	C		E	B	
Approach Delay (s)		53.1			64.2			34.3			27.5	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	109	38	33	123	156	31	1185	32	157	954	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1790		1770	1863	1583	1770	5065		1770	5037	
Flt Permitted	0.53	1.00		0.45	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	992	1790		835	1863	1583	1770	5065		1770	5037	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	69	111	39	34	126	159	32	1209	33	160	973	66
RTOR Reduction (vph)	0	10	0	0	0	139	0	2	0	0	4	0
Lane Group Flow (vph)	69	140	0	34	126	20	32	1240	0	160	1035	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	17.5	17.5		17.5	17.5	17.5	6.2	89.2		16.9	99.9	
Effective Green, g (s)	17.5	17.5		17.5	17.5	17.5	6.2	89.2		16.9	99.9	
Actuated g/C Ratio	0.12	0.12		0.12	0.12	0.12	0.04	0.64		0.12	0.71	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	124	223		104	232	197	78	3227		213	3594	
v/s Ratio Prot		c0.08			0.07		0.02	c0.24		c0.09	0.21	
v/s Ratio Perm	0.07			0.04		0.01						
v/c Ratio	0.56	0.63		0.33	0.54	0.10	0.41	0.38		0.75	0.29	
Uniform Delay, d1	57.6	58.2		55.9	57.5	54.3	65.1	12.2		59.5	7.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.57	0.53	
Incremental Delay, d2	5.3	5.5		1.8	2.6	0.2	3.5	0.3		9.4	0.1	
Delay (s)	62.9	63.6		57.7	60.1	54.5	68.6	12.6		43.1	3.9	
Level of Service	E	E		E	E	D	E	B		D	A	
Approach Delay (s)		63.4			57.1			14.0			9.2	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	330	32	78	488	197	118	820	86	336	525	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3492		1770	3387		1770	5013		1770	4912	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3492		1770	3387		1770	5013		1770	4912	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	144	337	33	80	498	201	120	837	88	343	536	158
RTOR Reduction (vph)	0	4	0	0	26	0	0	9	0	0	34	0
Lane Group Flow (vph)	144	366	0	80	673	0	120	916	0	343	660	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.2	33.9		11.5	30.2		13.3	37.7		25.2	49.6	
Effective Green, g (s)	15.2	33.9		11.5	30.2		13.3	37.7		25.2	49.6	
Actuated g/C Ratio	0.12	0.26		0.09	0.23		0.10	0.29		0.19	0.38	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	207	914		157	790		181	1460		344	1882	
v/s Ratio Prot	c0.08	c0.10		0.05	c0.20		0.07	c0.18		c0.19	0.13	
v/s Ratio Perm												
v/c Ratio	0.70	0.40		0.51	0.85		0.66	0.63		1.00	0.35	
Uniform Delay, d1	54.9	39.4		56.3	47.5		55.9	39.8		52.1	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.9	0.1		0.9	8.5		6.9	1.2		47.4	0.2	
Delay (s)	62.8	39.5		57.2	55.9		62.8	41.0		99.4	28.7	
Level of Service	E	D		E	E		E	D		F	C	
Approach Delay (s)		46.0			56.1			43.5			52.1	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	129.4	Sum of lost time (s)	21.1
Intersection Capacity Utilization	83.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	0	50	0	0	0	50	975	0	0	531	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5020	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5020	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	79	0	53	0	0	0	53	1037	0	0	565	53
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	79	0	11	0	0	0	53	1037	0	0	608	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	10.6		10.6				3.1	30.2			22.2	
Effective Green, g (s)	10.6		10.6				3.1	30.2			22.2	
Actuated g/C Ratio	0.20		0.20				0.06	0.58			0.43	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	362		323				105	2964			2151	
v/s Ratio Prot							0.03	c0.20			0.12	
v/s Ratio Perm	c0.04		0.01									
v/c Ratio	0.22		0.03				0.50	0.35			0.28	
Uniform Delay, d1	17.2		16.5				23.6	5.7			9.6	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	0.3		0.0				3.8	0.1			0.1	
Delay (s)	17.5		16.5				27.4	5.7			9.7	
Level of Service	B		B				C	A			A	
Approach Delay (s)		17.1			0.0			6.8			9.7	
Approach LOS		B			A			A			A	

Intersection Summary				
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.36			
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	43.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	267	1070	51	22	1417	720	28	49	37	303	53	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5051		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5051		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	278	1115	53	23	1476	750	29	51	39	316	55	242
RTOR Reduction (vph)	0	3	0	0	0	245	0	0	36	0	0	0
Lane Group Flow (vph)	278	1165	0	23	1476	505	29	51	3	316	55	242
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	12.8	70.2		4.5	61.9	61.9	4.5	9.6	9.6	14.0	19.1	120.0
Effective Green, g (s)	12.8	70.2		4.5	61.9	61.9	4.5	9.6	9.6	14.0	19.1	120.0
Actuated g/C Ratio	0.11	0.59		0.04	0.52	0.52	0.04	0.08	0.08	0.12	0.16	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	366	2954		66	1825	816	66	283	126	400	296	1583
v/s Ratio Prot	c0.08	0.23		0.01	c0.42		0.02	0.01		c0.09	0.03	
v/s Ratio Perm						0.32			0.00			c0.15
v/c Ratio	0.76	0.39		0.35	0.81	0.62	0.44	0.18	0.02	0.79	0.19	0.15
Uniform Delay, d1	52.1	13.4		56.3	24.1	20.7	56.5	51.5	50.9	51.6	43.7	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.8	0.4		1.2	4.0	3.5	1.7	0.1	0.0	9.5	0.1	0.2
Delay (s)	59.9	13.8		57.5	28.1	24.2	58.2	51.6	50.9	61.1	43.8	0.2
Level of Service	E	B		E	C	C	E	D	D	E	D	A
Approach Delay (s)		22.7			27.1			53.0			35.5	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	27.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	76.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

23: Huntington Beach Parking/Newland St & Pacific Coast Highway

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	1289	15	5	1990	220	12	11	15	88	6	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1697		1770	1593	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.43	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	803	1697		1378	1593	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	111	1343	16	5	2073	229	12	11	16	92	6	169
RTOR Reduction (vph)	0	0	5	0	0	88	0	14	0	0	144	0
Lane Group Flow (vph)	111	1343	11	5	2073	141	12	13	0	92	31	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	9.7	70.0	70.0	1.2	61.5	61.5	14.9	14.9		14.9	14.9	
Effective Green, g (s)	9.7	70.0	70.0	1.2	61.5	61.5	14.9	14.9		14.9	14.9	
Actuated g/C Ratio	0.10	0.70	0.70	0.01	0.62	0.62	0.15	0.15		0.15	0.15	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	171	3559	1108	21	3127	973	119	252		205	237	
v/s Ratio Prot	c0.06	0.26		0.00	c0.41			0.01			0.02	
v/s Ratio Perm			0.01			0.09	0.01			c0.07		
v/c Ratio	0.65	0.38	0.01	0.24	0.66	0.14	0.10	0.05		0.45	0.13	
Uniform Delay, d1	43.5	6.1	4.5	48.9	12.5	8.1	36.8	36.5		38.8	36.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	6.2	0.3	0.0	2.1	1.1	0.3	0.1	0.0		0.6	0.1	
Delay (s)	49.7	6.4	4.5	51.1	13.6	8.4	36.9	36.5		39.4	37.0	
Level of Service	D	A	A	D	B	A	D	D		D	D	
Approach Delay (s)		9.7			13.2			36.6			37.8	
Approach LOS		A			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	13.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	67.5%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

25: Magnolia Ave & Pacific Coast Highway

Existing PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	1254	36	49	2130	220	17	44	30	85	49	98
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1745	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1745	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	140	1334	38	52	2266	234	18	47	32	90	52	104
RTOR Reduction (vph)	0	0	16	0	0	90	0	21	0	0	0	93
Lane Group Flow (vph)	140	1334	22	52	2266	144	18	58	0	70	72	11
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	12.8	68.9	68.9	6.8	62.9	62.9	12.8	12.8		12.7	12.7	12.7
Effective Green, g (s)	12.8	68.9	68.9	6.8	62.9	62.9	12.8	12.8		12.7	12.7	12.7
Actuated g/C Ratio	0.11	0.57	0.57	0.06	0.52	0.52	0.11	0.11		0.11	0.11	0.11
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	188	2919	908	100	2665	829	188	186		177	184	167
v/s Ratio Prot	c0.08	0.26		0.03	c0.45		0.01	c0.03		c0.04	0.04	
v/s Ratio Perm			0.01			0.09						0.01
v/c Ratio	0.74	0.46	0.02	0.52	0.85	0.17	0.10	0.31		0.40	0.39	0.07
Uniform Delay, d1	52.0	14.8	11.0	55.0	24.5	14.9	48.4	49.5		50.1	50.0	48.3
Progression Factor	1.00	1.00	1.00	1.25	1.04	2.45	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	13.0	0.5	0.0	0.9	1.5	0.2	0.1	0.3		0.5	0.5	0.1
Delay (s)	65.1	15.3	11.1	69.7	27.0	36.8	48.5	49.9		50.6	50.5	48.4
Level of Service	E	B	B	E	C	D	D	D		D	D	D
Approach Delay (s)		19.8			28.8			49.6			49.6	
Approach LOS		B			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	27.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	74.5%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	1215	7	19	2224	657	24	28	13	315	8	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	171	1306	8	20	2391	706	26	30	14	339	9	169
RTOR Reduction (vph)	0	0	3	0	0	199	0	13	0	0	0	142
Lane Group Flow (vph)	171	1306	5	20	2391	507	26	31	0	339	9	27
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	15.9	71.2	71.2	2.8	58.1	77.6	5.8	5.8		19.5	19.5	19.5
Effective Green, g (s)	15.9	71.2	71.2	2.8	58.1	77.6	5.8	5.8		19.5	19.5	19.5
Actuated g/C Ratio	0.13	0.59	0.59	0.02	0.48	0.65	0.05	0.05		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	234	3017	939	41	2461	1023	85	85		557	302	257
v/s Ratio Prot	c0.10	0.26		0.01	c0.47	0.08	0.01	c0.02		c0.10	0.00	
v/s Ratio Perm			0.00			0.24						0.02
v/c Ratio	0.73	0.43	0.01	0.49	0.97	0.50	0.31	0.36		0.61	0.03	0.11
Uniform Delay, d1	50.0	13.4	10.0	57.9	30.1	11.0	55.2	55.3		46.7	42.3	42.8
Progression Factor	0.66	1.33	1.00	1.00	1.00	1.00	1.00	1.00		0.89	0.92	2.57
Incremental Delay, d2	9.0	0.4	0.0	3.3	12.6	0.1	0.7	1.0		1.3	0.0	0.1
Delay (s)	41.9	18.1	10.0	61.2	42.7	11.2	55.9	56.3		42.6	39.0	110.1
Level of Service	D	B	A	E	D	B	E	E		D	D	F
Approach Delay (s)		20.8			35.7			56.1			64.6	
Approach LOS		C			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	34.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			


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EX-PM                    Tue Jul 8, 2014 13:23:35                Page 1-1
--------------------------------------------------------------------------
                ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
                          EXISTING CONDITIONS (2014)
                                PM PEAK HOUR
--------------------------------------------------------------------------
                                Scenario Report
Scenario:             EX-PM

Command:              EX-PM
Volume:               EX-PM
Geometry:             EX
Impact Fee:           Default Impact Fee
Trip Generation:      None
Trip Distribution:    NONE
Paths:                Default Path
Routes:               Default Route
Configuration:        EX-PM

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	D	xxxxx	0.884	D	xxxxx	0.884	+ 0.000
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.845	D	xxxxx	0.845	+ 0.000
# 16 Beach Blvd & Adams Ave	B	xxxxx	0.695	B	xxxxx	0.695	+ 0.000
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.649	B	xxxxx	0.649	+ 0.000
# 21 Newland St & Atlanta Ave	A	xxxxx	0.548	A	xxxxx	0.548	+ 0.000
# 22 Newland St & Hamilton Ave	B	xxxxx	0.678	B	xxxxx	0.678	+ 0.000
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.594	A	xxxxx	0.594	+ 0.000
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.640	B	xxxxx	0.640	+ 0.000
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.777	C	xxxxx	0.777	+ 0.000
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.493	A	xxxxx	0.493	+ 0.000
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.581	A	xxxxx	0.581	+ 0.000
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.690	B	xxxxx	0.690	+ 0.000
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.607	B	xxxxx	0.607	+ 0.000
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.580	A	xxxxx	0.580	+ 0.000
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.757	C	xxxxx	0.757	+ 0.000
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.344	A	xxxxx	0.344	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.429	A	xxxxx	0.429	+ 0.000
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.222	A	xxxxx	0.222	+ 0.000
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.278	A	xxxxx	0.278	+ 0.000

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.884
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	415	2241	509		333	2200	639		416	907	245		174	591	172	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	415	2241	509		333	2200	639		416	907	245		174	591	172	
OvlAdjVol:							223				37					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.44	0.30		0.10	0.32	0.19		0.12	0.18	0.14		0.05	0.17	0.10	
OvlAdjV/S:							0.07				0.02					
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.845
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	63	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.35	0.35		0.05	0.24	0.20		0.12	0.24	0.24		0.07	0.27	0.27	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.695
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100		288	1043	152		156	455	59		187	828	339	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	129	1095	100		288	1043	152		156	455	59		187	828	339	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	129	1095	100		288	1043	152		156	455	59		187	828	339	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	129	1095	100		288	1043	152		156	455	59		187	828	339	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	129	1095	100		288	1043	152		156	455	59		187	828	339	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.75	0.25		2.00	2.62	0.38		1.00	2.66	0.34		1.00	2.00	1.00	
Final Sat.:	1700	4673	427		3400	4451	649		1700	4515	585		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.23	0.23		0.08	0.23	0.23		0.09	0.10	0.10		0.11	0.24	0.20	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.649
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37		303	53	232		267	1070	51		22	1417	720	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	28	49	37		303	53	232		267	1070	51		22	1417	720	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	28	49	0		303	53	0		267	1070	51		22	1417	720	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	28	49	0		303	53	0		267	1070	51		22	1417	720	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	28	49	0		303	53	0		267	1070	51		22	1417	720	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	4868	232		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.01	0.00		0.09	0.03	0.00		0.08	0.22	0.22		0.01	0.42	0.42	
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34		96	264	97		80	474	203		52	473	114	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	275	521	34		96	264	97		80	474	203		52	473	114	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	275	521	34		96	264	97		80	474	203		52	473	114	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	275	521	34		96	264	97		80	474	203		52	473	114	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	275	521	34		96	264	97		80	474	203		52	473	114	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.88	0.12		1.00	1.46	0.54		1.00	1.40	0.60		1.00	1.61	0.39	
Final Sat.:	1700	3192	208		1700	2486	914		1700	2381	1019		1700	2740	660	
Capacity Analysis Module:																
Vol/Sat:	0.16	0.16	0.16		0.06	0.11	0.11		0.05	0.20	0.20		0.03	0.17	0.17	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.678
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0
Volume Module:																
Base Vol:	0	304	65		223	203	0		0	0	0		153	0	476	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	304	65		223	203	0		0	0	0		153	0	476	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	304	65		223	203	0		0	0	0		153	0	476	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	304	65		223	203	0		0	0	0		153	0	476	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	304	65		223	203	0		0	0	0		153	0	476	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.82	0.18		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1401	299		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.22	0.22		0.13	0.12	0.00		0.00	0.00	0.00		0.09	0.00	0.28	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	0	1	0	1
Volume Module:																
Base Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	30	300	28		189	178	42		25	257	29		15	546	327	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	30	300	28		189	178	42		25	257	29		15	546	327	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	30	300	28		189	178	42		25	257	29		15	546	327	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.90	0.10		1.00	1.00	1.00	
Final Sat.:	1700	3110	290		1700	3400	1700		1700	1528	172		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10		0.11	0.05	0.02		0.01	0.17	0.17		0.01	0.32	0.19	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.640
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	111	569	153		387	389	88		89	350	67		231	1060	500	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	111	569	153		387	389	88		89	350	67		231	1060	500	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	111	569	153		387	389	88		89	350	67		231	1060	500	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.45	0.55		1.00	1.68	0.32		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4159	941		1700	2854	546		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.09		0.11	0.09	0.09		0.05	0.12	0.12		0.14	0.31	0.29	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.777
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.28	0.18		0.07	0.27	0.14		0.06	0.12	0.09		0.07	0.31	0.27	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.493
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16		29	1774	25		83	0	28		8	0	11	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	22	1797	16		29	1774	25		83	0	28		8	0	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	22	1797	16		29	1774	0		83	0	28		8	0	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	22	1797	16		29	1774	0		83	0	28		8	0	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	22	1797	16		29	1774	0		83	0	28		8	0	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.97	0.03		1.00	3.00	1.00		0.75	0.00	0.25		0.42	0.00	0.58	
Final Sat.:	1700	5055	45		1700	5100	1700		1271	0	429		716	0	984	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.36	0.36		0.02	0.35	0.00		0.05	0.00	0.07		0.00	0.00	0.01	
Crit Moves:		****			****						****	****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	69	1588	13		40	1550	213		220	8	82		13	3	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.31	0.31		0.02	0.35	0.35		0.13	0.13	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.690
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	106	1270	128		154	1191	182		248	472	87		332	667	108	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	106	1270	128		154	1191	182		248	472	87		332	667	108	
OvlAdjVol:			0				58									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.25	0.08		0.09	0.23	0.11		0.07	0.16	0.16		0.10	0.23	0.23	
OvlAdjV/S:			0.00				0.03									
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.607
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	184	1380	77		103	1149	236		177	211	136		185	242	96	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.29	0.29		0.06	0.23	0.14		0.10	0.10	0.10		0.11	0.07	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.580
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110	37	1112	200	147	219	109	145	249	26				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	154	1410	110	37	1112	200	147	219	109	145	249	26				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	154	1410	110	37	1112	200	147	219	109	145	249	26				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	154	1410	110	37	1112	200	147	219	109	145	249	26				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	154	1410	110	37	1112	200	147	219	109	145	249	26				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.78	0.22	1.00	2.54	0.46	1.00	1.34	0.66	1.00	1.81	0.19				
Final Sat.:	1700	4731	369	1700	4323	777	1700	2270	1130	1700	3079	321				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.30	0.30	0.02	0.26	0.26	0.09	0.10	0.10	0.09	0.08	0.08				
Crit Moves:	****				****			****			****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.757
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	261	873	144	304	850	179	274	747	123	281	1723	354				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	261	873	144	304	850	179	274	747	123	281	1723	354				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	261	873	144	304	850	179	274	747	123	281	1723	354				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.20	0.20	0.09	0.20	0.20	0.08	0.15	0.07	0.08	0.34	0.21				
Crit Moves:		****			****			****				****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.344
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	44	1249	0	0	1055	166	97	0	51	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.24	0.00	0.00	0.24	0.24	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.429
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	147	988	21	20	690	169	177	24	136	25	40	27				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	147	988	21	20	690	169	177	24	136	25	40	27				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	147	988	21	20	690	169	177	24	136	25	40	27				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.94	0.06	1.00	2.41	0.59	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4994	106	1700	4097	1003	1700	1700	1700	1700	2030	1370				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.20	0.20	0.01	0.17	0.17	0.10	0.01	0.08	0.01	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.222
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	14	689	0	0	407	85	62	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	14	689	0	0	407	85	62	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	14	689	0	0	407	85	62	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.48	0.52	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4219	881	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00	0.00	0.10	0.10	0.04	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****			****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.278
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1	12	378	26	7	0	86	0	1	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	175	677	1	12	378	26	7	0	86	0	1	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	175	677	1	12	378	26	7	0	86	0	1	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	175	677	1	12	378	26	7	0	86	0	1	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	175	677	1	12	378	26	7	0	86	0	1	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00				
Final Sat.:	1700	5092	8	1700	5100	1700	1700	0	1700	0	1700	0				
Capacity Analysis Module:																
Vol/Sat:	0.10	0.13	0.13	0.01	0.07	0.02	0.00	0.00	0.05	0.00	0.00	0.00				
Crit Moves:	****				****				****	****						

APPENDIX C: EXISTING PLUS PROJECT LOS RESULTS

1: Beach Blvd & McFadden Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	247	334	121	309	429	100	177	1838	140	145	2677	334
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3398		3433	3438		3433	6340		3433	6301	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3398		3433	3438		3433	6340		3433	6301	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	266	359	130	332	461	108	190	1976	151	156	2878	359
RTOR Reduction (vph)	0	28	0	0	15	0	0	8	0	0	15	0
Lane Group Flow (vph)	266	461	0	332	554	0	190	2119	0	156	3222	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.7	26.7		15.0	27.0		11.2	68.9		11.0	68.7	
Effective Green, g (s)	14.7	26.7		15.0	27.0		11.2	68.9		11.0	68.7	
Actuated g/C Ratio	0.10	0.19		0.11	0.19		0.08	0.49		0.08	0.49	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	360	648		367	663		274	3120		269	3091	
v/s Ratio Prot	0.08	c0.14		0.10	c0.16		0.06	c0.33		0.05	c0.51	
v/s Ratio Perm												
v/c Ratio	0.74	0.71		0.90	0.84		0.69	0.68		0.58	1.04	
Uniform Delay, d1	60.8	53.1		61.8	54.4		62.7	27.1		62.3	35.6	
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.92		1.00	1.00	
Incremental Delay, d2	7.7	3.7		24.8	8.9		6.9	1.1		3.0	28.6	
Delay (s)	68.5	56.8		86.6	63.3		53.9	26.0		65.3	64.2	
Level of Service	E	E		F	E		D	C		E	E	
Approach Delay (s)		60.9			71.9			28.3			64.3	
Approach LOS		E			E			C			E	

Intersection Summary			
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	94.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

2: Beach Blvd & Center Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	125	575	0	2164	2681	932
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	130	599	0	2254	2793	971
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	130	599	0	2254	2793	971
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	13.3	50.3		116.9	73.9	140.0
Effective Green, g (s)	13.3	50.3		116.9	73.9	140.0
Actuated g/C Ratio	0.10	0.36		0.84	0.53	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	326	1090		5350	3382	1583
v/s Ratio Prot	0.04	0.15		0.35	c0.44	
v/s Ratio Perm		0.07		0.00		c0.61
v/c Ratio	0.40	0.55		0.42	0.83	0.61
Uniform Delay, d1	59.6	35.8		2.9	27.7	0.0
Progression Factor	1.00	1.00		0.07	0.46	1.00
Incremental Delay, d2	1.1	0.7		0.0	1.0	0.7
Delay (s)	60.7	36.5		0.3	13.8	0.7
Level of Service	E	D		A	B	A
Approach Delay (s)	40.8			0.3	10.4	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	194	887	149	134	431	234	144	1738	278	448	2390	443
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	200	914	154	138	444	241	148	1792	287	462	2464	457
RTOR Reduction (vph)	0	0	68	0	0	173	0	0	122	0	0	49
Lane Group Flow (vph)	200	914	86	138	444	68	148	1792	165	462	2464	408
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.4	27.5	38.7	13.0	28.1	28.1	11.2	58.8	58.8	20.4	67.6	80.0
Effective Green, g (s)	12.4	27.5	38.7	13.0	28.1	28.1	11.2	58.8	58.8	20.4	67.6	80.0
Actuated g/C Ratio	0.09	0.20	0.28	0.09	0.20	0.20	0.08	0.42	0.42	0.15	0.48	0.57
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	304	998	437	318	710	317	274	2135	664	500	3094	1592
v/s Ratio Prot	c0.06	c0.18	0.02	0.04	0.13		0.04	c0.35		c0.13	0.38	0.02
v/s Ratio Perm			0.04			0.04			0.10			0.12
v/c Ratio	0.66	0.92	0.20	0.43	0.63	0.21	0.54	0.84	0.25	0.92	0.80	0.26
Uniform Delay, d1	61.7	55.1	38.8	60.0	51.1	46.7	61.9	36.4	26.3	59.0	30.4	15.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.33	0.41	0.53	1.41	0.49	0.41
Incremental Delay, d2	3.9	12.6	0.1	0.3	1.7	0.3	1.0	3.6	0.8	15.6	1.4	0.0
Delay (s)	65.6	67.7	38.8	60.4	52.9	47.1	83.3	18.4	14.6	98.7	16.2	6.1
Level of Service	E	E	D	E	D	D	F	B	B	F	B	A
Approach Delay (s)		63.9			52.4			22.2			26.1	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	91.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	18	20	64	8	98	45	1968	53	136	2526	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1716		1770	1863	1583	1770	6383		3433	6403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1716		1770	1863	1583	1770	6383		3433	6403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	25	19	21	67	8	103	47	2072	56	143	2659	14
RTOR Reduction (vph)	0	19	0	0	0	90	0	2	0	0	0	0
Lane Group Flow (vph)	25	21	0	67	8	13	47	2126	0	143	2673	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.0		9.9	18.1	18.1	8.1	82.5		12.0	86.4	
Effective Green, g (s)	7.8	16.0		9.9	18.1	18.1	8.1	82.5		12.0	86.4	
Actuated g/C Ratio	0.06	0.11		0.07	0.13	0.13	0.06	0.59		0.09	0.62	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	196		125	240	204	102	3761		294	3951	
v/s Ratio Prot	0.01	c0.01		c0.04	0.00		0.03	c0.33		0.04	c0.42	
v/s Ratio Perm						0.01						
v/c Ratio	0.26	0.11		0.54	0.03	0.07	0.46	0.57		0.49	0.68	
Uniform Delay, d1	63.3	55.6		62.8	53.3	53.5	63.8	17.7		61.1	17.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.54	0.29		0.70	0.29	
Incremental Delay, d2	1.4	0.2		4.4	0.1	0.1	2.9	0.5		0.8	0.6	
Delay (s)	64.7	55.9		67.2	53.4	53.7	101.5	5.6		43.4	5.7	
Level of Service	E	E		E	D	D	F	A		D	A	
Approach Delay (s)		59.3			58.7			7.7			7.6	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	4	40	86	5	50	36	2006	45	142	2519	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.98	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1608		1681	1602	1504	1770	6387		3433	6403	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1608		1681	1602	1504	1770	6387		3433	6403	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	28	4	42	90	5	52	38	2090	47	148	2624	14
RTOR Reduction (vph)	0	39	0	0	4	43	0	2	0	0	0	0
Lane Group Flow (vph)	28	7	0	50	47	3	38	2135	0	148	2638	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	10.6	10.6		8.3	8.3	8.3	8.2	87.4		15.8	95.0	
Effective Green, g (s)	10.6	10.6		8.3	8.3	8.3	8.2	87.4		15.8	95.0	
Actuated g/C Ratio	0.08	0.08		0.06	0.06	0.06	0.06	0.62		0.11	0.68	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	121		99	94	89	103	3987		387	4344	
v/s Ratio Prot	c0.02	0.00		c0.03	0.03		0.02	c0.33		0.04	c0.41	
v/s Ratio Perm						0.00						
v/c Ratio	0.21	0.06		0.51	0.50	0.03	0.37	0.54		0.38	0.61	
Uniform Delay, d1	60.8	60.1		63.9	63.8	62.1	63.4	14.8		57.6	12.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.92	1.13		0.60	0.14	
Incremental Delay, d2	0.8	0.2		4.0	4.2	0.1	1.8	0.4		0.5	0.5	
Delay (s)	61.5	60.3		67.9	68.0	62.2	60.3	17.1		35.2	2.2	
Level of Service	E	E		E	E	E	E	B		D	A	
Approach Delay (s)		60.8			66.1			17.9			3.9	
Approach LOS		E			E			B			A	

Intersection Summary				
HCM 2000 Control Delay	12.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.57			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9	
Intersection Capacity Utilization	66.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

6: Beach Blvd & Heil Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	347	276	50	223	101	128	1817	63	76	2375	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3304		1770	3374		1770	6376		1770	6349	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3304		1770	3374		1770	6376		1770	6349	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	192	365	291	53	235	106	135	1913	66	80	2500	163
RTOR Reduction (vph)	0	99	0	0	41	0	0	4	0	0	7	0
Lane Group Flow (vph)	192	557	0	53	300	0	135	1975	0	80	2656	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.0	32.1		8.8	18.9		13.0	69.3		11.0	67.3	
Effective Green, g (s)	22.0	32.1		8.8	18.9		13.0	69.3		11.0	67.3	
Actuated g/C Ratio	0.16	0.23		0.06	0.13		0.09	0.49		0.08	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	278	757		111	455		164	3156		139	3052	
v/s Ratio Prot	0.11	c0.17		0.03	c0.09		c0.08	0.31		0.05	c0.42	
v/s Ratio Perm												
v/c Ratio	0.69	0.74		0.48	0.66		0.82	0.63		0.58	0.87	
Uniform Delay, d1	55.8	50.0		63.4	57.5		62.4	25.9		62.2	32.5	
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.73		0.82	0.97	
Incremental Delay, d2	7.2	3.7		3.2	3.6		24.8	0.9		4.7	3.1	
Delay (s)	63.0	53.7		66.6	61.1		71.4	19.7		56.0	34.5	
Level of Service	E	D		E	E		E	B		E	C	
Approach Delay (s)		55.8			61.8			23.0			35.1	
Approach LOS		E			E			C			D	

Intersection Summary				
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	88.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

7: Beach Blvd & Terry Dr

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	108	17	60	40	4	16	50	1955	24	19	2618	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667	1478		1662	1478	1770	6396		1770	6399	
Flt Permitted		0.72	1.00		0.56	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1254	1478		968	1478	1770	6396		1770	6399	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	119	19	66	44	4	18	55	2148	26	21	2877	27
RTOR Reduction (vph)	0	0	56	0	0	15	0	1	0	0	1	0
Lane Group Flow (vph)	0	138	10	0	48	3	55	2173	0	21	2903	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		20.9	20.9		20.9	20.9	8.9	98.3		5.5	94.9	
Effective Green, g (s)		20.9	20.9		20.9	20.9	8.9	98.3		5.5	94.9	
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.06	0.70		0.04	0.68	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		187	220		144	220	112	4490		69	4337	
v/s Ratio Prot							c0.03	c0.34		0.01	c0.45	
v/s Ratio Perm		c0.11	0.01		0.05	0.00						
v/c Ratio		0.74	0.04		0.33	0.01	0.49	0.48		0.30	0.67	
Uniform Delay, d1		56.9	51.0		53.3	50.8	63.4	9.4		65.4	13.3	
Progression Factor		1.00	1.00		1.00	1.00	1.03	0.15		1.17	0.08	
Incremental Delay, d2		14.1	0.1		1.4	0.0	2.0	0.2		1.4	0.5	
Delay (s)		71.0	51.1		54.7	50.8	67.5	1.6		78.1	1.6	
Level of Service		E	D		D	D	E	A		E	A	
Approach Delay (s)		64.6			53.6			3.2			2.1	
Approach LOS		E			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	68.9%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

8: Beach Blvd & Warner Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	206	1195	92	214	847	88	162	1788	147	365	2000	257
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	5031		3433	5013		3433	6335		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	5031		3433	5013		3433	6335		3433	6408	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	229	1328	102	238	941	98	180	1987	163	406	2222	286
RTOR Reduction (vph)	0	6	0	0	8	0	0	9	0	0	0	115
Lane Group Flow (vph)	229	1424	0	238	1031	0	180	2141	0	406	2222	171
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.7	36.0		11.6	32.9		13.0	57.4		16.0	60.4	60.4
Effective Green, g (s)	14.7	36.0		11.6	32.9		13.0	57.4		16.0	60.4	60.4
Actuated g/C Ratio	0.10	0.26		0.08	0.23		0.09	0.41		0.11	0.43	0.43
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	360	1293		284	1178		318	2597		392	2764	682
v/s Ratio Prot	0.07	c0.28		0.07	c0.21		0.05	c0.34		c0.12	0.35	
v/s Ratio Perm												0.11
v/c Ratio	0.64	1.10		0.84	0.87		0.57	0.82		1.04	0.80	0.25
Uniform Delay, d1	60.1	52.0		63.3	51.6		60.8	36.8		62.0	34.6	25.4
Progression Factor	1.00	1.00		1.00	1.00		1.08	0.55		0.64	0.47	0.37
Incremental Delay, d2	2.7	57.6		18.2	7.5		1.2	2.6		49.1	2.0	0.7
Delay (s)	62.8	109.6		81.5	59.0		66.7	22.9		88.7	18.1	10.1
Level of Service	E	F		F	E		E	C		F	B	B
Approach Delay (s)		103.1			63.2			26.3			27.2	
Approach LOS		F			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	48.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	89.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

9: Beach Blvd & Slater Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	159	664	187	68	395	100	113	1480	37	192	1951	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.97		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3423		1770	3432		1770	6385		1770	6330	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3423		1770	3432		1770	6385		1770	6330	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	173	722	203	74	429	109	123	1609	40	209	2121	187
RTOR Reduction (vph)	0	18	0	0	16	0	0	3	0	0	10	0
Lane Group Flow (vph)	173	907	0	74	522	0	123	1646	0	209	2298	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	21.2	36.5		10.4	25.7		18.0	52.4		20.0	54.4	
Effective Green, g (s)	21.2	36.5		10.4	25.7		18.0	52.4		20.0	54.4	
Actuated g/C Ratio	0.15	0.26		0.07	0.18		0.13	0.37		0.14	0.39	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	268	892		131	630		227	2389		252	2459	
v/s Ratio Prot	0.10	c0.27		0.04	c0.15		0.07	c0.26		0.12	c0.36	
v/s Ratio Perm												
v/c Ratio	0.65	1.02		0.56	0.83		0.54	0.69		0.83	0.93	
Uniform Delay, d1	55.9	51.8		62.6	55.0		57.1	36.9		58.3	41.1	
Progression Factor	1.00	1.00		1.00	1.00		0.58	0.41		0.84	0.47	
Incremental Delay, d2	5.3	34.5		5.5	8.8		2.5	1.6		11.8	4.9	
Delay (s)	61.1	86.2		68.1	63.8		35.7	16.8		61.1	24.3	
Level of Service	E	F		E	E		D	B		E	C	
Approach Delay (s)		82.3			64.3			18.1			27.4	
Approach LOS		F			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	38.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	4	25	39	2	67	17	1545	61	116	2244	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1677		1770	6371		1770	6402	
Flt Permitted		0.72			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1264			1473		1770	6371		1770	6402	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	4	26	40	2	68	17	1577	62	118	2290	15
RTOR Reduction (vph)	0	23	0	0	47	0	0	3	0	0	0	0
Lane Group Flow (vph)	0	35	0	0	63	0	17	1636	0	118	2305	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		14.7			14.7		4.0	95.8		13.6	105.4	
Effective Green, g (s)		14.7			14.7		4.0	95.8		13.6	105.4	
Actuated g/C Ratio		0.10			0.10		0.03	0.68		0.10	0.75	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		132			154		50	4359		171	4819	
v/s Ratio Prot							0.01	0.26		c0.07	c0.36	
v/s Ratio Perm		0.03			c0.04							
v/c Ratio		0.26			0.41		0.34	0.38		0.69	0.48	
Uniform Delay, d1		57.7			58.6		66.7	9.4		61.2	6.7	
Progression Factor		1.00			1.00		1.23	0.11		1.15	0.07	
Incremental Delay, d2		1.1			1.7		3.2	0.2		4.9	0.1	
Delay (s)		58.7			60.3		85.4	1.3		75.4	0.6	
Level of Service		E			E		F	A		E	A	
Approach Delay (s)		58.7			60.3			2.1			4.2	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.6	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	62.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	376	116	127	295	140	122	1452	135	309	1631	128
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3414		1770	3368		1770	6326		1770	6338	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3414		1770	3368		1770	6326		1770	6338	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	88	400	123	135	314	149	130	1545	144	329	1735	136
RTOR Reduction (vph)	0	21	0	0	42	0	0	10	0	0	8	0
Lane Group Flow (vph)	88	502	0	135	421	0	130	1679	0	329	1863	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.0	25.5		12.0	25.5		12.5	60.7		21.1	69.3	
Effective Green, g (s)	12.0	25.5		12.0	25.5		12.5	60.7		21.1	69.3	
Actuated g/C Ratio	0.09	0.18		0.09	0.18		0.09	0.43		0.15	0.49	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	151	621		151	613		158	2742		266	3137	
v/s Ratio Prot	0.05	c0.15		c0.08	0.13		c0.07	c0.27		c0.19	0.29	
v/s Ratio Perm												
v/c Ratio	0.58	0.81		0.89	0.69		0.82	0.61		1.24	0.59	
Uniform Delay, d1	61.6	54.9		63.4	53.5		62.7	30.6		59.5	25.3	
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.57		0.56	0.50	
Incremental Delay, d2	3.7	7.8		42.6	3.3		24.4	0.9		132.3	0.8	
Delay (s)	65.2	62.7		106.0	56.9		78.1	18.5		165.6	13.3	
Level of Service	E	E		F	E		E	B		F	B	
Approach Delay (s)		63.1			67.9			22.7			36.1	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	282	385	100	94	330	131	105	1288	141	184	1338	369
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6313		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6313		3433	5085	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	300	410	106	100	351	139	112	1370	150	196	1423	393
RTOR Reduction (vph)	0	0	88	0	0	122	0	11	0	0	0	31
Lane Group Flow (vph)	300	410	18	100	351	17	112	1509	0	196	1423	362
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	23.5	23.5	23.5	17.5	17.5	17.5	11.0	64.4		11.9	65.3	88.8
Effective Green, g (s)	23.5	23.5	23.5	17.5	17.5	17.5	11.0	64.4		11.9	65.3	88.8
Actuated g/C Ratio	0.17	0.17	0.17	0.12	0.12	0.12	0.08	0.46		0.09	0.47	0.63
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	576	594	265	221	442	197	269	2903		291	2371	1004
v/s Ratio Prot	0.09	c0.12		0.06	c0.10		0.03	c0.24		0.06	c0.28	0.23
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.52	0.69	0.07	0.45	0.79	0.09	0.42	0.52		0.67	0.60	0.36
Uniform Delay, d1	53.1	54.8	49.0	56.8	59.5	54.2	61.4	26.8		62.2	27.7	12.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.16	0.44	0.65
Incremental Delay, d2	0.5	2.9	0.1	0.5	8.9	0.1	0.4	0.7		3.8	0.9	0.1
Delay (s)	53.6	57.8	49.1	57.3	68.4	54.3	61.8	27.5		76.0	13.1	8.0
Level of Service	D	E	D	E	E	D	E	C		E	B	A
Approach Delay (s)		55.1			63.2			29.9			18.3	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

13: Beach Blvd & Garfield Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	606	181	113	333	138	119	1153	78	139	1208	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3383		1770	5037		1770	5025	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3383		1770	5037		1770	5025	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	194	645	193	120	354	147	127	1227	83	148	1285	111
RTOR Reduction (vph)	0	0	149	0	41	0	0	6	0	0	7	0
Lane Group Flow (vph)	194	645	44	120	460	0	127	1304	0	148	1389	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	16.9	27.2	27.2	12.2	22.5		12.9	47.3		12.1	46.5	
Effective Green, g (s)	16.9	27.2	27.2	12.2	22.5		12.9	47.3		12.1	46.5	
Actuated g/C Ratio	0.14	0.23	0.23	0.10	0.19		0.11	0.39		0.10	0.39	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	249	802	358	179	634		190	1985		178	1947	
v/s Ratio Prot	0.11	c0.18		0.07	c0.14		0.07	c0.26		c0.08	c0.28	
v/s Ratio Perm			0.03									
v/c Ratio	0.78	0.80	0.12	0.67	0.73		0.67	0.66		0.83	0.71	
Uniform Delay, d1	49.7	43.9	36.9	52.0	45.9		51.5	29.7		52.9	31.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.59	1.00		1.00	1.00	
Incremental Delay, d2	13.1	6.2	0.2	7.5	4.4		5.7	1.4		25.8	2.3	
Delay (s)	62.8	50.1	37.1	59.5	50.3		36.0	31.2		78.8	33.4	
Level of Service	E	D	D	E	D		D	C		E	C	
Approach Delay (s)		50.1			52.0			31.6			37.7	
Approach LOS		D			D			C			D	

Intersection Summary				
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.77			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	76.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	155	467	192	125	416	115	77	1051	77	96	1286	100
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3424		1770	5033		1770	5030	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3424		1770	5033		1770	5030	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	163	492	202	132	438	121	81	1106	81	101	1354	105
RTOR Reduction (vph)	0	0	159	0	22	0	0	6	0	0	6	0
Lane Group Flow (vph)	163	492	43	132	537	0	81	1181	0	101	1453	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	16.2	25.7	25.7	14.8	24.3		9.1	48.2		10.9	50.0	
Effective Green, g (s)	16.2	25.7	25.7	14.8	24.3		9.1	48.2		10.9	50.0	
Actuated g/C Ratio	0.13	0.21	0.21	0.12	0.20		0.08	0.40		0.09	0.42	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	238	757	339	218	693		134	2021		160	2095	
v/s Ratio Prot	c0.09	0.14		0.07	c0.16		0.05	c0.23		0.06	c0.29	
v/s Ratio Perm			0.03									
v/c Ratio	0.68	0.65	0.13	0.61	0.77		0.60	0.58		0.63	0.69	
Uniform Delay, d1	49.5	43.0	38.1	49.8	45.3		53.7	28.1		52.6	28.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.94	0.56		0.71	0.46	
Incremental Delay, d2	7.9	1.9	0.2	4.7	5.4		7.2	1.2		5.9	1.4	
Delay (s)	57.4	45.0	38.3	54.5	50.7		57.7	17.0		43.1	14.7	
Level of Service	E	D	D	D	D		E	B		D	B	
Approach Delay (s)		45.8			51.4			19.6			16.5	
Approach LOS		D			D			B			B	

Intersection Summary				
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	78.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	20	79	27	9	47	31	1100	43	53	1281	70
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1696			1795	1583	1770	5057		1770	5046	
Flt Permitted		0.89			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1532			1161	1583	1770	5057		1770	5046	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	44	21	83	28	9	49	33	1158	45	56	1348	74
RTOR Reduction (vph)	0	44	0	0	0	43	0	2	0	0	3	0
Lane Group Flow (vph)	0	104	0	0	37	6	33	1201	0	56	1419	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		15.6			15.6	15.6	6.1	80.3		8.9	83.1	
Effective Green, g (s)		15.6			15.6	15.6	6.1	80.3		8.9	83.1	
Actuated g/C Ratio		0.13			0.13	0.13	0.05	0.67		0.07	0.69	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		199			150	205	89	3383		131	3494	
v/s Ratio Prot							0.02	c0.24		0.03	c0.28	
v/s Ratio Perm		c0.07			0.03	0.00						
v/c Ratio		0.52			0.25	0.03	0.37	0.35		0.43	0.41	
Uniform Delay, d1		48.7			46.9	45.6	55.1	8.6		53.1	7.9	
Progression Factor		1.00			1.00	1.00	1.07	0.41		0.68	0.86	
Incremental Delay, d2		2.4			0.9	0.1	2.3	0.3		1.7	0.3	
Delay (s)		51.2			47.8	45.7	61.5	3.8		37.6	7.1	
Level of Service		D			D	D	E	A		D	A	
Approach Delay (s)		51.2			46.6			5.3			8.3	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	113	727	94	117	409	215	86	819	173	320	896	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4998		1770	3539	1583	1770	4952		3433	5013	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4998		1770	3539	1583	1770	4952		3433	5013	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	116	749	97	121	422	222	89	844	178	330	924	97
RTOR Reduction (vph)	0	14	0	0	0	84	0	27	0	0	10	0
Lane Group Flow (vph)	116	832	0	121	422	138	89	995	0	330	1011	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	11.6	27.3		11.3	27.0	41.5	11.0	45.1		14.5	48.6	
Effective Green, g (s)	11.6	27.3		11.3	27.0	41.5	11.0	45.1		14.5	48.6	
Actuated g/C Ratio	0.10	0.23		0.09	0.22	0.35	0.09	0.38		0.12	0.41	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	171	1137		166	796	547	162	1861		414	2030	
v/s Ratio Prot	0.07	c0.17		c0.07	0.12	0.03	0.05	c0.20		c0.10	0.20	
v/s Ratio Perm						0.06						
v/c Ratio	0.68	0.73		0.73	0.53	0.25	0.55	0.53		0.80	0.50	
Uniform Delay, d1	52.4	43.0		52.9	40.9	28.1	52.1	29.3		51.3	26.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.83	0.69		0.84	0.70	
Incremental Delay, d2	8.1	3.0		12.7	1.2	0.1	1.9	1.1		9.0	0.8	
Delay (s)	60.5	46.0		65.5	42.2	28.2	45.4	21.3		52.2	19.4	
Level of Service	E	D		E	D	C	D	C		D	B	
Approach Delay (s)		47.7			41.8			23.3			27.4	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	204	49	27	114	220	15	732	60	221	925	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1809		1770	1863	1583	1770	5027		1770	5053	
Flt Permitted	0.62	1.00		0.27	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1157	1809		505	1863	1583	1770	5027		1770	5053	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	116	227	54	30	127	244	17	813	67	246	1028	46
RTOR Reduction (vph)	0	7	0	0	0	197	0	8	0	0	3	0
Lane Group Flow (vph)	116	274	0	30	127	47	17	872	0	246	1071	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	23.1	23.1		23.1	23.1	23.1	4.0	62.6		17.9	76.5	
Effective Green, g (s)	23.1	23.1		23.1	23.1	23.1	4.0	62.6		17.9	76.5	
Actuated g/C Ratio	0.19	0.19		0.19	0.19	0.19	0.03	0.52		0.15	0.64	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	222	348		97	358	304	59	2622		264	3221	
v/s Ratio Prot		c0.15			0.07		0.01	c0.17		c0.14	c0.21	
v/s Ratio Perm	0.10			0.06		0.03						
v/c Ratio	0.52	0.79		0.31	0.35	0.15	0.29	0.33		0.93	0.33	
Uniform Delay, d1	43.5	46.1		41.6	42.0	40.3	56.6	16.6		50.4	10.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.62	0.89	
Incremental Delay, d2	2.2	11.1		1.8	0.6	0.2	2.7	0.3		34.9	0.3	
Delay (s)	45.7	57.2		43.4	42.6	40.6	59.3	17.0		66.4	9.1	
Level of Service	D	E		D	D	D	E	B		E	A	
Approach Delay (s)		53.9			41.4			17.8			19.8	
Approach LOS		D			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	26.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	63.8%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	404	43	52	318	239	39	412	64	269	637	117
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.94		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3488		1770	3311		1770	4982		1770	4967	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3488		1770	3311		1770	4982		1770	4967	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	112	434	46	56	342	257	42	443	69	289	685	126
RTOR Reduction (vph)	0	4	0	0	86	0	0	17	0	0	17	0
Lane Group Flow (vph)	112	476	0	56	513	0	42	495	0	289	794	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.1	26.4		8.0	21.3		5.7	22.2		25.2	41.7	
Effective Green, g (s)	13.1	26.4		8.0	21.3		5.7	22.2		25.2	41.7	
Actuated g/C Ratio	0.13	0.26		0.08	0.21		0.06	0.22		0.24	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	225	894		137	685		98	1074		433	2012	
v/s Ratio Prot	c0.06	0.14		0.03	c0.16		0.02	c0.10		c0.16	0.16	
v/s Ratio Perm												
v/c Ratio	0.50	0.53		0.41	0.75		0.43	0.46		0.67	0.39	
Uniform Delay, d1	41.8	32.9		45.2	38.3		47.0	35.1		35.1	21.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.6	0.3		0.7	3.9		1.1	0.7		3.0	0.3	
Delay (s)	42.5	33.2		45.9	42.2		48.1	35.8		38.1	21.9	
Level of Service	D	C		D	D		D	D		D	C	
Approach Delay (s)		35.0			42.6			36.7			26.2	
Approach LOS		C			D			D			C	

Intersection Summary			
HCM 2000 Control Delay	33.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	102.9	Sum of lost time (s)	21.1
Intersection Capacity Utilization	71.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	0	38	0	0	0	22	390	0	0	672	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5044	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5044	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	39	0	40	0	0	0	23	415	0	0	715	41
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	39	0	6	0	0	0	23	415	0	0	751	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	8.1		8.1				1.1	32.4			26.4	
Effective Green, g (s)	8.1		8.1				1.1	32.4			26.4	
Actuated g/C Ratio	0.16		0.16				0.02	0.63			0.51	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	278		248				37	3199			2585	
v/s Ratio Prot							c0.01	0.08			c0.15	
v/s Ratio Perm	c0.02		0.00									
v/c Ratio	0.14		0.03				0.62	0.13			0.29	
Uniform Delay, d1	18.7		18.4				25.0	3.9			7.2	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	0.2		0.0				28.2	0.0			0.1	
Delay (s)	18.9		18.4				53.2	3.9			7.2	
Level of Service	B		B				D	A			A	
Approach Delay (s)		18.7			0.0			6.5			7.2	
Approach LOS		B			A			A			A	

Intersection Summary				
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.27			
Actuated Cycle Length (s)	51.5	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	31.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Existing Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	1707	23	19	710	314	5	14	29	566	51	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	84	1724	23	19	717	317	5	14	29	572	52	138
RTOR Reduction (vph)	0	1	0	0	0	178	0	0	27	0	0	0
Lane Group Flow (vph)	84	1746	0	19	717	139	5	14	2	572	52	138
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	11.4	52.2		2.9	43.7	43.7	1.1	8.2	8.2	15.0	22.1	100.0
Effective Green, g (s)	11.4	52.2		2.9	43.7	43.7	1.1	8.2	8.2	15.0	22.1	100.0
Actuated g/C Ratio	0.11	0.52		0.03	0.44	0.44	0.01	0.08	0.08	0.15	0.22	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	2.0	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	391	2649		51	1546	691	19	290	129	514	411	1583
v/s Ratio Prot	0.02	c0.34		0.01	c0.20		0.00	0.00		c0.17	c0.03	
v/s Ratio Perm						0.09			0.00			0.09
v/c Ratio	0.21	0.66		0.37	0.46	0.20	0.26	0.05	0.02	1.11	0.13	0.09
Uniform Delay, d1	40.2	17.4		47.7	19.9	17.4	49.0	42.3	42.2	42.5	31.2	0.0
Progression Factor	1.00	1.00		0.54	0.90	3.35	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.1	1.3		1.6	1.0	0.6	2.7	0.0	0.0	74.4	0.1	0.1
Delay (s)	40.3	18.7		27.1	18.9	58.8	51.7	42.3	42.2	116.9	31.3	0.1
Level of Service	D	B		C	B	E	D	D	D	F	C	A
Approach Delay (s)		19.7			31.1			43.2			89.9	
Approach LOS		B			C			D			F	

Intersection Summary				
HCM 2000 Control Delay	37.7	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	69.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	2126	3	3	851	135	13	15	8	195	1	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1766		1770	1585	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.56	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1048	1766		1383	1585	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	166	2169	3	3	868	138	13	15	8	199	1	146
RTOR Reduction (vph)	0	0	1	0	0	64	0	6	0	0	118	0
Lane Group Flow (vph)	166	2169	2	3	868	74	13	17	0	199	29	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	12.7	64.2	64.2	2.4	53.9	53.9	19.5	19.5		19.5	19.5	
Effective Green, g (s)	12.7	64.2	64.2	2.4	53.9	53.9	19.5	19.5		19.5	19.5	
Actuated g/C Ratio	0.13	0.64	0.64	0.02	0.54	0.54	0.20	0.20		0.20	0.20	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	224	3264	1016	42	2740	853	204	344		269	309	
v/s Ratio Prot	0.09	c0.43		0.00	c0.17			0.01			0.02	
v/s Ratio Perm			0.00			0.05	0.01			c0.14		
v/c Ratio	0.74	0.66	0.00	0.07	0.32	0.09	0.06	0.05		0.74	0.10	
Uniform Delay, d1	42.1	11.2	6.4	47.7	12.8	11.2	32.8	32.7		37.9	33.0	
Progression Factor	1.19	1.18	1.00	1.07	1.33	2.97	1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.7	0.7	0.0	0.3	0.3	0.2	0.0	0.0		8.8	0.0	
Delay (s)	57.9	14.0	6.4	51.1	17.4	33.3	32.9	32.7		46.7	33.1	
Level of Service	E	B	A	D	B	C	C	C		D	C	
Approach Delay (s)		17.1			19.7			32.8			40.9	
Approach LOS		B			B			C			D	

Intersection Summary				
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	75.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	2205	39	37	820	61	13	22	6	238	57	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1805		1681	1716	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1805		1681	1716	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	128	2273	40	38	845	63	13	23	6	245	59	179
RTOR Reduction (vph)	0	0	19	0	0	34	0	5	0	0	0	151
Lane Group Flow (vph)	128	2273	21	38	845	29	13	24	0	149	155	28
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.5	52.0	52.0	4.5	46.0	46.0	9.0	9.0		15.7	15.7	15.7
Effective Green, g (s)	10.5	52.0	52.0	4.5	46.0	46.0	9.0	9.0		15.7	15.7	15.7
Actuated g/C Ratio	0.10	0.52	0.52	0.04	0.46	0.46	0.09	0.09		0.16	0.16	0.16
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	185	2644	823	79	2339	728	159	162		263	269	248
v/s Ratio Prot	c0.07	c0.45		0.02	0.17		0.01	c0.01		0.09	c0.09	
v/s Ratio Perm			0.01			0.02						0.02
v/c Ratio	0.69	0.86	0.03	0.48	0.36	0.04	0.08	0.15		0.57	0.58	0.11
Uniform Delay, d1	43.2	20.8	11.7	46.6	17.5	14.9	41.7	42.0		39.0	39.1	36.2
Progression Factor	1.10	0.69	1.00	0.66	1.52	12.28	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.0	3.2	0.0	1.6	0.4	0.1	0.1	0.2		1.7	1.9	0.1
Delay (s)	54.7	17.5	11.7	32.4	27.0	182.5	41.8	42.1		40.7	40.9	36.3
Level of Service	D	B	B	C	C	F	D	D		D	D	D
Approach Delay (s)		19.3			37.5			42.0			39.1	
Approach LOS		B			D			D			D	

Intersection Summary				
HCM 2000 Control Delay	26.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	72.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	250	2179	2	7	705	252	11	15	11	560	5	218
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	250	2179	2	7	705	252	11	15	11	560	5	218
RTOR Reduction (vph)	0	0	1	0	0	101	0	11	0	0	0	169
Lane Group Flow (vph)	250	2179	1	7	705	151	11	15	0	560	5	49
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	15.6	52.0	52.0	1.1	37.5	59.9	3.8	3.8		22.4	22.4	22.4
Effective Green, g (s)	15.6	52.0	52.0	1.1	37.5	59.9	3.8	3.8		22.4	22.4	22.4
Actuated g/C Ratio	0.16	0.52	0.52	0.01	0.38	0.60	0.04	0.04		0.22	0.22	0.22
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	276	2644	823	19	1906	948	67	66		768	417	354
v/s Ratio Prot	c0.14	c0.43		0.00	c0.14	0.04	0.01	c0.01		c0.16	0.00	
v/s Ratio Perm			0.00			0.06						0.03
v/c Ratio	0.91	0.82	0.00	0.37	0.37	0.16	0.16	0.23		0.73	0.01	0.14
Uniform Delay, d1	41.5	20.2	11.5	49.1	22.7	8.9	46.6	46.7		36.0	30.2	31.1
Progression Factor	0.95	1.02	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	21.6	2.0	0.0	4.4	0.6	0.0	0.4	0.7		3.0	0.0	0.1
Delay (s)	61.1	22.6	11.5	53.5	23.2	8.9	47.0	47.4		38.9	30.2	31.1
Level of Service	E	C	B	D	C	A	D	D		D	C	C
Approach Delay (s)		26.6			19.7			47.2			36.7	
Approach LOS		C			B			D			D	

Intersection Summary			
HCM 2000 Control Delay	27.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	81.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			


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EX+P1-AM                    Tue Jul 8, 2014 13:23:47                    Page 1-1
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                 ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
                     EXISTING PLUS PROJECT CONDITIONS (2014)
                                AM PEAK HOUR
--------------------------------------------------------------------------------
                                Scenario Report
Scenario:              EX+P1-AM

Command:               EX+P1-AM
Volume:                EX-AM
Geometry:              EX
Impact Fee:            Default Impact Fee
Trip Generation:       P1-AM
Trip Distribution:     DIST-1
Paths:                 Default Path
Routes:                Default Route
Configuration:         EX+P1-AM


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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.722	C	xxxxx	0.736	+ 0.014
# 8 Beach Blvd & Warner Ave	C	xxxxx	0.746	C	xxxxx	0.757	+ 0.011
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.554	A	xxxxx	0.568	+ 0.015
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.549	A	xxxxx	0.571	+ 0.022
# 21 Newland St & Atlanta Ave	A	xxxxx	0.496	A	xxxxx	0.500	+ 0.004
# 22 Newland St & Hamilton Ave	A	xxxxx	0.561	B	xxxxx	0.659	+ 0.098
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.530	A	xxxxx	0.530	+ 0.000
# 26 Brookhurst St & Hamilton Ave	C	xxxxx	0.705	C	xxxxx	0.705	+ 0.000
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.799	C	xxxxx	0.799	+ 0.000
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.351	A	xxxxx	0.366	+ 0.015
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.402	A	xxxxx	0.417	+ 0.015
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.668	B	xxxxx	0.683	+ 0.015
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.521	A	xxxxx	0.536	+ 0.015
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.525	A	xxxxx	0.540	+ 0.015
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.741	C	xxxxx	0.756	+ 0.015
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.259	A	xxxxx	0.268	+ 0.010
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.390	A	xxxxx	0.405	+ 0.015
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.252	A	xxxxx	0.267	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.307	A	xxxxx	0.322	+ 0.015

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.722
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0	1	2	0	4	0	2	2	0	3	0	1	2	0	2	0	1
Volume Module:																				
Base Vol:	144	1666	278		448	2316	443		194	887	149		134	431	234	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	144	1666	278		448	2316	443		194	887	149		134	431	234	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	144	1666	278		448	2316	443		194	887	149		134	431	234	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	144	1666	278		448	2316	443		194	887	149		134	431	234	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	144	1666	278		448	2316	443		194	887	149		134	431	234	
OvlAdjVol:							249				77					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.33	0.16		0.13	0.34	0.13		0.06	0.17	0.09		0.04	0.13	0.14	
OvlAdjV/S:							0.07				0.05					
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.746
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.68	0.32		2.00	4.00	1.00		2.00	2.79	0.21		2.00	2.72	0.28	
Final Sat.:	3400	6263	537		3400	6800	1700		3400	4743	357		3400	4620	480	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.27	0.27		0.11	0.28	0.15		0.06	0.25	0.25		0.06	0.18	0.18	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.554
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	86	747	173		320	815	94		113	727	92		117	409	215	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	86	747	173		320	815	94		113	727	92		117	409	215	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	86	747	173		320	815	94		113	727	92		117	409	215	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	86	747	173		320	815	94		113	727	92		117	409	215	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	86	747	173		320	815	94		113	727	92		117	409	215	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.44	0.56		2.00	2.69	0.31		1.00	2.66	0.34		1.00	2.00	1.00	
Final Sat.:	1700	4141	959		3400	4573	527		1700	4527	573		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.18		0.09	0.18	0.18		0.07	0.16	0.16		0.07	0.12	0.13	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	5	14	29		494	51	137		83	1702	23		19	710	242	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	5	14	29		494	51	137		83	1702	23		19	710	242	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	5	14	0		494	51	0		83	1702	23		19	710	242	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	5	14	0		494	51	0		83	1702	23		19	710	242	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	5	14	0		494	51	0		83	1702	23		19	710	242	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.96	0.04		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	5032	68		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.15	0.03	0.00		0.02	0.34	0.34		0.01	0.21	0.14	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.496
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	128	316	39		151	377	71		84	516	238		29	354	150	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	128	316	39		151	377	71		84	516	238		29	354	150	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	128	316	39		151	377	71		84	516	238		29	354	150	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	128	316	39		151	377	71		84	516	238		29	354	150	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	128	316	39		151	377	71		84	516	238		29	354	150	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.78	0.22		1.00	1.68	0.32		1.00	1.37	0.63		1.00	1.40	0.60	
Final Sat.:	1700	3026	374		1700	2861	539		1700	2327	1073		1700	2388	1012	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.10	0.10		0.09	0.13	0.13		0.05	0.22	0.22		0.02	0.15	0.15	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.561
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0
Volume Module:																
Base Vol:	0	136	93		407	270	0		0	0	0		104	0	233	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	136	93		407	270	0		0	0	0		104	0	233	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	136	93		407	270	0		0	0	0		104	0	233	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	136	93		407	270	0		0	0	0		104	0	233	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	136	93		407	270	0		0	0	0		104	0	233	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.59	0.41		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1010	690		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.13	0.13		0.24	0.16	0.00		0.00	0.00	0.00		0.06	0.00	0.14	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.530
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	0	1	0	1
Volume Module:																
Base Vol:	36	206	45		214	256	35		75	397	54		25	305	309	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	36	206	45		214	256	35		75	397	54		25	305	309	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	36	206	45		214	256	35		75	397	54		25	305	309	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	36	206	45		214	256	35		75	397	54		25	305	309	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	36	206	45		214	256	35		75	397	54		25	305	309	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.64	0.36		1.00	2.00	1.00		1.00	0.88	0.12		1.00	1.00	1.00	
Final Sat.:	1700	2790	610		1700	3400	1700		1700	1496	204		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.07	0.07		0.13	0.08	0.02		0.04	0.27	0.27		0.01	0.18	0.18	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.705
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	70	295	342		477	413	82		98	769	56		120	403	279	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	70	295	342		477	413	82		98	769	56		120	403	279	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	70	295	342		477	413	82		98	769	56		120	403	279	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	70	295	342		477	413	82		98	769	56		120	403	279	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	70	295	342		477	413	82		98	769	56		120	403	279	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.50	0.50		1.00	1.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4255	845		1700	3169	231		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.06	0.20		0.14	0.10	0.10		0.06	0.24	0.24		0.07	0.12	0.16	
Crit Moves:			****		****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.799
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	120	1043	420		650	955	356		135	1325	90		174	366	80	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	120	1043	420		650	955	356		135	1325	90		174	366	80	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	120	1043	420		650	955	356		135	1325	90		174	366	80	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	120	1043	420		650	955	356		135	1325	90		174	366	80	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	120	1043	420		650	955	356		135	1325	90		174	366	80	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.20	0.25		0.19	0.19	0.21		0.04	0.26	0.05		0.05	0.11	0.05	
Crit Moves:				****	****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.351
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	45	1415	3		15	1274	150		11	1	8		3	0	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	45	1415	3		15	1274	150		11	1	8		3	0	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	45	1415	3		15	1274	0		11	1	8		3	0	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	45	1415	3		15	1274	0		11	1	8		3	0	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	45	1415	3		15	1274	0		11	1	8		3	0	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		0.55	0.05	0.40		0.23	0.00	0.77	
Final Sat.:	1700	5089	11		1700	5100	1700		935	85	680		392	0	1308	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.28	0.28		0.01	0.25	0.00		0.01	0.01	0.01		0.00	0.00	0.01	
Crit Moves:		****			****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.402
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	24	1367	9		19	1060	92		76	1	19		10	1	34	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.76	0.24		0.99	0.01	1.00		0.22	0.02	0.76	
Final Sat.:	1700	5067	33		1700	4693	407		1678	22	1700		378	38	1284	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.27	0.27		0.01	0.23	0.23		0.04	0.05	0.01		0.01	0.03	0.03	
Crit Moves:		****			****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.668
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 34 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	70	1102	196		133	741	142		271	898	57		147	341	143	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	70	1102	196		133	741	142		271	898	57		147	341	143	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	70	1102	196		133	741	142		271	898	57		147	341	143	
OvlAdjVol:			122				6									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.88	0.12		2.00	1.41	0.59	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	3197	203		3400	2395	1005	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.22	0.12		0.08	0.15	0.08		0.08	0.28	0.28		0.04	0.14	0.14	
OvlAdjV/S:			0.07				0.00									
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.521
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	78	1055	65		68	806	141		235	375	89		128	171	57	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	78	1055	65		68	806	141		235	375	89		128	171	57	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	78	1055	65		68	806	141		235	375	89		128	171	57	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.83	0.17		1.00	3.00	1.00		1.00	1.62	0.38		1.00	2.00	1.00	
Final Sat.:	1700	4804	296		1700	5100	1700		1700	2748	652		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.22	0.22		0.04	0.16	0.08		0.14	0.14	0.14		0.08	0.05	0.03	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.525
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	92	890	113	10	792	150	198	435	153	108	228	45				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	92	890	113	10	792	150	198	435	153	108	228	45				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	92	890	113	10	792	150	198	435	153	108	228	45				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	92	890	113	10	792	150	198	435	153	108	228	45				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	92	890	113	10	792	150	198	435	153	108	228	45				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.66	0.34	1.00	2.52	0.48	1.00	1.48	0.52	1.00	1.67	0.33				
Final Sat.:	1700	4525	575	1700	4288	812	1700	2515	885	1700	2840	560				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.20	0.20	0.01	0.18	0.18	0.12	0.17	0.17	0.06	0.08	0.08				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.741
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	42	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	80	657	267	382	676	155	234	1730	71	199	595	154				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	80	657	267	382	676	155	234	1730	71	199	595	154				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	80	657	267	382	676	155	234	1730	71	199	595	154				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.13	0.87	2.00	2.44	0.56	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	3626	1474	3400	4149	951	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.18	0.18	0.11	0.16	0.16	0.07	0.34	0.04	0.06	0.12	0.09				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.259
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	29	848	0	0	687	45	144	0	48	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	29	848	0	0	687	45	144	0	48	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	29	848	0	0	687	45	144	0	48	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.82	0.18	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4786	314	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.17	0.00	0.00	0.14	0.14	0.04	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****			****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.390
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	89	665	15	15	640	134	216	15	218	17	23	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	89	665	15	15	640	134	216	15	218	17	23	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	89	665	15	15	640	134	216	15	218	17	23	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.48	0.52	1.00	1.00	1.00	1.00	1.59	0.41				
Final Sat.:	1700	4988	113	1700	4217	883	1700	1700	1700	1700	2697	703				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.13	0.13	0.01	0.15	0.15	0.13	0.01	0.13	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.252
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	3	413	0	0	520	100	134	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	3	413	0	0	520	100	134	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	3	413	0	0	520	100	134	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.52	0.48	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4277	823	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00	0.00	0.12	0.12	0.08	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.307
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1!	0 0
Volume Module:																
Base Vol:	54	398	2	3	516	15	7	1	207	3	0	6				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	54	398	2	3	516	15	7	1	207	3	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	54	398	2	3	516	15	7	1	207	3	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	54	398	2	3	516	15	7	1	207	3	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	54	398	2	3	516	15	7	1	207	3	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.33	0.00	0.67				
Final Sat.:	1700	5075	26	1700	5100	1700	1700	8	1692	567	0	1133				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.08	0.08	0.00	0.10	0.01	0.00	0.12	0.12	0.00	0.00	0.01				
Crit Moves:	****				****			****		****						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	232	254	89	314	226	96	177	1706	149	122	1791	182
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3401		3433	3381		3433	6330		3433	6319	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3401		3433	3381		3433	6330		3433	6319	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	247	270	95	334	240	102	188	1815	159	130	1905	194
RTOR Reduction (vph)	0	30	0	0	39	0	0	9	0	0	11	0
Lane Group Flow (vph)	247	335	0	334	303	0	188	1965	0	130	2088	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.5	19.2		17.0	21.7		12.4	62.4		13.0	63.0	
Effective Green, g (s)	14.5	19.2		17.0	21.7		12.4	62.4		13.0	63.0	
Actuated g/C Ratio	0.11	0.15		0.13	0.17		0.10	0.48		0.10	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	382	502		448	564		327	3038		343	3062	
v/s Ratio Prot	0.07	c0.10		c0.10	0.09		0.05	c0.31		0.04	c0.33	
v/s Ratio Perm												
v/c Ratio	0.65	0.67		0.75	0.54		0.57	0.65		0.38	0.68	
Uniform Delay, d1	55.3	52.4		54.4	49.6		56.3	25.5		54.7	25.8	
Progression Factor	1.00	1.00		1.00	1.00		1.02	0.85		1.00	1.00	
Incremental Delay, d2	3.7	3.4		6.6	1.0		2.2	1.0		0.7	1.2	
Delay (s)	59.0	55.7		61.0	50.5		59.7	22.7		55.4	27.0	
Level of Service	E	E		E	D		E	C		E	C	
Approach Delay (s)		57.1			55.7			25.9			28.7	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	298	930	0	2207	2031	910
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	301	939	0	2229	2052	919
RTOR Reduction (vph)	0	2	0	0	0	0
Lane Group Flow (vph)	301	937	0	2229	2052	919
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	17.2	54.2		103.0	60.0	130.0
Effective Green, g (s)	17.2	54.2		103.0	60.0	130.0
Actuated g/C Ratio	0.13	0.42		0.79	0.46	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	454	1258		5077	2957	1583
v/s Ratio Prot	0.09	c0.21		0.34	c0.32	
v/s Ratio Perm		0.12		0.01		0.58
v/c Ratio	0.66	0.75		0.44	0.69	0.58
Uniform Delay, d1	53.6	32.1		4.3	27.7	0.0
Progression Factor	1.00	1.00		0.23	0.56	1.00
Incremental Delay, d2	4.0	2.6		0.0	1.2	1.3
Delay (s)	57.6	34.6		1.0	16.8	1.3
Level of Service	E	C		A	B	A
Approach Delay (s)	40.2			1.0	12.0	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	826	301	148	371	87	385	1802	465	218	2174	653
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	405	852	310	153	382	90	397	1858	479	225	2241	673
RTOR Reduction (vph)	0	0	68	0	0	76	0	0	174	0	0	52
Lane Group Flow (vph)	405	852	242	153	382	14	397	1858	305	225	2241	621
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	20.9	28.0	43.0	13.0	20.1	20.1	15.0	56.4	56.4	12.3	53.3	74.2
Effective Green, g (s)	20.9	28.0	43.0	13.0	20.1	20.1	15.0	56.4	56.4	12.3	53.3	74.2
Actuated g/C Ratio	0.16	0.22	0.33	0.10	0.15	0.15	0.12	0.43	0.43	0.09	0.41	0.57
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	551	1095	523	343	547	244	396	2206	686	324	2627	1689
v/s Ratio Prot	0.12	c0.17	0.05	0.04	c0.11		c0.12	c0.37		0.07	c0.35	0.06
v/s Ratio Perm			0.10			0.01			0.19			0.16
v/c Ratio	0.74	0.78	0.46	0.45	0.70	0.06	1.00	0.84	0.44	0.69	0.85	0.37
Uniform Delay, d1	51.9	48.1	34.4	55.1	52.1	46.9	57.5	32.8	25.8	57.0	34.8	15.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.68	0.57	0.32	1.04	0.75	0.59
Incremental Delay, d2	4.4	3.6	0.2	0.3	3.9	0.1	42.2	3.5	1.8	3.8	2.8	0.0
Delay (s)	56.3	51.6	34.6	55.4	56.0	47.0	81.6	22.1	9.9	63.3	28.8	9.0
Level of Service	E	D	C	E	E	D	F	C	A	E	C	A
Approach Delay (s)		49.5			54.5			28.6			27.1	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	22	43	101	31	140	135	2180	53	251	2374	24
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1676		1770	1863	1583	1770	6385		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1676		1770	1863	1583	1770	6385		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	28	22	44	103	32	143	138	2224	54	256	2422	24
RTOR Reduction (vph)	0	39	0	0	0	122	0	2	0	0	1	0
Lane Group Flow (vph)	28	27	0	103	32	21	138	2276	0	256	2445	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	13.5		13.4	19.1	19.1	14.4	69.2		14.3	69.1	
Effective Green, g (s)	7.8	13.5		13.4	19.1	19.1	14.4	69.2		14.3	69.1	
Actuated g/C Ratio	0.06	0.10		0.10	0.15	0.15	0.11	0.53		0.11	0.53	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	106	174		182	273	232	196	3398		377	3400	
v/s Ratio Prot	0.02	c0.02		c0.06	0.02		c0.08	0.36		0.07	c0.38	
v/s Ratio Perm						0.01						
v/c Ratio	0.26	0.15		0.57	0.12	0.09	0.70	0.67		0.68	0.72	
Uniform Delay, d1	58.4	53.0		55.5	48.1	47.9	55.7	22.1		55.6	23.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.28	0.26		1.29	0.29	
Incremental Delay, d2	1.3	0.4		4.0	0.2	0.2	7.8	0.8		2.9	0.8	
Delay (s)	59.7	53.5		59.5	48.3	48.1	79.1	6.5		74.9	7.6	
Level of Service	E	D		E	D	D	E	A		E	A	
Approach Delay (s)		55.3			52.4			10.7			13.9	
Approach LOS		E			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	36	3	26	264	8	200	50	2188	110	333	2207	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.95	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1611		1681	1564	1504	1770	6362		3433	6397	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1611		1681	1564	1504	1770	6362		3433	6397	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	38	3	27	275	8	208	52	2279	115	347	2299	26
RTOR Reduction (vph)	0	25	0	0	13	130	0	4	0	0	1	0
Lane Group Flow (vph)	38	5	0	170	154	24	52	2390	0	347	2324	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	10.9	10.9		19.9	19.9	19.9	8.3	65.5		15.8	73.0	
Effective Green, g (s)	10.9	10.9		19.9	19.9	19.9	8.3	65.5		15.8	73.0	
Actuated g/C Ratio	0.08	0.08		0.15	0.15	0.15	0.06	0.50		0.12	0.56	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	148	135		257	239	230	113	3205		417	3592	
v/s Ratio Prot	c0.02	0.00		c0.10	0.10		0.03	c0.38		c0.10	0.36	
v/s Ratio Perm						0.02						
v/c Ratio	0.26	0.04		0.66	0.65	0.10	0.46	0.75		0.83	0.65	
Uniform Delay, d1	55.8	54.7		51.9	51.7	47.4	58.7	25.6		55.8	19.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.37	0.29		0.55	0.22	
Incremental Delay, d2	0.9	0.1		6.3	5.9	0.2	2.1	1.1		10.3	0.7	
Delay (s)	56.7	54.9		58.1	57.6	47.6	82.4	8.7		40.9	5.0	
Level of Service	E	D		E	E	D	F	A		D	A	
Approach Delay (s)		55.9			54.6			10.3			9.6	
Approach LOS		E			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	224	168	151	38	159	107	140	2030	55	133	2220	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.94		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3288		1770	3326		1770	6382		1770	6329	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3288		1770	3326		1770	6382		1770	6329	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	226	170	153	38	161	108	141	2051	56	134	2242	200
RTOR Reduction (vph)	0	115	0	0	95	0	0	3	0	0	11	0
Lane Group Flow (vph)	226	208	0	38	174	0	141	2104	0	134	2431	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	25.6	32.1		8.8	15.3		13.2	56.3		14.0	57.1	
Effective Green, g (s)	25.6	32.1		8.8	15.3		13.2	56.3		14.0	57.1	
Actuated g/C Ratio	0.20	0.25		0.07	0.12		0.10	0.43		0.11	0.44	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	348	811		119	391		179	2763		190	2779	
v/s Ratio Prot	c0.13	0.06		0.02	c0.05		0.08	c0.33		0.08	c0.38	
v/s Ratio Perm												
v/c Ratio	0.65	0.26		0.32	0.44		0.79	0.76		0.71	0.87	
Uniform Delay, d1	48.1	39.4		57.7	53.4		57.0	31.2		56.0	33.2	
Progression Factor	1.00	1.00		1.00	1.00		0.58	1.17		0.61	0.39	
Incremental Delay, d2	4.1	0.2		1.6	0.8		17.7	1.8		8.9	3.3	
Delay (s)	52.2	39.5		59.3	54.2		50.5	38.2		43.1	16.2	
Level of Service	D	D		E	D		D	D		D	B	
Approach Delay (s)		44.7			54.8			39.0			17.6	
Approach LOS		D			D			D			B	

Intersection Summary			
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	83	7	20	78	11	26	117	2096	52	107	2134	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1662	1478		1665	1478	1770	6385		1770	6386	
Flt Permitted		0.64	1.00		0.64	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1106	1478		1117	1478	1770	6385		1770	6386	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	86	7	21	81	11	27	122	2183	54	111	2223	51
RTOR Reduction (vph)	0	0	18	0	0	23	0	2	0	0	2	0
Lane Group Flow (vph)	0	93	3	0	92	4	122	2235	0	111	2272	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		17.6	17.6		17.6	17.6	17.0	84.6		12.5	80.1	
Effective Green, g (s)		17.6	17.6		17.6	17.6	17.0	84.6		12.5	80.1	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.13	0.65		0.10	0.62	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		149	200		151	200	231	4155		170	3934	
v/s Ratio Prot							0.07	c0.35		0.06	c0.36	
v/s Ratio Perm		c0.08	0.00		0.08	0.00						
v/c Ratio		0.62	0.01		0.61	0.02	0.53	0.54		0.65	0.58	
Uniform Delay, d1		53.1	48.7		53.0	48.7	52.8	12.2		56.7	14.9	
Progression Factor		1.00	1.00		1.00	1.00	0.69	0.15		1.22	0.25	
Incremental Delay, d2		7.9	0.0		6.8	0.0	1.4	0.3		4.8	0.3	
Delay (s)		61.0	48.7		59.8	48.7	38.0	2.1		73.9	4.0	
Level of Service		E	D		E	D	D	A		E	A	
Approach Delay (s)		58.7			57.3			4.0			7.2	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.1	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	64.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	339	759	140	241	854	136	252	1755	179	154	1707	256
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4966		3433	4980		3433	6319		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4966		3433	4980		3433	6319		3433	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	346	774	143	246	871	139	257	1791	183	157	1742	261
RTOR Reduction (vph)	0	20	0	0	17	0	0	13	0	0	0	144
Lane Group Flow (vph)	346	897	0	246	993	0	257	1961	0	157	1742	117
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.1	32.4		10.8	29.1		13.0	55.8		12.0	54.8	54.8
Effective Green, g (s)	14.1	32.4		10.8	29.1		13.0	55.8		12.0	54.8	54.8
Actuated g/C Ratio	0.11	0.25		0.08	0.22		0.10	0.43		0.09	0.42	0.42
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	372	1237		285	1114		343	2712		316	2701	667
v/s Ratio Prot	c0.10	0.18		0.07	c0.20		0.07	c0.31		0.05	c0.27	
v/s Ratio Perm												0.07
v/c Ratio	0.93	0.72		0.86	0.89		0.75	0.72		0.50	0.64	0.18
Uniform Delay, d1	57.5	44.7		58.9	48.9		56.9	30.7		56.1	29.9	23.5
Progression Factor	1.00	1.00		1.00	1.00		1.31	0.30		0.69	0.39	0.58
Incremental Delay, d2	29.2	2.1		22.0	9.2		5.8	1.3		0.4	1.0	0.5
Delay (s)	86.7	46.9		80.8	58.1		80.6	10.4		38.9	12.6	14.1
Level of Service	F	D		F	E		F	B		D	B	B
Approach Delay (s)		57.8			62.6			18.5			14.7	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

9: Beach Blvd & Slater Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	352	168	94	405	110	143	1672	76	171	1859	173
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3368		1770	3426		1770	6366		1770	6326	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3368		1770	3426		1770	6366		1770	6326	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	367	175	98	422	115	149	1742	79	178	1936	180
RTOR Reduction (vph)	0	44	0	0	20	0	0	5	0	0	11	0
Lane Group Flow (vph)	177	498	0	98	517	0	149	1816	0	178	2105	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.1	29.9		12.0	24.8		18.0	51.0		16.4	49.4	
Effective Green, g (s)	17.1	29.9		12.0	24.8		18.0	51.0		16.4	49.4	
Actuated g/C Ratio	0.13	0.23		0.09	0.19		0.14	0.39		0.13	0.38	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	232	774		163	653		245	2497		223	2403	
v/s Ratio Prot	c0.10	0.15		0.06	c0.15		0.08	c0.29		0.10	c0.33	
v/s Ratio Perm												
v/c Ratio	0.76	0.64		0.60	0.79		0.61	0.73		0.80	0.88	
Uniform Delay, d1	54.5	45.2		56.7	50.1		52.7	33.6		55.2	37.5	
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.54		0.60	0.65	
Incremental Delay, d2	13.8	1.8		6.1	6.5		3.7	1.7		14.3	3.9	
Delay (s)	68.3	47.1		62.8	56.6		36.4	19.7		47.3	28.3	
Level of Service	E	D		E	E		D	B		D	C	
Approach Delay (s)		52.3			57.6			21.0			29.8	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	3	13	106	3	122	12	1837	56	68	2121	18
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.93		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716			1691		1770	6380		1770	6400	
Flt Permitted		0.78			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1380			1447		1770	6380		1770	6400	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	17	3	14	110	3	127	12	1914	58	71	2209	19
RTOR Reduction (vph)	0	12	0	0	33	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	22	0	0	207	0	12	1970	0	71	2227	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		22.8			22.8		4.0	81.8		9.5	87.3	
Effective Green, g (s)		22.8			22.8		4.0	81.8		9.5	87.3	
Actuated g/C Ratio		0.18			0.18		0.03	0.63		0.07	0.67	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		242			253		54	4014		129	4297	
v/s Ratio Prot							0.01	0.31		c0.04	c0.35	
v/s Ratio Perm		0.02			c0.14							
v/c Ratio		0.09			0.82		0.22	0.49		0.55	0.52	
Uniform Delay, d1		44.9			51.6		61.5	12.9		58.2	10.8	
Progression Factor		1.00			1.00		1.22	0.13		1.16	0.09	
Incremental Delay, d2		0.2			18.2		1.3	0.3		2.8	0.2	
Delay (s)		45.1			69.8		76.2	2.0		70.5	1.3	
Level of Service		D			E		E	A		E	A	
Approach Delay (s)		45.1			69.8			2.4			3.4	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	69.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	342	157	191	333	224	198	1527	182	276	1893	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3372		1770	3326		1770	6305		1770	6336	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3372		1770	3326		1770	6305		1770	6336	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	140	364	167	203	354	238	211	1624	194	294	2014	162
RTOR Reduction (vph)	0	43	0	0	89	0	0	16	0	0	9	0
Lane Group Flow (vph)	140	488	0	203	503	0	211	1802	0	294	2167	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.2	24.1		18.4	29.3		16.5	46.8		20.0	50.3	
Effective Green, g (s)	13.2	24.1		18.4	29.3		16.5	46.8		20.0	50.3	
Actuated g/C Ratio	0.10	0.19		0.14	0.23		0.13	0.36		0.15	0.39	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	179	625		250	749		224	2269		272	2451	
v/s Ratio Prot	0.08	c0.14		c0.11	0.15		c0.12	0.29		c0.17	c0.34	
v/s Ratio Perm												
v/c Ratio	0.78	0.78		0.81	0.67		0.94	0.79		1.08	0.88	
Uniform Delay, d1	57.0	50.4		54.1	46.0		56.3	37.3		55.0	37.1	
Progression Factor	1.00	1.00		1.00	1.00		0.74	0.64		0.73	0.67	
Incremental Delay, d2	18.3	6.5		17.0	2.5		40.1	2.6		74.8	4.6	
Delay (s)	75.3	56.9		71.2	48.4		81.6	26.3		114.7	29.5	
Level of Service	E	E		E	D		F	C		F	C	
Approach Delay (s)		60.7			54.2			32.1			39.6	
Approach LOS		E			D			C			D	

Intersection Summary			
HCM 2000 Control Delay	41.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	84.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	390	324	124	108	335	156	155	1350	140	255	1453	477
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6317		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6317		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	398	331	127	110	342	159	158	1378	143	260	1483	487
RTOR Reduction (vph)	0	0	104	0	0	139	0	11	0	0	0	23
Lane Group Flow (vph)	398	331	23	110	342	20	158	1510	0	260	1483	464
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	23.1	23.1	23.1	16.3	16.3	16.3	10.6	54.9		13.0	57.3	86.4
Effective Green, g (s)	23.1	23.1	23.1	16.3	16.3	16.3	10.6	54.9		13.0	57.3	86.4
Actuated g/C Ratio	0.18	0.18	0.18	0.13	0.13	0.13	0.08	0.42		0.10	0.44	0.66
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	610	628	281	221	443	198	279	2667		343	2241	1052
v/s Ratio Prot	c0.12	0.09		0.06	c0.10		0.05	0.24		c0.08	c0.29	0.29
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.65	0.53	0.08	0.50	0.77	0.10	0.57	0.57		0.76	0.66	0.44
Uniform Delay, d1	49.7	48.5	44.6	53.0	55.1	50.4	57.5	28.5		57.0	28.7	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.42	0.49		1.42	0.32	0.45
Incremental Delay, d2	2.0	0.5	0.1	0.6	7.4	0.1	1.2	0.7		4.1	0.7	0.1
Delay (s)	51.8	49.0	44.7	53.7	62.5	50.4	82.6	14.8		85.1	10.0	4.8
Level of Service	D	D	D	D	E	D	F	B		F	B	A
Approach Delay (s)		49.6			57.8			21.1			17.6	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	28.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	75.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	185	373	126	128	315	140	173	1230	98	223	1346	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3376		1770	5029		1770	4982	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3376		1770	5029		1770	4982	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	189	381	129	131	321	143	177	1255	100	228	1373	214
RTOR Reduction (vph)	0	0	102	0	41	0	0	7	0	0	15	0
Lane Group Flow (vph)	189	381	27	131	423	0	177	1348	0	228	1572	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.3	26.9	26.9	12.9	22.5		21.0	50.0		19.0	48.0	
Effective Green, g (s)	17.3	26.9	26.9	12.9	22.5		21.0	50.0		19.0	48.0	
Actuated g/C Ratio	0.13	0.21	0.21	0.10	0.17		0.16	0.38		0.15	0.37	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	235	732	327	175	584		285	1934		258	1839	
v/s Ratio Prot	c0.11	0.11		0.07	c0.13		0.10	c0.27		0.13	c0.32	
v/s Ratio Perm			0.02									
v/c Ratio	0.80	0.52	0.08	0.75	0.72		0.62	0.70		0.88	0.85	
Uniform Delay, d1	54.7	45.8	41.6	57.0	50.8		50.8	33.6		54.4	37.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.48	0.28		0.57	0.73	
Incremental Delay, d2	16.9	0.9	0.1	14.2	4.7		2.5	1.8		23.5	4.4	
Delay (s)	71.6	46.7	41.7	71.1	55.5		26.7	11.1		54.4	32.0	
Level of Service	E	D	D	E	E		C	B		D	C	
Approach Delay (s)		52.5			59.0			12.9			34.8	
Approach LOS		D			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	81.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	117	271	162	107	306	95	164	1193	118	104	1336	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3413		1770	5017		1770	5024	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3413		1770	5017		1770	5024	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	122	282	169	111	319	99	171	1243	123	108	1392	121
RTOR Reduction (vph)	0	0	139	0	24	0	0	8	0	0	7	0
Lane Group Flow (vph)	122	282	30	111	394	0	171	1358	0	108	1506	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	13.9	22.8	22.8	12.0	20.9		16.8	60.8		14.0	58.0	
Effective Green, g (s)	13.9	22.8	22.8	12.0	20.9		16.8	60.8		14.0	58.0	
Actuated g/C Ratio	0.11	0.18	0.18	0.09	0.16		0.13	0.47		0.11	0.45	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	189	620	277	163	548		228	2346		190	2241	
v/s Ratio Prot	c0.07	0.08		0.06	c0.12		c0.10	0.27		0.06	c0.30	
v/s Ratio Perm			0.02									
v/c Ratio	0.65	0.45	0.11	0.68	0.72		0.75	0.58		0.57	0.67	
Uniform Delay, d1	55.7	48.0	45.0	57.1	51.8		54.6	25.3		55.1	28.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.65	0.95		0.60	0.50	
Incremental Delay, d2	7.4	0.5	0.2	11.1	4.5		12.3	1.0		2.3	1.0	
Delay (s)	63.0	48.6	45.2	68.3	56.2		48.0	24.9		35.5	15.3	
Level of Service	E	D	D	E	E		D	C		D	B	
Approach Delay (s)		50.7			58.8			27.5			16.6	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	30.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	75.5%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	18	35	153	27	143	51	1181	79	117	1219	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.94			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1724			1787	1583	1770	5037		1770	5055	
Flt Permitted		0.76			0.68	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1327			1272	1583	1770	5037		1770	5055	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	29	18	36	156	28	146	52	1205	81	119	1244	52
RTOR Reduction (vph)	0	23	0	0	0	120	0	4	0	0	3	0
Lane Group Flow (vph)	0	60	0	0	184	26	52	1282	0	119	1293	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		23.1			23.1	23.1	12.8	77.4		14.3	78.9	
Effective Green, g (s)		23.1			23.1	23.1	12.8	77.4		14.3	78.9	
Actuated g/C Ratio		0.18			0.18	0.18	0.10	0.60		0.11	0.61	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		235			226	281	174	2998		194	3067	
v/s Ratio Prot							0.03	c0.25		c0.07	0.26	
v/s Ratio Perm		0.05			c0.14	0.02						
v/c Ratio		0.26			0.81	0.09	0.30	0.43		0.61	0.42	
Uniform Delay, d1		46.0			51.4	44.7	54.4	14.3		55.2	13.5	
Progression Factor		1.00			1.00	1.00	0.90	0.71		0.98	0.51	
Incremental Delay, d2		0.6			19.7	0.1	0.9	0.4		4.4	0.3	
Delay (s)		46.6			71.0	44.8	50.1	10.5		58.3	7.2	
Level of Service		D			E	D	D	B		E	A	
Approach Delay (s)		46.6			59.4			12.0			11.5	
Approach LOS		D			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.53			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	62.2%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	179	385	64	170	416	254	86	859	97	236	1001	134
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4977		1770	3539	1583	1770	5008		3433	4995	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4977		1770	3539	1583	1770	5008		3433	4995	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	188	405	67	179	438	267	91	904	102	248	1054	141
RTOR Reduction (vph)	0	19	0	0	0	52	0	9	0	0	11	0
Lane Group Flow (vph)	188	453	0	179	438	215	91	997	0	248	1184	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	16.7	24.7		15.5	23.5	36.9	11.2	54.6		13.4	56.8	
Effective Green, g (s)	16.7	24.7		15.5	23.5	36.9	11.2	54.6		13.4	56.8	
Actuated g/C Ratio	0.13	0.19		0.12	0.18	0.28	0.09	0.42		0.10	0.44	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	227	945		211	639	449	152	2103		353	2182	
v/s Ratio Prot	c0.11	0.09		0.10	c0.12	0.05	0.05	0.20		c0.07	c0.24	
v/s Ratio Perm						0.09						
v/c Ratio	0.83	0.48		0.85	0.69	0.48	0.60	0.47		0.70	0.54	
Uniform Delay, d1	55.3	46.9		56.1	49.8	38.6	57.2	27.3		56.4	27.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.79	0.81		1.51	0.19	
Incremental Delay, d2	20.4	0.8		24.9	3.9	0.3	4.0	0.7		4.7	0.9	
Delay (s)	75.7	47.7		81.0	53.7	38.9	49.4	22.8		89.6	5.9	
Level of Service	E	D		F	D	D	D	C		F	A	
Approach Delay (s)		55.7			54.8			25.0			20.3	
Approach LOS		E			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	70.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	120	28	25	107	167	25	836	46	215	950	48
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	5045		1770	5049	
Flt Permitted	0.61	1.00		0.47	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1136	1810		870	1863	1583	1770	5045		1770	5049	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	75	125	29	26	111	174	26	871	48	224	990	50
RTOR Reduction (vph)	0	7	0	0	0	151	0	4	0	0	3	0
Lane Group Flow (vph)	75	147	0	26	111	23	26	915	0	224	1037	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	17.3	17.3		17.3	17.3	17.3	6.0	72.3		24.0	90.3	
Effective Green, g (s)	17.3	17.3		17.3	17.3	17.3	6.0	72.3		24.0	90.3	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.05	0.56		0.18	0.69	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	240		115	247	210	81	2805		326	3507	
v/s Ratio Prot		c0.08			0.06		0.01	c0.18		c0.13	0.21	
v/s Ratio Perm	0.07			0.03		0.01						
v/c Ratio	0.50	0.61		0.23	0.45	0.11	0.32	0.33		0.69	0.30	
Uniform Delay, d1	52.3	53.2		50.4	52.0	49.6	60.0	15.6		49.5	7.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.79	0.18	
Incremental Delay, d2	2.6	4.6		1.0	1.3	0.2	2.3	0.3		4.9	0.2	
Delay (s)	54.9	57.8		51.4	53.3	49.8	62.3	16.0		44.2	1.6	
Level of Service	D	E		D	D	D	E	B		D	A	
Approach Delay (s)		56.8			51.2			17.2			9.1	
Approach LOS		E			D			B			A	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	63.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	245	39	45	255	210	56	566	64	222	607	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.93		1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3467		1770	3300		1770	5008		1770	4968	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3467		1770	3300		1770	5008		1770	4968	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	102	261	41	48	271	223	60	602	68	236	646	117
RTOR Reduction (vph)	0	8	0	0	96	0	0	10	0	0	17	0
Lane Group Flow (vph)	102	294	0	48	398	0	60	660	0	236	746	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.1	23.5		7.9	18.3		8.0	25.6		18.1	35.7	
Effective Green, g (s)	13.1	23.5		7.9	18.3		8.0	25.6		18.1	35.7	
Actuated g/C Ratio	0.14	0.24		0.08	0.19		0.08	0.27		0.19	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	241	846		145	627		147	1332		333	1843	
v/s Ratio Prot	c0.06	0.08		0.03	c0.12		0.03	c0.13		c0.13	0.15	
v/s Ratio Perm												
v/c Ratio	0.42	0.35		0.33	0.64		0.41	0.50		0.71	0.40	
Uniform Delay, d1	38.1	30.0		41.7	35.9		41.9	29.8		36.6	22.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	0.4	0.1		0.5	1.6		0.7	0.6		5.6	0.3	
Delay (s)	38.5	30.1		42.1	37.4		42.5	30.4		42.1	22.7	
Level of Service	D	C		D	D		D	C		D	C	
Approach Delay (s)		32.2			37.9			31.4			27.3	
Approach LOS		C			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	96.2	Sum of lost time (s)	21.1
Intersection Capacity Utilization	65.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	65	0	38	0	0	0	37	576	0	0	665	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5044	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5044	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	69	0	40	0	0	0	39	613	0	0	707	40
RTOR Reduction (vph)	0	0	34	0	0	0	0	0	0	0	5	0
Lane Group Flow (vph)	69	0	6	0	0	0	39	613	0	0	742	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	7.9		7.9				3.0	33.3			25.4	
Effective Green, g (s)	7.9		7.9				3.0	33.3			25.4	
Actuated g/C Ratio	0.15		0.15				0.06	0.64			0.49	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	267		239				101	3243			2454	
v/s Ratio Prot							c0.02	0.12			c0.15	
v/s Ratio Perm	c0.04		0.00									
v/c Ratio	0.26		0.03				0.39	0.19			0.30	
Uniform Delay, d1	19.6		18.9				23.7	3.9			8.1	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	0.5		0.0				2.4	0.0			0.1	
Delay (s)	20.1		18.9				26.2	3.9			8.1	
Level of Service	C		B				C	A			A	
Approach Delay (s)		19.7			0.0			5.2			8.1	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.30		
Actuated Cycle Length (s)	52.2	Sum of lost time (s)	15.9
Intersection Capacity Utilization	37.8%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	172	800	33	28	909	368	22	46	29	381	63	249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5055		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5055		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	187	870	36	30	988	400	24	50	32	414	68	271
RTOR Reduction (vph)	0	2	0	0	0	168	0	0	29	0	0	0
Lane Group Flow (vph)	187	904	0	30	988	232	24	50	3	414	68	271
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	10.8	47.1		4.2	40.5	40.5	3.8	8.3	8.3	18.7	23.2	100.0
Effective Green, g (s)	10.8	47.1		4.2	40.5	40.5	3.8	8.3	8.3	18.7	23.2	100.0
Actuated g/C Ratio	0.11	0.47		0.04	0.40	0.40	0.04	0.08	0.08	0.19	0.23	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	370	2380		74	1433	641	67	293	131	641	432	1583
v/s Ratio Prot	c0.05	0.18		0.02	c0.28		0.01	0.01		c0.12	0.04	
v/s Ratio Perm						0.15			0.00			c0.17
v/c Ratio	0.51	0.38		0.41	0.69	0.36	0.36	0.17	0.02	0.65	0.16	0.17
Uniform Delay, d1	42.1	17.0		46.7	24.6	20.7	46.9	42.6	42.1	37.6	30.6	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.2		1.3	1.6	0.6	1.2	0.1	0.0	1.7	0.1	0.2
Delay (s)	42.5	17.2		48.0	26.2	21.3	48.1	42.7	42.1	39.3	30.7	0.2
Level of Service	D	B		D	C	C	D	D	D	D	C	A
Approach Delay (s)		21.5			25.3			43.8			24.4	
Approach LOS		C			C			D			C	

Intersection Summary			
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	61.5%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	151	1044	10	7	1092	147	18	5	10	65	6	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1671		1770	1594	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.57	1.00		0.75	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1068	1671		1392	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	159	1099	11	7	1149	155	19	5	11	68	6	148
RTOR Reduction (vph)	0	0	4	0	0	80	0	9	0	0	122	0
Lane Group Flow (vph)	159	1099	7	7	1149	75	19	7	0	68	32	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	12.2	48.9	48.9	0.8	37.5	37.5	13.4	13.4		13.4	13.4	
Effective Green, g (s)	12.2	48.9	48.9	0.8	37.5	37.5	13.4	13.4		13.4	13.4	
Actuated g/C Ratio	0.16	0.64	0.64	0.01	0.49	0.49	0.17	0.17		0.17	0.17	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	280	3229	1005	18	2476	770	185	290		242	277	
v/s Ratio Prot	c0.09	0.22		0.00	c0.23			0.00			0.02	
v/s Ratio Perm			0.00			0.05	0.02			c0.05		
v/c Ratio	0.57	0.34	0.01	0.39	0.46	0.10	0.10	0.02		0.28	0.11	
Uniform Delay, d1	30.0	6.5	5.2	37.9	13.1	10.6	26.7	26.4		27.6	26.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	1.6	0.1	0.0	5.0	0.2	0.1	0.1	0.0		0.2	0.1	
Delay (s)	31.5	6.7	5.2	42.9	13.3	10.7	26.8	26.4		27.8	26.9	
Level of Service	C	A	A	D	B	B	C	C		C	C	
Approach Delay (s)		9.8			13.2			26.6			27.2	
Approach LOS		A			B			C			C	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	77.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	56.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

25: Magnolia Ave & Pacific Coast Highway

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	971	31	55	1089	91	16	18	15	163	41	135
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1736		1681	1718	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1736		1681	1718	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	991	32	56	1111	93	16	18	15	166	42	138
RTOR Reduction (vph)	0	0	15	0	0	44	0	13	0	0	0	121
Lane Group Flow (vph)	93	991	17	56	1111	49	16	20	0	103	105	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.0	58.3	58.3	6.4	54.7	54.7	12.7	12.7		13.3	13.3	13.3
Effective Green, g (s)	10.0	58.3	58.3	6.4	54.7	54.7	12.7	12.7		13.3	13.3	13.3
Actuated g/C Ratio	0.09	0.53	0.53	0.06	0.50	0.50	0.12	0.12		0.12	0.12	0.12
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	161	2707	842	103	2540	790	205	201		204	208	192
v/s Ratio Prot	c0.05	c0.19		0.03	c0.22		0.01	c0.01		c0.06	0.06	
v/s Ratio Perm			0.01			0.03						0.01
v/c Ratio	0.58	0.37	0.02	0.54	0.44	0.06	0.08	0.10		0.50	0.50	0.09
Uniform Delay, d1	47.7	14.9	12.1	50.1	17.5	14.2	43.2	43.3		45.0	45.0	42.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	3.1	0.4	0.0	3.1	0.2	0.1	0.1	0.1		0.7	0.7	0.1
Delay (s)	50.8	15.3	12.1	53.2	17.8	14.2	43.2	43.4		45.7	45.7	42.8
Level of Service	D	B	B	D	B	B	D	D		D	D	D
Approach Delay (s)		18.1			19.1			43.3			44.6	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	22.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.41			
Actuated Cycle Length (s)	109.5	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	55.9%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

27: Brookhurst St & Pacific Coast Highway

Existing Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	176	973	3	26	1015	362	24	22	17	298	10	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1740		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1740		3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	183	1014	3	27	1057	377	25	23	18	310	10	172
RTOR Reduction (vph)	0	0	2	0	0	175	0	16	0	0	0	140
Lane Group Flow (vph)	183	1014	1	27	1057	202	25	25	0	310	10	32
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	15.5	42.8	42.8	3.7	31.0	47.5	5.1	5.1		16.5	16.5	16.5
Effective Green, g (s)	15.5	42.8	42.8	3.7	31.0	47.5	5.1	5.1		16.5	16.5	16.5
Actuated g/C Ratio	0.17	0.48	0.48	0.04	0.35	0.53	0.06	0.06		0.19	0.19	0.19
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	308	2450	762	73	1775	846	101	99		637	346	294
v/s Ratio Prot	c0.10	0.20		0.02	c0.21	0.04	0.01	c0.01		c0.09	0.01	
v/s Ratio Perm			0.00			0.08						0.02
v/c Ratio	0.59	0.41	0.00	0.37	0.60	0.24	0.25	0.25		0.49	0.03	0.11
Uniform Delay, d1	33.8	14.9	11.9	41.4	23.7	11.0	40.0	40.0		32.4	29.6	30.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	2.0	0.2	0.0	1.2	0.7	0.1	0.5	0.5		0.2	0.0	0.1
Delay (s)	35.8	15.1	11.9	42.6	24.5	11.1	40.5	40.5		32.6	29.6	30.1
Level of Service	D	B	B	D	C	B	D	D		C	C	C
Approach Delay (s)		18.2			21.4			40.5			31.6	
Approach LOS		B			C			D			C	

Intersection Summary				
HCM 2000 Control Delay	22.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	88.8	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	58.0%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Scenario Report

Scenario:	EX+P1-MD
Command:	EX+P1-MD
Volume:	EX-MD
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	P1-MD
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	EX+P1-MD

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	B	xxxxx	0.697	C	xxxxx	0.708	+ 0.011
# 8 Beach Blvd & Warner Ave	B	xxxxx	0.662	B	xxxxx	0.674	+ 0.011
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.562	A	xxxxx	0.578	+ 0.016
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.472	A	xxxxx	0.494	+ 0.022
# 21 Newland St & Atlanta Ave	A	xxxxx	0.427	A	xxxxx	0.430	+ 0.003
# 22 Newland St & Hamilton Ave	A	xxxxx	0.451	A	xxxxx	0.545	+ 0.094
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.398	A	xxxxx	0.404	+ 0.007
# 26 Brookhurst St & Hamilton Ave	A	xxxxx	0.404	A	xxxxx	0.420	+ 0.016
# 30 Brookhurst Street & Talbert Av	B	xxxxx	0.626	B	xxxxx	0.626	+ 0.000
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.494	A	xxxxx	0.509	+ 0.015
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.598	B	xxxxx	0.613	+ 0.015
# 33 Brookhurst Street & Ellis Aven	A	xxxxx	0.574	A	xxxxx	0.594	+ 0.019
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.594	B	xxxxx	0.609	+ 0.015
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.528	A	xxxxx	0.543	+ 0.015
# 36 Brookhurst Street & Adams Aven	A	xxxxx	0.527	A	xxxxx	0.542	+ 0.015
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.307	A	xxxxx	0.322	+ 0.015
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.348	A	xxxxx	0.363	+ 0.015
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.190	A	xxxxx	0.205	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.222	A	xxxxx	0.236	+ 0.015

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.697
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	385	1729	465	218	2101	653	393	826	301	148	371	87				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	385	1729	465	218	2101	653	393	826	301	148	371	87				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	385	1729	465	218	2101	653	393	826	301	148	371	87				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	385	1729	465	218	2101	653	393	826	301	148	371	87				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	385	1729	465	218	2101	653	393	826	301	148	371	87				
OvlAdjVol:						260			109							
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	4.00	2.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	6800	3400	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.11	0.34	0.27	0.06	0.31	0.19	0.12	0.16	0.18	0.04	0.11	0.05				
OvlAdjV/S:						0.08			0.06							
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.662
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	34	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	251	1682	179	154	1634	256	339	759	139	241	853	135				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.62	0.38	2.00	4.00	1.00	2.00	2.54	0.46	2.00	2.59	0.41				
Final Sat.:	3400	6146	654	3400	6800	1700	3400	4311	789	3400	4403	697				
Capacity Analysis Module:																
Vol/Sat:	0.07	0.27	0.27	0.05	0.24	0.15	0.10	0.18	0.18	0.07	0.19	0.19				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.562
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	85	785	97	236	924	134	179	385	63	170	415	254				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	85	785	97	236	924	134	179	385	63	170	415	254				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	85	785	97	236	924	134	179	385	63	170	415	254				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.67	0.33	2.00	2.62	0.38	1.00	2.58	0.42	1.00	2.00	1.00				
Final Sat.:	1700	4539	561	3400	4454	646	1700	4383	717	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.17	0.17	0.07	0.21	0.21	0.11	0.09	0.09	0.10	0.12	0.15				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.472
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	22	46	29	309	63	249	172	798	33	28	907	296				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	22	46	29	309	63	249	172	798	33	28	907	296				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	22	46	0	309	63	0	172	798	33	28	907	296				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	22	46	0	309	63	0	172	798	33	28	907	296				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	22	46	0	309	63	0	172	798	33	28	907	296				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.88	0.12	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4897	203	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01	0.00	0.09	0.04	0.00	0.05	0.16	0.16	0.02	0.27	0.17				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.427
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	151	255	38	88	231	95	64	372	142	31	389	138				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	151	255	38	88	231	95	64	372	142	31	389	138				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	151	255	38	88	231	95	64	372	142	31	389	138				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	151	255	38	88	231	95	64	372	142	31	389	138				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	151	255	38	88	231	95	64	372	142	31	389	138				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.74	0.26	1.00	1.42	0.58	1.00	1.45	0.55	1.00	1.48	0.52				
Final Sat.:	1700	2959	441	1700	2409	991	1700	2461	939	1700	2510	890				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.09	0.09	0.05	0.10	0.10	0.04	0.15	0.15	0.02	0.15	0.16				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	158	62	195	170	0	0	0	0	116	0	267				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	158	62	195	170	0	0	0	0	116	0	267				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	158	62	195	170	0	0	0	0	116	0	267				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	158	62	195	170	0	0	0	0	116	0	267				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	158	62	195	170	0	0	0	0	116	0	267				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.72	0.28	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1221	479	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.13	0.13	0.11	0.10	0.00	0.00	0.00	0.00	0.07	0.00	0.16				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.398
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	20	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	17	148	14		210	158	36		52	209	30		21	248	218	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	17	148	14		210	158	36		52	209	30		21	248	218	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	17	148	14		210	158	36		52	209	30		21	248	218	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	17	148	14		210	158	36		52	209	30		21	248	218	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	17	148	14		210	158	36		52	209	30		21	248	218	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.87	0.13		1.00	1.00	1.00	
Final Sat.:	1700	3106	294		1700	3400	1700		1700	1487	213		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.05	0.05		0.12	0.05	0.02		0.03	0.14	0.14		0.01	0.15	0.13	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.404
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	20	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	90	333	106		319	351	68		82	322	41		116	437	249	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	90	333	106		319	351	68		82	322	41		116	437	249	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	90	333	106		319	351	68		82	322	41		116	437	249	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	90	333	106		319	351	68		82	322	41		116	437	249	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	90	333	106		319	351	68		82	322	41		116	437	249	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.51	0.49		1.00	1.77	0.23		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4272	828		1700	3016	384		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.07	0.06		0.09	0.08	0.08		0.05	0.11	0.11		0.07	0.13	0.15	
Crit Moves:		****			****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.626
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	157	1203	480		309	1488	374		194	671	198		242	370	194	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.24	0.28		0.09	0.29	0.22		0.06	0.13	0.12		0.07	0.11	0.11	
Crit Moves:			****		****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.494
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	29	1705	5		39	1941	63		67	0	26		4	0	8	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	29	1705	5		39	1941	63		67	0	26		4	0	8	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	29	1705	5		39	1941	0		67	0	26		4	0	8	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	29	1705	5		39	1941	0		67	0	26		4	0	8	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	29	1705	5		39	1941	0		67	0	26		4	0	8	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		0.72	0.00	0.28		0.33	0.00	0.67	
Final Sat.:	1700	5085	15		1700	5100	1700		1225	0	475		567	0	1133	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.34	0.34		0.02	0.38	0.00		0.04	0.00	0.05		0.00	0.00	0.01	
Crit Moves:	****					****			****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.598
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	58	1443	7		30	1516	225		279	3	78		12	1	14	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	58	1443	7		30	1516	225		279	3	78		12	1	14	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	2.61	0.39		0.99	0.01	1.00		0.44	0.04	0.52	
Final Sat.:	1700	5075	25		1700	4441	659		1682	18	1700		756	63	881	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.28	0.28		0.02	0.34	0.34		0.16	0.17	0.05		0.01	0.02	0.02	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.574
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	79	933	180		160	1153	198		278	512	94		250	419	115	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	79	933	180		160	1153	198		278	512	94		250	419	115	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	79	933	180		160	1153	198		278	512	94		250	419	115	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	79	933	180		160	1153	198		278	512	94		250	419	115	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	79	933	180		160	1153	198		278	512	94		250	419	115	
OvlAdjVol:			55				59									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.57	0.43	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2873	527		3400	2668	732	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.11		0.09	0.23	0.12		0.08	0.18	0.18		0.07	0.16	0.16	
OvlAdjV/S:			0.03				0.03									
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	138	1118	109		169	1107	214		229	231	111		176	219	110	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	138	1118	109		169	1107	214		229	231	111		176	219	110	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	138	1118	109		169	1107	214		229	231	111		176	219	110	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	138	1118	109		169	1107	214		229	231	111		176	219	110	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	138	1118	109		169	1107	214		229	231	111		176	219	110	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.73	0.27		1.00	3.00	1.00		1.00	1.35	0.65		1.00	2.00	1.00	
Final Sat.:	1700	4647	453		1700	5100	1700		1700	2296	1104		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.24	0.24		0.10	0.22	0.13		0.13	0.10	0.10		0.10	0.06	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.528
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	97	1006	80		21	1177	198		160	183	95		119	196	20	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	97	1006	80		21	1177	198		160	183	95		119	196	20	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	97	1006	80		21	1177	198		160	183	95		119	196	20	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	97	1006	80		21	1177	198		160	183	95		119	196	20	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	97	1006	80		21	1177	198		160	183	95		119	196	20	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.57	0.43		1.00	1.32	0.68		1.00	1.81	0.19	
Final Sat.:	1700	4724	376		1700	4366	734		1700	2238	1162		1700	3085	315	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.21	0.21		0.01	0.27	0.27		0.09	0.08	0.08		0.07	0.06	0.06	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.527
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	172	631	128		308	712	173		293	684	84		197	771	220	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	172	631	128		308	712	173		293	684	84		197	771	220	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	172	631	128		308	712	173		293	684	84		197	771	220	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	172	631	128		308	712	173		293	684	84		197	771	220	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	172	631	128		308	712	173		293	684	84		197	771	220	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.49	0.51		2.00	2.41	0.59		2.00	3.00	1.00		2.00	3.00	1.00	
Final Sat.:	3400	4240	860		3400	4103	997		3400	5100	1700		3400	5100	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.15	0.15		0.09	0.17	0.17		0.09	0.13	0.05		0.06	0.15	0.13	
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.307
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	48	879	0		0	895	125		98	0	49		0	0	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	48	879	0		0	895	125		98	0	49		0	0	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	48	879	0		0	895	125		98	0	49		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	48	879	0		0	895	125		98	0	49		0	0	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	48	879	0		0	895	125		98	0	49		0	0	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	0.00		0.00	2.63	0.37		2.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	1700	5100	0		0	4475	625		3400	0	1700		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.17	0.00		0.00	0.20	0.20		0.03	0.00	0.03		0.00	0.00	0.00	
Crit Moves:	****					****			****							

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.348
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	19	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	615	14		25	623	145		141	26	143		15	25	17	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	89	615	14		25	623	145		141	26	143		15	25	17	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	89	615	14		25	623	145		141	26	143		15	25	17	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	89	615	14		25	623	145		141	26	143		15	25	17	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	89	615	14		25	623	145		141	26	143		15	25	17	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.93	0.07		1.00	2.43	0.57		1.00	1.00	1.00		1.00	1.19	0.81	
Final Sat.:	1700	4986	114		1700	4137	963		1700	1700	1700		1700	2024	1376	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.12	0.12		0.01	0.15	0.15		0.08	0.02	0.08		0.01	0.01	0.01	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.190
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	15	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	8	412	0		0	340	107		81	0	6		0	0	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	8	412	0		0	340	107		81	0	6		0	0	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	8	412	0		0	340	107		81	0	6		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	8	412	0		0	340	107		81	0	6		0	0	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	8	412	0		0	340	107		81	0	6		0	0	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	0.00		0.00	2.28	0.72		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	1700	5100	0		0	3879	1221		1700	0	1700		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00		0.00	0.09	0.09		0.05	0.00	0.00		0.00	0.00	0.00	
Crit Moves:	****					****			****							

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.222
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	16	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	0	0 1
Volume Module:																
Base Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	102	374	3	9	294	26	11	1	91	0	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	102	374	3	9	294	26	11	1	91	0	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	102	374	3	9	294	26	11	1	91	0	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.00	0.00	1.00				
Final Sat.:	1700	5059	41	1700	5100	1700	1700	18	1682	0	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.07	0.07	0.01	0.06	0.02	0.01	0.05	0.05	0.00	0.00	0.00				
Crit Moves:	****				****			****		****						

1: Beach Blvd & McFadden Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	378	144	356	421	141	245	2616	230	195	2141	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6303	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6303	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	409	394	150	371	439	147	255	2725	240	203	2230	274
RTOR Reduction (vph)	0	28	0	0	24	0	0	10	0	0	15	0
Lane Group Flow (vph)	409	516	0	371	562	0	255	2955	0	203	2489	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.8	29.2		16.9	27.3		12.1	64.5		11.0	63.4	
Effective Green, g (s)	18.8	29.2		16.9	27.3		12.1	64.5		11.0	63.4	
Actuated g/C Ratio	0.13	0.21		0.12	0.20		0.09	0.46		0.08	0.45	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	461	707		414	664		296	2916		269	2854	
v/s Ratio Prot	c0.12	0.15		0.11	c0.16		0.07	c0.47		0.06	c0.39	
v/s Ratio Perm												
v/c Ratio	0.89	0.73		0.90	0.85		0.86	1.01		0.75	0.87	
Uniform Delay, d1	59.6	51.7		60.7	54.3		63.1	37.8		63.2	34.6	
Progression Factor	1.00	1.00		1.00	1.00		0.84	1.05		1.00	1.00	
Incremental Delay, d2	18.3	3.8		21.2	9.7		18.2	18.4		11.4	4.0	
Delay (s)	77.8	55.5		81.9	64.1		71.0	58.2		74.6	38.6	
Level of Service	E	E		F	E		E	E		E	D	
Approach Delay (s)		65.1			71.0			59.2			41.3	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	55.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

2: Beach Blvd & Center Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	329	947	0	2925	2243	947
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	336	966	0	2985	2289	966
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	336	965	0	2985	2289	966
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	18.5	65.5		111.7	58.7	140.0
Effective Green, g (s)	18.5	65.5		111.7	58.7	140.0
Actuated g/C Ratio	0.13	0.47		0.80	0.42	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	453	1393		5112	2686	1583
v/s Ratio Prot	0.10	c0.23		0.46	c0.36	
v/s Ratio Perm		0.11		0.01		0.61
v/c Ratio	0.74	0.69		0.58	0.85	0.61
Uniform Delay, d1	58.5	29.3		5.4	36.7	0.0
Progression Factor	1.00	1.00		0.57	0.66	1.00
Incremental Delay, d2	6.9	1.6		0.0	2.5	1.2
Delay (s)	65.3	30.9		3.1	26.7	1.2
Level of Service	E	C		A	C	A
Approach Delay (s)	39.8			3.1	19.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	74.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	416	907	245	174	591	172	415	2303	509	333	2260	639
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	433	945	255	181	616	179	432	2399	530	347	2354	666
RTOR Reduction (vph)	0	0	65	0	0	144	0	0	155	0	0	45
Lane Group Flow (vph)	433	945	190	181	616	35	432	2399	375	347	2354	621
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.9	29.0	43.0	13.0	27.1	27.1	14.0	63.7	63.7	14.0	63.3	78.2
Effective Green, g (s)	14.9	29.0	43.0	13.0	27.1	27.1	14.0	63.7	63.7	14.0	63.3	78.2
Actuated g/C Ratio	0.11	0.21	0.31	0.09	0.19	0.19	0.10	0.46	0.46	0.10	0.45	0.56
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	365	1053	486	318	685	306	343	2313	720	343	2897	1648
v/s Ratio Prot	c0.13	c0.19	0.04	0.05	c0.17		c0.13	c0.47		c0.10	0.37	0.04
v/s Ratio Perm			0.08			0.02			0.24			0.18
v/c Ratio	1.19	0.90	0.39	0.57	0.90	0.11	1.26	1.04	0.52	1.01	0.81	0.38
Uniform Delay, d1	62.5	54.1	38.2	60.8	55.1	46.5	63.0	38.1	27.3	63.0	33.2	17.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.59	0.41	1.34	0.59	0.64
Incremental Delay, d2	108.2	10.1	0.2	1.4	14.6	0.2	133.1	26.7	2.0	40.8	1.6	0.0
Delay (s)	170.7	64.2	38.4	62.2	69.7	46.7	179.6	49.4	13.2	125.0	21.3	11.2
Level of Service	F	E	D	E	E	D	F	D	B	F	C	B
Approach Delay (s)		88.4			64.1			60.4			30.0	
Approach LOS		F			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	54.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	99.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	19	41	127	32	175	120	2717	72	244	2378	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1670		1770	1863	1583	1770	6383		3433	6397	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1670		1770	1863	1583	1770	6383		3433	6397	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	19	42	130	33	179	122	2772	73	249	2427	28
RTOR Reduction (vph)	0	38	0	0	0	152	0	2	0	0	1	0
Lane Group Flow (vph)	24	23	0	130	33	27	122	2843	0	249	2454	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	12.6		16.0	20.8	20.8	15.1	77.0		14.8	76.7	
Effective Green, g (s)	7.8	12.6		16.0	20.8	20.8	15.1	77.0		14.8	76.7	
Actuated g/C Ratio	0.06	0.09		0.11	0.15	0.15	0.11	0.55		0.11	0.55	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	150		202	276	235	190	3510		362	3504	
v/s Ratio Prot	c0.01	c0.01		c0.07	0.02		0.07	c0.45		c0.07	0.38	
v/s Ratio Perm						0.02						
v/c Ratio	0.24	0.15		0.64	0.12	0.11	0.64	0.81		0.69	0.70	
Uniform Delay, d1	63.3	58.8		59.3	51.7	51.6	59.9	25.6		60.4	23.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.28	0.21		1.34	0.34	
Incremental Delay, d2	1.3	0.5		6.9	0.2	0.2	4.6	1.4		3.4	0.7	
Delay (s)	64.6	59.2		66.1	51.9	51.8	81.5	6.7		84.3	8.5	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		60.8			57.3			9.8			15.5	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	5	18	248	4	165	63	2664	99	318	2322	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1644		1681	1576	1504	1770	6373		3433	6400	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1644		1681	1576	1504	1770	6373		3433	6400	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	29	5	18	251	4	167	64	2691	100	321	2345	19
RTOR Reduction (vph)	0	17	0	0	8	116	0	3	0	0	0	0
Lane Group Flow (vph)	29	6	0	146	136	17	64	2788	0	321	2364	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	10.6	10.6		17.5	17.5	17.5	8.7	74.1		19.9	85.3	
Effective Green, g (s)	10.6	10.6		17.5	17.5	17.5	8.7	74.1		19.9	85.3	
Actuated g/C Ratio	0.08	0.08		0.12	0.12	0.12	0.06	0.53		0.14	0.61	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	124		210	197	188	109	3373		487	3899	
v/s Ratio Prot	c0.02	0.00		c0.09	0.09		0.04	c0.44		c0.09	0.37	
v/s Ratio Perm						0.01						
v/c Ratio	0.22	0.05		0.70	0.69	0.09	0.59	0.83		0.66	0.61	
Uniform Delay, d1	60.8	60.0		58.7	58.7	54.2	63.9	27.6		56.8	16.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.38	0.10		0.63	0.12	
Incremental Delay, d2	0.8	0.2		9.6	10.0	0.2	0.7	0.2		2.4	0.5	
Delay (s)	61.6	60.2		68.3	68.6	54.4	88.8	3.1		38.1	2.5	
Level of Service	E	E		E	E	D	F	A		D	A	
Approach Delay (s)		61.0			64.1			5.0			6.8	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	76.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	312	179	41	307	157	165	2649	49	162	2193	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3359		1770	6390		1770	6316	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3359		1770	6390		1770	6316	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	257	322	185	42	316	162	170	2731	51	167	2261	238
RTOR Reduction (vph)	0	56	0	0	48	0	0	2	0	0	13	0
Lane Group Flow (vph)	257	451	0	42	430	0	170	2780	0	167	2486	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	21.7	36.1		8.8	23.2		14.0	56.3		20.0	62.3	
Effective Green, g (s)	21.7	36.1		8.8	23.2		14.0	56.3		20.0	62.3	
Actuated g/C Ratio	0.15	0.26		0.06	0.17		0.10	0.40		0.14	0.44	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	862		111	556		177	2569		252	2810	
v/s Ratio Prot	c0.15	0.13		0.02	c0.13		0.10	c0.44		0.09	c0.39	
v/s Ratio Perm												
v/c Ratio	0.94	0.52		0.38	0.77		0.96	1.08		0.66	0.88	
Uniform Delay, d1	58.5	44.6		63.0	55.9		62.7	41.9		56.8	35.6	
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.87		0.73	0.57	
Incremental Delay, d2	37.6	0.6		2.2	6.6		50.3	43.5		5.2	3.7	
Delay (s)	96.1	45.1		65.1	62.5		103.5	79.9		46.8	24.0	
Level of Service	F	D		E	E		F	E		D	C	
Approach Delay (s)		62.3			62.7			81.2			25.5	
Approach LOS		E			E			F			C	

Intersection Summary			
HCM 2000 Control Delay	56.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	91.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	17	39	59	10	20	152	2585	65	70	2069	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1669	1478		1667	1478	1770	6384		1770	6385	
Flt Permitted		0.71	1.00		0.59	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1241	1478		1027	1478	1770	6384		1770	6385	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	87	18	40	61	10	21	157	2665	67	72	2133	53
RTOR Reduction (vph)	0	0	35	0	0	18	0	2	0	0	2	0
Lane Group Flow (vph)	0	105	5	0	71	3	157	2730	0	72	2184	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		18.5	18.5		18.5	18.5	22.9	97.0		9.2	83.3	
Effective Green, g (s)		18.5	18.5		18.5	18.5	22.9	97.0		9.2	83.3	
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.16	0.69		0.07	0.59	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		163	195		135	195	289	4423		116	3799	
v/s Ratio Prot							0.09	c0.43		0.04	c0.34	
v/s Ratio Perm		c0.08	0.00		0.07	0.00						
v/c Ratio		0.64	0.03		0.53	0.01	0.54	0.62		0.62	0.57	
Uniform Delay, d1		57.6	52.9		56.7	52.8	53.7	11.5		63.7	17.5	
Progression Factor		1.00	1.00		1.00	1.00	0.64	0.50		1.21	0.33	
Incremental Delay, d2		8.4	0.1		3.7	0.0	0.6	0.2		5.2	0.3	
Delay (s)		66.1	53.0		60.3	52.9	34.8	5.9		82.2	6.1	
Level of Service		E	D		E	D	C	A		F	A	
Approach Delay (s)		62.4			58.6			7.5			8.5	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

8: Beach Blvd & Warner Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	1076	144	240	1190	211	315	2264	179	178	1724	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4995		3433	4970		3433	6338		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4995		3433	4970		3433	6338		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	423	1133	152	253	1253	222	332	2383	188	187	1815	353
RTOR Reduction (vph)	0	12	0	0	18	0	0	8	0	0	0	175
Lane Group Flow (vph)	423	1273	0	253	1457	0	332	2563	0	187	1815	178
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	16.0	33.0		15.0	32.0		13.0	61.0		12.0	60.0	60.0
Effective Green, g (s)	16.0	33.0		15.0	32.0		13.0	61.0		12.0	60.0	60.0
Actuated g/C Ratio	0.11	0.24		0.11	0.23		0.09	0.44		0.09	0.43	0.43
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	392	1177		367	1136		318	2761		294	2746	678
v/s Ratio Prot	0.12	c0.25		0.07	c0.29		c0.10	c0.40		0.05	0.28	
v/s Ratio Perm												0.11
v/c Ratio	1.08	1.08		0.69	1.28		1.04	0.93		0.64	0.66	0.26
Uniform Delay, d1	62.0	53.5		60.3	54.0		63.5	37.4		61.9	31.9	25.7
Progression Factor	1.00	1.00		1.00	1.00		1.22	0.59		1.38	0.39	0.52
Incremental Delay, d2	68.3	51.2		4.3	134.1		42.8	2.9		2.8	1.1	0.8
Delay (s)	130.3	104.7		64.5	188.1		120.2	25.0		88.2	13.6	14.3
Level of Service	F	F		E	F		F	C		F	B	B
Approach Delay (s)		111.0			170.0			35.9			19.6	
Approach LOS		F			F			D			B	

Intersection Summary			
HCM 2000 Control Delay	72.9	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.08		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	101.0%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

9: Beach Blvd & Slater Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	473	150	109	598	151	192	2300	65	171	1888	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3412		1770	3432		1770	6381		1770	6336	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3412		1770	3432		1770	6381		1770	6336	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	200	493	156	114	623	157	200	2396	68	178	1967	159
RTOR Reduction (vph)	0	22	0	0	16	0	0	2	0	0	9	0
Lane Group Flow (vph)	200	627	0	114	764	0	200	2462	0	178	2117	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.0	29.3		15.7	29.0		18.0	55.8		18.5	56.3	
Effective Green, g (s)	16.0	29.3		15.7	29.0		18.0	55.8		18.5	56.3	
Actuated g/C Ratio	0.11	0.21		0.11	0.21		0.13	0.40		0.13	0.40	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	202	714		198	710		227	2543		233	2547	
v/s Ratio Prot	0.11	c0.18		0.06	c0.22		0.11	c0.39		0.10	c0.33	
v/s Ratio Perm												
v/c Ratio	0.99	0.88		0.58	1.08		0.88	0.97		0.76	0.83	
Uniform Delay, d1	61.9	53.6		59.0	55.5		59.9	41.2		58.6	37.6	
Progression Factor	1.00	1.00		1.00	1.00		0.77	0.71		0.56	0.74	
Incremental Delay, d2	60.3	11.8		4.0	56.2		25.9	10.2		10.5	2.5	
Delay (s)	122.2	65.4		63.0	111.7		72.3	39.6		43.4	30.3	
Level of Service	F	E		E	F		E	D		D	C	
Approach Delay (s)		78.8			105.5			42.1			31.3	
Approach LOS		E			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	51.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	93.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	1	16	107	8	157	16	2291	80	78	2124	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719			1684		1770	6376		1770	6396	
Flt Permitted		0.66			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1177			1485		1770	6376		1770	6396	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	1	16	110	8	162	16	2362	82	80	2190	28
RTOR Reduction (vph)	0	13	0	0	37	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	31	0	0	243	0	16	2441	0	80	2217	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		26.1			26.1		4.0	88.0		10.0	94.0	
Effective Green, g (s)		26.1			26.1		4.0	88.0		10.0	94.0	
Actuated g/C Ratio		0.19			0.19		0.03	0.63		0.07	0.67	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		219			276		50	4007		126	4294	
v/s Ratio Prot							0.01	c0.38		c0.05	0.35	
v/s Ratio Perm		0.03			c0.16							
v/c Ratio		0.14			0.88		0.32	0.61		0.63	0.52	
Uniform Delay, d1		47.6			55.4		66.7	15.6		63.2	11.6	
Progression Factor		1.00			1.00		1.30	0.17		1.36	0.15	
Incremental Delay, d2		0.3			26.3		0.8	0.2		5.9	0.3	
Delay (s)		47.9			81.8		87.8	2.8		91.6	2.0	
Level of Service		D			F		F	A		F	A	
Approach Delay (s)		47.9			81.8			3.3			5.1	
Approach LOS		D			F			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	373	141	194	479	277	157	2020	175	253	1921	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	3345		1770	6331		1770	6350	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3394		1770	3345		1770	6331		1770	6350	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	143	389	147	202	499	289	164	2104	182	264	2001	129
RTOR Reduction (vph)	0	29	0	0	59	0	0	10	0	0	7	0
Lane Group Flow (vph)	143	507	0	202	729	0	164	2276	0	264	2123	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.0	25.7		20.3	32.0		14.3	49.3		24.0	59.0	
Effective Green, g (s)	14.0	25.7		20.3	32.0		14.3	49.3		24.0	59.0	
Actuated g/C Ratio	0.10	0.18		0.15	0.23		0.10	0.35		0.17	0.42	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	177	623		256	764		180	2229		303	2676	
v/s Ratio Prot	0.08	c0.15		0.11	c0.22		0.09	c0.36		c0.15	0.33	
v/s Ratio Perm												
v/c Ratio	0.81	0.81		0.79	0.95		0.91	1.02		0.87	0.79	
Uniform Delay, d1	61.7	54.9		57.8	53.3		62.2	45.4		56.5	35.2	
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.59		0.45	0.26	
Incremental Delay, d2	21.9	8.3		13.8	22.1		35.6	22.5		20.1	2.2	
Delay (s)	83.5	63.1		71.6	75.4		82.6	49.5		45.8	11.4	
Level of Service	F	E		E	E		F	D		D	B	
Approach Delay (s)		67.4			74.6			51.7			15.2	
Approach LOS		E			E			D			B	

Intersection Summary				
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	95.6%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

12: Beach Blvd & Main St/Ellis Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	396	428	102	137	482	127	168	1681	149	252	1517	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6330		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6330		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	404	437	104	140	492	130	171	1715	152	257	1548	491
RTOR Reduction (vph)	0	0	85	0	0	109	0	9	0	0	0	21
Lane Group Flow (vph)	404	437	19	140	492	21	171	1858	0	257	1548	470
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	25.6	25.6	25.6	22.4	22.4	22.4	10.5	55.5		13.8	58.8	90.4
Effective Green, g (s)	25.6	25.6	25.6	22.4	22.4	22.4	10.5	55.5		13.8	58.8	90.4
Actuated g/C Ratio	0.18	0.18	0.18	0.16	0.16	0.16	0.08	0.40		0.10	0.42	0.65
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	627	647	289	283	566	253	257	2509		338	2135	1022
v/s Ratio Prot	0.12	c0.12		0.08	c0.14		0.05	0.29		c0.07	c0.30	0.30
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.64	0.68	0.07	0.49	0.87	0.08	0.67	0.74		0.76	0.73	0.46
Uniform Delay, d1	53.0	53.3	47.3	53.6	57.4	50.1	63.0	36.1		61.5	33.9	12.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.48		1.28	0.44	0.62
Incremental Delay, d2	1.8	2.3	0.0	0.5	13.0	0.1	2.9	1.2		5.3	1.3	0.1
Delay (s)	54.8	55.7	47.4	54.1	70.3	50.1	92.1	18.5		84.1	16.0	7.9
Level of Service	D	E	D	D	E	D	F	B		F	B	A
Approach Delay (s)		54.4			63.9			24.7			21.9	
Approach LOS		D			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	81.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	188	501	134	140	386	121	207	1578	93	187	1460	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3412		1770	5043		1770	5010	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3412		1770	5043		1770	5010	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	194	516	138	144	398	125	213	1627	96	193	1505	166
RTOR Reduction (vph)	0	0	108	0	22	0	0	4	0	0	10	0
Lane Group Flow (vph)	194	516	30	144	501	0	213	1719	0	193	1661	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.5	30.7	30.7	12.6	25.8		18.9	57.0		18.5	56.6	
Effective Green, g (s)	17.5	30.7	30.7	12.6	25.8		18.9	57.0		18.5	56.6	
Actuated g/C Ratio	0.12	0.22	0.22	0.09	0.18		0.13	0.41		0.13	0.40	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	221	776	347	159	628		238	2053		233	2025	
v/s Ratio Prot	c0.11	0.15		0.08	c0.15		c0.12	c0.34		0.11	c0.33	
v/s Ratio Perm			0.02									
v/c Ratio	0.88	0.66	0.09	0.91	0.80		0.89	0.84		0.83	0.82	
Uniform Delay, d1	60.2	49.9	43.5	63.1	54.6		59.6	37.3		59.2	37.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.58	0.46		0.47	0.93	
Incremental Delay, d2	29.3	2.4	0.1	43.8	7.4		18.7	2.2		15.8	3.0	
Delay (s)	89.5	52.3	43.6	107.0	62.0		53.4	19.5		43.8	37.6	
Level of Service	F	D	D	F	E		D	B		D	D	
Approach Delay (s)		59.4			71.7			23.2			38.2	
Approach LOS		E			E			C			D	

Intersection Summary				
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	85.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	133	402	145	114	351	128	202	1595	161	129	1452	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3397		1770	5016		1770	5017	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3397		1770	5016		1770	5017	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	140	423	153	120	369	135	213	1679	169	136	1528	151
RTOR Reduction (vph)	0	0	123	0	28	0	0	8	0	0	8	0
Lane Group Flow (vph)	140	423	30	120	476	0	213	1840	0	136	1671	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.2	27.7	27.7	12.0	24.5		20.8	58.9		21.0	59.1	
Effective Green, g (s)	15.2	27.7	27.7	12.0	24.5		20.8	58.9		21.0	59.1	
Actuated g/C Ratio	0.11	0.20	0.20	0.09	0.18		0.15	0.42		0.15	0.42	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	192	700	313	151	594		262	2110		265	2117	
v/s Ratio Prot	c0.08	0.12		0.07	c0.14		0.12	c0.37		0.08	c0.33	
v/s Ratio Perm			0.02									
v/c Ratio	0.73	0.60	0.10	0.79	0.80		0.81	0.87		0.51	0.79	
Uniform Delay, d1	60.4	51.2	45.9	62.8	55.4		57.7	37.1		54.8	35.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.76	0.74		0.51	0.37	
Incremental Delay, d2	13.0	1.5	0.1	24.3	7.7		16.2	5.0		1.1	2.0	
Delay (s)	73.4	52.6	46.1	87.1	63.1		60.1	32.2		29.1	15.0	
Level of Service	E	D	D	F	E		E	C		C	B	
Approach Delay (s)		55.3			67.7			35.1			16.1	
Approach LOS		E			E			D			B	

Intersection Summary				
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	83.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	18	55	144	29	92	65	1540	84	115	1426	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5046		1770	5039	
Flt Permitted		0.69			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1200			1154	1583	1770	5046		1770	5039	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	18	56	145	29	93	66	1556	85	116	1440	92
RTOR Reduction (vph)	0	26	0	0	0	77	0	4	0	0	4	0
Lane Group Flow (vph)	0	88	0	0	174	16	66	1637	0	116	1528	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		24.6			24.6	24.6	9.6	86.4		13.8	90.6	
Effective Green, g (s)		24.6			24.6	24.6	9.6	86.4		13.8	90.6	
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.62		0.10	0.65	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		210			202	278	121	3114		174	3260	
v/s Ratio Prot							0.04	c0.32		c0.07	0.30	
v/s Ratio Perm		0.07			c0.15	0.01						
v/c Ratio		0.42			0.86	0.06	0.55	0.53		0.67	0.47	
Uniform Delay, d1		51.3			56.0	48.1	63.1	15.2		60.9	12.5	
Progression Factor		1.00			1.00	1.00	0.68	0.49		0.98	0.62	
Incremental Delay, d2		1.3			29.3	0.1	3.5	0.5		6.1	0.3	
Delay (s)		52.7			85.3	48.1	46.2	7.9		66.0	8.1	
Level of Service		D			F	D	D	A		E	A	
Approach Delay (s)		52.7			72.4			9.4			12.2	
Approach LOS		D			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	455	59	187	829	339	130	1160	100	288	1103	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4997		1770	3539	1583	1770	5025		3433	4993	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4997		1770	3539	1583	1770	5025		3433	4993	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	166	484	63	199	882	361	138	1234	106	306	1173	162
RTOR Reduction (vph)	0	12	0	0	0	69	0	7	0	0	12	0
Lane Group Flow (vph)	166	535	0	199	882	292	138	1333	0	306	1323	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	16.0	35.5		17.3	36.8	52.5	17.0	49.7		15.7	48.4	
Effective Green, g (s)	16.0	35.5		17.3	36.8	52.5	17.0	49.7		15.7	48.4	
Actuated g/C Ratio	0.11	0.25		0.12	0.26	0.38	0.12	0.36		0.11	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	202	1267		218	930	593	214	1783		384	1726	
v/s Ratio Prot	0.09	0.11		c0.11	c0.25	0.06	0.08	c0.27		0.09	c0.26	
v/s Ratio Perm						0.13						
v/c Ratio	0.82	0.42		0.91	0.95	0.49	0.64	0.75		0.80	0.77	
Uniform Delay, d1	60.6	43.7		60.6	50.7	33.5	58.6	39.6		60.6	40.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.83	0.76		1.18	0.32	
Incremental Delay, d2	21.8	0.5		37.2	18.6	0.2	4.6	2.7		9.2	3.0	
Delay (s)	82.4	44.2		97.8	69.2	33.8	53.5	33.0		80.8	16.0	
Level of Service	F	D		F	E	C	D	C		F	B	
Approach Delay (s)		53.1			64.3			34.9			28.1	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	43.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	82.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	109	38	33	123	156	31	1251	32	157	1014	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1790		1770	1863	1583	1770	5066		1770	5040	
Flt Permitted	0.53	1.00		0.45	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	992	1790		835	1863	1583	1770	5066		1770	5040	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	69	111	39	34	126	159	32	1277	33	160	1035	66
RTOR Reduction (vph)	0	10	0	0	0	139	0	1	0	0	3	0
Lane Group Flow (vph)	69	140	0	34	126	20	32	1309	0	160	1098	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	17.5	17.5		17.5	17.5	17.5	6.2	89.2		16.9	99.9	
Effective Green, g (s)	17.5	17.5		17.5	17.5	17.5	6.2	89.2		16.9	99.9	
Actuated g/C Ratio	0.12	0.12		0.12	0.12	0.12	0.04	0.64		0.12	0.71	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	124	223		104	232	197	78	3227		213	3596	
v/s Ratio Prot		c0.08			0.07		0.02	c0.26		c0.09	0.22	
v/s Ratio Perm	0.07			0.04		0.01						
v/c Ratio	0.56	0.63		0.33	0.54	0.10	0.41	0.41		0.75	0.31	
Uniform Delay, d1	57.6	58.2		55.9	57.5	54.3	65.1	12.4		59.5	7.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.57	0.56	
Incremental Delay, d2	5.3	5.5		1.8	2.6	0.2	3.5	0.4		8.9	0.1	
Delay (s)	62.9	63.6		57.7	60.1	54.5	68.6	12.8		42.9	4.2	
Level of Service	E	E		E	E	D	E	B		D	A	
Approach Delay (s)		63.4			57.1			14.1			9.1	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	19.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	68.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	330	32	78	490	203	118	880	86	336	585	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3492		1770	3384		1770	5017		1770	4926	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3492		1770	3384		1770	5017		1770	4926	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	144	337	33	80	500	207	120	898	88	343	597	158
RTOR Reduction (vph)	0	4	0	0	28	0	0	8	0	0	30	0
Lane Group Flow (vph)	144	366	0	80	679	0	120	978	0	343	725	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.4	34.0		11.6	30.2		13.5	40.7		25.2	52.4	
Effective Green, g (s)	15.4	34.0		11.6	30.2		13.5	40.7		25.2	52.4	
Actuated g/C Ratio	0.12	0.26		0.09	0.23		0.10	0.31		0.19	0.40	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	205	895		154	770		180	1539		336	1946	
v/s Ratio Prot	c0.08	c0.10		0.05	c0.20		0.07	c0.19		c0.19	0.15	
v/s Ratio Perm												
v/c Ratio	0.70	0.41		0.52	0.88		0.67	0.64		1.02	0.37	
Uniform Delay, d1	56.4	40.9		57.8	49.5		57.4	39.6		53.7	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.6	0.1		1.2	11.3		7.0	1.2		54.5	0.3	
Delay (s)	65.0	41.1		59.1	60.8		64.4	40.8		108.2	28.7	
Level of Service	E	D		E	E		E	D		F	C	
Approach Delay (s)		47.8			60.6			43.3			53.5	
Approach LOS		D			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	132.6	Sum of lost time (s)	21.1
Intersection Capacity Utilization	85.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	0	50	0	0	0	50	1035	0	0	591	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5026	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5026	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	79	0	53	0	0	0	53	1101	0	0	629	53
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	0	0	9	0
Lane Group Flow (vph)	79	0	11	0	0	0	53	1101	0	0	673	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	10.6		10.6				3.1	30.4			22.4	
Effective Green, g (s)	10.6		10.6				3.1	30.4			22.4	
Actuated g/C Ratio	0.20		0.20				0.06	0.58			0.43	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	360		322				105	2972			2165	
v/s Ratio Prot							0.03	c0.22			0.13	
v/s Ratio Perm	c0.04		0.01									
v/c Ratio	0.22		0.03				0.50	0.37			0.31	
Uniform Delay, d1	17.3		16.6				23.7	5.7			9.7	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	0.3		0.0				3.8	0.1			0.1	
Delay (s)	17.6		16.6				27.5	5.8			9.8	
Level of Service	B		B				C	A			A	
Approach Delay (s)		17.2			0.0			6.8			9.8	
Approach LOS		B			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	52.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	267	1070	51	22	1422	780	28	49	37	363	53	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5051		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5051		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	278	1115	53	23	1481	812	29	51	39	378	55	242
RTOR Reduction (vph)	0	3	0	0	0	268	0	0	36	0	0	0
Lane Group Flow (vph)	278	1165	0	23	1481	544	29	51	3	378	55	242
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	12.8	69.4		4.5	61.1	61.1	4.5	9.6	9.6	14.8	19.9	120.0
Effective Green, g (s)	12.8	69.4		4.5	61.1	61.1	4.5	9.6	9.6	14.8	19.9	120.0
Actuated g/C Ratio	0.11	0.58		0.04	0.51	0.51	0.04	0.08	0.08	0.12	0.17	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	366	2921		66	1801	806	66	283	126	423	308	1583
v/s Ratio Prot	c0.08	0.23		0.01	c0.42		0.02	0.01		c0.11	0.03	
v/s Ratio Perm						0.34			0.00			c0.15
v/c Ratio	0.76	0.40		0.35	0.82	0.68	0.44	0.18	0.02	0.89	0.18	0.15
Uniform Delay, d1	52.1	13.9		56.3	24.9	22.0	56.5	51.5	50.9	51.8	43.0	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.8	0.4		1.2	4.4	4.5	1.7	0.1	0.0	20.2	0.1	0.2
Delay (s)	59.9	14.3		57.5	29.3	26.5	58.2	51.6	50.9	72.0	43.1	0.2
Level of Service	E	B		E	C	C	E	D	D	E	D	A
Approach Delay (s)		23.1			28.6			53.0			43.9	
Approach LOS		C			C			D			D	

Intersection Summary			
HCM 2000 Control Delay	29.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	77.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

23: Huntington Beach Parking/Newland St & Pacific Coast Highway

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	1289	15	5	2052	295	12	11	15	88	6	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1697		1770	1593	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.43	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	792	1697		1378	1593	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	174	1343	16	5	2138	307	12	11	16	92	6	171
RTOR Reduction (vph)	0	0	5	0	0	129	0	14	0	0	146	0
Lane Group Flow (vph)	174	1343	11	5	2138	178	12	13	0	92	31	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	13.2	70.0	70.0	1.2	58.0	58.0	14.9	14.9		14.9	14.9	
Effective Green, g (s)	13.2	70.0	70.0	1.2	58.0	58.0	14.9	14.9		14.9	14.9	
Actuated g/C Ratio	0.13	0.70	0.70	0.01	0.58	0.58	0.15	0.15		0.15	0.15	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	233	3559	1108	21	2949	918	118	252		205	237	
v/s Ratio Prot	c0.10	0.26		0.00	c0.42			0.01			0.02	
v/s Ratio Perm			0.01			0.11	0.02			c0.07		
v/c Ratio	0.75	0.38	0.01	0.24	0.72	0.19	0.10	0.05		0.45	0.13	
Uniform Delay, d1	41.8	6.1	4.5	48.9	15.2	9.9	36.8	36.5		38.8	36.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	10.8	0.3	0.0	2.1	1.6	0.5	0.1	0.0		0.6	0.1	
Delay (s)	52.6	6.4	4.5	51.1	16.8	10.4	36.9	36.5		39.4	37.0	
Level of Service	D	A	A	D	B	B	D	D		D	D	
Approach Delay (s)		11.6			16.1			36.6			37.8	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	72.0%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

25: Magnolia Ave & Pacific Coast Highway

Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	1254	36	49	2205	220	17	44	30	162	49	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1723	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1723	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	140	1334	38	52	2346	234	18	47	32	172	52	170
RTOR Reduction (vph)	0	0	17	0	0	91	0	21	0	0	0	149
Lane Group Flow (vph)	140	1334	21	52	2346	143	18	58	0	110	114	21
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	12.8	66.8	66.8	6.8	60.8	60.8	12.8	12.8		14.8	14.8	14.8
Effective Green, g (s)	12.8	66.8	66.8	6.8	60.8	60.8	12.8	12.8		14.8	14.8	14.8
Actuated g/C Ratio	0.11	0.56	0.56	0.06	0.51	0.51	0.11	0.11		0.12	0.12	0.12
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	188	2830	881	100	2576	802	188	186		207	212	195
v/s Ratio Prot	c0.08	0.26		0.03	c0.46		0.01	c0.03		0.07	c0.07	
v/s Ratio Perm			0.01			0.09						0.01
v/c Ratio	0.74	0.47	0.02	0.52	0.91	0.18	0.10	0.31		0.53	0.54	0.11
Uniform Delay, d1	52.0	16.0	12.0	55.0	27.1	16.1	48.4	49.5		49.3	49.4	46.7
Progression Factor	1.00	1.00	1.00	1.22	1.29	2.82	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	13.0	0.6	0.1	0.2	0.6	0.0	0.1	0.3		1.3	1.3	0.1
Delay (s)	65.1	16.6	12.0	67.1	35.6	45.4	48.5	49.9		50.7	50.7	46.8
Level of Service	E	B	B	E	D	D	D	D		D	D	D
Approach Delay (s)		20.9			37.1			49.6			49.0	
Approach LOS		C			D			D			D	

Intersection Summary				
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	79.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	234	1217	7	19	2224	657	24	28	13	315	8	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	252	1309	8	20	2391	706	26	30	14	339	9	249
RTOR Reduction (vph)	0	0	3	0	0	219	0	13	0	0	0	208
Lane Group Flow (vph)	252	1309	5	20	2391	487	26	31	0	339	9	41
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	24.7	70.8	70.8	2.8	48.9	68.8	5.8	5.8		19.9	19.9	19.9
Effective Green, g (s)	24.7	70.8	70.8	2.8	48.9	68.8	5.8	5.8		19.9	19.9	19.9
Actuated g/C Ratio	0.21	0.59	0.59	0.02	0.41	0.57	0.05	0.05		0.17	0.17	0.17
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	364	3000	933	41	2072	907	85	85		569	308	262
v/s Ratio Prot	c0.14	0.26		0.01	c0.47	0.09	0.01	c0.02		c0.10	0.00	
v/s Ratio Perm			0.00			0.22						0.03
v/c Ratio	0.69	0.44	0.01	0.49	1.15	0.54	0.31	0.36		0.60	0.03	0.16
Uniform Delay, d1	44.1	13.6	10.1	57.9	35.5	15.8	55.2	55.3		46.3	42.0	42.9
Progression Factor	0.67	1.18	1.00	1.00	1.00	1.00	1.00	1.00		0.88	0.93	3.14
Incremental Delay, d2	4.2	0.4	0.0	3.3	75.3	0.3	0.7	1.0		1.1	0.0	0.1
Delay (s)	33.7	16.4	10.1	61.2	110.8	16.1	55.9	56.3		41.9	38.9	134.5
Level of Service	C	B	B	E	F	B	E	E		D	D	F
Approach Delay (s)		19.2			89.0			56.1			80.5	
Approach LOS		B			F			E			F	

Intersection Summary			
HCM 2000 Control Delay	67.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	85.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			


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EX+P1-PM                    Tue Jul 8, 2014 13:24:14                    Page 1-1
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                 ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
                     EXISTING PLUS PROJECT CONDITIONS (2014)
                                PM PEAK HOUR
--------------------------------------------------------------------------------
                                Scenario Report
Scenario:              EX+P1-PM

Command:               EX+P1-PM
Volume:                EX-PM
Geometry:              EX
Impact Fee:            Default Impact Fee
Trip Generation:       P1-PM
Trip Distribution:     DIST-1
Paths:                 Default Path
Routes:                Default Route
Configuration:         EX+P1-PM


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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	D	xxxxx	0.884	D	xxxxx	0.896	+ 0.012
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.845	D	xxxxx	0.855	+ 0.009
# 16 Beach Blvd & Adams Ave	B	xxxxx	0.695	C	xxxxx	0.708	+ 0.013
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.649	C	xxxxx	0.709	+ 0.060
# 21 Newland St & Atlanta Ave	A	xxxxx	0.548	A	xxxxx	0.552	+ 0.004
# 22 Newland St & Hamilton Ave	B	xxxxx	0.678	C	xxxxx	0.762	+ 0.084
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.594	B	xxxxx	0.602	+ 0.009
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.640	B	xxxxx	0.657	+ 0.017
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.777	C	xxxxx	0.792	+ 0.015
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.493	A	xxxxx	0.508	+ 0.015
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.581	A	xxxxx	0.596	+ 0.015
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.690	C	xxxxx	0.706	+ 0.015
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.607	B	xxxxx	0.622	+ 0.015
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.580	A	xxxxx	0.594	+ 0.015
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.757	C	xxxxx	0.773	+ 0.015
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.344	A	xxxxx	0.359	+ 0.015
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.429	A	xxxxx	0.443	+ 0.015
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.222	A	xxxxx	0.236	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.278	A	xxxxx	0.292	+ 0.015

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.884
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0 3	0	1	2	0 4	0	2	2	0 3	0	1	2	0 2	0	1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	415	2241	509		333	2200	639		416	907	245		174	591	172	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	415	2241	509		333	2200	639		416	907	245		174	591	172	
OvlAdjVol:							223				37					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.44	0.30		0.10	0.32	0.19		0.12	0.18	0.14		0.05	0.17	0.10	
OvlAdjV/S:							0.07				0.02					
Crit Moves:	****				****				****				****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.845
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 63 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179	178	1664	335	402	1076	144	240	1189	210				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	314	2203	179	178	1664	335	402	1076	144	240	1189	210				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	314	2203	179	178	1664	335	402	1076	144	240	1189	210				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	314	2203	179	178	1664	335	402	1076	144	240	1189	210				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	314	2203	179	178	1664	335	402	1076	144	240	1189	210				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.70	0.30	2.00	4.00	1.00	2.00	2.65	0.35	2.00	2.55	0.45				
Final Sat.:	3400	6289	511	3400	6800	1700	3400	4498	602	3400	4334	766				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.35	0.35	0.05	0.24	0.20	0.12	0.24	0.24	0.07	0.27	0.27				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	129	1095	100	288	1043	152	156	455	59	187	828	339				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.75	0.25	2.00	2.62	0.38	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4673	427	3400	4451	649	1700	4515	585	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.23	0.23	0.08	0.23	0.23	0.09	0.10	0.10	0.11	0.24	0.20				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.649
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37		303	53	232		267	1070	51		22	1417	720	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	28	49	37		303	53	232		267	1070	51		22	1417	720	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	28	49	0		303	53	0		267	1070	51		22	1417	720	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	28	49	0		303	53	0		267	1070	51		22	1417	720	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	28	49	0		303	53	0		267	1070	51		22	1417	720	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	4868	232		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.01	0.00		0.09	0.03	0.00		0.08	0.22	0.22		0.01	0.42	0.42	
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34		96	264	97		80	474	203		52	473	114	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	275	521	34		96	264	97		80	474	203		52	473	114	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	275	521	34		96	264	97		80	474	203		52	473	114	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	275	521	34		96	264	97		80	474	203		52	473	114	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	275	521	34		96	264	97		80	474	203		52	473	114	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.88	0.12		1.00	1.46	0.54		1.00	1.40	0.60		1.00	1.61	0.39	
Final Sat.:	1700	3192	208		1700	2486	914		1700	2381	1019		1700	2740	660	
Capacity Analysis Module:																
Vol/Sat:	0.16	0.16	0.16		0.06	0.11	0.11		0.05	0.20	0.20		0.03	0.17	0.17	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.678
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1	0	1	0	1	0	0	0	0	0	1	0	0
Volume Module:																
Base Vol:	0	304	65		223	203	0		0	0	0		153	0	476	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	0	304	65		223	203	0		0	0	0		153	0	476	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	304	65		223	203	0		0	0	0		153	0	476	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	304	65		223	203	0		0	0	0		153	0	476	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	304	65		223	203	0		0	0	0		153	0	476	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.82	0.18		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1401	299		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.22	0.22		0.13	0.12	0.00		0.00	0.00	0.00		0.09	0.00	0.28	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1	0	1	0	2	0	1	1	0	0	1	0	1
Volume Module:																
Base Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	30	300	28		189	178	42		25	257	29		15	546	327	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	30	300	28		189	178	42		25	257	29		15	546	327	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	30	300	28		189	178	42		25	257	29		15	546	327	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.90	0.10		1.00	1.00	1.00	
Final Sat.:	1700	3110	290		1700	3400	1700		1700	1528	172		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10		0.11	0.05	0.02		0.01	0.17	0.17		0.01	0.32	0.19	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.640
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	111	569	153		387	389	88		89	350	67		231	1060	500	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	111	569	153		387	389	88		89	350	67		231	1060	500	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	111	569	153		387	389	88		89	350	67		231	1060	500	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.45	0.55		1.00	1.68	0.32		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4159	941		1700	2854	546		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.09		0.11	0.09	0.09		0.05	0.12	0.12		0.14	0.31	0.29	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.777
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.28	0.18		0.07	0.27	0.14		0.06	0.12	0.09		0.07	0.31	0.27	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.493
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16		29	1774	25		83	0	28		8	0	11	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	22	1797	16		29	1774	25		83	0	28		8	0	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	22	1797	16		29	1774	0		83	0	28		8	0	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	22	1797	16		29	1774	0		83	0	28		8	0	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	22	1797	16		29	1774	0		83	0	28		8	0	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.97	0.03		1.00	3.00	1.00		0.75	0.00	0.25		0.42	0.00	0.58	
Final Sat.:	1700	5055	45		1700	5100	1700		1271	0	429		716	0	984	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.36	0.36		0.02	0.35	0.00		0.05	0.00	0.07		0.00	0.00	0.01	
Crit Moves:		****			****						****	****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	69	1588	13		40	1550	213		220	8	82		13	3	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.31	0.31		0.02	0.35	0.35		0.13	0.13	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.690
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	106	1270	128		154	1191	182		248	472	87		332	667	108	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	106	1270	128		154	1191	182		248	472	87		332	667	108	
OvlAdjVol:			0				58									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.25	0.08		0.09	0.23	0.11		0.07	0.16	0.16		0.10	0.23	0.23	
OvlAdjV/S:			0.00				0.03									
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.607
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	184	1380	77		103	1149	236		177	211	136		185	242	96	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.29	0.29		0.06	0.23	0.14		0.10	0.10	0.10		0.11	0.07	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.580
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	1	0	1	0
Volume Module:																
Base Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	154	1410	110		37	1112	200		147	219	109		145	249	26	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.54	0.46		1.00	1.34	0.66		1.00	1.81	0.19	
Final Sat.:	1700	4731	369		1700	4323	777		1700	2270	1130		1700	3079	321	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.30	0.30		0.02	0.26	0.26		0.09	0.10	0.10		0.09	0.08	0.08	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.757
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	44	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	2	1	0	2	0	2	1	0	2	0	3	0	1	
Volume Module:																
Base Vol:	261	873	144		304	850	179		274	747	123		281	1723	354	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	261	873	144		304	850	179		274	747	123		281	1723	354	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	261	873	144		304	850	179		274	747	123		281	1723	354	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	261	873	144		304	850	179		274	747	123		281	1723	354	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	261	873	144		304	850	179		274	747	123		281	1723	354	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.58	0.42		2.00	2.48	0.52		2.00	3.00	1.00		2.00	3.00	1.00	
Final Sat.:	3400	4378	722		3400	4213	887		3400	5100	1700		3400	5100	1700	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.20	0.20		0.09	0.20	0.20		0.08	0.15	0.07		0.08	0.34	0.21	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.344
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	44	1249	0	0	1055	166	97	0	51	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.24	0.00	0.00	0.24	0.24	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.429
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	147	988	21	20	690	169	177	24	136	25	40	27				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	147	988	21	20	690	169	177	24	136	25	40	27				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	147	988	21	20	690	169	177	24	136	25	40	27				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.94	0.06	1.00	2.41	0.59	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4994	106	1700	4097	1003	1700	1700	1700	1700	2030	1370				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.20	0.20	0.01	0.17	0.17	0.10	0.01	0.08	0.01	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.222
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	14	689	0	0	407	85	62	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	14	689	0	0	407	85	62	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	14	689	0	0	407	85	62	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.48	0.52	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4219	881	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00	0.00	0.10	0.10	0.04	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****			****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.278
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1	12	378	26	7	0	86	0	1	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	175	677	1	12	378	26	7	0	86	0	1	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	175	677	1	12	378	26	7	0	86	0	1	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	175	677	1	12	378	26	7	0	86	0	1	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	175	677	1	12	378	26	7	0	86	0	1	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00				
Final Sat.:	1700	5092	8	1700	5100	1700	1700	0	1700	0	1700	0				
Capacity Analysis Module:																
Vol/Sat:	0.10	0.13	0.13	0.01	0.07	0.02	0.00	0.00	0.05	0.00	0.00	0.00				
Crit Moves:	****				****				****	****						

APPENDIX D: PENDING AND APPROVED DEVELOPMENT PROJECTS

APPENDIX D – PENDING AND APPROVED DEVELOPMENT PROJECTS

Project Name	Location	Land Use Type
1. Beach & Ellis - Elan Apartments	18502 and 18508-18552 Beach Blvd. (southeast corner of Beach & Ellis)	Apartments
2. Beach Walk	19891 and 19895 Beach Blvd. (west side of Beach Blvd. between Utica and Adams Avenue-across from the Newland Shopping Center)	Apartments
3. The Boardwalk	Northeast corner of Edinger Avenue and Gothard (former Levitz furniture store site).	Mixed Use Apartments/Commercial
4. Brightwater	Proximate to Warner Avenue and Los Patos	Single Family Housing
5. Lamb Residential Subdivision	10251 Yorktown Avenue	Single Family Housing
6. Wardlow Residential Subdivision	9191 Pioneer Drive	Single Family Housing
7. Gun Range Reuse	Central Park (Proximate to Gothard Street and Talbert Avenue)	Community Park
8. Huntington Beach Lofts	7302-7400 Center Avenue, across from Goldenwest College (Southeast Corner of Gothard Street and Center Avenue)	Mixed Use Apartments/Commercial
9. Huntington Beach Senior Center	Central Park (southwest of the intersection of Goldenwest Street and Talbert Avenue)	Senior Center
10. Oceana Apartments	18151 Beach Blvd. (west side of Beach Blvd., south of Talbert at former Enterprise Car Rental site)	Apartments
11. Pacific City	31 acres bounded by Pacific Coast Highway, First Street, Atlanta Avenue, and Huntington Street	Mixed Use Condominiums/Commercial/ Hotel
12. Parkside Estates	West side of Graham St., south of Warner Ave., along the East Garden Grove Winterburg Food Control Channel	Single Family Housing
13. Pedigo Apartments	7262, 7266, 7280 Edinger Avenue and 16001, 17091 Gothard Street (southwest corner of Edinger Avenue and Gothard Street)	Apartments
14. Pierside Pavillion Expansion	300 Pacific Coast Highway (northeast corner of Pacific Coast Highway and Main Street)	Retail/Office/Restaurants
15. The Ridge	Southeast of the intersection of Bolsa Chica Street and Los Patos Avenue	Single Family Housing
16. Poseidon Desalination Facility	21730 Newland Street (off of Pacific Coast Highway)	Desalination Facility
17. Plains All American Pipeline Tanks (Removal)	West of Magnolia, south of Ascon site, 21845 Magnolia St	Pipeline Tank Removal
18. Huntington Beach Energy Project AES	21730 Newland Street	Construction project

Source: City of Huntington Beach, 2014

APPENDIX D – CUMMULATIVE PROJECT TRIP GENERATION

Project Name	Daily	AM Peak			MD Peak			PM Peak		
		In	Out	Total	In	Out	Total	In	Out	Total
1. Beach & Ellis - Elan Apartments [b]	1693	32	55	87	29	29	58	76	57	133
2. Beach Walk [a]	1150	18	70	88	30	29	59	70	37	107
3. The Boardwalk [c]	9020	155	454	609	203	203	406	471	296	767
4. Brightwater [a]	3380	67	199	266	89	89	178	224	131	355
5. Lamb Residential Subdivision [d]	970	15	46	61	21	20	41	52	30	82
6. Wardlow Residential Subdivision [e]	590	9	28	37	13	12	25	31	18	49
7. Gun Range Reuse [f]	594	30	19	49	17	16	33	34	47	81
8. Huntington Beach Lofts [g]	2640	42	162	204	68	68	136	155	91	246
9. Huntington Beach Senior Center [h]	3395	252	63	315	105	105	210	40	110	150
10. Oceana Apartments [a]	1150	18	70	88	30	29	59	70	37	107
11. Pacific City [i]	12002	345	283	628	210	209	419	505	546	1051
12. Parkside Estates [a]	1057	21	62	83	28	28	56	70	41	111
13. Pedigo Apartments [j]	3392	52	208	260	87	87	174	206	111	317
14. Pierside Pavillion Expansion [k]	1325	60	40	100	34	33	67	55	55	110
15. The Ridge [a]	209	4	13	17	6	6	12	14	8	22
16. Poseidon Desalination Plant [l]	130	9	9	18	9	9	18	9	9	18
17. Plains All American Pipeline Tanks Removal [m]	150	10	10	20	10	10	20	10	10	20
18. Huntington Beach Energy Project AES [n]	734	15	15	30	10	10	20	15	15	30

Source:
[a] ITE Trip Generation Manual 9th Edition, (2012).
[b] *Traffic Analysis for Beach-Ellis Project*, Austin-Foust Associates, Inc., (2011).
[c] *Traffic Analysis for Murdy-Commons Project*, Austin-Foust Associates, Inc., (2010).
[d] *Traffic Impact Analysis for the Proposed Residential Development at the Lamb School Site*, Garland Associates, (2012).
[e] *Traffic Impact Analysis for the Proposed Residential Development at the Wardlow School Site*, Garland Associates, (2012).
[f] *Gun Range Remediation and Reuse Project Traffic Analysis*, Stantec, (2013).
[g] *The Rip Curl Traffic Analysis*, Austin-Foust Associates, Inc., (2008).
[h] *Huntington Beach Senior Center Project Traffic Impact Analysis*, Urban Cross Roads, (2007).
[i] *Traffic Impact Analysis Report Pacific City*, Linscott, Law & Greenspan, Engineers, (2003).
[j] *Traffic Impact Analysis for Archstone Edinger Apartments*, Arch Beach Consulting, (2013).
[k] *Traffic Study for Pierside Pavilion Expansion*, Minigar & Associates, (2012).
[l] *Poseidon Seawater Desalination Facility EIR*, Dudek, (2010).
[m] Fehr & Peers, (2014).
[n] *Huntington Beach Energy Project Preliminary Staff Assessment*, California Energy Commission, (2013). Values assume use of employee shuttle service from off-site parking area to construction site.

APPENDIX E: PROJECT OPERATING YEAR (2017) BASE LOS RESULTS

HCM Signalized Intersection Capacity Analysis Remedial Action Plan Ascon Landfill Site TIA

1: Beach Blvd & McFadden Ave Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	254	344	125	323	442	103	182	2025	163	149	2868	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3398		3433	3439		3433	6336		3433	6305	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3398		3433	3439		3433	6336		3433	6305	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	273	370	134	347	475	111	196	2177	175	160	3084	370
RTOR Reduction (vph)	0	26	0	0	14	0	0	8	0	0	14	0
Lane Group Flow (vph)	273	478	0	347	572	0	196	2344	0	160	3440	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.5	33.8		13.7	31.0		12.0	72.9		11.2	72.1	
Effective Green, g (s)	16.5	33.8		13.7	31.0		12.0	72.9		11.2	72.1	
Actuated g/C Ratio	0.11	0.23		0.09	0.21		0.08	0.49		0.07	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	377	765		313	710		274	3079		256	3030	
v/s Ratio Prot	c0.08	0.14		c0.10	c0.17		0.06	c0.37		0.05	c0.55	
v/s Ratio Perm												
v/c Ratio	0.72	0.63		1.11	0.81		0.72	0.76		0.62	1.14	
Uniform Delay, d1	64.5	52.4		68.2	56.6		67.3	31.5		67.4	39.0	
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.69		1.00	1.00	
Incremental Delay, d2	6.8	1.6		83.3	6.6		7.7	1.6		4.7	65.6	
Delay (s)	71.3	54.0		151.5	63.3		74.1	23.3		72.1	104.5	
Level of Service	E	D		F	E		E	C		E	F	
Approach Delay (s)		60.1			96.1			27.2			103.1	
Approach LOS		E			F			C			F	

Intersection Summary			
HCM 2000 Control Delay	73.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	98.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	178	546	0	2375	2878	977
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	185	569	0	2474	2998	1018
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	185	568	0	2474	2998	1018
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	13.9	41.4		126.3	92.8	150.0
Effective Green, g (s)	13.9	41.4		126.3	92.8	150.0
Actuated g/C Ratio	0.09	0.28		0.84	0.62	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	318	852		5395	3964	1583
v/s Ratio Prot	0.05	0.12		0.38	c0.47	
v/s Ratio Perm		0.08		0.00		c0.64
v/c Ratio	0.58	0.67		0.46	0.76	0.64
Uniform Delay, d1	65.3	48.2		3.0	20.5	0.0
Progression Factor	1.00	1.00		0.08	0.39	1.00
Incremental Delay, d2	3.2	2.1		0.0	0.4	0.5
Delay (s)	68.5	50.3		0.2	8.4	0.5
Level of Service	E	D		A	A	A
Approach Delay (s)	54.8			0.2	6.4	
Approach LOS	D			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.3	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	69.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	308	1069	219	139	481	241	175	1828	288	461	2496	492
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	318	1102	226	143	496	248	180	1885	297	475	2573	507
RTOR Reduction (vph)	0	0	57	0	0	145	0	0	113	0	0	100
Lane Group Flow (vph)	318	1102	169	143	496	103	180	1885	184	475	2573	407
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.4	38.9	51.1	13.0	39.5	39.5	12.2	51.8	51.8	26.0	65.2	77.6
Effective Green, g (s)	12.4	38.9	51.1	13.0	39.5	39.5	12.2	51.8	51.8	26.0	65.2	77.6
Actuated g/C Ratio	0.08	0.26	0.34	0.09	0.26	0.26	0.08	0.35	0.35	0.17	0.43	0.52
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	283	1318	539	297	931	416	279	1756	546	595	2785	1441
v/s Ratio Prot	c0.09	c0.22	0.03	0.04	0.14		0.05	c0.37		c0.14	c0.40	0.02
v/s Ratio Perm			0.08			0.06			0.12			0.12
v/c Ratio	1.12	0.84	0.31	0.48	0.53	0.25	0.65	1.07	0.34	0.80	0.92	0.28
Uniform Delay, d1	68.8	52.5	36.5	65.3	47.3	43.5	66.8	49.1	36.4	59.5	40.1	20.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.57	0.40	1.13	0.58	0.38
Incremental Delay, d2	91.0	4.8	0.1	0.4	0.6	0.3	3.2	42.8	1.4	4.6	4.5	0.0
Delay (s)	159.8	57.3	36.6	65.7	47.9	43.8	99.4	70.8	15.9	72.0	27.6	7.8
Level of Service	F	E	D	E	D	D	F	E	B	E	C	A
Approach Delay (s)		74.3			49.7			66.1			30.7	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	96.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	19	21	66	8	101	46	2094	55	140	2704	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1716		1770	1863	1583	1770	6383		3433	6403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1716		1770	1863	1583	1770	6383		3433	6403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	20	22	69	8	106	48	2204	58	147	2846	14
RTOR Reduction (vph)	0	19	0	0	0	92	0	2	0	0	0	0
Lane Group Flow (vph)	26	23	0	69	8	14	48	2260	0	147	2860	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	18.4		9.9	20.5	20.5	8.3	89.4		12.7	93.8	
Effective Green, g (s)	7.8	18.4		9.9	20.5	20.5	8.3	89.4		12.7	93.8	
Actuated g/C Ratio	0.05	0.12		0.07	0.14	0.14	0.06	0.60		0.08	0.63	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	210		116	254	216	97	3804		290	4004	
v/s Ratio Prot	0.01	c0.01		c0.04	0.00		0.03	c0.35		0.04	c0.45	
v/s Ratio Perm						0.01						
v/c Ratio	0.28	0.11		0.59	0.03	0.07	0.49	0.59		0.51	0.71	
Uniform Delay, d1	68.4	58.5		68.1	56.1	56.4	68.8	19.0		65.7	19.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.61	0.22		0.63	0.25	
Incremental Delay, d2	1.7	0.2		7.9	0.1	0.1	3.4	0.6		0.7	0.6	
Delay (s)	70.1	58.7		76.0	56.2	56.5	114.3	4.8		41.9	5.4	
Level of Service	E	E		E	E	E	F	A		D	A	
Approach Delay (s)		63.1			63.9			7.0			7.2	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	4	41	89	5	52	37	2133	46	146	2696	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.98	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1607		1681	1603	1504	1770	6388		3433	6403	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1607		1681	1603	1504	1770	6388		3433	6403	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	4	43	93	5	54	39	2222	48	152	2808	14
RTOR Reduction (vph)	0	39	0	0	3	45	0	1	0	0	0	0
Lane Group Flow (vph)	29	8	0	52	49	3	39	2269	0	152	2822	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.1	13.1		9.0	9.0	9.0	8.1	97.1		12.9	101.9	
Effective Green, g (s)	13.1	13.1		9.0	9.0	9.0	8.1	97.1		12.9	101.9	
Actuated g/C Ratio	0.09	0.09		0.06	0.06	0.06	0.05	0.65		0.09	0.68	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	154	140		100	96	90	95	4135		295	4349	
v/s Ratio Prot	c0.02	0.00		c0.03	0.03		0.02	c0.36		0.04	c0.44	
v/s Ratio Perm						0.00						
v/c Ratio	0.19	0.06		0.52	0.51	0.03	0.41	0.55		0.52	0.65	
Uniform Delay, d1	63.5	62.8		68.4	68.4	66.4	68.6	14.5		65.6	13.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.86	1.50		0.58	0.30	
Incremental Delay, d2	0.6	0.2		4.8	4.6	0.1	2.2	0.4		1.1	0.6	
Delay (s)	64.1	62.9		73.2	72.9	66.5	61.1	22.1		39.1	4.7	
Level of Service	E	E		E	E	E	E	C		D	A	
Approach Delay (s)		63.4			71.0			22.7			6.5	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	187	357	284	52	230	104	132	1938	65	78	2548	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3304		1770	3374		1770	6377		1770	6351	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3304		1770	3374		1770	6377		1770	6351	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	197	376	299	55	242	109	139	2040	68	82	2682	168
RTOR Reduction (vph)	0	103	0	0	39	0	0	3	0	0	6	0
Lane Group Flow (vph)	197	572	0	55	312	0	139	2105	0	82	2844	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.9	35.7		8.8	21.6		12.8	74.3		12.4	73.9	
Effective Green, g (s)	22.9	35.7		8.8	21.6		12.8	74.3		12.4	73.9	
Actuated g/C Ratio	0.15	0.24		0.06	0.14		0.09	0.50		0.08	0.49	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	270	786		103	485		151	3158		146	3128	
v/s Ratio Prot	0.11	c0.17		0.03	c0.09		c0.08	0.33		0.05	c0.45	
v/s Ratio Perm												
v/c Ratio	0.73	0.73		0.53	0.64		0.92	0.67		0.56	0.91	
Uniform Delay, d1	60.6	52.7		68.6	60.6		68.1	28.5		66.2	35.0	
Progression Factor	1.00	1.00		1.00	1.00		0.88	0.96		0.87	0.86	
Incremental Delay, d2	9.5	3.4		5.2	2.9		46.2	1.0		3.8	4.1	
Delay (s)	70.1	56.1		73.8	63.5		105.9	28.4		61.1	34.2	
Level of Service	E	E		E	E		F	C		E	C	
Approach Delay (s)		59.2			64.9			33.2			34.9	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	91.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	18	62	41	4	16	52	2080	25	20	2798	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667	1478		1662	1478	1770	6397		1770	6399	
Flt Permitted		0.72	1.00		0.56	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1254	1478		971	1478	1770	6397		1770	6399	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	122	20	68	45	4	18	57	2286	27	22	3075	29
RTOR Reduction (vph)	0	0	57	0	0	15	0	1	0	0	1	0
Lane Group Flow (vph)	0	142	11	0	49	3	57	2312	0	22	3103	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		23.9	23.9		23.9	23.9	8.6	105.3		5.5	102.2	
Effective Green, g (s)		23.9	23.9		23.9	23.9	8.6	105.3		5.5	102.2	
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.06	0.70		0.04	0.68	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		199	235		154	235	101	4490		64	4359	
v/s Ratio Prot							c0.03	c0.36		0.01	c0.48	
v/s Ratio Perm		c0.11	0.01		0.05	0.00						
v/c Ratio		0.71	0.05		0.32	0.01	0.56	0.52		0.34	0.71	
Uniform Delay, d1		59.8	53.4		55.8	53.1	68.9	10.4		70.5	14.8	
Progression Factor		1.00	1.00		1.00	1.00	1.07	0.20		1.23	0.16	
Incremental Delay, d2		11.5	0.1		1.2	0.0	2.2	0.1		1.7	0.5	
Delay (s)		71.3	53.5		57.0	53.1	76.0	2.2		88.1	2.9	
Level of Service		E	D		E	D	E	A		F	A	
Approach Delay (s)		65.5			56.0			4.0			3.5	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	71.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	227	1313	136	222	900	93	187	1891	156	381	2148	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	5014		3433	5014		3433	6335		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	5014		3433	5014		3433	6335		3433	6408	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	252	1459	151	247	1000	103	208	2101	173	423	2387	304
RTOR Reduction (vph)	0	8	0	0	9	0	0	8	0	0	0	107
Lane Group Flow (vph)	252	1602	0	247	1094	0	208	2266	0	423	2387	197
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Effective Green, g (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Actuated g/C Ratio	0.09	0.31		0.08	0.29		0.09	0.36		0.13	0.40	0.40
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	322	1540		265	1457		297	2289		437	2576	636
v/s Ratio Prot	0.07	c0.32		c0.07	0.22		0.06	c0.36		0.12	c0.37	
v/s Ratio Perm												0.12
v/c Ratio	0.78	1.04		0.93	0.75		0.70	0.99		0.97	0.93	0.31
Uniform Delay, d1	66.5	52.0		68.8	48.3		66.6	47.6		65.1	42.7	30.6
Progression Factor	1.00	1.00		1.00	1.00		1.02	0.58		0.67	0.52	0.42
Incremental Delay, d2	10.9	34.1		36.9	2.2		4.7	14.4		28.1	5.4	0.9
Delay (s)	77.3	86.0		105.7	50.5		72.8	41.9		72.0	27.6	13.7
Level of Service	E	F		F	D		E	D		E	C	B
Approach Delay (s)		84.8			60.6			44.5			32.2	
Approach LOS		F			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	51.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.00			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0	
Intersection Capacity Utilization	94.5%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

9: Beach Blvd & Slater Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	688	192	70	421	103	118	1599	38	198	2139	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.97		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3423		1770	3435		1770	6386		1770	6335	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3423		1770	3435		1770	6386		1770	6335	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	178	748	209	76	458	112	128	1738	41	215	2325	192
RTOR Reduction (vph)	0	17	0	0	15	0	0	2	0	0	9	0
Lane Group Flow (vph)	178	940	0	76	555	0	128	1777	0	215	2508	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.7	42.9		12.0	30.2		12.5	52.9		21.5	61.9	
Effective Green, g (s)	24.7	42.9		12.0	30.2		12.5	52.9		21.5	61.9	
Actuated g/C Ratio	0.16	0.29		0.08	0.20		0.08	0.35		0.14	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	291	978		141	691		147	2252		253	2614	
v/s Ratio Prot	0.10	c0.27		0.04	c0.16		0.07	c0.28		0.12	c0.40	
v/s Ratio Perm												
v/c Ratio	0.61	0.96		0.54	0.80		0.87	0.79		0.85	0.96	
Uniform Delay, d1	58.2	52.7		66.3	57.1		68.0	43.5		62.7	42.8	
Progression Factor	1.00	1.00		1.00	1.00		0.77	0.71		0.83	0.54	
Incremental Delay, d2	3.8	19.9		3.9	6.7		37.5	2.7		9.3	4.6	
Delay (s)	62.0	72.6		70.3	63.8		90.1	33.7		61.2	27.6	
Level of Service	E	E		E	E		F	C		E	C	
Approach Delay (s)		71.0			64.5			37.5			30.2	
Approach LOS		E			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	43.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	94.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

10: Beach Blvd & Newman Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	4	26	40	2	69	18	1668	63	119	2440	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1677		1770	6373		1770	6402	
Flt Permitted		0.73			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1284			1465		1770	6373		1770	6402	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	29	4	27	41	2	70	18	1702	64	121	2490	15
RTOR Reduction (vph)	0	24	0	0	48	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	36	0	0	65	0	18	1764	0	121	2505	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		17.2			17.2		6.0	101.3		15.6	110.9	
Effective Green, g (s)		17.2			17.2		6.0	101.3		15.6	110.9	
Actuated g/C Ratio		0.11			0.11		0.04	0.68		0.10	0.74	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		147			167		70	4303		184	4733	
v/s Ratio Prot							0.01	0.28		c0.07	c0.39	
v/s Ratio Perm		0.03			c0.04							
v/c Ratio		0.25			0.39		0.26	0.41		0.66	0.53	
Uniform Delay, d1		60.5			61.5		69.8	10.9		64.6	8.4	
Progression Factor		1.00			1.00		1.15	0.08		1.19	0.10	
Incremental Delay, d2		0.9			1.5		1.2	0.2		2.9	0.1	
Delay (s)		61.4			63.1		81.7	1.0		79.8	1.0	
Level of Service		E			E		F	A		E	A	
Approach Delay (s)		61.4			63.1			1.8			4.6	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	65.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	408	130	131	375	146	176	1559	139	323	1766	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3391		1770	6329		1770	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3391		1770	6329		1770	6323	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	102	434	138	139	399	155	187	1659	148	344	1879	181
RTOR Reduction (vph)	0	22	0	0	29	0	0	9	0	0	9	0
Lane Group Flow (vph)	102	550	0	139	525	0	187	1798	0	344	2051	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.2	30.2		13.2	31.2		18.6	54.6		31.3	67.3	
Effective Green, g (s)	12.2	30.2		13.2	31.2		18.6	54.6		31.3	67.3	
Actuated g/C Ratio	0.08	0.20		0.09	0.21		0.12	0.36		0.21	0.45	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	143	686		155	705		219	2303		369	2836	
v/s Ratio Prot	0.06	c0.16		c0.08	0.15		0.11	c0.28		c0.19	0.32	
v/s Ratio Perm												
v/c Ratio	0.71	0.80		0.90	0.74		0.85	0.78		0.93	0.72	
Uniform Delay, d1	67.2	57.1		67.7	55.7		64.4	42.4		58.3	33.7	
Progression Factor	1.00	1.00		1.00	1.00		0.74	0.65		0.41	0.20	
Incremental Delay, d2	13.1	6.9		42.3	4.4		22.5	2.3		27.1	1.4	
Delay (s)	80.3	64.0		110.1	60.1		70.1	29.8		50.8	8.2	
Level of Service	F	E		F	E		E	C		D	A	
Approach Delay (s)		66.4			70.1			33.6			14.3	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	33.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	316	410	102	127	359	150	112	1378	156	226	1445	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6310		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6310		3433	5085	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	336	436	109	135	382	160	119	1466	166	240	1537	445
RTOR Reduction (vph)	0	0	89	0	0	133	0	11	0	0	0	22
Lane Group Flow (vph)	336	436	20	135	382	27	119	1621	0	240	1537	423
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	27.9	27.9	27.9	19.2	19.2	19.2	10.0	66.4		13.8	70.2	98.1
Effective Green, g (s)	27.9	27.9	27.9	19.2	19.2	19.2	10.0	66.4		13.8	70.2	98.1
Actuated g/C Ratio	0.19	0.19	0.19	0.13	0.13	0.13	0.07	0.44		0.09	0.47	0.65
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	638	658	294	226	452	202	228	2793		315	2379	1035
v/s Ratio Prot	0.10	c0.12		0.08	c0.11		0.03	c0.26		c0.07	c0.30	0.27
v/s Ratio Perm			0.01			0.02						
v/c Ratio	0.53	0.66	0.07	0.60	0.85	0.14	0.52	0.58		0.76	0.65	0.41
Uniform Delay, d1	55.1	56.7	50.3	61.8	63.9	58.0	67.7	31.4		66.5	30.4	12.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.37	0.39	0.22
Incremental Delay, d2	0.5	2.1	0.1	2.8	13.0	0.1	1.0	0.9		6.7	1.0	0.1
Delay (s)	55.5	58.8	50.4	64.6	77.0	58.2	68.7	32.2		97.6	12.7	2.8
Level of Service	E	E	D	E	E	E	E	C		F	B	A
Approach Delay (s)		56.5			70.1			34.7			19.9	
Approach LOS		E			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	75.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	631	186	125	352	147	123	1246	87	157	1312	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3383		1770	5035		1770	5021	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3383		1770	5035		1770	5021	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	204	671	198	133	374	156	131	1326	93	167	1396	129
RTOR Reduction (vph)	0	0	149	0	40	0	0	6	0	0	7	0
Lane Group Flow (vph)	204	671	49	133	490	0	131	1413	0	167	1518	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	18.8	32.2	32.2	13.0	26.4		13.0	49.2		14.4	50.6	
Effective Green, g (s)	18.8	32.2	32.2	13.0	26.4		13.0	49.2		14.4	50.6	
Actuated g/C Ratio	0.14	0.25	0.25	0.10	0.20		0.10	0.38		0.11	0.39	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	255	876	392	177	687		177	1905		196	1954	
v/s Ratio Prot	0.12	c0.19		0.08	c0.14		0.07	c0.28		c0.09	c0.30	
v/s Ratio Perm			0.03									
v/c Ratio	0.80	0.77	0.13	0.75	0.71		0.74	0.74		0.85	0.78	
Uniform Delay, d1	53.8	45.4	38.0	56.9	48.3		56.9	34.9		56.8	34.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.63	1.04		1.00	1.00	
Incremental Delay, d2	15.4	4.3	0.2	14.7	3.8		10.9	2.1		27.4	3.1	
Delay (s)	69.2	49.7	38.2	71.6	52.0		46.8	38.5		84.1	37.9	
Level of Service	E	D	D	E	D		D	D		F	D	
Approach Delay (s)		51.3			56.0			39.2			42.4	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	45.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	79.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	488	199	140	437	124	81	1139	89	107	1387	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3422		1770	5030		1770	5030	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3422		1770	5030		1770	5030	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	172	514	209	147	460	131	85	1199	94	113	1460	115
RTOR Reduction (vph)	0	0	162	0	23	0	0	6	0	0	6	0
Lane Group Flow (vph)	172	514	47	147	568	0	85	1287	0	113	1569	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.1	29.1	29.1	14.2	28.2		11.6	54.2		12.1	54.7	
Effective Green, g (s)	15.1	29.1	29.1	14.2	28.2		11.6	54.2		12.1	54.7	
Actuated g/C Ratio	0.12	0.22	0.22	0.11	0.22		0.09	0.42		0.09	0.42	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	205	792	354	193	742		157	2097		164	2116	
v/s Ratio Prot	c0.10	0.15		0.08	c0.17		0.05	c0.26		0.06	c0.31	
v/s Ratio Perm			0.03									
v/c Ratio	0.84	0.65	0.13	0.76	0.77		0.54	0.61		0.69	0.74	
Uniform Delay, d1	56.3	45.8	40.4	56.3	47.8		56.7	29.7		57.1	31.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.05	0.44		0.80	0.63	
Incremental Delay, d2	24.8	1.8	0.2	16.2	4.7		3.6	1.3		8.0	1.6	
Delay (s)	81.1	47.7	40.5	72.4	52.5		62.8	14.4		53.4	21.5	
Level of Service	F	D	D	E	D		E	B		D	C	
Approach Delay (s)		52.4			56.5			17.4			23.6	
Approach LOS		D			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

15: Beach Blvd & Utica Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	21	81	28	9	48	42	1202	44	55	1394	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1697			1794	1583	1770	5059		1770	5048	
Flt Permitted		0.89			0.63	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1535			1170	1583	1770	5059		1770	5048	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	22	85	29	9	51	44	1265	46	58	1467	76
RTOR Reduction (vph)	0	44	0	0	0	44	0	2	0	0	3	0
Lane Group Flow (vph)	0	108	0	0	38	7	44	1309	0	58	1540	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		18.0			18.0	18.0	8.4	87.4		9.4	88.4	
Effective Green, g (s)		18.0			18.0	18.0	8.4	87.4		9.4	88.4	
Actuated g/C Ratio		0.14			0.14	0.14	0.06	0.67		0.07	0.68	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		212			162	219	114	3401		127	3432	
v/s Ratio Prot							0.02	c0.26		0.03	c0.31	
v/s Ratio Perm		c0.07			0.03	0.00						
v/c Ratio		0.51			0.23	0.03	0.39	0.38		0.46	0.45	
Uniform Delay, d1		51.9			49.9	48.5	58.3	9.4		57.9	9.6	
Progression Factor		1.00			1.00	1.00	1.18	0.40		0.61	0.63	
Incremental Delay, d2		1.9			0.7	0.1	1.9	0.3		1.8	0.3	
Delay (s)		53.8			50.6	48.5	70.8	4.1		37.2	6.4	
Level of Service		D			D	D	E	A		D	A	
Approach Delay (s)		53.8			49.4			6.2			7.5	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	756	95	130	430	232	89	874	185	401	975	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	4952		3433	5008	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	4952		3433	5008	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	125	779	98	134	443	239	92	901	191	413	1005	113
RTOR Reduction (vph)	0	13	0	0	0	74	0	22	0	0	9	0
Lane Group Flow (vph)	125	864	0	134	443	165	92	1070	0	413	1109	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	13.5	30.9		13.3	30.7	49.4	13.3	45.3		18.7	50.7	
Effective Green, g (s)	13.5	30.9		13.3	30.7	49.4	13.3	45.3		18.7	50.7	
Actuated g/C Ratio	0.10	0.24		0.10	0.24	0.38	0.10	0.35		0.14	0.39	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	183	1188		181	835	601	181	1725		493	1953	
v/s Ratio Prot	0.07	c0.17		c0.08	0.13	0.04	0.05	c0.22		c0.12	0.22	
v/s Ratio Perm						0.06						
v/c Ratio	0.68	0.73		0.74	0.53	0.27	0.51	0.62		0.84	0.57	
Uniform Delay, d1	56.2	45.7		56.7	43.4	27.9	55.3	35.2		54.2	31.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.64	0.46		0.70	0.53	
Incremental Delay, d2	8.1	2.8		13.2	1.2	0.1	0.7	1.5		10.5	1.1	
Delay (s)	64.3	48.4		69.9	44.5	28.0	35.9	17.7		48.2	17.5	
Level of Service	E	D		E	D	C	D	B		D	B	
Approach Delay (s)		50.4			43.9			19.1			25.8	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	32.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	75.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	210	50	28	117	227	15	792	62	228	1011	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1809		1770	1863	1583	1770	5030		1770	5055	
Flt Permitted	0.61	1.00		0.26	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1130	1809		485	1863	1583	1770	5030		1770	5055	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	233	56	31	130	252	17	880	69	253	1123	47
RTOR Reduction (vph)	0	8	0	0	0	202	0	6	0	0	2	0
Lane Group Flow (vph)	119	281	0	31	130	50	17	943	0	253	1168	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	26.0	26.0		26.0	26.0	26.0	4.0	49.5		38.1	83.6	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	4.0	49.5		38.1	83.6	
Actuated g/C Ratio	0.20	0.20		0.20	0.20	0.20	0.03	0.38		0.29	0.64	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	226	361		97	372	316	54	1915		518	3250	
v/s Ratio Prot		c0.16			0.07		0.01	c0.19		c0.14	0.23	
v/s Ratio Perm	0.11			0.06		0.03						
v/c Ratio	0.53	0.78		0.32	0.35	0.16	0.31	0.49		0.49	0.36	
Uniform Delay, d1	46.5	49.3		44.4	44.7	43.0	61.7	30.7		37.9	10.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.17	0.94		0.46	0.29	
Incremental Delay, d2	2.2	10.1		1.9	0.6	0.2	3.0	0.8		0.6	0.3	
Delay (s)	48.7	59.4		46.3	45.3	43.2	75.2	29.5		18.2	3.4	
Level of Service	D	E		D	D	D	E	C		B	A	
Approach Delay (s)		56.3			44.1			30.3			6.0	
Approach LOS		E			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	432	44	54	352	249	40	402	66	271	643	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.94		1.00	0.98		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3490		1770	3319		1770	4978		1770	4906	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3490		1770	3319		1770	4978		1770	4906	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	176	465	47	58	378	268	43	432	71	291	691	213
RTOR Reduction (vph)	0	7	0	0	107	0	0	15	0	0	38	0
Lane Group Flow (vph)	176	505	0	58	539	0	43	488	0	291	866	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.5	35.5		8.0	27.0		11.0	40.9		24.5	54.4	
Effective Green, g (s)	16.5	35.5		8.0	27.0		11.0	40.9		24.5	54.4	
Actuated g/C Ratio	0.13	0.27		0.06	0.21		0.08	0.31		0.19	0.42	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	224	953		108	689		149	1566		333	2052	
v/s Ratio Prot	c0.10	0.14		0.03	c0.16		0.02	c0.10		c0.16	c0.18	
v/s Ratio Perm												
v/c Ratio	0.79	0.53		0.54	0.78		0.29	0.31		0.87	0.42	
Uniform Delay, d1	55.0	40.2		59.2	48.7		55.8	33.9		51.2	26.7	
Progression Factor	1.00	1.00		1.00	1.00		0.93	0.89		1.29	0.50	
Incremental Delay, d2	15.3	0.3		2.6	5.3		0.4	0.5		20.2	0.6	
Delay (s)	70.3	40.4		61.8	54.1		52.4	30.7		86.1	14.0	
Level of Service	E	D		E	D		D	C		F	B	
Approach Delay (s)		48.1			54.7			32.5			31.6	
Approach LOS		D			D			C			C	

Intersection Summary				
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	72.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

19: Beach Blvd & Pacific View Ave

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	0	81	0	0	0	75	380	0	0	679	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5042	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5042	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	40	0	86	0	0	0	80	404	0	0	722	43
RTOR Reduction (vph)	0	0	76	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	40	0	10	0	0	0	80	404	0	0	763	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.6		14.6				10.0	104.4			89.5	
Effective Green, g (s)	14.6		14.6				10.0	104.4			89.5	
Actuated g/C Ratio	0.11		0.11				0.08	0.80			0.69	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	198		177				136	4083			3471	
v/s Ratio Prot							c0.05	0.08			c0.15	
v/s Ratio Perm	c0.02		0.01									
v/c Ratio	0.20		0.05				0.59	0.10			0.22	
Uniform Delay, d1	52.4		51.5				58.0	2.7			7.4	
Progression Factor	1.00		1.00				1.26	0.48			0.32	
Incremental Delay, d2	0.5		0.1				6.1	0.0			0.1	
Delay (s)	52.9		51.7				79.0	1.4			2.5	
Level of Service	D		D				E	A			A	
Approach Delay (s)		52.1			0.0			14.2			2.5	
Approach LOS		D			A			B			A	

Intersection Summary				
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.25			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	37.8%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	1807	24	20	801	349	5	14	30	601	53	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	90	1825	24	20	809	353	5	14	30	607	54	154
RTOR Reduction (vph)	0	1	0	0	0	170	0	0	28	0	0	0
Lane Group Flow (vph)	90	1848	0	20	809	183	5	14	2	607	54	154
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	9.8	74.3		2.8	67.3	67.3	6.6	10.2	10.2	21.0	24.6	130.0
Effective Green, g (s)	9.8	74.3		2.8	67.3	67.3	6.6	10.2	10.2	21.0	24.6	130.0
Actuated g/C Ratio	0.08	0.57		0.02	0.52	0.52	0.05	0.08	0.08	0.16	0.19	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	2.0	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	258	2900		38	1832	819	89	277	124	554	352	1583
v/s Ratio Prot	0.03	c0.36		0.01	c0.23		0.00	0.00		c0.18	0.03	
v/s Ratio Perm						0.12			0.00			c0.10
v/c Ratio	0.35	0.64		0.53	0.44	0.22	0.06	0.05	0.02	1.10	0.15	0.10
Uniform Delay, d1	57.1	18.8		62.9	19.6	17.1	58.7	55.4	55.3	54.5	44.0	0.0
Progression Factor	1.00	1.00		1.46	0.23	0.14	1.00	1.00	1.00	0.77	0.51	1.00
Incremental Delay, d2	0.3	1.1		5.8	0.8	0.6	0.1	0.0	0.0	66.8	0.1	0.1
Delay (s)	57.4	19.9		97.8	5.2	3.0	58.8	55.4	55.3	108.7	22.4	0.1
Level of Service	E	B		F	A	A	E	E	E	F	C	A
Approach Delay (s)		21.6			6.1			55.7			82.4	
Approach LOS		C			A			E			F	

Intersection Summary			
HCM 2000 Control Delay	29.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

23: Huntington Beach Parking/Newland St & Pacific Coast Highway

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	2337	3	3	972	62	13	15	8	201	1	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1766		1770	1585	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.52	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	963	1766		1383	1585	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	91	2385	3	3	992	63	13	15	8	205	1	150
RTOR Reduction (vph)	0	0	1	0	0	24	0	6	0	0	121	0
Lane Group Flow (vph)	91	2385	2	3	992	39	13	17	0	205	30	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	10.8	90.0	90.0	1.2	80.4	80.4	24.9	24.9		24.9	24.9	
Effective Green, g (s)	10.8	90.0	90.0	1.2	80.4	80.4	24.9	24.9		24.9	24.9	
Actuated g/C Ratio	0.08	0.69	0.69	0.01	0.62	0.62	0.19	0.19		0.19	0.19	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	147	3520	1095	16	3144	979	184	338		264	303	
v/s Ratio Prot	0.05	c0.47		c0.00	0.20			0.01			0.02	
v/s Ratio Perm			0.00			0.02	0.01			c0.15		
v/c Ratio	0.62	0.68	0.00	0.19	0.32	0.04	0.07	0.05		0.78	0.10	
Uniform Delay, d1	57.6	11.6	6.2	63.9	11.8	9.7	43.1	42.9		49.9	43.3	
Progression Factor	0.95	0.91	1.00	0.46	0.18	0.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.8	0.7	0.0	2.0	0.3	0.1	0.1	0.0		12.2	0.1	
Delay (s)	58.7	11.3	6.2	31.5	2.4	0.1	43.1	42.9		62.2	43.4	
Level of Service	E	B	A	C	A	A	D	D		E	D	
Approach Delay (s)		13.1			2.3			43.0			54.2	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

25: Magnolia Ave & Pacific Coast Highway

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	2418	40	38	937	62	13	23	6	172	59	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1727	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1727	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	132	2493	41	39	966	64	13	24	6	177	61	108
RTOR Reduction (vph)	0	0	16	0	0	32	0	6	0	0	0	94
Lane Group Flow (vph)	132	2493	25	39	966	32	13	24	0	117	121	14
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	17.9	78.2	78.2	5.4	65.7	65.7	10.2	10.2		17.4	17.4	17.4
Effective Green, g (s)	17.9	78.2	78.2	5.4	65.7	65.7	10.2	10.2		17.4	17.4	17.4
Actuated g/C Ratio	0.14	0.60	0.60	0.04	0.51	0.51	0.08	0.08		0.13	0.13	0.13
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	243	3058	952	73	2569	800	138	141		224	231	211
v/s Ratio Prot	0.07	c0.49		c0.02	0.19		0.01	c0.01		0.07	c0.07	
v/s Ratio Perm			0.02			0.02						0.01
v/c Ratio	0.54	0.82	0.03	0.53	0.38	0.04	0.09	0.17		0.52	0.52	0.07
Uniform Delay, d1	52.2	20.3	10.5	61.1	19.6	16.2	55.6	56.0		52.4	52.4	49.2
Progression Factor	0.90	0.71	1.00	1.14	0.30	0.35	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.0	2.0	0.0	3.6	0.4	0.1	0.1	0.2		1.0	1.0	0.1
Delay (s)	48.0	16.4	10.5	72.9	6.2	5.8	55.7	56.2		53.4	53.4	49.3
Level of Service	D	B	B	E	A	A	E	E		D	D	D
Approach Delay (s)		17.9			8.6			56.0			52.1	
Approach LOS		B			A			E			D	

Intersection Summary				
HCM 2000 Control Delay	18.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	76.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

27: Brookhurst St & Pacific Coast Highway

Opening Year AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	2395	2	7	895	261	11	15	11	579	5	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	180	2395	2	7	895	261	11	15	11	579	5	147
RTOR Reduction (vph)	0	0	1	0	0	84	0	11	0	0	0	115
Lane Group Flow (vph)	180	2395	1	7	895	177	11	15	0	579	5	32
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	17.0	76.4	76.4	0.8	60.2	88.3	4.0	4.0		28.1	28.1	28.1
Effective Green, g (s)	17.0	76.4	76.4	0.8	60.2	88.3	4.0	4.0		28.1	28.1	28.1
Actuated g/C Ratio	0.13	0.59	0.59	0.01	0.46	0.68	0.03	0.03		0.22	0.22	0.22
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	231	2988	930	10	2354	1075	54	53		742	402	342
v/s Ratio Prot	0.10	c0.47		c0.00	0.18	0.04	0.01	c0.01		c0.17	0.00	
v/s Ratio Perm			0.00			0.08						0.02
v/c Ratio	0.78	0.80	0.00	0.70	0.38	0.16	0.20	0.29		0.78	0.01	0.09
Uniform Delay, d1	54.7	20.9	11.1	64.5	22.7	7.5	61.4	61.6		48.0	40.0	40.8
Progression Factor	1.14	0.36	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.3	1.5	0.0	101.3	0.5	0.0	0.7	1.1		4.9	0.0	0.0
Delay (s)	71.7	9.1	11.1	165.8	23.2	7.6	62.1	62.7		53.0	40.0	40.8
Level of Service	E	A	B	F	C	A	E	E		D	D	D
Approach Delay (s)		13.5			20.6			62.5			50.4	
Approach LOS		B			C			E			D	

Intersection Summary				
HCM 2000 Control Delay	21.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	86.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
AM PEAK HOUR

Scenario Report

Scenario:	OYNP-AM
Command:	OYNP-AM
Volume:	EX-AM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	OY-CUMUL-AM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	OYNP-AM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
AM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.742	C	xxxxx	0.795	+ 0.053
# 8 Beach Blvd & Warner Ave	C	xxxxx	0.767	D	xxxxx	0.813	+ 0.046
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.569	B	xxxxx	0.619	+ 0.050
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.564	B	xxxxx	0.601	+ 0.038
# 21 Newland St & Atlanta Ave	A	xxxxx	0.509	A	xxxxx	0.517	+ 0.007
# 22 Newland St & Hamilton Ave	A	xxxxx	0.577	A	xxxxx	0.577	+ 0.000
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.544	A	xxxxx	0.544	+ 0.000
# 26 Brookhurst St & Hamilton Ave	C	xxxxx	0.724	C	xxxxx	0.724	+ 0.000
# 30 Brookhurst Street & Talbert Av	D	xxxxx	0.822	D	xxxxx	0.838	+ 0.016
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.360	A	xxxxx	0.367	+ 0.007
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.413	A	xxxxx	0.420	+ 0.007
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.687	C	xxxxx	0.710	+ 0.023
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.536	A	xxxxx	0.547	+ 0.012
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.540	A	xxxxx	0.548	+ 0.009
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.762	C	xxxxx	0.773	+ 0.011
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.265	A	xxxxx	0.265	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.400	A	xxxxx	0.408	+ 0.008
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.258	A	xxxxx	0.259	+ 0.000
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.315	A	xxxxx	0.315	+ 0.000

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.742
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0	1	2	0	4	0	2	2	0	3	0	1	
Volume Module:																
Base Vol:	144	1666	278		448	2316	443		194	887	149		134	431	234	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	148	1716	286		461	2385	456		200	914	153		138	444	241	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	148	1716	286		461	2385	456		200	914	153		138	444	241	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	148	1716	286		461	2385	456		200	914	153		138	444	241	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	148	1716	286		461	2385	456		200	914	153		138	444	241	
OvlAdjVol:							256				79					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.34	0.17		0.14	0.35	0.13		0.06	0.18	0.09		0.04	0.13	0.14	
OvlAdjV/S:							0.08				0.05					
Crit Moves:	****				****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.767
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	1	0	2	0	4	0	1	2	0	2	1	0	
Volume Module:																
Base Vol:	162	1716	147		365	1926	257		206	1195	90		214	847	88	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	167	1767	151		376	1984	265		212	1231	93		220	872	91	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	167	1767	151		376	1984	265		212	1231	93		220	872	91	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	167	1767	151		376	1984	265		212	1231	93		220	872	91	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	167	1767	151		376	1984	265		212	1231	93		220	872	91	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.68	0.32		2.00	4.00	1.00		2.00	2.79	0.21		2.00	2.72	0.28	
Final Sat.:	3400	6263	537		3400	6800	1700		3400	4743	357		3400	4620	480	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.28	0.28		0.11	0.29	0.16		0.06	0.26	0.26		0.06	0.19	0.19	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.569
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	86	747	173	320	815	94	113	727	92	117	409	215				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	89	769	178	330	839	97	116	749	95	121	421	221				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	89	769	178	330	839	97	116	749	95	121	421	221				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	89	769	178	330	839	97	116	749	95	121	421	221				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	89	769	178	330	839	97	116	749	95	121	421	221				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.44	0.56	2.00	2.69	0.31	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4141	959	3400	4573	527	1700	4527	573	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.19	0.10	0.18	0.18	0.07	0.17	0.17	0.07	0.12	0.13				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.564
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	5	14	29	494	51	137	83	1702	23	19	710	242				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	5	14	30	509	53	141	85	1753	24	20	731	249				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	5	14	0	509	53	0	85	1753	24	20	731	249				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	5	14	0	509	53	0	85	1753	24	20	731	249				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	5	14	0	509	53	0	85	1753	24	20	731	249				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.96	0.04	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	5032	68	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.15	0.03	0.00	0.03	0.35	0.35	0.01	0.22	0.15				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.509
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1	0	1	0	1	1	0	1	0	1	0	1	1	0
Volume Module:																
Base Vol:	128	316	39	151	377	71	84	516	238	29	354	150				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	132	325	40	156	388	73	87	531	245	30	365	155				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	132	325	40	156	388	73	87	531	245	30	365	155				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	132	325	40	156	388	73	87	531	245	30	365	155				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	132	325	40	156	388	73	87	531	245	30	365	155				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.78	0.22	1.00	1.68	0.32	1.00	1.37	0.63	1.00	1.40	0.60				
Final Sat.:	1700	3026	374	1700	2861	539	1700	2327	1073	1700	2388	1012				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.11	0.11	0.09	0.14	0.14	0.05	0.23	0.23	0.02	0.15	0.15				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.577
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1	0	1	0	1	0	0	0	0	0	0	0	0	1
Volume Module:																
Base Vol:	0	136	93	407	270	0	0	0	0	104	0	233				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	0	140	96	419	278	0	0	0	0	107	0	240				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	140	96	419	278	0	0	0	0	107	0	240				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	140	96	419	278	0	0	0	0	107	0	240				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	140	96	419	278	0	0	0	0	107	0	240				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.59	0.41	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1010	690	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.14	0.14	0.25	0.16	0.00	0.00	0.00	0.00	0.06	0.00	0.14				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.544
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	36	206	45		214	256	35		75	397	54		25	305	309	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	37	212	46		220	264	36		77	409	56		26	314	318	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	37	212	46		220	264	36		77	409	56		26	314	318	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	37	212	46		220	264	36		77	409	56		26	314	318	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	37	212	46		220	264	36		77	409	56		26	314	318	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.64	0.36		1.00	2.00	1.00		1.00	0.88	0.12		1.00	1.00	1.00	
Final Sat.:	1700	2790	610		1700	3400	1700		1700	1496	204		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.08	0.08		0.13	0.08	0.02		0.05	0.27	0.27		0.02	0.18	0.19	
Crit Moves:		****			****					****			****			

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	70	295	342		477	413	82		98	769	56		120	403	279	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	72	304	352		491	425	84		101	792	58		124	415	287	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	72	304	352		491	425	84		101	792	58		124	415	287	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	72	304	352		491	425	84		101	792	58		124	415	287	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	72	304	352		491	425	84		101	792	58		124	415	287	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.50	0.50		1.00	1.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4255	845		1700	3169	231		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.06	0.21		0.14	0.10	0.10		0.06	0.25	0.25		0.07	0.12	0.17	
Crit Moves:				****	****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.822
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	120	1043	420	650	955	356	135	1325	90	174	366	80				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	124	1074	433	670	984	367	139	1365	93	179	377	82				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	124	1074	433	670	984	367	139	1365	93	179	377	82				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	124	1074	433	670	984	367	139	1365	93	179	377	82				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	124	1074	433	670	984	367	139	1365	93	179	377	82				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	5100	1700	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.21	0.25	0.20	0.19	0.22	0.04	0.27	0.05	0.05	0.11	0.05				
Crit Moves:			****	****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.360
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	45	1415	3	15	1274	150	11	1	8	3	0	10				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	46	1457	3	15	1312	155	11	1	8	3	0	10				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	46	1457	3	15	1312	0	11	1	8	3	0	10				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	46	1457	3	15	1312	0	11	1	8	3	0	10				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	46	1457	3	15	1312	0	11	1	8	3	0	10				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.55	0.05	0.40	0.23	0.00	0.77				
Final Sat.:	1700	5089	11	1700	5100	1700	935	85	680	392	0	1308				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.29	0.29	0.01	0.26	0.00	0.01	0.01	0.01	0.00	0.00	0.01				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.413
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	25	1408	9		20	1092	95		78	1	20		10	1	35	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	25	1408	9		20	1092	95		78	1	20		10	1	35	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	25	1408	9		20	1092	95		78	1	20		10	1	35	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	25	1408	9		20	1092	95		78	1	20		10	1	35	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.76	0.24		0.99	0.01	1.00		0.22	0.02	0.76	
Final Sat.:	1700	5067	33		1700	4693	407		1678	22	1700		378	38	1284	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.28	0.28		0.01	0.23	0.23		0.05	0.05	0.01		0.01	0.03	0.03	
Crit Moves:		****				****				****				****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.687
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	72	1135	202		137	763	146		279	925	59		151	351	147	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	72	1135	202		137	763	146		279	925	59		151	351	147	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	72	1135	202		137	763	146		279	925	59		151	351	147	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	72	1135	202		137	763	146		279	925	59		151	351	147	
OvlAdjVol:			126				7									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.88	0.12		2.00	1.41	0.59	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	3197	203		3400	2395	1005	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.22	0.12		0.08	0.15	0.09		0.08	0.29	0.29		0.04	0.15	0.15	
OvlAdjV/S:			0.07				0.00									
Crit Moves:		****				****					****			****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.536
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	80	1087	67		70	830	145		242	386	92		132	176	59	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	80	1087	67		70	830	145		242	386	92		132	176	59	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	80	1087	67		70	830	145		242	386	92		132	176	59	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	80	1087	67		70	830	145		242	386	92		132	176	59	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.83	0.17		1.00	3.00	1.00		1.00	1.62	0.38		1.00	2.00	1.00	
Final Sat.:	1700	4804	296		1700	5100	1700		1700	2748	652		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.23	0.23		0.04	0.16	0.09		0.14	0.14	0.14		0.08	0.05	0.03	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.540
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	92	890	113		10	792	150		198	435	153		108	228	45	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	95	917	116		10	816	155		204	448	158		111	235	46	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	95	917	116		10	816	155		204	448	158		111	235	46	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	95	917	116		10	816	155		204	448	158		111	235	46	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	95	917	116		10	816	155		204	448	158		111	235	46	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.66	0.34		1.00	2.52	0.48		1.00	1.48	0.52		1.00	1.67	0.33	
Final Sat.:	1700	4525	575		1700	4288	812		1700	2515	885		1700	2840	560	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.20	0.20		0.01	0.19	0.19		0.12	0.18	0.18		0.07	0.08	0.08	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.762
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	82	677	275	393	696	160	241	1782	73	205	613	159				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	82	677	275	393	696	160	241	1782	73	205	613	159				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	82	677	275	393	696	160	241	1782	73	205	613	159				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	82	677	275	393	696	160	241	1782	73	205	613	159				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.13	0.87	2.00	2.44	0.56	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	3626	1474	3400	4149	951	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.19	0.19	0.12	0.17	0.17	0.07	0.35	0.04	0.06	0.12	0.09				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.265
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	30	873	0	0	708	46	148	0	49	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	30	873	0	0	708	46	148	0	49	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	30	873	0	0	708	46	148	0	49	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	30	873	0	0	708	46	148	0	49	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.82	0.18	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4786	314	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.17	0.00	0.00	0.15	0.15	0.04	0.00	0.03	0.00	0.00	0.00				
Crit Moves:		****		****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.400
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	92	685	15	15	659	138	222	15	225	18	24	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	92	685	15	15	659	138	222	15	225	18	24	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	92	685	15	15	659	138	222	15	225	18	24	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	92	685	15	15	659	138	222	15	225	18	24	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.48	0.52	1.00	1.00	1.00	1.00	1.59	0.41				
Final Sat.:	1700	4988	113	1700	4217	883	1700	1700	1700	1700	2697	703				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.14	0.14	0.01	0.16	0.16	0.13	0.01	0.13	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.258
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	3	425	0	0	536	103	138	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	3	425	0	0	536	103	138	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	3	425	0	0	536	103	138	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	3	425	0	0	536	103	138	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.52	0.48	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4277	823	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00	0.00	0.13	0.13	0.08	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.315
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	18	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1!	0 0
Volume Module:																
Base Vol:	54	398	2		3	516	15		7		1	207	3		0	6
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03		1.03	1.03	1.03		1.03	1.03
Initial Bse:	56	410	2		3	531	15		7		1	213	3		0	6
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	56	410	2		3	531	15		7		1	213	3		0	6
Reduct Vol:	0	0	0		0	0	0		0		0	0	0		0	0
Reduced Vol:	56	410	2		3	531	15		7		1	213	3		0	6
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
FinalVolume:	56	410	2		3	531	15		7		1	213	3		0	6
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700		1700	1700	1700		1700	1700
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
Lanes:	1.00	2.98	0.02		1.00	3.00	1.00		1.00		0.01	0.99	0.33		0.00	0.67
Final Sat.:	1700	5075	26		1700	5100	1700		1700		8	1692	567		0	1133
Capacity Analysis Module:																
Vol/Sat:	0.03	0.08	0.08		0.00	0.10	0.01		0.00		0.13	0.13	0.00		0.00	0.01
Crit Moves:	****					****					****		****			

1: Beach Blvd & McFadden Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	239	262	92	331	233	99	182	1837	161	126	1926	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3401		3433	3381		3433	6330		3433	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3401		3433	3381		3433	6330		3433	6323	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	254	279	98	352	248	105	194	1954	171	134	2049	199
RTOR Reduction (vph)	0	29	0	0	38	0	0	8	0	0	9	0
Lane Group Flow (vph)	254	348	0	352	315	0	194	2117	0	134	2239	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.3	22.5		18.5	25.7		12.4	69.5		11.1	68.2	
Effective Green, g (s)	15.3	22.5		18.5	25.7		12.4	69.5		11.1	68.2	
Actuated g/C Ratio	0.11	0.16		0.13	0.18		0.09	0.50		0.08	0.49	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	375	546		453	620		304	3142		272	3080	
v/s Ratio Prot	0.07	c0.10		c0.10	0.09		0.06	c0.33		0.04	c0.35	
v/s Ratio Perm												
v/c Ratio	0.68	0.64		0.78	0.51		0.64	0.67		0.49	0.73	
Uniform Delay, d1	60.0	54.9		58.8	51.5		61.6	26.7		61.8	28.5	
Progression Factor	1.00	1.00		1.00	1.00		1.01	0.91		1.00	1.00	
Incremental Delay, d2	4.8	2.4		8.2	0.7		3.9	1.0		1.4	1.5	
Delay (s)	64.8	57.4		66.9	52.1		66.4	25.2		63.2	30.0	
Level of Service	E	E		E	D		E	C		E	C	
Approach Delay (s)		60.3			59.5			28.7			31.9	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

2: Beach Blvd & Center Ave

Opening Year MD Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	327	921	0	2319	2184	964
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	330	930	0	2342	2206	974
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	330	929	0	2342	2206	974
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	18.7	59.2		111.5	65.0	140.0
Effective Green, g (s)	18.7	59.2		111.5	65.0	140.0
Actuated g/C Ratio	0.13	0.42		0.80	0.46	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	458	1268		5103	2975	1583
v/s Ratio Prot	0.10	c0.21		0.36	c0.34	
v/s Ratio Perm		0.12		0.00		0.62
v/c Ratio	0.72	0.73		0.46	0.74	0.62
Uniform Delay, d1	58.1	33.8		4.6	30.6	0.0
Progression Factor	1.00	1.00		0.25	0.59	1.00
Incremental Delay, d2	5.9	2.3		0.0	1.4	1.5
Delay (s)	64.0	36.1		1.2	19.6	1.5
Level of Service	E	D		A	B	A
Approach Delay (s)	43.4			1.2	14.0	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	451	919	341	153	432	90	428	1855	480	225	2239	728
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	465	947	352	158	445	93	441	1912	495	232	2308	751
RTOR Reduction (vph)	0	0	57	0	0	75	0	0	143	0	0	115
Lane Group Flow (vph)	465	947	295	158	445	18	441	1912	352	232	2308	636
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	26.9	40.7	55.1	13.0	26.8	26.8	14.4	53.4	53.4	12.6	51.2	78.1
Effective Green, g (s)	26.9	40.7	55.1	13.0	26.8	26.8	14.4	53.4	53.4	12.6	51.2	78.1
Actuated g/C Ratio	0.19	0.29	0.39	0.09	0.19	0.19	0.10	0.38	0.38	0.09	0.37	0.56
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	659	1478	623	318	677	303	353	1939	603	308	2343	1646
v/s Ratio Prot	c0.14	c0.19	0.05	0.05	c0.13		c0.13	c0.38		0.07	c0.36	0.07
v/s Ratio Perm			0.14			0.01			0.22			0.15
v/c Ratio	0.71	0.64	0.47	0.50	0.66	0.06	1.25	0.99	0.58	0.75	0.99	0.39
Uniform Delay, d1	52.8	43.3	31.6	60.4	52.4	46.3	62.8	42.9	34.5	62.2	44.0	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.64	0.48	0.26	0.98	0.74	0.51
Incremental Delay, d2	2.8	1.0	0.2	0.4	2.3	0.1	130.6	15.7	3.4	6.4	12.4	0.0
Delay (s)	55.7	44.2	31.8	60.8	54.7	46.4	170.7	36.4	12.4	67.4	45.2	9.0
Level of Service	E	D	C	E	D	D	F	D	B	E	D	A
Approach Delay (s)		44.8			55.0			53.1			38.5	
Approach LOS		D			D			D			D	

Intersection Summary			
HCM 2000 Control Delay	45.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	90.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	23	44	104	32	144	139	2276	55	259	2477	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1678		1770	1863	1583	1770	6385		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1678		1770	1863	1583	1770	6385		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	29	23	45	106	33	147	142	2322	56	264	2528	26
RTOR Reduction (vph)	0	40	0	0	0	125	0	2	0	0	1	0
Lane Group Flow (vph)	29	28	0	106	33	22	142	2376	0	264	2553	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.3		12.2	20.7	20.7	16.6	76.5		15.4	75.3	
Effective Green, g (s)	7.8	16.3		12.2	20.7	20.7	16.6	76.5		15.4	75.3	
Actuated g/C Ratio	0.06	0.12		0.09	0.15	0.15	0.12	0.55		0.11	0.54	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	195		154	275	234	209	3488		377	3441	
v/s Ratio Prot	0.02	c0.02		c0.06	c0.02		c0.08	0.37		0.08	c0.40	
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.14		0.69	0.12	0.09	0.68	0.68		0.70	0.74	
Uniform Delay, d1	63.5	55.6		62.1	51.7	51.5	59.1	22.9		60.1	24.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.30	0.16		1.18	0.26	
Incremental Delay, d2	1.7	0.3		12.1	0.2	0.2	5.9	0.8		2.5	0.6	
Delay (s)	65.2	55.9		74.1	51.9	51.7	83.1	4.5		73.2	7.1	
Level of Service	E	E		E	D	D	F	A		E	A	
Approach Delay (s)		58.7			60.0			8.9			13.3	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	69.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	3	27	272	8	206	52	2284	113	343	2305	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.95	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1610		1681	1563	1504	1770	6362		3433	6397	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1610		1681	1563	1504	1770	6362		3433	6397	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	39	3	28	283	8	215	54	2379	118	357	2401	27
RTOR Reduction (vph)	0	25	0	0	12	135	0	4	0	0	1	0
Lane Group Flow (vph)	39	6	0	175	160	24	54	2493	0	357	2427	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.5	13.5		21.0	21.0	21.0	8.2	72.2		15.4	79.4	
Effective Green, g (s)	13.5	13.5		21.0	21.0	21.0	8.2	72.2		15.4	79.4	
Actuated g/C Ratio	0.10	0.10		0.15	0.15	0.15	0.06	0.52		0.11	0.57	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	170	155		252	234	225	103	3280		377	3628	
v/s Ratio Prot	c0.02	0.00		c0.10	0.10		0.03	c0.39		c0.10	0.38	
v/s Ratio Perm						0.02						
v/c Ratio	0.23	0.04		0.69	0.68	0.11	0.52	0.76		0.95	0.67	
Uniform Delay, d1	58.4	57.4		56.5	56.4	51.4	64.0	27.0		61.9	21.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.38	0.34		0.54	0.25	
Incremental Delay, d2	0.7	0.1		8.0	8.0	0.2	3.4	1.2		26.3	0.7	
Delay (s)	59.1	57.5		64.5	64.4	51.6	91.9	10.3		59.5	5.9	
Level of Service	E	E		E	E	D	F	B		E	A	
Approach Delay (s)		58.4			60.4			12.0			12.8	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	173	156	39	164	110	144	2122	57	137	2318	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.94		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3287		1770	3326		1770	6383		1770	6330	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3287		1770	3326		1770	6383		1770	6330	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	233	175	158	39	166	111	145	2143	58	138	2341	206
RTOR Reduction (vph)	0	120	0	0	97	0	0	2	0	0	9	0
Lane Group Flow (vph)	233	213	0	39	180	0	145	2199	0	138	2538	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	25.2	33.6		8.8	17.2		17.0	66.4		12.4	61.8	
Effective Green, g (s)	25.2	33.6		8.8	17.2		17.0	66.4		12.4	61.8	
Actuated g/C Ratio	0.18	0.24		0.06	0.12		0.12	0.47		0.09	0.44	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	318	788		111	408		214	3027		156	2794	
v/s Ratio Prot	c0.13	0.06		0.02	c0.05		0.08	c0.34		0.08	c0.40	
v/s Ratio Perm												
v/c Ratio	0.73	0.27		0.35	0.44		0.68	0.73		0.88	0.91	
Uniform Delay, d1	54.2	43.2		62.9	56.9		58.9	29.5		63.1	36.5	
Progression Factor	1.00	1.00		1.00	1.00		0.58	0.96		0.67	0.51	
Incremental Delay, d2	8.4	0.2		1.9	0.8		7.0	1.3		32.9	4.3	
Delay (s)	62.7	43.4		64.8	57.7		41.1	29.6		75.1	22.9	
Level of Service	E	D		E	E		D	C		E	C	
Approach Delay (s)		51.3			58.6			30.3			25.6	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	31.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	7	21	80	11	27	121	2190	54	110	2230	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1662	1478		1665	1478	1770	6385		1770	6387	
Flt Permitted		0.62	1.00		0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1078	1478		1084	1478	1770	6385		1770	6387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	89	7	22	83	11	28	126	2281	56	115	2323	52
RTOR Reduction (vph)	0	0	19	0	0	24	0	2	0	0	2	0
Lane Group Flow (vph)	0	96	3	0	94	4	126	2335	0	115	2373	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		20.0	20.0		20.0	20.0	19.4	90.8		13.9	85.3	
Effective Green, g (s)		20.0	20.0		20.0	20.0	19.4	90.8		13.9	85.3	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.14	0.65		0.10	0.61	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		154	211		154	211	245	4141		175	3891	
v/s Ratio Prot							0.07	c0.37		0.06	c0.37	
v/s Ratio Perm		c0.09	0.00		0.09	0.00						
v/c Ratio		0.62	0.01		0.61	0.02	0.51	0.56		0.66	0.61	
Uniform Delay, d1		56.5	51.5		56.3	51.6	55.9	13.6		60.8	17.0	
Progression Factor		1.00	1.00		1.00	1.00	0.68	0.19		0.96	0.52	
Incremental Delay, d2		7.6	0.0		7.0	0.0	1.1	0.3		4.4	0.4	
Delay (s)		64.1	51.6		63.3	51.6	39.4	2.9		62.9	9.2	
Level of Service		E	D		E	D	D	A		E	A	
Approach Delay (s)		61.7			60.6			4.8			11.7	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	66.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

8: Beach Blvd & Warner Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	357	819	164	250	916	141	280	1828	186	161	1780	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4958		3433	4983		3433	6319		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4958		3433	4983		3433	6319		3433	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	364	836	167	255	935	144	286	1865	190	164	1816	278
RTOR Reduction (vph)	0	22	0	0	15	0	0	11	0	0	0	130
Lane Group Flow (vph)	364	981	0	255	1064	0	286	2044	0	164	1816	148
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.4	38.7		13.7	35.0		14.6	56.6		12.0	54.0	54.0
Effective Green, g (s)	17.4	38.7		13.7	35.0		14.6	56.6		12.0	54.0	54.0
Actuated g/C Ratio	0.12	0.28		0.10	0.25		0.10	0.40		0.09	0.39	0.39
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	426	1370		335	1245		358	2554		294	2471	610
v/s Ratio Prot	c0.11	0.20		0.07	c0.21		0.08	c0.32		0.05	c0.28	
v/s Ratio Perm												0.09
v/c Ratio	0.85	0.72		0.76	0.85		0.80	0.80		0.56	0.73	0.24
Uniform Delay, d1	60.1	45.7		61.6	50.1		61.3	36.7		61.5	36.9	29.1
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.48		0.67	0.49	0.64
Incremental Delay, d2	14.8	1.8		8.9	5.9		8.0	1.9		1.1	1.6	0.8
Delay (s)	74.8	47.5		70.4	56.0		68.7	19.7		42.4	19.6	19.4
Level of Service	E	D		E	E		E	B		D	B	B
Approach Delay (s)		54.8			58.8			25.7			21.2	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

9: Beach Blvd & Slater Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	369	173	97	422	113	147	1766	78	176	1959	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3370		1770	3427		1770	6367		1770	6328	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3370		1770	3427		1770	6367		1770	6328	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	182	384	180	101	440	118	153	1840	81	183	2041	185
RTOR Reduction (vph)	0	42	0	0	19	0	0	4	0	0	9	0
Lane Group Flow (vph)	182	522	0	101	539	0	153	1917	0	183	2217	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.0	33.9		13.6	28.5		13.7	54.2		17.6	58.1	
Effective Green, g (s)	19.0	33.9		13.6	28.5		13.7	54.2		17.6	58.1	
Actuated g/C Ratio	0.14	0.24		0.10	0.20		0.10	0.39		0.13	0.42	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	240	816		171	697		173	2464		222	2626	
v/s Ratio Prot	c0.10	0.16		0.06	c0.16		c0.09	0.30		0.10	c0.35	
v/s Ratio Perm												
v/c Ratio	0.76	0.64		0.59	0.77		0.88	0.78		0.82	0.84	
Uniform Delay, d1	58.3	47.6		60.5	52.7		62.4	37.6		59.7	36.9	
Progression Factor	1.00	1.00		1.00	1.00		0.83	0.82		0.90	0.52	
Incremental Delay, d2	12.8	1.7		5.4	5.3		33.9	2.2		16.5	2.6	
Delay (s)	71.1	49.3		65.9	58.0		85.6	33.0		70.4	21.7	
Level of Service	E	D		E	E		F	C		E	C	
Approach Delay (s)		54.6			59.2			36.9			25.4	
Approach LOS		D			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	36.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	82.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

10: Beach Blvd & Newman Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	3	13	109	3	126	12	1936	58	70	2228	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.93		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716			1691		1770	6380		1770	6400	
Flt Permitted		0.79			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1397			1447		1770	6380		1770	6400	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	17	3	14	114	3	131	12	2017	60	73	2321	20
RTOR Reduction (vph)	0	11	0	0	34	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	23	0	0	214	0	12	2075	0	73	2340	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		26.8			26.8		4.0	87.4		9.9	93.3	
Effective Green, g (s)		26.8			26.8		4.0	87.4		9.9	93.3	
Actuated g/C Ratio		0.19			0.19		0.03	0.62		0.07	0.67	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		267			276		50	3982		125	4265	
v/s Ratio Prot							0.01	0.33		c0.04	c0.37	
v/s Ratio Perm		0.02			c0.15							
v/c Ratio		0.08			0.78		0.24	0.52		0.58	0.55	
Uniform Delay, d1		46.5			53.7		66.5	14.6		63.1	12.3	
Progression Factor		1.00			1.00		1.17	0.13		1.18	0.12	
Incremental Delay, d2		0.1			12.8		1.0	0.2		4.1	0.3	
Delay (s)		46.7			66.5		78.7	2.1		78.6	1.8	
Level of Service		D			E		E	A		E	A	
Approach Delay (s)		46.7			66.5			2.6			4.1	
Approach LOS		D			E			A			A	

Intersection Summary				
HCM 2000 Control Delay	7.0	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.61			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	71.1%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

11: Beach Blvd & Talbert Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	382	178	197	374	233	241	1598	187	286	1975	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3371		1770	3335		1770	6307		1770	6330	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3371		1770	3335		1770	6307		1770	6330	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	163	406	189	210	398	248	256	1700	199	304	2101	185
RTOR Reduction (vph)	0	43	0	0	71	0	0	14	0	0	10	0
Lane Group Flow (vph)	163	552	0	210	575	0	256	1885	0	304	2276	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.3	29.2		22.2	37.1		20.3	44.6		23.3	47.6	
Effective Green, g (s)	14.3	29.2		22.2	37.1		20.3	44.6		23.3	47.6	
Actuated g/C Ratio	0.10	0.21		0.16	0.27		0.15	0.32		0.17	0.34	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	180	703		280	883		256	2009		294	2152	
v/s Ratio Prot	0.09	c0.16		c0.12	0.17		0.14	c0.30		0.17	c0.36	
v/s Ratio Perm												
v/c Ratio	0.91	0.79		0.75	0.65		1.00	0.94		1.03	1.06	
Uniform Delay, d1	62.2	52.4		56.2	45.7		59.9	46.4		58.4	46.2	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.67		0.68	0.62	
Incremental Delay, d2	40.3	5.9		9.6	1.8		52.1	8.8		58.3	35.7	
Delay (s)	102.5	58.4		65.8	47.5		100.1	40.0		98.2	64.3	
Level of Service	F	E		E	D		F	D		F	E	
Approach Delay (s)		67.9			52.0			47.1			68.3	
Approach LOS		E			D			D			E	

Intersection Summary				
HCM 2000 Control Delay	58.9	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	89.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

12: Beach Blvd & Main St/Ellis Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	423	345	128	128	354	177	161	1407	152	283	1508	512
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	432	352	131	131	361	181	164	1436	155	289	1539	522
RTOR Reduction (vph)	0	0	105	0	0	159	0	11	0	0	0	19
Lane Group Flow (vph)	432	352	26	131	361	22	164	1580	0	289	1539	503
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	27.6	27.6	27.6	17.1	17.1	17.1	10.5	58.0		14.6	62.1	95.7
Effective Green, g (s)	27.6	27.6	27.6	17.1	17.1	17.1	10.5	58.0		14.6	62.1	95.7
Actuated g/C Ratio	0.20	0.20	0.20	0.12	0.12	0.12	0.08	0.41		0.10	0.44	0.68
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	676	697	312	216	432	193	257	2615		358	2255	1082
v/s Ratio Prot	c0.13	0.10		0.07	c0.10		0.05	0.25		c0.08	c0.30	0.32
v/s Ratio Perm			0.02			0.01						
v/c Ratio	0.64	0.51	0.08	0.61	0.84	0.11	0.64	0.60		0.81	0.68	0.46
Uniform Delay, d1	51.6	50.1	45.9	58.3	60.1	54.7	62.9	32.0		61.3	31.1	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.36	0.60		1.44	0.34	0.48
Incremental Delay, d2	1.6	0.3	0.1	3.3	12.6	0.1	2.6	0.7		3.0	0.4	0.0
Delay (s)	53.2	50.4	45.9	61.5	72.6	54.8	88.3	19.8		91.3	11.1	4.9
Level of Service	D	D	D	E	E	D	F	B		F	B	A
Approach Delay (s)		51.1			65.7			26.2			19.6	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	78.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	197	389	130	137	329	150	178	1286	106	236	1402	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3373		1770	5027		1770	4981	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3373		1770	5027		1770	4981	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	201	397	133	140	336	153	182	1312	108	241	1431	227
RTOR Reduction (vph)	0	0	102	0	42	0	0	6	0	0	14	0
Lane Group Flow (vph)	201	397	31	140	447	0	182	1414	0	241	1644	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	19.8	32.2	32.2	13.7	26.1		15.9	50.5		22.4	57.0	
Effective Green, g (s)	19.8	32.2	32.2	13.7	26.1		15.9	50.5		22.4	57.0	
Actuated g/C Ratio	0.14	0.23	0.23	0.10	0.19		0.11	0.36		0.16	0.41	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	250	813	364	173	628		201	1813		283	2027	
v/s Ratio Prot	c0.11	0.11		0.08	c0.13		c0.10	0.28		0.14	c0.33	
v/s Ratio Perm			0.02									
v/c Ratio	0.80	0.49	0.08	0.81	0.71		0.91	0.78		0.85	0.81	
Uniform Delay, d1	58.2	46.8	42.3	61.9	53.4		61.3	39.8		57.2	36.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.58	0.40		0.55	0.70	
Incremental Delay, d2	16.0	0.6	0.1	22.4	4.1		33.0	2.8		16.9	2.9	
Delay (s)	74.2	47.4	42.5	84.3	57.5		68.3	18.9		48.2	28.5	
Level of Service	E	D	D	F	E		E	B		D	C	
Approach Delay (s)		53.9			63.4			24.5			31.0	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	36.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

14: Beach Blvd & Yorktown Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	285	168	117	321	103	170	1245	129	112	1390	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3410		1770	5014		1770	5024	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3410		1770	5014		1770	5024	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	129	297	175	122	334	107	177	1297	134	117	1448	127
RTOR Reduction (vph)	0	0	143	0	25	0	0	7	0	0	6	0
Lane Group Flow (vph)	129	297	33	122	416	0	177	1424	0	117	1569	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	14.8	26.0	26.0	13.2	24.4		18.1	67.1		13.3	62.3	
Effective Green, g (s)	14.8	26.0	26.0	13.2	24.4		18.1	67.1		13.3	62.3	
Actuated g/C Ratio	0.11	0.19	0.19	0.09	0.17		0.13	0.48		0.10	0.44	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	187	657	293	166	594		228	2403		168	2235	
v/s Ratio Prot	c0.07	0.08		0.07	c0.12		c0.10	0.28		0.07	c0.31	
v/s Ratio Perm			0.02									
v/c Ratio	0.69	0.45	0.11	0.73	0.70		0.78	0.59		0.70	0.70	
Uniform Delay, d1	60.4	50.7	47.4	61.7	54.4		59.0	26.5		61.4	31.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.90		0.59	0.44	
Incremental Delay, d2	10.1	0.5	0.2	15.5	3.7		14.4	1.0		7.6	1.2	
Delay (s)	70.5	51.2	47.6	77.2	58.1		50.0	24.8		43.8	15.0	
Level of Service	E	D	D	E	E		D	C		D	B	
Approach Delay (s)		54.3			62.2			27.5			17.0	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	77.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

15: Beach Blvd & Utica Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	19	36	158	28	147	69	1240	81	121	1277	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.94			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1724			1787	1583	1770	5038		1770	5055	
Flt Permitted		0.75			0.67	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1317			1253	1583	1770	5038		1770	5055	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	30	19	37	161	29	150	70	1265	83	123	1303	54
RTOR Reduction (vph)	0	24	0	0	0	122	0	4	0	0	2	0
Lane Group Flow (vph)	0	62	0	0	190	28	70	1344	0	123	1355	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		26.4			26.4	26.4	11.8	83.3		15.1	86.6	
Effective Green, g (s)		26.4			26.4	26.4	11.8	83.3		15.1	86.6	
Actuated g/C Ratio		0.19			0.19	0.19	0.08	0.59		0.11	0.62	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		248			236	298	149	2997		190	3126	
v/s Ratio Prot							c0.04	c0.27		c0.07	0.27	
v/s Ratio Perm		0.05			c0.15	0.02						
v/c Ratio		0.25			0.81	0.09	0.47	0.45		0.65	0.43	
Uniform Delay, d1		48.4			54.3	46.9	61.1	15.7		59.9	13.9	
Progression Factor		1.00			1.00	1.00	0.86	0.67		0.77	0.75	
Incremental Delay, d2		0.5			17.8	0.1	2.0	0.4		5.5	0.3	
Delay (s)		48.9			72.1	47.1	54.8	10.9		51.7	10.8	
Level of Service		D			E	D	D	B		D	B	
Approach Delay (s)		48.9			61.1			13.0			14.2	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	63.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	403	65	180	433	279	88	889	105	273	1032	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4980		1770	3539	1583	1770	5004		3433	4992	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4980		1770	3539	1583	1770	5004		3433	4992	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	424	68	189	456	294	93	936	111	287	1086	152
RTOR Reduction (vph)	0	17	0	0	0	68	0	9	0	0	11	0
Lane Group Flow (vph)	200	475	0	189	456	226	93	1038	0	287	1227	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	19.4	27.3		18.5	26.4	41.4	11.6	57.4		15.0	60.8	
Effective Green, g (s)	19.4	27.3		18.5	26.4	41.4	11.6	57.4		15.0	60.8	
Actuated g/C Ratio	0.14	0.20		0.13	0.19	0.30	0.08	0.41		0.11	0.43	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	245	971		233	667	468	146	2051		367	2167	
v/s Ratio Prot	c0.11	0.10		0.11	c0.13	0.05	0.05	0.21		c0.08	c0.25	
v/s Ratio Perm						0.09						
v/c Ratio	0.82	0.49		0.81	0.68	0.48	0.64	0.51		0.78	0.57	
Uniform Delay, d1	58.6	50.1		59.1	52.9	40.5	62.2	30.7		60.9	29.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.79	0.93		1.49	0.26	
Incremental Delay, d2	17.7	0.8		18.0	3.7	0.3	6.3	0.9		8.9	1.0	
Delay (s)	76.3	51.0		77.1	56.6	40.8	55.6	29.4		99.7	8.8	
Level of Service	E	D		E	E	D	E	C		F	A	
Approach Delay (s)		58.3			55.8			31.5			25.9	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	124	29	26	110	172	26	870	47	221	984	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	5046		1770	5049	
Flt Permitted	0.59	1.00		0.45	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1093	1810		833	1863	1583	1770	5046		1770	5049	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	77	129	30	27	115	179	27	906	49	230	1025	51
RTOR Reduction (vph)	0	7	0	0	0	154	0	3	0	0	2	0
Lane Group Flow (vph)	77	152	0	27	115	25	27	952	0	230	1074	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	19.4	19.4		19.4	19.4	19.4	7.4	80.7		23.5	96.8	
Effective Green, g (s)	19.4	19.4		19.4	19.4	19.4	7.4	80.7		23.5	96.8	
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.14	0.05	0.58		0.17	0.69	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	250		115	258	219	93	2908		297	3491	
v/s Ratio Prot		c0.08			0.06		0.02	c0.19		c0.13	0.21	
v/s Ratio Perm	0.07			0.03		0.02						
v/c Ratio	0.51	0.61		0.23	0.45	0.11	0.29	0.33		0.77	0.31	
Uniform Delay, d1	55.9	56.7		53.7	55.4	52.8	63.8	15.5		55.7	8.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.79	0.52		0.74	0.21	
Incremental Delay, d2	2.7	4.2		1.1	1.2	0.2	1.6	0.3		10.0	0.2	
Delay (s)	58.6	60.9		54.7	56.6	53.0	52.0	8.3		51.3	2.0	
Level of Service	E	E		D	E	D	D	A		D	A	
Approach Delay (s)		60.1			54.4			9.5			10.7	
Approach LOS		E			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	19.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	65.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	265	40	46	276	216	58	547	66	225	589	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.93		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3469		1770	3306		1770	5003		1770	4924	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3469		1770	3306		1770	5003		1770	4924	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	153	282	43	49	294	230	62	582	70	239	627	168
RTOR Reduction (vph)	0	10	0	0	114	0	0	9	0	0	27	0
Lane Group Flow (vph)	153	315	0	49	410	0	62	643	0	239	768	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.6	32.3		8.2	23.9		8.3	54.6		23.8	70.1	
Effective Green, g (s)	16.6	32.3		8.2	23.9		8.3	54.6		23.8	70.1	
Actuated g/C Ratio	0.12	0.23		0.06	0.17		0.06	0.39		0.17	0.50	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	209	800		103	564		104	1951		300	2465	
v/s Ratio Prot	c0.09	0.09		0.03	c0.12		c0.04	c0.13		c0.14	0.16	
v/s Ratio Perm												
v/c Ratio	0.73	0.39		0.48	0.73		0.60	0.33		0.80	0.31	
Uniform Delay, d1	59.6	45.6		63.8	55.0		64.2	29.9		55.8	20.7	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.09		0.68	0.36	
Incremental Delay, d2	10.8	0.1		1.3	4.0		6.0	0.5		12.4	0.3	
Delay (s)	70.4	45.7		65.1	58.9		70.3	33.0		50.2	7.8	
Level of Service	E	D		E	E		E	C		D	A	
Approach Delay (s)		53.6			59.5			36.2			17.6	
Approach LOS		D			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	66.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	0	70	0	0	0	70	557	0	0	649	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5043	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5043	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	71	0	74	0	0	0	74	593	0	0	690	41
RTOR Reduction (vph)	0	0	66	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	71	0	8	0	0	0	74	593	0	0	729	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.5		14.5				10.0	114.5			99.6	
Effective Green, g (s)	14.5		14.5				10.0	114.5			99.6	
Actuated g/C Ratio	0.10		0.10				0.07	0.82			0.71	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	183		163				126	4158			3587	
v/s Ratio Prot							c0.04	0.12			c0.14	
v/s Ratio Perm	c0.04		0.00									
v/c Ratio	0.39		0.05				0.59	0.14			0.20	
Uniform Delay, d1	58.6		56.5				63.0	2.6			6.8	
Progression Factor	1.00		1.00				1.04	0.50			0.40	
Incremental Delay, d2	1.4		0.1				6.2	0.1			0.1	
Delay (s)	60.0		56.6				72.0	1.4			2.8	
Level of Service	E		E				E	A			A	
Approach Delay (s)		58.3			0.0			9.2			2.8	
Approach LOS		E			A			A			A	

Intersection Summary				
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.26			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	37.6%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	863	34	29	976	369	23	47	30	382	65	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	938	37	32	1061	401	25	51	33	415	71	284
RTOR Reduction (vph)	0	2	0	0	0	150	0	0	30	0	0	0
Lane Group Flow (vph)	198	973	0	32	1061	251	25	51	3	415	71	284
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.0	82.0		4.4	73.4	73.4	4.0	11.6	11.6	20.3	27.9	140.0
Effective Green, g (s)	13.0	82.0		4.4	73.4	73.4	4.0	11.6	11.6	20.3	27.9	140.0
Actuated g/C Ratio	0.09	0.59		0.03	0.52	0.52	0.03	0.08	0.08	0.15	0.20	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	318	2961		55	1855	829	50	293	131	497	371	1583
v/s Ratio Prot	c0.06	0.19		0.02	c0.30		c0.01	0.01		c0.12	0.04	
v/s Ratio Perm						0.16			0.00			c0.18
v/c Ratio	0.62	0.33		0.58	0.57	0.30	0.50	0.17	0.02	0.84	0.19	0.18
Uniform Delay, d1	61.1	14.9		66.9	22.6	18.8	67.0	59.7	59.0	58.2	46.7	0.0
Progression Factor	1.00	1.00		1.43	0.42	0.25	1.00	1.00	1.00	0.71	0.61	1.00
Incremental Delay, d2	2.7	0.3		9.4	1.2	0.9	2.8	0.1	0.0	11.0	0.1	0.2
Delay (s)	63.9	15.2		104.7	10.8	5.6	69.9	59.8	59.0	52.4	28.5	0.2
Level of Service	E	B		F	B	A	E	E	E	D	C	A
Approach Delay (s)		23.4			11.4			61.9			31.0	
Approach LOS		C			B			E			C	

Intersection Summary				
HCM 2000 Control Delay	21.2	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.60			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	63.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

23: Huntington Beach Parking/Newland St & Pacific Coast Highway

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	1180	10	7	1156	74	19	5	10	67	6	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1671		1770	1594	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.36	1.00		0.75	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	662	1671		1392	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	83	1242	11	7	1217	78	20	5	11	71	6	152
RTOR Reduction (vph)	0	0	3	0	0	23	0	10	0	0	134	0
Lane Group Flow (vph)	83	1242	8	7	1217	55	20	6	0	71	24	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	10.7	106.0	106.0	3.4	98.7	98.7	16.7	16.7		16.7	16.7	
Effective Green, g (s)	10.7	106.0	106.0	3.4	98.7	98.7	16.7	16.7		16.7	16.7	
Actuated g/C Ratio	0.08	0.76	0.76	0.02	0.71	0.71	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	135	3850	1198	42	3584	1116	78	199		166	190	
v/s Ratio Prot	c0.05	0.24		0.00	c0.24			0.00			0.02	
v/s Ratio Perm			0.01			0.03	0.03			c0.05		
v/c Ratio	0.61	0.32	0.01	0.17	0.34	0.05	0.26	0.03		0.43	0.13	
Uniform Delay, d1	62.7	5.5	4.2	66.9	8.0	6.3	56.0	54.5		57.2	55.1	
Progression Factor	1.06	0.89	1.00	0.67	0.43	0.36	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.2	0.2	0.0	0.6	0.2	0.1	0.6	0.0		0.6	0.1	
Delay (s)	71.4	5.1	4.2	45.3	3.7	2.3	56.6	54.5		57.9	55.2	
Level of Service	E	A	A	D	A	A	E	D		E	E	
Approach Delay (s)		9.2			3.8			55.7			56.1	
Approach LOS		A			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.37			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	55.2%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

25: Magnolia Ave & Pacific Coast Highway

Opening Year MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	1105	32	57	1150	95	16	19	15	92	42	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1739		1681	1737	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1739		1681	1737	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	96	1128	33	58	1173	97	16	19	15	94	43	65
RTOR Reduction (vph)	0	0	13	0	0	56	0	14	0	0	0	58
Lane Group Flow (vph)	96	1128	20	58	1173	41	16	20	0	68	69	7
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	33.8	85.4	85.4	7.4	59.0	59.0	13.6	13.6		14.8	14.8	14.8
Effective Green, g (s)	33.8	85.4	85.4	7.4	59.0	59.0	13.6	13.6		14.8	14.8	14.8
Actuated g/C Ratio	0.24	0.61	0.61	0.05	0.42	0.42	0.10	0.10		0.11	0.11	0.11
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	427	3101	965	93	2142	667	171	168		177	183	167
v/s Ratio Prot	0.05	c0.22		0.03	c0.23		0.01	c0.01		c0.04	0.04	
v/s Ratio Perm			0.01			0.03						0.00
v/c Ratio	0.22	0.36	0.02	0.62	0.55	0.06	0.09	0.12		0.38	0.38	0.04
Uniform Delay, d1	42.6	13.7	10.8	64.9	30.5	24.1	57.6	57.7		58.4	58.3	56.2
Progression Factor	0.90	0.65	1.00	0.67	0.92	1.79	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.0	8.5	0.4	0.1	0.1	0.1		0.5	0.5	0.0
Delay (s)	38.4	9.3	10.8	52.1	28.3	43.2	57.7	57.9		58.9	58.8	56.3
Level of Service	D	A	B	D	C	D	E	E		E	E	E
Approach Delay (s)		11.5			30.5			57.8			58.0	
Approach LOS		B			C			E			E	

Intersection Summary				
HCM 2000 Control Delay	24.5	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.43			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	53.4%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	104	1108	3	27	1152	374	25	23	18	308	10	93
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	108	1154	3	28	1200	390	26	24	19	321	10	97
RTOR Reduction (vph)	0	0	1	0	0	109	0	18	0	0	0	83
Lane Group Flow (vph)	108	1154	2	28	1200	281	26	25	0	321	10	14
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	12.6	82.4	82.4	10.1	79.9	100.8	5.9	5.9		20.9	20.9	20.9
Effective Green, g (s)	12.6	82.4	82.4	10.1	79.9	100.8	5.9	5.9		20.9	20.9	20.9
Actuated g/C Ratio	0.09	0.59	0.59	0.07	0.57	0.72	0.04	0.04		0.15	0.15	0.15
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	159	2992	931	127	2902	1139	74	73		512	278	236
v/s Ratio Prot	c0.06	0.23		0.02	c0.24	0.04	c0.01	0.01		c0.09	0.01	
v/s Ratio Perm			0.00			0.14						0.01
v/c Ratio	0.68	0.39	0.00	0.22	0.41	0.25	0.35	0.34		0.63	0.04	0.06
Uniform Delay, d1	61.7	15.3	11.9	61.2	16.9	6.7	65.2	65.2		55.9	50.9	51.1
Progression Factor	1.49	0.31	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	8.4	0.4	0.0	0.3	0.4	0.0	1.1	1.0		1.7	0.0	0.0
Delay (s)	100.7	5.1	11.9	61.6	17.3	6.7	66.2	66.2		57.6	51.0	51.2
Level of Service	F	A	B	E	B	A	E	E		E	D	D
Approach Delay (s)		13.3			15.5			66.2			56.0	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	20.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	57.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
MD PEAK HOUR

Scenario Report

Scenario:	OYNP-MD
Command:	OYNP-MD
Volume:	EX-MD
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	OY-CUMUL-MD
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	OYNP-MD

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
MD PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.716	C	xxxxx	0.765	+ 0.048
# 8 Beach Blvd & Warner Ave	B	xxxxx	0.676	C	xxxxx	0.706	+ 0.030
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.578	B	xxxxx	0.608	+ 0.030
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.484	A	xxxxx	0.517	+ 0.033
# 21 Newland St & Atlanta Ave	A	xxxxx	0.439	A	xxxxx	0.444	+ 0.005
# 22 Newland St & Hamilton Ave	A	xxxxx	0.463	A	xxxxx	0.463	+ 0.000
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.408	A	xxxxx	0.409	+ 0.001
# 26 Brookhurst St & Hamilton Ave	A	xxxxx	0.414	A	xxxxx	0.415	+ 0.000
# 30 Brookhurst Street & Talbert Av	B	xxxxx	0.643	B	xxxxx	0.654	+ 0.011
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.518	A	xxxxx	0.522	+ 0.003
# 32 Brookhurst Street & Quail Aven	B	xxxxx	0.622	B	xxxxx	0.625	+ 0.003
# 33 Brookhurst Street & Ellis Aven	A	xxxxx	0.595	B	xxxxx	0.608	+ 0.013
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.605	B	xxxxx	0.617	+ 0.012
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.549	A	xxxxx	0.559	+ 0.010
# 36 Brookhurst Street & Adams Aven	A	xxxxx	0.541	A	xxxxx	0.547	+ 0.006
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.315	A	xxxxx	0.315	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.357	A	xxxxx	0.362	+ 0.005
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.194	A	xxxxx	0.194	+ 0.000
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.227	A	xxxxx	0.227	+ 0.000

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	385	1729	465		218	2101	653		393	826	301		148	371	87	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	397	1781	479		225	2164	673		405	851	310		152	382	90	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	397	1781	479		225	2164	673		405	851	310		152	382	90	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	397	1781	479		225	2164	673		405	851	310		152	382	90	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	397	1781	479		225	2164	673		405	851	310		152	382	90	
OvlAdjVol:							268				112					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.35	0.28		0.07	0.32	0.20		0.12	0.17	0.18		0.04	0.11	0.05	
OvlAdjV/S:							0.08				0.07					
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.676
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	259	1732	184	159	1683	264	349	782	143	248	879	139				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	259	1732	184	159	1683	264	349	782	143	248	879	139				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	259	1732	184	159	1683	264	349	782	143	248	879	139				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	259	1732	184	159	1683	264	349	782	143	248	879	139				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.62	0.38	2.00	4.00	1.00	2.00	2.54	0.46	2.00	2.59	0.41				
Final Sat.:	3400	6146	654	3400	6800	1700	3400	4311	789	3400	4403	697				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.28	0.28	0.05	0.25	0.16	0.10	0.18	0.18	0.07	0.20	0.20				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	88	809	100	243	952	138	184	397	65	175	427	262				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	88	809	100	243	952	138	184	397	65	175	427	262				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	88	809	100	243	952	138	184	397	65	175	427	262				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	88	809	100	243	952	138	184	397	65	175	427	262				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.67	0.33	2.00	2.62	0.38	1.00	2.58	0.42	1.00	2.00	1.00				
Final Sat.:	1700	4539	561	3400	4454	646	1700	4383	717	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.18	0.07	0.21	0.21	0.11	0.09	0.09	0.10	0.13	0.15				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.484
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	22	46	29	309	63	249	172	798	33	28	907	296				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	23	47	30	318	65	256	177	822	34	29	934	305				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	23	47	0	318	65	0	177	822	34	29	934	305				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	23	47	0	318	65	0	177	822	34	29	934	305				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	23	47	0	318	65	0	177	822	34	29	934	305				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.88	0.12	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4897	203	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01	0.00	0.09	0.04	0.00	0.05	0.17	0.17	0.02	0.27	0.18				
Crit Moves:	****			****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.439
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	151	255	38	88	231	95	64	372	142	31	389	138				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	156	263	39	91	238	98	66	383	146	32	401	142				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	156	263	39	91	238	98	66	383	146	32	401	142				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	156	263	39	91	238	98	66	383	146	32	401	142				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	156	263	39	91	238	98	66	383	146	32	401	142				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.74	0.26	1.00	1.42	0.58	1.00	1.45	0.55	1.00	1.48	0.52				
Final Sat.:	1700	2959	441	1700	2409	991	1700	2461	939	1700	2510	890				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.09	0.09	0.05	0.10	0.10	0.04	0.16	0.16	0.02	0.16	0.16				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	158	62		195	170	0		0	0	0		116	0	267	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	0	163	64		201	175	0		0	0	0		119	0	275	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	163	64		201	175	0		0	0	0		119	0	275	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	163	64		201	175	0		0	0	0		119	0	275	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	163	64		201	175	0		0	0	0		119	0	275	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.72	0.28		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1221	479		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.13	0.13		0.12	0.10	0.00		0.00	0.00	0.00		0.07	0.00	0.16	
Crit Moves:		****			****										****	

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.408
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	17	148	14		210	158	36		52	209	30		21	248	218	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	18	152	14		216	163	37		54	215	31		22	255	225	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	18	152	14		216	163	37		54	215	31		22	255	225	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	18	152	14		216	163	37		54	215	31		22	255	225	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	18	152	14		216	163	37		54	215	31		22	255	225	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.87	0.13		1.00	1.00	1.00	
Final Sat.:	1700	3106	294		1700	3400	1700		1700	1487	213		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.05	0.05		0.13	0.05	0.02		0.03	0.14	0.14		0.01	0.15	0.13	
Crit Moves:		****			****				****					****		

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.414
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	90	333	106		319	351	68		82	322	41		116	437	249	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	93	343	109		329	362	70		84	332	42		119	450	256	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	93	343	109		329	362	70		84	332	42		119	450	256	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	93	343	109		329	362	70		84	332	42		119	450	256	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	93	343	109		329	362	70		84	332	42		119	450	256	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.51	0.49		1.00	1.77	0.23		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4272	828		1700	3016	384		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.07	0.06		0.10	0.08	0.08		0.05	0.11	0.11		0.07	0.13	0.15	
Crit Moves:		****			****				****						****	

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.643
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	162	1239	494		318	1533	385		200	691	204		249	381	200	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	162	1239	494		318	1533	385		200	691	204		249	381	200	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	162	1239	494		318	1533	385		200	691	204		249	381	200	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	162	1239	494		318	1533	385		200	691	204		249	381	200	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.24	0.29		0.09	0.30	0.23		0.06	0.14	0.12		0.07	0.11	0.12	
Crit Moves:				****	****					****			****			

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.518
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	29	1705	5	39	1941	63	67	0	26	4	0	8				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	30	1756	5	40	1999	65	69	0	27	4	0	8				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	30	1756	5	40	1999	0	69	0	27	4	0	8				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	30	1756	5	40	1999	0	69	0	27	4	0	8				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	30	1756	5	40	1999	0	69	0	27	4	0	8				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.72	0.00	0.28	0.33	0.00	0.67				
Final Sat.:	1700	5085	15	1700	5100	1700	1225	0	475	567	0	1133				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.35	0.35	0.02	0.39	0.00	0.04	0.00	0.06	0.00	0.00	0.01				
Crit Moves:	****				****				****	****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.622
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	58	1443	7	30	1516	225	279	3	78	12	1	14				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	60	1486	7	31	1561	232	287	3	80	12	1	14				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	60	1486	7	31	1561	232	287	3	80	12	1	14				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	60	1486	7	31	1561	232	287	3	80	12	1	14				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	60	1486	7	31	1561	232	287	3	80	12	1	14				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	2.61	0.39	0.99	0.01	1.00	0.44	0.04	0.52				
Final Sat.:	1700	5075	25	1700	4441	659	1682	18	1700	756	63	881				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.29	0.29	0.02	0.35	0.35	0.17	0.17	0.05	0.01	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	79	933	180	160	1153	198	278	512	94	250	419	115				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	81	961	185	165	1188	204	286	527	97	258	432	118				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	81	961	185	165	1188	204	286	527	97	258	432	118				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	81	961	185	165	1188	204	286	527	97	258	432	118				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	81	961	185	165	1188	204	286	527	97	258	432	118				
OvlAdjVol:			57			61										
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	1.69	0.31	2.00	1.57	0.43				
Final Sat.:	1700	5100	1700	1700	5100	1700	3400	2873	527	3400	2668	732				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.11	0.10	0.23	0.12	0.08	0.18	0.18	0.08	0.16	0.16				
OvlAdjV/S:			0.03			0.04										
Crit Moves:	****			****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.605
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	138	1118	109	169	1107	214	229	231	111	176	219	110				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	142	1152	112	174	1140	220	236	238	114	181	226	113				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	142	1152	112	174	1140	220	236	238	114	181	226	113				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	142	1152	112	174	1140	220	236	238	114	181	226	113				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	142	1152	112	174	1140	220	236	238	114	181	226	113				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.73	0.27	1.00	3.00	1.00	1.00	1.35	0.65	1.00	2.00	1.00				
Final Sat.:	1700	4647	453	1700	5100	1700	1700	2296	1104	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.25	0.25	0.10	0.22	0.13	0.14	0.10	0.10	0.11	0.07	0.07				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	97	1006	80	21	1177	198	160	183	95	119	196	20				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	100	1036	82	22	1212	204	165	188	98	123	202	21				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	100	1036	82	22	1212	204	165	188	98	123	202	21				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	100	1036	82	22	1212	204	165	188	98	123	202	21				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	100	1036	82	22	1212	204	165	188	98	123	202	21				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.78	0.22	1.00	2.57	0.43	1.00	1.32	0.68	1.00	1.81	0.19				
Final Sat.:	1700	4724	376	1700	4366	734	1700	2238	1162	1700	3085	315				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.22	0.22	0.01	0.28	0.28	0.10	0.08	0.08	0.07	0.07	0.07				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.541
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	172	631	128	308	712	173	293	684	84	197	771	220				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	177	650	132	317	733	178	302	705	87	203	794	227				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	177	650	132	317	733	178	302	705	87	203	794	227				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	177	650	132	317	733	178	302	705	87	203	794	227				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	177	650	132	317	733	178	302	705	87	203	794	227				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.49	0.51	2.00	2.41	0.59	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4240	860	3400	4103	997	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.15	0.15	0.09	0.18	0.18	0.09	0.14	0.05	0.06	0.16	0.13				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.315
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0	0	0	0	2	1	0	2	0	0	1	0	0
Volume Module:																
Base Vol:	48	879	0	0	895	125	98	0	49	0	0	0	0	0	0	0
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	49	905	0	0	922	129	101	0	50	0	0	0	0	0	0	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	49	905	0	0	922	129	101	0	50	0	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	905	0	0	922	129	101	0	50	0	0	0	0	0	0	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	49	905	0	0	922	129	101	0	50	0	0	0	0	0	0	0
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	3.00	0.00	0.00	2.63	0.37	2.00	0.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	1700	5100	0	0	4475	625	3400	0	1700	0	0	0	0	0	0	0
Capacity Analysis Module:																
Vol/Sat:	0.03	0.18	0.00	0.00	0.21	0.21	0.03	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	****				****		****									

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.357
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1	0	1	0	2	1	0	1	0	1	0	1	0
Volume Module:																
Base Vol:	89	615	14	25	623	145	141	26	143	15	25	17				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	92	633	14	26	642	149	145	27	147	15	26	18				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	92	633	14	26	642	149	145	27	147	15	26	18				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	92	633	14	26	642	149	145	27	147	15	26	18				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	92	633	14	26	642	149	145	27	147	15	26	18				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.43	0.57	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4986	114	1700	4137	963	1700	1700	1700	1700	2024	1376				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.13	0.13	0.02	0.16	0.16	0.09	0.02	0.09	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.194
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	8	412	0	0	340	107	81	0	6	0	0	0	0	0	0	0
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	8	424	0	0	350	110	83	0	6	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	8	424	0	0	350	110	83	0	6	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	8	424	0	0	350	110	83	0	6	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	8	424	0	0	350	110	83	0	6	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.28	0.72	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	3879	1221	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00	0.00	0.09	0.09	0.05	0.00	0.00	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.227
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	0	0 1
Volume Module:																
Base Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	105	385	3	9	303	27	11	1	94	0	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	105	385	3	9	303	27	11	1	94	0	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	105	385	3	9	303	27	11	1	94	0	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	105	385	3	9	303	27	11	1	94	0	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.00	0.00	1.00				
Final Sat.:	1700	5059	41	1700	5100	1700	1700	18	1682	0	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.08	0.08	0.01	0.06	0.02	0.01	0.06	0.06	0.00	0.00	0.00				
Crit Moves:	****				****			****		****						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	405	389	148	385	434	145	252	2857	252	201	2372	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6309	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6309	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	422	405	154	401	452	151	262	2976	262	209	2471	282
RTOR Reduction (vph)	0	27	0	0	24	0	0	9	0	0	13	0
Lane Group Flow (vph)	422	532	0	401	579	0	262	3229	0	209	2740	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	23.5	39.4		15.7	31.6		12.0	65.5		11.0	64.5	
Effective Green, g (s)	23.5	39.4		15.7	31.6		12.0	65.5		11.0	64.5	
Actuated g/C Ratio	0.16	0.26		0.10	0.21		0.08	0.44		0.07	0.43	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	537	891		359	717		274	2764		251	2712	
v/s Ratio Prot	c0.12	0.16		c0.12	c0.17		0.08	c0.51		0.06	c0.43	
v/s Ratio Perm												
v/c Ratio	0.79	0.60		1.12	0.81		0.96	1.17		0.83	1.01	
Uniform Delay, d1	60.8	48.4		67.2	56.3		68.7	42.2		68.6	42.8	
Progression Factor	1.00	1.00		1.00	1.00		0.93	0.97		1.00	1.00	
Incremental Delay, d2	7.4	1.1		83.0	6.7		35.4	79.0		20.4	19.8	
Delay (s)	68.3	49.5		150.2	63.0		99.4	119.7		89.0	62.6	
Level of Service	E	D		F	E		F	F		F	E	
Approach Delay (s)		57.5			97.8			118.2			64.5	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	89.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	366	1001	0	3186	2505	1037
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	373	1021	0	3251	2556	1058
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	373	1020	0	3251	2556	1058
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	20.5	62.0		119.7	72.2	150.0
Effective Green, g (s)	20.5	62.0		119.7	72.2	150.0
Actuated g/C Ratio	0.14	0.41		0.80	0.48	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	469	1235		5113	3084	1583
v/s Ratio Prot	0.11	c0.23		0.50	c0.40	
v/s Ratio Perm		0.14		0.01		0.67
v/c Ratio	0.80	0.83		0.64	0.83	0.67
Uniform Delay, d1	62.7	39.2		6.2	33.6	0.0
Progression Factor	1.00	1.00		0.54	0.51	1.00
Incremental Delay, d2	9.5	4.8		0.0	1.4	1.2
Delay (s)	72.3	44.0		3.4	18.4	1.2
Level of Service	E	D		A	B	A
Approach Delay (s)	51.6			3.4	13.3	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	80.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	521	1053	304	181	726	177	496	2452	525	343	2419	788
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	543	1097	317	189	756	184	517	2554	547	357	2520	821
RTOR Reduction (vph)	0	0	48	0	0	133	0	0	144	0	0	47
Lane Group Flow (vph)	543	1097	269	189	756	51	517	2554	403	357	2520	774
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.1	50.2	66.6	13.2	38.3	38.3	16.4	53.7	53.7	12.6	49.5	74.6
Effective Green, g (s)	25.1	50.2	66.6	13.2	38.3	38.3	16.4	53.7	53.7	12.6	49.5	74.6
Actuated g/C Ratio	0.17	0.33	0.44	0.09	0.26	0.26	0.11	0.36	0.36	0.08	0.33	0.50
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	574	1701	702	302	903	404	375	1820	566	288	2114	1471
v/s Ratio Prot	c0.16	0.22	0.04	0.06	c0.21		0.15	c0.50		0.10	c0.39	0.09
v/s Ratio Perm			0.13			0.03			0.25			0.19
v/c Ratio	0.95	0.64	0.38	0.63	0.84	0.13	1.38	1.40	0.71	1.24	1.19	0.53
Uniform Delay, d1	61.8	42.3	27.9	66.0	52.9	43.0	66.8	48.1	41.5	68.7	50.2	25.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.69	0.50	1.05	0.68	0.50
Incremental Delay, d2	24.4	0.8	0.1	2.9	6.8	0.1	181.2	183.7	5.0	124.0	89.4	0.1
Delay (s)	86.2	43.2	28.1	68.9	59.7	43.1	231.9	216.8	25.8	196.2	123.8	13.0
Level of Service	F	D	C	E	E	D	F	F	C	F	F	B
Approach Delay (s)		52.7			58.6			190.0			106.2	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	120.1	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	109.0%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	20	42	131	33	180	124	2949	74	251	2594	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1672		1770	1863	1583	1770	6384		3433	6397	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1672		1770	1863	1583	1770	6384		3433	6397	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	20	43	134	34	184	127	3009	76	256	2647	29
RTOR Reduction (vph)	0	39	0	0	0	154	0	2	0	0	1	0
Lane Group Flow (vph)	26	24	0	134	34	30	127	3083	0	256	2675	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	14.6		17.4	24.2	24.2	15.8	81.6		16.8	82.6	
Effective Green, g (s)	7.8	14.6		17.4	24.2	24.2	15.8	81.6		16.8	82.6	
Actuated g/C Ratio	0.05	0.10		0.12	0.16	0.16	0.11	0.54		0.11	0.55	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	162		205	300	255	186	3472		384	3522	
v/s Ratio Prot	c0.01	c0.01		c0.08	0.02		0.07	c0.48		c0.07	0.42	
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.15		0.65	0.11	0.12	0.68	0.89		0.67	0.76	
Uniform Delay, d1	68.4	62.0		63.4	53.7	53.8	64.7	30.2		63.9	26.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.34	0.15		1.33	0.32	
Incremental Delay, d2	1.7	0.4		7.3	0.2	0.2	5.9	2.3		0.4	0.1	
Delay (s)	70.1	62.4		70.7	53.9	54.0	92.7	6.9		85.4	8.5	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		64.7			60.3			10.3			15.2	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	15.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	5	19	255	4	170	65	2894	102	328	2536	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1642		1681	1576	1504	1770	6375		3433	6400	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1642		1681	1576	1504	1770	6375		3433	6400	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	30	5	19	258	4	172	66	2923	103	331	2562	20
RTOR Reduction (vph)	0	17	0	0	7	117	0	3	0	0	0	0
Lane Group Flow (vph)	30	7	0	150	141	19	66	3023	0	331	2582	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		21.5	21.5	21.5	8.7	82.8		14.6	88.7	
Effective Green, g (s)	13.2	13.2		21.5	21.5	21.5	8.7	82.8		14.6	88.7	
Actuated g/C Ratio	0.09	0.09		0.14	0.14	0.14	0.06	0.55		0.10	0.59	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	144		240	225	215	102	3519		334	3784	
v/s Ratio Prot	c0.02	0.00		0.09	c0.09		0.04	c0.47		c0.10	0.40	
v/s Ratio Perm						0.01						
v/c Ratio	0.19	0.05		0.62	0.63	0.09	0.65	0.86		0.99	0.68	
Uniform Delay, d1	63.5	62.6		60.5	60.5	55.8	69.1	28.6		67.6	21.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.35	0.18		0.57	0.37	
Incremental Delay, d2	0.6	0.1		5.0	5.4	0.2	1.3	0.3		38.5	0.7	
Delay (s)	64.1	62.8		65.5	65.9	55.9	94.3	5.3		76.7	8.5	
Level of Service	E	E		E	E	E	F	A		E	A	
Approach Delay (s)		63.5			62.6			7.2			16.3	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	256	321	184	42	316	162	170	2879	50	167	2403	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3359		1770	6391		1770	6321	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3359		1770	6391		1770	6321	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	264	331	190	43	326	167	175	2968	52	172	2477	245
RTOR Reduction (vph)	0	53	0	0	48	0	0	2	0	0	11	0
Lane Group Flow (vph)	264	468	0	43	445	0	175	3018	0	172	2711	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	31.1	48.7		8.8	26.4		13.5	60.3		13.4	60.2	
Effective Green, g (s)	31.1	48.7		8.8	26.4		13.5	60.3		13.4	60.2	
Actuated g/C Ratio	0.21	0.32		0.06	0.18		0.09	0.40		0.09	0.40	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	366	1086		103	591		159	2569		158	2536	
v/s Ratio Prot	c0.15	0.14		0.02	c0.13		0.10	c0.47		0.10	c0.43	
v/s Ratio Perm												
v/c Ratio	0.72	0.43		0.42	0.75		1.10	1.17		1.09	1.07	
Uniform Delay, d1	55.4	39.8		68.1	58.7		68.2	44.9		68.3	44.9	
Progression Factor	1.00	1.00		1.00	1.00		0.96	0.76		0.92	0.91	
Incremental Delay, d2	6.9	0.3		2.7	5.4		92.4	82.2		87.9	37.9	
Delay (s)	62.3	40.1		70.9	64.1		157.6	116.3		151.1	78.7	
Level of Service	E	D		E	E		F	F		F	E	
Approach Delay (s)		47.5			64.7			118.6			83.0	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	93.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	95.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	18	40	61	10	21	157	2813	67	72	2275	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1670	1478		1667	1478	1770	6386		1770	6386	
Flt Permitted		0.70	1.00		0.57	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1214	1478		997	1478	1770	6386		1770	6386	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	90	19	41	63	10	22	162	2900	69	74	2345	55
RTOR Reduction (vph)	0	0	35	0	0	19	0	2	0	0	2	0
Lane Group Flow (vph)	0	109	6	0	73	3	162	2967	0	74	2398	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		21.1	21.1		21.1	21.1	24.0	102.2		11.4	89.6	
Effective Green, g (s)		21.1	21.1		21.1	21.1	24.0	102.2		11.4	89.6	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.68		0.08	0.60	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		170	207		140	207	283	4350		134	3814	
v/s Ratio Prot							0.09	c0.46		0.04	c0.38	
v/s Ratio Perm		c0.09	0.00		0.07	0.00						
v/c Ratio		0.64	0.03		0.52	0.01	0.57	0.68		0.55	0.63	
Uniform Delay, d1		60.9	55.6		59.8	55.5	58.3	14.2		66.8	19.5	
Progression Factor		1.00	1.00		1.00	1.00	0.59	0.54		1.04	0.53	
Incremental Delay, d2		8.0	0.1		3.5	0.0	0.3	0.1		0.4	0.1	
Delay (s)		68.9	55.7		63.2	55.5	34.5	7.8		69.7	10.5	
Level of Service		E	E		E	E	C	A		E	B	
Approach Delay (s)		65.3			61.5			9.1			12.2	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	74.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	428	1162	182	252	1318	221	373	2465	187	186	1899	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4982		3433	4976		3433	6340		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4982		3433	4976		3433	6340		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	451	1223	192	265	1387	233	393	2595	197	196	1999	382
RTOR Reduction (vph)	0	15	0	0	16	0	0	8	0	0	0	161
Lane Group Flow (vph)	451	1400	0	265	1604	0	393	2784	0	196	1999	221
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.8	46.2		14.3	42.7		18.1	58.5		12.0	52.4	52.4
Effective Green, g (s)	17.8	46.2		14.3	42.7		18.1	58.5		12.0	52.4	52.4
Actuated g/C Ratio	0.12	0.31		0.10	0.28		0.12	0.39		0.08	0.35	0.35
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	407	1534		327	1416		414	2472		274	2238	552
v/s Ratio Prot	c0.13	0.28		0.08	c0.32		c0.11	c0.44		0.06	0.31	
v/s Ratio Perm												0.14
v/c Ratio	1.11	0.91		0.81	1.13		0.95	1.13		0.72	0.89	0.40
Uniform Delay, d1	66.1	50.0		66.5	53.6		65.5	45.8		67.3	46.2	36.9
Progression Factor	1.00	1.00		1.00	1.00		0.90	0.76		1.24	0.56	0.69
Incremental Delay, d2	77.2	8.6		13.4	69.2		5.3	57.4		5.9	5.0	1.8
Delay (s)	143.3	58.6		79.9	122.8		64.0	92.2		89.2	30.9	27.3
Level of Service	F	E		E	F		E	F		F	C	C
Approach Delay (s)		79.1			116.8			88.7			34.8	
Approach LOS		E			F			F			C	

Intersection Summary			
HCM 2000 Control Delay	77.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	107.3%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

9: Beach Blvd & Slater Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	495	158	112	619	156	199	2554	67	176	2107	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3433		1770	6383		1770	6341	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3433		1770	6383		1770	6341	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	206	516	165	117	645	162	207	2660	70	183	2195	165
RTOR Reduction (vph)	0	22	0	0	15	0	0	2	0	0	7	0
Lane Group Flow (vph)	206	659	0	117	792	0	207	2728	0	183	2353	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.3	34.8		19.7	37.2		18.3	58.5		16.3	56.5	
Effective Green, g (s)	17.3	34.8		19.7	37.2		18.3	58.5		16.3	56.5	
Actuated g/C Ratio	0.12	0.23		0.13	0.25		0.12	0.39		0.11	0.38	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	791		232	851		215	2489		192	2388	
v/s Ratio Prot	c0.12	0.19		0.07	c0.23		0.12	c0.43		0.10	c0.37	
v/s Ratio Perm												
v/c Ratio	1.01	0.83		0.50	0.93		0.96	1.10		0.95	0.99	
Uniform Delay, d1	66.3	54.8		60.6	55.1		65.5	45.8		66.5	46.3	
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.74		0.99	0.52	
Incremental Delay, d2	65.6	7.5		1.7	16.5		42.6	48.6		33.4	9.9	
Delay (s)	131.9	62.4		62.3	71.6		96.0	82.3		99.5	33.9	
Level of Service	F	E		E	E		F	F		F	C	
Approach Delay (s)		78.5			70.4			83.2			38.6	
Approach LOS		E			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	65.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	1	16	110	8	162	16	2545	82	80	2353	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1720			1684		1770	6378		1770	6396	
Flt Permitted		0.67			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1191			1481		1770	6378		1770	6396	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	1	16	113	8	167	16	2624	85	82	2426	29
RTOR Reduction (vph)	0	13	0	0	37	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	32	0	0	251	0	16	2707	0	82	2454	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		30.7			30.7		4.0	91.0		12.4	99.4	
Effective Green, g (s)		30.7			30.7		4.0	91.0		12.4	99.4	
Actuated g/C Ratio		0.20			0.20		0.03	0.61		0.08	0.66	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		243			303		47	3869		146	4238	
v/s Ratio Prot							0.01	c0.42		c0.05	0.38	
v/s Ratio Perm		0.03			c0.17							
v/c Ratio		0.13			0.83		0.34	0.70		0.56	0.58	
Uniform Delay, d1		48.8			57.1		71.7	20.2		66.2	13.8	
Progression Factor		1.00			1.00		1.40	0.45		1.43	0.28	
Incremental Delay, d2		0.2			16.9		0.4	0.1		1.9	0.2	
Delay (s)		49.0			74.0		100.4	9.2		96.5	4.1	
Level of Service		D			E		F	A		F	A	
Approach Delay (s)		49.0			74.0			9.8			7.1	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	77.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	424	166	200	512	290	221	2237	180	264	2129	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3390		1770	3347		1770	6336		1770	6348	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3390		1770	3347		1770	6336		1770	6348	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	172	442	173	208	533	302	230	2330	188	275	2218	146
RTOR Reduction (vph)	0	29	0	0	53	0	0	8	0	0	6	0
Lane Group Flow (vph)	172	586	0	208	782	0	230	2510	0	275	2358	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.6	31.4		22.2	38.0		19.9	54.4		21.3	55.8	
Effective Green, g (s)	15.6	31.4		22.2	38.0		19.9	54.4		21.3	55.8	
Actuated g/C Ratio	0.10	0.21		0.15	0.25		0.13	0.36		0.14	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	184	709		261	847		234	2297		251	2361	
v/s Ratio Prot	0.10	c0.17		0.12	c0.23		0.13	c0.40		c0.16	0.37	
v/s Ratio Perm												
v/c Ratio	0.93	0.83		0.80	0.92		0.98	1.09		1.10	1.00	
Uniform Delay, d1	66.7	56.7		61.7	54.6		64.9	47.8		64.3	47.1	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.56		0.65	0.55	
Incremental Delay, d2	47.1	8.0		14.5	15.6		43.2	47.2		80.3	16.7	
Delay (s)	113.8	64.7		76.2	70.2		94.2	73.7		122.3	42.4	
Level of Service	F	E		E	E		F	E		F	D	
Approach Delay (s)		75.4			71.4			75.4			50.7	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	65.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	100.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	461	466	108	177	514	166	175	1849	171	297	1656	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6327		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6327		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	470	476	110	181	524	169	179	1887	174	303	1690	552
RTOR Reduction (vph)	0	0	80	0	0	96	0	10	0	0	0	20
Lane Group Flow (vph)	470	476	30	181	524	73	179	2051	0	303	1690	532
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	30.3	30.3	30.3	27.0	27.0	27.0	10.4	54.5		15.5	59.6	95.9
Effective Green, g (s)	30.3	30.3	30.3	27.0	27.0	27.0	10.4	54.5		15.5	59.6	95.9
Actuated g/C Ratio	0.20	0.20	0.20	0.18	0.18	0.18	0.07	0.36		0.10	0.40	0.64
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	693	714	319	318	637	284	238	2298		354	2020	1012
v/s Ratio Prot	c0.14	0.13		0.10	c0.15		0.05	c0.32		c0.09	0.33	0.34
v/s Ratio Perm			0.02			0.05						
v/c Ratio	0.68	0.67	0.09	0.57	0.82	0.26	0.75	0.89		0.86	0.84	0.53
Uniform Delay, d1	55.3	55.2	48.7	56.2	59.2	52.9	68.5	45.0		66.2	40.8	14.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.32	0.59		1.18	0.55	0.96
Incremental Delay, d2	2.2	2.0	0.1	1.4	8.0	0.2	4.4	2.3		6.0	1.3	0.1
Delay (s)	57.6	57.1	48.8	57.6	67.2	53.1	95.1	28.8		83.9	23.8	14.2
Level of Service	E	E	D	E	E	D	F	C		F	C	B
Approach Delay (s)		56.5			62.5			34.1			28.8	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	39.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	86.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	530	138	157	411	140	213	1745	110	202	1617	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3405		1770	5040		1770	5011	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3405		1770	5040		1770	5011	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	215	546	142	162	424	144	220	1799	113	208	1667	180
RTOR Reduction (vph)	0	0	108	0	24	0	0	4	0	0	8	0
Lane Group Flow (vph)	215	546	34	162	544	0	220	1908	0	208	1839	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	22.4	36.4	36.4	16.3	30.3		19.2	56.4		19.7	56.9	
Effective Green, g (s)	22.4	36.4	36.4	16.3	30.3		19.2	56.4		19.7	56.9	
Actuated g/C Ratio	0.15	0.24	0.24	0.11	0.20		0.13	0.38		0.13	0.38	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	264	858	384	192	687		226	1895		232	1900	
v/s Ratio Prot	c0.12	0.15		0.09	c0.16		0.12	c0.38		0.12	c0.37	
v/s Ratio Perm			0.02									
v/c Ratio	0.81	0.64	0.09	0.84	0.79		0.97	1.01		0.90	0.97	
Uniform Delay, d1	61.8	50.9	44.0	65.6	56.9		65.1	46.8		64.1	45.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.44		0.49	0.92	
Incremental Delay, d2	16.4	1.8	0.1	26.2	6.6		34.6	16.1		23.1	10.6	
Delay (s)	78.2	52.6	44.1	91.8	63.4		73.8	36.5		54.5	52.8	
Level of Service	E	D	D	F	E		E	D		D	D	
Approach Delay (s)		57.4			69.7			40.4			53.0	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	51.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	92.4%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	429	151	133	375	142	209	1760	183	142	1609	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3394		1770	5013		1770	5019	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3394		1770	5013		1770	5019	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	152	452	159	140	395	149	220	1853	193	149	1694	160
RTOR Reduction (vph)	0	0	120	0	28	0	0	8	0	0	7	0
Lane Group Flow (vph)	152	452	39	140	516	0	220	2038	0	149	1847	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.5	33.3	33.3	13.3	29.1		21.4	68.9		14.1	61.6	
Effective Green, g (s)	17.5	33.3	33.3	13.3	29.1		21.4	68.9		14.1	61.6	
Actuated g/C Ratio	0.12	0.22	0.22	0.09	0.19		0.14	0.46		0.09	0.41	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	206	785	351	156	658		252	2302		166	2061	
v/s Ratio Prot	c0.09	0.13		c0.08	c0.15		0.12	c0.41		0.08	c0.37	
v/s Ratio Perm			0.02									
v/c Ratio	0.74	0.58	0.11	0.90	0.78		0.87	0.89		0.90	0.90	
Uniform Delay, d1	64.0	52.0	46.6	67.7	57.5		63.0	37.0		67.2	41.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.96	0.62		0.78	0.73	
Incremental Delay, d2	12.9	1.0	0.1	43.0	6.1		24.5	5.0		23.0	3.1	
Delay (s)	76.9	53.1	46.7	110.7	63.5		85.2	27.9		75.3	33.3	
Level of Service	E	D	D	F	E		F	C		E	C	
Approach Delay (s)		56.5			73.2			33.5			36.5	
Approach LOS		E			E			C			D	

Intersection Summary				
HCM 2000 Control Delay	42.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	88.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	19	57	148	30	95	105	1722	87	118	1600	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5049		1770	5043	
Flt Permitted		0.68			0.61	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1187			1141	1583	1770	5049		1770	5043	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	41	19	58	149	30	96	106	1739	88	119	1616	95
RTOR Reduction (vph)	0	26	0	0	0	78	0	3	0	0	4	0
Lane Group Flow (vph)	0	92	0	0	179	18	106	1824	0	119	1707	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		27.6			27.6	27.6	17.8	91.8		15.4	89.4	
Effective Green, g (s)		27.6			27.6	27.6	17.8	91.8		15.4	89.4	
Actuated g/C Ratio		0.18			0.18	0.18	0.12	0.61		0.10	0.60	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		218			209	291	210	3089		181	3005	
v/s Ratio Prot							0.06	c0.36		c0.07	0.34	
v/s Ratio Perm		0.08			c0.16	0.01						
v/c Ratio		0.42			0.86	0.06	0.50	0.59		0.66	0.57	
Uniform Delay, d1		54.1			59.3	50.5	62.0	17.7		64.8	18.5	
Progression Factor		1.00			1.00	1.00	0.72	0.51		0.66	1.32	
Incremental Delay, d2		1.3			27.4	0.1	1.1	0.5		4.3	0.4	
Delay (s)		55.5			86.7	50.6	45.8	9.5		46.8	24.9	
Level of Service		E			F	D	D	A		D	C	
Approach Delay (s)		55.5			74.1			11.5			26.3	
Approach LOS		E			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	72.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	484	61	206	866	389	133	1297	117	336	1223	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	5022		3433	4994	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	5022		3433	4994	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	186	515	65	219	921	414	141	1380	124	357	1301	177
RTOR Reduction (vph)	0	10	0	0	0	62	0	7	0	0	12	0
Lane Group Flow (vph)	186	570	0	219	921	352	141	1497	0	357	1466	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	17.5	38.6		20.4	41.5	59.1	16.2	51.6		17.6	53.0	
Effective Green, g (s)	17.5	38.6		20.4	41.5	59.1	16.2	51.6		17.6	53.0	
Actuated g/C Ratio	0.12	0.26		0.14	0.28	0.39	0.11	0.34		0.12	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	206	1286		240	979	623	191	1727		402	1764	
v/s Ratio Prot	0.11	0.11		c0.12	c0.26	0.07	0.08	c0.30		0.10	c0.29	
v/s Ratio Perm						0.16						
v/c Ratio	0.90	0.44		0.91	0.94	0.56	0.74	0.87		0.89	0.83	
Uniform Delay, d1	65.4	46.7		63.9	53.0	35.4	64.8	46.0		65.2	44.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.69	0.59		1.29	0.37	
Incremental Delay, d2	36.4	0.5		34.8	16.8	0.7	10.9	5.6		17.4	4.0	
Delay (s)	101.8	47.2		98.7	69.9	36.1	55.6	32.5		101.4	20.4	
Level of Service	F	D		F	E	D	E	C		F	C	
Approach Delay (s)		60.5			64.9			34.5			36.1	
Approach LOS		E			E			C			D	

Intersection Summary				
HCM 2000 Control Delay	46.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.92			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8	
Intersection Capacity Utilization	89.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

17: Beach Blvd & Indianapolis Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	112	39	34	127	161	32	1404	33	162	1145	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1790		1770	1863	1583	1770	5068		1770	5043	
Flt Permitted	0.51	1.00		0.43	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	957	1790		808	1863	1583	1770	5068		1770	5043	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	71	114	40	35	130	164	33	1433	34	165	1168	68
RTOR Reduction (vph)	0	10	0	0	0	143	0	1	0	0	3	0
Lane Group Flow (vph)	71	144	0	35	130	21	33	1466	0	165	1233	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	19.6	19.6		19.6	19.6	19.6	8.2	84.8		29.2	105.8	
Effective Green, g (s)	19.6	19.6		19.6	19.6	19.6	8.2	84.8		29.2	105.8	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.05	0.57		0.19	0.71	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	233		105	243	206	96	2865		344	3556	
v/s Ratio Prot		c0.08			0.07		0.02	c0.29		c0.09	0.24	
v/s Ratio Perm	0.07			0.04		0.01						
v/c Ratio	0.57	0.62		0.33	0.53	0.10	0.34	0.51		0.48	0.35	
Uniform Delay, d1	61.2	61.7		59.3	60.9	57.5	68.3	19.9		53.7	8.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.44	0.41		0.51	0.24	
Incremental Delay, d2	5.8	4.9		1.9	2.3	0.2	1.3	0.4		0.6	0.1	
Delay (s)	67.0	66.5		61.1	63.2	57.7	99.5	8.5		28.1	2.2	
Level of Service	E	E		E	E	E	F	A		C	A	
Approach Delay (s)		66.7			60.2			10.6			5.2	
Approach LOS		E			E			B			A	

Intersection Summary				
HCM 2000 Control Delay	16.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.52			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.4	
Intersection Capacity Utilization	71.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

18: Beach Blvd & Atlanta Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	259	373	33	80	534	210	122	907	89	351	597	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3390		1770	5017		1770	4853	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3390		1770	5017		1770	4853	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	264	381	34	82	545	214	124	926	91	358	609	266
RTOR Reduction (vph)	0	4	0	0	28	0	0	7	0	0	58	0
Lane Group Flow (vph)	264	411	0	82	731	0	124	1010	0	358	817	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.3	47.2		11.6	34.5		29.6	38.2		31.9	40.5	
Effective Green, g (s)	24.3	47.2		11.6	34.5		29.6	38.2		31.9	40.5	
Actuated g/C Ratio	0.16	0.31		0.08	0.23		0.20	0.25		0.21	0.27	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	286	1100		136	779		349	1277		376	1310	
v/s Ratio Prot	c0.15	0.12		0.05	c0.22		0.07	c0.20		c0.20	0.17	
v/s Ratio Perm												
v/c Ratio	0.92	0.37		0.60	0.94		0.36	0.79		0.95	0.62	
Uniform Delay, d1	61.9	39.9		67.0	56.7		52.0	52.2		58.3	48.1	
Progression Factor	1.00	1.00		1.00	1.00		1.06	1.04		0.87	0.64	
Incremental Delay, d2	33.1	0.1		5.1	18.5		0.2	4.9		32.9	2.2	
Delay (s)	95.0	40.0		72.1	75.2		55.3	59.3		83.8	32.7	
Level of Service	F	D		E	E		E	E		F	C	
Approach Delay (s)		61.4			74.9			58.9			47.5	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	59.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	92.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	0	134	0	0	0	128	1066	0	0	603	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5025	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5025	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	81	0	143	0	0	0	136	1134	0	0	641	55
RTOR Reduction (vph)	0	0	128	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	81	0	15	0	0	0	136	1134	0	0	693	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	16.0		16.0				16.9	123.0			101.2	
Effective Green, g (s)	16.0		16.0				16.9	123.0			101.2	
Actuated g/C Ratio	0.11		0.11				0.11	0.82			0.67	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	188		168				199	4169			3390	
v/s Ratio Prot							c0.08	c0.22			0.14	
v/s Ratio Perm	c0.05		0.01									
v/c Ratio	0.43		0.09				0.68	0.27			0.20	
Uniform Delay, d1	62.7		60.4				64.0	3.1			9.2	
Progression Factor	1.00		1.00				1.13	0.53			0.55	
Incremental Delay, d2	1.6		0.2				4.3	0.1			0.1	
Delay (s)	64.3		60.7				76.6	1.7			5.1	
Level of Service	E		E				E	A			A	
Approach Delay (s)		62.0			0.0			9.7			5.1	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	45.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	1200	53	23	1552	868	29	50	38	443	55	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	299	1250	55	24	1617	904	30	52	40	461	57	257
RTOR Reduction (vph)	0	3	0	0	0	241	0	0	37	0	0	0
Lane Group Flow (vph)	299	1302	0	24	1617	663	30	52	3	461	57	257
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.3	84.0		4.3	75.0	75.0	3.6	11.6	11.6	28.4	36.4	150.0
Effective Green, g (s)	13.3	84.0		4.3	75.0	75.0	3.6	11.6	11.6	28.4	36.4	150.0
Actuated g/C Ratio	0.09	0.56		0.03	0.50	0.50	0.02	0.08	0.08	0.19	0.24	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	304	2829		50	1769	791	42	273	122	649	452	1583
v/s Ratio Prot	c0.09	0.26		0.01	c0.46		c0.02	0.01		c0.13	0.03	
v/s Ratio Perm						0.42			0.00			c0.16
v/c Ratio	0.98	0.46		0.48	0.91	0.84	0.71	0.19	0.03	0.71	0.13	0.16
Uniform Delay, d1	68.2	19.6		71.7	34.5	32.3	72.7	64.8	64.0	56.9	44.4	0.0
Progression Factor	1.00	1.00		1.24	0.33	0.61	1.00	1.00	1.00	1.17	1.13	1.00
Incremental Delay, d2	46.7	0.5		2.0	7.0	8.1	38.0	0.1	0.0	3.0	0.0	0.2
Delay (s)	114.9	20.1		90.9	18.3	27.8	110.7	64.9	64.0	69.7	50.3	0.2
Level of Service	F	C		F	B	C	F	E	E	E	D	A
Approach Delay (s)		37.8			22.4			75.9			45.2	
Approach LOS		D			C			E			D	

Intersection Summary				
HCM 2000 Control Delay	32.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	84.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	1557	15	5	2268	227	12	11	15	91	6	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1697		1770	1593	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.28	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	524	1697		1378	1593	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	115	1622	16	5	2362	236	12	11	16	95	6	174
RTOR Reduction (vph)	0	0	4	0	0	59	0	14	0	0	153	0
Lane Group Flow (vph)	115	1622	12	5	2362	177	12	13	0	95	27	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	13.1	116.4	116.4	1.2	104.5	104.5	18.5	18.5		18.5	18.5	
Effective Green, g (s)	13.1	116.4	116.4	1.2	104.5	104.5	18.5	18.5		18.5	18.5	
Actuated g/C Ratio	0.09	0.78	0.78	0.01	0.70	0.70	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	154	3945	1228	14	3542	1102	64	209		169	196	
v/s Ratio Prot	c0.06	0.32		c0.00	c0.46			0.01			0.02	
v/s Ratio Perm			0.01			0.11	0.02			c0.07		
v/c Ratio	0.75	0.41	0.01	0.36	0.67	0.16	0.19	0.06		0.56	0.14	
Uniform Delay, d1	66.8	5.5	3.8	74.0	12.9	7.8	59.0	58.1		61.9	58.7	
Progression Factor	0.73	2.15	1.00	0.55	0.36	0.09	1.00	1.00		1.00	1.00	
Incremental Delay, d2	14.0	0.3	0.0	3.1	0.5	0.2	0.5	0.0		2.5	0.1	
Delay (s)	62.6	12.2	3.8	43.4	5.1	0.8	59.5	58.1		64.5	58.8	
Level of Service	E	B	A	D	A	A	E	E		E	E	
Approach Delay (s)		15.4			4.8			58.6			60.7	
Approach LOS		B			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	12.5	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	73.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

25: Magnolia Ave & Pacific Coast Highway

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	1521	37	50	2412	232	18	45	31	91	50	101
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1749		1681	1743	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1749		1681	1743	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	145	1618	39	53	2566	247	19	48	33	97	53	107
RTOR Reduction (vph)	0	0	15	0	0	68	0	17	0	0	0	96
Lane Group Flow (vph)	145	1618	24	53	2566	179	19	64	0	74	76	11
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.9	91.5	91.5	7.2	87.8	87.8	17.0	17.0		15.5	15.5	15.5
Effective Green, g (s)	10.9	91.5	91.5	7.2	87.8	87.8	17.0	17.0		15.5	15.5	15.5
Actuated g/C Ratio	0.07	0.61	0.61	0.05	0.59	0.59	0.11	0.11		0.10	0.10	0.10
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	128	3101	965	84	2976	926	200	198		173	180	163
v/s Ratio Prot	c0.08	0.32		0.03	c0.50		0.01	c0.04		c0.04	0.04	
v/s Ratio Perm			0.02			0.11						0.01
v/c Ratio	1.13	0.52	0.02	0.63	0.86	0.19	0.10	0.32		0.43	0.42	0.07
Uniform Delay, d1	69.5	16.7	11.6	70.1	26.0	14.5	59.6	61.2		63.1	63.1	60.7
Progression Factor	0.87	0.53	1.02	1.40	0.17	0.04	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	117.4	0.6	0.0	4.2	1.4	0.2	0.1	0.3		0.6	0.6	0.1
Delay (s)	177.8	9.4	11.9	102.2	5.7	0.7	59.7	61.6		63.7	63.6	60.8
Level of Service	F	A	B	F	A	A	E	E		E	E	E
Approach Delay (s)		23.0			7.1			61.2			62.5	
Approach LOS		C			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	80.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

27: Brookhurst St & Pacific Coast Highway

Opening Year PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	1483	7	20	2514	680	25	29	13	326	8	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1776		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1776		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	176	1595	8	22	2703	731	27	31	14	351	9	174
RTOR Reduction (vph)	0	0	3	0	0	53	0	11	0	0	0	146
Lane Group Flow (vph)	176	1595	5	22	2703	678	27	34	0	351	9	28
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	18.8	96.2	96.2	3.7	81.1	104.9	5.6	5.6		23.8	23.8	23.8
Effective Green, g (s)	18.8	96.2	96.2	3.7	81.1	104.9	5.6	5.6		23.8	23.8	23.8
Actuated g/C Ratio	0.13	0.64	0.64	0.02	0.54	0.70	0.04	0.04		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	221	3261	1015	43	2749	1107	66	66		544	295	251
v/s Ratio Prot	c0.10	0.31		0.01	c0.53	0.10	0.02	c0.02		c0.10	0.00	
v/s Ratio Perm			0.00			0.33						0.02
v/c Ratio	0.80	0.49	0.01	0.51	0.98	0.61	0.41	0.52		0.65	0.03	0.11
Uniform Delay, d1	63.7	14.1	9.7	72.3	33.8	11.9	70.6	70.9		59.1	53.3	54.0
Progression Factor	0.76	1.09	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	15.1	0.5	0.0	4.2	13.7	0.7	1.5	3.4		2.0	0.0	0.1
Delay (s)	63.5	15.9	9.7	76.5	47.5	12.6	72.1	74.3		61.1	53.4	54.1
Level of Service	E	B	A	E	D	B	E	E		E	D	D
Approach Delay (s)		20.5			40.3			73.5			58.7	
Approach LOS		C			D			E			E	

Intersection Summary				
HCM 2000 Control Delay	36.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	87.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Scenario Report

Scenario:	OYNP-PM
Command:	OYNP-PM
Volume:	EX-PM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	OY-CUMUL-PM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	OYNP-PM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	E	xxxxx	0.909	E	xxxxx	0.999	+ 0.090
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.869	E	xxxxx	0.923	+ 0.053
# 16 Beach Blvd & Adams Ave	C	xxxxx	0.724	C	xxxxx	0.783	+ 0.059
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.674	C	xxxxx	0.790	+ 0.116
# 21 Newland St & Atlanta Ave	A	xxxxx	0.563	A	xxxxx	0.574	+ 0.011
# 22 Newland St & Hamilton Ave	B	xxxxx	0.697	B	xxxxx	0.697	+ 0.000
# 24 Magnolia St & Hamilton Ave	B	xxxxx	0.610	B	xxxxx	0.611	+ 0.001
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.657	B	xxxxx	0.658	+ 0.001
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.798	D	xxxxx	0.806	+ 0.008
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.506	A	xxxxx	0.511	+ 0.005
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.594	B	xxxxx	0.602	+ 0.008
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.710	C	xxxxx	0.735	+ 0.025
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.624	B	xxxxx	0.637	+ 0.013
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.595	B	xxxxx	0.610	+ 0.015
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.778	C	xxxxx	0.792	+ 0.013
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.353	A	xxxxx	0.353	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.440	A	xxxxx	0.452	+ 0.012
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.227	A	xxxxx	0.227	+ 0.001
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.284	A	xxxxx	0.285	+ 0.000

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.909
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	92	Level Of Service:	E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	427	2308	524		343	2266	658		428	934	252		179	609	177	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	427	2308	524		343	2266	658		428	934	252		179	609	177	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	427	2308	524		343	2266	658		428	934	252		179	609	177	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	427	2308	524		343	2266	658		428	934	252		179	609	177	
OvlAdjVol:							230				39					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.45	0.31		0.10	0.33	0.19		0.13	0.18	0.15		0.05	0.18	0.10	
OvlAdjV/S:							0.07				0.02					
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.869
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.36	0.36		0.05	0.25	0.20		0.12	0.25	0.25		0.07	0.28	0.28	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	133	1128	103	297	1074	157	161	469	61	193	853	349				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	133	1128	103	297	1074	157	161	469	61	193	853	349				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	133	1128	103	297	1074	157	161	469	61	193	853	349				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	133	1128	103	297	1074	157	161	469	61	193	853	349				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.75	0.25	2.00	2.62	0.38	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4673	427	3400	4451	649	1700	4515	585	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.24	0.24	0.09	0.24	0.24	0.09	0.10	0.10	0.11	0.25	0.21				
Crit Moves:	****			****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37	303	53	232	267	1070	51	22	1417	720				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	29	50	38	312	55	239	275	1102	53	23	1460	742				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	29	50	0	312	55	0	275	1102	53	23	1460	742				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	29	50	0	312	55	0	275	1102	53	23	1460	742				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	29	50	0	312	55	0	275	1102	53	23	1460	742				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.86	0.14	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4868	232	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.01	0.00	0.09	0.03	0.00	0.08	0.23	0.23	0.01	0.43	0.44				
Crit Moves:	****			****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.563
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34	96	264	97	80	474	203	52	473	114				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	283	537	35	99	272	100	82	488	209	54	487	117				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	283	537	35	99	272	100	82	488	209	54	487	117				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	283	537	35	99	272	100	82	488	209	54	487	117				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	283	537	35	99	272	100	82	488	209	54	487	117				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.88	0.12	1.00	1.46	0.54	1.00	1.40	0.60	1.00	1.61	0.39				
Final Sat.:	1700	3192	208	1700	2486	914	1700	2381	1019	1700	2740	660				
Capacity Analysis Module:																
Vol/Sat:	0.17	0.17	0.17	0.06	0.11	0.11	0.05	0.21	0.21	0.03	0.18	0.18				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	304	65	223	203	0	0	0	0	153	0	476				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	0	313	67	230	209	0	0	0	0	158	0	490				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	313	67	230	209	0	0	0	0	158	0	490				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	313	67	230	209	0	0	0	0	158	0	490				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	313	67	230	209	0	0	0	0	158	0	490				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.82	0.18	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1401	299	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.22	0.22	0.14	0.12	0.00	0.00	0.00	0.00	0.09	0.00	0.29				
Crit Moves:		****		****								****				

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	31	309	29		195	183	43		26	265	30		15	562	337	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	31	309	29		195	183	43		26	265	30		15	562	337	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	31	309	29		195	183	43		26	265	30		15	562	337	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	31	309	29		195	183	43		26	265	30		15	562	337	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.90	0.10		1.00	1.00	1.00	
Final Sat.:	1700	3110	290		1700	3400	1700		1700	1528	172		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10		0.11	0.05	0.03		0.02	0.17	0.17		0.01	0.33	0.20	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.657
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	114	586	158		399	401	91		92	361	69		238	1092	515	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	114	586	158		399	401	91		92	361	69		238	1092	515	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	114	586	158		399	401	91		92	361	69		238	1092	515	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	114	586	158		399	401	91		92	361	69		238	1092	515	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.45	0.55		1.00	1.68	0.32		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4159	941		1700	2854	546		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.09		0.12	0.10	0.10		0.05	0.13	0.13		0.14	0.32	0.30	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.798
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.29	0.19		0.07	0.28	0.15		0.06	0.13	0.09		0.07	0.32	0.28	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.506
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16		29	1774	25		83	0	28		8	0	11	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	23	1851	16		30	1827	26		85	0	29		8	0	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	23	1851	16		30	1827	0		85	0	29		8	0	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	23	1851	16		30	1827	0		85	0	29		8	0	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	23	1851	16		30	1827	0		85	0	29		8	0	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.97	0.03		1.00	3.00	1.00		0.74	0.01	0.25		0.42	0.00	0.58	
Final Sat.:	1700	5055	45		1700	5100	1700		1271	0	429		716	0	984	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.37	0.37		0.02	0.36	0.00		0.05	0.00	0.07		0.00	0.00	0.01	
Crit Moves:		****			****							****	****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	71	1636	13		41	1597	219		227	8	84		13	3	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	71	1636	13		41	1597	219		227	8	84		13	3	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	71	1636	13		41	1597	219		227	8	84		13	3	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	71	1636	13		41	1597	219		227	8	84		13	3	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.32	0.32		0.02	0.36	0.36		0.13	0.14	0.05		0.01	0.02	0.02	
Crit Moves:	****					****				****			****			

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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.710
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	109	1308	132		159	1227	187		255	486	90		342	687	111	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	109	1308	132		159	1227	187		255	486	90		342	687	111	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	109	1308	132		159	1227	187		255	486	90		342	687	111	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	109	1308	132		159	1227	187		255	486	90		342	687	111	
OvlAdjVol:			0				60									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.26	0.08		0.09	0.24	0.11		0.08	0.17	0.17		0.10	0.23	0.23	
OvlAdjV/S:			0.00				0.04									
Crit Moves:		****				****				****				****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.624
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	190	1421	79		106	1183	243		182	217	140		191	249	99	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	190	1421	79		106	1183	243		182	217	140		191	249	99	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	190	1421	79		106	1183	243		182	217	140		191	249	99	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	190	1421	79		106	1183	243		182	217	140		191	249	99	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.29	0.29		0.06	0.23	0.14		0.11	0.11	0.11		0.11	0.07	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	159	1452	113		38	1145	206		151	226	112		149	256	27	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	159	1452	113		38	1145	206		151	226	112		149	256	27	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	159	1452	113		38	1145	206		151	226	112		149	256	27	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	159	1452	113		38	1145	206		151	226	112		149	256	27	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.54	0.46		1.00	1.34	0.66		1.00	1.81	0.19	
Final Sat.:	1700	4731	369		1700	4323	777		1700	2270	1130		1700	3079	321	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.31	0.31		0.02	0.26	0.26		0.09	0.10	0.10		0.09	0.08	0.08	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	269	899	148	313	876	184	282	769	127	289	1775	365				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	269	899	148	313	876	184	282	769	127	289	1775	365				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	269	899	148	313	876	184	282	769	127	289	1775	365				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	269	899	148	313	876	184	282	769	127	289	1775	365				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.21	0.21	0.09	0.21	0.21	0.08	0.15	0.07	0.09	0.35	0.21				
Crit Moves:	****			****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR NO PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.353
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	45	1286	0	0	1087	171	100	0	53	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	45	1286	0	0	1087	171	100	0	53	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	45	1286	0	0	1087	171	100	0	53	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	45	1286	0	0	1087	171	100	0	53	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.25	0.00	0.00	0.25	0.25	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.440
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	151	1018	22	21	711	174	182	25	140	26	41	28				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	151	1018	22	21	711	174	182	25	140	26	41	28				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	151	1018	22	21	711	174	182	25	140	26	41	28				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	151	1018	22	21	711	174	182	25	140	26	41	28				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.94	0.06	1.00	2.41	0.59	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4994	106	1700	4097	1003	1700	1700	1700	1700	2030	1370				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.20	0.20	0.01	0.17	0.17	0.11	0.01	0.08	0.02	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.227
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	14	710	0	0	419	88	64	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	14	710	0	0	419	88	64	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	14	710	0	0	419	88	64	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	14	710	0	0	419	88	64	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.48	0.52	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4219	881	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00	0.00	0.10	0.10	0.04	0.00	0.01	0.00	0.00	0.00				
Crit Moves:		****		****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.284
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1		12	378	26		7	0	86		0	1	0	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	180	697	1		12	389	27		7	0	89		0	1	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	180	697	1		12	389	27		7	0	89		0	1	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	180	697	1		12	389	27		7	0	89		0	1	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	180	697	1		12	389	27		7	0	89		0	1	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		1.00	0.00	1.00		0.00	1.00	0.00	
Final Sat.:	1700	5092	8		1700	5100	1700		1700	0	1700		0	1700	0	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.14	0.14		0.01	0.08	0.02		0.00	0.00	0.05		0.00	0.00	0.00	
Crit Moves:	****					****					****	****				

APPENDIX F: PROJECT OPERATING YEAR (2017) PLUS PROJECT LOS

HCM Signalized Intersection Capacity Analysis Remedial Action Plan Ascon Landfill Site TIA
1: Beach Blvd & McFadden Ave Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	254	344	125	323	442	103	182	2025	163	149	2870	344
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3398		3433	3439		3433	6336		3433	6305	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3398		3433	3439		3433	6336		3433	6305	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	273	370	134	347	475	111	196	2177	175	160	3086	370
RTOR Reduction (vph)	0	26	0	0	14	0	0	8	0	0	14	0
Lane Group Flow (vph)	273	478	0	347	572	0	196	2344	0	160	3442	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.5	33.8		13.7	31.0		12.0	72.9		11.2	72.1	
Effective Green, g (s)	16.5	33.8		13.7	31.0		12.0	72.9		11.2	72.1	
Actuated g/C Ratio	0.11	0.23		0.09	0.21		0.08	0.49		0.07	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	377	765		313	710		274	3079		256	3030	
v/s Ratio Prot	c0.08	0.14		c0.10	c0.17		0.06	c0.37		0.05	c0.55	
v/s Ratio Perm												
v/c Ratio	0.72	0.63		1.11	0.81		0.72	0.76		0.62	1.14	
Uniform Delay, d1	64.5	52.4		68.2	56.6		67.3	31.5		67.4	39.0	
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.68		1.00	1.00	
Incremental Delay, d2	6.8	1.6		83.3	6.6		7.7	1.6		4.7	65.9	
Delay (s)	71.3	54.0		151.5	63.3		74.4	23.0		72.1	104.8	
Level of Service	E	D		F	E		E	C		E	F	
Approach Delay (s)		60.1			96.1			27.0			103.4	
Approach LOS		E			F			C			F	

Intersection Summary			
HCM 2000 Control Delay	73.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	98.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	178	618	0	2447	2881	977
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	185	644	0	2549	3001	1018
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	185	643	0	2549	3001	1018
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	13.9	41.4		126.3	92.8	150.0
Effective Green, g (s)	13.9	41.4		126.3	92.8	150.0
Actuated g/C Ratio	0.09	0.28		0.84	0.62	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	318	852		5395	3964	1583
v/s Ratio Prot	0.05	c0.14		0.39	c0.47	
v/s Ratio Perm		0.09		0.00		0.64
v/c Ratio	0.58	0.75		0.47	0.76	0.64
Uniform Delay, d1	65.3	49.6		3.1	20.5	0.0
Progression Factor	1.00	1.00		0.11	0.39	1.00
Incremental Delay, d2	3.2	4.0		0.0	0.4	0.5
Delay (s)	68.5	53.7		0.3	8.4	0.5
Level of Service	E	D		A	A	A
Approach Delay (s)	57.0			0.3	6.4	
Approach LOS	E			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	72.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	308	1069	219	139	481	241	175	1900	288	461	2571	492
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	318	1102	226	143	496	248	180	1959	297	475	2651	507
RTOR Reduction (vph)	0	0	57	0	0	145	0	0	109	0	0	100
Lane Group Flow (vph)	318	1102	169	143	496	103	180	1959	188	475	2651	407
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.4	38.9	51.1	13.0	39.5	39.5	12.2	51.8	51.8	26.0	65.2	77.6
Effective Green, g (s)	12.4	38.9	51.1	13.0	39.5	39.5	12.2	51.8	51.8	26.0	65.2	77.6
Actuated g/C Ratio	0.08	0.26	0.34	0.09	0.26	0.26	0.08	0.35	0.35	0.17	0.43	0.52
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	283	1318	539	297	931	416	279	1756	546	595	2785	1441
v/s Ratio Prot	c0.09	c0.22	0.03	0.04	0.14		0.05	c0.39		c0.14	c0.41	0.02
v/s Ratio Perm			0.08			0.06			0.12			0.12
v/c Ratio	1.12	0.84	0.31	0.48	0.53	0.25	0.65	1.12	0.34	0.80	0.95	0.28
Uniform Delay, d1	68.8	52.5	36.5	65.3	47.3	43.5	66.8	49.1	36.5	59.5	40.9	20.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.55	0.37	1.12	0.60	0.44
Incremental Delay, d2	91.0	4.8	0.1	0.4	0.6	0.3	3.2	59.2	1.4	4.5	6.3	0.0
Delay (s)	159.8	57.3	36.6	65.7	47.9	43.8	99.5	86.4	15.0	71.0	30.9	8.9
Level of Service	F	E	D	E	D	D	F	F	B	E	C	A
Approach Delay (s)		74.3			49.7			78.7			33.1	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	55.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	19	21	66	8	101	46	2166	55	140	2778	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1716		1770	1863	1583	1770	6384		3433	6403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1716		1770	1863	1583	1770	6384		3433	6403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	20	22	69	8	106	48	2280	58	147	2924	14
RTOR Reduction (vph)	0	19	0	0	0	92	0	2	0	0	0	0
Lane Group Flow (vph)	26	23	0	69	8	14	48	2336	0	147	2938	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	18.4		9.9	20.5	20.5	8.3	89.4		12.7	93.8	
Effective Green, g (s)	7.8	18.4		9.9	20.5	20.5	8.3	89.4		12.7	93.8	
Actuated g/C Ratio	0.05	0.12		0.07	0.14	0.14	0.06	0.60		0.08	0.63	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	210		116	254	216	97	3804		290	4004	
v/s Ratio Prot	0.01	c0.01		c0.04	0.00		0.03	c0.37		0.04	c0.46	
v/s Ratio Perm						0.01						
v/c Ratio	0.28	0.11		0.59	0.03	0.07	0.49	0.61		0.51	0.73	
Uniform Delay, d1	68.4	58.5		68.1	56.1	56.4	68.8	19.3		65.7	19.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.61	0.24		0.62	0.25	
Incremental Delay, d2	1.7	0.2		7.9	0.1	0.1	3.3	0.6		0.7	0.6	
Delay (s)	70.1	58.7		76.0	56.2	56.5	113.8	5.3		41.2	5.4	
Level of Service	E	E		E	E	E	F	A		D	A	
Approach Delay (s)		63.1			63.9			7.4			7.1	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	71.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	4	41	89	5	52	37	2205	46	146	2770	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.98	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1607		1681	1603	1504	1770	6388		3433	6403	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1607		1681	1603	1504	1770	6388		3433	6403	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	29	4	43	93	5	54	39	2297	48	152	2885	14
RTOR Reduction (vph)	0	39	0	0	3	45	0	1	0	0	0	0
Lane Group Flow (vph)	29	8	0	52	49	3	39	2344	0	152	2899	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.1	13.1		9.0	9.0	9.0	8.1	97.1		12.9	101.9	
Effective Green, g (s)	13.1	13.1		9.0	9.0	9.0	8.1	97.1		12.9	101.9	
Actuated g/C Ratio	0.09	0.09		0.06	0.06	0.06	0.05	0.65		0.09	0.68	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	154	140		100	96	90	95	4135		295	4349	
v/s Ratio Prot	c0.02	0.00		c0.03	0.03		0.02	c0.37		0.04	c0.45	
v/s Ratio Perm						0.00						
v/c Ratio	0.19	0.06		0.52	0.51	0.03	0.41	0.57		0.52	0.67	
Uniform Delay, d1	63.5	62.8		68.4	68.4	66.4	68.6	14.7		65.6	14.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.84	1.51		0.57	0.30	
Incremental Delay, d2	0.6	0.2		4.8	4.6	0.1	2.1	0.4		1.1	0.6	
Delay (s)	64.1	62.9		73.2	72.9	66.5	59.9	22.7		38.4	4.8	
Level of Service	E	E		E	E	E	E	C		D	A	
Approach Delay (s)		63.4			71.0			23.3			6.4	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	69.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	187	357	284	52	230	104	132	2010	65	78	2622	160
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3304		1770	3374		1770	6378		1770	6353	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3304		1770	3374		1770	6378		1770	6353	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	197	376	299	55	242	109	139	2116	68	82	2760	168
RTOR Reduction (vph)	0	103	0	0	39	0	0	3	0	0	5	0
Lane Group Flow (vph)	197	572	0	55	312	0	139	2181	0	82	2923	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.9	35.7		8.8	21.6		12.8	74.3		12.4	73.9	
Effective Green, g (s)	22.9	35.7		8.8	21.6		12.8	74.3		12.4	73.9	
Actuated g/C Ratio	0.15	0.24		0.06	0.14		0.09	0.50		0.08	0.49	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	270	786		103	485		151	3159		146	3129	
v/s Ratio Prot	0.11	c0.17		0.03	c0.09		c0.08	0.34		0.05	c0.46	
v/s Ratio Perm												
v/c Ratio	0.73	0.73		0.53	0.64		0.92	0.69		0.56	0.93	
Uniform Delay, d1	60.6	52.7		68.6	60.6		68.1	29.0		66.2	35.8	
Progression Factor	1.00	1.00		1.00	1.00		0.89	0.97		0.88	0.85	
Incremental Delay, d2	9.5	3.4		5.2	2.9		45.8	1.1		3.7	5.3	
Delay (s)	70.1	56.1		73.8	63.5		106.3	29.3		61.8	35.7	
Level of Service	E	E		E	E		F	C		E	D	
Approach Delay (s)		59.2			64.9			33.9			36.4	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	40.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	18	62	41	4	16	52	2152	25	20	2872	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667	1478		1662	1478	1770	6397		1770	6399	
Flt Permitted		0.72	1.00		0.56	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1254	1478		971	1478	1770	6397		1770	6399	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	122	20	68	45	4	18	57	2365	27	22	3156	29
RTOR Reduction (vph)	0	0	57	0	0	15	0	1	0	0	1	0
Lane Group Flow (vph)	0	142	11	0	49	3	57	2391	0	22	3184	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		23.9	23.9		23.9	23.9	8.6	105.3		5.5	102.2	
Effective Green, g (s)		23.9	23.9		23.9	23.9	8.6	105.3		5.5	102.2	
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.06	0.70		0.04	0.68	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		199	235		154	235	101	4490		64	4359	
v/s Ratio Prot							c0.03	c0.37		0.01	c0.50	
v/s Ratio Perm		c0.11	0.01		0.05	0.00						
v/c Ratio		0.71	0.05		0.32	0.01	0.56	0.53		0.34	0.73	
Uniform Delay, d1		59.8	53.4		55.8	53.1	68.9	10.6		70.5	15.2	
Progression Factor		1.00	1.00		1.00	1.00	1.07	0.19		1.23	0.19	
Incremental Delay, d2		11.5	0.1		1.2	0.0	1.8	0.1		1.5	0.5	
Delay (s)		71.3	53.5		57.0	53.1	75.5	2.1		88.0	3.4	
Level of Service		E	D		E	D	E	A		F	A	
Approach Delay (s)		65.5			56.0			3.8			4.0	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	72.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	227	1313	139	222	900	93	187	1963	156	381	2222	274
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	5012		3433	5014		3433	6337		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	5012		3433	5014		3433	6337		3433	6408	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	252	1459	154	247	1000	103	208	2181	173	423	2469	304
RTOR Reduction (vph)	0	8	0	0	9	0	0	8	0	0	0	103
Lane Group Flow (vph)	252	1605	0	247	1094	0	208	2346	0	423	2469	201
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Effective Green, g (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Actuated g/C Ratio	0.09	0.31		0.08	0.29		0.09	0.36		0.13	0.40	0.40
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	322	1540		265	1457		297	2289		437	2576	636
v/s Ratio Prot	0.07	c0.32		c0.07	0.22		0.06	c0.37		0.12	c0.39	
v/s Ratio Perm												0.13
v/c Ratio	0.78	1.04		0.93	0.75		0.70	1.02		0.97	0.96	0.32
Uniform Delay, d1	66.5	52.0		68.8	48.3		66.6	47.9		65.1	43.6	30.7
Progression Factor	1.00	1.00		1.00	1.00		1.03	0.57		0.68	0.54	0.41
Incremental Delay, d2	10.9	34.7		36.9	2.2		4.5	23.0		27.6	7.9	0.9
Delay (s)	77.3	86.6		105.7	50.5		73.0	50.2		72.0	31.4	13.6
Level of Service	E	F		F	D		E	D		E	C	B
Approach Delay (s)		85.4			60.6			52.1			35.1	
Approach LOS		F			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	54.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	1.02			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0	
Intersection Capacity Utilization	95.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

9: Beach Blvd & Slater Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	688	194	70	421	103	118	1671	38	198	2215	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.97		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3422		1770	3435		1770	6387		1770	6337	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3422		1770	3435		1770	6387		1770	6337	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	178	748	211	76	458	112	128	1816	41	215	2408	192
RTOR Reduction (vph)	0	17	0	0	15	0	0	2	0	0	8	0
Lane Group Flow (vph)	178	942	0	76	555	0	128	1855	0	215	2592	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.7	42.9		12.0	30.2		12.6	52.9		21.5	61.8	
Effective Green, g (s)	24.7	42.9		12.0	30.2		12.6	52.9		21.5	61.8	
Actuated g/C Ratio	0.16	0.29		0.08	0.20		0.08	0.35		0.14	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	291	978		141	691		148	2252		253	2610	
v/s Ratio Prot	0.10	c0.28		0.04	c0.16		0.07	c0.29		0.12	c0.41	
v/s Ratio Perm												
v/c Ratio	0.61	0.96		0.54	0.80		0.86	0.82		0.85	0.99	
Uniform Delay, d1	58.2	52.8		66.3	57.1		67.9	44.3		62.7	43.9	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.73		0.85	0.53	
Incremental Delay, d2	3.8	20.2		3.9	6.7		35.7	3.4		8.1	8.2	
Delay (s)	62.0	73.0		70.3	63.8		89.1	35.8		61.4	31.4	
Level of Service	E	E		E	E		F	D		E	C	
Approach Delay (s)		71.3			64.5			39.2			33.7	
Approach LOS		E			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	44.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.97			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	95.8%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

10: Beach Blvd & Newman Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	4	26	40	2	69	18	1740	63	119	2519	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1677		1770	6374		1770	6402	
Flt Permitted		0.73			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1284			1465		1770	6374		1770	6402	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	29	4	27	41	2	70	18	1776	64	121	2570	15
RTOR Reduction (vph)	0	24	0	0	48	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	36	0	0	65	0	18	1838	0	121	2585	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		17.2			17.2		6.0	101.3		15.6	110.9	
Effective Green, g (s)		17.2			17.2		6.0	101.3		15.6	110.9	
Actuated g/C Ratio		0.11			0.11		0.04	0.68		0.10	0.74	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		147			167		70	4304		184	4733	
v/s Ratio Prot							0.01	0.29		c0.07	c0.40	
v/s Ratio Perm		0.03			c0.04							
v/c Ratio		0.25			0.39		0.26	0.43		0.66	0.55	
Uniform Delay, d1		60.5			61.5		69.8	11.1		64.6	8.5	
Progression Factor		1.00			1.00		1.15	0.07		1.18	0.09	
Incremental Delay, d2		0.9			1.5		1.1	0.2		2.4	0.1	
Delay (s)		61.4			63.1		81.2	1.0		78.8	0.9	
Level of Service		E			E		F	A		E	A	
Approach Delay (s)		61.4			63.1			1.8			4.4	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	66.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	96	408	130	131	375	146	176	1631	139	323	1845	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3391		1770	6332		1770	6327	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3391		1770	6332		1770	6327	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	102	434	138	139	399	155	187	1735	148	344	1963	181
RTOR Reduction (vph)	0	22	0	0	29	0	0	8	0	0	9	0
Lane Group Flow (vph)	102	550	0	139	525	0	187	1875	0	344	2135	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.2	30.2		13.2	31.2		18.6	54.6		31.3	67.3	
Effective Green, g (s)	12.2	30.2		13.2	31.2		18.6	54.6		31.3	67.3	
Actuated g/C Ratio	0.08	0.20		0.09	0.21		0.12	0.36		0.21	0.45	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	143	686		155	705		219	2304		369	2838	
v/s Ratio Prot	0.06	c0.16		c0.08	0.15		0.11	c0.30		c0.19	0.34	
v/s Ratio Perm												
v/c Ratio	0.71	0.80		0.90	0.74		0.85	0.81		0.93	0.75	
Uniform Delay, d1	67.2	57.1		67.7	55.7		64.4	43.1		58.3	34.4	
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.65		0.41	0.22	
Incremental Delay, d2	13.1	6.9		42.3	4.4		22.2	2.8		26.8	1.6	
Delay (s)	80.3	64.0		110.1	60.1		68.7	30.7		50.7	9.0	
Level of Service	F	E		F	E		E	C		D	A	
Approach Delay (s)		66.4			70.1			34.2			14.8	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	86.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	316	410	104	127	359	150	112	1450	156	226	1524	418
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	336	436	111	135	382	160	119	1543	166	240	1621	445
RTOR Reduction (vph)	0	0	90	0	0	133	0	10	0	0	0	22
Lane Group Flow (vph)	336	436	21	135	382	27	119	1699	0	240	1621	423
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	27.9	27.9	27.9	19.2	19.2	19.2	10.0	66.4		13.8	70.2	98.1
Effective Green, g (s)	27.9	27.9	27.9	19.2	19.2	19.2	10.0	66.4		13.8	70.2	98.1
Actuated g/C Ratio	0.19	0.19	0.19	0.13	0.13	0.13	0.07	0.44		0.09	0.47	0.65
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	638	658	294	226	452	202	228	2794		315	2379	1035
v/s Ratio Prot	0.10	c0.12		0.08	c0.11		0.03	c0.27		0.07	c0.32	0.27
v/s Ratio Perm			0.01			0.02						
v/c Ratio	0.53	0.66	0.07	0.60	0.85	0.14	0.52	0.61		0.76	0.68	0.41
Uniform Delay, d1	55.1	56.7	50.4	61.8	63.9	58.0	67.7	31.9		66.5	31.2	12.2
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.37	0.39	0.25
Incremental Delay, d2	0.5	2.1	0.1	2.8	13.0	0.1	1.0	1.0		6.4	1.1	0.1
Delay (s)	55.5	58.8	50.4	64.6	77.0	58.2	68.7	32.9		97.8	13.4	3.1
Level of Service	E	E	D	E	E	E	E	C		F	B	A
Approach Delay (s)		56.5			70.1			35.2			20.2	
Approach LOS		E			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	76.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	631	186	125	352	147	123	1318	87	157	1394	121
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3383		1770	5038		1770	5024	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3383		1770	5038		1770	5024	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	204	671	198	133	374	156	131	1402	93	167	1483	129
RTOR Reduction (vph)	0	0	149	0	40	0	0	5	0	0	7	0
Lane Group Flow (vph)	204	671	49	133	490	0	131	1490	0	167	1605	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	18.8	32.2	32.2	13.0	26.4		13.0	49.2		14.4	50.6	
Effective Green, g (s)	18.8	32.2	32.2	13.0	26.4		13.0	49.2		14.4	50.6	
Actuated g/C Ratio	0.14	0.25	0.25	0.10	0.20		0.10	0.38		0.11	0.39	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	255	876	392	177	687		177	1906		196	1955	
v/s Ratio Prot	0.12	c0.19		0.08	c0.14		0.07	c0.30		0.09	c0.32	
v/s Ratio Perm			0.03									
v/c Ratio	0.80	0.77	0.13	0.75	0.71		0.74	0.78		0.85	0.82	
Uniform Delay, d1	53.8	45.4	38.0	56.9	48.3		56.9	35.7		56.8	35.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.61	1.02		1.00	1.00	
Incremental Delay, d2	15.4	4.3	0.2	14.7	3.8		10.5	2.5		27.4	4.0	
Delay (s)	69.2	49.7	38.2	71.6	52.0		45.3	39.0		84.1	39.6	
Level of Service	E	D	D	E	D		D	D		F	D	
Approach Delay (s)		51.3			56.0			39.5			43.8	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	45.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	81.4%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	163	488	199	140	437	124	81	1211	89	107	1468	109
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3422		1770	5033		1770	5032	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3422		1770	5033		1770	5032	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	172	514	209	147	460	131	85	1275	94	113	1545	115
RTOR Reduction (vph)	0	0	162	0	23	0	0	6	0	0	6	0
Lane Group Flow (vph)	172	514	47	147	568	0	85	1363	0	113	1654	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.1	29.1	29.1	14.2	28.2		11.6	54.2		12.1	54.7	
Effective Green, g (s)	15.1	29.1	29.1	14.2	28.2		11.6	54.2		12.1	54.7	
Actuated g/C Ratio	0.12	0.22	0.22	0.11	0.22		0.09	0.42		0.09	0.42	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	205	792	354	193	742		157	2098		164	2117	
v/s Ratio Prot	c0.10	0.15		0.08	c0.17		0.05	c0.27		0.06	c0.33	
v/s Ratio Perm			0.03									
v/c Ratio	0.84	0.65	0.13	0.76	0.77		0.54	0.65		0.69	0.78	
Uniform Delay, d1	56.3	45.8	40.4	56.3	47.8		56.7	30.3		57.1	32.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.08	0.43		0.79	0.63	
Incremental Delay, d2	24.8	1.8	0.2	16.2	4.7		3.6	1.5		7.5	1.9	
Delay (s)	81.1	47.7	40.5	72.4	52.5		64.7	14.5		52.6	22.3	
Level of Service	F	D	D	E	D		E	B		D	C	
Approach Delay (s)		52.4			56.5			17.4			24.2	
Approach LOS		D			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	83.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

15: Beach Blvd & Utica Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	43	21	81	28	9	48	42	1274	44	55	1476	72
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.92			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1697			1794	1583	1770	5060		1770	5050	
Flt Permitted		0.89			0.63	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1535			1170	1583	1770	5060		1770	5050	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	45	22	85	29	9	51	44	1341	46	58	1554	76
RTOR Reduction (vph)	0	44	0	0	0	44	0	2	0	0	3	0
Lane Group Flow (vph)	0	108	0	0	38	7	44	1385	0	58	1627	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		18.0			18.0	18.0	8.4	87.4		9.4	88.4	
Effective Green, g (s)		18.0			18.0	18.0	8.4	87.4		9.4	88.4	
Actuated g/C Ratio		0.14			0.14	0.14	0.06	0.67		0.07	0.68	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		212			162	219	114	3401		127	3434	
v/s Ratio Prot							0.02	c0.27		0.03	c0.32	
v/s Ratio Perm		c0.07			0.03	0.00						
v/c Ratio		0.51			0.23	0.03	0.39	0.41		0.46	0.47	
Uniform Delay, d1		51.9			49.9	48.5	58.3	9.6		57.9	9.8	
Progression Factor		1.00			1.00	1.00	1.20	0.40		0.62	0.64	
Incremental Delay, d2		1.9			0.7	0.1	1.8	0.3		1.7	0.3	
Delay (s)		53.8			50.6	48.5	71.6	4.2		37.4	6.6	
Level of Service		D			D	D	E	A		D	A	
Approach Delay (s)		53.8			49.4			6.2			7.6	
Approach LOS		D			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	121	756	97	130	430	232	89	946	185	401	1056	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4999		1770	3539	1583	1770	4960		3433	5014	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4999		1770	3539	1583	1770	4960		3433	5014	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	125	779	100	134	443	239	92	975	191	413	1089	113
RTOR Reduction (vph)	0	14	0	0	0	73	0	20	0	0	9	0
Lane Group Flow (vph)	125	865	0	134	443	166	92	1146	0	413	1193	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	13.5	30.9		13.3	30.7	49.4	13.3	45.3		18.7	50.7	
Effective Green, g (s)	13.5	30.9		13.3	30.7	49.4	13.3	45.3		18.7	50.7	
Actuated g/C Ratio	0.10	0.24		0.10	0.24	0.38	0.10	0.35		0.14	0.39	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	183	1188		181	835	601	181	1728		493	1955	
v/s Ratio Prot	0.07	c0.17		c0.08	0.13	0.04	0.05	c0.23		c0.12	0.24	
v/s Ratio Perm						0.07						
v/c Ratio	0.68	0.73		0.74	0.53	0.28	0.51	0.66		0.84	0.61	
Uniform Delay, d1	56.2	45.7		56.7	43.4	27.9	55.3	35.9		54.2	31.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.62	0.43		0.72	0.54	
Incremental Delay, d2	8.1	2.8		13.2	1.2	0.1	0.7	1.8		10.4	1.3	
Delay (s)	64.3	48.5		69.9	44.5	28.0	34.7	17.4		49.6	18.4	
Level of Service	E	D		E	D	C	C	B		D	B	
Approach Delay (s)		50.4			43.9			18.6			26.3	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	32.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Opening Year Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	210	50	28	117	227	15	864	62	228	1094	42
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1809		1770	1863	1583	1770	5034		1770	5057	
Flt Permitted	0.61	1.00		0.26	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1130	1809		485	1863	1583	1770	5034		1770	5057	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	119	233	56	31	130	252	17	960	69	253	1216	47
RTOR Reduction (vph)	0	8	0	0	0	202	0	6	0	0	2	0
Lane Group Flow (vph)	119	281	0	31	130	50	17	1023	0	253	1261	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	26.0	26.0		26.0	26.0	26.0	4.0	49.5		38.1	83.6	
Effective Green, g (s)	26.0	26.0		26.0	26.0	26.0	4.0	49.5		38.1	83.6	
Actuated g/C Ratio	0.20	0.20		0.20	0.20	0.20	0.03	0.38		0.29	0.64	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	226	361		97	372	316	54	1916		518	3252	
v/s Ratio Prot		c0.16			0.07		0.01	c0.20		c0.14	0.25	
v/s Ratio Perm	0.11			0.06		0.03						
v/c Ratio	0.53	0.78		0.32	0.35	0.16	0.31	0.53		0.49	0.39	
Uniform Delay, d1	46.5	49.3		44.4	44.7	43.0	61.7	31.3		37.9	11.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.28	0.88		0.44	0.31	
Incremental Delay, d2	2.2	10.1		1.9	0.6	0.2	3.0	1.0		0.6	0.3	
Delay (s)	48.7	59.4		46.3	45.3	43.2	82.0	28.5		17.3	3.7	
Level of Service	D	E		D	D	D	F	C		B	A	
Approach Delay (s)		56.3			44.1			29.3			6.0	
Approach LOS		E			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	67.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	164	435	44	54	352	249	40	474	66	283	715	198
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3491		1770	3319		1770	4992		1770	4920	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3491		1770	3319		1770	4992		1770	4920	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	176	468	47	58	378	268	43	510	71	304	769	213
RTOR Reduction (vph)	0	7	0	0	107	0	0	12	0	0	34	0
Lane Group Flow (vph)	176	508	0	58	539	0	43	569	0	304	948	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.4	35.4		8.0	27.0		10.5	40.1		25.4	55.0	
Effective Green, g (s)	16.4	35.4		8.0	27.0		10.5	40.1		25.4	55.0	
Actuated g/C Ratio	0.13	0.27		0.06	0.21		0.08	0.31		0.20	0.42	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	223	950		108	689		142	1539		345	2081	
v/s Ratio Prot	c0.10	0.15		0.03	c0.16		0.02	c0.11		c0.17	c0.19	
v/s Ratio Perm												
v/c Ratio	0.79	0.54		0.54	0.78		0.30	0.37		0.88	0.46	
Uniform Delay, d1	55.1	40.3		59.2	48.7		56.3	35.1		50.8	26.8	
Progression Factor	1.00	1.00		1.00	1.00		0.92	0.87		1.27	0.45	
Incremental Delay, d2	15.6	0.3		2.6	5.3		0.4	0.7		20.6	0.7	
Delay (s)	70.7	40.6		61.8	54.1		52.4	31.3		85.0	12.6	
Level of Service	E	D		E	D		D	C		F	B	
Approach Delay (s)		48.3			54.7			32.8			29.7	
Approach LOS		D			D			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	0	81	0	0	0	75	452	0	0	751	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5046	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5046	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	40	0	86	0	0	0	80	481	0	0	799	43
RTOR Reduction (vph)	0	0	76	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	40	0	10	0	0	0	80	481	0	0	840	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.6		14.6				10.0	104.4			89.5	
Effective Green, g (s)	14.6		14.6				10.0	104.4			89.5	
Actuated g/C Ratio	0.11		0.11				0.08	0.80			0.69	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	198		177				136	4083			3473	
v/s Ratio Prot							c0.05	0.09			c0.17	
v/s Ratio Perm	c0.02		0.01									
v/c Ratio	0.20		0.05				0.59	0.12			0.24	
Uniform Delay, d1	52.4		51.5				58.0	2.8			7.6	
Progression Factor	1.00		1.00				1.23	0.45			0.27	
Incremental Delay, d2	0.5		0.1				6.0	0.1			0.2	
Delay (s)	52.9		51.7				77.2	1.3			2.2	
Level of Service	D		D				E	A			A	
Approach Delay (s)		52.1			0.0			12.1			2.2	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	39.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	1812	24	20	801	421	5	14	30	673	53	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5075		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	90	1830	24	20	809	425	5	14	30	680	54	154
RTOR Reduction (vph)	0	1	0	0	0	205	0	0	28	0	0	0
Lane Group Flow (vph)	90	1853	0	20	809	220	5	14	2	680	54	154
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	9.8	74.3		2.8	67.3	67.3	6.6	10.2	10.2	21.0	24.6	130.0
Effective Green, g (s)	9.8	74.3		2.8	67.3	67.3	6.6	10.2	10.2	21.0	24.6	130.0
Actuated g/C Ratio	0.08	0.57		0.02	0.52	0.52	0.05	0.08	0.08	0.16	0.19	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	2.0	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	258	2900		38	1832	819	89	277	124	554	352	1583
v/s Ratio Prot	0.03	c0.37		0.01	c0.23		0.00	0.00		c0.20	0.03	
v/s Ratio Perm						0.14			0.00			c0.10
v/c Ratio	0.35	0.64		0.53	0.44	0.27	0.06	0.05	0.02	1.23	0.15	0.10
Uniform Delay, d1	57.1	18.8		62.9	19.6	17.6	58.7	55.4	55.3	54.5	44.0	0.0
Progression Factor	1.00	1.00		1.41	0.22	0.34	1.00	1.00	1.00	0.78	0.52	1.00
Incremental Delay, d2	0.3	1.1		5.7	0.7	0.8	0.1	0.0	0.0	117.4	0.1	0.1
Delay (s)	57.4	19.9		94.3	5.1	6.7	58.8	55.4	55.3	160.1	23.1	0.1
Level of Service	E	B		F	A	A	E	E	E	F	C	A
Approach Delay (s)		21.6			7.1			55.7			124.1	
Approach LOS		C			A			E			F	

Intersection Summary				
HCM 2000 Control Delay	39.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.71			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	74.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	166	2337	3	3	1044	137	13	15	8	201	1	147
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1766		1770	1585	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.52	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	963	1766		1383	1585	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	169	2385	3	3	1065	140	13	15	8	205	1	150
RTOR Reduction (vph)	0	0	1	0	0	61	0	6	0	0	121	0
Lane Group Flow (vph)	169	2385	2	3	1065	79	13	17	0	205	30	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	17.4	90.0	90.0	1.2	73.8	73.8	24.9	24.9		24.9	24.9	
Effective Green, g (s)	17.4	90.0	90.0	1.2	73.8	73.8	24.9	24.9		24.9	24.9	
Actuated g/C Ratio	0.13	0.69	0.69	0.01	0.57	0.57	0.19	0.19		0.19	0.19	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	236	3520	1095	16	2886	898	184	338		264	303	
v/s Ratio Prot	0.10	c0.47		c0.00	0.21			0.01			0.02	
v/s Ratio Perm			0.00			0.05	0.01			c0.15		
v/c Ratio	0.72	0.68	0.00	0.19	0.37	0.09	0.07	0.05		0.78	0.10	
Uniform Delay, d1	53.9	11.6	6.2	63.9	15.4	12.8	43.1	42.9		49.9	43.3	
Progression Factor	0.96	0.86	1.00	0.47	0.26	0.05	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.4	0.7	0.0	1.9	0.3	0.2	0.1	0.0		12.2	0.1	
Delay (s)	57.4	10.7	6.2	32.0	4.3	0.8	43.1	42.9		62.2	43.4	
Level of Service	E	B	A	C	A	A	D	D		E	D	
Approach Delay (s)		13.8			4.0			43.0			54.2	
Approach LOS		B			A			D			D	

Intersection Summary				
HCM 2000 Control Delay	14.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	79.5%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	128	2418	40	38	1012	65	13	23	6	247	59	177
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1717	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1717	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	132	2493	41	39	1043	67	13	24	6	255	61	182
RTOR Reduction (vph)	0	0	17	0	0	34	0	6	0	0	0	155
Lane Group Flow (vph)	132	2493	24	39	1043	33	13	24	0	156	160	27
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	17.8	76.0	76.0	5.4	63.6	63.6	10.2	10.2		19.6	19.6	19.6
Effective Green, g (s)	17.8	76.0	76.0	5.4	63.6	63.6	10.2	10.2		19.6	19.6	19.6
Actuated g/C Ratio	0.14	0.58	0.58	0.04	0.49	0.49	0.08	0.08		0.15	0.15	0.15
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	242	2972	925	73	2487	774	138	141		253	258	238
v/s Ratio Prot	0.07	c0.49		0.02	c0.21		0.01	c0.01		0.09	c0.09	
v/s Ratio Perm			0.02			0.02						0.02
v/c Ratio	0.55	0.84	0.03	0.53	0.42	0.04	0.09	0.17		0.62	0.62	0.12
Uniform Delay, d1	52.3	22.0	11.4	61.1	21.3	17.3	55.6	56.0		51.7	51.7	47.7
Progression Factor	0.92	0.76	1.00	1.28	0.32	0.27	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.1	2.4	0.0	3.5	0.5	0.1	0.1	0.2		3.1	3.3	0.1
Delay (s)	49.2	19.1	11.4	81.7	7.4	4.8	55.7	56.2		54.8	55.0	47.8
Level of Service	D	B	B	F	A	A	E	E		D	E	D
Approach Delay (s)		20.5			9.7			56.0			52.3	
Approach LOS		C			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	21.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	255	2395	2	7	897	261	11	15	11	579	5	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1745		3433	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	255	2395	2	7	897	261	11	15	11	579	5	222
RTOR Reduction (vph)	0	0	1	0	0	90	0	11	0	0	0	174
Lane Group Flow (vph)	255	2395	1	7	897	171	11	15	0	579	5	48
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	21.9	76.3	76.3	0.8	55.2	83.4	4.0	4.0		28.2	28.2	28.2
Effective Green, g (s)	21.9	76.3	76.3	0.8	55.2	83.4	4.0	4.0		28.2	28.2	28.2
Actuated g/C Ratio	0.17	0.59	0.59	0.01	0.42	0.64	0.03	0.03		0.22	0.22	0.22
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	298	2984	929	10	2159	1015	54	53		744	404	343
v/s Ratio Prot	0.14	c0.47		c0.00	0.18	0.04	0.01	c0.01		c0.17	0.00	
v/s Ratio Perm			0.00			0.07						0.03
v/c Ratio	0.86	0.80	0.00	0.70	0.42	0.17	0.20	0.29		0.78	0.01	0.14
Uniform Delay, d1	52.5	21.0	11.1	64.5	26.1	9.4	61.4	61.6		48.0	40.0	41.1
Progression Factor	1.10	0.37	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	13.5	1.5	0.0	101.3	0.6	0.0	0.7	1.1		4.7	0.0	0.1
Delay (s)	71.3	9.2	11.1	165.8	26.7	9.4	62.1	62.7		52.7	40.0	41.2
Level of Service	E	A	B	F	C	A	E	E		D	D	D
Approach Delay (s)		15.2			23.7			62.5			49.4	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	86.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Scenario Report

Scenario:	OY+P1-AM
Command:	OY+P1-AM
Volume:	EX-AM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	OY-CUMUL+P1-AM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	OY+P1-AM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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AM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/C	Future LOS	Future Del/ Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.742	D	xxxxx	0.809	+ 0.067
# 8 Beach Blvd & Warner Ave	C	xxxxx	0.767	D	xxxxx	0.824	+ 0.057
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.569	B	xxxxx	0.633	+ 0.064
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.564	B	xxxxx	0.624	+ 0.060
# 21 Newland St & Atlanta Ave	A	xxxxx	0.509	A	xxxxx	0.521	+ 0.011
# 22 Newland St & Hamilton Ave	A	xxxxx	0.577	B	xxxxx	0.674	+ 0.098
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.544	A	xxxxx	0.544	+ 0.000
# 26 Brookhurst St & Hamilton Ave	C	xxxxx	0.724	C	xxxxx	0.724	+ 0.000
# 30 Brookhurst Street & Talbert Av	D	xxxxx	0.822	D	xxxxx	0.838	+ 0.016
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.360	A	xxxxx	0.382	+ 0.022
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.413	A	xxxxx	0.435	+ 0.022
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.687	C	xxxxx	0.725	+ 0.038
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.536	A	xxxxx	0.562	+ 0.026
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.540	A	xxxxx	0.564	+ 0.024
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.762	C	xxxxx	0.788	+ 0.026
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.265	A	xxxxx	0.280	+ 0.015
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.400	A	xxxxx	0.423	+ 0.024
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.258	A	xxxxx	0.273	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.315	A	xxxxx	0.330	+ 0.015

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.742
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 42 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	144	1666	278	448	2316	443	194	887	149	134	431	234				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	148	1716	286	461	2385	456	200	914	153	138	444	241				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	148	1716	286	461	2385	456	200	914	153	138	444	241				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	148	1716	286	461	2385	456	200	914	153	138	444	241				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	148	1716	286	461	2385	456	200	914	153	138	444	241				
OvlAdjVol:						256			79							
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	4.00	2.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	6800	3400	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.34	0.17	0.14	0.35	0.13	0.06	0.18	0.09	0.04	0.13	0.14				
OvlAdjV/S:						0.08			0.05							
Crit Moves:	****			****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.767
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 46 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	162	1716	147	365	1926	257	206	1195	90	214	847	88				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	167	1767	151	376	1984	265	212	1231	93	220	872	91				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	167	1767	151	376	1984	265	212	1231	93	220	872	91				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	167	1767	151	376	1984	265	212	1231	93	220	872	91				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	167	1767	151	376	1984	265	212	1231	93	220	872	91				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.68	0.32	2.00	4.00	1.00	2.00	2.79	0.21	2.00	2.72	0.28				
Final Sat.:	3400	6263	537	3400	6800	1700	3400	4743	357	3400	4620	480				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.28	0.28	0.11	0.29	0.16	0.06	0.26	0.26	0.06	0.19	0.19				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.569
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	86	747	173		320	815	94		113	727	92		117	409	215	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	89	769	178		330	839	97		116	749	95		121	421	221	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	89	769	178		330	839	97		116	749	95		121	421	221	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	89	769	178		330	839	97		116	749	95		121	421	221	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	89	769	178		330	839	97		116	749	95		121	421	221	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.44	0.56		2.00	2.69	0.31		1.00	2.66	0.34		1.00	2.00	1.00	
Final Sat.:	1700	4141	959		3400	4573	527		1700	4527	573		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.19		0.10	0.18	0.18		0.07	0.17	0.17		0.07	0.12	0.13	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.564
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	5	14	29		494	51	137		83	1702	23		19	710	242	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	5	14	30		509	53	141		85	1753	24		20	731	249	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	5	14	0		509	53	0		85	1753	24		20	731	249	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	5	14	0		509	53	0		85	1753	24		20	731	249	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	5	14	0		509	53	0		85	1753	24		20	731	249	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.96	0.04		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	5032	68		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.15	0.03	0.00		0.03	0.35	0.35		0.01	0.22	0.15	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.509
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	24	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	128	316	39	151	377	71	84	516	238	29	354	150				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	132	325	40	156	388	73	87	531	245	30	365	155				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	132	325	40	156	388	73	87	531	245	30	365	155				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	132	325	40	156	388	73	87	531	245	30	365	155				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	132	325	40	156	388	73	87	531	245	30	365	155				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.78	0.22	1.00	1.68	0.32	1.00	1.37	0.63	1.00	1.40	0.60				
Final Sat.:	1700	3026	374	1700	2861	539	1700	2327	1073	1700	2388	1012				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.11	0.11	0.09	0.14	0.14	0.05	0.23	0.23	0.02	0.15	0.15				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.577
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	136	93	407	270	0	0	0	0	104	0	233				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	0	140	96	419	278	0	0	0	0	107	0	240				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	140	96	419	278	0	0	0	0	107	0	240				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	140	96	419	278	0	0	0	0	107	0	240				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	140	96	419	278	0	0	0	0	107	0	240				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.59	0.41	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1010	690	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.14	0.14	0.25	0.16	0.00	0.00	0.00	0.00	0.06	0.00	0.14				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.544
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	36	206	45		214	256	35		75	397	54		25	305	309	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	37	212	46		220	264	36		77	409	56		26	314	318	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	37	212	46		220	264	36		77	409	56		26	314	318	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	37	212	46		220	264	36		77	409	56		26	314	318	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	37	212	46		220	264	36		77	409	56		26	314	318	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.64	0.36		1.00	2.00	1.00		1.00	0.88	0.12		1.00	1.00	1.00	
Final Sat.:	1700	2790	610		1700	3400	1700		1700	1496	204		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.08	0.08		0.13	0.08	0.02		0.05	0.27	0.27		0.02	0.18	0.19	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	70	295	342		477	413	82		98	769	56		120	403	279	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	72	304	352		491	425	84		101	792	58		124	415	287	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	72	304	352		491	425	84		101	792	58		124	415	287	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	72	304	352		491	425	84		101	792	58		124	415	287	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	72	304	352		491	425	84		101	792	58		124	415	287	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.50	0.50		1.00	1.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4255	845		1700	3169	231		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.06	0.21		0.14	0.10	0.10		0.06	0.25	0.25		0.07	0.12	0.17	
Crit Moves:				****	****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.822
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	120	1043	420	650	955	356	135	1325	90	174	366	80				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	124	1074	433	670	984	367	139	1365	93	179	377	82				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	124	1074	433	670	984	367	139	1365	93	179	377	82				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	124	1074	433	670	984	367	139	1365	93	179	377	82				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	124	1074	433	670	984	367	139	1365	93	179	377	82				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	5100	1700	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.21	0.25	0.20	0.19	0.22	0.04	0.27	0.05	0.05	0.11	0.05				
Crit Moves:			****	****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.360
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	45	1415	3	15	1274	150	11	1	8	3	0	10				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	46	1457	3	15	1312	155	11	1	8	3	0	10				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	46	1457	3	15	1312	0	11	1	8	3	0	10				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	46	1457	3	15	1312	0	11	1	8	3	0	10				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	46	1457	3	15	1312	0	11	1	8	3	0	10				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.55	0.05	0.40	0.23	0.00	0.77				
Final Sat.:	1700	5089	11	1700	5100	1700	935	85	680	392	0	1308				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.29	0.29	0.01	0.26	0.00	0.01	0.01	0.01	0.00	0.00	0.01				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.413
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	20	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	25	1408	9		20	1092	95		78	1	20		10	1	35	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	25	1408	9		20	1092	95		78	1	20		10	1	35	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	25	1408	9		20	1092	95		78	1	20		10	1	35	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	25	1408	9		20	1092	95		78	1	20		10	1	35	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.76	0.24		0.99	0.01	1.00		0.22	0.02	0.76	
Final Sat.:	1700	5067	33		1700	4693	407		1678	22	1700		378	38	1284	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.28	0.28		0.01	0.23	0.23		0.05	0.05	0.01		0.01	0.03	0.03	
Crit Moves:		****				****				****				****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.687
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	36	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	72	1135	202		137	763	146		279	925	59		151	351	147	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	72	1135	202		137	763	146		279	925	59		151	351	147	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	72	1135	202		137	763	146		279	925	59		151	351	147	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	72	1135	202		137	763	146		279	925	59		151	351	147	
OvlAdjVol:			126				7									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.88	0.12		2.00	1.41	0.59	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	3197	203		3400	2395	1005	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.22	0.12		0.08	0.15	0.09		0.08	0.29	0.29		0.04	0.15	0.15	
OvlAdjV/S:			0.07				0.00									
Crit Moves:		****				****					****			****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.536
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	80	1087	67		70	830	145		242	386	92		132	176	59	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	80	1087	67		70	830	145		242	386	92		132	176	59	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	80	1087	67		70	830	145		242	386	92		132	176	59	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	80	1087	67		70	830	145		242	386	92		132	176	59	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.83	0.17		1.00	3.00	1.00		1.00	1.62	0.38		1.00	2.00	1.00	
Final Sat.:	1700	4804	296		1700	5100	1700		1700	2748	652		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.23	0.23		0.04	0.16	0.09		0.14	0.14	0.14		0.08	0.05	0.03	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.540
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	92	890	113		10	792	150		198	435	153		108	228	45	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	95	917	116		10	816	155		204	448	158		111	235	46	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	95	917	116		10	816	155		204	448	158		111	235	46	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	95	917	116		10	816	155		204	448	158		111	235	46	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	95	917	116		10	816	155		204	448	158		111	235	46	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.66	0.34		1.00	2.52	0.48		1.00	1.48	0.52		1.00	1.67	0.33	
Final Sat.:	1700	4525	575		1700	4288	812		1700	2515	885		1700	2840	560	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.20	0.20		0.01	0.19	0.19		0.12	0.18	0.18		0.07	0.08	0.08	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.762
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	45	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	82	677	275	393	696	160	241	1782	73	205	613	159				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	82	677	275	393	696	160	241	1782	73	205	613	159				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	82	677	275	393	696	160	241	1782	73	205	613	159				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	82	677	275	393	696	160	241	1782	73	205	613	159				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.13	0.87	2.00	2.44	0.56	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	3626	1474	3400	4149	951	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.19	0.19	0.12	0.17	0.17	0.07	0.35	0.04	0.06	0.12	0.09				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.265
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	30	873	0	0	708	46	148	0	49	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	30	873	0	0	708	46	148	0	49	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	30	873	0	0	708	46	148	0	49	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	30	873	0	0	708	46	148	0	49	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.82	0.18	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4786	314	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.17	0.00	0.00	0.15	0.15	0.04	0.00	0.03	0.00	0.00	0.00				
Crit Moves:		****		****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.400
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	92	685	15	15	659	138	222	15	225	18	24	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	92	685	15	15	659	138	222	15	225	18	24	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	92	685	15	15	659	138	222	15	225	18	24	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	92	685	15	15	659	138	222	15	225	18	24	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.48	0.52	1.00	1.00	1.00	1.00	1.59	0.41				
Final Sat.:	1700	4988	113	1700	4217	883	1700	1700	1700	1700	2697	703				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.14	0.14	0.01	0.16	0.16	0.13	0.01	0.13	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.258
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	3	425	0	0	536	103	138	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	3	425	0	0	536	103	138	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	3	425	0	0	536	103	138	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	3	425	0	0	536	103	138	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.52	0.48	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4277	823	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00	0.00	0.13	0.13	0.08	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.315
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	18	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1!	0 0
Volume Module:																
Base Vol:	54	398	2		3	516	15		7		1	207	3		0	6
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03		1.03	1.03	1.03		1.03	1.03
Initial Bse:	56	410	2		3	531	15		7		1	213	3		0	6
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	56	410	2		3	531	15		7		1	213	3		0	6
Reduct Vol:	0	0	0		0	0	0		0		0	0	0		0	0
Reduced Vol:	56	410	2		3	531	15		7		1	213	3		0	6
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
FinalVolume:	56	410	2		3	531	15		7		1	213	3		0	6
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700		1700	1700	1700		1700	1700
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
Lanes:	1.00	2.98	0.02		1.00	3.00	1.00		1.00		0.01	0.99	0.33		0.00	0.67
Final Sat.:	1700	5075	26		1700	5100	1700		1700		8	1692	567		0	1133
Capacity Analysis Module:																
Vol/Sat:	0.03	0.08	0.08		0.00	0.10	0.01		0.00		0.13	0.13	0.00		0.00	0.01
Crit Moves:	****					****					****		****			

1: Beach Blvd & McFadden Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	239	262	92	331	233	99	182	1839	161	126	1927	187
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3401		3433	3381		3433	6331		3433	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3401		3433	3381		3433	6331		3433	6323	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	254	279	98	352	248	105	194	1956	171	134	2050	199
RTOR Reduction (vph)	0	29	0	0	38	0	0	8	0	0	9	0
Lane Group Flow (vph)	254	348	0	352	315	0	194	2119	0	134	2240	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.3	22.5		18.5	25.7		12.4	69.5		11.1	68.2	
Effective Green, g (s)	15.3	22.5		18.5	25.7		12.4	69.5		11.1	68.2	
Actuated g/C Ratio	0.11	0.16		0.13	0.18		0.09	0.50		0.08	0.49	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	375	546		453	620		304	3142		272	3080	
v/s Ratio Prot	0.07	c0.10		c0.10	0.09		0.06	c0.33		0.04	c0.35	
v/s Ratio Perm												
v/c Ratio	0.68	0.64		0.78	0.51		0.64	0.67		0.49	0.73	
Uniform Delay, d1	60.0	54.9		58.8	51.5		61.6	26.7		61.8	28.5	
Progression Factor	1.00	1.00		1.00	1.00		1.03	0.88		1.00	1.00	
Incremental Delay, d2	4.8	2.4		8.2	0.7		3.8	1.0		1.4	1.5	
Delay (s)	64.8	57.4		66.9	52.1		67.0	24.5		63.2	30.1	
Level of Service	E	E		E	D		E	C		E	C	
Approach Delay (s)		60.3			59.5			28.0			31.9	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	76.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

2: Beach Blvd & Center Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	327	993	0	2392	2186	964
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	330	1003	0	2416	2208	974
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	330	1002	0	2416	2208	974
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	18.7	59.2		111.5	65.0	140.0
Effective Green, g (s)	18.7	59.2		111.5	65.0	140.0
Actuated g/C Ratio	0.13	0.42		0.80	0.46	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	458	1268		5103	2975	1583
v/s Ratio Prot	0.10	c0.23		0.37	c0.34	
v/s Ratio Perm		0.13		0.01		0.62
v/c Ratio	0.72	0.79		0.47	0.74	0.62
Uniform Delay, d1	58.1	35.0		4.7	30.7	0.0
Progression Factor	1.00	1.00		0.26	0.59	1.00
Incremental Delay, d2	5.9	3.6		0.0	1.4	1.5
Delay (s)	64.0	38.6		1.2	19.6	1.5
Level of Service	E	D		A	B	A
Approach Delay (s)	44.9			1.2	14.0	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	451	919	341	153	432	90	428	1928	480	225	2312	728
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	465	947	352	158	445	93	441	1988	495	232	2384	751
RTOR Reduction (vph)	0	0	57	0	0	75	0	0	143	0	0	115
Lane Group Flow (vph)	465	947	295	158	445	18	441	1988	352	232	2384	636
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	26.9	40.7	55.1	13.0	26.8	26.8	14.4	53.4	53.4	12.6	51.2	78.1
Effective Green, g (s)	26.9	40.7	55.1	13.0	26.8	26.8	14.4	53.4	53.4	12.6	51.2	78.1
Actuated g/C Ratio	0.19	0.29	0.39	0.09	0.19	0.19	0.10	0.38	0.38	0.09	0.37	0.56
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	659	1478	623	318	677	303	353	1939	603	308	2343	1646
v/s Ratio Prot	c0.14	c0.19	0.05	0.05	c0.13		c0.13	c0.39		0.07	c0.37	0.07
v/s Ratio Perm			0.14			0.01			0.22			0.15
v/c Ratio	0.71	0.64	0.47	0.50	0.66	0.06	1.25	1.03	0.58	0.75	1.02	0.39
Uniform Delay, d1	52.8	43.3	31.6	60.4	52.4	46.3	62.8	43.3	34.5	62.2	44.4	17.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.63	0.48	0.25	0.97	0.76	0.52
Incremental Delay, d2	2.8	1.0	0.2	0.4	2.3	0.1	130.3	25.3	3.4	6.2	19.9	0.0
Delay (s)	55.7	44.2	31.8	60.8	54.7	46.4	170.1	46.2	12.0	66.8	53.7	9.1
Level of Service	E	D	C	E	D	D	F	D	B	E	D	A
Approach Delay (s)		44.8			55.0			59.1			44.7	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	91.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	23	44	104	32	144	139	2349	55	259	2550	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1678		1770	1863	1583	1770	6386		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1678		1770	1863	1583	1770	6386		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	29	23	45	106	33	147	142	2397	56	264	2602	26
RTOR Reduction (vph)	0	40	0	0	0	125	0	2	0	0	0	0
Lane Group Flow (vph)	29	28	0	106	33	22	142	2451	0	264	2628	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.3		12.2	20.7	20.7	16.6	76.5		15.4	75.3	
Effective Green, g (s)	7.8	16.3		12.2	20.7	20.7	16.6	76.5		15.4	75.3	
Actuated g/C Ratio	0.06	0.12		0.09	0.15	0.15	0.12	0.55		0.11	0.54	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	195		154	275	234	209	3489		377	3441	
v/s Ratio Prot	0.02	c0.02		c0.06	c0.02		c0.08	0.38		0.08	c0.41	
v/s Ratio Perm						0.01						
v/c Ratio	0.30	0.14		0.69	0.12	0.09	0.68	0.70		0.70	0.76	
Uniform Delay, d1	63.5	55.6		62.1	51.7	51.5	59.1	23.4		60.1	25.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.30	0.16		1.18	0.26	
Incremental Delay, d2	1.7	0.3		12.1	0.2	0.2	5.7	0.8		2.2	0.6	
Delay (s)	65.2	55.9		74.1	51.9	51.7	82.8	4.5		72.8	7.1	
Level of Service	E	E		E	D	D	F	A		E	A	
Approach Delay (s)		58.7			60.0			8.8			13.1	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	70.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	37	3	27	272	8	206	52	2357	113	343	2378	26
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.95	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1610		1681	1563	1504	1770	6364		3433	6397	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1610		1681	1563	1504	1770	6364		3433	6397	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	39	3	28	283	8	215	54	2455	118	357	2477	27
RTOR Reduction (vph)	0	25	0	0	12	135	0	4	0	0	1	0
Lane Group Flow (vph)	39	6	0	175	160	24	54	2569	0	357	2503	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.5	13.5		21.0	21.0	21.0	8.2	72.2		15.4	79.4	
Effective Green, g (s)	13.5	13.5		21.0	21.0	21.0	8.2	72.2		15.4	79.4	
Actuated g/C Ratio	0.10	0.10		0.15	0.15	0.15	0.06	0.52		0.11	0.57	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	170	155		252	234	225	103	3282		377	3628	
v/s Ratio Prot	c0.02	0.00		c0.10	0.10		0.03	c0.40		c0.10	0.39	
v/s Ratio Perm						0.02						
v/c Ratio	0.23	0.04		0.69	0.68	0.11	0.52	0.78		0.95	0.69	
Uniform Delay, d1	58.4	57.4		56.5	56.4	51.4	64.0	27.5		61.9	21.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.38	0.34		0.53	0.24	
Incremental Delay, d2	0.7	0.1		8.0	8.0	0.2	3.3	1.4		25.8	0.8	
Delay (s)	59.1	57.5		64.5	64.4	51.6	91.5	10.8		58.4	6.0	
Level of Service	E	E		E	E	D	F	B		E	A	
Approach Delay (s)		58.4			60.4			12.4			12.5	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	231	173	156	39	164	110	144	2195	57	137	2391	204
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.94		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3287		1770	3326		1770	6383		1770	6332	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3287		1770	3326		1770	6383		1770	6332	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	233	175	158	39	166	111	145	2217	58	138	2415	206
RTOR Reduction (vph)	0	120	0	0	97	0	0	2	0	0	8	0
Lane Group Flow (vph)	233	213	0	39	180	0	145	2273	0	138	2613	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	25.2	33.6		8.8	17.2		17.0	66.4		12.4	61.8	
Effective Green, g (s)	25.2	33.6		8.8	17.2		17.0	66.4		12.4	61.8	
Actuated g/C Ratio	0.18	0.24		0.06	0.12		0.12	0.47		0.09	0.44	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	318	788		111	408		214	3027		156	2795	
v/s Ratio Prot	c0.13	0.06		0.02	c0.05		0.08	c0.36		0.08	c0.41	
v/s Ratio Perm												
v/c Ratio	0.73	0.27		0.35	0.44		0.68	0.75		0.88	0.93	
Uniform Delay, d1	54.2	43.2		62.9	56.9		58.9	30.0		63.1	37.2	
Progression Factor	1.00	1.00		1.00	1.00		0.61	0.95		0.68	0.53	
Incremental Delay, d2	8.4	0.2		1.9	0.8		6.9	1.5		32.3	5.7	
Delay (s)	62.7	43.4		64.8	57.7		42.9	29.9		75.2	25.3	
Level of Service	E	D		E	E		D	C		E	C	
Approach Delay (s)		51.3			58.6			30.7			27.8	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	84.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	85	7	21	80	11	27	121	2263	54	110	2303	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1662	1478		1665	1478	1770	6386		1770	6387	
Flt Permitted		0.62	1.00		0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1078	1478		1084	1478	1770	6386		1770	6387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	89	7	22	83	11	28	126	2357	56	115	2399	52
RTOR Reduction (vph)	0	0	19	0	0	24	0	1	0	0	2	0
Lane Group Flow (vph)	0	96	3	0	94	4	126	2412	0	115	2449	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		20.0	20.0		20.0	20.0	19.4	90.8		13.9	85.3	
Effective Green, g (s)		20.0	20.0		20.0	20.0	19.4	90.8		13.9	85.3	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.14	0.65		0.10	0.61	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		154	211		154	211	245	4141		175	3891	
v/s Ratio Prot							0.07	c0.38		0.06	c0.38	
v/s Ratio Perm		c0.09	0.00		0.09	0.00						
v/c Ratio		0.62	0.01		0.61	0.02	0.51	0.58		0.66	0.63	
Uniform Delay, d1		56.5	51.5		56.3	51.6	55.9	13.9		60.8	17.3	
Progression Factor		1.00	1.00		1.00	1.00	0.67	0.19		0.96	0.54	
Incremental Delay, d2		7.6	0.0		7.0	0.0	1.1	0.4		4.0	0.4	
Delay (s)		64.1	51.6		63.3	51.6	38.7	3.0		62.6	9.6	
Level of Service		E	D		E	D	D	A		E	A	
Approach Delay (s)		61.7			60.6			4.7			12.0	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

8: Beach Blvd & Warner Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	357	819	165	250	917	142	281	1900	186	161	1853	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4958		3433	4983		3433	6322		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4958		3433	4983		3433	6322		3433	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	364	836	168	255	936	145	287	1939	190	164	1891	278
RTOR Reduction (vph)	0	22	0	0	15	0	0	11	0	0	0	125
Lane Group Flow (vph)	364	982	0	255	1066	0	287	2118	0	164	1891	153
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.4	38.7		13.7	35.0		14.7	56.5		12.1	53.9	53.9
Effective Green, g (s)	17.4	38.7		13.7	35.0		14.7	56.5		12.1	53.9	53.9
Actuated g/C Ratio	0.12	0.28		0.10	0.25		0.10	0.40		0.09	0.38	0.38
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	426	1370		335	1245		360	2551		296	2467	609
v/s Ratio Prot	c0.11	0.20		0.07	c0.21		0.08	c0.34		0.05	c0.30	
v/s Ratio Perm												0.10
v/c Ratio	0.85	0.72		0.76	0.86		0.80	0.83		0.55	0.77	0.25
Uniform Delay, d1	60.1	45.7		61.6	50.1		61.2	37.5		61.4	37.6	29.3
Progression Factor	1.00	1.00		1.00	1.00		1.00	0.48		0.67	0.50	0.57
Incremental Delay, d2	14.8	1.8		8.9	6.0		7.5	2.2		1.0	1.9	0.8
Delay (s)	74.8	47.5		70.4	56.1		69.0	20.1		42.4	20.8	17.5
Level of Service	E	D		E	E		E	C		D	C	B
Approach Delay (s)		54.8			58.8			25.9			21.9	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	35.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	89.0%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

9: Beach Blvd & Slater Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	369	174	97	423	113	148	1839	78	176	2033	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3369		1770	3427		1770	6369		1770	6331	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3369		1770	3427		1770	6369		1770	6331	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	182	384	181	101	441	118	154	1916	81	183	2118	185
RTOR Reduction (vph)	0	42	0	0	19	0	0	4	0	0	9	0
Lane Group Flow (vph)	182	523	0	101	540	0	154	1993	0	183	2294	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.0	34.0		13.6	28.6		13.8	54.1		17.6	57.9	
Effective Green, g (s)	19.0	34.0		13.6	28.6		13.8	54.1		17.6	57.9	
Actuated g/C Ratio	0.14	0.24		0.10	0.20		0.10	0.39		0.13	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	240	818		171	700		174	2461		222	2618	
v/s Ratio Prot	c0.10	0.16		0.06	c0.16		0.09	c0.31		0.10	c0.36	
v/s Ratio Perm												
v/c Ratio	0.76	0.64		0.59	0.77		0.89	0.81		0.82	0.88	
Uniform Delay, d1	58.3	47.5		60.5	52.6		62.3	38.4		59.7	37.8	
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.83		0.93	0.50	
Incremental Delay, d2	12.8	1.6		5.4	5.3		33.5	2.6		16.0	3.3	
Delay (s)	71.1	49.1		65.9	57.9		86.0	34.6		71.8	22.2	
Level of Service	E	D		E	E		F	C		E	C	
Approach Delay (s)		54.5			59.1			38.3			25.9	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	37.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	83.8%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	3	13	109	3	126	12	2010	58	70	2304	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.93		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1716			1691		1770	6381		1770	6400	
Flt Permitted		0.79			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1397			1447		1770	6381		1770	6400	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	17	3	14	114	3	131	12	2094	60	73	2400	20
RTOR Reduction (vph)	0	11	0	0	34	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	23	0	0	214	0	12	2152	0	73	2419	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		26.8			26.8		4.0	87.4		9.9	93.3	
Effective Green, g (s)		26.8			26.8		4.0	87.4		9.9	93.3	
Actuated g/C Ratio		0.19			0.19		0.03	0.62		0.07	0.67	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		267			276		50	3983		125	4265	
v/s Ratio Prot							0.01	0.34		c0.04	c0.38	
v/s Ratio Perm		0.02			c0.15							
v/c Ratio		0.08			0.78		0.24	0.54		0.58	0.57	
Uniform Delay, d1		46.5			53.7		66.5	14.9		63.1	12.5	
Progression Factor		1.00			1.00		1.16	0.13		1.18	0.13	
Incremental Delay, d2		0.1			12.8		0.9	0.2		3.9	0.3	
Delay (s)		46.7			66.5		78.4	2.1		78.1	1.9	
Level of Service		D			E		E	A		E	A	
Approach Delay (s)		46.7			66.5			2.5			4.1	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	72.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	382	178	197	374	233	241	1672	187	286	2051	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3371		1770	3335		1770	6311		1770	6333	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3371		1770	3335		1770	6311		1770	6333	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	163	406	189	210	398	248	256	1779	199	304	2182	185
RTOR Reduction (vph)	0	43	0	0	71	0	0	14	0	0	9	0
Lane Group Flow (vph)	163	552	0	210	575	0	256	1964	0	304	2358	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.3	29.2		22.2	37.1		20.3	44.6		23.3	47.6	
Effective Green, g (s)	14.3	29.2		22.2	37.1		20.3	44.6		23.3	47.6	
Actuated g/C Ratio	0.10	0.21		0.16	0.27		0.15	0.32		0.17	0.34	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	180	703		280	883		256	2010		294	2153	
v/s Ratio Prot	0.09	c0.16		c0.12	0.17		0.14	c0.31		0.17	c0.37	
v/s Ratio Perm												
v/c Ratio	0.91	0.79		0.75	0.65		1.00	0.98		1.03	1.10	
Uniform Delay, d1	62.2	52.4		56.2	45.7		59.9	47.2		58.4	46.2	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.67		0.69	0.62	
Incremental Delay, d2	40.3	5.9		9.6	1.8		51.6	13.8		58.0	50.0	
Delay (s)	102.5	58.4		65.8	47.5		98.6	45.4		98.0	78.6	
Level of Service	F	E		E	D		F	D		F	E	
Approach Delay (s)		67.9			52.0			51.5			80.8	
Approach LOS		E			D			D			F	

Intersection Summary				
HCM 2000 Control Delay	65.5	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	91.0%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

12: Beach Blvd & Main St/Ellis Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	423	345	129	128	355	177	162	1481	152	283	1583	512
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6318		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6318		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	432	352	132	131	362	181	165	1511	155	289	1615	522
RTOR Reduction (vph)	0	0	106	0	0	159	0	11	0	0	0	19
Lane Group Flow (vph)	432	352	26	131	362	22	165	1655	0	289	1615	503
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	27.6	27.6	27.6	17.2	17.2	17.2	10.5	57.9		14.6	62.0	95.6
Effective Green, g (s)	27.6	27.6	27.6	17.2	17.2	17.2	10.5	57.9		14.6	62.0	95.6
Actuated g/C Ratio	0.20	0.20	0.20	0.12	0.12	0.12	0.08	0.41		0.10	0.44	0.68
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	676	697	312	217	434	194	257	2612		358	2251	1080
v/s Ratio Prot	c0.13	0.10		0.07	c0.10		0.05	0.26		c0.08	c0.32	0.32
v/s Ratio Perm			0.02			0.01						
v/c Ratio	0.64	0.51	0.08	0.60	0.83	0.11	0.64	0.63		0.81	0.72	0.47
Uniform Delay, d1	51.6	50.1	45.9	58.2	60.0	54.6	62.9	32.6		61.3	31.8	10.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.37	0.59		1.44	0.34	0.47
Incremental Delay, d2	1.6	0.3	0.1	3.2	12.4	0.1	2.6	0.8		1.2	0.2	0.0
Delay (s)	53.2	50.4	45.9	61.4	72.4	54.7	88.9	19.9		89.6	10.9	4.9
Level of Service	D	D	D	E	E	D	F	B		F	B	A
Approach Delay (s)		51.1			65.5			26.1			19.0	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	79.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	197	389	130	137	329	150	178	1360	106	236	1479	222
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3373		1770	5030		1770	4986	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3373		1770	5030		1770	4986	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	201	397	133	140	336	153	182	1388	108	241	1509	227
RTOR Reduction (vph)	0	0	102	0	42	0	0	6	0	0	13	0
Lane Group Flow (vph)	201	397	31	140	447	0	182	1490	0	241	1723	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	19.8	32.2	32.2	13.7	26.1		15.9	50.5		22.4	57.0	
Effective Green, g (s)	19.8	32.2	32.2	13.7	26.1		15.9	50.5		22.4	57.0	
Actuated g/C Ratio	0.14	0.23	0.23	0.10	0.19		0.11	0.36		0.16	0.41	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	250	813	364	173	628		201	1814		283	2030	
v/s Ratio Prot	c0.11	0.11		0.08	c0.13		c0.10	c0.30		0.14	c0.35	
v/s Ratio Perm			0.02									
v/c Ratio	0.80	0.49	0.08	0.81	0.71		0.91	0.82		0.85	0.85	
Uniform Delay, d1	58.2	46.8	42.3	61.9	53.4		61.3	40.7		57.2	37.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.59	0.42		0.54	0.69	
Incremental Delay, d2	16.0	0.6	0.1	22.4	4.1		32.3	3.5		16.4	3.6	
Delay (s)	74.2	47.4	42.5	84.3	57.5		68.6	20.8		47.3	29.6	
Level of Service	E	D	D	F	E		E	C		D	C	
Approach Delay (s)		53.9			63.4			26.0			31.8	
Approach LOS		D			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.82			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	85.9%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	124	285	168	117	321	103	170	1320	129	112	1466	122
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3410		1770	5018		1770	5027	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3410		1770	5018		1770	5027	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	129	297	175	122	334	107	177	1375	134	117	1527	127
RTOR Reduction (vph)	0	0	143	0	25	0	0	7	0	0	6	0
Lane Group Flow (vph)	129	297	33	122	416	0	177	1502	0	117	1648	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	14.8	26.0	26.0	13.2	24.4		18.1	67.1		13.3	62.3	
Effective Green, g (s)	14.8	26.0	26.0	13.2	24.4		18.1	67.1		13.3	62.3	
Actuated g/C Ratio	0.11	0.19	0.19	0.09	0.17		0.13	0.48		0.10	0.44	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	187	657	293	166	594		228	2405		168	2237	
v/s Ratio Prot	c0.07	0.08		0.07	c0.12		c0.10	0.30		0.07	c0.33	
v/s Ratio Perm			0.02									
v/c Ratio	0.69	0.45	0.11	0.73	0.70		0.78	0.62		0.70	0.74	
Uniform Delay, d1	60.4	50.7	47.4	61.7	54.4		59.0	27.1		61.4	32.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.88		0.61	0.46	
Incremental Delay, d2	10.1	0.5	0.2	15.5	3.7		14.3	1.2		7.1	1.3	
Delay (s)	70.5	51.2	47.6	77.2	58.1		49.7	25.0		44.5	16.1	
Level of Service	E	D	D	E	E		D	C		D	B	
Approach Delay (s)		54.3			62.2			27.6			17.9	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	31.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	79.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	19	36	158	28	147	69	1315	81	121	1353	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.94			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1724			1787	1583	1770	5041		1770	5057	
Flt Permitted		0.75			0.67	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1317			1253	1583	1770	5041		1770	5057	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	30	19	37	161	29	150	70	1342	83	123	1381	54
RTOR Reduction (vph)	0	24	0	0	0	122	0	3	0	0	2	0
Lane Group Flow (vph)	0	62	0	0	190	28	70	1422	0	123	1433	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		26.4			26.4	26.4	11.8	83.3		15.1	86.6	
Effective Green, g (s)		26.4			26.4	26.4	11.8	83.3		15.1	86.6	
Actuated g/C Ratio		0.19			0.19	0.19	0.08	0.59		0.11	0.62	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		248			236	298	149	2999		190	3128	
v/s Ratio Prot							0.04	c0.28		c0.07	0.28	
v/s Ratio Perm		0.05			c0.15	0.02						
v/c Ratio		0.25			0.81	0.09	0.47	0.47		0.65	0.46	
Uniform Delay, d1		48.4			54.3	46.9	61.1	16.0		59.9	14.2	
Progression Factor		1.00			1.00	1.00	0.83	0.62		0.77	0.79	
Incremental Delay, d2		0.5			17.8	0.1	2.0	0.5		5.3	0.3	
Delay (s)		48.9			72.1	47.1	52.9	10.3		51.2	11.5	
Level of Service		D			E	D	D	B		D	B	
Approach Delay (s)		48.9			61.1			12.3			14.7	
Approach LOS		D			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	19.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.56			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	65.2%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	190	403	66	180	433	279	89	964	105	273	1109	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4979		1770	3539	1583	1770	5010		3433	4997	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4979		1770	3539	1583	1770	5010		3433	4997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	424	69	189	456	294	94	1015	111	287	1167	152
RTOR Reduction (vph)	0	18	0	0	0	67	0	8	0	0	10	0
Lane Group Flow (vph)	200	475	0	189	456	227	94	1118	0	287	1309	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	19.4	27.3		18.5	26.4	41.4	11.6	57.4		15.0	60.8	
Effective Green, g (s)	19.4	27.3		18.5	26.4	41.4	11.6	57.4		15.0	60.8	
Actuated g/C Ratio	0.14	0.20		0.13	0.19	0.30	0.08	0.41		0.11	0.43	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	245	970		233	667	468	146	2054		367	2170	
v/s Ratio Prot	c0.11	0.10		0.11	c0.13	0.05	0.05	0.22		c0.08	c0.26	
v/s Ratio Perm						0.09						
v/c Ratio	0.82	0.49		0.81	0.68	0.49	0.64	0.54		0.78	0.60	
Uniform Delay, d1	58.6	50.2		59.1	52.9	40.5	62.2	31.4		60.9	30.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.84	0.89		1.49	0.25	
Incremental Delay, d2	17.7	0.8		18.0	3.7	0.3	6.8	1.0		8.8	1.1	
Delay (s)	76.3	51.0		77.1	56.6	40.8	59.1	28.9		99.8	8.8	
Level of Service	E	D		E	E	D	E	C		F	A	
Approach Delay (s)		58.3			55.8			31.2			25.1	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	38.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8	
Intersection Capacity Utilization	73.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

17: Beach Blvd & Indianapolis Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	124	29	26	110	172	26	945	47	221	1061	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	5049		1770	5052	
Flt Permitted	0.59	1.00		0.45	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1093	1810		833	1863	1583	1770	5049		1770	5052	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	77	129	30	27	115	179	27	984	49	230	1105	51
RTOR Reduction (vph)	0	7	0	0	0	154	0	3	0	0	2	0
Lane Group Flow (vph)	77	152	0	27	115	25	27	1030	0	230	1154	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	19.4	19.4		19.4	19.4	19.4	7.4	80.7		23.5	96.8	
Effective Green, g (s)	19.4	19.4		19.4	19.4	19.4	7.4	80.7		23.5	96.8	
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.14	0.05	0.58		0.17	0.69	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	250		115	258	219	93	2910		297	3493	
v/s Ratio Prot		c0.08			0.06		0.02	c0.20		c0.13	0.23	
v/s Ratio Perm	0.07			0.03		0.02						
v/c Ratio	0.51	0.61		0.23	0.45	0.11	0.29	0.35		0.77	0.33	
Uniform Delay, d1	55.9	56.7		53.7	55.4	52.8	63.8	15.8		55.7	8.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.73	0.42		0.79	0.20	
Incremental Delay, d2	2.7	4.2		1.1	1.2	0.2	1.6	0.3		9.7	0.2	
Delay (s)	58.6	60.9		54.7	56.6	53.0	48.3	7.0		53.9	1.9	
Level of Service	E	E		D	E	D	D	A		D	A	
Approach Delay (s)		60.1			54.4			8.0			10.6	
Approach LOS		E			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	266	40	46	277	219	58	619	66	231	661	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3469		1770	3305		1770	5012		1770	4938	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3469		1770	3305		1770	5012		1770	4938	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	153	283	43	49	295	233	62	659	70	246	703	168
RTOR Reduction (vph)	0	10	0	0	113	0	0	7	0	0	23	0
Lane Group Flow (vph)	153	316	0	49	415	0	62	722	0	246	849	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.5	32.5		8.1	24.1		8.3	54.0		24.3	70.0	
Effective Green, g (s)	16.5	32.5		8.1	24.1		8.3	54.0		24.3	70.0	
Actuated g/C Ratio	0.12	0.23		0.06	0.17		0.06	0.39		0.17	0.50	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	208	805		102	568		104	1933		307	2469	
v/s Ratio Prot	c0.09	0.09		0.03	c0.13		c0.04	c0.14		c0.14	0.17	
v/s Ratio Perm												
v/c Ratio	0.74	0.39		0.48	0.73		0.60	0.37		0.80	0.34	
Uniform Delay, d1	59.6	45.4		63.9	54.9		64.2	30.9		55.5	21.1	
Progression Factor	1.00	1.00		1.00	1.00		1.04	1.11		0.68	0.35	
Incremental Delay, d2	11.0	0.1		1.3	4.2		6.0	0.6		12.8	0.4	
Delay (s)	70.7	45.5		65.2	59.1		72.5	34.7		50.4	7.9	
Level of Service	E	D		E	E		E	C		D	A	
Approach Delay (s)		53.6			59.6			37.6			17.2	
Approach LOS		D			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	67.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	67	0	70	0	0	0	70	629	0	0	721	39
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5047	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5047	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	71	0	74	0	0	0	74	669	0	0	767	41
RTOR Reduction (vph)	0	0	66	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	71	0	8	0	0	0	74	669	0	0	806	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.5		14.5				10.0	114.5			99.6	
Effective Green, g (s)	14.5		14.5				10.0	114.5			99.6	
Actuated g/C Ratio	0.10		0.10				0.07	0.82			0.71	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	183		163				126	4158			3590	
v/s Ratio Prot							c0.04	0.13			c0.16	
v/s Ratio Perm	c0.04		0.00									
v/c Ratio	0.39		0.05				0.59	0.16			0.22	
Uniform Delay, d1	58.6		56.5				63.0	2.7			6.9	
Progression Factor	1.00		1.00				1.11	0.44			0.36	
Incremental Delay, d2	1.4		0.1				6.1	0.1			0.1	
Delay (s)	60.0		56.6				76.1	1.2			2.6	
Level of Service	E		E				E	A			A	
Approach Delay (s)		58.3			0.0			8.7			2.6	
Approach LOS		E			A			A			A	

Intersection Summary				
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.27			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	39.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highwa

Opening Year Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	866	34	29	978	441	23	47	30	454	65	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	198	941	37	32	1063	479	25	51	33	493	71	284
RTOR Reduction (vph)	0	2	0	0	0	192	0	0	30	0	0	0
Lane Group Flow (vph)	198	976	0	32	1063	287	25	51	3	493	71	284
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.0	77.2		4.4	68.6	68.6	4.0	11.6	11.6	25.1	32.7	140.0
Effective Green, g (s)	13.0	77.2		4.4	68.6	68.6	4.0	11.6	11.6	25.1	32.7	140.0
Actuated g/C Ratio	0.09	0.55		0.03	0.49	0.49	0.03	0.08	0.08	0.18	0.23	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	318	2788		55	1734	775	50	293	131	615	435	1583
v/s Ratio Prot	c0.06	0.19		0.02	c0.30		c0.01	0.01		c0.14	0.04	
v/s Ratio Perm						0.18			0.00			c0.18
v/c Ratio	0.62	0.35		0.58	0.61	0.37	0.50	0.17	0.02	0.80	0.16	0.18
Uniform Delay, d1	61.1	17.5		66.9	26.0	22.2	67.0	59.7	59.0	55.1	42.7	0.0
Progression Factor	1.00	1.00		1.41	0.36	0.14	1.00	1.00	1.00	0.70	0.56	1.00
Incremental Delay, d2	2.7	0.3		9.3	1.6	1.3	2.8	0.1	0.0	6.9	0.1	0.2
Delay (s)	63.9	17.8		103.9	11.0	4.4	69.9	59.8	59.0	45.3	24.0	0.2
Level of Service	E	B		F	B	A	E	E	E	D	C	A
Approach Delay (s)		25.6			10.9			61.9			28.4	
Approach LOS		C			B			E			C	

Intersection Summary				
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.62			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	65.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	153	1180	10	7	1229	149	19	5	10	67	6	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.90		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1671		1770	1594	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.35	1.00		0.75	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	655	1671		1392	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	161	1242	11	7	1294	157	20	5	11	71	6	153
RTOR Reduction (vph)	0	0	3	0	0	53	0	10	0	0	135	0
Lane Group Flow (vph)	161	1242	8	7	1294	104	20	6	0	71	24	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	16.8	104.6	104.6	4.8	92.6	92.6	16.7	16.7		16.7	16.7	
Effective Green, g (s)	16.8	104.6	104.6	4.8	92.6	92.6	16.7	16.7		16.7	16.7	
Actuated g/C Ratio	0.12	0.75	0.75	0.03	0.66	0.66	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	212	3799	1182	60	3363	1047	78	199		166	190	
v/s Ratio Prot	c0.09	0.24		0.00	c0.25			0.00			0.02	
v/s Ratio Perm			0.01			0.07	0.03			c0.05		
v/c Ratio	0.76	0.33	0.01	0.12	0.38	0.10	0.26	0.03		0.43	0.13	
Uniform Delay, d1	59.6	5.9	4.5	65.5	10.8	8.6	56.0	54.5		57.2	55.1	
Progression Factor	0.85	1.05	1.00	0.69	0.19	0.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.6	0.2	0.0	0.3	0.3	0.2	0.6	0.0		0.6	0.1	
Delay (s)	62.3	6.4	4.5	45.8	2.3	0.2	56.6	54.5		57.9	55.2	
Level of Service	E	A	A	D	A	A	E	D		E	E	
Approach Delay (s)		12.8			2.3			55.7			56.1	
Approach LOS		B			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.44			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	59.6%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	94	1105	32	57	1225	96	16	19	15	168	42	137
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1739		1681	1718	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1739		1681	1718	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	96	1128	33	58	1250	98	16	19	15	171	43	140
RTOR Reduction (vph)	0	0	13	0	0	57	0	14	0	0	0	123
Lane Group Flow (vph)	96	1128	20	58	1250	41	16	20	0	106	108	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	31.8	83.1	83.1	7.4	58.7	58.7	13.6	13.6		17.1	17.1	17.1
Effective Green, g (s)	31.8	83.1	83.1	7.4	58.7	58.7	13.6	13.6		17.1	17.1	17.1
Actuated g/C Ratio	0.23	0.59	0.59	0.05	0.42	0.42	0.10	0.10		0.12	0.12	0.12
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	402	3018	939	93	2132	663	171	168		205	209	193
v/s Ratio Prot	0.05	c0.22		0.03	c0.25		0.01	c0.01		c0.06	0.06	
v/s Ratio Perm			0.01			0.03						0.01
v/c Ratio	0.24	0.37	0.02	0.62	0.59	0.06	0.09	0.12		0.52	0.52	0.09
Uniform Delay, d1	44.2	14.9	11.7	64.9	31.3	24.2	57.6	57.7		57.6	57.6	54.5
Progression Factor	0.82	0.60	1.00	0.78	0.78	1.20	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.0	8.4	0.5	0.1	0.1	0.1		0.9	0.9	0.1
Delay (s)	36.3	9.2	11.7	59.2	25.0	29.2	57.7	57.9		58.5	58.5	54.6
Level of Service	D	A	B	E	C	C	E	E		E	E	D
Approach Delay (s)		11.4			26.7			57.8			57.0	
Approach LOS		B			C			E			E	

Intersection Summary				
HCM 2000 Control Delay	24.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	58.7%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	179	1109	3	27	1153	374	25	23	18	308	10	168
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	186	1155	3	28	1201	390	26	24	19	321	10	175
RTOR Reduction (vph)	0	0	1	0	0	98	0	18	0	0	0	149
Lane Group Flow (vph)	186	1155	2	28	1201	292	26	25	0	321	10	27
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	19.3	80.3	80.3	11.9	72.9	94.1	5.9	5.9		21.2	21.2	21.2
Effective Green, g (s)	19.3	80.3	80.3	11.9	72.9	94.1	5.9	5.9		21.2	21.2	21.2
Actuated g/C Ratio	0.14	0.57	0.57	0.09	0.52	0.67	0.04	0.04		0.15	0.15	0.15
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	244	2916	907	150	2647	1064	74	73		519	282	239
v/s Ratio Prot	c0.11	0.23		0.02	c0.24	0.04	c0.01	0.01		c0.09	0.01	
v/s Ratio Perm			0.00			0.14						0.02
v/c Ratio	0.76	0.40	0.00	0.19	0.45	0.27	0.35	0.34		0.62	0.04	0.11
Uniform Delay, d1	58.1	16.5	12.7	59.6	21.1	9.2	65.2	65.2		55.6	50.7	51.3
Progression Factor	1.41	0.48	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	11.5	0.4	0.0	0.2	0.6	0.1	1.1	1.0		1.5	0.0	0.1
Delay (s)	93.3	8.2	12.7	59.8	21.6	9.3	66.2	66.2		57.2	50.7	51.3
Level of Service	F	A	B	E	C	A	E	E		E	D	D
Approach Delay (s)		20.0			19.3			66.2			55.0	
Approach LOS		C			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	25.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	61.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			


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                 ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
                  OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
                                MD PEAK HOUR
--------------------------------------------------------------------------------
                                Scenario Report
Scenario:              OY+P1-MD

Command:               OY+P1-MD
Volume:                EX-MD
Geometry:              EX
Impact Fee:            Default Impact Fee
Trip Generation:       OY-CUMUL+P1-MD
Trip Distribution:     DIST-1
Paths:                 Default Path
Routes:                Default Route
Configuration:         OY+P1-MD


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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.716	C	xxxxx	0.775	+ 0.059
# 8 Beach Blvd & Warner Ave	B	xxxxx	0.676	C	xxxxx	0.717	+ 0.041
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.578	B	xxxxx	0.624	+ 0.046
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.484	A	xxxxx	0.539	+ 0.054
# 21 Newland St & Atlanta Ave	A	xxxxx	0.439	A	xxxxx	0.446	+ 0.008
# 22 Newland St & Hamilton Ave	A	xxxxx	0.463	A	xxxxx	0.557	+ 0.094
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.408	A	xxxxx	0.415	+ 0.007
# 26 Brookhurst St & Hamilton Ave	A	xxxxx	0.414	A	xxxxx	0.431	+ 0.016
# 30 Brookhurst Street & Talbert Av	B	xxxxx	0.643	B	xxxxx	0.654	+ 0.011
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.518	A	xxxxx	0.537	+ 0.018
# 32 Brookhurst Street & Quail Aven	B	xxxxx	0.622	B	xxxxx	0.640	+ 0.018
# 33 Brookhurst Street & Ellis Aven	A	xxxxx	0.595	B	xxxxx	0.622	+ 0.028
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.605	B	xxxxx	0.632	+ 0.027
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.549	A	xxxxx	0.574	+ 0.025
# 36 Brookhurst Street & Adams Aven	A	xxxxx	0.541	A	xxxxx	0.562	+ 0.021
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.315	A	xxxxx	0.330	+ 0.015
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.357	A	xxxxx	0.377	+ 0.020
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.194	A	xxxxx	0.209	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.227	A	xxxxx	0.242	+ 0.015

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.716
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0	1	2	0	4	0	2	2	0	3	0	1	2	0	2	0	1
Volume Module:																
Base Vol:	385	1729	465		218	2101	653		393	826	301		148	371	87	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	397	1781	479		225	2164	673		405	851	310		152	382	90	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	397	1781	479		225	2164	673		405	851	310		152	382	90	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	397	1781	479		225	2164	673		405	851	310		152	382	90	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	397	1781	479		225	2164	673		405	851	310		152	382	90	
OvlAdjVol:							268				112					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.35	0.28		0.07	0.32	0.20		0.12	0.17	0.18		0.04	0.11	0.05	
OvlAdjV/S:							0.08				0.07					
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.676
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	35	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	259	1732	184	159	1683	264	349	782	143	248	879	139				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	259	1732	184	159	1683	264	349	782	143	248	879	139				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	259	1732	184	159	1683	264	349	782	143	248	879	139				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	259	1732	184	159	1683	264	349	782	143	248	879	139				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.62	0.38	2.00	4.00	1.00	2.00	2.54	0.46	2.00	2.59	0.41				
Final Sat.:	3400	6146	654	3400	6800	1700	3400	4311	789	3400	4403	697				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.28	0.28	0.05	0.25	0.16	0.10	0.18	0.18	0.07	0.20	0.20				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	88	809	100	243	952	138	184	397	65	175	427	262				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	88	809	100	243	952	138	184	397	65	175	427	262				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	88	809	100	243	952	138	184	397	65	175	427	262				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	88	809	100	243	952	138	184	397	65	175	427	262				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.67	0.33	2.00	2.62	0.38	1.00	2.58	0.42	1.00	2.00	1.00				
Final Sat.:	1700	4539	561	3400	4454	646	1700	4383	717	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.18	0.07	0.21	0.21	0.11	0.09	0.09	0.10	0.13	0.15				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.484
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	22	46	29	309	63	249	172	798	33	28	907	296				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	23	47	30	318	65	256	177	822	34	29	934	305				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	23	47	0	318	65	0	177	822	34	29	934	305				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	23	47	0	318	65	0	177	822	34	29	934	305				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	23	47	0	318	65	0	177	822	34	29	934	305				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.88	0.12	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4897	203	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01	0.00	0.09	0.04	0.00	0.05	0.17	0.17	0.02	0.27	0.18				
Crit Moves:	****			****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.439
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	151	255	38	88	231	95	64	372	142	31	389	138				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	156	263	39	91	238	98	66	383	146	32	401	142				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	156	263	39	91	238	98	66	383	146	32	401	142				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	156	263	39	91	238	98	66	383	146	32	401	142				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	156	263	39	91	238	98	66	383	146	32	401	142				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.74	0.26	1.00	1.42	0.58	1.00	1.45	0.55	1.00	1.48	0.52				
Final Sat.:	1700	2959	441	1700	2409	991	1700	2461	939	1700	2510	890				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.09	0.09	0.05	0.10	0.10	0.04	0.16	0.16	0.02	0.16	0.16				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.463
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	158	62		195	170	0		0	0	0		116	0	267	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	0	163	64		201	175	0		0	0	0		119	0	275	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	163	64		201	175	0		0	0	0		119	0	275	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	163	64		201	175	0		0	0	0		119	0	275	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	163	64		201	175	0		0	0	0		119	0	275	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.72	0.28		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1221	479		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.13	0.13		0.12	0.10	0.00		0.00	0.00	0.00		0.07	0.00	0.16	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.408
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	17	148	14		210	158	36		52	209	30		21	248	218	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	18	152	14		216	163	37		54	215	31		22	255	225	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	18	152	14		216	163	37		54	215	31		22	255	225	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	18	152	14		216	163	37		54	215	31		22	255	225	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	18	152	14		216	163	37		54	215	31		22	255	225	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.87	0.13		1.00	1.00	1.00	
Final Sat.:	1700	3106	294		1700	3400	1700		1700	1487	213		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.05	0.05		0.13	0.05	0.02		0.03	0.14	0.14		0.01	0.15	0.13	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.414
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	90	333	106		319	351	68		82	322	41		116	437	249	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	93	343	109		329	362	70		84	332	42		119	450	256	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	93	343	109		329	362	70		84	332	42		119	450	256	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	93	343	109		329	362	70		84	332	42		119	450	256	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	93	343	109		329	362	70		84	332	42		119	450	256	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.51	0.49		1.00	1.77	0.23		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4272	828		1700	3016	384		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.07	0.06		0.10	0.08	0.08		0.05	0.11	0.11		0.07	0.13	0.15	
Crit Moves:		****			****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.643
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	162	1239	494		318	1533	385		200	691	204		249	381	200	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	162	1239	494		318	1533	385		200	691	204		249	381	200	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	162	1239	494		318	1533	385		200	691	204		249	381	200	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	162	1239	494		318	1533	385		200	691	204		249	381	200	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.24	0.29		0.09	0.30	0.23		0.06	0.14	0.12		0.07	0.11	0.12	
Crit Moves:				****	****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.518
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	29	1705	5	39	1941	63	67	0	26	4	0	8				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	30	1756	5	40	1999	65	69	0	27	4	0	8				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	30	1756	5	40	1999	0	69	0	27	4	0	8				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	30	1756	5	40	1999	0	69	0	27	4	0	8				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	30	1756	5	40	1999	0	69	0	27	4	0	8				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.72	0.00	0.28	0.33	0.00	0.67				
Final Sat.:	1700	5085	15	1700	5100	1700	1225	0	475	567	0	1133				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.35	0.35	0.02	0.39	0.00	0.04	0.00	0.06	0.00	0.00	0.01				
Crit Moves:	****				****				****	****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.622
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	58	1443	7	30	1516	225	279	3	78	12	1	14				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	60	1486	7	31	1561	232	287	3	80	12	1	14				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	60	1486	7	31	1561	232	287	3	80	12	1	14				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	60	1486	7	31	1561	232	287	3	80	12	1	14				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	60	1486	7	31	1561	232	287	3	80	12	1	14				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	2.61	0.39	0.99	0.01	1.00	0.44	0.04	0.52				
Final Sat.:	1700	5075	25	1700	4441	659	1682	18	1700	756	63	881				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.29	0.29	0.02	0.35	0.35	0.17	0.17	0.05	0.01	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	79	933	180	160	1153	198	278	512	94	250	419	115				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	81	961	185	165	1188	204	286	527	97	258	432	118				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	81	961	185	165	1188	204	286	527	97	258	432	118				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	81	961	185	165	1188	204	286	527	97	258	432	118				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	81	961	185	165	1188	204	286	527	97	258	432	118				
OvlAdjVol:			57			61										
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	1.69	0.31	2.00	1.57	0.43				
Final Sat.:	1700	5100	1700	1700	5100	1700	3400	2873	527	3400	2668	732				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.11	0.10	0.23	0.12	0.08	0.18	0.18	0.08	0.16	0.16				
OvlAdjV/S:			0.03			0.04										
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.605
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	138	1118	109	169	1107	214	229	231	111	176	219	110				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	142	1152	112	174	1140	220	236	238	114	181	226	113				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	142	1152	112	174	1140	220	236	238	114	181	226	113				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	142	1152	112	174	1140	220	236	238	114	181	226	113				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	142	1152	112	174	1140	220	236	238	114	181	226	113				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.73	0.27	1.00	3.00	1.00	1.00	1.35	0.65	1.00	2.00	1.00				
Final Sat.:	1700	4647	453	1700	5100	1700	1700	2296	1104	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.25	0.25	0.10	0.22	0.13	0.14	0.10	0.10	0.11	0.07	0.07				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.549
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	97	1006	80	21	1177	198	160	183	95	119	196	20				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	100	1036	82	22	1212	204	165	188	98	123	202	21				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	100	1036	82	22	1212	204	165	188	98	123	202	21				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	100	1036	82	22	1212	204	165	188	98	123	202	21				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	100	1036	82	22	1212	204	165	188	98	123	202	21				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.78	0.22	1.00	2.57	0.43	1.00	1.32	0.68	1.00	1.81	0.19				
Final Sat.:	1700	4724	376	1700	4366	734	1700	2238	1162	1700	3085	315				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.22	0.22	0.01	0.28	0.28	0.10	0.08	0.08	0.07	0.07	0.07				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.541
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	172	631	128	308	712	173	293	684	84	197	771	220				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	177	650	132	317	733	178	302	705	87	203	794	227				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	177	650	132	317	733	178	302	705	87	203	794	227				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	177	650	132	317	733	178	302	705	87	203	794	227				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	177	650	132	317	733	178	302	705	87	203	794	227				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.49	0.51	2.00	2.41	0.59	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4240	860	3400	4103	997	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.15	0.15	0.09	0.18	0.18	0.09	0.14	0.05	0.06	0.16	0.13				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.315
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	48	879	0	0	895	125	98	0	49	0	0	0	0	0	0	0
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	49	905	0	0	922	129	101	0	50	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	49	905	0	0	922	129	101	0	50	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	49	905	0	0	922	129	101	0	50	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	49	905	0	0	922	129	101	0	50	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.63	0.37	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4475	625	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.18	0.00	0.00	0.21	0.21	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.357
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	615	14	25	623	145	141	26	143	15	25	17				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	92	633	14	26	642	149	145	27	147	15	26	18				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	92	633	14	26	642	149	145	27	147	15	26	18				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	92	633	14	26	642	149	145	27	147	15	26	18				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	92	633	14	26	642	149	145	27	147	15	26	18				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.43	0.57	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4986	114	1700	4137	963	1700	1700	1700	1700	2024	1376				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.13	0.13	0.02	0.16	0.16	0.09	0.02	0.09	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.194
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	15	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	8	412	0	0	340	107	81	0	6	0	0	0	0	0	0	0
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	8	424	0	0	350	110	83	0	6	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	8	424	0	0	350	110	83	0	6	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	8	424	0	0	350	110	83	0	6	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	8	424	0	0	350	110	83	0	6	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.28	0.72	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	3879	1221	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.08	0.00	0.00	0.09	0.09	0.05	0.00	0.00	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.227
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	16	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	0	0 1
Volume Module:																
Base Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	105	385	3	9	303	27	11	1	94	0	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	105	385	3	9	303	27	11	1	94	0	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	105	385	3	9	303	27	11	1	94	0	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	105	385	3	9	303	27	11	1	94	0	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.00	0.00	1.00				
Final Sat.:	1700	5059	41	1700	5100	1700	1700	18	1682	0	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.08	0.08	0.01	0.06	0.02	0.01	0.06	0.06	0.00	0.00	0.00				
Crit Moves:	****				****			****		****						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	405	389	148	385	434	145	252	2860	252	201	2372	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6309	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6309	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	422	405	154	401	452	151	262	2979	262	209	2471	282
RTOR Reduction (vph)	0	27	0	0	24	0	0	9	0	0	13	0
Lane Group Flow (vph)	422	532	0	401	579	0	262	3232	0	209	2740	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	23.5	39.4		15.7	31.6		12.0	65.5		11.0	64.5	
Effective Green, g (s)	23.5	39.4		15.7	31.6		12.0	65.5		11.0	64.5	
Actuated g/C Ratio	0.16	0.26		0.10	0.21		0.08	0.44		0.07	0.43	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	537	891		359	717		274	2764		251	2712	
v/s Ratio Prot	c0.12	0.16		c0.12	c0.17		0.08	c0.51		0.06	c0.43	
v/s Ratio Perm												
v/c Ratio	0.79	0.60		1.12	0.81		0.96	1.17		0.83	1.01	
Uniform Delay, d1	60.8	48.4		67.2	56.3		68.7	42.2		68.6	42.8	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.95		1.00	1.00	
Incremental Delay, d2	7.4	1.1		83.0	6.7		35.1	79.4		20.4	19.8	
Delay (s)	68.3	49.5		150.2	63.0		100.1	119.4		89.0	62.6	
Level of Service	E	D		F	E		F	F		F	E	
Approach Delay (s)		57.5			97.8			117.9			64.5	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	89.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	366	1061	0	3249	2505	1037
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	373	1083	0	3315	2556	1058
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	373	1082	0	3315	2556	1058
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	20.5	62.0		119.7	72.2	150.0
Effective Green, g (s)	20.5	62.0		119.7	72.2	150.0
Actuated g/C Ratio	0.14	0.41		0.80	0.48	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	469	1235		5113	3084	1583
v/s Ratio Prot	0.11	c0.24		0.51	c0.40	
v/s Ratio Perm		0.15		0.01		0.67
v/c Ratio	0.80	0.88		0.65	0.83	0.67
Uniform Delay, d1	62.7	40.5		6.3	33.6	0.0
Progression Factor	1.00	1.00		0.62	0.51	1.00
Incremental Delay, d2	9.5	7.4		0.0	1.4	1.2
Delay (s)	72.3	47.9		3.9	18.4	1.2
Level of Service	E	D		A	B	A
Approach Delay (s)	54.2			3.9	13.3	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	521	1053	304	181	726	177	496	2515	525	343	2479	788
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	543	1097	317	189	756	184	517	2620	547	357	2582	821
RTOR Reduction (vph)	0	0	48	0	0	133	0	0	144	0	0	47
Lane Group Flow (vph)	543	1097	269	189	756	51	517	2620	403	357	2582	774
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.1	50.2	66.6	13.2	38.3	38.3	16.4	53.7	53.7	12.6	49.5	74.6
Effective Green, g (s)	25.1	50.2	66.6	13.2	38.3	38.3	16.4	53.7	53.7	12.6	49.5	74.6
Actuated g/C Ratio	0.17	0.33	0.44	0.09	0.26	0.26	0.11	0.36	0.36	0.08	0.33	0.50
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	574	1701	702	302	903	404	375	1820	566	288	2114	1471
v/s Ratio Prot	c0.16	0.22	0.04	0.06	c0.21		0.15	c0.52		0.10	c0.40	0.09
v/s Ratio Perm			0.13			0.03			0.25			0.19
v/c Ratio	0.95	0.64	0.38	0.63	0.84	0.13	1.38	1.44	0.71	1.24	1.22	0.53
Uniform Delay, d1	61.8	42.3	27.9	66.0	52.9	43.0	66.8	48.1	41.5	68.7	50.2	25.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.69	0.51	1.04	0.69	0.51
Incremental Delay, d2	24.4	0.8	0.1	2.9	6.8	0.1	180.8	199.8	4.8	123.5	102.2	0.1
Delay (s)	86.2	43.2	28.1	68.9	59.7	43.1	231.7	233.1	25.9	195.1	136.9	13.1
Level of Service	F	D	C	E	E	D	F	F	C	F	F	B
Approach Delay (s)		52.7			58.6			202.1			115.4	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	128.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	110.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	20	42	131	33	180	124	3012	74	251	2654	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1672		1770	1863	1583	1770	6385		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1672		1770	1863	1583	1770	6385		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	20	43	134	34	184	127	3073	76	256	2708	29
RTOR Reduction (vph)	0	39	0	0	0	154	0	2	0	0	1	0
Lane Group Flow (vph)	26	24	0	134	34	30	127	3147	0	256	2736	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	14.6		17.4	24.2	24.2	15.8	81.6		16.8	82.6	
Effective Green, g (s)	7.8	14.6		17.4	24.2	24.2	15.8	81.6		16.8	82.6	
Actuated g/C Ratio	0.05	0.10		0.12	0.16	0.16	0.11	0.54		0.11	0.55	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	162		205	300	255	186	3473		384	3523	
v/s Ratio Prot	c0.01	c0.01		c0.08	0.02		0.07	c0.49		c0.07	0.43	
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.15		0.65	0.11	0.12	0.68	0.91		0.67	0.78	
Uniform Delay, d1	68.4	62.0		63.4	53.7	53.8	64.7	30.8		63.9	26.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.35	0.16		1.33	0.33	
Incremental Delay, d2	1.7	0.4		7.3	0.2	0.2	5.7	2.6		0.4	0.2	
Delay (s)	70.1	62.4		70.7	53.9	54.0	92.7	7.6		85.5	8.8	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		64.7			60.3			10.9			15.3	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	16.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	80.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	5	19	255	4	170	65	2957	102	328	2596	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1642		1681	1576	1504	1770	6376		3433	6401	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1642		1681	1576	1504	1770	6376		3433	6401	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	30	5	19	258	4	172	66	2987	103	331	2622	20
RTOR Reduction (vph)	0	17	0	0	7	117	0	2	0	0	0	0
Lane Group Flow (vph)	30	7	0	150	141	19	66	3088	0	331	2642	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		21.5	21.5	21.5	8.7	82.8		14.6	88.7	
Effective Green, g (s)	13.2	13.2		21.5	21.5	21.5	8.7	82.8		14.6	88.7	
Actuated g/C Ratio	0.09	0.09		0.14	0.14	0.14	0.06	0.55		0.10	0.59	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	144		240	225	215	102	3519		334	3785	
v/s Ratio Prot	c0.02	0.00		0.09	c0.09		0.04	c0.48		c0.10	0.41	
v/s Ratio Perm						0.01						
v/c Ratio	0.19	0.05		0.62	0.63	0.09	0.65	0.88		0.99	0.70	
Uniform Delay, d1	63.5	62.6		60.5	60.5	55.8	69.1	29.2		67.6	21.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.35	0.20		0.58	0.40	
Incremental Delay, d2	0.6	0.1		5.0	5.4	0.2	1.3	0.3		37.9	0.7	
Delay (s)	64.1	62.8		65.5	65.9	55.9	94.3	6.3		76.9	9.3	
Level of Service	E	E		E	E	E	F	A		E	A	
Approach Delay (s)		63.5			62.6			8.1			16.8	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	256	321	184	42	316	162	170	2942	50	167	2463	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3359		1770	6392		1770	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3359		1770	6392		1770	6323	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	264	331	190	43	326	167	175	3033	52	172	2539	245
RTOR Reduction (vph)	0	53	0	0	48	0	0	1	0	0	11	0
Lane Group Flow (vph)	264	468	0	43	445	0	175	3084	0	172	2773	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	31.1	48.7		8.8	26.4		13.5	60.3		13.4	60.2	
Effective Green, g (s)	31.1	48.7		8.8	26.4		13.5	60.3		13.4	60.2	
Actuated g/C Ratio	0.21	0.32		0.06	0.18		0.09	0.40		0.09	0.40	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	366	1086		103	591		159	2569		158	2537	
v/s Ratio Prot	c0.15	0.14		0.02	c0.13		0.10	c0.48		0.10	c0.44	
v/s Ratio Perm												
v/c Ratio	0.72	0.43		0.42	0.75		1.10	1.20		1.09	1.09	
Uniform Delay, d1	55.4	39.8		68.1	58.7		68.2	44.9		68.3	44.9	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.76		0.92	0.91	
Incremental Delay, d2	6.9	0.3		2.7	5.4		91.8	93.3		87.3	47.4	
Delay (s)	62.3	40.1		70.9	64.1		156.8	127.5		150.2	88.0	
Level of Service	E	D		E	E		F	F		F	F	
Approach Delay (s)		47.5			64.7			129.0			91.6	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	101.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	96.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	18	40	61	10	21	157	2876	67	72	2335	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1670	1478		1667	1478	1770	6386		1770	6386	
Flt Permitted		0.70	1.00		0.57	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1214	1478		997	1478	1770	6386		1770	6386	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	90	19	41	63	10	22	162	2965	69	74	2407	55
RTOR Reduction (vph)	0	0	35	0	0	19	0	2	0	0	2	0
Lane Group Flow (vph)	0	109	6	0	73	3	162	3032	0	74	2460	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		21.1	21.1		21.1	21.1	24.0	102.2		11.4	89.6	
Effective Green, g (s)		21.1	21.1		21.1	21.1	24.0	102.2		11.4	89.6	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.68		0.08	0.60	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		170	207		140	207	283	4350		134	3814	
v/s Ratio Prot							0.09	c0.47		0.04	c0.39	
v/s Ratio Perm		c0.09	0.00		0.07	0.00						
v/c Ratio		0.64	0.03		0.52	0.01	0.57	0.70		0.55	0.65	
Uniform Delay, d1		60.9	55.6		59.8	55.5	58.3	14.5		66.8	19.8	
Progression Factor		1.00	1.00		1.00	1.00	0.58	0.57		1.03	0.55	
Incremental Delay, d2		8.0	0.1		3.5	0.0	0.3	0.1		0.4	0.1	
Delay (s)		68.9	55.7		63.2	55.5	34.2	8.3		69.6	10.9	
Level of Service		E	E		E	E	C	A		E	B	
Approach Delay (s)		65.3			61.5			9.6			12.7	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	428	1162	182	252	1319	222	375	2526	187	186	1959	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4982		3433	4975		3433	6342		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4982		3433	4975		3433	6342		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	451	1223	192	265	1388	234	395	2659	197	196	2062	382
RTOR Reduction (vph)	0	15	0	0	16	0	0	7	0	0	0	156
Lane Group Flow (vph)	451	1400	0	265	1606	0	395	2849	0	196	2062	226
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.8	46.2		14.3	42.7		18.2	58.5		12.0	52.3	52.3
Effective Green, g (s)	17.8	46.2		14.3	42.7		18.2	58.5		12.0	52.3	52.3
Actuated g/C Ratio	0.12	0.31		0.10	0.28		0.12	0.39		0.08	0.35	0.35
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	407	1534		327	1416		416	2473		274	2234	551
v/s Ratio Prot	c0.13	0.28		0.08	c0.32		c0.12	c0.45		0.06	0.32	
v/s Ratio Perm												0.14
v/c Ratio	1.11	0.91		0.81	1.13		0.95	1.15		0.72	0.92	0.41
Uniform Delay, d1	66.1	50.0		66.5	53.6		65.4	45.8		67.3	46.9	37.1
Progression Factor	1.00	1.00		1.00	1.00		0.90	0.76		1.25	0.56	0.64
Incremental Delay, d2	77.2	8.6		13.4	69.8		5.3	68.9		5.9	6.5	1.8
Delay (s)	143.3	58.6		79.9	123.4		64.0	103.5		89.7	33.0	25.5
Level of Service	F	E		E	F		E	F		F	C	C
Approach Delay (s)		79.1			117.3			98.7			36.1	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	81.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	108.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

9: Beach Blvd & Slater Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	495	158	112	620	156	200	2617	67	176	2167	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3433		1770	6384		1770	6342	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3433		1770	6384		1770	6342	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	206	516	165	117	646	162	208	2726	70	183	2257	165
RTOR Reduction (vph)	0	22	0	0	15	0	0	2	0	0	7	0
Lane Group Flow (vph)	206	659	0	117	793	0	208	2794	0	183	2415	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.3	34.8		19.7	37.2		18.3	58.5		16.3	56.5	
Effective Green, g (s)	17.3	34.8		19.7	37.2		18.3	58.5		16.3	56.5	
Actuated g/C Ratio	0.12	0.23		0.13	0.25		0.12	0.39		0.11	0.38	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	791		232	851		215	2489		192	2388	
v/s Ratio Prot	c0.12	0.19		0.07	c0.23		0.12	c0.44		0.10	c0.38	
v/s Ratio Perm												
v/c Ratio	1.01	0.83		0.50	0.93		0.97	1.12		0.95	1.01	
Uniform Delay, d1	66.3	54.8		60.6	55.2		65.6	45.8		66.5	46.8	
Progression Factor	1.00	1.00		1.00	1.00		0.83	0.76		1.01	0.50	
Incremental Delay, d2	65.6	7.5		1.7	16.6		43.0	59.5		31.7	15.2	
Delay (s)	131.9	62.4		62.3	71.8		97.4	94.1		98.8	38.8	
Level of Service	F	E		E	E		F	F		F	D	
Approach Delay (s)		78.5			70.6			94.3			43.0	
Approach LOS		E			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	99.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	1	16	110	8	162	16	2608	82	80	2413	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1720			1684		1770	6378		1770	6397	
Flt Permitted		0.67			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1191			1481		1770	6378		1770	6397	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	1	16	113	8	167	16	2689	85	82	2488	29
RTOR Reduction (vph)	0	13	0	0	37	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	32	0	0	251	0	16	2772	0	82	2516	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		30.7			30.7		4.0	91.0		12.4	99.4	
Effective Green, g (s)		30.7			30.7		4.0	91.0		12.4	99.4	
Actuated g/C Ratio		0.20			0.20		0.03	0.61		0.08	0.66	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		243			303		47	3869		146	4239	
v/s Ratio Prot							0.01	c0.43		c0.05	c0.39	
v/s Ratio Perm		0.03			c0.17							
v/c Ratio		0.13			0.83		0.34	0.72		0.56	0.59	
Uniform Delay, d1		48.8			57.1		71.7	20.5		66.2	14.1	
Progression Factor		1.00			1.00		1.40	0.46		1.43	0.28	
Incremental Delay, d2		0.2			16.9		0.4	0.1		1.6	0.2	
Delay (s)		49.0			74.0		100.8	9.5		96.4	4.2	
Level of Service		D			E		F	A		F	A	
Approach Delay (s)		49.0			74.0			10.0			7.1	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	78.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	424	166	200	512	290	221	2301	180	264	2189	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3390		1770	3347		1770	6338		1770	6350	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3390		1770	3347		1770	6338		1770	6350	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	172	442	173	208	533	302	230	2397	188	275	2280	146
RTOR Reduction (vph)	0	29	0	0	53	0	0	8	0	0	6	0
Lane Group Flow (vph)	172	586	0	208	782	0	230	2577	0	275	2420	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.6	31.4		22.2	38.0		19.9	54.4		21.3	55.8	
Effective Green, g (s)	15.6	31.4		22.2	38.0		19.9	54.4		21.3	55.8	
Actuated g/C Ratio	0.10	0.21		0.15	0.25		0.13	0.36		0.14	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	184	709		261	847		234	2298		251	2362	
v/s Ratio Prot	0.10	c0.17		0.12	c0.23		0.13	c0.41		c0.16	0.38	
v/s Ratio Perm												
v/c Ratio	0.93	0.83		0.80	0.92		0.98	1.12		1.10	1.02	
Uniform Delay, d1	66.7	56.7		61.7	54.6		64.9	47.8		64.3	47.1	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.55		0.67	0.57	
Incremental Delay, d2	47.1	8.0		14.5	15.6		42.2	59.0		80.0	23.5	
Delay (s)	113.8	64.7		76.2	70.2		93.4	85.3		123.1	50.2	
Level of Service	F	E		E	E		F	F		F	D	
Approach Delay (s)		75.4			71.4			85.9			57.6	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	72.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	101.7%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	461	466	108	177	515	166	176	1912	171	297	1716	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6329		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6329		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	470	476	110	181	526	169	180	1951	174	303	1751	552
RTOR Reduction (vph)	0	0	80	0	0	96	0	9	0	0	0	20
Lane Group Flow (vph)	470	476	30	181	526	73	180	2116	0	303	1751	532
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	30.3	30.3	30.3	27.2	27.2	27.2	10.4	54.3		15.5	59.4	95.7
Effective Green, g (s)	30.3	30.3	30.3	27.2	27.2	27.2	10.4	54.3		15.5	59.4	95.7
Actuated g/C Ratio	0.20	0.20	0.20	0.18	0.18	0.18	0.07	0.36		0.10	0.40	0.64
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	693	714	319	320	641	287	238	2291		354	2013	1009
v/s Ratio Prot	c0.14	0.13		0.10	c0.15		0.05	c0.33		c0.09	0.34	0.34
v/s Ratio Perm			0.02			0.05						
v/c Ratio	0.68	0.67	0.09	0.57	0.82	0.26	0.76	0.92		0.86	0.87	0.53
Uniform Delay, d1	55.3	55.2	48.7	56.0	59.1	52.7	68.6	45.9		66.2	41.7	14.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.33	0.58		1.18	0.55	0.97
Incremental Delay, d2	2.2	2.0	0.1	1.4	7.9	0.2	3.7	2.7		5.1	1.5	0.1
Delay (s)	57.6	57.1	48.8	57.4	67.0	52.9	94.7	29.5		83.1	24.5	14.4
Level of Service	E	E	D	E	E	D	F	C		F	C	B
Approach Delay (s)		56.5			62.3			34.5			29.2	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	39.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	87.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	530	138	157	411	140	213	1810	110	202	1677	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3405		1770	5042		1770	5013	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3405		1770	5042		1770	5013	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	215	546	142	162	424	144	220	1866	113	208	1729	180
RTOR Reduction (vph)	0	0	108	0	24	0	0	4	0	0	8	0
Lane Group Flow (vph)	215	546	34	162	544	0	220	1975	0	208	1901	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	22.4	36.4	36.4	16.3	30.3		19.2	56.4		19.7	56.9	
Effective Green, g (s)	22.4	36.4	36.4	16.3	30.3		19.2	56.4		19.7	56.9	
Actuated g/C Ratio	0.15	0.24	0.24	0.11	0.20		0.13	0.38		0.13	0.38	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	264	858	384	192	687		226	1895		232	1901	
v/s Ratio Prot	c0.12	0.15		0.09	c0.16		0.12	c0.39		0.12	c0.38	
v/s Ratio Perm			0.02									
v/c Ratio	0.81	0.64	0.09	0.84	0.79		0.97	1.04		0.90	1.00	
Uniform Delay, d1	61.8	50.9	44.0	65.6	56.9		65.1	46.8		64.1	46.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.44		0.49	0.91	
Incremental Delay, d2	16.4	1.8	0.1	26.2	6.6		32.8	26.4		22.1	16.0	
Delay (s)	78.2	52.6	44.1	91.8	63.4		72.2	47.1		53.3	58.5	
Level of Service	E	D	D	F	E		E	D		D	E	
Approach Delay (s)		57.4			69.7			49.6			58.0	
Approach LOS		E			E			D			E	

Intersection Summary				
HCM 2000 Control Delay	56.2	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	93.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	429	151	133	375	142	209	1825	183	142	1669	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3394		1770	5016		1770	5022	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3394		1770	5016		1770	5022	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	152	452	159	140	395	149	220	1921	193	149	1757	160
RTOR Reduction (vph)	0	0	120	0	28	0	0	8	0	0	6	0
Lane Group Flow (vph)	152	452	39	140	516	0	220	2106	0	149	1911	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.5	33.3	33.3	13.3	29.1		21.4	68.9		14.1	61.6	
Effective Green, g (s)	17.5	33.3	33.3	13.3	29.1		21.4	68.9		14.1	61.6	
Actuated g/C Ratio	0.12	0.22	0.22	0.09	0.19		0.14	0.46		0.09	0.41	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	206	785	351	156	658		252	2304		166	2062	
v/s Ratio Prot	c0.09	0.13		c0.08	c0.15		0.12	c0.42		0.08	c0.38	
v/s Ratio Perm			0.02									
v/c Ratio	0.74	0.58	0.11	0.90	0.78		0.87	0.91		0.90	0.93	
Uniform Delay, d1	64.0	52.0	46.6	67.7	57.5		63.0	37.8		67.2	42.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.98	0.61		0.79	0.75	
Incremental Delay, d2	12.9	1.0	0.1	43.0	6.1		24.2	6.3		21.0	3.8	
Delay (s)	76.9	53.1	46.7	110.7	63.5		86.2	29.3		73.8	35.2	
Level of Service	E	D	D	F	E		F	C		E	D	
Approach Delay (s)		56.5			73.2			34.6			38.0	
Approach LOS		E			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

15: Beach Blvd & Utica Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	19	57	148	30	95	105	1786	87	118	1660	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5050		1770	5044	
Flt Permitted		0.68			0.61	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1187			1141	1583	1770	5050		1770	5044	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	41	19	58	149	30	96	106	1804	88	119	1677	95
RTOR Reduction (vph)	0	26	0	0	0	78	0	3	0	0	3	0
Lane Group Flow (vph)	0	92	0	0	179	18	106	1889	0	119	1769	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		27.6			27.6	27.6	17.8	91.8		15.4	89.4	
Effective Green, g (s)		27.6			27.6	27.6	17.8	91.8		15.4	89.4	
Actuated g/C Ratio		0.18			0.18	0.18	0.12	0.61		0.10	0.60	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		218			209	291	210	3090		181	3006	
v/s Ratio Prot							0.06	c0.37		c0.07	0.35	
v/s Ratio Perm		0.08			c0.16	0.01						
v/c Ratio		0.42			0.86	0.06	0.50	0.61		0.66	0.59	
Uniform Delay, d1		54.1			59.3	50.5	62.0	18.0		64.8	18.9	
Progression Factor		1.00			1.00	1.00	0.70	0.49		0.65	1.35	
Incremental Delay, d2		1.3			27.4	0.1	1.0	0.5		3.9	0.4	
Delay (s)		55.5			86.7	50.6	44.6	9.2		46.3	25.9	
Level of Service		E			F	D	D	A		D	C	
Approach Delay (s)		55.5			74.1			11.1			27.1	
Approach LOS		E			E			B			C	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	484	61	206	867	389	134	1362	117	336	1283	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	5025		3433	4998	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	5025		3433	4998	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	186	515	65	219	922	414	143	1449	124	357	1365	177
RTOR Reduction (vph)	0	10	0	0	0	62	0	7	0	0	11	0
Lane Group Flow (vph)	186	570	0	219	922	352	143	1566	0	357	1531	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	17.5	38.6		20.4	41.5	59.1	16.2	51.6		17.6	53.0	
Effective Green, g (s)	17.5	38.6		20.4	41.5	59.1	16.2	51.6		17.6	53.0	
Actuated g/C Ratio	0.12	0.26		0.14	0.28	0.39	0.11	0.34		0.12	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	206	1286		240	979	623	191	1728		402	1765	
v/s Ratio Prot	0.11	0.11		c0.12	c0.26	0.07	0.08	c0.31		0.10	c0.31	
v/s Ratio Perm						0.16						
v/c Ratio	0.90	0.44		0.91	0.94	0.56	0.75	0.91		0.89	0.87	
Uniform Delay, d1	65.4	46.7		63.9	53.1	35.4	64.9	46.9		65.2	45.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.67	0.57		1.30	0.40	
Incremental Delay, d2	36.4	0.5		34.8	17.0	0.7	11.6	7.5		17.1	5.1	
Delay (s)	101.8	47.2		98.7	70.0	36.1	55.3	34.1		101.7	23.2	
Level of Service	F	D		F	E	D	E	C		F	C	
Approach Delay (s)		60.5			65.0			35.8			37.9	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	47.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	90.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	112	39	34	127	161	32	1470	33	162	1205	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1790		1770	1863	1583	1770	5068		1770	5045	
Flt Permitted	0.51	1.00		0.43	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	957	1790		808	1863	1583	1770	5068		1770	5045	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	71	114	40	35	130	164	33	1500	34	165	1230	68
RTOR Reduction (vph)	0	10	0	0	0	143	0	1	0	0	3	0
Lane Group Flow (vph)	71	144	0	35	130	21	33	1533	0	165	1295	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	19.6	19.6		19.6	19.6	19.6	8.2	84.8		29.2	105.8	
Effective Green, g (s)	19.6	19.6		19.6	19.6	19.6	8.2	84.8		29.2	105.8	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.05	0.57		0.19	0.71	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	233		105	243	206	96	2865		344	3558	
v/s Ratio Prot		c0.08			0.07		0.02	c0.30		c0.09	0.26	
v/s Ratio Perm	0.07			0.04		0.01						
v/c Ratio	0.57	0.62		0.33	0.53	0.10	0.34	0.53		0.48	0.36	
Uniform Delay, d1	61.2	61.7		59.3	60.9	57.5	68.3	20.3		53.7	8.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.44	0.40		0.50	0.22	
Incremental Delay, d2	5.8	4.9		1.9	2.3	0.2	1.2	0.4		0.5	0.1	
Delay (s)	67.0	66.5		61.1	63.2	57.7	99.3	8.6		27.3	2.1	
Level of Service	E	E		E	E	E	F	A		C	A	
Approach Delay (s)		66.7			60.2			10.5			5.0	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	73.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	259	373	33	80	536	216	122	967	89	351	657	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3387		1770	5021		1770	4869	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3387		1770	5021		1770	4869	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	264	381	34	82	547	220	124	987	91	358	670	266
RTOR Reduction (vph)	0	4	0	0	29	0	0	7	0	0	51	0
Lane Group Flow (vph)	264	411	0	82	738	0	124	1071	0	358	885	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.3	47.3		11.6	34.6		27.2	38.1		31.9	42.8	
Effective Green, g (s)	24.3	47.3		11.6	34.6		27.2	38.1		31.9	42.8	
Actuated g/C Ratio	0.16	0.32		0.08	0.23		0.18	0.25		0.21	0.29	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	286	1102		136	781		320	1275		376	1389	
v/s Ratio Prot	c0.15	0.12		0.05	c0.22		0.07	c0.21		c0.20	0.18	
v/s Ratio Perm												
v/c Ratio	0.92	0.37		0.60	0.94		0.39	0.84		0.95	0.64	
Uniform Delay, d1	61.9	39.8		67.0	56.8		54.1	53.1		58.3	46.8	
Progression Factor	1.00	1.00		1.00	1.00		1.09	1.10		0.88	0.57	
Incremental Delay, d2	33.1	0.1		5.1	19.6		0.3	6.6		32.7	2.1	
Delay (s)	95.0	39.9		72.1	76.4		59.4	65.0		83.7	28.8	
Level of Service	F	D		E	E		E	E		F	C	
Approach Delay (s)		61.3			76.0			64.4			44.0	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	59.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	93.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	0	134	0	0	0	128	1126	0	0	663	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5030	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5030	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	81	0	143	0	0	0	136	1198	0	0	705	55
RTOR Reduction (vph)	0	0	128	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	81	0	15	0	0	0	136	1198	0	0	757	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	16.0		16.0				16.9	123.0			101.2	
Effective Green, g (s)	16.0		16.0				16.9	123.0			101.2	
Actuated g/C Ratio	0.11		0.11				0.11	0.82			0.67	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	188		168				199	4169			3393	
v/s Ratio Prot							c0.08	c0.24			0.15	
v/s Ratio Perm	c0.05		0.01									
v/c Ratio	0.43		0.09				0.68	0.29			0.22	
Uniform Delay, d1	62.7		60.4				64.0	3.2			9.3	
Progression Factor	1.00		1.00				1.08	0.50			0.49	
Incremental Delay, d2	1.6		0.2				3.4	0.1			0.1	
Delay (s)	64.3		60.7				72.7	1.7			4.7	
Level of Service	E		E				E	A			A	
Approach Delay (s)		62.0			0.0			8.9			4.7	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	46.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	1200	53	23	1557	928	29	50	38	503	55	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	299	1250	55	24	1622	967	30	52	40	524	57	257
RTOR Reduction (vph)	0	3	0	0	0	276	0	0	37	0	0	0
Lane Group Flow (vph)	299	1302	0	24	1622	691	30	52	3	524	57	257
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.3	78.4		4.3	69.4	69.4	3.6	11.6	11.6	34.0	42.0	150.0
Effective Green, g (s)	13.3	78.4		4.3	69.4	69.4	3.6	11.6	11.6	34.0	42.0	150.0
Actuated g/C Ratio	0.09	0.52		0.03	0.46	0.46	0.02	0.08	0.08	0.23	0.28	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	304	2641		50	1637	732	42	273	122	778	521	1583
v/s Ratio Prot	c0.09	0.26		0.01	c0.46		c0.02	0.01		c0.15	0.03	
v/s Ratio Perm						0.44			0.00			c0.16
v/c Ratio	0.98	0.49		0.48	0.99	0.94	0.71	0.19	0.03	0.67	0.11	0.16
Uniform Delay, d1	68.2	23.0		71.7	40.0	38.4	72.7	64.8	64.0	52.9	40.1	0.0
Progression Factor	1.00	1.00		1.21	0.32	0.68	1.00	1.00	1.00	1.23	1.15	1.00
Incremental Delay, d2	46.7	0.7		1.9	16.6	17.3	38.0	0.1	0.0	1.8	0.0	0.2
Delay (s)	114.9	23.7		88.5	29.4	43.6	110.7	64.9	64.0	67.1	46.3	0.2
Level of Service	F	C		F	C	D	F	E	E	E	D	A
Approach Delay (s)		40.7			35.2			75.9			45.2	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	39.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	86.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	170	1557	15	5	2330	302	12	11	15	91	6	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1697		1770	1593	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.27	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	512	1697		1378	1593	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	177	1622	16	5	2427	315	12	11	16	95	6	176
RTOR Reduction (vph)	0	0	4	0	0	87	0	14	0	0	154	0
Lane Group Flow (vph)	177	1622	12	5	2427	228	12	13	0	95	28	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	19.2	116.4	116.4	1.2	98.4	98.4	18.5	18.5		18.5	18.5	
Effective Green, g (s)	19.2	116.4	116.4	1.2	98.4	98.4	18.5	18.5		18.5	18.5	
Actuated g/C Ratio	0.13	0.78	0.78	0.01	0.66	0.66	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	226	3945	1228	14	3335	1038	63	209		169	196	
v/s Ratio Prot	c0.10	0.32		c0.00	c0.48			0.01			0.02	
v/s Ratio Perm			0.01			0.14	0.02			c0.07		
v/c Ratio	0.78	0.41	0.01	0.36	0.73	0.22	0.19	0.06		0.56	0.14	
Uniform Delay, d1	63.4	5.5	3.8	74.0	17.0	10.4	59.0	58.1		61.9	58.7	
Progression Factor	0.73	2.02	1.00	0.58	0.35	0.09	1.00	1.00		1.00	1.00	
Incremental Delay, d2	13.1	0.3	0.0	2.7	0.7	0.2	0.5	0.0		2.5	0.1	
Delay (s)	59.3	11.5	3.8	45.5	6.6	1.1	59.6	58.1		64.5	58.8	
Level of Service	E	B	A	D	A	A	E	E		E	E	
Approach Delay (s)		16.1			6.0			58.6			60.7	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	13.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	77.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	1521	37	50	2487	232	18	45	31	168	50	163
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1749		1681	1722	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1749		1681	1722	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	145	1618	39	53	2646	247	19	48	33	179	53	173
RTOR Reduction (vph)	0	0	16	0	0	68	0	17	0	0	0	152
Lane Group Flow (vph)	145	1618	23	53	2646	179	19	64	0	115	117	21
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.9	88.8	88.8	7.2	85.1	85.1	17.0	17.0		18.2	18.2	18.2
Effective Green, g (s)	10.9	88.8	88.8	7.2	85.1	85.1	17.0	17.0		18.2	18.2	18.2
Actuated g/C Ratio	0.07	0.59	0.59	0.05	0.57	0.57	0.11	0.11		0.12	0.12	0.12
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	128	3010	937	84	2884	898	200	198		203	208	192
v/s Ratio Prot	c0.08	0.32		0.03	c0.52		0.01	c0.04		c0.07	0.07	
v/s Ratio Perm			0.01			0.11						0.01
v/c Ratio	1.13	0.54	0.02	0.63	0.92	0.20	0.10	0.32		0.57	0.56	0.11
Uniform Delay, d1	69.5	18.3	12.7	70.1	29.3	15.8	59.6	61.2		62.2	62.1	58.7
Progression Factor	0.87	0.55	1.05	1.39	0.17	0.03	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	117.4	0.7	0.0	1.0	0.6	0.0	0.1	0.3		2.2	2.1	0.1
Delay (s)	178.2	10.8	13.4	98.5	5.7	0.5	59.7	61.6		64.3	64.2	58.8
Level of Service	F	B	B	F	A	A	E	E		E	E	E
Approach Delay (s)		24.3			7.0			61.2			61.9	
Approach LOS		C			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	84.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	239	1485	7	20	2514	680	25	29	13	326	8	237
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1776		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1776		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	257	1597	8	22	2703	731	27	31	14	351	9	255
RTOR Reduction (vph)	0	0	3	0	0	42	0	11	0	0	0	193
Lane Group Flow (vph)	257	1597	5	22	2703	689	27	34	0	351	9	62
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	29.7	96.0	96.0	3.7	70.0	94.0	5.6	5.6		24.0	24.0	24.0
Effective Green, g (s)	29.7	96.0	96.0	3.7	70.0	94.0	5.6	5.6		24.0	24.0	24.0
Actuated g/C Ratio	0.20	0.64	0.64	0.02	0.47	0.63	0.04	0.04		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	350	3254	1013	43	2373	992	66	66		549	298	253
v/s Ratio Prot	c0.15	0.31		0.01	c0.53	c0.11	0.02	c0.02		0.10	0.00	
v/s Ratio Perm			0.00			0.32						0.04
v/c Ratio	0.73	0.49	0.01	0.51	1.14	0.69	0.41	0.52		0.64	0.03	0.24
Uniform Delay, d1	56.4	14.2	9.8	72.3	40.0	18.5	70.6	70.9		59.0	53.2	55.1
Progression Factor	0.72	1.14	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.0	0.5	0.0	4.2	68.3	1.7	1.5	3.4		1.8	0.0	0.2
Delay (s)	46.8	16.6	9.8	76.5	108.3	20.2	72.1	74.3		60.8	53.2	55.3
Level of Service	D	B	A	E	F	C	E	E		E	D	E
Approach Delay (s)		20.7			89.4			73.5			58.4	
Approach LOS		C			F			E			E	

Intersection Summary				
HCM 2000 Control Delay	64.8	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	91.3%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Scenario Report

Scenario:	OY+P1-PM
Command:	OY+P1-PM
Volume:	EX-PM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	OY-CUMUL+P1-PM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	OY+P1-PM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
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Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	E	xxxxx	0.909	F	xxxxx	1.011	+ 0.102
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.869	E	xxxxx	0.932	+ 0.063
# 16 Beach Blvd & Adams Ave	C	xxxxx	0.724	C	xxxxx	0.796	+ 0.072
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.674	D	xxxxx	0.843	+ 0.169
# 21 Newland St & Atlanta Ave	A	xxxxx	0.563	A	xxxxx	0.578	+ 0.015
# 22 Newland St & Hamilton Ave	B	xxxxx	0.697	C	xxxxx	0.781	+ 0.084
# 24 Magnolia St & Hamilton Ave	B	xxxxx	0.610	B	xxxxx	0.620	+ 0.010
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.657	B	xxxxx	0.675	+ 0.018
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.798	D	xxxxx	0.821	+ 0.023
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.506	A	xxxxx	0.526	+ 0.020
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.594	B	xxxxx	0.617	+ 0.023
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.710	C	xxxxx	0.750	+ 0.040
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.624	B	xxxxx	0.653	+ 0.029
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.595	B	xxxxx	0.625	+ 0.029
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.778	D	xxxxx	0.807	+ 0.028
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.353	A	xxxxx	0.368	+ 0.015
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.440	A	xxxxx	0.466	+ 0.026
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.227	A	xxxxx	0.242	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.284	A	xxxxx	0.300	+ 0.015

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.909
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	92	Level Of Service:	E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	427	2308	524		343	2266	658		428	934	252		179	609	177	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	427	2308	524		343	2266	658		428	934	252		179	609	177	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	427	2308	524		343	2266	658		428	934	252		179	609	177	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	427	2308	524		343	2266	658		428	934	252		179	609	177	
OvlAdjVol:							230				39					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.45	0.31		0.10	0.33	0.19		0.13	0.18	0.15		0.05	0.18	0.10	
OvlAdjV/S:							0.07				0.02					
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.869
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	72	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.36	0.36		0.05	0.25	0.20		0.12	0.25	0.25		0.07	0.28	0.28	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	133	1128	103	297	1074	157	161	469	61	193	853	349				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	133	1128	103	297	1074	157	161	469	61	193	853	349				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	133	1128	103	297	1074	157	161	469	61	193	853	349				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	133	1128	103	297	1074	157	161	469	61	193	853	349				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.75	0.25	2.00	2.62	0.38	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4673	427	3400	4451	649	1700	4515	585	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.24	0.24	0.09	0.24	0.24	0.09	0.10	0.10	0.11	0.25	0.21				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37	303	53	232	267	1070	51	22	1417	720				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	29	50	38	312	55	239	275	1102	53	23	1460	742				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	29	50	0	312	55	0	275	1102	53	23	1460	742				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	29	50	0	312	55	0	275	1102	53	23	1460	742				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	29	50	0	312	55	0	275	1102	53	23	1460	742				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.86	0.14	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4868	232	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.01	0.00	0.09	0.03	0.00	0.08	0.23	0.23	0.01	0.43	0.44				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.563
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34	96	264	97	80	474	203	52	473	114				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	283	537	35	99	272	100	82	488	209	54	487	117				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	283	537	35	99	272	100	82	488	209	54	487	117				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	283	537	35	99	272	100	82	488	209	54	487	117				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	283	537	35	99	272	100	82	488	209	54	487	117				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.88	0.12	1.00	1.46	0.54	1.00	1.40	0.60	1.00	1.61	0.39				
Final Sat.:	1700	3192	208	1700	2486	914	1700	2381	1019	1700	2740	660				
Capacity Analysis Module:																
Vol/Sat:	0.17	0.17	0.17	0.06	0.11	0.11	0.05	0.21	0.21	0.03	0.18	0.18				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	304	65	223	203	0	0	0	0	153	0	476				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	0	313	67	230	209	0	0	0	0	158	0	490				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	313	67	230	209	0	0	0	0	158	0	490				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	313	67	230	209	0	0	0	0	158	0	490				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	313	67	230	209	0	0	0	0	158	0	490				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.82	0.18	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1401	299	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.22	0.22	0.14	0.12	0.00	0.00	0.00	0.00	0.09	0.00	0.29				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	30	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	31	309	29		195	183	43		26	265	30		15	562	337	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	31	309	29		195	183	43		26	265	30		15	562	337	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	31	309	29		195	183	43		26	265	30		15	562	337	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	31	309	29		195	183	43		26	265	30		15	562	337	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.90	0.10		1.00	1.00	1.00	
Final Sat.:	1700	3110	290		1700	3400	1700		1700	1528	172		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10		0.11	0.05	0.03		0.02	0.17	0.17		0.01	0.33	0.20	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.657
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	33	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	114	586	158		399	401	91		92	361	69		238	1092	515	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	114	586	158		399	401	91		92	361	69		238	1092	515	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	114	586	158		399	401	91		92	361	69		238	1092	515	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	114	586	158		399	401	91		92	361	69		238	1092	515	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.45	0.55		1.00	1.68	0.32		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4159	941		1700	2854	546		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.09		0.12	0.10	0.10		0.05	0.13	0.13		0.14	0.32	0.30	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.798
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.29	0.19		0.07	0.28	0.15		0.06	0.13	0.09		0.07	0.32	0.28	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.506
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16		29	1774	25		83	0	28		8	0	11	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	23	1851	16		30	1827	26		85	0	29		8	0	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	23	1851	16		30	1827	0		85	0	29		8	0	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	23	1851	16		30	1827	0		85	0	29		8	0	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	23	1851	16		30	1827	0		85	0	29		8	0	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.97	0.03		1.00	3.00	1.00		0.74	0.01	0.25		0.42	0.00	0.58	
Final Sat.:	1700	5055	45		1700	5100	1700		1271	0	429		716	0	984	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.37	0.37		0.02	0.36	0.00		0.05	0.00	0.07		0.00	0.00	0.01	
Crit Moves:		****			****							****	****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.594
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	29	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1	0	1	0	2	1	0	0	1	0	0	1!	0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	71	1636	13		41	1597	219		227	8	84		13	3	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	71	1636	13		41	1597	219		227	8	84		13	3	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	71	1636	13		41	1597	219		227	8	84		13	3	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	71	1636	13		41	1597	219		227	8	84		13	3	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.32	0.32		0.02	0.36	0.36		0.13	0.14	0.05		0.01	0.02	0.02	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.710
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	38	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0	1	1	0	3	0	1	2	0	1	1	0	
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	109	1308	132		159	1227	187		255	486	90		342	687	111	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	109	1308	132		159	1227	187		255	486	90		342	687	111	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	109	1308	132		159	1227	187		255	486	90		342	687	111	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	109	1308	132		159	1227	187		255	486	90		342	687	111	
OvlAdjVol:			0				60									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.26	0.08		0.09	0.24	0.11		0.08	0.17	0.17		0.10	0.23	0.23	
OvlAdjV/S:			0.00				0.04									
Crit Moves:		****				****				****				****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.624
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	190	1421	79		106	1183	243		182	217	140		191	249	99	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	190	1421	79		106	1183	243		182	217	140		191	249	99	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	190	1421	79		106	1183	243		182	217	140		191	249	99	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	190	1421	79		106	1183	243		182	217	140		191	249	99	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.29	0.29		0.06	0.23	0.14		0.11	0.11	0.11		0.11	0.07	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	159	1452	113		38	1145	206		151	226	112		149	256	27	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	159	1452	113		38	1145	206		151	226	112		149	256	27	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	159	1452	113		38	1145	206		151	226	112		149	256	27	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	159	1452	113		38	1145	206		151	226	112		149	256	27	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.54	0.46		1.00	1.34	0.66		1.00	1.81	0.19	
Final Sat.:	1700	4731	369		1700	4323	777		1700	2270	1130		1700	3079	321	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.31	0.31		0.02	0.26	0.26		0.09	0.10	0.10		0.09	0.08	0.08	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.778
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	269	899	148	313	876	184	282	769	127	289	1775	365				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	269	899	148	313	876	184	282	769	127	289	1775	365				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	269	899	148	313	876	184	282	769	127	289	1775	365				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	269	899	148	313	876	184	282	769	127	289	1775	365				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.21	0.21	0.09	0.21	0.21	0.08	0.15	0.07	0.09	0.35	0.21				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.353
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	19	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	45	1286	0	0	1087	171	100	0	53	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	45	1286	0	0	1087	171	100	0	53	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	45	1286	0	0	1087	171	100	0	53	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	45	1286	0	0	1087	171	100	0	53	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.25	0.00	0.00	0.25	0.25	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.440
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	151	1018	22	21	711	174	182	25	140	26	41	28				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	151	1018	22	21	711	174	182	25	140	26	41	28				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	151	1018	22	21	711	174	182	25	140	26	41	28				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	151	1018	22	21	711	174	182	25	140	26	41	28				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.94	0.06	1.00	2.41	0.59	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4994	106	1700	4097	1003	1700	1700	1700	1700	2030	1370				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.20	0.20	0.01	0.17	0.17	0.11	0.01	0.08	0.02	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.227
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	14	710	0	0	419	88	64	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	14	710	0	0	419	88	64	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	14	710	0	0	419	88	64	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	14	710	0	0	419	88	64	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.48	0.52	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4219	881	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00	0.00	0.10	0.10	0.04	0.00	0.01	0.00	0.00	0.00				
Crit Moves:		****		****		****		****								

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.284
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1		12	378	26		7	0	86		0	1	0	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	180	697	1		12	389	27		7	0	89		0	1	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	180	697	1		12	389	27		7	0	89		0	1	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	180	697	1		12	389	27		7	0	89		0	1	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	180	697	1		12	389	27		7	0	89		0	1	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		1.00	0.00	1.00		0.00	1.00	0.00	
Final Sat.:	1700	5092	8		1700	5100	1700		1700	0	1700		0	1700	0	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.14	0.14		0.01	0.08	0.02		0.00	0.00	0.05		0.00	0.00	0.00	
Crit Moves:	****					****					****		****			

APPENDIX G: ALTERNATIVE 6 PROJECT OPERATING YEAR (2020) BASE LOS RESULTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	262	355	128	333	455	106	188	2083	168	154	2953	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3398		3433	3439		3433	6336		3433	6305	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3398		3433	3439		3433	6336		3433	6305	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	282	382	138	358	489	114	202	2240	181	166	3175	382
RTOR Reduction (vph)	0	25	0	0	14	0	0	8	0	0	14	0
Lane Group Flow (vph)	282	495	0	358	589	0	202	2413	0	166	3543	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.9	34.9		13.7	31.7		11.7	71.9		11.1	71.3	
Effective Green, g (s)	16.9	34.9		13.7	31.7		11.7	71.9		11.1	71.3	
Actuated g/C Ratio	0.11	0.23		0.09	0.21		0.08	0.48		0.07	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	386	790		313	726		267	3037		254	2996	
v/s Ratio Prot	c0.08	0.15		c0.10	c0.17		0.06	c0.38		0.05	c0.56	
v/s Ratio Perm												
v/c Ratio	0.73	0.63		1.14	0.81		0.76	0.79		0.65	1.18	
Uniform Delay, d1	64.3	51.7		68.2	56.3		67.8	32.8		67.6	39.4	
Progression Factor	1.00	1.00		1.00	1.00		0.98	0.70		1.00	1.00	
Incremental Delay, d2	7.0	1.6		95.6	6.9		10.4	2.0		5.9	85.9	
Delay (s)	71.3	53.2		163.8	63.2		76.8	25.1		73.5	125.3	
Level of Service	E	D		F	E		E	C		E	F	
Approach Delay (s)		59.6			100.6			29.1			123.0	
Approach LOS		E			F			C			F	

Intersection Summary			
HCM 2000 Control Delay	83.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	182	562	0	2441	2963	1006
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	190	585	0	2543	3086	1048
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	190	584	0	2543	3086	1048
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	14.0	41.5		126.2	92.7	150.0
Effective Green, g (s)	14.0	41.5		126.2	92.7	150.0
Actuated g/C Ratio	0.09	0.28		0.84	0.62	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	320	854		5391	3960	1583
v/s Ratio Prot	0.06	0.13		0.39	c0.48	
v/s Ratio Perm		0.08		0.00		c0.66
v/c Ratio	0.59	0.68		0.47	0.78	0.66
Uniform Delay, d1	65.3	48.4		3.1	21.1	0.0
Progression Factor	1.00	1.00		0.10	0.39	1.00
Incremental Delay, d2	3.4	2.4		0.0	0.1	0.2
Delay (s)	68.7	50.8		0.3	8.4	0.2
Level of Service	E	D		A	A	A
Approach Delay (s)	55.2			0.3	6.3	
Approach LOS	E			A	A	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	314	1097	224	143	495	248	180	1880	297	476	2569	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	324	1131	231	147	510	256	186	1938	306	491	2648	522
RTOR Reduction (vph)	0	0	57	0	0	144	0	0	114	0	0	95
Lane Group Flow (vph)	324	1131	174	147	510	112	186	1938	192	491	2648	427
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.4	39.7	51.9	13.0	40.3	40.3	12.2	51.7	51.7	25.3	64.4	76.8
Effective Green, g (s)	12.4	39.7	51.9	13.0	40.3	40.3	12.2	51.7	51.7	25.3	64.4	76.8
Actuated g/C Ratio	0.08	0.26	0.35	0.09	0.27	0.27	0.08	0.34	0.34	0.17	0.43	0.51
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	283	1345	547	297	950	425	279	1752	545	579	2751	1426
v/s Ratio Prot	c0.09	c0.22	0.03	0.04	0.14		0.05	c0.38		c0.14	c0.41	0.02
v/s Ratio Perm			0.08			0.07			0.12			0.13
v/c Ratio	1.14	0.84	0.32	0.49	0.54	0.26	0.67	1.11	0.35	0.85	0.96	0.30
Uniform Delay, d1	68.8	52.2	36.0	65.4	46.9	43.2	66.9	49.1	36.7	60.5	41.6	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.55	0.38	1.14	0.57	0.40
Incremental Delay, d2	98.5	4.9	0.1	0.5	0.6	0.3	3.9	55.4	1.5	7.0	7.3	0.0
Delay (s)	167.3	57.1	36.2	65.8	47.5	43.5	99.9	82.7	15.3	75.8	31.1	8.5
Level of Service	F	E	D	E	D	D	F	F	B	E	C	A
Approach Delay (s)		75.4			49.3			75.5			33.9	
Approach LOS		E			D			E			C	

Intersection Summary			
HCM 2000 Control Delay	55.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	98.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	19	21	68	8	104	48	2154	56	144	2781	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1716		1770	1863	1583	1770	6383		3433	6403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1716		1770	1863	1583	1770	6383		3433	6403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	20	22	72	8	109	51	2267	59	152	2927	15
RTOR Reduction (vph)	0	20	0	0	0	94	0	2	0	0	0	0
Lane Group Flow (vph)	26	22	0	72	8	15	51	2324	0	152	2942	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.2		12.3	20.7	20.7	8.3	89.3		12.6	93.6	
Effective Green, g (s)	7.8	16.2		12.3	20.7	20.7	8.3	89.3		12.6	93.6	
Actuated g/C Ratio	0.05	0.11		0.08	0.14	0.14	0.06	0.60		0.08	0.62	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	185		145	257	218	97	3800		288	3995	
v/s Ratio Prot	0.01	c0.01		c0.04	0.00		0.03	c0.36		0.04	c0.46	
v/s Ratio Perm						c0.01						
v/c Ratio	0.28	0.12		0.50	0.03	0.07	0.53	0.61		0.53	0.74	
Uniform Delay, d1	68.4	60.5		65.9	56.0	56.3	68.9	19.3		65.8	19.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.60	0.24		0.62	0.26	
Incremental Delay, d2	1.7	0.3		2.7	0.0	0.1	4.3	0.6		0.8	0.6	
Delay (s)	70.1	60.8		68.5	56.0	56.4	114.3	5.3		41.4	5.6	
Level of Service	E	E		E	E	E	F	A		D	A	
Approach Delay (s)		64.3			61.0			7.7			7.4	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	9.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	71.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	4	42	91	5	53	38	2194	48	151	2773	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.98	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1607		1681	1600	1504	1770	6387		3433	6403	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1607		1681	1600	1504	1770	6387		3433	6403	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	30	4	44	95	5	55	40	2285	50	157	2889	15
RTOR Reduction (vph)	0	40	0	0	4	45	0	1	0	0	0	0
Lane Group Flow (vph)	30	8	0	54	49	3	40	2334	0	157	2904	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		9.1	9.1	9.1	8.1	96.9		12.9	101.7	
Effective Green, g (s)	13.2	13.2		9.1	9.1	9.1	8.1	96.9		12.9	101.7	
Actuated g/C Ratio	0.09	0.09		0.06	0.06	0.06	0.05	0.65		0.09	0.68	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	141		101	97	91	95	4126		295	4341	
v/s Ratio Prot	c0.02	0.00		c0.03	0.03		0.02	c0.37		0.05	c0.45	
v/s Ratio Perm						0.00						
v/c Ratio	0.19	0.06		0.53	0.51	0.03	0.42	0.57		0.53	0.67	
Uniform Delay, d1	63.5	62.7		68.4	68.3	66.3	68.7	14.8		65.7	14.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.84	1.47		0.57	0.30	
Incremental Delay, d2	0.6	0.2		5.4	4.1	0.1	2.2	0.4		1.3	0.6	
Delay (s)	64.1	62.9		73.7	72.4	66.4	60.0	22.2		38.6	4.9	
Level of Service	E	E		E	E	E	E	C		D	A	
Approach Delay (s)		63.3			71.0			22.8			6.6	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	368	293	53	237	107	136	1993	67	81	2621	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3304		1770	3373		1770	6376		1770	6351	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3304		1770	3373		1770	6376		1770	6351	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	203	387	308	56	249	113	143	2098	71	85	2759	174
RTOR Reduction (vph)	0	102	0	0	39	0	0	3	0	0	6	0
Lane Group Flow (vph)	203	593	0	56	323	0	143	2166	0	85	2927	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	23.9	37.1		8.8	22.0		12.8	72.8		12.5	72.5	
Effective Green, g (s)	23.9	37.1		8.8	22.0		12.8	72.8		12.5	72.5	
Actuated g/C Ratio	0.16	0.25		0.06	0.15		0.09	0.49		0.08	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	817		103	494		151	3094		147	3069	
v/s Ratio Prot	0.11	c0.18		0.03	c0.10		c0.08	0.34		0.05	c0.46	
v/s Ratio Perm												
v/c Ratio	0.72	0.73		0.54	0.65		0.95	0.70		0.58	0.95	
Uniform Delay, d1	59.9	51.8		68.6	60.4		68.3	30.1		66.2	37.1	
Progression Factor	1.00	1.00		1.00	1.00		0.89	0.96		0.86	0.86	
Incremental Delay, d2	8.5	3.2		5.8	3.1		52.4	1.2		4.1	6.9	
Delay (s)	68.4	55.0		74.4	63.5		112.8	30.0		61.4	38.9	
Level of Service	E	E		E	E		F	C		E	D	
Approach Delay (s)		58.0			65.0			35.1			39.6	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	42.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	18	64	42	4	17	53	2140	25	20	2878	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667	1478		1662	1478	1770	6397		1770	6399	
Flt Permitted		0.72	1.00		0.55	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1252	1478		955	1478	1770	6397		1770	6399	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	126	20	70	46	4	19	58	2352	27	22	3163	30
RTOR Reduction (vph)	0	0	59	0	0	16	0	1	0	0	1	0
Lane Group Flow (vph)	0	146	11	0	50	3	58	2378	0	22	3192	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		24.3	24.3		24.3	24.3	8.6	104.9		5.5	101.8	
Effective Green, g (s)		24.3	24.3		24.3	24.3	8.6	104.9		5.5	101.8	
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.06	0.70		0.04	0.68	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		202	239		154	239	101	4473		64	4342	
v/s Ratio Prot							c0.03	c0.37		0.01	c0.50	
v/s Ratio Perm		c0.12	0.01		0.05	0.00						
v/c Ratio		0.72	0.05		0.32	0.01	0.57	0.53		0.34	0.74	
Uniform Delay, d1		59.7	53.1		55.6	52.8	68.9	10.8		70.5	15.5	
Progression Factor		1.00	1.00		1.00	1.00	1.07	0.19		1.21	0.19	
Incremental Delay, d2		12.0	0.1		1.2	0.0	2.0	0.1		1.4	0.5	
Delay (s)		71.7	53.2		56.8	52.8	76.0	2.2		86.7	3.4	
Level of Service		E	D		E	D	E	A		F	A	
Approach Delay (s)		65.7			55.7			4.0			4.0	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	234	1350	139	229	927	95	192	1946	161	392	2208	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	5014		3433	5014		3433	6334		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	5014		3433	5014		3433	6334		3433	6408	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	260	1500	154	254	1030	106	213	2162	179	436	2453	313
RTOR Reduction (vph)	0	8	0	0	9	0	0	8	0	0	0	108
Lane Group Flow (vph)	260	1646	0	254	1127	0	213	2333	0	436	2453	205
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Effective Green, g (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Actuated g/C Ratio	0.09	0.31		0.08	0.29		0.09	0.36		0.13	0.40	0.40
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	322	1540		265	1457		297	2288		437	2576	636
v/s Ratio Prot	0.08	c0.33		c0.07	0.22		0.06	c0.37		0.13	c0.38	
v/s Ratio Perm												0.13
v/c Ratio	0.81	1.07		0.96	0.77		0.72	1.02		1.00	0.95	0.32
Uniform Delay, d1	66.6	52.0		69.0	48.7		66.7	47.9		65.4	43.5	30.8
Progression Factor	1.00	1.00		1.00	1.00		1.02	0.58		0.68	0.54	0.42
Incremental Delay, d2	13.0	43.7		43.1	2.6		5.2	21.5		34.9	7.2	0.9
Delay (s)	79.7	95.7		112.1	51.3		73.5	49.1		79.5	30.6	13.9
Level of Service	E	F		F	D		E	D		E	C	B
Approach Delay (s)		93.5			62.4			51.2			35.7	
Approach LOS		F			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	56.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	96.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

9: Beach Blvd & Slater Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	709	197	72	433	106	122	1644	39	204	2198	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.97		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3424		1770	3435		1770	6386		1770	6334	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3424		1770	3435		1770	6386		1770	6334	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	771	214	78	471	115	133	1787	42	222	2389	199
RTOR Reduction (vph)	0	17	0	0	15	0	0	2	0	0	9	0
Lane Group Flow (vph)	184	968	0	78	571	0	133	1827	0	222	2579	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.3	43.0		12.0	30.7		12.5	52.5		21.8	61.8	
Effective Green, g (s)	24.3	43.0		12.0	30.7		12.5	52.5		21.8	61.8	
Actuated g/C Ratio	0.16	0.29		0.08	0.20		0.08	0.35		0.15	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	981		141	703		147	2235		257	2609	
v/s Ratio Prot	0.10	c0.28		0.04	c0.17		0.08	c0.29		0.13	c0.41	
v/s Ratio Perm												
v/c Ratio	0.64	0.99		0.55	0.81		0.90	0.82		0.86	0.99	
Uniform Delay, d1	58.8	53.2		66.4	56.9		68.2	44.4		62.6	43.7	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.74		0.84	0.53	
Incremental Delay, d2	4.9	25.2		4.6	7.1		44.8	3.3		9.2	7.5	
Delay (s)	63.7	78.4		71.1	64.0		98.8	36.1		61.9	30.8	
Level of Service	E	E		E	E		F	D		E	C	
Approach Delay (s)		76.1			64.8			40.4			33.3	
Approach LOS		E			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	46.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	96.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	4	27	41	2	71	18	1715	65	123	2508	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1676		1770	6373		1770	6402	
Flt Permitted		0.72			0.85		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1268			1458		1770	6373		1770	6402	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	30	4	28	42	2	72	18	1750	66	126	2559	16
RTOR Reduction (vph)	0	24	0	0	49	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	38	0	0	67	0	18	1814	0	126	2575	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		17.3			17.3		6.0	100.9		15.9	110.8	
Effective Green, g (s)		17.3			17.3		6.0	100.9		15.9	110.8	
Actuated g/C Ratio		0.12			0.12		0.04	0.67		0.11	0.74	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		146			168		70	4286		187	4728	
v/s Ratio Prot							0.01	0.28		c0.07	c0.40	
v/s Ratio Perm		0.03			c0.05							
v/c Ratio		0.26			0.40		0.26	0.42		0.67	0.54	
Uniform Delay, d1		60.5			61.5		69.8	11.2		64.6	8.6	
Progression Factor		1.00			1.00		1.14	0.08		1.19	0.10	
Incremental Delay, d2		1.0			1.6		1.1	0.2		2.8	0.1	
Delay (s)		61.5			63.1		81.0	1.0		79.3	1.0	
Level of Service		E			E		F	A		E	A	
Approach Delay (s)		61.5			63.1			1.8			4.6	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.7	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	66.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	420	134	135	384	151	180	1603	143	333	1814	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3389		1770	6329		1770	6324	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3389		1770	6329		1770	6324	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	105	447	143	144	409	161	191	1705	152	354	1930	185
RTOR Reduction (vph)	0	21	0	0	30	0	0	9	0	0	9	0
Lane Group Flow (vph)	105	569	0	144	540	0	191	1848	0	354	2106	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.2	30.8		13.2	31.8		18.9	54.0		31.3	66.4	
Effective Green, g (s)	12.2	30.8		13.2	31.8		18.9	54.0		31.3	66.4	
Actuated g/C Ratio	0.08	0.21		0.09	0.21		0.13	0.36		0.21	0.44	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	143	700		155	718		223	2278		369	2799	
v/s Ratio Prot	0.06	c0.17		c0.08	0.16		0.11	c0.29		c0.20	0.33	
v/s Ratio Perm												
v/c Ratio	0.73	0.81		0.93	0.75		0.86	0.81		0.96	0.75	
Uniform Delay, d1	67.3	56.8		67.9	55.4		64.2	43.4		58.7	34.9	
Progression Factor	1.00	1.00		1.00	1.00		0.73	0.64		0.41	0.22	
Incremental Delay, d2	15.4	7.3		50.4	4.6		22.2	2.8		32.5	1.7	
Delay (s)	82.7	64.2		118.4	60.0		69.0	30.6		56.8	9.3	
Level of Service	F	E		F	E		E	C		E	A	
Approach Delay (s)		67.0			71.8			34.1			16.1	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	325	422	105	130	369	154	115	1417	161	231	1484	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6310		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6310		3433	5085	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	346	449	112	138	393	164	122	1507	171	246	1579	457
RTOR Reduction (vph)	0	0	91	0	0	132	0	11	0	0	0	23
Lane Group Flow (vph)	346	449	21	138	393	32	122	1667	0	246	1579	434
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	28.3	28.3	28.3	19.5	19.5	19.5	10.0	65.5		14.0	69.5	97.8
Effective Green, g (s)	28.3	28.3	28.3	19.5	19.5	19.5	10.0	65.5		14.0	69.5	97.8
Actuated g/C Ratio	0.19	0.19	0.19	0.13	0.13	0.13	0.07	0.44		0.09	0.46	0.65
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	647	667	298	230	460	205	228	2755		320	2356	1032
v/s Ratio Prot	0.10	c0.13		0.08	c0.11		0.04	c0.26		0.07	c0.31	0.27
v/s Ratio Perm			0.01			0.02						
v/c Ratio	0.53	0.67	0.07	0.60	0.85	0.15	0.54	0.61		0.77	0.67	0.42
Uniform Delay, d1	54.9	56.6	50.0	61.6	63.9	57.9	67.8	32.3		66.4	31.3	12.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.38	0.40	0.24
Incremental Delay, d2	0.5	2.2	0.1	2.8	13.8	0.1	1.2	1.0		6.5	1.0	0.1
Delay (s)	55.4	58.8	50.1	64.4	77.7	58.1	69.0	33.3		97.9	13.4	3.1
Level of Service	E	E	D	E	E	E	E	C		F	B	A
Approach Delay (s)		56.4			70.4			35.8			20.5	
Approach LOS		E			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	37.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.70			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	76.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	650	192	129	362	151	126	1280	90	162	1347	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3383		1770	5035		1770	5021	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3383		1770	5035		1770	5021	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	211	691	204	137	385	161	134	1362	96	172	1433	132
RTOR Reduction (vph)	0	0	152	0	40	0	0	6	0	0	7	0
Lane Group Flow (vph)	211	691	52	137	506	0	134	1452	0	172	1558	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	19.4	33.2	33.2	13.1	26.9		12.9	48.1		14.4	49.6	
Effective Green, g (s)	19.4	33.2	33.2	13.1	26.9		12.9	48.1		14.4	49.6	
Actuated g/C Ratio	0.15	0.26	0.26	0.10	0.21		0.10	0.37		0.11	0.38	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	264	903	404	178	700		175	1862		196	1915	
v/s Ratio Prot	0.12	c0.20		0.08	c0.15		0.08	c0.29		c0.10	c0.31	
v/s Ratio Perm			0.03									
v/c Ratio	0.80	0.77	0.13	0.77	0.72		0.77	0.78		0.88	0.81	
Uniform Delay, d1	53.4	44.8	37.3	57.0	48.1		57.1	36.3		56.9	36.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.62	1.03		1.00	1.00	
Incremental Delay, d2	14.5	4.2	0.2	16.3	4.0		12.9	2.6		31.9	3.9	
Delay (s)	67.9	48.9	37.5	73.3	52.0		48.5	39.8		88.9	40.0	
Level of Service	E	D	D	E	D		D	D		F	D	
Approach Delay (s)		50.4			56.3			40.6			44.8	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	46.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	81.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	168	503	205	144	451	128	84	1170	92	110	1425	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3422		1770	5030		1770	5030	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3422		1770	5030		1770	5030	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	177	529	216	152	475	135	88	1232	97	116	1500	118
RTOR Reduction (vph)	0	0	166	0	22	0	0	6	0	0	6	0
Lane Group Flow (vph)	177	529	50	152	588	0	88	1323	0	116	1612	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.2	29.9	29.9	14.2	28.9		11.7	53.4		12.1	53.8	
Effective Green, g (s)	15.2	29.9	29.9	14.2	28.9		11.7	53.4		12.1	53.8	
Actuated g/C Ratio	0.12	0.23	0.23	0.11	0.22		0.09	0.41		0.09	0.41	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	206	813	364	193	760		159	2066		164	2081	
v/s Ratio Prot	c0.10	0.15		0.09	c0.17		0.05	c0.26		0.07	c0.32	
v/s Ratio Perm			0.03									
v/c Ratio	0.86	0.65	0.14	0.79	0.77		0.55	0.64		0.71	0.77	
Uniform Delay, d1	56.3	45.3	39.8	56.4	47.5		56.6	30.6		57.2	32.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.06	0.45		0.78	0.62	
Incremental Delay, d2	28.1	1.9	0.2	18.8	4.9		3.9	1.5		8.7	1.9	
Delay (s)	84.4	47.2	40.0	75.3	52.4		64.2	15.1		53.5	22.1	
Level of Service	F	D	D	E	D		E	B		D	C	
Approach Delay (s)		52.6			57.0			18.2			24.2	
Approach LOS		D			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.78			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	82.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	21	84	29	10	50	43	1234	46	56	1432	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1696			1796	1583	1770	5058		1770	5048	
Flt Permitted		0.89			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1530			1158	1583	1770	5058		1770	5048	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	22	88	31	11	53	45	1299	48	59	1507	78
RTOR Reduction (vph)	0	45	0	0	0	46	0	2	0	0	3	0
Lane Group Flow (vph)	0	112	0	0	42	7	45	1345	0	59	1582	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		18.3			18.3	18.3	8.4	87.0		9.5	88.1	
Effective Green, g (s)		18.3			18.3	18.3	8.4	87.0		9.5	88.1	
Actuated g/C Ratio		0.14			0.14	0.14	0.06	0.67		0.07	0.68	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		215			163	222	114	3384		129	3420	
v/s Ratio Prot							0.03	c0.27		0.03	c0.31	
v/s Ratio Perm		c0.07			0.04	0.00						
v/c Ratio		0.52			0.26	0.03	0.39	0.40		0.46	0.46	
Uniform Delay, d1		51.8			49.8	48.2	58.4	9.7		57.8	9.8	
Progression Factor		1.00			1.00	1.00	1.22	0.39		0.62	0.66	
Incremental Delay, d2		2.3			0.8	0.1	1.9	0.3		1.7	0.3	
Delay (s)		54.1			50.6	48.3	72.8	4.1		37.8	6.8	
Level of Service		D			D	D	E	A		D	A	
Approach Delay (s)		54.1			49.3			6.3			7.9	
Approach LOS		D			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.47			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	65.7%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	779	98	133	443	239	91	898	191	411	1001	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.97		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	4951		3433	5008	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	4951		3433	5008	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	803	101	137	457	246	94	926	197	424	1032	116
RTOR Reduction (vph)	0	13	0	0	0	72	0	23	0	0	9	0
Lane Group Flow (vph)	129	891	0	137	457	174	94	1100	0	424	1139	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	13.6	31.4		13.4	31.2	50.3	13.3	44.3		19.1	50.1	
Effective Green, g (s)	13.6	31.4		13.4	31.2	50.3	13.3	44.3		19.1	50.1	
Actuated g/C Ratio	0.10	0.24		0.10	0.24	0.39	0.10	0.34		0.15	0.39	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	185	1207		182	849	612	181	1687		504	1930	
v/s Ratio Prot	0.07	c0.18		c0.08	0.13	0.04	0.05	c0.22		c0.12	0.23	
v/s Ratio Perm						0.07						
v/c Ratio	0.70	0.74		0.75	0.54	0.28	0.52	0.65		0.84	0.59	
Uniform Delay, d1	56.2	45.5		56.7	43.1	27.4	55.3	36.3		54.0	31.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.63	0.46		0.71	0.54	
Incremental Delay, d2	8.9	2.9		14.4	1.2	0.1	0.9	1.8		10.7	1.2	
Delay (s)	65.1	48.4		71.1	44.3	27.5	35.9	18.7		49.0	18.3	
Level of Service	E	D		E	D	C	D	B		D	B	
Approach Delay (s)		50.5			43.8			20.0			26.6	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	33.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	77.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	217	52	29	121	234	16	813	64	235	1038	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1809		1770	1863	1583	1770	5030		1770	5054	
Flt Permitted	0.60	1.00		0.25	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1119	1809		468	1863	1583	1770	5030		1770	5054	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	122	241	58	32	134	260	18	903	71	261	1153	49
RTOR Reduction (vph)	0	8	0	0	0	207	0	6	0	0	3	0
Lane Group Flow (vph)	122	291	0	32	134	53	18	968	0	261	1199	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	26.7	26.7		26.7	26.7	26.7	4.0	48.8		38.1	82.9	
Effective Green, g (s)	26.7	26.7		26.7	26.7	26.7	4.0	48.8		38.1	82.9	
Actuated g/C Ratio	0.21	0.21		0.21	0.21	0.21	0.03	0.38		0.29	0.64	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	371		96	382	325	54	1888		518	3222	
v/s Ratio Prot		c0.16			0.07		0.01	c0.19		c0.15	0.24	
v/s Ratio Perm	0.11			0.07		0.03						
v/c Ratio	0.53	0.78		0.33	0.35	0.16	0.33	0.51		0.50	0.37	
Uniform Delay, d1	46.1	48.9		44.1	44.2	42.5	61.7	31.4		38.1	11.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.19	0.92		0.45	0.29	
Incremental Delay, d2	2.4	10.4		2.0	0.6	0.2	3.3	0.9		0.7	0.3	
Delay (s)	48.5	59.3		46.1	44.8	42.7	77.0	29.9		17.9	3.5	
Level of Service	D	E		D	D	D	E	C		B	A	
Approach Delay (s)		56.2			43.6			30.8			6.1	
Approach LOS		E			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	445	46	55	362	257	41	413	68	279	661	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3490		1770	3319		1770	4978		1770	4908	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3490		1770	3319		1770	4978		1770	4908	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	180	478	49	59	389	276	44	444	73	300	711	216
RTOR Reduction (vph)	0	6	0	0	107	0	0	15	0	0	38	0
Lane Group Flow (vph)	180	521	0	59	558	0	44	502	0	300	889	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.8	36.3		8.0	27.5		10.7	39.5		25.1	53.9	
Effective Green, g (s)	16.8	36.3		8.0	27.5		10.7	39.5		25.1	53.9	
Actuated g/C Ratio	0.13	0.28		0.06	0.21		0.08	0.30		0.19	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	228	974		108	702		145	1512		341	2034	
v/s Ratio Prot	c0.10	0.15		0.03	c0.17		0.02	c0.10		c0.17	c0.18	
v/s Ratio Perm												
v/c Ratio	0.79	0.53		0.55	0.79		0.30	0.33		0.88	0.44	
Uniform Delay, d1	54.9	39.7		59.2	48.6		56.1	35.0		51.0	27.2	
Progression Factor	1.00	1.00		1.00	1.00		0.94	0.90		1.29	0.51	
Incremental Delay, d2	15.3	0.3		3.0	5.8		0.4	0.6		20.4	0.6	
Delay (s)	70.2	40.0		62.2	54.4		53.1	32.1		85.9	14.4	
Level of Service	E	D		E	D		D	C		F	B	
Approach Delay (s)		47.7			55.0			33.8			31.9	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Alternative 6 No Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	0	82	0	0	0	75	390	0	0	698	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5043	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5043	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	41	0	87	0	0	0	80	415	0	0	743	44
RTOR Reduction (vph)	0	0	77	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	41	0	10	0	0	0	80	415	0	0	785	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.6		14.6				10.0	104.4			89.5	
Effective Green, g (s)	14.6		14.6				10.0	104.4			89.5	
Actuated g/C Ratio	0.11		0.11				0.08	0.80			0.69	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	198		177				136	4083			3471	
v/s Ratio Prot							c0.05	0.08			c0.16	
v/s Ratio Perm	c0.02		0.01									
v/c Ratio	0.21		0.06				0.59	0.10			0.23	
Uniform Delay, d1	52.4		51.5				58.0	2.7			7.5	
Progression Factor	1.00		1.00				1.25	0.46			0.31	
Incremental Delay, d2	0.5		0.1				6.1	0.0			0.1	
Delay (s)	53.0		51.7				78.4	1.3			2.4	
Level of Service	D		D				E	A			A	
Approach Delay (s)		52.1			0.0			13.8			2.4	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	38.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	1861	24	20	824	357	5	15	31	616	54	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5076		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5076		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	93	1880	24	20	832	361	5	15	31	622	55	158
RTOR Reduction (vph)	0	0	0	0	0	178	0	0	28	0	0	0
Lane Group Flow (vph)	93	1904	0	20	832	183	5	15	3	622	55	158
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	9.8	72.9		2.8	65.9	65.9	5.4	11.6	11.6	21.0	27.2	130.0
Effective Green, g (s)	9.8	72.9		2.8	65.9	65.9	5.4	11.6	11.6	21.0	27.2	130.0
Actuated g/C Ratio	0.08	0.56		0.02	0.51	0.51	0.04	0.09	0.09	0.16	0.21	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	2.0	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	258	2846		38	1794	802	73	315	141	554	389	1583
v/s Ratio Prot	0.03	c0.38		0.01	c0.24		0.00	0.00		c0.18	0.03	
v/s Ratio Perm						0.12			0.00			c0.10
v/c Ratio	0.36	0.67		0.53	0.46	0.23	0.07	0.05	0.02	1.12	0.14	0.10
Uniform Delay, d1	57.1	20.1		62.9	20.7	17.9	59.9	54.1	54.0	54.5	41.9	0.0
Progression Factor	1.00	1.00		1.46	0.25	0.15	1.00	1.00	1.00	0.79	0.51	1.00
Incremental Delay, d2	0.3	1.3		5.8	0.8	0.6	0.1	0.0	0.0	76.4	0.1	0.1
Delay (s)	57.4	21.3		97.6	5.9	3.4	60.0	54.2	54.0	119.3	21.4	0.1
Level of Service	E	C		F	A	A	E	D	D	F	C	A
Approach Delay (s)		23.0			6.7			54.7			90.3	
Approach LOS		C			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	91	2404	3	3	997	64	14	16	8	207	1	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1770		1770	1585	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.51	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	949	1770		1381	1585	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	93	2453	3	3	1017	65	14	16	8	211	1	155
RTOR Reduction (vph)	0	0	1	0	0	25	0	6	0	0	125	0
Lane Group Flow (vph)	93	2453	2	3	1017	40	14	18	0	211	31	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	10.9	89.5	89.5	1.2	79.8	79.8	25.4	25.4		25.4	25.4	
Effective Green, g (s)	10.9	89.5	89.5	1.2	79.8	79.8	25.4	25.4		25.4	25.4	
Actuated g/C Ratio	0.08	0.69	0.69	0.01	0.61	0.61	0.20	0.20		0.20	0.20	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	148	3500	1089	16	3121	971	185	345		269	309	
v/s Ratio Prot	0.05	c0.48		c0.00	0.20			0.01			0.02	
v/s Ratio Perm			0.00			0.03	0.01			c0.15		
v/c Ratio	0.63	0.70	0.00	0.19	0.33	0.04	0.08	0.05		0.78	0.10	
Uniform Delay, d1	57.6	12.2	6.3	63.9	12.1	9.9	42.7	42.5		49.7	42.9	
Progression Factor	0.94	1.08	1.00	0.47	0.18	0.01	1.00	1.00		1.00	1.00	
Incremental Delay, d2	3.9	0.8	0.0	2.0	0.3	0.1	0.1	0.0		12.9	0.1	
Delay (s)	58.0	13.9	6.3	32.0	2.5	0.1	42.8	42.5		62.6	43.0	
Level of Service	E	B	A	C	A	A	D	D		E	D	
Approach Delay (s)		15.5			2.4			42.6			54.3	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	2488	41	39	961	64	14	23	6	177	61	108
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1727	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1727	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	136	2565	42	40	991	66	14	24	6	182	63	111
RTOR Reduction (vph)	0	0	17	0	0	33	0	6	0	0	0	96
Lane Group Flow (vph)	136	2565	25	40	991	33	14	24	0	120	125	15
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	17.8	78.0	78.0	5.4	65.6	65.6	10.2	10.2		17.6	17.6	17.6
Effective Green, g (s)	17.8	78.0	78.0	5.4	65.6	65.6	10.2	10.2		17.6	17.6	17.6
Actuated g/C Ratio	0.14	0.60	0.60	0.04	0.50	0.50	0.08	0.08		0.14	0.14	0.14
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	242	3051	949	73	2565	798	138	141		227	233	214
v/s Ratio Prot	0.08	c0.50		c0.02	0.19		0.01	c0.01		0.07	c0.07	
v/s Ratio Perm			0.02			0.02						0.01
v/c Ratio	0.56	0.84	0.03	0.55	0.39	0.04	0.10	0.17		0.53	0.54	0.07
Uniform Delay, d1	52.5	21.0	10.6	61.1	19.8	16.3	55.6	56.0		52.3	52.4	49.1
Progression Factor	0.86	0.70	18.83	1.21	0.29	0.29	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	2.3	0.0	4.2	0.4	0.1	0.1	0.2		1.0	1.2	0.1
Delay (s)	46.7	17.0	199.0	77.9	6.1	4.9	55.8	56.2		53.4	53.6	49.1
Level of Service	D	B	F	E	A	A	E	E		D	D	D
Approach Delay (s)		21.3			8.6			56.0			52.1	
Approach LOS		C			A			E			D	

Intersection Summary			
HCM 2000 Control Delay	20.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	77.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	186	2464	2	7	917	268	12	16	12	596	5	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1743		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1743		3433	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	186	2464	2	7	917	268	12	16	12	596	5	152
RTOR Reduction (vph)	0	0	1	0	0	87	0	12	0	0	0	118
Lane Group Flow (vph)	186	2464	1	7	917	181	12	16	0	596	5	34
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	17.3	75.7	75.7	0.8	59.2	87.9	4.1	4.1		28.7	28.7	28.7
Effective Green, g (s)	17.3	75.7	75.7	0.8	59.2	87.9	4.1	4.1		28.7	28.7	28.7
Actuated g/C Ratio	0.13	0.58	0.58	0.01	0.46	0.68	0.03	0.03		0.22	0.22	0.22
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	235	2961	921	10	2315	1070	55	54		757	411	349
v/s Ratio Prot	0.11	c0.48		c0.00	0.18	0.04	0.01	c0.01		c0.17	0.00	
v/s Ratio Perm			0.00			0.08						0.02
v/c Ratio	0.79	0.83	0.00	0.70	0.40	0.17	0.22	0.30		0.79	0.01	0.10
Uniform Delay, d1	54.6	22.0	11.3	64.5	23.5	7.7	61.4	61.6		47.8	39.6	40.3
Progression Factor	1.18	0.33	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.9	1.8	0.0	101.3	0.5	0.0	0.7	1.2		5.0	0.0	0.0
Delay (s)	74.2	9.1	11.4	165.8	24.0	7.7	62.1	62.7		52.8	39.6	40.4
Level of Service	E	A	B	F	C	A	E	E		D	D	D
Approach Delay (s)		13.7			21.2			62.5			50.2	
Approach LOS		B			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	22.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	88.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Scenario Report

Scenario:	ALT6NP-AM
Command:	ALT6NP-AM
Volume:	EX-AM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	2018-CUMUL-AM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	ALT6NP-AM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.763	D	xxxxx	0.816	+ 0.053
# 8 Beach Blvd & Warner Ave	C	xxxxx	0.789	D	xxxxx	0.835	+ 0.046
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.585	B	xxxxx	0.634	+ 0.050
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.580	B	xxxxx	0.617	+ 0.038
# 21 Newland St & Atlanta Ave	A	xxxxx	0.523	A	xxxxx	0.531	+ 0.007
# 22 Newland St & Hamilton Ave	A	xxxxx	0.593	A	xxxxx	0.593	+ 0.000
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.559	A	xxxxx	0.560	+ 0.000
# 26 Brookhurst St & Hamilton Ave	C	xxxxx	0.745	C	xxxxx	0.745	+ 0.000
# 30 Brookhurst Street & Talbert Av	D	xxxxx	0.845	D	xxxxx	0.862	+ 0.016
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.369	A	xxxxx	0.377	+ 0.007
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.424	A	xxxxx	0.431	+ 0.007
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.706	C	xxxxx	0.730	+ 0.023
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.550	A	xxxxx	0.562	+ 0.012
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.555	A	xxxxx	0.563	+ 0.009
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.784	C	xxxxx	0.795	+ 0.011
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.271	A	xxxxx	0.272	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.413	A	xxxxx	0.414	+ 0.000
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.265	A	xxxxx	0.265	+ 0.000
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.323	A	xxxxx	0.323	+ 0.000

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.763
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	144	1666	278	448	2316	443	194	887	149	134	431	234				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	153	1768	295	476	2458	470	206	942	158	142	458	248				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	153	1768	295	476	2458	470	206	942	158	142	458	248				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	153	1768	295	476	2458	470	206	942	158	142	458	248				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	153	1768	295	476	2458	470	206	942	158	142	458	248				
OvlAdjVol:						264			82							
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	4.00	2.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	6800	3400	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.35	0.17	0.14	0.36	0.14	0.06	0.18	0.09	0.04	0.13	0.15				
OvlAdjV/S:						0.08			0.05							
Crit Moves:	****			****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.789
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	162	1716	147	365	1926	257	206	1195	90	214	847	88				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.68	0.32	2.00	4.00	1.00	2.00	2.79	0.21	2.00	2.72	0.28				
Final Sat.:	3400	6263	537	3400	6800	1700	3400	4743	357	3400	4620	480				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.29	0.29	0.11	0.30	0.16	0.06	0.27	0.27	0.07	0.19	0.19				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.585
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	86	747	173	320	815	94	113	727	92	117	409	215				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	91	793	184	340	865	100	120	772	98	124	434	228				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	91	793	184	340	865	100	120	772	98	124	434	228				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	91	793	184	340	865	100	120	772	98	124	434	228				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	91	793	184	340	865	100	120	772	98	124	434	228				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.44	0.56	2.00	2.69	0.31	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4141	959	3400	4573	527	1700	4527	573	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.19	0.10	0.19	0.19	0.07	0.17	0.17	0.07	0.13	0.13				
Crit Moves:	****			****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.580
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	5	14	29	494	51	137	83	1702	23	19	710	242				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	5	15	31	524	54	145	88	1807	24	20	754	257				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	5	15	0	524	54	0	88	1807	24	20	754	257				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	5	15	0	524	54	0	88	1807	24	20	754	257				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	5	15	0	524	54	0	88	1807	24	20	754	257				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.96	0.04	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	5032	68	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00	0.15	0.03	0.00	0.03	0.36	0.36	0.01	0.22	0.15				
Crit Moves:	****			****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.523
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	128	316	39	151	377	71	84	516	238	29	354	150				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	136	335	41	160	400	75	89	548	253	31	376	159				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	136	335	41	160	400	75	89	548	253	31	376	159				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	136	335	41	160	400	75	89	548	253	31	376	159				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	136	335	41	160	400	75	89	548	253	31	376	159				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.78	0.22	1.00	1.68	0.32	1.00	1.37	0.63	1.00	1.40	0.60				
Final Sat.:	1700	3026	374	1700	2861	539	1700	2327	1073	1700	2388	1012				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.11	0.11	0.09	0.14	0.14	0.05	0.24	0.24	0.02	0.16	0.16				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.593
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	136	93	407	270	0	0	0	0	104	0	233				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	0	144	99	432	287	0	0	0	0	110	0	247				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	144	99	432	287	0	0	0	0	110	0	247				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	144	99	432	287	0	0	0	0	110	0	247				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	144	99	432	287	0	0	0	0	110	0	247				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.59	0.41	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1010	690	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.14	0.14	0.25	0.17	0.00	0.00	0.00	0.00	0.06	0.00	0.15				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.559
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	36	206	45		214	256	35		75	397	54		25	305	309	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	38	219	48		227	272	37		80	421	57		27	324	328	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	38	219	48		227	272	37		80	421	57		27	324	328	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	38	219	48		227	272	37		80	421	57		27	324	328	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	38	219	48		227	272	37		80	421	57		27	324	328	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.64	0.36		1.00	2.00	1.00		1.00	0.88	0.12		1.00	1.00	1.00	
Final Sat.:	1700	2790	610		1700	3400	1700		1700	1496	204		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.08	0.08		0.13	0.08	0.02		0.05	0.28	0.28		0.02	0.19	0.19	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.745
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	70	295	342		477	413	82		98	769	56		120	403	279	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	74	313	363		506	438	87		104	816	59		127	428	296	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	74	313	363		506	438	87		104	816	59		127	428	296	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	74	313	363		506	438	87		104	816	59		127	428	296	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	74	313	363		506	438	87		104	816	59		127	428	296	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.50	0.50		1.00	1.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4255	845		1700	3169	231		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.06	0.21		0.15	0.10	0.10		0.06	0.26	0.26		0.07	0.13	0.17	
Crit Moves:				****	****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.845
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	120	1043	420	650	955	356	135	1325	90	174	366	80				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	5100	1700	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.22	0.26	0.20	0.20	0.22	0.04	0.28	0.06	0.05	0.11	0.05				
Crit Moves:			****	****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.369
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	45	1415	3	15	1274	150	11	1	8	3	0	10				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	48	1502	3	16	1352	159	12	1	8	3	0	11				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	48	1502	3	16	1352	0	12	1	8	3	0	11				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	48	1502	3	16	1352	0	12	1	8	3	0	11				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	48	1502	3	16	1352	0	12	1	8	3	0	11				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.55	0.05	0.40	0.23	0.00	0.77				
Final Sat.:	1700	5089	11	1700	5100	1700	935	85	680	392	0	1308				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.30	0.30	0.01	0.27	0.00	0.01	0.01	0.01	0.00	0.00	0.01				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.424
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	25	1451	10		20	1125	98		81	1	20		11	1	36	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	25	1451	10		20	1125	98		81	1	20		11	1	36	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	25	1451	10		20	1125	98		81	1	20		11	1	36	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	25	1451	10		20	1125	98		81	1	20		11	1	36	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.76	0.24		0.99	0.01	1.00		0.22	0.02	0.76	
Final Sat.:	1700	5067	33		1700	4693	407		1678	22	1700		378	38	1284	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.29	0.29		0.01	0.24	0.24		0.05	0.05	0.01		0.01	0.03	0.03	
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.706
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	74	1170	208		141	787	151		288	953	61		156	362	152	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	74	1170	208		141	787	151		288	953	61		156	362	152	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	74	1170	208		141	787	151		288	953	61		156	362	152	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	74	1170	208		141	787	151		288	953	61		156	362	152	
OvlAdjVol:			130				7									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.88	0.12		2.00	1.41	0.59	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	3197	203		3400	2395	1005	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.23	0.12		0.08	0.15	0.09		0.08	0.30	0.30		0.05	0.15	0.15	
OvlAdjV/S:			0.08				0.00									
Crit Moves:	****				****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.550
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	83	1120	69		72	856	150		249	398	94		136	182	61	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	83	1120	69		72	856	150		249	398	94		136	182	61	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	83	1120	69		72	856	150		249	398	94		136	182	61	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	83	1120	69		72	856	150		249	398	94		136	182	61	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.83	0.17		1.00	3.00	1.00		1.00	1.62	0.38		1.00	2.00	1.00	
Final Sat.:	1700	4804	296		1700	5100	1700		1700	2748	652		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.23	0.23		0.04	0.17	0.09		0.15	0.14	0.14		0.08	0.05	0.04	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.555
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	92	890	113		10	792	150		198	435	153		108	228	45	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	98	945	120		11	841	159		210	462	162		115	242	48	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	98	945	120		11	841	159		210	462	162		115	242	48	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	98	945	120		11	841	159		210	462	162		115	242	48	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	98	945	120		11	841	159		210	462	162		115	242	48	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.66	0.34		1.00	2.52	0.48		1.00	1.48	0.52		1.00	1.67	0.33	
Final Sat.:	1700	4525	575		1700	4288	812		1700	2515	885		1700	2840	560	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.21	0.21		0.01	0.20	0.20		0.12	0.18	0.18		0.07	0.09	0.09	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.784
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	85	697	283	405	718	165	248	1836	75	211	632	163				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	85	697	283	405	718	165	248	1836	75	211	632	163				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	85	697	283	405	718	165	248	1836	75	211	632	163				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	85	697	283	405	718	165	248	1836	75	211	632	163				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.13	0.87	2.00	2.44	0.56	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	3626	1474	3400	4149	951	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.19	0.19	0.12	0.17	0.17	0.07	0.36	0.04	0.06	0.12	0.10				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.271
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	31	900	0	0	729	48	153	0	51	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	31	900	0	0	729	48	153	0	51	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	31	900	0	0	729	48	153	0	51	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	31	900	0	0	729	48	153	0	51	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.82	0.18	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4786	314	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.18	0.00	0.00	0.15	0.15	0.04	0.00	0.03	0.00	0.00	0.00				
Crit Moves:		****		****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.413
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	94	706	16	16	679	142	229	16	231	18	24	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	94	706	16	16	679	142	229	16	231	18	24	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	94	706	16	16	679	142	229	16	231	18	24	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	94	706	16	16	679	142	229	16	231	18	24	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.48	0.52	1.00	1.00	1.00	1.00	1.59	0.41				
Final Sat.:	1700	4988	113	1700	4217	883	1700	1700	1700	1700	2697	703				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.14	0.14	0.01	0.16	0.16	0.13	0.01	0.14	0.01	0.01	0.01				
Crit Moves:	****				****				****	****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.265
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	3	438	0	0	552	106	142	0	13	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	3	438	0	0	552	106	142	0	13	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	3	438	0	0	552	106	142	0	13	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	3	438	0	0	552	106	142	0	13	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.52	0.48	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4277	823	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.09	0.00	0.00	0.13	0.13	0.08	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.323
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	18	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1!	0 0
Volume Module:																
Base Vol:	54	398	2		3	516	15		7		1	207	3		0	6
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06		1.06	1.06	1.06		1.06	1.06
Initial Bse:	57	422	2		3	548	16		7		1	220	3		0	6
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	57	422	2		3	548	16		7		1	220	3		0	6
Reduct Vol:	0	0	0		0	0	0		0		0	0	0		0	0
Reduced Vol:	57	422	2		3	548	16		7		1	220	3		0	6
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
FinalVolume:	57	422	2		3	548	16		7		1	220	3		0	6
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700		1700	1700	1700		1700	1700
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
Lanes:	1.00	2.98	0.02		1.00	3.00	1.00		1.00		0.01	0.99	0.33		0.00	0.67
Final Sat.:	1700	5075	26		1700	5100	1700		1700		8	1692	567		0	1133
Capacity Analysis Module:																
Vol/Sat:	0.03	0.08	0.08		0.00	0.11	0.01		0.00		0.13	0.13	0.00		0.00	0.01
Crit Moves:	****					****					****		****			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	270	94	341	240	102	188	1891	166	130	1982	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3402		3433	3380		3433	6330		3433	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3402		3433	3380		3433	6330		3433	6323	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	262	287	100	363	255	109	200	2012	177	138	2109	205
RTOR Reduction (vph)	0	28	0	0	38	0	0	8	0	0	9	0
Lane Group Flow (vph)	262	359	0	363	326	0	200	2181	0	138	2305	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.4	22.8		18.9	26.3		12.6	68.8		11.1	67.3	
Effective Green, g (s)	15.4	22.8		18.9	26.3		12.6	68.8		11.1	67.3	
Actuated g/C Ratio	0.11	0.16		0.13	0.19		0.09	0.49		0.08	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	377	554		463	634		308	3110		272	3039	
v/s Ratio Prot	0.08	c0.11		c0.11	0.10		0.06	c0.34		0.04	c0.36	
v/s Ratio Perm												
v/c Ratio	0.69	0.65		0.78	0.51		0.65	0.70		0.51	0.76	
Uniform Delay, d1	60.0	54.8		58.6	51.1		61.6	27.6		61.8	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.03	0.88		1.00	1.00	
Incremental Delay, d2	5.5	2.6		8.5	0.7		4.1	1.2		1.5	1.8	
Delay (s)	65.5	57.4		67.0	51.8		67.6	25.6		63.3	31.5	
Level of Service	E	E		E	D		E	C		E	C	
Approach Delay (s)		60.7			59.4			29.1			33.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	336	948	0	2386	2248	993
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	339	958	0	2410	2271	1003
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	339	957	0	2410	2271	1003
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	18.9	59.4		111.3	64.8	140.0
Effective Green, g (s)	18.9	59.4		111.3	64.8	140.0
Actuated g/C Ratio	0.13	0.42		0.79	0.46	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	463	1272		5094	2965	1583
v/s Ratio Prot	0.10	c0.22		0.37	c0.35	
v/s Ratio Perm		0.13		0.01		0.63
v/c Ratio	0.73	0.75		0.47	0.77	0.63
Uniform Delay, d1	58.1	34.1		4.7	31.3	0.0
Progression Factor	1.00	1.00		0.24	0.58	1.00
Incremental Delay, d2	6.3	2.7		0.0	1.6	1.6
Delay (s)	64.4	36.8		1.2	19.7	1.6
Level of Service	E	D		A	B	A
Approach Delay (s)	44.0			1.2	14.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	463	945	351	158	444	92	440	1909	495	231	2305	748
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	477	974	362	163	458	95	454	1968	510	238	2376	771
RTOR Reduction (vph)	0	0	56	0	0	77	0	0	144	0	0	109
Lane Group Flow (vph)	477	974	306	163	458	18	454	1968	366	238	2376	662
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	28.0	42.2	56.6	13.0	27.2	27.2	14.4	51.7	51.7	12.8	49.7	77.7
Effective Green, g (s)	28.0	42.2	56.6	13.0	27.2	27.2	14.4	51.7	51.7	12.8	49.7	77.7
Actuated g/C Ratio	0.20	0.30	0.40	0.09	0.19	0.19	0.10	0.37	0.37	0.09	0.36	0.56
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	686	1532	639	318	687	307	353	1877	584	313	2274	1638
v/s Ratio Prot	c0.14	0.19	0.05	0.05	c0.13		c0.13	c0.39		0.07	c0.37	0.08
v/s Ratio Perm			0.14			0.01			0.23			0.16
v/c Ratio	0.70	0.64	0.48	0.51	0.67	0.06	1.29	1.05	0.63	0.76	1.04	0.40
Uniform Delay, d1	52.0	42.3	30.8	60.5	52.2	46.0	62.8	44.1	36.2	62.1	45.1	17.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.65	0.51	0.28	0.98	0.74	0.50
Incremental Delay, d2	2.5	0.9	0.2	0.6	2.5	0.1	145.4	33.1	4.2	6.5	28.9	0.0
Delay (s)	54.5	43.1	31.0	61.1	54.7	46.1	186.0	55.7	14.3	67.0	62.3	9.0
Level of Service	D	D	C	E	D	D	F	E	B	E	E	A
Approach Delay (s)		43.7			55.0			68.6			50.5	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	55.5	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	23	46	107	33	149	143	2343	56	266	2550	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1675		1770	1863	1583	1770	6385		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1675		1770	1863	1583	1770	6385		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	30	23	47	109	34	152	146	2391	57	271	2602	26
RTOR Reduction (vph)	0	42	0	0	0	130	0	2	0	0	0	0
Lane Group Flow (vph)	30	28	0	109	34	22	146	2446	0	271	2628	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.3		12.2	20.7	20.7	17.3	76.0		15.9	74.6	
Effective Green, g (s)	7.8	16.3		12.2	20.7	20.7	17.3	76.0		15.9	74.6	
Actuated g/C Ratio	0.06	0.12		0.09	0.15	0.15	0.12	0.54		0.11	0.53	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	195		154	275	234	218	3466		389	3409	
v/s Ratio Prot	0.02	c0.02		c0.06	c0.02		c0.08	0.38		0.08	c0.41	
v/s Ratio Perm						0.01						
v/c Ratio	0.31	0.15		0.71	0.12	0.10	0.67	0.71		0.70	0.77	
Uniform Delay, d1	63.5	55.6		62.2	51.8	51.6	58.6	23.7		59.7	25.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.30	0.17		1.16	0.26	
Incremental Delay, d2	1.8	0.3		13.8	0.2	0.2	5.0	0.8		1.8	0.6	
Delay (s)	65.3	55.9		76.0	52.0	51.7	81.5	4.7		71.4	7.2	
Level of Service	E	E		E	D	D	F	A		E	A	
Approach Delay (s)		58.7			60.7			9.0			13.2	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	70.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	3	28	280	8	212	53	2351	117	353	2372	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.95	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1610		1681	1563	1504	1770	6362		3433	6397	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1610		1681	1563	1504	1770	6362		3433	6397	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	40	3	29	292	8	221	55	2449	122	368	2471	28
RTOR Reduction (vph)	0	26	0	0	12	138	0	4	0	0	1	0
Lane Group Flow (vph)	40	6	0	181	164	26	55	2567	0	368	2498	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.5	13.5		22.1	22.1	22.1	8.3	71.0		15.5	78.2	
Effective Green, g (s)	13.5	13.5		22.1	22.1	22.1	8.3	71.0		15.5	78.2	
Actuated g/C Ratio	0.10	0.10		0.16	0.16	0.16	0.06	0.51		0.11	0.56	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	170	155		265	246	237	104	3226		380	3573	
v/s Ratio Prot	c0.02	0.00		c0.11	0.11		0.03	c0.40		c0.11	0.39	
v/s Ratio Perm						0.02						
v/c Ratio	0.24	0.04		0.68	0.67	0.11	0.53	0.80		0.97	0.70	
Uniform Delay, d1	58.5	57.4		55.6	55.5	50.5	64.0	28.5		62.0	22.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.37	0.35		0.52	0.25	
Incremental Delay, d2	0.7	0.1		7.1	6.7	0.2	3.3	1.5		30.1	0.8	
Delay (s)	59.2	57.5		62.7	62.2	50.7	91.2	11.4		62.4	6.5	
Level of Service	E	E		E	E	D	F	B		E	A	
Approach Delay (s)		58.4			58.8			13.1			13.7	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	74.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	238	178	160	40	169	114	149	2183	58	141	2386	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.94		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3288		1770	3326		1770	6383		1770	6330	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3288		1770	3326		1770	6383		1770	6330	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	240	180	162	40	171	115	151	2205	59	142	2410	212
RTOR Reduction (vph)	0	122	0	0	98	0	0	2	0	0	9	0
Lane Group Flow (vph)	240	220	0	40	188	0	151	2262	0	142	2613	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	26.3	34.9		8.8	17.4		18.1	65.1		12.4	59.4	
Effective Green, g (s)	26.3	34.9		8.8	17.4		18.1	65.1		12.4	59.4	
Actuated g/C Ratio	0.19	0.25		0.06	0.12		0.13	0.46		0.09	0.42	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	332	819		111	413		228	2968		156	2685	
v/s Ratio Prot	c0.14	0.07		0.02	c0.06		0.09	c0.35		0.08	c0.41	
v/s Ratio Perm												
v/c Ratio	0.72	0.27		0.36	0.46		0.66	0.76		0.91	0.97	
Uniform Delay, d1	53.4	42.3		62.9	56.9		58.0	31.0		63.2	39.5	
Progression Factor	1.00	1.00		1.00	1.00		0.59	0.94		0.70	0.56	
Incremental Delay, d2	7.6	0.2		2.0	0.8		5.9	1.6		37.6	9.8	
Delay (s)	61.0	42.5		64.9	57.7		40.0	30.9		81.6	32.1	
Level of Service	E	D		E	E		D	C		F	C	
Approach Delay (s)		50.1			58.6			31.5			34.6	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	36.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	84.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	7	21	83	12	28	124	2253	55	114	2295	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1661	1478		1665	1478	1770	6385		1770	6387	
Flt Permitted		0.61	1.00		0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1059	1478		1073	1478	1770	6385		1770	6387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	92	7	22	86	12	29	129	2347	57	119	2391	54
RTOR Reduction (vph)	0	0	19	0	0	25	0	1	0	0	2	0
Lane Group Flow (vph)	0	99	3	0	98	4	129	2403	0	119	2443	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		20.3	20.3		20.3	20.3	19.4	90.3		14.1	85.0	
Effective Green, g (s)		20.3	20.3		20.3	20.3	19.4	90.3		14.1	85.0	
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.14	0.64		0.10	0.61	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		153	214		155	214	245	4118		178	3877	
v/s Ratio Prot							0.07	c0.38		0.07	c0.38	
v/s Ratio Perm		c0.09	0.00		0.09	0.00						
v/c Ratio		0.65	0.01		0.63	0.02	0.53	0.58		0.67	0.63	
Uniform Delay, d1		56.5	51.3		56.3	51.3	56.0	14.1		60.7	17.5	
Progression Factor		1.00	1.00		1.00	1.00	0.67	0.19		0.99	0.49	
Incremental Delay, d2		9.1	0.0		8.1	0.0	1.2	0.4		3.8	0.3	
Delay (s)		65.5	51.3		64.5	51.4	38.9	3.0		63.8	8.9	
Level of Service		E	D		E	D	D	A		E	A	
Approach Delay (s)		62.9			61.5			4.9			11.5	
Approach LOS		E			E			A			B	

Intersection Summary				
HCM 2000 Control Delay	10.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	67.1%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

8: Beach Blvd & Warner Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	368	843	169	258	942	145	287	1881	192	165	1831	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4958		3433	4983		3433	6319		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4958		3433	4983		3433	6319		3433	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	376	860	172	263	961	148	293	1919	196	168	1868	286
RTOR Reduction (vph)	0	22	0	0	15	0	0	11	0	0	0	131
Lane Group Flow (vph)	376	1010	0	263	1094	0	293	2104	0	168	1868	155
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.7	39.2		13.9	35.4		14.8	55.9		12.0	53.1	53.1
Effective Green, g (s)	17.7	39.2		13.9	35.4		14.8	55.9		12.0	53.1	53.1
Actuated g/C Ratio	0.13	0.28		0.10	0.25		0.11	0.40		0.09	0.38	0.38
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	434	1388		340	1259		362	2523		294	2430	600
v/s Ratio Prot	c0.11	0.20		0.08	c0.22		0.09	c0.33		0.05	c0.29	
v/s Ratio Perm												0.10
v/c Ratio	0.87	0.73		0.77	0.87		0.81	0.83		0.57	0.77	0.26
Uniform Delay, d1	60.0	45.6		61.5	50.1		61.2	37.9		61.5	38.1	29.9
Progression Factor	1.00	1.00		1.00	1.00		0.97	0.49		0.67	0.50	0.61
Incremental Delay, d2	15.9	1.9		9.6	6.6		8.2	2.3		1.3	1.9	0.8
Delay (s)	75.9	47.5		71.1	56.7		67.5	20.8		42.6	21.1	18.9
Level of Service	E	D		E	E		E	C		D	C	B
Approach Delay (s)		55.1			59.5			26.5			22.4	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0	
Intersection Capacity Utilization	89.4%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	380	178	100	435	117	152	1816	81	182	2015	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3370		1770	3427		1770	6367		1770	6327	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3370		1770	3427		1770	6367		1770	6327	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	188	396	185	104	453	122	158	1892	84	190	2099	192
RTOR Reduction (vph)	0	41	0	0	19	0	0	4	0	0	9	0
Lane Group Flow (vph)	188	540	0	104	556	0	158	1972	0	190	2282	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.6	34.9		13.7	29.0		13.7	52.9		17.8	57.0	
Effective Green, g (s)	19.6	34.9		13.7	29.0		13.7	52.9		17.8	57.0	
Actuated g/C Ratio	0.14	0.25		0.10	0.21		0.10	0.38		0.13	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	247	840		173	709		173	2405		225	2575	
v/s Ratio Prot	c0.11	0.16		0.06	c0.16		c0.09	0.31		0.11	c0.36	
v/s Ratio Perm												
v/c Ratio	0.76	0.64		0.60	0.78		0.91	0.82		0.84	0.89	
Uniform Delay, d1	57.9	47.0		60.5	52.5		62.6	39.3		59.7	38.5	
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.85		0.92	0.51	
Incremental Delay, d2	12.9	1.7		5.8	5.7		39.9	2.8		18.1	3.6	
Delay (s)	70.9	48.7		66.3	58.2		93.0	36.3		73.1	23.4	
Level of Service	E	D		E	E		F	D		E	C	
Approach Delay (s)		54.1			59.5			40.5			27.2	
Approach LOS		D			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	84.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	3	14	113	3	130	13	1991	59	72	2293	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.93		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1715			1691		1770	6380		1770	6400	
Flt Permitted		0.79			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1386			1449		1770	6380		1770	6400	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	18	3	15	118	3	135	14	2074	61	75	2389	20
RTOR Reduction (vph)	0	12	0	0	34	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	24	0	0	222	0	14	2133	0	75	2408	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		27.4			27.4		4.0	86.7		10.0	92.7	
Effective Green, g (s)		27.4			27.4		4.0	86.7		10.0	92.7	
Actuated g/C Ratio		0.20			0.20		0.03	0.62		0.07	0.66	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		271			283		50	3951		126	4237	
v/s Ratio Prot							0.01	0.33		c0.04	c0.38	
v/s Ratio Perm		0.02			c0.15							
v/c Ratio		0.09			0.79		0.28	0.54		0.60	0.57	
Uniform Delay, d1		46.1			53.5		66.6	15.2		63.0	12.8	
Progression Factor		1.00			1.00		1.16	0.13		1.18	0.12	
Incremental Delay, d2		0.1			13.3		1.0	0.2		4.1	0.3	
Delay (s)		46.2			66.8		78.1	2.2		78.2	1.8	
Level of Service		D			E		E	A		E	A	
Approach Delay (s)		46.2			66.8			2.7			4.2	
Approach LOS		D			E			A			A	

Intersection Summary				
HCM 2000 Control Delay	7.1	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.63			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	72.6%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

11: Beach Blvd & Talbert Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	393	183	203	384	240	247	1643	193	295	2032	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3370		1770	3335		1770	6307		1770	6331	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3370		1770	3335		1770	6307		1770	6331	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	167	418	195	216	409	255	263	1748	205	314	2162	189
RTOR Reduction (vph)	0	43	0	0	70	0	0	14	0	0	10	0
Lane Group Flow (vph)	167	570	0	216	594	0	263	1939	0	314	2341	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.4	29.7		22.8	38.1		19.2	43.5		23.3	47.6	
Effective Green, g (s)	14.4	29.7		22.8	38.1		19.2	43.5		23.3	47.6	
Actuated g/C Ratio	0.10	0.21		0.16	0.27		0.14	0.31		0.17	0.34	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	182	714		288	907		242	1959		294	2152	
v/s Ratio Prot	0.09	c0.17		c0.12	0.18		0.15	c0.31		0.18	c0.37	
v/s Ratio Perm												
v/c Ratio	0.92	0.80		0.75	0.66		1.09	0.99		1.07	1.09	
Uniform Delay, d1	62.2	52.3		55.9	45.1		60.4	48.0		58.4	46.2	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.66		0.69	0.62	
Incremental Delay, d2	42.8	6.4		9.3	1.8		78.1	16.3		68.1	47.1	
Delay (s)	105.0	58.7		65.2	46.9		125.8	48.2		108.4	75.8	
Level of Service	F	E		E	D		F	D		F	E	
Approach Delay (s)		68.6			51.4			57.4			79.6	
Approach LOS		E			D			E			E	

Intersection Summary				
HCM 2000 Control Delay	67.0	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.95			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	91.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

12: Beach Blvd & Main St/Ellis Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	435	355	132	132	365	182	165	1447	157	291	1552	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	444	362	135	135	372	186	168	1477	160	297	1584	538
RTOR Reduction (vph)	0	0	108	0	0	162	0	11	0	0	0	19
Lane Group Flow (vph)	444	362	27	135	372	24	168	1626	0	297	1584	519
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	28.1	28.1	28.1	17.6	17.6	17.6	10.5	56.6		15.0	61.1	95.2
Effective Green, g (s)	28.1	28.1	28.1	17.6	17.6	17.6	10.5	56.6		15.0	61.1	95.2
Actuated g/C Ratio	0.20	0.20	0.20	0.13	0.13	0.13	0.08	0.40		0.11	0.44	0.68
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	689	710	317	222	444	199	257	2552		367	2219	1076
v/s Ratio Prot	c0.13	0.10		0.08	c0.11		0.05	0.26		c0.09	c0.31	0.33
v/s Ratio Perm			0.02			0.02						
v/c Ratio	0.64	0.51	0.09	0.61	0.84	0.12	0.65	0.64		0.81	0.71	0.48
Uniform Delay, d1	51.4	49.8	45.5	57.9	59.8	54.3	63.0	33.5		61.1	32.3	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.37	0.60		1.45	0.35	0.52
Incremental Delay, d2	1.7	0.3	0.1	3.2	12.4	0.1	2.9	0.8		1.2	0.2	0.0
Delay (s)	53.0	50.1	45.6	61.1	72.2	54.4	89.3	20.7		89.5	11.4	5.5
Level of Service	D	D	D	E	E	D	F	C		F	B	A
Approach Delay (s)		50.8			65.3			27.1			19.7	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	79.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	202	401	134	141	339	155	184	1322	109	243	1442	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3373		1770	5027		1770	4981	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3373		1770	5027		1770	4981	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	206	409	137	144	346	158	188	1349	111	248	1471	234
RTOR Reduction (vph)	0	0	105	0	42	0	0	7	0	0	14	0
Lane Group Flow (vph)	206	409	32	144	462	0	188	1453	0	248	1691	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	20.3	33.2	33.2	13.7	26.6		15.9	48.9		23.0	56.0	
Effective Green, g (s)	20.3	33.2	33.2	13.7	26.6		15.9	48.9		23.0	56.0	
Actuated g/C Ratio	0.15	0.24	0.24	0.10	0.19		0.11	0.35		0.16	0.40	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	256	839	375	173	640		201	1755		290	1992	
v/s Ratio Prot	c0.12	0.12		c0.08	c0.14		c0.11	c0.29		0.14	c0.34	
v/s Ratio Perm			0.02									
v/c Ratio	0.80	0.49	0.09	0.83	0.72		0.94	0.83		0.86	0.85	
Uniform Delay, d1	57.9	46.1	41.6	62.0	53.2		61.5	41.7		56.9	38.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.59	0.43		0.52	0.70	
Incremental Delay, d2	15.7	0.6	0.1	26.5	4.3		39.3	3.8		16.4	3.7	
Delay (s)	73.7	46.7	41.7	88.5	57.5		75.6	21.8		45.9	30.3	
Level of Service	E	D	D	F	E		E	C		D	C	
Approach Delay (s)		53.2			64.4			27.9			32.3	
Approach LOS		D			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	38.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	86.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	294	173	121	331	106	175	1280	132	115	1429	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3411		1770	5014		1770	5024	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3411		1770	5014		1770	5024	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	132	306	180	126	345	110	182	1333	138	120	1489	131
RTOR Reduction (vph)	0	0	146	0	25	0	0	7	0	0	6	0
Lane Group Flow (vph)	132	306	34	126	430	0	182	1464	0	120	1614	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.0	26.5	26.5	13.3	24.8		18.5	66.5		13.3	61.3	
Effective Green, g (s)	15.0	26.5	26.5	13.3	24.8		18.5	66.5		13.3	61.3	
Actuated g/C Ratio	0.11	0.19	0.19	0.10	0.18		0.13	0.48		0.10	0.44	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	189	669	299	168	604		233	2381		168	2199	
v/s Ratio Prot	c0.07	0.09		0.07	c0.13		c0.10	0.29		0.07	c0.32	
v/s Ratio Perm			0.02									
v/c Ratio	0.70	0.46	0.11	0.75	0.71		0.78	0.61		0.71	0.73	
Uniform Delay, d1	60.3	50.4	47.0	61.7	54.2		58.8	27.3		61.5	32.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.88		0.61	0.47	
Incremental Delay, d2	10.7	0.5	0.2	17.0	4.0		14.6	1.1		8.1	1.3	
Delay (s)	71.0	50.9	47.2	78.8	58.2		49.9	25.2		45.7	16.8	
Level of Service	E	D	D	E	E		D	C		D	B	
Approach Delay (s)		54.1			62.7			27.9			18.8	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	32.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.73			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	79.1%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	19	37	162	29	152	70	1275	84	124	1313	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.94			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1724			1787	1583	1770	5038		1770	5055	
Flt Permitted		0.74			0.67	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1296			1250	1583	1770	5038		1770	5055	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	19	38	165	30	155	71	1301	86	127	1340	55
RTOR Reduction (vph)	0	23	0	0	0	125	0	4	0	0	2	0
Lane Group Flow (vph)	0	65	0	0	195	30	71	1383	0	127	1393	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		26.9			26.9	26.9	11.8	82.5		15.4	86.1	
Effective Green, g (s)		26.9			26.9	26.9	11.8	82.5		15.4	86.1	
Actuated g/C Ratio		0.19			0.19	0.19	0.08	0.59		0.11	0.61	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		249			240	304	149	2968		194	3108	
v/s Ratio Prot							0.04	c0.27		c0.07	0.28	
v/s Ratio Perm		0.05			c0.16	0.02						
v/c Ratio		0.26			0.81	0.10	0.48	0.47		0.65	0.45	
Uniform Delay, d1		48.1			54.1	46.6	61.2	16.3		59.7	14.3	
Progression Factor		1.00			1.00	1.00	0.85	0.65		0.76	0.76	
Incremental Delay, d2		0.6			18.5	0.1	2.0	0.4		5.5	0.3	
Delay (s)		48.6			72.7	46.7	54.0	11.1		51.1	11.2	
Level of Service		D			E	D	D	B		D	B	
Approach Delay (s)		48.6			61.2			13.2			14.5	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	64.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	415	67	185	447	287	90	913	108	281	1061	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4979		1770	3539	1583	1770	5004		3433	4992	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4979		1770	3539	1583	1770	5004		3433	4992	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	437	71	195	471	302	95	961	114	296	1117	156
RTOR Reduction (vph)	0	18	0	0	0	64	0	9	0	0	11	0
Lane Group Flow (vph)	206	490	0	195	471	238	95	1066	0	296	1262	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	19.7	27.7		18.9	26.9	42.2	11.6	56.3		15.3	60.0	
Effective Green, g (s)	19.7	27.7		18.9	26.9	42.2	11.6	56.3		15.3	60.0	
Actuated g/C Ratio	0.14	0.20		0.13	0.19	0.30	0.08	0.40		0.11	0.43	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	249	985		238	679	477	146	2012		375	2139	
v/s Ratio Prot	c0.12	0.10		0.11	c0.13	0.05	0.05	0.21		c0.09	c0.25	
v/s Ratio Perm						0.10						
v/c Ratio	0.83	0.50		0.82	0.69	0.50	0.65	0.53		0.79	0.59	
Uniform Delay, d1	58.5	50.0		58.9	52.7	40.2	62.2	31.8		60.8	30.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.79	0.92		1.49	0.26	
Incremental Delay, d2	18.8	0.8		18.4	3.9	0.3	7.4	1.0		9.0	1.1	
Delay (s)	77.3	50.8		77.3	56.6	40.5	56.6	30.1		99.3	9.2	
Level of Service	E	D		E	E	D	E	C		F	A	
Approach Delay (s)		58.5			55.7			32.2			26.2	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	73.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	127	30	27	114	177	27	894	49	228	1012	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	5046		1770	5049	
Flt Permitted	0.58	1.00		0.44	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1074	1810		817	1863	1583	1770	5046		1770	5049	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	79	132	31	28	119	184	28	931	51	238	1054	53
RTOR Reduction (vph)	0	7	0	0	0	158	0	3	0	0	2	0
Lane Group Flow (vph)	79	156	0	28	119	26	28	979	0	238	1105	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	19.7	19.7		19.7	19.7	19.7	7.4	79.7		24.2	96.5	
Effective Green, g (s)	19.7	19.7		19.7	19.7	19.7	7.4	79.7		24.2	96.5	
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.14	0.05	0.57		0.17	0.69	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	254		114	262	222	93	2872		305	3480	
v/s Ratio Prot		c0.09			0.06		0.02	c0.19		c0.13	0.22	
v/s Ratio Perm	0.07			0.03		0.02						
v/c Ratio	0.52	0.61		0.25	0.45	0.12	0.30	0.34		0.78	0.32	
Uniform Delay, d1	55.8	56.6		53.5	55.2	52.5	63.8	16.1		55.4	8.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.77	0.50		0.76	0.20	
Incremental Delay, d2	3.2	4.4		1.1	1.3	0.2	1.7	0.3		10.1	0.2	
Delay (s)	59.0	60.9		54.7	56.5	52.8	51.0	8.3		52.3	1.9	
Level of Service	E	E		D	E	D	D	A		D	A	
Approach Delay (s)		60.3			54.3			9.5			10.8	
Approach LOS		E			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	66.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	273	41	48	284	223	59	562	68	232	606	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.93		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3469		1770	3306		1770	5003		1770	4925	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3469		1770	3306		1770	5003		1770	4925	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	156	290	44	51	302	237	63	598	72	247	645	172
RTOR Reduction (vph)	0	10	0	0	112	0	0	9	0	0	27	0
Lane Group Flow (vph)	156	324	0	51	427	0	63	661	0	247	790	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.7	33.0		8.1	24.4		8.3	53.4		24.4	69.5	
Effective Green, g (s)	16.7	33.0		8.1	24.4		8.3	53.4		24.4	69.5	
Actuated g/C Ratio	0.12	0.24		0.06	0.17		0.06	0.38		0.17	0.50	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	211	817		102	576		104	1908		308	2444	
v/s Ratio Prot	c0.09	0.09		0.03	c0.13		c0.04	c0.13		c0.14	0.16	
v/s Ratio Perm												
v/c Ratio	0.74	0.40		0.50	0.74		0.61	0.35		0.80	0.32	
Uniform Delay, d1	59.5	45.1		64.0	54.8		64.3	30.9		55.5	21.1	
Progression Factor	1.00	1.00		1.00	1.00		1.01	1.07		0.68	0.36	
Incremental Delay, d2	11.1	0.1		1.4	4.5		6.6	0.5		12.8	0.3	
Delay (s)	70.6	45.2		65.4	59.3		71.5	33.5		50.3	8.0	
Level of Service	E	D		E	E		E	C		D	A	
Approach Delay (s)		53.3			59.8			36.7			17.8	
Approach LOS		D			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	37.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	0	71	0	0	0	71	573	0	0	667	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5042	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5042	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	73	0	76	0	0	0	76	610	0	0	710	43
RTOR Reduction (vph)	0	0	68	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	73	0	8	0	0	0	76	610	0	0	751	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.6		14.6				10.1	114.4			99.4	
Effective Green, g (s)	14.6		14.6				10.1	114.4			99.4	
Actuated g/C Ratio	0.10		0.10				0.07	0.82			0.71	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	184		165				127	4155			3579	
v/s Ratio Prot							c0.04	0.12			c0.15	
v/s Ratio Perm	c0.04		0.01									
v/c Ratio	0.40		0.05				0.60	0.15			0.21	
Uniform Delay, d1	58.6		56.4				63.0	2.7			6.9	
Progression Factor	1.00		1.00				1.04	0.49			0.41	
Incremental Delay, d2	1.4		0.1				6.7	0.1			0.1	
Delay (s)	60.0		56.6				72.5	1.4			3.0	
Level of Service	E		E				E	A			A	
Approach Delay (s)		58.2			0.0			9.3			3.0	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.26		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	38.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Alternative 6 No Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	188	888	35	30	1005	378	23	49	31	392	67	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	965	38	33	1092	411	25	53	34	426	73	292
RTOR Reduction (vph)	0	2	0	0	0	151	0	0	31	0	0	0
Lane Group Flow (vph)	204	1001	0	33	1092	260	25	53	3	426	73	292
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.3	81.5		4.4	72.6	72.6	4.0	11.6	11.6	20.8	28.4	140.0
Effective Green, g (s)	13.3	81.5		4.4	72.6	72.6	4.0	11.6	11.6	20.8	28.4	140.0
Actuated g/C Ratio	0.10	0.58		0.03	0.52	0.52	0.03	0.08	0.08	0.15	0.20	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	326	2943		55	1835	820	50	293	131	510	377	1583
v/s Ratio Prot	c0.06	0.20		0.02	c0.31		c0.01	0.01		c0.12	0.04	
v/s Ratio Perm						0.16			0.00			c0.18
v/c Ratio	0.63	0.34		0.60	0.60	0.32	0.50	0.18	0.02	0.84	0.19	0.18
Uniform Delay, d1	61.0	15.2		66.9	23.5	19.4	67.0	59.8	59.0	57.9	46.3	0.0
Progression Factor	1.00	1.00		1.42	0.41	0.17	1.00	1.00	1.00	0.71	0.60	1.00
Incremental Delay, d2	2.7	0.3		10.8	1.4	1.0	2.8	0.1	0.0	10.7	0.1	0.3
Delay (s)	63.6	15.6		105.8	11.1	4.4	69.9	59.9	59.0	51.7	27.7	0.3
Level of Service	E	B		F	B	A	E	E	E	D	C	A
Approach Delay (s)		23.7			11.3			61.8			30.5	
Approach LOS		C			B			E			C	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	64.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	82	1213	11	7	1188	76	19	5	11	69	6	149
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1666		1770	1594	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.34	1.00		0.75	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	633	1666		1390	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	1277	12	7	1251	80	20	5	12	73	6	157
RTOR Reduction (vph)	0	0	3	0	0	24	0	11	0	0	138	0
Lane Group Flow (vph)	86	1277	9	7	1251	56	20	6	0	73	25	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	10.9	106.1	106.1	3.2	98.4	98.4	16.8	16.8		16.8	16.8	
Effective Green, g (s)	10.9	106.1	106.1	3.2	98.4	98.4	16.8	16.8		16.8	16.8	
Actuated g/C Ratio	0.08	0.76	0.76	0.02	0.70	0.70	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	137	3853	1199	40	3574	1112	75	199		166	191	
v/s Ratio Prot	c0.05	0.25		0.00	c0.25			0.00			0.02	
v/s Ratio Perm			0.01			0.04	0.03			c0.05		
v/c Ratio	0.63	0.33	0.01	0.17	0.35	0.05	0.27	0.03		0.44	0.13	
Uniform Delay, d1	62.6	5.5	4.1	67.1	8.2	6.4	56.0	54.4		57.2	55.1	
Progression Factor	1.03	1.00	1.00	0.64	0.37	0.22	1.00	1.00		1.00	1.00	
Incremental Delay, d2	5.7	0.2	0.0	0.7	0.2	0.1	0.7	0.0		0.7	0.1	
Delay (s)	70.1	5.7	4.1	43.5	3.3	1.5	56.7	54.4		57.9	55.2	
Level of Service	E	A	A	D	A	A	E	D		E	E	
Approach Delay (s)		9.7			3.4			55.7			56.0	
Approach LOS		A			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.39			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	55.8%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	1136	33	58	1182	98	17	19	16	94	44	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1735		1681	1737	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1735		1681	1737	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	99	1159	34	59	1206	100	17	19	16	96	45	67
RTOR Reduction (vph)	0	0	13	0	0	58	0	14	0	0	0	60
Lane Group Flow (vph)	99	1159	21	59	1206	43	17	21	0	69	72	7
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	33.2	85.3	85.3	7.4	59.5	59.5	13.6	13.6		14.9	14.9	14.9
Effective Green, g (s)	33.2	85.3	85.3	7.4	59.5	59.5	13.6	13.6		14.9	14.9	14.9
Actuated g/C Ratio	0.24	0.61	0.61	0.05	0.42	0.42	0.10	0.10		0.11	0.11	0.11
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	419	3098	964	93	2161	672	171	168		178	184	168
v/s Ratio Prot	0.06	c0.23		0.03	c0.24		0.01	c0.01		0.04	c0.04	
v/s Ratio Perm			0.01			0.03						0.00
v/c Ratio	0.24	0.37	0.02	0.63	0.56	0.06	0.10	0.12		0.39	0.39	0.04
Uniform Delay, d1	43.2	13.8	10.8	65.0	30.3	23.8	57.6	57.7		58.3	58.3	56.1
Progression Factor	0.85	0.57	1.00	0.67	0.89	1.68	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.3	0.0	9.3	0.4	0.1	0.1	0.1		0.5	0.5	0.0
Delay (s)	36.8	8.2	10.9	53.0	27.4	40.0	57.7	57.9		58.8	58.8	56.2
Level of Service	D	A	B	D	C	D	E	E		E	E	E
Approach Delay (s)		10.4			29.4			57.8			58.0	
Approach LOS		B			C			E			E	

Intersection Summary				
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.44			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	54.2%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	1139	3	28	1184	385	25	23	18	317	11	96
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	111	1186	3	29	1233	401	26	24	19	330	11	100
RTOR Reduction (vph)	0	0	1	0	0	113	0	18	0	0	0	85
Lane Group Flow (vph)	111	1186	2	29	1233	288	26	25	0	330	11	15
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	12.8	82.1	82.1	10.2	79.5	100.6	5.9	5.9		21.1	21.1	21.1
Effective Green, g (s)	12.8	82.1	82.1	10.2	79.5	100.6	5.9	5.9		21.1	21.1	21.1
Actuated g/C Ratio	0.09	0.59	0.59	0.07	0.57	0.72	0.04	0.04		0.15	0.15	0.15
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	161	2981	928	128	2887	1137	74	73		517	280	238
v/s Ratio Prot	c0.06	0.23		0.02	c0.24	0.04	c0.01	0.01		c0.10	0.01	
v/s Ratio Perm			0.00			0.14						0.01
v/c Ratio	0.69	0.40	0.00	0.23	0.43	0.25	0.35	0.34		0.64	0.04	0.06
Uniform Delay, d1	61.7	15.6	12.0	61.2	17.3	6.8	65.2	65.2		55.9	50.8	51.0
Progression Factor	1.49	0.31	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	9.0	0.4	0.0	0.3	0.5	0.0	1.1	1.0		1.9	0.0	0.0
Delay (s)	100.7	5.2	12.0	61.5	17.7	6.8	66.2	66.2		57.8	50.8	51.0
Level of Service	F	A	B	E	B	A	E	E		E	D	D
Approach Delay (s)		13.4			15.9			66.2			56.1	
Approach LOS		B			B			E			E	

Intersection Summary			
HCM 2000 Control Delay	21.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	58.0%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			


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ALT6NP-MD                    Thu Aug 21, 2014 09:02:06                    Page 1-1
--------------------------------------------------------------------------------
                 ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
                   ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
                                MD PEAK HOUR
--------------------------------------------------------------------------------
                                Scenario Report
Scenario:              ALT6NP-MD

Command:               ALT6NP-MD
Volume:                EX-MD
Geometry:              EX
Impact Fee:            Default Impact Fee
Trip Generation:       2018-CUMUL-MD
Trip Distribution:     DIST-1
Paths:                 Default Path
Routes:                Default Route
Configuration:         ALT6NP-MD

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.737	C	xxxxx	0.785	+ 0.048
# 8 Beach Blvd & Warner Ave	B	xxxxx	0.695	C	xxxxx	0.725	+ 0.030
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.594	B	xxxxx	0.624	+ 0.030
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.498	A	xxxxx	0.530	+ 0.033
# 21 Newland St & Atlanta Ave	A	xxxxx	0.451	A	xxxxx	0.456	+ 0.005
# 22 Newland St & Hamilton Ave	A	xxxxx	0.476	A	xxxxx	0.476	+ 0.000
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.419	A	xxxxx	0.420	+ 0.001
# 26 Brookhurst St & Hamilton Ave	A	xxxxx	0.426	A	xxxxx	0.426	+ 0.000
# 30 Brookhurst Street & Talbert Av	B	xxxxx	0.661	B	xxxxx	0.673	+ 0.011
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.533	A	xxxxx	0.536	+ 0.003
# 32 Brookhurst Street & Quail Aven	B	xxxxx	0.640	B	xxxxx	0.643	+ 0.003
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.611	B	xxxxx	0.624	+ 0.013
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.628	B	xxxxx	0.634	+ 0.006
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.564	A	xxxxx	0.575	+ 0.010
# 36 Brookhurst Street & Adams Aven	A	xxxxx	0.556	A	xxxxx	0.562	+ 0.006
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.323	A	xxxxx	0.323	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.367	A	xxxxx	0.372	+ 0.005
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.199	A	xxxxx	0.199	+ 0.000
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.232	A	xxxxx	0.233	+ 0.000

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.737
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0 3	0	1	2	0 4	0	2	2	0 3	0	1	2	0 2	0	1
Volume Module:																
Base Vol:	385	1729	465		218	2101	653		393	826	301		148	371	87	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	409	1835	494		231	2230	693		417	877	320		157	394	92	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	409	1835	494		231	2230	693		417	877	320		157	394	92	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	409	1835	494		231	2230	693		417	877	320		157	394	92	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	409	1835	494		231	2230	693		417	877	320		157	394	92	
OvlAdjVol:							276				115					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.36	0.29		0.07	0.33	0.20		0.12	0.17	0.19		0.05	0.12	0.05	
OvlAdjV/S:							0.08				0.07					
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	266	1785	190	163	1734	272	360	806	148	256	905	143				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	266	1785	190	163	1734	272	360	806	148	256	905	143				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	266	1785	190	163	1734	272	360	806	148	256	905	143				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	266	1785	190	163	1734	272	360	806	148	256	905	143				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.62	0.38	2.00	4.00	1.00	2.00	2.54	0.46	2.00	2.59	0.41				
Final Sat.:	3400	6146	654	3400	6800	1700	3400	4311	789	3400	4403	697				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.29	0.29	0.05	0.26	0.16	0.11	0.19	0.19	0.08	0.21	0.21				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	90	833	103	251	981	142	190	409	67	180	441	270				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	90	833	103	251	981	142	190	409	67	180	441	270				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	90	833	103	251	981	142	190	409	67	180	441	270				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	90	833	103	251	981	142	190	409	67	180	441	270				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.67	0.33	2.00	2.62	0.38	1.00	2.58	0.42	1.00	2.00	1.00				
Final Sat.:	1700	4539	561	3400	4454	646	1700	4383	717	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.18	0.07	0.22	0.22	0.11	0.09	0.09	0.11	0.13	0.16				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.498
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	22	46	29		309	63	249		172	798	33		28	907	296	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	23	49	31		328	67	264		183	847	35		30	963	314	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	23	49	0		328	67	0		183	847	35		30	963	314	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	23	49	0		328	67	0		183	847	35		30	963	314	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	23	49	0		328	67	0		183	847	35		30	963	314	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.88	0.12		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	4897	203		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01	0.00		0.10	0.04	0.00		0.05	0.17	0.17		0.02	0.28	0.18	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	151	255	38		88	231	95		64	372	142		31	389	138	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	160	271	40		93	245	101		68	395	151		33	413	146	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	160	271	40		93	245	101		68	395	151		33	413	146	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	160	271	40		93	245	101		68	395	151		33	413	146	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	160	271	40		93	245	101		68	395	151		33	413	146	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.74	0.26		1.00	1.42	0.58		1.00	1.45	0.55		1.00	1.48	0.52	
Final Sat.:	1700	2959	441		1700	2409	991		1700	2461	939		1700	2510	890	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.09	0.09		0.05	0.10	0.10		0.04	0.16	0.16		0.02	0.16	0.16	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.476
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	158	62		195	170	0		0	0	0		116	0	267	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	0	168	66		207	180	0		0	0	0		123	0	283	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	168	66		207	180	0		0	0	0		123	0	283	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	168	66		207	180	0		0	0	0		123	0	283	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	168	66		207	180	0		0	0	0		123	0	283	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.72	0.28		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1221	479		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.14	0.14		0.12	0.11	0.00		0.00	0.00	0.00		0.07	0.00	0.17	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.419
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	17	148	14		210	158	36		52	209	30		21	248	218	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	18	157	15		223	168	38		55	222	32		22	263	231	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	18	157	15		223	168	38		55	222	32		22	263	231	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	18	157	15		223	168	38		55	222	32		22	263	231	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	18	157	15		223	168	38		55	222	32		22	263	231	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.87	0.13		1.00	1.00	1.00	
Final Sat.:	1700	3106	294		1700	3400	1700		1700	1487	213		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.05	0.05		0.13	0.05	0.02		0.03	0.15	0.15		0.01	0.15	0.14	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.426
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	90	333	106		319	351	68		82	322	41		116	437	249	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	96	353	113		339	373	72		87	342	44		123	464	264	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	96	353	113		339	373	72		87	342	44		123	464	264	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	96	353	113		339	373	72		87	342	44		123	464	264	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	96	353	113		339	373	72		87	342	44		123	464	264	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.51	0.49		1.00	1.77	0.23		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4272	828		1700	3016	384		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.07	0.07		0.10	0.09	0.09		0.05	0.11	0.11		0.07	0.14	0.16	
Crit Moves:		****			****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.661
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	167	1277	510		328	1580	397		206	712	210		257	393	206	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	167	1277	510		328	1580	397		206	712	210		257	393	206	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	167	1277	510		328	1580	397		206	712	210		257	393	206	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	167	1277	510		328	1580	397		206	712	210		257	393	206	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.25	0.30		0.10	0.31	0.23		0.06	0.14	0.12		0.08	0.12	0.12	
Crit Moves:			****		****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.533
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	29	1705	5		39	1941	63		67	0	26		4	0	8	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	31	1810	5		41	2060	67		71	0	28		4	0	8	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	31	1810	5		41	2060	0		71	0	28		4	0	8	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	31	1810	5		41	2060	0		71	0	28		4	0	8	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	31	1810	5		41	2060	0		71	0	28		4	0	8	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		0.72	0.00	0.28		0.33	0.00	0.67	
Final Sat.:	1700	5085	15		1700	5100	1700		1225	0	475		567	0	1133	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.36	0.36		0.02	0.40	0.00		0.04	0.00	0.06		0.00	0.00	0.01	
Crit Moves:	****					****					****		****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.640
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	62	1532	7		32	1609	239		296	3	83		13	1	15	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	62	1532	7		32	1609	239		296	3	83		13	1	15	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	62	1532	7		32	1609	239		296	3	83		13	1	15	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	62	1532	7		32	1609	239		296	3	83		13	1	15	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	2.61	0.39		0.99	0.01	1.00		0.44	0.04	0.52	
Final Sat.:	1700	5075	25		1700	4441	659		1682	18	1700		756	63	881	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.30	0.30		0.02	0.36	0.36		0.17	0.18	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.611
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	79	933	180	160	1153	198	278	512	94	250	419	115				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	84	990	191	170	1224	210	295	543	100	265	445	122				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	84	990	191	170	1224	210	295	543	100	265	445	122				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	84	990	191	170	1224	210	295	543	100	265	445	122				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	84	990	191	170	1224	210	295	543	100	265	445	122				
OvlAdjVol:			58			63										
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	1.69	0.31	2.00	1.57	0.43				
Final Sat.:	1700	5100	1700	1700	5100	1700	3400	2873	527	3400	2668	732				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.11	0.10	0.24	0.12	0.09	0.19	0.19	0.08	0.17	0.17				
OvlAdjV/S:			0.03			0.04										
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.628
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	138	1118	109	169	1107	214	229	231	111	176	219	110				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	146	1187	116	179	1175	227	243	245	118	187	232	117				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	146	1187	116	179	1175	227	243	245	118	187	232	117				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	146	1187	116	179	1175	227	243	245	118	187	232	117				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	146	1187	116	179	1175	227	243	245	118	187	232	117				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.73	0.27	1.00	3.00	1.00	1.00	1.35	0.65	1.00	2.00	1.00				
Final Sat.:	1700	4647	453	1700	5100	1700	1700	2296	1104	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.26	0.26	0.11	0.23	0.13	0.14	0.11	0.11	0.11	0.07	0.07				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.564
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	97	1006	80	21	1177	198	160	183	95	119	196	20				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	103	1068	85	22	1249	210	170	194	101	126	208	21				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	103	1068	85	22	1249	210	170	194	101	126	208	21				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	103	1068	85	22	1249	210	170	194	101	126	208	21				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	103	1068	85	22	1249	210	170	194	101	126	208	21				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.78	0.22	1.00	2.57	0.43	1.00	1.32	0.68	1.00	1.81	0.19				
Final Sat.:	1700	4724	376	1700	4366	734	1700	2238	1162	1700	3085	315				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.23	0.23	0.01	0.29	0.29	0.10	0.09	0.09	0.07	0.07	0.07				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.556
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	172	631	128	308	712	173	293	684	84	197	771	220				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	183	670	136	327	756	184	311	726	89	209	818	234				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	183	670	136	327	756	184	311	726	89	209	818	234				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	183	670	136	327	756	184	311	726	89	209	818	234				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	183	670	136	327	756	184	311	726	89	209	818	234				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.49	0.51	2.00	2.41	0.59	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4240	860	3400	4103	997	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.16	0.16	0.10	0.18	0.18	0.09	0.14	0.05	0.06	0.16	0.14				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.323
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	48	879	0	0	895	125	98	0	49	0	0	0	0	0	0	0
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	51	933	0	0	950	133	104	0	52	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	51	933	0	0	950	133	104	0	52	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	51	933	0	0	950	133	104	0	52	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	51	933	0	0	950	133	104	0	52	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.63	0.37	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4475	625	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.18	0.00	0.00	0.21	0.21	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.367
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	615	14	25	623	145	141	26	143	15	25	17				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	94	653	15	27	661	154	150	28	152	16	27	18				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	94	653	15	27	661	154	150	28	152	16	27	18				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	94	653	15	27	661	154	150	28	152	16	27	18				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	94	653	15	27	661	154	150	28	152	16	27	18				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.43	0.57	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4986	114	1700	4137	963	1700	1700	1700	1700	2024	1376				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.13	0.13	0.02	0.16	0.16	0.09	0.02	0.09	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.199
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	8	412	0	0	340	107	81	0	6	0	0	0	0	0	0	0
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	8	437	0	0	361	114	86	0	6	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	8	437	0	0	361	114	86	0	6	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	8	437	0	0	361	114	86	0	6	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	8	437	0	0	361	114	86	0	6	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.28	0.72	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	3879	1221	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.09	0.00	0.00	0.09	0.09	0.05	0.00	0.00	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.232
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	0	0 1
Volume Module:																
Base Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	108	397	3	10	312	28	12	1	97	0	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	108	397	3	10	312	28	12	1	97	0	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	108	397	3	10	312	28	12	1	97	0	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	108	397	3	10	312	28	12	1	97	0	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.00	0.00	1.00				
Final Sat.:	1700	5059	41	1700	5100	1700	1700	18	1682	0	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.08	0.08	0.01	0.06	0.02	0.01	0.06	0.06	0.00	0.00	0.00				
Crit Moves:	****				****			****		****						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	417	401	153	396	447	150	260	2940	259	207	2440	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6309	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6309	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	434	418	159	412	466	156	271	3062	270	216	2542	291
RTOR Reduction (vph)	0	27	0	0	24	0	0	9	0	0	13	0
Lane Group Flow (vph)	434	550	0	412	598	0	271	3323	0	216	2820	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.8	39.4		15.7	32.3		12.0	65.5		11.0	64.5	
Effective Green, g (s)	22.8	39.4		15.7	32.3		12.0	65.5		11.0	64.5	
Actuated g/C Ratio	0.15	0.26		0.10	0.22		0.08	0.44		0.07	0.43	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	521	891		359	733		274	2764		251	2712	
v/s Ratio Prot	c0.13	0.16		c0.12	c0.18		0.08	c0.52		0.06	c0.45	
v/s Ratio Perm												
v/c Ratio	0.83	0.62		1.15	0.82		0.99	1.20		0.86	1.04	
Uniform Delay, d1	61.8	48.7		67.2	56.0		68.9	42.2		68.7	42.8	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.95		1.00	1.00	
Incremental Delay, d2	11.0	1.3		94.0	7.0		43.0	93.7		24.7	28.7	
Delay (s)	72.7	50.0		161.1	63.0		108.4	133.9		93.4	71.5	
Level of Service	E	D		F	E		F	F		F	E	
Approach Delay (s)		59.7			102.1			132.0			73.0	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	99.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	376	1029	0	3276	2576	1067
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	384	1050	0	3343	2629	1089
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	384	1049	0	3343	2629	1089
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	20.7	62.2		119.5	72.0	150.0
Effective Green, g (s)	20.7	62.2		119.5	72.0	150.0
Actuated g/C Ratio	0.14	0.41		0.80	0.48	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	473	1239		5105	3075	1583
v/s Ratio Prot	0.11	c0.23		0.52	c0.41	
v/s Ratio Perm		0.14		0.01		0.69
v/c Ratio	0.81	0.85		0.65	0.85	0.69
Uniform Delay, d1	62.8	39.6		6.5	34.4	0.0
Progression Factor	1.00	1.00		0.61	0.51	1.00
Incremental Delay, d2	10.7	5.7		0.0	1.6	1.2
Delay (s)	73.5	45.3		4.0	19.2	1.2
Level of Service	E	D		A	B	A
Approach Delay (s)	52.9			4.0	13.9	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	82.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	535	1082	312	187	744	183	510	2523	541	353	2488	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	557	1127	325	195	775	191	531	2628	564	368	2592	842
RTOR Reduction (vph)	0	0	48	0	0	133	0	0	143	0	0	48
Lane Group Flow (vph)	557	1127	277	195	775	58	531	2628	421	368	2592	794
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	24.5	50.1	66.5	13.3	38.9	38.9	16.4	53.7	53.7	12.6	49.5	74.0
Effective Green, g (s)	24.5	50.1	66.5	13.3	38.9	38.9	16.4	53.7	53.7	12.6	49.5	74.0
Actuated g/C Ratio	0.16	0.33	0.44	0.09	0.26	0.26	0.11	0.36	0.36	0.08	0.33	0.49
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	560	1698	701	304	917	410	375	1820	566	288	2114	1460
v/s Ratio Prot	c0.16	0.22	0.04	0.06	c0.22		0.15	c0.52		0.11	c0.40	0.09
v/s Ratio Perm			0.13			0.04			0.27			0.20
v/c Ratio	0.99	0.66	0.39	0.64	0.85	0.14	1.42	1.44	0.74	1.28	1.23	0.54
Uniform Delay, d1	62.7	42.7	28.2	66.0	52.7	42.7	66.8	48.1	42.1	68.7	50.2	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.69	0.52	1.06	0.69	0.52
Incremental Delay, d2	36.4	1.0	0.1	3.4	7.2	0.2	196.7	201.7	5.4	139.0	104.2	0.1
Delay (s)	99.1	43.7	28.3	69.5	59.9	42.9	247.8	235.1	27.4	211.9	138.7	13.8
Level of Service	F	D	C	E	E	D	F	F	C	F	F	B
Approach Delay (s)		56.6			58.7			205.4			118.1	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	130.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.18		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	111.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	20	44	135	34	186	127	3032	76	259	2667	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1669		1770	1863	1583	1770	6384		3433	6397	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1669		1770	1863	1583	1770	6384		3433	6397	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	20	45	138	35	190	130	3094	78	264	2721	30
RTOR Reduction (vph)	0	41	0	0	0	159	0	2	0	0	1	0
Lane Group Flow (vph)	26	24	0	138	35	31	130	3170	0	264	2750	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	14.6		17.9	24.7	24.7	16.2	80.3		17.6	81.7	
Effective Green, g (s)	7.8	14.6		17.9	24.7	24.7	16.2	80.3		17.6	81.7	
Actuated g/C Ratio	0.05	0.10		0.12	0.16	0.16	0.11	0.54		0.12	0.54	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	162		211	306	260	191	3417		402	3484	
v/s Ratio Prot	c0.01	c0.01		c0.08	0.02		0.07	c0.50		c0.08	0.43	
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.15		0.65	0.11	0.12	0.68	0.93		0.66	0.79	
Uniform Delay, d1	68.4	62.0		63.1	53.3	53.4	64.4	32.2		63.3	27.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.36	0.17		1.35	0.33	
Incremental Delay, d2	1.7	0.4		7.1	0.2	0.2	5.3	3.3		0.4	0.2	
Delay (s)	70.1	62.5		70.2	53.5	53.6	93.1	8.7		85.5	9.1	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		64.6			59.9			12.0			15.8	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	80.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	5	19	263	4	175	67	2976	105	338	2607	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1642		1681	1576	1504	1770	6375		3433	6401	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1642		1681	1576	1504	1770	6375		3433	6401	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	31	5	19	266	4	177	68	3006	106	341	2633	20
RTOR Reduction (vph)	0	17	0	0	7	119	0	3	0	0	0	0
Lane Group Flow (vph)	31	7	0	154	146	21	68	3109	0	341	2653	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		22.7	22.7	22.7	8.8	81.6		14.6	87.4	
Effective Green, g (s)	13.2	13.2		22.7	22.7	22.7	8.8	81.6		14.6	87.4	
Actuated g/C Ratio	0.09	0.09		0.15	0.15	0.15	0.06	0.54		0.10	0.58	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	144		254	238	227	103	3468		334	3729	
v/s Ratio Prot	c0.02	0.00		0.09	c0.09		0.04	c0.49		c0.10	0.41	
v/s Ratio Perm						0.01						
v/c Ratio	0.20	0.05		0.61	0.61	0.09	0.66	0.90		1.02	0.71	
Uniform Delay, d1	63.5	62.6		59.5	59.6	54.8	69.1	30.4		67.7	22.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.36	0.21		0.58	0.40	
Incremental Delay, d2	0.6	0.1		4.1	4.6	0.2	1.4	0.4		45.4	0.8	
Delay (s)	64.1	62.8		63.5	64.2	55.0	95.2	6.7		84.6	9.6	
Level of Service	E	E		E	E	D	F	A		F	A	
Approach Delay (s)		63.5			61.1			8.6			18.2	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	331	190	44	326	167	175	2960	52	172	2470	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3345		1770	3359		1770	6391		1770	6321	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3345		1770	3359		1770	6391		1770	6321	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	272	341	196	45	336	172	180	3052	54	177	2546	253
RTOR Reduction (vph)	0	53	0	0	48	0	0	2	0	0	11	0
Lane Group Flow (vph)	272	484	0	45	460	0	180	3104	0	177	2788	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	30.7	48.8		8.8	26.9		13.4	60.2		13.4	60.2	
Effective Green, g (s)	30.7	48.8		8.8	26.9		13.4	60.2		13.4	60.2	
Actuated g/C Ratio	0.20	0.33		0.06	0.18		0.09	0.40		0.09	0.40	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	362	1088		103	602		158	2564		158	2536	
v/s Ratio Prot	c0.15	0.14		0.03	c0.14		0.10	c0.49		0.10	c0.44	
v/s Ratio Perm												
v/c Ratio	0.75	0.45		0.44	0.76		1.14	1.21		1.12	1.10	
Uniform Delay, d1	56.1	39.9		68.2	58.5		68.3	44.9		68.3	44.9	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.77		0.92	0.90	
Incremental Delay, d2	8.5	0.3		2.9	5.8		104.8	97.8		97.3	49.9	
Delay (s)	64.6	40.2		71.2	64.3		169.8	132.2		160.0	90.2	
Level of Service	E	D		E	E		F	F		F	F	
Approach Delay (s)		48.4			64.9			134.3			94.4	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	104.6	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	97.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	18	41	63	11	21	161	2892	69	74	2339	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1669	1478		1667	1478	1770	6385		1770	6386	
Flt Permitted		0.69	1.00		0.57	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1196	1478		992	1478	1770	6385		1770	6386	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	92	19	42	65	11	22	166	2981	71	76	2411	56
RTOR Reduction (vph)	0	0	36	0	0	19	0	2	0	0	2	0
Lane Group Flow (vph)	0	111	6	0	76	3	166	3050	0	76	2465	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		21.3	21.3		21.3	21.3	24.0	101.9		11.5	89.4	
Effective Green, g (s)		21.3	21.3		21.3	21.3	24.0	101.9		11.5	89.4	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.68		0.08	0.60	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		169	209		140	209	283	4337		135	3806	
v/s Ratio Prot							0.09	c0.48		0.04	c0.39	
v/s Ratio Perm		c0.09	0.00		0.08	0.00						
v/c Ratio		0.66	0.03		0.54	0.01	0.59	0.70		0.56	0.65	
Uniform Delay, d1		60.9	55.4		59.8	55.3	58.4	14.8		66.8	19.9	
Progression Factor		1.00	1.00		1.00	1.00	0.59	0.57		1.03	0.55	
Incremental Delay, d2		8.9	0.1		4.2	0.0	0.3	0.1		0.5	0.1	
Delay (s)		69.8	55.5		64.1	55.4	34.7	8.5		69.4	11.1	
Level of Service		E	E		E	E	C	A		E	B	
Approach Delay (s)		65.8			62.1			9.9			12.9	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	441	1196	187	260	1355	228	383	2534	193	192	1951	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4982		3433	4975		3433	6340		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4982		3433	4975		3433	6340		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	464	1259	197	274	1426	240	403	2667	203	202	2054	394
RTOR Reduction (vph)	0	14	0	0	16	0	0	8	0	0	0	162
Lane Group Flow (vph)	464	1442	0	274	1650	0	403	2862	0	202	2054	232
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.8	46.7		13.8	42.7		18.3	58.5		12.0	52.2	52.2
Effective Green, g (s)	17.8	46.7		13.8	42.7		18.3	58.5		12.0	52.2	52.2
Actuated g/C Ratio	0.12	0.31		0.09	0.28		0.12	0.39		0.08	0.35	0.35
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	407	1551		315	1416		418	2472		274	2229	550
v/s Ratio Prot	c0.14	0.29		0.08	c0.33		c0.12	c0.45		0.06	0.32	
v/s Ratio Perm												0.15
v/c Ratio	1.14	0.93		0.87	1.17		0.96	1.16		0.74	0.92	0.42
Uniform Delay, d1	66.1	50.1		67.2	53.6		65.5	45.8		67.5	46.9	37.4
Progression Factor	1.00	1.00		1.00	1.00		0.90	0.76		1.25	0.57	0.65
Incremental Delay, d2	88.6	10.1		21.0	82.5		6.8	71.5		7.0	6.4	1.9
Delay (s)	154.7	60.2		88.2	136.2		65.5	106.2		91.0	33.0	26.1
Level of Service	F	E		F	F		E	F		F	C	C
Approach Delay (s)		83.0			129.4			101.2			36.4	
Approach LOS		F			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	85.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.15		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	109.6%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	510	162	116	638	160	205	2625	69	182	2164	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3433		1770	6383		1770	6341	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3433		1770	6383		1770	6341	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	212	531	169	121	665	167	214	2734	72	190	2254	169
RTOR Reduction (vph)	0	21	0	0	15	0	0	2	0	0	8	0
Lane Group Flow (vph)	212	679	0	121	817	0	214	2804	0	190	2415	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.3	35.6		19.3	37.6		18.3	58.5		15.9	56.1	
Effective Green, g (s)	17.3	35.6		19.3	37.6		18.3	58.5		15.9	56.1	
Actuated g/C Ratio	0.12	0.24		0.13	0.25		0.12	0.39		0.11	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	809		227	860		215	2489		187	2371	
v/s Ratio Prot	c0.12	0.20		0.07	c0.24		0.12	c0.44		0.11	c0.38	
v/s Ratio Perm												
v/c Ratio	1.04	0.84		0.53	0.95		1.00	1.13		1.02	1.02	
Uniform Delay, d1	66.3	54.5		61.1	55.3		65.8	45.8		67.0	47.0	
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.79		1.01	0.51	
Incremental Delay, d2	73.7	7.6		2.4	19.6		50.4	61.2		47.9	17.3	
Delay (s)	140.0	62.1		63.5	74.8		106.1	97.1		115.4	41.4	
Level of Service	F	E		E	E		F	F		F	D	
Approach Delay (s)		80.2			73.4			97.7			46.8	
Approach LOS		F			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	74.8	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	1	17	114	8	167	17	2615	85	83	2418	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1717			1684		1770	6377		1770	6396	
Flt Permitted		0.68			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1195			1477		1770	6377		1770	6396	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	29	1	18	118	8	172	18	2696	88	86	2493	30
RTOR Reduction (vph)	0	14	0	0	36	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	34	0	0	262	0	18	2782	0	86	2522	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		31.6			31.6		6.0	90.1		12.4	96.5	
Effective Green, g (s)		31.6			31.6		6.0	90.1		12.4	96.5	
Actuated g/C Ratio		0.21			0.21		0.04	0.60		0.08	0.64	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		251			311		70	3830		146	4114	
v/s Ratio Prot							0.01	c0.44		c0.05	0.39	
v/s Ratio Perm		0.03			c0.18							
v/c Ratio		0.13			0.84		0.26	0.73		0.59	0.61	
Uniform Delay, d1		48.1			56.8		69.8	21.2		66.3	15.8	
Progression Factor		1.00			1.00		1.40	0.47		1.43	0.29	
Incremental Delay, d2		0.2			18.2		0.2	0.1		2.0	0.2	
Delay (s)		48.3			75.0		97.8	10.2		96.8	4.8	
Level of Service		D			E		F	B		F	A	
Approach Delay (s)		48.3			75.0			10.7			7.8	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	79.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	436	171	206	527	299	226	2298	186	272	2187	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3390		1770	3347		1770	6336		1770	6348	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3390		1770	3347		1770	6336		1770	6348	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	176	454	178	215	549	311	235	2394	194	283	2278	150
RTOR Reduction (vph)	0	29	0	0	53	0	0	8	0	0	6	0
Lane Group Flow (vph)	176	603	0	215	807	0	235	2580	0	283	2422	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.8	32.0		22.3	38.5		19.3	53.7		21.3	55.7	
Effective Green, g (s)	15.8	32.0		22.3	38.5		19.3	53.7		21.3	55.7	
Actuated g/C Ratio	0.11	0.21		0.15	0.26		0.13	0.36		0.14	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	186	723		263	859		227	2268		251	2357	
v/s Ratio Prot	0.10	c0.18		0.12	c0.24		0.13	c0.41		c0.16	0.38	
v/s Ratio Perm												
v/c Ratio	0.95	0.83		0.82	0.94		1.04	1.14		1.13	1.03	
Uniform Delay, d1	66.7	56.5		61.9	54.6		65.3	48.1		64.3	47.1	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.54		0.67	0.57	
Incremental Delay, d2	49.7	8.4		16.8	17.8		56.4	65.7		90.3	24.3	
Delay (s)	116.4	64.9		78.6	72.4		108.9	91.8		133.6	51.3	
Level of Service	F	E		E	E		F	F		F	D	
Approach Delay (s)		76.1			73.7			93.2			59.9	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	76.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	102.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	473	479	111	181	530	170	180	1899	176	304	1702	557
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6326		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6326		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	483	489	113	185	541	173	184	1938	180	310	1737	568
RTOR Reduction (vph)	0	0	79	0	0	94	0	10	0	0	0	21
Lane Group Flow (vph)	483	489	34	185	541	79	184	2108	0	310	1737	547
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	31.2	31.2	31.2	28.0	28.0	28.0	10.4	52.8		15.3	57.7	94.9
Effective Green, g (s)	31.2	31.2	31.2	28.0	28.0	28.0	10.4	52.8		15.3	57.7	94.9
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19	0.19	0.07	0.35		0.10	0.38	0.63
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	714	736	329	330	660	295	238	2226		350	1956	1001
v/s Ratio Prot	c0.14	0.14		0.10	c0.15		0.05	c0.33		c0.09	0.34	0.35
v/s Ratio Perm			0.02			0.05						
v/c Ratio	0.68	0.66	0.10	0.56	0.82	0.27	0.77	0.95		0.89	0.89	0.55
Uniform Delay, d1	54.7	54.6	48.1	55.4	58.6	52.2	68.6	47.2		66.5	43.1	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.32	0.59		1.15	0.57	1.03
Incremental Delay, d2	2.1	1.9	0.1	1.3	7.5	0.2	4.1	3.6		6.8	1.7	0.1
Delay (s)	56.9	56.5	48.1	56.7	66.0	52.4	94.4	31.2		83.1	26.5	16.0
Level of Service	E	E	D	E	E	D	F	C		F	C	B
Approach Delay (s)		55.8			61.5			36.3			30.9	
Approach LOS		E			E			D			C	

Intersection Summary					
HCM 2000 Control Delay	40.6	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7		
Intersection Capacity Utilization	88.3%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

13: Beach Blvd & Garfield Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	546	142	162	423	143	220	1793	113	208	1661	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3405		1770	5040		1770	5011	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3405		1770	5040		1770	5011	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	222	563	146	167	436	147	227	1848	116	214	1712	186
RTOR Reduction (vph)	0	0	109	0	24	0	0	4	0	0	9	0
Lane Group Flow (vph)	222	563	37	167	559	0	227	1960	0	214	1889	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	23.3	37.6	37.6	16.5	30.8		19.2	55.0		19.7	55.5	
Effective Green, g (s)	23.3	37.6	37.6	16.5	30.8		19.2	55.0		19.7	55.5	
Actuated g/C Ratio	0.16	0.25	0.25	0.11	0.21		0.13	0.37		0.13	0.37	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	274	887	396	194	699		226	1848		232	1854	
v/s Ratio Prot	c0.13	0.16		0.09	c0.16		0.13	c0.39		0.12	c0.38	
v/s Ratio Perm			0.02									
v/c Ratio	0.81	0.63	0.09	0.86	0.80		1.00	1.06		0.92	1.02	
Uniform Delay, d1	61.2	50.1	43.1	65.6	56.7		65.4	47.5		64.4	47.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.46		0.48	0.89	
Incremental Delay, d2	15.6	1.7	0.1	29.3	6.8		40.6	33.3		26.3	20.9	
Delay (s)	76.8	51.8	43.3	94.9	63.4		80.2	55.0		57.4	63.0	
Level of Service	E	D	D	F	E		F	D		E	E	
Approach Delay (s)		56.4			70.4			57.6			62.4	
Approach LOS		E			E			E			E	

Intersection Summary					
HCM 2000 Control Delay	60.7	HCM 2000 Level of Service	E		
HCM 2000 Volume to Capacity ratio	0.96				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.2		
Intersection Capacity Utilization	94.5%	ICU Level of Service	F		
Analysis Period (min)	15				
c Critical Lane Group					

14: Beach Blvd & Yorktown Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	442	156	137	386	146	215	1808	188	146	1653	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3393		1770	5013		1770	5019	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3393		1770	5013		1770	5019	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	465	164	144	406	154	226	1903	198	154	1740	165
RTOR Reduction (vph)	0	0	120	0	28	0	0	8	0	0	7	0
Lane Group Flow (vph)	156	465	44	144	532	0	226	2093	0	154	1898	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.8	34.0	34.0	13.4	29.6		21.7	68.1		14.1	60.5	
Effective Green, g (s)	17.8	34.0	34.0	13.4	29.6		21.7	68.1		14.1	60.5	
Actuated g/C Ratio	0.12	0.23	0.23	0.09	0.20		0.14	0.45		0.09	0.40	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	210	802	358	158	669		256	2275		166	2024	
v/s Ratio Prot	c0.09	0.13		c0.08	c0.16		0.13	c0.42		0.09	c0.38	
v/s Ratio Perm			0.03									
v/c Ratio	0.74	0.58	0.12	0.91	0.80		0.88	0.92		0.93	0.94	
Uniform Delay, d1	63.9	51.6	46.1	67.7	57.3		62.9	38.4		67.4	42.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.62		0.81	0.78	
Incremental Delay, d2	13.2	1.0	0.2	46.4	6.5		25.6	6.8		24.8	4.2	
Delay (s)	77.1	52.7	46.3	114.1	63.8		86.4	30.4		79.1	37.5	
Level of Service	E	D	D	F	E		F	C		E	D	
Approach Delay (s)		56.2			74.1			35.9			40.7	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	44.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.89			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	89.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	19	58	153	31	98	107	1769	89	122	1643	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5049		1770	5043	
Flt Permitted		0.67			0.61	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1169			1142	1583	1770	5049		1770	5043	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	42	19	59	155	31	99	108	1787	90	123	1660	98
RTOR Reduction (vph)	0	26	0	0	0	80	0	3	0	0	4	0
Lane Group Flow (vph)	0	94	0	0	186	19	108	1874	0	123	1754	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		28.4			28.4	28.4	17.8	90.7		15.7	88.6	
Effective Green, g (s)		28.4			28.4	28.4	17.8	90.7		15.7	88.6	
Actuated g/C Ratio		0.19			0.19	0.19	0.12	0.60		0.10	0.59	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		221			216	299	210	3052		185	2978	
v/s Ratio Prot							0.06	c0.37		c0.07	0.35	
v/s Ratio Perm		0.08			c0.16	0.01						
v/c Ratio		0.43			0.86	0.06	0.51	0.61		0.66	0.59	
Uniform Delay, d1		53.6			58.9	49.9	62.0	18.6		64.6	19.3	
Progression Factor		1.00			1.00	1.00	0.71	0.50		0.65	1.34	
Incremental Delay, d2		1.3			27.8	0.1	1.1	0.5		3.9	0.4	
Delay (s)		54.9			86.7	50.0	45.4	9.8		45.7	26.2	
Level of Service		D			F	D	D	A		D	C	
Approach Delay (s)		54.9			73.9			11.8			27.5	
Approach LOS		D			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	73.9%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	498	63	212	892	400	137	1331	120	345	1256	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	5022		3433	4994	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	5022		3433	4994	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	191	530	67	226	949	426	146	1416	128	367	1336	181
RTOR Reduction (vph)	0	10	0	0	0	62	0	7	0	0	12	0
Lane Group Flow (vph)	191	587	0	226	949	364	146	1537	0	367	1505	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	17.7	39.1		20.6	42.0	59.8	16.2	50.7		17.8	52.3	
Effective Green, g (s)	17.7	39.1		20.6	42.0	59.8	16.2	50.7		17.8	52.3	
Actuated g/C Ratio	0.12	0.26		0.14	0.28	0.40	0.11	0.34		0.12	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	208	1303		243	990	631	191	1697		407	1741	
v/s Ratio Prot	0.11	0.12		c0.13	c0.27	0.07	0.08	c0.31		0.11	c0.30	
v/s Ratio Perm						0.16						
v/c Ratio	0.92	0.45		0.93	0.96	0.58	0.76	0.91		0.90	0.86	
Uniform Delay, d1	65.4	46.4		64.0	53.1	35.2	65.0	47.4		65.2	45.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.69	0.59		1.29	0.41	
Incremental Delay, d2	39.4	0.5		38.6	19.5	0.8	13.4	7.6		19.1	5.0	
Delay (s)	104.8	47.0		102.6	72.7	36.0	58.0	35.4		103.3	23.8	
Level of Service	F	D		F	E	D	E	D		F	C	
Approach Delay (s)		61.0			67.1			37.3			39.3	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	91.0%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	116	40	35	131	166	33	1441	34	167	1175	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1791		1770	1863	1583	1770	5068		1770	5043	
Flt Permitted	0.50	1.00		0.42	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	941	1791		789	1863	1583	1770	5068		1770	5043	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	73	118	41	36	134	169	34	1470	35	170	1199	70
RTOR Reduction (vph)	0	10	0	0	0	146	0	1	0	0	3	0
Lane Group Flow (vph)	73	149	0	36	134	23	34	1504	0	170	1266	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	20.0	20.0		20.0	20.0	20.0	8.3	84.3		29.3	105.3	
Effective Green, g (s)	20.0	20.0		20.0	20.0	20.0	8.3	84.3		29.3	105.3	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.06	0.56		0.20	0.70	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	238		105	248	211	97	2848		345	3540	
v/s Ratio Prot		c0.08			0.07		0.02	c0.30		c0.10	0.25	
v/s Ratio Perm	0.08			0.05		0.01						
v/c Ratio	0.58	0.63		0.34	0.54	0.11	0.35	0.53		0.49	0.36	
Uniform Delay, d1	61.1	61.5		59.0	60.7	57.1	68.3	20.5		53.7	8.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.42	0.41		0.51	0.24	
Incremental Delay, d2	6.8	5.1		2.0	2.4	0.2	1.2	0.4		0.5	0.1	
Delay (s)	67.9	66.6		61.0	63.1	57.4	98.5	8.8		27.9	2.3	
Level of Service	E	E		E	E	E	F	A		C	A	
Approach Delay (s)		67.0			60.0			10.7			5.3	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	73.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	383	34	83	549	216	125	932	91	362	613	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.95	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3389		1770	5017		1770	4855	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3389		1770	5017		1770	4855	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	269	391	35	85	560	220	128	951	93	369	626	271
RTOR Reduction (vph)	0	4	0	0	28	0	0	8	0	0	57	0
Lane Group Flow (vph)	269	422	0	85	752	0	128	1036	0	369	840	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.4	47.5		11.7	34.8		28.7	37.2		32.5	41.0	
Effective Green, g (s)	24.4	47.5		11.7	34.8		28.7	37.2		32.5	41.0	
Actuated g/C Ratio	0.16	0.32		0.08	0.23		0.19	0.25		0.22	0.27	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	287	1107		138	786		338	1244		383	1327	
v/s Ratio Prot	c0.15	0.12		0.05	c0.22		0.07	c0.21		c0.21	0.17	
v/s Ratio Perm												
v/c Ratio	0.94	0.38		0.62	0.96		0.38	0.83		0.96	0.63	
Uniform Delay, d1	62.0	39.8		67.0	56.9		52.9	53.5		58.2	47.9	
Progression Factor	1.00	1.00		1.00	1.00		1.07	1.06		0.87	0.62	
Incremental Delay, d2	36.0	0.1		5.6	21.8		0.3	6.5		35.0	2.2	
Delay (s)	98.0	39.9		72.6	78.7		56.9	62.9		85.8	31.7	
Level of Service	F	D		E	E		E	E		F	C	
Approach Delay (s)		62.4			78.1			62.3			47.5	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	61.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Alternative 6 No Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	0	135	0	0	0	129	1097	0	0	620	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5026	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5026	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	84	0	144	0	0	0	137	1167	0	0	660	56
RTOR Reduction (vph)	0	0	129	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	84	0	15	0	0	0	137	1167	0	0	713	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	16.1		16.1				17.0	122.9			101.0	
Effective Green, g (s)	16.1		16.1				17.0	122.9			101.0	
Actuated g/C Ratio	0.11		0.11				0.11	0.82			0.67	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	189		169				200	4166			3384	
v/s Ratio Prot							c0.08	c0.23			0.14	
v/s Ratio Perm	c0.05		0.01									
v/c Ratio	0.44		0.09				0.69	0.28			0.21	
Uniform Delay, d1	62.8		60.4				63.9	3.2			9.3	
Progression Factor	1.00		1.00				1.12	0.50			0.54	
Incremental Delay, d2	1.7		0.2				3.9	0.1			0.1	
Delay (s)	64.4		60.6				75.6	1.7			5.2	
Level of Service	E		E				E	A			A	
Approach Delay (s)		62.0			0.0			9.4			5.2	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	46.1%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	295	1234	54	23	1596	890	30	52	39	453	56	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	307	1285	56	24	1662	927	31	54	41	472	58	265
RTOR Reduction (vph)	0	3	0	0	0	244	0	0	38	0	0	0
Lane Group Flow (vph)	307	1338	0	24	1662	683	31	54	3	472	58	265
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.3	83.0		4.3	74.0	74.0	3.6	11.7	11.7	29.3	37.4	150.0
Effective Green, g (s)	13.3	83.0		4.3	74.0	74.0	3.6	11.7	11.7	29.3	37.4	150.0
Actuated g/C Ratio	0.09	0.55		0.03	0.49	0.49	0.02	0.08	0.08	0.20	0.25	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	304	2795		50	1745	780	42	276	123	670	464	1583
v/s Ratio Prot	c0.09	0.26		0.01	c0.47		c0.02	0.02		c0.14	0.03	
v/s Ratio Perm						0.43			0.00			c0.17
v/c Ratio	1.01	0.48		0.48	0.95	0.88	0.74	0.20	0.03	0.70	0.12	0.17
Uniform Delay, d1	68.3	20.4		71.7	36.3	33.9	72.7	64.7	63.9	56.3	43.6	0.0
Progression Factor	1.00	1.00		1.23	0.35	0.65	1.00	1.00	1.00	1.18	1.13	1.00
Incremental Delay, d2	54.1	0.6		2.0	10.4	10.3	44.0	0.1	0.0	2.7	0.0	0.2
Delay (s)	122.5	20.9		89.9	23.1	32.3	116.7	64.9	63.9	69.0	49.4	0.2
Level of Service	F	C		F	C	C	F	E	E	E	D	A
Approach Delay (s)		39.9			27.0			77.3			44.6	
Approach LOS		D			C			E			D	

Intersection Summary				
HCM 2000 Control Delay	35.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	86.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	114	1597	16	5	2330	234	13	12	16	93	6	172
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1699		1770	1592	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.27	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	497	1699		1375	1592	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	119	1664	17	5	2427	244	14	12	17	97	6	179
RTOR Reduction (vph)	0	0	4	0	0	60	0	15	0	0	157	0
Lane Group Flow (vph)	119	1664	13	5	2427	184	14	14	0	97	28	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	13.3	116.3	116.3	1.2	104.2	104.2	18.6	18.6		18.6	18.6	
Effective Green, g (s)	13.3	116.3	116.3	1.2	104.2	104.2	18.6	18.6		18.6	18.6	
Actuated g/C Ratio	0.09	0.78	0.78	0.01	0.69	0.69	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	156	3942	1227	14	3532	1099	61	210		170	197	
v/s Ratio Prot	c0.07	0.33		c0.00	c0.48			0.01			0.02	
v/s Ratio Perm			0.01			0.12	0.03			c0.07		
v/c Ratio	0.76	0.42	0.01	0.36	0.69	0.17	0.23	0.07		0.57	0.14	
Uniform Delay, d1	66.8	5.6	3.8	74.0	13.4	7.9	59.2	58.0		61.9	58.6	
Progression Factor	0.73	2.15	1.00	0.55	0.38	0.09	1.00	1.00		1.00	1.00	
Incremental Delay, d2	15.7	0.3	0.0	2.9	0.6	0.2	0.7	0.0		2.9	0.1	
Delay (s)	64.3	12.4	3.8	43.4	5.7	0.9	59.9	58.1		64.8	58.7	
Level of Service	E	B	A	D	A	A	E	E		E	E	
Approach Delay (s)		15.8			5.3			58.7			60.8	
Approach LOS		B			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.67			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	74.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1560	38	52	2479	239	18	47	32	93	52	104
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1743	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.99	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1743	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	149	1660	40	55	2637	254	19	50	34	99	55	111
RTOR Reduction (vph)	0	0	16	0	0	68	0	16	0	0	0	99
Lane Group Flow (vph)	149	1660	24	55	2637	186	19	68	0	75	79	12
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.8	91.3	91.3	7.3	87.8	87.8	17.0	17.0		15.6	15.6	15.6
Effective Green, g (s)	10.8	91.3	91.3	7.3	87.8	87.8	17.0	17.0		15.6	15.6	15.6
Actuated g/C Ratio	0.07	0.61	0.61	0.05	0.59	0.59	0.11	0.11		0.10	0.10	0.10
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	127	3095	963	86	2976	926	200	198		174	181	164
v/s Ratio Prot	c0.08	0.33		0.03	c0.52		0.01	c0.04		0.04	c0.05	
v/s Ratio Perm			0.02			0.12						0.01
v/c Ratio	1.17	0.54	0.03	0.64	0.89	0.20	0.10	0.34		0.43	0.44	0.07
Uniform Delay, d1	69.6	17.1	11.7	70.1	26.8	14.6	59.6	61.4		63.0	63.1	60.7
Progression Factor	0.87	0.54	0.92	1.39	0.20	0.03	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	131.5	0.6	0.0	3.3	1.3	0.1	0.1	0.4		0.6	0.6	0.1
Delay (s)	191.8	9.8	10.8	100.8	6.6	0.7	59.7	61.7		63.7	63.7	60.7
Level of Service	F	A	B	F	A	A	E	E		E	E	E
Approach Delay (s)		24.5			7.8			61.4			62.4	
Approach LOS		C			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	81.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	1522	7	20	2584	700	25	30	14	336	8	167
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	182	1637	8	22	2778	753	27	32	15	361	9	180
RTOR Reduction (vph)	0	0	3	0	0	51	0	12	0	0	0	151
Lane Group Flow (vph)	182	1637	5	22	2778	702	27	35	0	361	9	29
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	19.5	95.6	95.6	3.7	79.8	104.1	5.7	5.7		24.3	24.3	24.3
Effective Green, g (s)	19.5	95.6	95.6	3.7	79.8	104.1	5.7	5.7		24.3	24.3	24.3
Actuated g/C Ratio	0.13	0.64	0.64	0.02	0.53	0.69	0.04	0.04		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	230	3240	1008	43	2705	1098	67	67		556	301	256
v/s Ratio Prot	c0.10	0.32		0.01	c0.55	0.10	0.02	c0.02		c0.11	0.00	
v/s Ratio Perm			0.00			0.34						0.02
v/c Ratio	0.79	0.51	0.01	0.51	1.03	0.64	0.40	0.53		0.65	0.03	0.11
Uniform Delay, d1	63.3	14.5	9.9	72.3	35.1	12.6	70.5	70.8		58.9	52.9	53.7
Progression Factor	0.75	1.09	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	14.1	0.5	0.0	4.2	24.6	0.9	1.4	3.4		2.0	0.0	0.1
Delay (s)	61.8	16.4	9.9	76.5	59.7	13.5	71.9	74.3		60.8	52.9	53.7
Level of Service	E	B	A	E	E	B	E	E		E	D	D
Approach Delay (s)		20.9			50.0			73.4			58.4	
Approach LOS		C			D			E			E	

Intersection Summary				
HCM 2000 Control Delay	42.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	89.0%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Scenario Report

Scenario:	ALT6NP-PM
Command:	ALT6NP-PM
Volume:	EX-PM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	2018-CUMUL-PM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	ALT6NP-PM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	E	xxxxx	0.935	F	xxxxx	1.025	+ 0.090
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.894	E	xxxxx	0.948	+ 0.053
# 16 Beach Blvd & Adams Ave	C	xxxxx	0.745	D	xxxxx	0.804	+ 0.059
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.693	D	xxxxx	0.809	+ 0.116
# 21 Newland St & Atlanta Ave	A	xxxxx	0.578	A	xxxxx	0.589	+ 0.011
# 22 Newland St & Hamilton Ave	C	xxxxx	0.717	C	xxxxx	0.717	+ 0.000
# 24 Magnolia St & Hamilton Ave	B	xxxxx	0.627	B	xxxxx	0.628	+ 0.001
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.676	B	xxxxx	0.676	+ 0.001
# 30 Brookhurst Street & Talbert Av	D	xxxxx	0.821	D	xxxxx	0.829	+ 0.008
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.520	A	xxxxx	0.524	+ 0.005
# 32 Brookhurst Street & Quail Aven	B	xxxxx	0.614	B	xxxxx	0.622	+ 0.008
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.730	C	xxxxx	0.755	+ 0.025
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.641	B	xxxxx	0.655	+ 0.013
# 35 Brookhurst Street & Yorktown A	B	xxxxx	0.612	B	xxxxx	0.627	+ 0.015
# 36 Brookhurst Street & Adams Aven	D	xxxxx	0.801	D	xxxxx	0.814	+ 0.013
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.362	A	xxxxx	0.362	+ 0.000
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.452	A	xxxxx	0.464	+ 0.012
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.232	A	xxxxx	0.233	+ 0.001
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.292	A	xxxxx	0.292	+ 0.000

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.935
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	113	Level Of Service:	E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	441	2379	540		353	2335	678		442	963	260		185	627	183	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	441	2379	540		353	2335	678		442	963	260		185	627	183	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	441	2379	540		353	2335	678		442	963	260		185	627	183	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	441	2379	540		353	2335	678		442	963	260		185	627	183	
OvlAdjVol:							237				40					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.47	0.32		0.10	0.34	0.20		0.13	0.19	0.15		0.05	0.18	0.11	
OvlAdjV/S:							0.07				0.02					
Crit Moves:	****				****				****				****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.894
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	83	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.37	0.37		0.06	0.26	0.21		0.13	0.25	0.25		0.07	0.29	0.29	
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.745
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	137	1162	106	306	1107	161	166	483	63	199	879	360				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	137	1162	106	306	1107	161	166	483	63	199	879	360				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	137	1162	106	306	1107	161	166	483	63	199	879	360				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	137	1162	106	306	1107	161	166	483	63	199	879	360				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.75	0.25	2.00	2.62	0.38	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4673	427	3400	4451	649	1700	4515	585	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.25	0.25	0.09	0.25	0.25	0.10	0.11	0.11	0.12	0.26	0.21				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.693
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37	303	53	232	267	1070	51	22	1417	720				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	30	52	39	322	56	246	283	1136	54	23	1504	764				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	30	52	0	322	56	0	283	1136	54	23	1504	764				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	30	52	0	322	56	0	283	1136	54	23	1504	764				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	30	52	0	322	56	0	283	1136	54	23	1504	764				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.86	0.14	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4868	232	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.02	0.00	0.09	0.03	0.00	0.08	0.23	0.23	0.01	0.44	0.45				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.578
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	28	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34	96	264	97	80	474	203	52	473	114				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	292	553	36	102	280	103	85	503	215	55	502	121				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	292	553	36	102	280	103	85	503	215	55	502	121				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	292	553	36	102	280	103	85	503	215	55	502	121				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	292	553	36	102	280	103	85	503	215	55	502	121				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.88	0.12	1.00	1.46	0.54	1.00	1.40	0.60	1.00	1.61	0.39				
Final Sat.:	1700	3192	208	1700	2486	914	1700	2381	1019	1700	2740	660				
Capacity Analysis Module:																
Vol/Sat:	0.17	0.17	0.17	0.06	0.11	0.11	0.05	0.21	0.21	0.03	0.18	0.18				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.717
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	39	Level Of Service:	C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	304	65	223	203	0	0	0	0	153	0	476				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	0	323	69	237	215	0	0	0	0	162	0	505				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	323	69	237	215	0	0	0	0	162	0	505				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	323	69	237	215	0	0	0	0	162	0	505				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	323	69	237	215	0	0	0	0	162	0	505				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.82	0.18	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1401	299	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.23	0.23	0.14	0.13	0.00	0.00	0.00	0.00	0.10	0.00	0.30				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.627
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	30	300	28	189	178	42	25	257	29	15	546	327				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	32	318	30	201	189	45	27	273	31	16	580	347				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	32	318	30	201	189	45	27	273	31	16	580	347				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	32	318	30	201	189	45	27	273	31	16	580	347				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	32	318	30	201	189	45	27	273	31	16	580	347				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.83	0.17	1.00	2.00	1.00	1.00	0.90	0.10	1.00	1.00	1.00				
Final Sat.:	1700	3110	290	1700	3400	1700	1700	1528	172	1700	1700	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10	0.12	0.06	0.03	0.02	0.18	0.18	0.01	0.34	0.20				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.676
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153	387	389	88	89	350	67	231	1060	500				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	118	604	162	411	413	93	94	372	71	245	1125	531				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	118	604	162	411	413	93	94	372	71	245	1125	531				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	118	604	162	411	413	93	94	372	71	245	1125	531				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	118	604	162	411	413	93	94	372	71	245	1125	531				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	2.00	2.45	0.55	1.00	1.68	0.32	1.00	2.00	1.00				
Final Sat.:	1700	5100	1700	3400	4159	941	1700	2854	546	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.07	0.12	0.10	0.12	0.10	0.10	0.06	0.13	0.13	0.14	0.33	0.31				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.821
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	57	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314	237	1392	244	212	635	156	243	1059	461				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	5100	1700	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.30	0.20	0.07	0.29	0.15	0.07	0.13	0.10	0.08	0.33	0.29				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec):	100	Critical Vol./Cap.(X):	0.520
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	25	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16	29	1774	25	83	0	28	8	0	11				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	23	1908	17	31	1883	27	88	0	30	8	0	12				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	23	1908	17	31	1883	0	88	0	30	8	0	12				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	23	1908	17	31	1883	0	88	0	30	8	0	12				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	23	1908	17	31	1883	0	88	0	30	8	0	12				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.97	0.03	1.00	3.00	1.00	0.74	0.01	0.25	0.42	0.00	0.58				
Final Sat.:	1700	5055	45	1700	5100	1700	1271	0	429	716	0	984				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.38	0.38	0.02	0.37	0.00	0.05	0.00	0.07	0.00	0.00	0.01				
Crit Moves:		****		****					****	****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.614
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	73	1686	14		42	1645	226		234	8	87		14	3	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	73	1686	14		42	1645	226		234	8	87		14	3	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	73	1686	14		42	1645	226		234	8	87		14	3	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	73	1686	14		42	1645	226		234	8	87		14	3	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.33	0.33		0.02	0.37	0.37		0.14	0.14	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	113	1348	136		163	1264	193		263	501	92		352	708	115	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	113	1348	136		163	1264	193		263	501	92		352	708	115	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	113	1348	136		163	1264	193		263	501	92		352	708	115	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	113	1348	136		163	1264	193		263	501	92		352	708	115	
OvlAdjVol:			0				62									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.26	0.08		0.10	0.25	0.11		0.08	0.17	0.17		0.10	0.24	0.24	
OvlAdjV/S:			0.00				0.04									
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.641
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	195	1465	82		109	1220	251		188	224	144		196	257	102	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	195	1465	82		109	1220	251		188	224	144		196	257	102	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	195	1465	82		109	1220	251		188	224	144		196	257	102	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	195	1465	82		109	1220	251		188	224	144		196	257	102	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.30	0.30		0.06	0.24	0.15		0.11	0.11	0.11		0.12	0.08	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.612
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	163	1497	117		39	1180	212		156	232	116		154	264	28	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	163	1497	117		39	1180	212		156	232	116		154	264	28	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	163	1497	117		39	1180	212		156	232	116		154	264	28	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	163	1497	117		39	1180	212		156	232	116		154	264	28	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.54	0.46		1.00	1.34	0.66		1.00	1.81	0.19	
Final Sat.:	1700	4731	369		1700	4323	777		1700	2270	1130		1700	3079	321	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.32	0.32		0.02	0.27	0.27		0.09	0.10	0.10		0.09	0.09	0.09	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.801
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	277	927	153	323	902	190	291	793	131	298	1829	376				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	277	927	153	323	902	190	291	793	131	298	1829	376				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	277	927	153	323	902	190	291	793	131	298	1829	376				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	277	927	153	323	902	190	291	793	131	298	1829	376				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.21	0.21	0.09	0.21	0.21	0.09	0.16	0.08	0.09	0.36	0.22				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.362
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	47	1326	0	0	1120	176	103	0	54	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	47	1326	0	0	1120	176	103	0	54	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	47	1326	0	0	1120	176	103	0	54	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	47	1326	0	0	1120	176	103	0	54	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.26	0.00	0.00	0.25	0.25	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.452
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	156	1049	22	21	732	179	188	25	144	27	42	29				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	156	1049	22	21	732	179	188	25	144	27	42	29				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	156	1049	22	21	732	179	188	25	144	27	42	29				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	156	1049	22	21	732	179	188	25	144	27	42	29				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.94	0.06	1.00	2.41	0.59	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4994	106	1700	4097	1003	1700	1700	1700	1700	2030	1370				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.21	0.21	0.01	0.18	0.18	0.11	0.01	0.08	0.02	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.232
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	15	731	0	0	432	90	66	0	13	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	15	731	0	0	432	90	66	0	13	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	15	731	0	0	432	90	66	0	13	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	15	731	0	0	432	90	66	0	13	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.48	0.52	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4219	881	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00	0.00	0.10	0.10	0.04	0.00	0.01	0.00	0.00	0.00				
Crit Moves:		****		****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 NO PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.292
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1		12	378	26		7	0	86		0	1	0	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	186	719	1		13	401	28		7	0	91		0	1	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	186	719	1		13	401	28		7	0	91		0	1	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	186	719	1		13	401	28		7	0	91		0	1	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	186	719	1		13	401	28		7	0	91		0	1	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		1.00	0.00	1.00		0.00	1.00	0.00	
Final Sat.:	1700	5092	8		1700	5100	1700		1700	0	1700		0	1700	0	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.14	0.14		0.01	0.08	0.02		0.00	0.00	0.05		0.00	0.00	0.00	
Crit Moves:	****					****					****		****			

APPENDIX H: ALTERNATIVE 6 PROJECT OPERATING YEAR (2020) PLUS PROJECT LOS

HCM Signalized Intersection Capacity Analysis Remedial Action Plan Ascon Landfill Site TIA
1: Beach Blvd & McFadden Ave Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	262	355	128	333	455	106	188	2083	168	154	2955	355
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3398		3433	3439		3433	6336		3433	6305	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3398		3433	3439		3433	6336		3433	6305	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	282	382	138	358	489	114	202	2240	181	166	3177	382
RTOR Reduction (vph)	0	25	0	0	14	0	0	8	0	0	14	0
Lane Group Flow (vph)	282	495	0	358	589	0	202	2413	0	166	3545	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.9	34.9		13.7	31.7		11.7	71.9		11.1	71.3	
Effective Green, g (s)	16.9	34.9		13.7	31.7		11.7	71.9		11.1	71.3	
Actuated g/C Ratio	0.11	0.23		0.09	0.21		0.08	0.48		0.07	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	386	790		313	726		267	3037		254	2996	
v/s Ratio Prot	c0.08	0.15		c0.10	c0.17		0.06	c0.38		0.05	c0.56	
v/s Ratio Perm												
v/c Ratio	0.73	0.63		1.14	0.81		0.76	0.79		0.65	1.18	
Uniform Delay, d1	64.3	51.7		68.2	56.3		67.8	32.8		67.6	39.4	
Progression Factor	1.00	1.00		1.00	1.00		0.99	0.70		1.00	1.00	
Incremental Delay, d2	7.0	1.6		95.6	6.9		10.3	2.0		5.9	86.2	
Delay (s)	71.3	53.2		163.8	63.2		77.2	24.8		73.5	125.6	
Level of Service	E	D		F	E		E	C		E	F	
Approach Delay (s)		59.6			100.6			28.8			123.3	
Approach LOS		E			F			C			F	

Intersection Summary			
HCM 2000 Control Delay	83.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	100.0%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	182	634	0	2513	2966	1006
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	190	660	0	2618	3090	1048
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	190	659	0	2618	3090	1048
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	14.0	41.5		126.2	92.7	150.0
Effective Green, g (s)	14.0	41.5		126.2	92.7	150.0
Actuated g/C Ratio	0.09	0.28		0.84	0.62	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	320	854		5391	3960	1583
v/s Ratio Prot	0.06	c0.14		0.40	c0.48	
v/s Ratio Perm		0.10		0.00		c0.66
v/c Ratio	0.59	0.77		0.49	0.78	0.66
Uniform Delay, d1	65.3	49.9		3.2	21.1	0.0
Progression Factor	1.00	1.00		0.14	0.39	1.00
Incremental Delay, d2	3.4	4.6		0.0	0.1	0.2
Delay (s)	68.7	54.4		0.5	8.5	0.2
Level of Service	E	D		A	A	A
Approach Delay (s)	57.6			0.5	6.4	
Approach LOS	E			A	A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	314	1097	224	143	495	248	180	1952	297	476	2644	506
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	324	1131	231	147	510	256	186	2012	306	491	2726	522
RTOR Reduction (vph)	0	0	57	0	0	144	0	0	109	0	0	95
Lane Group Flow (vph)	324	1131	174	147	510	112	186	2012	197	491	2726	427
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	12.4	39.7	51.9	13.0	40.3	40.3	12.2	51.7	51.7	25.3	64.4	76.8
Effective Green, g (s)	12.4	39.7	51.9	13.0	40.3	40.3	12.2	51.7	51.7	25.3	64.4	76.8
Actuated g/C Ratio	0.08	0.26	0.35	0.09	0.27	0.27	0.08	0.34	0.34	0.17	0.43	0.51
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	283	1345	547	297	950	425	279	1752	545	579	2751	1426
v/s Ratio Prot	c0.09	c0.22	0.03	0.04	0.14		0.05	c0.40		c0.14	c0.43	0.02
v/s Ratio Perm			0.08			0.07			0.12			0.13
v/c Ratio	1.14	0.84	0.32	0.49	0.54	0.26	0.67	1.15	0.36	0.85	0.99	0.30
Uniform Delay, d1	68.8	52.2	36.0	65.4	46.9	43.2	66.9	49.1	36.8	60.5	42.5	21.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.44	0.54	0.36	1.12	0.60	0.45
Incremental Delay, d2	98.5	4.9	0.1	0.5	0.6	0.3	3.8	72.7	1.5	6.8	11.4	0.0
Delay (s)	167.3	57.1	36.2	65.8	47.5	43.5	99.9	99.4	14.7	74.8	36.8	9.5
Level of Service	F	E	D	E	D	D	F	F	B	E	D	A
Approach Delay (s)		75.4			49.3			89.1			38.0	
Approach LOS		E			D			F			D	

Intersection Summary			
HCM 2000 Control Delay	60.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	100.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	19	21	68	8	104	48	2226	56	144	2855	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.92		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1716		1770	1863	1583	1770	6384		3433	6403	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1716		1770	1863	1583	1770	6384		3433	6403	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	26	20	22	72	8	109	51	2343	59	152	3005	15
RTOR Reduction (vph)	0	20	0	0	0	94	0	2	0	0	0	0
Lane Group Flow (vph)	26	22	0	72	8	15	51	2400	0	152	3020	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.2		12.3	20.7	20.7	8.3	89.3		12.6	93.6	
Effective Green, g (s)	7.8	16.2		12.3	20.7	20.7	8.3	89.3		12.6	93.6	
Actuated g/C Ratio	0.05	0.11		0.08	0.14	0.14	0.06	0.60		0.08	0.62	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	185		145	257	218	97	3800		288	3995	
v/s Ratio Prot	0.01	c0.01		c0.04	0.00		0.03	c0.38		0.04	c0.47	
v/s Ratio Perm						c0.01						
v/c Ratio	0.28	0.12		0.50	0.03	0.07	0.53	0.63		0.53	0.76	
Uniform Delay, d1	68.4	60.5		65.9	56.0	56.3	68.9	19.7		65.8	20.1	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.59	0.26		0.61	0.26	
Incremental Delay, d2	1.7	0.3		2.7	0.0	0.1	4.3	0.7		0.7	0.6	
Delay (s)	70.1	60.8		68.5	56.0	56.4	113.7	5.9		40.9	5.7	
Level of Service	E	E		E	E	E	F	A		D	A	
Approach Delay (s)		64.3			61.0			8.1			7.4	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.65		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	4	42	91	5	53	38	2266	48	151	2847	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.98	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1607		1681	1600	1504	1770	6388		3433	6403	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1607		1681	1600	1504	1770	6388		3433	6403	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	30	4	44	95	5	55	40	2360	50	157	2966	15
RTOR Reduction (vph)	0	40	0	0	4	45	0	1	0	0	0	0
Lane Group Flow (vph)	30	8	0	54	49	3	40	2409	0	157	2981	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		9.1	9.1	9.1	8.1	96.9		12.9	101.7	
Effective Green, g (s)	13.2	13.2		9.1	9.1	9.1	8.1	96.9		12.9	101.7	
Actuated g/C Ratio	0.09	0.09		0.06	0.06	0.06	0.05	0.65		0.09	0.68	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	141		101	97	91	95	4126		295	4341	
v/s Ratio Prot	c0.02	0.00		c0.03	0.03		0.02	c0.38		0.05	c0.47	
v/s Ratio Perm						0.00						
v/c Ratio	0.19	0.06		0.53	0.51	0.03	0.42	0.58		0.53	0.69	
Uniform Delay, d1	63.5	62.7		68.4	68.3	66.3	68.7	15.1		65.7	14.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.84	1.48		0.57	0.31	
Incremental Delay, d2	0.6	0.2		5.4	4.1	0.1	2.1	0.4		1.3	0.6	
Delay (s)	64.1	62.9		73.7	72.4	66.4	59.6	22.8		38.6	5.2	
Level of Service	E	E		E	E	E	E	C		D	A	
Approach Delay (s)		63.3			71.0			23.4			6.9	
Approach LOS		E			E			C			A	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	193	368	293	53	237	107	136	2065	67	81	2695	165
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3304		1770	3373		1770	6377		1770	6352	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3304		1770	3373		1770	6377		1770	6352	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	203	387	308	56	249	113	143	2174	71	85	2837	174
RTOR Reduction (vph)	0	102	0	0	39	0	0	3	0	0	5	0
Lane Group Flow (vph)	203	593	0	56	323	0	143	2242	0	85	3006	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	23.9	37.1		8.8	22.0		12.8	72.8		12.5	72.5	
Effective Green, g (s)	23.9	37.1		8.8	22.0		12.8	72.8		12.5	72.5	
Actuated g/C Ratio	0.16	0.25		0.06	0.15		0.09	0.49		0.08	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	282	817		103	494		151	3094		147	3070	
v/s Ratio Prot	0.11	c0.18		0.03	c0.10		c0.08	0.35		0.05	c0.47	
v/s Ratio Perm												
v/c Ratio	0.72	0.73		0.54	0.65		0.95	0.72		0.58	0.98	
Uniform Delay, d1	59.9	51.8		68.6	60.4		68.3	30.6		66.2	38.0	
Progression Factor	1.00	1.00		1.00	1.00		0.90	0.97		0.87	0.86	
Incremental Delay, d2	8.5	3.2		5.8	3.1		51.9	1.3		4.1	9.9	
Delay (s)	68.4	55.0		74.4	63.5		113.2	31.0		61.9	42.7	
Level of Service	E	E		E	E		F	C		E	D	
Approach Delay (s)		58.0			65.0			35.9			43.2	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	44.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	94.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	115	18	64	42	4	17	53	2212	25	20	2952	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1667	1478		1662	1478	1770	6397		1770	6399	
Flt Permitted		0.72	1.00		0.55	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1252	1478		955	1478	1770	6397		1770	6399	
Peak-hour factor, PHF	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	126	20	70	46	4	19	58	2431	27	22	3244	30
RTOR Reduction (vph)	0	0	59	0	0	16	0	1	0	0	1	0
Lane Group Flow (vph)	0	146	11	0	50	3	58	2457	0	22	3273	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		24.3	24.3		24.3	24.3	8.6	104.9		5.5	101.8	
Effective Green, g (s)		24.3	24.3		24.3	24.3	8.6	104.9		5.5	101.8	
Actuated g/C Ratio		0.16	0.16		0.16	0.16	0.06	0.70		0.04	0.68	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		202	239		154	239	101	4473		64	4342	
v/s Ratio Prot							c0.03	c0.38		0.01	c0.51	
v/s Ratio Perm		c0.12	0.01		0.05	0.00						
v/c Ratio		0.72	0.05		0.32	0.01	0.57	0.55		0.34	0.75	
Uniform Delay, d1		59.7	53.1		55.6	52.8	68.9	11.0		70.5	15.9	
Progression Factor		1.00	1.00		1.00	1.00	1.08	0.20		1.21	0.21	
Incremental Delay, d2		12.0	0.1		1.2	0.0	0.7	0.0		1.3	0.5	
Delay (s)		71.7	53.2		56.8	52.8	75.0	2.2		86.5	3.9	
Level of Service		E	D		E	D	E	A		F	A	
Approach Delay (s)		65.7			55.7			3.9			4.4	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	6.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	73.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	234	1350	142	229	927	95	192	2018	161	392	2282	282
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.99		1.00	0.99		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	5013		3433	5014		3433	6337		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	5013		3433	5014		3433	6337		3433	6408	1583
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	260	1500	158	254	1030	106	213	2242	179	436	2536	313
RTOR Reduction (vph)	0	8	0	0	9	0	0	8	0	0	0	104
Lane Group Flow (vph)	260	1650	0	254	1127	0	213	2413	0	436	2536	209
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Effective Green, g (s)	14.1	46.1		11.6	43.6		13.0	54.2		19.1	60.3	60.3
Actuated g/C Ratio	0.09	0.31		0.08	0.29		0.09	0.36		0.13	0.40	0.40
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	322	1540		265	1457		297	2289		437	2576	636
v/s Ratio Prot	0.08	c0.33		c0.07	0.22		0.06	c0.38		0.13	c0.40	
v/s Ratio Perm												0.13
v/c Ratio	0.81	1.07		0.96	0.77		0.72	1.05		1.00	0.98	0.33
Uniform Delay, d1	66.6	52.0		69.0	48.7		66.7	47.9		65.4	44.4	30.9
Progression Factor	1.00	1.00		1.00	1.00		1.03	0.57		0.69	0.56	0.43
Incremental Delay, d2	13.0	44.7		43.1	2.6		5.0	32.6		34.3	11.3	0.9
Delay (s)	79.7	96.6		112.1	51.3		73.5	59.8		79.8	36.1	14.2
Level of Service	E	F		F	D		E	E		E	D	B
Approach Delay (s)		94.3			62.4			60.9			39.8	
Approach LOS		F			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	60.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.05		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	97.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

9: Beach Blvd & Slater Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	709	199	72	433	106	122	1716	39	204	2274	183
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.97		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3423		1770	3435		1770	6387		1770	6336	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3423		1770	3435		1770	6387		1770	6336	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	184	771	216	78	471	115	133	1865	42	222	2472	199
RTOR Reduction (vph)	0	17	0	0	15	0	0	2	0	0	8	0
Lane Group Flow (vph)	184	970	0	78	571	0	133	1905	0	222	2663	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.3	43.0		12.0	30.7		12.5	52.5		21.8	61.8	
Effective Green, g (s)	24.3	43.0		12.0	30.7		12.5	52.5		21.8	61.8	
Actuated g/C Ratio	0.16	0.29		0.08	0.20		0.08	0.35		0.15	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	981		141	703		147	2235		257	2610	
v/s Ratio Prot	0.10	c0.28		0.04	c0.17		0.08	c0.30		0.13	c0.42	
v/s Ratio Perm												
v/c Ratio	0.64	0.99		0.55	0.81		0.90	0.85		0.86	1.02	
Uniform Delay, d1	58.8	53.3		66.4	56.9		68.2	45.2		62.6	44.1	
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.76		0.86	0.53	
Incremental Delay, d2	4.9	25.7		4.6	7.1		44.6	4.1		7.7	14.5	
Delay (s)	63.7	78.9		71.1	64.0		100.3	38.5		61.4	37.8	
Level of Service	E	E		E	E		F	D		E	D	
Approach Delay (s)		76.5			64.8			42.6			39.6	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	49.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.00		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	97.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	4	27	41	2	71	18	1787	65	123	2587	16
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1708			1676		1770	6374		1770	6402	
Flt Permitted		0.72			0.85		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1268			1458		1770	6374		1770	6402	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	30	4	28	42	2	72	18	1823	66	126	2640	16
RTOR Reduction (vph)	0	24	0	0	49	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	38	0	0	67	0	18	1887	0	126	2656	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		17.3			17.3		6.0	100.9		15.9	110.8	
Effective Green, g (s)		17.3			17.3		6.0	100.9		15.9	110.8	
Actuated g/C Ratio		0.12			0.12		0.04	0.67		0.11	0.74	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		146			168		70	4287		187	4728	
v/s Ratio Prot							0.01	0.30		c0.07	c0.41	
v/s Ratio Perm		0.03			c0.05							
v/c Ratio		0.26			0.40		0.26	0.44		0.67	0.56	
Uniform Delay, d1		60.5			61.5		69.8	11.4		64.6	8.8	
Progression Factor		1.00			1.00		1.15	0.07		1.19	0.10	
Incremental Delay, d2		1.0			1.6		1.1	0.2		2.2	0.1	
Delay (s)		61.5			63.1		81.1	1.0		78.7	1.0	
Level of Service		E			E		F	A		E	A	
Approach Delay (s)		61.5			63.1			1.7			4.5	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	5.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	67.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	99	420	134	135	384	151	180	1675	143	333	1893	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3389		1770	6332		1770	6327	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3389		1770	6332		1770	6327	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	105	447	143	144	409	161	191	1782	152	354	2014	185
RTOR Reduction (vph)	0	21	0	0	30	0	0	8	0	0	9	0
Lane Group Flow (vph)	105	569	0	144	540	0	191	1926	0	354	2190	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	12.2	30.8		13.2	31.8		18.9	54.0		31.3	66.4	
Effective Green, g (s)	12.2	30.8		13.2	31.8		18.9	54.0		31.3	66.4	
Actuated g/C Ratio	0.08	0.21		0.09	0.21		0.13	0.36		0.21	0.44	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	143	700		155	718		223	2279		369	2800	
v/s Ratio Prot	0.06	c0.17		c0.08	0.16		0.11	c0.30		c0.20	0.35	
v/s Ratio Perm												
v/c Ratio	0.73	0.81		0.93	0.75		0.86	0.84		0.96	0.78	
Uniform Delay, d1	67.3	56.8		67.9	55.4		64.2	44.1		58.7	35.6	
Progression Factor	1.00	1.00		1.00	1.00		0.72	0.64		0.41	0.23	
Incremental Delay, d2	15.4	7.3		50.4	4.6		21.8	3.4		32.2	1.9	
Delay (s)	82.7	64.2		118.4	60.0		68.2	31.7		56.5	10.2	
Level of Service	F	E		F	E		E	C		E	B	
Approach Delay (s)		67.0			71.8			35.0			16.6	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	35.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	88.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	325	422	107	130	369	154	115	1489	161	231	1563	430
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6314		3433	5085	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	346	449	114	138	393	164	122	1584	171	246	1663	457
RTOR Reduction (vph)	0	0	92	0	0	132	0	10	0	0	0	23
Lane Group Flow (vph)	346	449	22	138	393	32	122	1745	0	246	1663	434
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	28.3	28.3	28.3	19.5	19.5	19.5	10.0	65.5		14.0	69.5	97.8
Effective Green, g (s)	28.3	28.3	28.3	19.5	19.5	19.5	10.0	65.5		14.0	69.5	97.8
Actuated g/C Ratio	0.19	0.19	0.19	0.13	0.13	0.13	0.07	0.44		0.09	0.46	0.65
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	647	667	298	230	460	205	228	2757		320	2356	1032
v/s Ratio Prot	0.10	c0.13		0.08	c0.11		0.04	c0.28		0.07	c0.33	0.27
v/s Ratio Perm			0.01			0.02						
v/c Ratio	0.53	0.67	0.07	0.60	0.85	0.15	0.54	0.63		0.77	0.71	0.42
Uniform Delay, d1	54.9	56.6	50.1	61.6	63.9	57.9	67.8	32.9		66.4	32.1	12.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.38	0.40	0.25
Incremental Delay, d2	0.5	2.2	0.1	2.8	13.8	0.1	1.2	1.1		6.2	1.1	0.1
Delay (s)	55.4	58.8	50.1	64.4	77.7	58.1	69.0	34.0		98.1	13.8	3.2
Level of Service	E	E	D	E	E	E	E	C		F	B	A
Approach Delay (s)		56.4			70.4			36.3			20.6	
Approach LOS		E			E			D			C	

Intersection Summary				
HCM 2000 Control Delay	37.1	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	77.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	650	192	129	362	151	126	1352	90	162	1429	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3383		1770	5038		1770	5024	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3383		1770	5038		1770	5024	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	211	691	204	137	385	161	134	1438	96	172	1520	132
RTOR Reduction (vph)	0	0	152	0	40	0	0	5	0	0	7	0
Lane Group Flow (vph)	211	691	52	137	506	0	134	1529	0	172	1645	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	19.4	33.2	33.2	13.1	26.9		12.9	48.1		14.4	49.6	
Effective Green, g (s)	19.4	33.2	33.2	13.1	26.9		12.9	48.1		14.4	49.6	
Actuated g/C Ratio	0.15	0.26	0.26	0.10	0.21		0.10	0.37		0.11	0.38	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	264	903	404	178	700		175	1864		196	1916	
v/s Ratio Prot	0.12	c0.20		0.08	c0.15		0.08	c0.30		0.10	c0.33	
v/s Ratio Perm			0.03									
v/c Ratio	0.80	0.77	0.13	0.77	0.72		0.77	0.82		0.88	0.86	
Uniform Delay, d1	53.4	44.8	37.3	57.0	48.1		57.1	37.0		56.9	37.0	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.61	1.01		1.00	1.00	
Incremental Delay, d2	14.5	4.2	0.2	16.3	4.0		12.4	3.1		31.9	5.3	
Delay (s)	67.9	48.9	37.5	73.3	52.0		47.5	40.5		88.9	42.2	
Level of Service	E	D	D	E	D		D	D		F	D	
Approach Delay (s)		50.4			56.3			41.1			46.6	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	82.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	168	503	205	144	451	128	84	1242	92	110	1506	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3422		1770	5033		1770	5032	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3422		1770	5033		1770	5032	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	177	529	216	152	475	135	88	1307	97	116	1585	118
RTOR Reduction (vph)	0	0	166	0	22	0	0	6	0	0	6	0
Lane Group Flow (vph)	177	529	50	152	588	0	88	1398	0	116	1697	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.2	29.9	29.9	14.2	28.9		11.7	53.4		12.1	53.8	
Effective Green, g (s)	15.2	29.9	29.9	14.2	28.9		11.7	53.4		12.1	53.8	
Actuated g/C Ratio	0.12	0.23	0.23	0.11	0.22		0.09	0.41		0.09	0.41	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	206	813	364	193	760		159	2067		164	2082	
v/s Ratio Prot	c0.10	0.15		0.09	c0.17		0.05	c0.28		0.07	c0.34	
v/s Ratio Perm			0.03									
v/c Ratio	0.86	0.65	0.14	0.79	0.77		0.55	0.68		0.71	0.82	
Uniform Delay, d1	56.3	45.3	39.8	56.4	47.5		56.6	31.3		57.2	33.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		1.10	0.43		0.78	0.62	
Incremental Delay, d2	28.1	1.9	0.2	18.8	4.9		3.9	1.7		8.0	2.2	
Delay (s)	84.4	47.2	40.0	75.3	52.4		66.0	15.1		52.6	23.0	
Level of Service	F	D	D	E	D		E	B		D	C	
Approach Delay (s)		52.6			57.0			18.1			24.9	
Approach LOS		D			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	32.9	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	84.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	45	21	84	29	10	50	43	1306	46	56	1514	74
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.92			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.99			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1696			1796	1583	1770	5060		1770	5050	
Flt Permitted		0.89			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1530			1158	1583	1770	5060		1770	5050	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	47	22	88	31	11	53	45	1375	48	59	1594	78
RTOR Reduction (vph)	0	45	0	0	0	46	0	2	0	0	3	0
Lane Group Flow (vph)	0	112	0	0	42	7	45	1421	0	59	1669	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		18.3			18.3	18.3	8.4	87.0		9.5	88.1	
Effective Green, g (s)		18.3			18.3	18.3	8.4	87.0		9.5	88.1	
Actuated g/C Ratio		0.14			0.14	0.14	0.06	0.67		0.07	0.68	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		215			163	222	114	3386		129	3422	
v/s Ratio Prot							0.03	c0.28		0.03	c0.33	
v/s Ratio Perm		c0.07			0.04	0.00						
v/c Ratio		0.52			0.26	0.03	0.39	0.42		0.46	0.49	
Uniform Delay, d1		51.8			49.8	48.2	58.4	9.9		57.8	10.1	
Progression Factor		1.00			1.00	1.00	1.22	0.39		0.63	0.67	
Incremental Delay, d2		2.3			0.8	0.1	1.8	0.3		1.6	0.3	
Delay (s)		54.1			50.6	48.3	73.0	4.2		37.9	7.1	
Level of Service		D			D	D	E	A		D	A	
Approach Delay (s)		54.1			49.3			6.3			8.1	
Approach LOS		D			D			A			A	

Intersection Summary				
HCM 2000 Control Delay	10.6	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.49			
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	67.3%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	125	779	100	133	443	239	91	970	191	411	1082	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4999		1770	3539	1583	1770	4960		3433	5013	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4999		1770	3539	1583	1770	4960		3433	5013	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	129	803	103	137	457	246	94	1000	197	424	1115	116
RTOR Reduction (vph)	0	14	0	0	0	72	0	20	0	0	9	0
Lane Group Flow (vph)	129	892	0	137	457	174	94	1177	0	424	1222	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	13.6	31.4		13.4	31.2	50.3	13.3	44.3		19.1	50.1	
Effective Green, g (s)	13.6	31.4		13.4	31.2	50.3	13.3	44.3		19.1	50.1	
Actuated g/C Ratio	0.10	0.24		0.10	0.24	0.39	0.10	0.34		0.15	0.39	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	185	1207		182	849	612	181	1690		504	1931	
v/s Ratio Prot	0.07	c0.18		c0.08	0.13	0.04	0.05	c0.24		c0.12	0.24	
v/s Ratio Perm						0.07						
v/c Ratio	0.70	0.74		0.75	0.54	0.28	0.52	0.70		0.84	0.63	
Uniform Delay, d1	56.2	45.5		56.7	43.1	27.4	55.3	37.0		54.0	32.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.60	0.43		0.73	0.55	
Incremental Delay, d2	8.9	2.9		14.4	1.2	0.1	0.9	2.1		10.6	1.4	
Delay (s)	65.1	48.5		71.1	44.3	27.5	34.3	18.2		50.1	19.3	
Level of Service	E	D		E	D	C	C	B		D	B	
Approach Delay (s)		50.5			43.8			19.4			27.2	
Approach LOS		D			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	33.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	78.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	110	217	52	29	121	234	16	885	64	235	1121	44
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1809		1770	1863	1583	1770	5034		1770	5056	
Flt Permitted	0.60	1.00		0.25	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1119	1809		468	1863	1583	1770	5034		1770	5056	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	122	241	58	32	134	260	18	983	71	261	1246	49
RTOR Reduction (vph)	0	8	0	0	0	207	0	6	0	0	2	0
Lane Group Flow (vph)	122	291	0	32	134	53	18	1048	0	261	1293	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	26.7	26.7		26.7	26.7	26.7	4.0	48.8		38.1	82.9	
Effective Green, g (s)	26.7	26.7		26.7	26.7	26.7	4.0	48.8		38.1	82.9	
Actuated g/C Ratio	0.21	0.21		0.21	0.21	0.21	0.03	0.38		0.29	0.64	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	229	371		96	382	325	54	1889		518	3224	
v/s Ratio Prot		c0.16			0.07		0.01	c0.21		c0.15	0.26	
v/s Ratio Perm	0.11			0.07		0.03						
v/c Ratio	0.53	0.78		0.33	0.35	0.16	0.33	0.55		0.50	0.40	
Uniform Delay, d1	46.1	48.9		44.1	44.2	42.5	61.7	32.0		38.1	11.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.29	0.87		0.45	0.33	
Incremental Delay, d2	2.4	10.4		2.0	0.6	0.2	3.2	1.1		0.7	0.3	
Delay (s)	48.5	59.3		46.1	44.8	42.7	83.1	29.1		17.6	4.1	
Level of Service	D	E		D	D	D	F	C		B	A	
Approach Delay (s)		56.2			43.6			30.0			6.4	
Approach LOS		E			D			C			A	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.59		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	72.7%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	167	448	46	55	362	257	41	485	68	291	733	201
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.94		1.00	0.98		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3490		1770	3319		1770	4992		1770	4921	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3490		1770	3319		1770	4992		1770	4921	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	180	482	49	59	389	276	44	522	73	313	788	216
RTOR Reduction (vph)	0	7	0	0	107	0	0	13	0	0	34	0
Lane Group Flow (vph)	180	524	0	59	558	0	44	582	0	313	970	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.5	36.0		8.0	27.5		10.3	38.9		26.0	54.6	
Effective Green, g (s)	16.5	36.0		8.0	27.5		10.3	38.9		26.0	54.6	
Actuated g/C Ratio	0.13	0.28		0.06	0.21		0.08	0.30		0.20	0.42	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	224	966		108	702		140	1493		354	2066	
v/s Ratio Prot	c0.10	0.15		0.03	c0.17		0.02	c0.12		c0.18	c0.20	
v/s Ratio Perm												
v/c Ratio	0.80	0.54		0.55	0.79		0.31	0.39		0.88	0.47	
Uniform Delay, d1	55.2	40.0		59.2	48.6		56.5	36.1		50.5	27.2	
Progression Factor	1.00	1.00		1.00	1.00		0.92	0.87		1.25	0.46	
Incremental Delay, d2	17.6	0.3		3.0	5.8		0.5	0.8		20.5	0.7	
Delay (s)	72.7	40.3		62.2	54.4		52.4	32.2		83.6	13.1	
Level of Service	E	D		E	D		D	C		F	B	
Approach Delay (s)		48.5			55.0			33.6			29.9	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	74.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Alternative 6 Plus Project AM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	39	0	82	0	0	0	75	462	0	0	770	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5046	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5046	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	41	0	87	0	0	0	80	491	0	0	819	44
RTOR Reduction (vph)	0	0	77	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	41	0	10	0	0	0	80	491	0	0	861	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.6		14.6				10.0	104.4			89.5	
Effective Green, g (s)	14.6		14.6				10.0	104.4			89.5	
Actuated g/C Ratio	0.11		0.11				0.08	0.80			0.69	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	198		177				136	4083			3473	
v/s Ratio Prot							c0.05	0.10			c0.17	
v/s Ratio Perm	c0.02		0.01									
v/c Ratio	0.21		0.06				0.59	0.12			0.25	
Uniform Delay, d1	52.4		51.5				58.0	2.8			7.6	
Progression Factor	1.00		1.00				1.22	0.43			0.27	
Incremental Delay, d2	0.5		0.1				6.0	0.1			0.2	
Delay (s)	53.0		51.7				76.7	1.2			2.2	
Level of Service	D		D				E	A			A	
Approach Delay (s)		52.1			0.0			11.8			2.2	
Approach LOS		D			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	9.8	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.27		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	39.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	1866	24	20	824	429	5	15	31	688	54	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5076		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5076		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	93	1885	24	20	832	433	5	15	31	695	55	158
RTOR Reduction (vph)	0	0	0	0	0	214	0	0	28	0	0	0
Lane Group Flow (vph)	93	1909	0	20	832	219	5	15	3	695	55	158
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	9.8	72.9		2.8	65.9	65.9	5.4	11.6	11.6	21.0	27.2	130.0
Effective Green, g (s)	9.8	72.9		2.8	65.9	65.9	5.4	11.6	11.6	21.0	27.2	130.0
Actuated g/C Ratio	0.08	0.56		0.02	0.51	0.51	0.04	0.09	0.09	0.16	0.21	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	2.0	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	258	2846		38	1794	802	73	315	141	554	389	1583
v/s Ratio Prot	0.03	c0.38		0.01	c0.24		0.00	0.00		c0.20	0.03	
v/s Ratio Perm						0.14			0.00			c0.10
v/c Ratio	0.36	0.67		0.53	0.46	0.27	0.07	0.05	0.02	1.25	0.14	0.10
Uniform Delay, d1	57.1	20.1		62.9	20.7	18.3	59.9	54.1	54.0	54.5	41.9	0.0
Progression Factor	1.00	1.00		1.38	0.23	0.38	1.00	1.00	1.00	0.80	0.51	1.00
Incremental Delay, d2	0.3	1.3		5.7	0.8	0.8	0.1	0.0	0.0	128.6	0.1	0.1
Delay (s)	57.4	21.4		92.6	5.6	7.7	60.0	54.2	54.0	172.2	21.5	0.1
Level of Service	E	C		F	A	A	E	D	D	F	C	A
Approach Delay (s)		23.0			7.7			54.7			133.1	
Approach LOS		C			A			D			F	

Intersection Summary			
HCM 2000 Control Delay	42.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.73		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	76.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	168	2404	3	3	1069	139	14	16	8	207	1	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1770		1770	1585	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.51	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	949	1770		1381	1585	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	171	2453	3	3	1091	142	14	16	8	211	1	155
RTOR Reduction (vph)	0	0	1	0	0	62	0	6	0	0	125	0
Lane Group Flow (vph)	171	2453	2	3	1091	80	14	18	0	211	31	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	17.7	89.5	89.5	1.2	73.0	73.0	25.4	25.4		25.4	25.4	
Effective Green, g (s)	17.7	89.5	89.5	1.2	73.0	73.0	25.4	25.4		25.4	25.4	
Actuated g/C Ratio	0.14	0.69	0.69	0.01	0.56	0.56	0.20	0.20		0.20	0.20	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	240	3500	1089	16	2855	888	185	345		269	309	
v/s Ratio Prot	0.10	c0.48		c0.00	0.21			0.01			0.02	
v/s Ratio Perm			0.00			0.05	0.01			c0.15		
v/c Ratio	0.71	0.70	0.00	0.19	0.38	0.09	0.08	0.05		0.78	0.10	
Uniform Delay, d1	53.7	12.2	6.3	63.9	15.9	13.2	42.7	42.5		49.7	42.9	
Progression Factor	0.95	1.02	1.00	0.50	0.27	0.08	1.00	1.00		1.00	1.00	
Incremental Delay, d2	4.9	0.7	0.0	1.9	0.4	0.2	0.1	0.0		12.9	0.1	
Delay (s)	55.9	13.1	6.3	34.2	4.7	1.2	42.8	42.5		62.6	43.0	
Level of Service	E	B	A	C	A	A	D	D		E	D	
Approach Delay (s)		15.9			4.4			42.6			54.3	
Approach LOS		B			A			D			D	

Intersection Summary			
HCM 2000 Control Delay	16.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	2488	41	39	1036	67	14	23	6	252	61	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1717	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1807		1681	1717	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	136	2565	42	40	1068	69	14	24	6	260	63	186
RTOR Reduction (vph)	0	0	18	0	0	35	0	6	0	0	0	158
Lane Group Flow (vph)	136	2565	24	40	1068	34	14	24	0	161	162	28
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	17.8	75.8	75.8	5.4	63.4	63.4	10.2	10.2		19.8	19.8	19.8
Effective Green, g (s)	17.8	75.8	75.8	5.4	63.4	63.4	10.2	10.2		19.8	19.8	19.8
Actuated g/C Ratio	0.14	0.58	0.58	0.04	0.49	0.49	0.08	0.08		0.15	0.15	0.15
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	242	2964	923	73	2479	772	138	141		256	261	241
v/s Ratio Prot	0.08	c0.50		0.02	c0.21		0.01	c0.01		c0.10	0.09	
v/s Ratio Perm			0.02			0.02						0.02
v/c Ratio	0.56	0.87	0.03	0.55	0.43	0.04	0.10	0.17		0.63	0.62	0.12
Uniform Delay, d1	52.5	22.8	11.5	61.1	21.6	17.4	55.6	56.0		51.7	51.6	47.6
Progression Factor	0.88	0.73	19.27	1.33	0.32	0.24	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	1.4	2.8	0.0	4.2	0.5	0.1	0.1	0.2		3.5	3.3	0.1
Delay (s)	47.7	19.6	221.2	85.4	7.5	4.2	55.8	56.2		55.1	54.9	47.6
Level of Service	D	B	F	F	A	A	E	E		E	D	D
Approach Delay (s)		24.1			10.0			56.0			52.3	
Approach LOS		C			A			E			D	

Intersection Summary					
HCM 2000 Control Delay	23.9	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.74				
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.8		
Intersection Capacity Utilization	78.6%	ICU Level of Service	D		
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	261	2464	2	7	919	268	12	16	12	596	5	227
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1743		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1743		3433	1863	1583
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	261	2464	2	7	919	268	12	16	12	596	5	227
RTOR Reduction (vph)	0	0	1	0	0	88	0	12	0	0	0	177
Lane Group Flow (vph)	261	2464	1	7	919	180	12	16	0	596	5	50
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	22.4	75.5	75.5	0.8	53.9	82.8	4.1	4.1		28.9	28.9	28.9
Effective Green, g (s)	22.4	75.5	75.5	0.8	53.9	82.8	4.1	4.1		28.9	28.9	28.9
Actuated g/C Ratio	0.17	0.58	0.58	0.01	0.41	0.64	0.03	0.03		0.22	0.22	0.22
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	304	2953	919	10	2108	1008	55	54		763	414	351
v/s Ratio Prot	0.15	c0.48		c0.00	0.18	0.04	0.01	c0.01		c0.17	0.00	
v/s Ratio Perm			0.00			0.07						0.03
v/c Ratio	0.86	0.83	0.00	0.70	0.44	0.18	0.22	0.30		0.78	0.01	0.14
Uniform Delay, d1	52.3	22.2	11.4	64.5	27.2	9.7	61.4	61.6		47.6	39.4	40.6
Progression Factor	1.15	0.35	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.9	1.8	0.0	101.3	0.7	0.0	0.7	1.2		4.8	0.0	0.1
Delay (s)	72.8	9.5	11.4	165.8	27.8	9.7	62.1	62.7		52.4	39.4	40.7
Level of Service	E	A	B	F	C	A	E	E		D	D	D
Approach Delay (s)		15.5			24.6			62.5			49.1	
Approach LOS		B			C			E			D	

Intersection Summary					
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C		
HCM 2000 Volume to Capacity ratio	0.80				
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	20.7		
Intersection Capacity Utilization	88.1%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Scenario Report

Scenario:	ALT6+P1-AM
Command:	ALT6+P1-AM
Volume:	EX-AM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	2018-CUMUL+P2-AM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	ALT6+P1-AM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.763	D	xxxxx	0.830	+ 0.067
# 8 Beach Blvd & Warner Ave	C	xxxxx	0.789	D	xxxxx	0.846	+ 0.057
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.585	B	xxxxx	0.649	+ 0.064
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.580	B	xxxxx	0.639	+ 0.060
# 21 Newland St & Atlanta Ave	A	xxxxx	0.523	A	xxxxx	0.535	+ 0.011
# 22 Newland St & Hamilton Ave	A	xxxxx	0.593	B	xxxxx	0.690	+ 0.098
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.559	A	xxxxx	0.560	+ 0.000
# 26 Brookhurst St & Hamilton Ave	C	xxxxx	0.745	C	xxxxx	0.745	+ 0.000
# 30 Brookhurst Street & Talbert Av	D	xxxxx	0.845	D	xxxxx	0.862	+ 0.016
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.369	A	xxxxx	0.391	+ 0.022
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.424	A	xxxxx	0.446	+ 0.022
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.706	C	xxxxx	0.745	+ 0.038
# 34 Brookhurst Street & Garfield A	A	xxxxx	0.550	A	xxxxx	0.577	+ 0.026
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.555	A	xxxxx	0.579	+ 0.024
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.784	D	xxxxx	0.810	+ 0.026
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.271	A	xxxxx	0.281	+ 0.010
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.413	A	xxxxx	0.429	+ 0.016
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.265	A	xxxxx	0.280	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.323	A	xxxxx	0.338	+ 0.015

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.763
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 45 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	144	1666	278	448	2316	443	194	887	149	134	431	234				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	153	1768	295	476	2458	470	206	942	158	142	458	248				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	153	1768	295	476	2458	470	206	942	158	142	458	248				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	153	1768	295	476	2458	470	206	942	158	142	458	248				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	153	1768	295	476	2458	470	206	942	158	142	458	248				
OvlAdjVol:						264			82							
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	4.00	2.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	6800	3400	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.35	0.17	0.14	0.36	0.14	0.06	0.18	0.09	0.04	0.13	0.15				
OvlAdjV/S:						0.08			0.05							
Crit Moves:		****			****			****			****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.789
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 50 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	162	1716	147	365	1926	257	206	1195	90	214	847	88				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	172	1822	156	387	2044	273	219	1268	96	227	899	93				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.68	0.32	2.00	4.00	1.00	2.00	2.79	0.21	2.00	2.72	0.28				
Final Sat.:	3400	6263	537	3400	6800	1700	3400	4743	357	3400	4620	480				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.29	0.29	0.11	0.30	0.16	0.06	0.27	0.27	0.07	0.19	0.19				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.585
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	86	747	173		320	815	94		113	727	92		117	409	215	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	91	793	184		340	865	100		120	772	98		124	434	228	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	91	793	184		340	865	100		120	772	98		124	434	228	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	91	793	184		340	865	100		120	772	98		124	434	228	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	91	793	184		340	865	100		120	772	98		124	434	228	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.44	0.56		2.00	2.69	0.31		1.00	2.66	0.34		1.00	2.00	1.00	
Final Sat.:	1700	4141	959		3400	4573	527		1700	4527	573		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.19		0.10	0.19	0.19		0.07	0.17	0.17		0.07	0.13	0.13	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.580
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	5	14	29		494	51	137		83	1702	23		19	710	242	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	5	15	31		524	54	145		88	1807	24		20	754	257	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	5	15	0		524	54	0		88	1807	24		20	754	257	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	5	15	0		524	54	0		88	1807	24		20	754	257	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	5	15	0		524	54	0		88	1807	24		20	754	257	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.96	0.04		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	5032	68		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.00	0.00		0.15	0.03	0.00		0.03	0.36	0.36		0.01	0.22	0.15	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.523
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	128	316	39		151	377	71		84	516	238		29	354	150	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	136	335	41		160	400	75		89	548	253		31	376	159	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	136	335	41		160	400	75		89	548	253		31	376	159	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	136	335	41		160	400	75		89	548	253		31	376	159	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	136	335	41		160	400	75		89	548	253		31	376	159	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.78	0.22		1.00	1.68	0.32		1.00	1.37	0.63		1.00	1.40	0.60	
Final Sat.:	1700	3026	374		1700	2861	539		1700	2327	1073		1700	2388	1012	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.11	0.11		0.09	0.14	0.14		0.05	0.24	0.24		0.02	0.16	0.16	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.593
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	136	93		407	270	0		0	0	0		104	0	233	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	0	144	99		432	287	0		0	0	0		110	0	247	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	144	99		432	287	0		0	0	0		110	0	247	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	144	99		432	287	0		0	0	0		110	0	247	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	144	99		432	287	0		0	0	0		110	0	247	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.59	0.41		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1010	690		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.14	0.14		0.25	0.17	0.00		0.00	0.00	0.00		0.06	0.00	0.15	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.559
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	36	206	45	214	256	35	75	397	54	25	305	309				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	38	219	48	227	272	37	80	421	57	27	324	328				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	38	219	48	227	272	37	80	421	57	27	324	328				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	38	219	48	227	272	37	80	421	57	27	324	328				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	38	219	48	227	272	37	80	421	57	27	324	328				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.64	0.36	1.00	2.00	1.00	1.00	0.88	0.12	1.00	1.00	1.00				
Final Sat.:	1700	2790	610	1700	3400	1700	1700	1496	204	1700	1700	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.08	0.08	0.13	0.08	0.02	0.05	0.28	0.28	0.02	0.19	0.19				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.745
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	70	295	342	477	413	82	98	769	56	120	403	279				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	74	313	363	506	438	87	104	816	59	127	428	296				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	74	313	363	506	438	87	104	816	59	127	428	296				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	74	313	363	506	438	87	104	816	59	127	428	296				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	74	313	363	506	438	87	104	816	59	127	428	296				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	2.00	2.50	0.50	1.00	1.86	0.14	1.00	2.00	1.00				
Final Sat.:	1700	5100	1700	3400	4255	845	1700	3169	231	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.06	0.21	0.15	0.10	0.10	0.06	0.26	0.26	0.07	0.13	0.17				
Crit Moves:			****	****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.845
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 64 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	120	1043	420	650	955	356	135	1325	90	174	366	80				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	127	1107	446	690	1014	378	143	1406	96	185	389	85				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	5100	1700	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.04	0.22	0.26	0.20	0.20	0.22	0.04	0.28	0.06	0.05	0.11	0.05				
Crit Moves:			****	****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.369
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	45	1415	3	15	1274	150	11	1	8	3	0	10				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	48	1502	3	16	1352	159	12	1	8	3	0	11				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	48	1502	3	16	1352	0	12	1	8	3	0	11				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	48	1502	3	16	1352	0	12	1	8	3	0	11				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	48	1502	3	16	1352	0	12	1	8	3	0	11				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	0.55	0.05	0.40	0.23	0.00	0.77				
Final Sat.:	1700	5089	11	1700	5100	1700	935	85	680	392	0	1308				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.30	0.30	0.01	0.27	0.00	0.01	0.01	0.01	0.00	0.00	0.01				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.424
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	24	1367	9		19	1060	92		76	1	19		10	1	34	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	25	1451	10		20	1125	98		81	1	20		11	1	36	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	25	1451	10		20	1125	98		81	1	20		11	1	36	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	25	1451	10		20	1125	98		81	1	20		11	1	36	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	25	1451	10		20	1125	98		81	1	20		11	1	36	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.76	0.24		0.99	0.01	1.00		0.22	0.02	0.76	
Final Sat.:	1700	5067	33		1700	4693	407		1678	22	1700		378	38	1284	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.29	0.29		0.01	0.24	0.24		0.05	0.05	0.01		0.01	0.03	0.03	
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.706
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	70	1102	196		133	741	142		271	898	57		147	341	143	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	74	1170	208		141	787	151		288	953	61		156	362	152	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	74	1170	208		141	787	151		288	953	61		156	362	152	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	74	1170	208		141	787	151		288	953	61		156	362	152	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	74	1170	208		141	787	151		288	953	61		156	362	152	
OvlAdjVol:			130				7									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.88	0.12		2.00	1.41	0.59	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	3197	203		3400	2395	1005	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.23	0.12		0.08	0.15	0.09		0.08	0.30	0.30		0.05	0.15	0.15	
OvlAdjV/S:			0.08				0.00									
Crit Moves:		****				****					****			****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.550
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	78	1055	65		68	806	141		235	375	89		128	171	57	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	83	1120	69		72	856	150		249	398	94		136	182	61	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	83	1120	69		72	856	150		249	398	94		136	182	61	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	83	1120	69		72	856	150		249	398	94		136	182	61	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	83	1120	69		72	856	150		249	398	94		136	182	61	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.83	0.17		1.00	3.00	1.00		1.00	1.62	0.38		1.00	2.00	1.00	
Final Sat.:	1700	4804	296		1700	5100	1700		1700	2748	652		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.23	0.23		0.04	0.17	0.09		0.15	0.14	0.14		0.08	0.05	0.04	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.555
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	92	890	113		10	792	150		198	435	153		108	228	45	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	98	945	120		11	841	159		210	462	162		115	242	48	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	98	945	120		11	841	159		210	462	162		115	242	48	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	98	945	120		11	841	159		210	462	162		115	242	48	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	98	945	120		11	841	159		210	462	162		115	242	48	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.66	0.34		1.00	2.52	0.48		1.00	1.48	0.52		1.00	1.67	0.33	
Final Sat.:	1700	4525	575		1700	4288	812		1700	2515	885		1700	2840	560	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.21	0.21		0.01	0.20	0.20		0.12	0.18	0.18		0.07	0.09	0.09	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.784
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 49 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	80	657	267	382	676	155	234	1730	71	199	595	154				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	85	697	283	405	718	165	248	1836	75	211	632	163				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	85	697	283	405	718	165	248	1836	75	211	632	163				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	85	697	283	405	718	165	248	1836	75	211	632	163				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	85	697	283	405	718	165	248	1836	75	211	632	163				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.13	0.87	2.00	2.44	0.56	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	3626	1474	3400	4149	951	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.19	0.19	0.12	0.17	0.17	0.07	0.36	0.04	0.06	0.12	0.10				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.271
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	29	848	0	0	687	45	144	0	48	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	31	900	0	0	729	48	153	0	51	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	31	900	0	0	729	48	153	0	51	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	31	900	0	0	729	48	153	0	51	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	31	900	0	0	729	48	153	0	51	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.82	0.18	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4786	314	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.18	0.00	0.00	0.15	0.15	0.04	0.00	0.03	0.00	0.00	0.00				
Crit Moves:		****		****				****								

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.413
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 20 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	665	15	15	640	134	216	15	218	17	23	6				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	94	706	16	16	679	142	229	16	231	18	24	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	94	706	16	16	679	142	229	16	231	18	24	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	94	706	16	16	679	142	229	16	231	18	24	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	94	706	16	16	679	142	229	16	231	18	24	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.48	0.52	1.00	1.00	1.00	1.00	1.59	0.41				
Final Sat.:	1700	4988	113	1700	4217	883	1700	1700	1700	1700	2697	703				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.14	0.14	0.01	0.16	0.16	0.13	0.01	0.14	0.01	0.01	0.01				
Crit Moves:	****				****				****	****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.265
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	3	413	0	0	520	100	134	0	12	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	3	438	0	0	552	106	142	0	13	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	3	438	0	0	552	106	142	0	13	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	3	438	0	0	552	106	142	0	13	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	3	438	0	0	552	106	142	0	13	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.52	0.48	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4277	823	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.09	0.00	0.00	0.13	0.13	0.08	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
AM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.323
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	18	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1!	0 0
Volume Module:																
Base Vol:	54	398	2		3	516	15		7		1	207	3		0	6
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06		1.06	1.06	1.06		1.06	1.06
Initial Bse:	57	422	2		3	548	16		7		1	220	3		0	6
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
PHF Volume:	57	422	2		3	548	16		7		1	220	3		0	6
Reduct Vol:	0	0	0		0	0	0		0		0	0	0		0	0
Reduced Vol:	57	422	2		3	548	16		7		1	220	3		0	6
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
FinalVolume:	57	422	2		3	548	16		7		1	220	3		0	6
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700		1700	1700	1700		1700	1700
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00		1.00	1.00	1.00		1.00	1.00
Lanes:	1.00	2.98	0.02		1.00	3.00	1.00		1.00		0.01	0.99	0.33		0.00	0.67
Final Sat.:	1700	5075	26		1700	5100	1700		1700		8	1692	567		0	1133
Capacity Analysis Module:																
Vol/Sat:	0.03	0.08	0.08		0.00	0.11	0.01		0.00		0.13	0.13	0.00		0.00	0.01
Crit Moves:	****					****					****		****			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	246	270	94	341	240	102	188	1893	166	130	1983	193
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3402		3433	3380		3433	6330		3433	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3402		3433	3380		3433	6330		3433	6323	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	262	287	100	363	255	109	200	2014	177	138	2110	205
RTOR Reduction (vph)	0	28	0	0	38	0	0	8	0	0	9	0
Lane Group Flow (vph)	262	359	0	363	326	0	200	2183	0	138	2306	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.4	22.8		18.9	26.3		12.6	68.8		11.1	67.3	
Effective Green, g (s)	15.4	22.8		18.9	26.3		12.6	68.8		11.1	67.3	
Actuated g/C Ratio	0.11	0.16		0.13	0.19		0.09	0.49		0.08	0.48	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	377	554		463	634		308	3110		272	3039	
v/s Ratio Prot	0.08	c0.11		c0.11	0.10		0.06	c0.34		0.04	c0.36	
v/s Ratio Perm												
v/c Ratio	0.69	0.65		0.78	0.51		0.65	0.70		0.51	0.76	
Uniform Delay, d1	60.0	54.8		58.6	51.1		61.6	27.6		61.8	29.7	
Progression Factor	1.00	1.00		1.00	1.00		1.04	0.86		1.00	1.00	
Incremental Delay, d2	5.5	2.6		8.5	0.7		4.1	1.2		1.5	1.8	
Delay (s)	65.5	57.4		67.0	51.8		68.2	24.9		63.3	31.5	
Level of Service	E	E		E	D		E	C		E	C	
Approach Delay (s)		60.7			59.4			28.5			33.3	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	37.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	77.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	336	1020	0	2459	2250	993
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	339	1030	0	2484	2273	1003
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	339	1029	0	2484	2273	1003
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	18.9	59.4		111.3	64.8	140.0
Effective Green, g (s)	18.9	59.4		111.3	64.8	140.0
Actuated g/C Ratio	0.13	0.42		0.79	0.46	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	463	1272		5094	2965	1583
v/s Ratio Prot	0.10	c0.23		0.38	c0.35	
v/s Ratio Perm		0.14		0.01		0.63
v/c Ratio	0.73	0.81		0.49	0.77	0.63
Uniform Delay, d1	58.1	35.3		4.8	31.3	0.0
Progression Factor	1.00	1.00		0.26	0.58	1.00
Incremental Delay, d2	6.3	4.1		0.0	1.6	1.6
Delay (s)	64.4	39.4		1.3	19.7	1.6
Level of Service	E	D		A	B	A
Approach Delay (s)	45.6			1.3	14.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	15.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

3: Beach Blvd & Edinger Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	463	945	351	158	444	92	440	1982	495	231	2378	748
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	477	974	362	163	458	95	454	2043	510	238	2452	771
RTOR Reduction (vph)	0	0	56	0	0	77	0	0	144	0	0	109
Lane Group Flow (vph)	477	974	306	163	458	18	454	2043	366	238	2452	662
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	28.0	42.2	56.6	13.0	27.2	27.2	14.4	51.7	51.7	12.8	49.7	77.7
Effective Green, g (s)	28.0	42.2	56.6	13.0	27.2	27.2	14.4	51.7	51.7	12.8	49.7	77.7
Actuated g/C Ratio	0.20	0.30	0.40	0.09	0.19	0.19	0.10	0.37	0.37	0.09	0.36	0.56
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	686	1532	639	318	687	307	353	1877	584	313	2274	1638
v/s Ratio Prot	c0.14	0.19	0.05	0.05	c0.13		c0.13	c0.40		0.07	c0.38	0.08
v/s Ratio Perm			0.14			0.01			0.23			0.16
v/c Ratio	0.70	0.64	0.48	0.51	0.67	0.06	1.29	1.09	0.63	0.76	1.08	0.40
Uniform Delay, d1	52.0	42.3	30.8	60.5	52.2	46.0	62.8	44.1	36.2	62.1	45.1	17.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.64	0.51	0.26	0.97	0.76	0.51
Incremental Delay, d2	2.5	0.9	0.2	0.6	2.5	0.1	145.2	47.7	4.1	6.3	41.3	0.0
Delay (s)	54.5	43.1	31.0	61.1	54.7	46.1	185.5	70.1	13.6	66.4	75.5	9.2
Level of Service	D	D	C	E	D	D	F	E	B	E	E	A
Approach Delay (s)		43.7			55.0			78.0			60.1	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM 2000 Control Delay	62.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	93.5%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	23	46	107	33	149	143	2416	56	266	2623	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1675		1770	1863	1583	1770	6386		3433	6399	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1675		1770	1863	1583	1770	6386		3433	6399	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	30	23	47	109	34	152	146	2465	57	271	2677	26
RTOR Reduction (vph)	0	42	0	0	0	130	0	2	0	0	0	0
Lane Group Flow (vph)	30	28	0	109	34	22	146	2520	0	271	2703	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	16.3		12.2	20.7	20.7	17.3	76.0		15.9	74.6	
Effective Green, g (s)	7.8	16.3		12.2	20.7	20.7	17.3	76.0		15.9	74.6	
Actuated g/C Ratio	0.06	0.12		0.09	0.15	0.15	0.12	0.54		0.11	0.53	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	195		154	275	234	218	3466		389	3409	
v/s Ratio Prot	0.02	c0.02		c0.06	c0.02		c0.08	0.39		0.08	c0.42	
v/s Ratio Perm						0.01						
v/c Ratio	0.31	0.15		0.71	0.12	0.10	0.67	0.73		0.70	0.79	
Uniform Delay, d1	63.5	55.6		62.2	51.8	51.6	58.6	24.2		59.7	26.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.30	0.17		1.16	0.25	
Incremental Delay, d2	1.8	0.3		13.8	0.2	0.2	4.8	0.9		1.5	0.5	
Delay (s)	65.3	55.9		76.0	52.0	51.7	80.9	5.1		70.8	7.2	
Level of Service	E	E		E	D	D	F	A		E	A	
Approach Delay (s)		58.7			60.7			9.2			13.0	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	14.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	71.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	38	3	28	280	8	212	53	2424	117	353	2445	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.86		1.00	0.95	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1610		1681	1563	1504	1770	6364		3433	6397	
Flt Permitted	0.95	1.00		0.95	0.97	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1610		1681	1563	1504	1770	6364		3433	6397	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	40	3	29	292	8	221	55	2525	122	368	2547	28
RTOR Reduction (vph)	0	26	0	0	12	138	0	4	0	0	1	0
Lane Group Flow (vph)	40	6	0	181	164	26	55	2643	0	368	2574	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.5	13.5		22.1	22.1	22.1	8.3	71.0		15.5	78.2	
Effective Green, g (s)	13.5	13.5		22.1	22.1	22.1	8.3	71.0		15.5	78.2	
Actuated g/C Ratio	0.10	0.10		0.16	0.16	0.16	0.06	0.51		0.11	0.56	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	170	155		265	246	237	104	3227		380	3573	
v/s Ratio Prot	c0.02	0.00		c0.11	0.11		0.03	c0.42		c0.11	0.40	
v/s Ratio Perm						0.02						
v/c Ratio	0.24	0.04		0.68	0.67	0.11	0.53	0.82		0.97	0.72	
Uniform Delay, d1	58.5	57.4		55.6	55.5	50.5	64.0	29.1		62.0	22.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.37	0.35		0.53	0.27	
Incremental Delay, d2	0.7	0.1		7.1	6.7	0.2	3.2	1.6		29.4	0.9	
Delay (s)	59.2	57.5		62.7	62.2	50.7	90.8	12.0		62.0	7.0	
Level of Service	E	E		E	E	D	F	B		E	A	
Approach Delay (s)		58.4			58.8			13.6			13.9	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	238	178	160	40	169	114	149	2256	58	141	2459	210
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.93		1.00	0.94		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3288		1770	3326		1770	6384		1770	6332	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3288		1770	3326		1770	6384		1770	6332	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	240	180	162	40	171	115	151	2279	59	142	2484	212
RTOR Reduction (vph)	0	122	0	0	98	0	0	2	0	0	9	0
Lane Group Flow (vph)	240	220	0	40	188	0	151	2336	0	142	2687	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	26.3	34.9		8.8	17.4		18.1	65.1		12.4	59.4	
Effective Green, g (s)	26.3	34.9		8.8	17.4		18.1	65.1		12.4	59.4	
Actuated g/C Ratio	0.19	0.25		0.06	0.12		0.13	0.46		0.09	0.42	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	332	819		111	413		228	2968		156	2686	
v/s Ratio Prot	c0.14	0.07		0.02	c0.06		0.09	c0.37		0.08	c0.42	
v/s Ratio Perm												
v/c Ratio	0.72	0.27		0.36	0.46		0.66	0.79		0.91	1.00	
Uniform Delay, d1	53.4	42.3		62.9	56.9		58.0	31.6		63.2	40.3	
Progression Factor	1.00	1.00		1.00	1.00		0.62	0.93		0.70	0.57	
Incremental Delay, d2	7.6	0.2		2.0	0.8		5.8	1.8		36.9	14.7	
Delay (s)	61.0	42.5		64.9	57.7		41.7	31.2		81.3	37.8	
Level of Service	E	D		E	E		D	C		F	D	
Approach Delay (s)		50.1			58.6			31.8			40.0	
Approach LOS		D			E			C			D	

Intersection Summary			
HCM 2000 Control Delay	38.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	85.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	88	7	21	83	12	28	124	2326	55	114	2368	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1661	1478		1665	1478	1770	6386		1770	6387	
Flt Permitted		0.61	1.00		0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1059	1478		1073	1478	1770	6386		1770	6387	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	92	7	22	86	12	29	129	2423	57	119	2467	54
RTOR Reduction (vph)	0	0	19	0	0	25	0	1	0	0	2	0
Lane Group Flow (vph)	0	99	3	0	98	4	129	2479	0	119	2519	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		20.3	20.3		20.3	20.3	19.4	90.3		14.1	85.0	
Effective Green, g (s)		20.3	20.3		20.3	20.3	19.4	90.3		14.1	85.0	
Actuated g/C Ratio		0.15	0.15		0.15	0.15	0.14	0.64		0.10	0.61	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		153	214		155	214	245	4118		178	3877	
v/s Ratio Prot							0.07	c0.39		0.07	c0.39	
v/s Ratio Perm		c0.09	0.00		0.09	0.00						
v/c Ratio		0.65	0.01		0.63	0.02	0.53	0.60		0.67	0.65	
Uniform Delay, d1		56.5	51.3		56.3	51.3	56.0	14.4		60.7	17.8	
Progression Factor		1.00	1.00		1.00	1.00	0.66	0.19		1.00	0.51	
Incremental Delay, d2		9.1	0.0		8.1	0.0	1.1	0.4		3.3	0.3	
Delay (s)		65.5	51.3		64.5	51.4	38.2	3.1		63.8	9.4	
Level of Service		E	D		E	D	D	A		E	A	
Approach Delay (s)		62.9			61.5			4.9			11.8	
Approach LOS		E			E			A			B	

Intersection Summary				
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3	
Intersection Capacity Utilization	68.2%	ICU Level of Service	C	
Analysis Period (min)	15			

c Critical Lane Group

8: Beach Blvd & Warner Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	368	843	170	258	943	146	288	1953	192	165	1904	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.97		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4958		3433	4983		3433	6322		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4958		3433	4983		3433	6322		3433	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	376	860	173	263	962	149	294	1993	196	168	1943	286
RTOR Reduction (vph)	0	22	0	0	15	0	0	11	0	0	0	126
Lane Group Flow (vph)	376	1011	0	263	1096	0	294	2178	0	168	1943	160
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.6	39.2		13.9	35.5		14.8	55.9		12.0	53.1	53.1
Effective Green, g (s)	17.6	39.2		13.9	35.5		14.8	55.9		12.0	53.1	53.1
Actuated g/C Ratio	0.13	0.28		0.10	0.25		0.11	0.40		0.09	0.38	0.38
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	431	1388		340	1263		362	2524		294	2430	600
v/s Ratio Prot	c0.11	0.20		0.08	c0.22		0.09	c0.34		0.05	c0.30	
v/s Ratio Perm												0.10
v/c Ratio	0.87	0.73		0.77	0.87		0.81	0.86		0.57	0.80	0.27
Uniform Delay, d1	60.1	45.6		61.5	50.0		61.2	38.5		61.5	38.7	30.0
Progression Factor	1.00	1.00		1.00	1.00		0.98	0.48		0.68	0.52	0.55
Incremental Delay, d2	16.9	1.9		9.6	6.5		8.1	2.7		1.3	2.2	0.8
Delay (s)	77.0	47.5		71.1	56.5		67.8	21.3		42.9	22.3	17.3
Level of Service	E	D		E	E		E	C		D	C	B
Approach Delay (s)		55.4			59.3			26.8			23.1	
Approach LOS		E			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	36.8	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.87			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0	
Intersection Capacity Utilization	90.5%	ICU Level of Service	E	
Analysis Period (min)	15			

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	380	179	100	436	117	153	1889	81	182	2089	184
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.97		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3370		1770	3427		1770	6368		1770	6330	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3370		1770	3427		1770	6368		1770	6330	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	188	396	186	104	454	122	159	1968	84	190	2176	192
RTOR Reduction (vph)	0	41	0	0	19	0	0	4	0	0	9	0
Lane Group Flow (vph)	188	541	0	104	557	0	159	2048	0	190	2359	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	19.5	34.9		13.7	29.1		13.7	52.9		17.8	57.0	
Effective Green, g (s)	19.5	34.9		13.7	29.1		13.7	52.9		17.8	57.0	
Actuated g/C Ratio	0.14	0.25		0.10	0.21		0.10	0.38		0.13	0.41	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	246	840		173	712		173	2406		225	2577	
v/s Ratio Prot	c0.11	0.16		0.06	c0.16		0.09	c0.32		0.11	c0.37	
v/s Ratio Perm												
v/c Ratio	0.76	0.64		0.60	0.78		0.92	0.85		0.84	0.92	
Uniform Delay, d1	58.0	47.0		60.5	52.5		62.6	39.9		59.7	39.2	
Progression Factor	1.00	1.00		1.00	1.00		0.87	0.88		0.95	0.50	
Incremental Delay, d2	13.2	1.7		5.8	5.6		40.5	3.4		17.5	4.6	
Delay (s)	71.2	48.7		66.3	58.1		94.7	38.4		74.2	24.1	
Level of Service	E	D		E	E		F	D		E	C	
Approach Delay (s)		54.2			59.3			42.5			27.8	
Approach LOS		D			E			D			C	

Intersection Summary			
HCM 2000 Control Delay	39.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	17	3	14	113	3	130	13	2065	59	72	2369	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.94			0.93		1.00	1.00		1.00	1.00	
Flt Protected		0.98			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1715			1691		1770	6381		1770	6400	
Flt Permitted		0.79			0.84		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1386			1449		1770	6381		1770	6400	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	18	3	15	118	3	135	14	2151	61	75	2468	20
RTOR Reduction (vph)	0	12	0	0	34	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	24	0	0	222	0	14	2210	0	75	2488	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		27.4			27.4		4.0	86.7		10.0	92.7	
Effective Green, g (s)		27.4			27.4		4.0	86.7		10.0	92.7	
Actuated g/C Ratio		0.20			0.20		0.03	0.62		0.07	0.66	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		271			283		50	3951		126	4237	
v/s Ratio Prot							0.01	0.35		c0.04	c0.39	
v/s Ratio Perm		0.02			c0.15							
v/c Ratio		0.09			0.79		0.28	0.56		0.60	0.59	
Uniform Delay, d1		46.1			53.5		66.6	15.5		63.0	13.1	
Progression Factor		1.00			1.00		1.16	0.13		1.17	0.16	
Incremental Delay, d2		0.1			13.3		0.8	0.2		3.8	0.3	
Delay (s)		46.2			66.8		77.8	2.2		77.7	2.4	
Level of Service		D			E		E	A		E	A	
Approach Delay (s)		46.2			66.8			2.7			4.6	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	7.2	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	73.7%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	157	393	183	203	384	240	247	1717	193	295	2108	178
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.94		1.00	0.98		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3370		1770	3335		1770	6311		1770	6333	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3370		1770	3335		1770	6311		1770	6333	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	167	418	195	216	409	255	263	1827	205	314	2243	189
RTOR Reduction (vph)	0	43	0	0	70	0	0	14	0	0	9	0
Lane Group Flow (vph)	167	570	0	216	594	0	263	2018	0	314	2423	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.4	29.7		22.8	38.1		19.2	43.5		23.3	47.6	
Effective Green, g (s)	14.4	29.7		22.8	38.1		19.2	43.5		23.3	47.6	
Actuated g/C Ratio	0.10	0.21		0.16	0.27		0.14	0.31		0.17	0.34	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	182	714		288	907		242	1960		294	2153	
v/s Ratio Prot	0.09	c0.17		c0.12	0.18		0.15	c0.32		0.18	c0.38	
v/s Ratio Perm												
v/c Ratio	0.92	0.80		0.75	0.66		1.09	1.03		1.07	1.13	
Uniform Delay, d1	62.2	52.3		55.9	45.1		60.4	48.2		58.4	46.2	
Progression Factor	1.00	1.00		1.00	1.00		0.78	0.66		0.69	0.62	
Incremental Delay, d2	42.8	6.4		9.3	1.8		77.6	26.5		67.7	62.2	
Delay (s)	105.0	58.7		65.2	46.9		124.8	58.4		108.1	91.0	
Level of Service	F	E		E	D		F	E		F	F	
Approach Delay (s)		68.6			51.4			66.0			92.9	
Approach LOS		E			D			E			F	

Intersection Summary			
HCM 2000 Control Delay	75.4	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	435	355	133	132	366	182	166	1521	157	291	1627	527
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6318		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6318		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	444	362	136	135	373	186	169	1552	160	297	1660	538
RTOR Reduction (vph)	0	0	109	0	0	162	0	11	0	0	0	19
Lane Group Flow (vph)	444	362	27	135	373	24	169	1701	0	297	1660	519
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	28.1	28.1	28.1	17.7	17.7	17.7	10.5	56.5		15.0	61.0	95.1
Effective Green, g (s)	28.1	28.1	28.1	17.7	17.7	17.7	10.5	56.5		15.0	61.0	95.1
Actuated g/C Ratio	0.20	0.20	0.20	0.13	0.13	0.13	0.08	0.40		0.11	0.44	0.68
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	689	710	317	223	447	200	257	2549		367	2215	1075
v/s Ratio Prot	c0.13	0.10		0.08	c0.11		0.05	0.27		c0.09	c0.33	0.33
v/s Ratio Perm			0.02			0.02						
v/c Ratio	0.64	0.51	0.09	0.61	0.83	0.12	0.66	0.67		0.81	0.75	0.48
Uniform Delay, d1	51.4	49.8	45.5	57.8	59.7	54.3	63.0	34.1		61.1	33.1	10.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.37	0.59		1.45	0.34	0.51
Incremental Delay, d2	1.7	0.3	0.1	3.2	12.1	0.1	2.7	0.8		1.2	0.2	0.0
Delay (s)	53.0	50.1	45.6	61.0	71.8	54.4	89.3	20.8		89.7	11.5	5.5
Level of Service	D	D	D	E	E	D	F	C		F	B	A
Approach Delay (s)		50.8			65.0			27.0			19.5	
Approach LOS		D			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7
Intersection Capacity Utilization	81.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

13: Beach Blvd & Garfield Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	202	401	134	141	339	155	184	1396	109	243	1519	229
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.95		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3373		1770	5030		1770	4985	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3373		1770	5030		1770	4985	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	206	409	137	144	346	158	188	1424	111	248	1550	234
RTOR Reduction (vph)	0	0	105	0	42	0	0	6	0	0	13	0
Lane Group Flow (vph)	206	409	32	144	462	0	188	1529	0	248	1771	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	20.3	33.2	33.2	13.7	26.6		15.9	48.9		23.0	56.0	
Effective Green, g (s)	20.3	33.2	33.2	13.7	26.6		15.9	48.9		23.0	56.0	
Actuated g/C Ratio	0.15	0.24	0.24	0.10	0.19		0.11	0.35		0.16	0.40	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	256	839	375	173	640		201	1756		290	1994	
v/s Ratio Prot	c0.12	0.12		c0.08	c0.14		c0.11	c0.30		0.14	c0.36	
v/s Ratio Perm			0.02									
v/c Ratio	0.80	0.49	0.09	0.83	0.72		0.94	0.87		0.86	0.89	
Uniform Delay, d1	57.9	46.1	41.6	62.0	53.2		61.5	42.6		56.9	39.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.45		0.52	0.69	
Incremental Delay, d2	15.7	0.6	0.1	26.5	4.3		38.5	5.0		15.9	4.8	
Delay (s)	73.7	46.7	41.7	88.5	57.5		75.6	24.0		45.7	31.7	
Level of Service	E	D	D	F	E		E	C		D	C	
Approach Delay (s)		53.2			64.4			29.6			33.5	
Approach LOS		D			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	38.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.85			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	87.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	127	294	173	121	331	106	175	1355	132	115	1505	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3411		1770	5017		1770	5026	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3411		1770	5017		1770	5026	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	132	306	180	126	345	110	182	1411	138	120	1568	131
RTOR Reduction (vph)	0	0	146	0	25	0	0	7	0	0	6	0
Lane Group Flow (vph)	132	306	34	126	430	0	182	1542	0	120	1693	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.0	26.5	26.5	13.3	24.8		18.5	66.5		13.3	61.3	
Effective Green, g (s)	15.0	26.5	26.5	13.3	24.8		18.5	66.5		13.3	61.3	
Actuated g/C Ratio	0.11	0.19	0.19	0.10	0.18		0.13	0.48		0.10	0.44	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	189	669	299	168	604		233	2383		168	2200	
v/s Ratio Prot	c0.07	0.09		0.07	c0.13		c0.10	0.31		0.07	c0.34	
v/s Ratio Perm			0.02									
v/c Ratio	0.70	0.46	0.11	0.75	0.71		0.78	0.65		0.71	0.77	
Uniform Delay, d1	60.3	50.4	47.0	61.7	54.2		58.8	27.9		61.5	33.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.87		0.62	0.48	
Incremental Delay, d2	10.7	0.5	0.2	17.0	4.0		14.5	1.3		7.4	1.4	
Delay (s)	71.0	50.9	47.2	78.8	58.2		49.6	25.4		45.5	17.4	
Level of Service	E	D	D	E	E		D	C		D	B	
Approach Delay (s)		54.1			62.7			27.9			19.3	
Approach LOS		D			E			C			B	

Intersection Summary				
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	80.5%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	19	37	162	29	152	70	1350	84	124	1389	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.94			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1724			1787	1583	1770	5040		1770	5057	
Flt Permitted		0.74			0.67	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1296			1250	1583	1770	5040		1770	5057	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	31	19	38	165	30	155	71	1378	86	127	1417	55
RTOR Reduction (vph)	0	23	0	0	0	125	0	3	0	0	2	0
Lane Group Flow (vph)	0	65	0	0	195	30	71	1461	0	127	1470	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		26.9			26.9	26.9	11.8	82.5		15.4	86.1	
Effective Green, g (s)		26.9			26.9	26.9	11.8	82.5		15.4	86.1	
Actuated g/C Ratio		0.19			0.19	0.19	0.08	0.59		0.11	0.61	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		249			240	304	149	2970		194	3110	
v/s Ratio Prot							0.04	c0.29		c0.07	0.29	
v/s Ratio Perm		0.05			c0.16	0.02						
v/c Ratio		0.26			0.81	0.10	0.48	0.49		0.65	0.47	
Uniform Delay, d1		48.1			54.1	46.6	61.2	16.6		59.7	14.6	
Progression Factor		1.00			1.00	1.00	0.82	0.61		0.76	0.78	
Incremental Delay, d2		0.6			18.5	0.1	2.0	0.5		5.3	0.3	
Delay (s)		48.6			72.7	46.7	52.3	10.6		50.8	11.8	
Level of Service		D			E	D	D	B		D	B	
Approach Delay (s)		48.6			61.2			12.5			14.9	
Approach LOS		D			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	19.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	66.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	196	415	68	185	447	287	91	988	108	281	1138	148
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4977		1770	3539	1583	1770	5010		3433	4997	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4977		1770	3539	1583	1770	5010		3433	4997	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	437	72	195	471	302	96	1040	114	296	1198	156
RTOR Reduction (vph)	0	18	0	0	0	63	0	8	0	0	10	0
Lane Group Flow (vph)	206	491	0	195	471	239	96	1146	0	296	1344	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	19.7	27.7		18.9	26.9	42.2	11.7	56.3		15.3	59.9	
Effective Green, g (s)	19.7	27.7		18.9	26.9	42.2	11.7	56.3		15.3	59.9	
Actuated g/C Ratio	0.14	0.20		0.13	0.19	0.30	0.08	0.40		0.11	0.43	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	249	984		238	679	477	147	2014		375	2138	
v/s Ratio Prot	c0.12	0.10		0.11	c0.13	0.05	0.05	0.23		c0.09	c0.27	
v/s Ratio Perm						0.10						
v/c Ratio	0.83	0.50		0.82	0.69	0.50	0.65	0.57		0.79	0.63	
Uniform Delay, d1	58.5	50.0		58.9	52.7	40.2	62.2	32.4		60.8	31.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.86	0.88		1.49	0.26	
Incremental Delay, d2	18.8	0.8		18.4	3.9	0.3	7.3	1.1		8.9	1.3	
Delay (s)	77.3	50.8		77.3	56.6	40.5	60.5	29.5		99.4	9.3	
Level of Service	E	D		E	E	D	E	C		F	A	
Approach Delay (s)		58.5			55.8			31.9			25.5	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	38.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	127	30	27	114	177	27	969	49	228	1089	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.97		1.00	1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1810		1770	1863	1583	1770	5049		1770	5051	
Flt Permitted	0.58	1.00		0.44	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1074	1810		817	1863	1583	1770	5049		1770	5051	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	79	132	31	28	119	184	28	1009	51	238	1134	53
RTOR Reduction (vph)	0	7	0	0	0	158	0	3	0	0	2	0
Lane Group Flow (vph)	79	156	0	28	119	26	28	1057	0	238	1185	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	19.7	19.7		19.7	19.7	19.7	7.4	79.7		24.2	96.5	
Effective Green, g (s)	19.7	19.7		19.7	19.7	19.7	7.4	79.7		24.2	96.5	
Actuated g/C Ratio	0.14	0.14		0.14	0.14	0.14	0.05	0.57		0.17	0.69	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	151	254		114	262	222	93	2874		305	3481	
v/s Ratio Prot		c0.09			0.06		0.02	c0.21		c0.13	0.23	
v/s Ratio Perm	0.07			0.03		0.02						
v/c Ratio	0.52	0.61		0.25	0.45	0.12	0.30	0.37		0.78	0.34	
Uniform Delay, d1	55.8	56.6		53.5	55.2	52.5	63.8	16.4		55.4	8.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.72	0.41		0.81	0.19	
Incremental Delay, d2	3.2	4.4		1.1	1.3	0.2	1.7	0.3		9.7	0.2	
Delay (s)	59.0	60.9		54.7	56.5	52.8	47.4	7.0		54.8	1.9	
Level of Service	E	E		D	E	D	D	A		D	A	
Approach Delay (s)		60.3			54.3			8.1			10.7	
Approach LOS		E			D			A			B	

Intersection Summary			
HCM 2000 Control Delay	18.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	67.5%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	147	274	41	48	285	226	59	634	68	238	678	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	0.93		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3469		1770	3305		1770	5012		1770	4938	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3469		1770	3305		1770	5012		1770	4938	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	156	291	44	51	303	240	63	674	72	253	721	172
RTOR Reduction (vph)	0	10	0	0	114	0	0	7	0	0	23	0
Lane Group Flow (vph)	156	325	0	51	429	0	63	739	0	253	870	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.7	33.1		8.1	24.5		8.3	53.0		24.7	69.4	
Effective Green, g (s)	16.7	33.1		8.1	24.5		8.3	53.0		24.7	69.4	
Actuated g/C Ratio	0.12	0.24		0.06	0.18		0.06	0.38		0.18	0.50	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	211	820		102	578		104	1897		312	2447	
v/s Ratio Prot	c0.09	0.09		0.03	c0.13		c0.04	c0.15		c0.14	0.18	
v/s Ratio Perm												
v/c Ratio	0.74	0.40		0.50	0.74		0.61	0.39		0.81	0.36	
Uniform Delay, d1	59.5	45.0		64.0	54.8		64.3	31.7		55.4	21.6	
Progression Factor	1.00	1.00		1.00	1.00		1.04	1.09		0.67	0.36	
Incremental Delay, d2	11.1	0.1		1.4	4.5		6.6	0.6		13.5	0.4	
Delay (s)	70.6	45.1		65.4	59.3		73.5	35.1		50.8	8.1	
Level of Service	E	D		E	E		E	D		D	A	
Approach Delay (s)		53.2			59.8			38.1			17.5	
Approach LOS		D			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	37.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	69.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	69	0	71	0	0	0	71	645	0	0	739	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5046	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5046	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	73	0	76	0	0	0	76	686	0	0	786	43
RTOR Reduction (vph)	0	0	68	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	73	0	8	0	0	0	76	686	0	0	827	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	14.6		14.6				10.1	114.4			99.4	
Effective Green, g (s)	14.6		14.6				10.1	114.4			99.4	
Actuated g/C Ratio	0.10		0.10				0.07	0.82			0.71	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	184		165				127	4155			3582	
v/s Ratio Prot							c0.04	0.13			c0.16	
v/s Ratio Perm	c0.04		0.01									
v/c Ratio	0.40		0.05				0.60	0.17			0.23	
Uniform Delay, d1	58.6		56.4				63.0	2.7			7.0	
Progression Factor	1.00		1.00				1.10	0.43			0.35	
Incremental Delay, d2	1.4		0.1				6.5	0.1			0.1	
Delay (s)	60.0		56.6				75.9	1.2			2.6	
Level of Service	E		E				E	A			A	
Approach Delay (s)		58.2			0.0			8.7			2.6	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.28		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	39.5%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

20: Huntington Beach Parking/Beach Blvd & Pacific Coast Highway

Alternative 6 Plus Project MD Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	188	891	35	30	1007	450	23	49	31	464	67	269
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5056		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	204	968	38	33	1095	489	25	53	34	504	73	292
RTOR Reduction (vph)	0	2	0	0	0	193	0	0	31	0	0	0
Lane Group Flow (vph)	204	1004	0	33	1095	296	25	53	3	504	73	292
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.2	76.2		4.4	67.4	67.4	3.7	11.6	11.6	26.1	34.0	140.0
Effective Green, g (s)	13.2	76.2		4.4	67.4	67.4	3.7	11.6	11.6	26.1	34.0	140.0
Actuated g/C Ratio	0.09	0.54		0.03	0.48	0.48	0.03	0.08	0.08	0.19	0.24	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	323	2751		55	1703	762	46	293	131	640	452	1583
v/s Ratio Prot	c0.06	0.20		0.02	c0.31		c0.01	0.01		c0.15	0.04	
v/s Ratio Perm						0.19			0.00			c0.18
v/c Ratio	0.63	0.36		0.60	0.64	0.39	0.54	0.18	0.02	0.79	0.16	0.18
Uniform Delay, d1	61.1	18.1		66.9	27.3	23.1	67.3	59.8	59.0	54.3	41.8	0.0
Progression Factor	1.00	1.00		1.39	0.39	0.14	1.00	1.00	1.00	0.70	0.55	1.00
Incremental Delay, d2	2.9	0.4		10.7	1.8	1.4	6.9	0.1	0.0	5.8	0.1	0.3
Delay (s)	64.0	18.5		103.7	12.4	4.7	74.2	59.9	59.0	43.9	23.0	0.3
Level of Service	E	B		F	B	A	E	E	E	D	C	A
Approach Delay (s)		26.2			11.9			62.8			27.5	
Approach LOS		C			B			E			C	

Intersection Summary			
HCM 2000 Control Delay	21.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.64		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	1213	11	7	1261	151	19	5	11	69	6	150
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.89		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1666		1770	1594	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.34	1.00		0.75	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	627	1666		1390	1594	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	164	1277	12	7	1327	159	20	5	12	73	6	158
RTOR Reduction (vph)	0	0	3	0	0	54	0	11	0	0	139	0
Lane Group Flow (vph)	164	1277	9	7	1327	105	20	6	0	73	25	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	17.1	104.9	104.9	4.4	92.2	92.2	16.8	16.8		16.8	16.8	
Effective Green, g (s)	17.1	104.9	104.9	4.4	92.2	92.2	16.8	16.8		16.8	16.8	
Actuated g/C Ratio	0.12	0.75	0.75	0.03	0.66	0.66	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	216	3810	1186	55	3348	1042	75	199		166	191	
v/s Ratio Prot	c0.09	0.25		0.00	c0.26			0.00			0.02	
v/s Ratio Perm			0.01			0.07	0.03			c0.05		
v/c Ratio	0.76	0.34	0.01	0.13	0.40	0.10	0.27	0.03		0.44	0.13	
Uniform Delay, d1	59.5	5.9	4.4	65.9	11.0	8.7	56.0	54.4		57.2	55.1	
Progression Factor	0.88	1.08	1.00	0.70	0.19	0.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.4	0.2	0.0	0.3	0.3	0.2	0.7	0.0		0.7	0.1	
Delay (s)	63.8	6.6	4.4	46.2	2.4	0.2	56.7	54.4		57.9	55.2	
Level of Service	E	A	A	D	A	A	E	D		E	E	
Approach Delay (s)		13.0			2.3			55.7			56.0	
Approach LOS		B			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.45			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	60.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	97	1136	33	58	1257	99	17	19	16	170	44	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1735		1681	1719	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1735		1681	1719	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	99	1159	34	59	1283	101	17	19	16	173	45	142
RTOR Reduction (vph)	0	0	14	0	0	58	0	14	0	0	0	124
Lane Group Flow (vph)	99	1159	20	59	1283	43	17	21	0	107	111	18
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	31.2	82.9	82.9	7.4	59.1	59.1	13.6	13.6		17.3	17.3	17.3
Effective Green, g (s)	31.2	82.9	82.9	7.4	59.1	59.1	13.6	13.6		17.3	17.3	17.3
Actuated g/C Ratio	0.22	0.59	0.59	0.05	0.42	0.42	0.10	0.10		0.12	0.12	0.12
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	394	3011	937	93	2146	668	171	168		207	212	195
v/s Ratio Prot	0.06	c0.23		0.03	c0.25		0.01	c0.01		0.06	c0.06	
v/s Ratio Perm			0.01			0.03						0.01
v/c Ratio	0.25	0.38	0.02	0.63	0.60	0.06	0.10	0.12		0.52	0.52	0.09
Uniform Delay, d1	44.8	15.1	11.8	65.0	31.3	24.0	57.6	57.7		57.4	57.5	54.4
Progression Factor	0.79	0.53	1.00	0.79	0.75	1.11	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	0.1	0.4	0.0	9.2	0.6	0.1	0.1	0.1		0.9	1.1	0.1
Delay (s)	35.3	8.4	11.8	60.3	24.1	26.7	57.7	57.9		58.3	58.6	54.4
Level of Service	D	A	B	E	C	C	E	E		E	E	D
Approach Delay (s)		10.5			25.8			57.8			56.9	
Approach LOS		B			C			E			E	

Intersection Summary				
HCM 2000 Control Delay	23.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.48			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	59.4%	ICU Level of Service	B	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	182	1140	3	28	1185	385	25	23	18	317	11	171
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.93		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1739		3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	190	1188	3	29	1234	401	26	24	19	330	11	178
RTOR Reduction (vph)	0	0	1	0	0	97	0	18	0	0	0	151
Lane Group Flow (vph)	190	1188	2	29	1234	304	26	25	0	330	11	27
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	19.4	79.8	79.8	12.1	72.5	94.0	5.9	5.9		21.5	21.5	21.5
Effective Green, g (s)	19.4	79.8	79.8	12.1	72.5	94.0	5.9	5.9		21.5	21.5	21.5
Actuated g/C Ratio	0.14	0.57	0.57	0.09	0.52	0.67	0.04	0.04		0.15	0.15	0.15
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	245	2898	902	152	2633	1062	74	73		527	286	243
v/s Ratio Prot	c0.11	0.23		0.02	c0.24	0.04	c0.01	0.01		c0.10	0.01	
v/s Ratio Perm			0.00			0.15						0.02
v/c Ratio	0.78	0.41	0.00	0.19	0.47	0.29	0.35	0.34		0.63	0.04	0.11
Uniform Delay, d1	58.2	16.9	13.0	59.4	21.5	9.4	65.2	65.2		55.5	50.4	51.0
Progression Factor	1.40	0.48	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	12.5	0.4	0.0	0.2	0.6	0.1	1.1	1.0		1.7	0.0	0.1
Delay (s)	93.8	8.5	13.0	59.6	22.1	9.4	66.2	66.2		57.2	50.5	51.1
Level of Service	F	A	B	E	C	A	E	E		E	D	D
Approach Delay (s)		20.2			19.7			66.2			54.9	
Approach LOS		C			B			E			D	

Intersection Summary			
HCM 2000 Control Delay	25.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Scenario Report

Scenario:	ALT6+P1-MD
Command:	ALT6+P1-MD
Volume:	EX-MD
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	2018-CUMUL+P2-MD
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	ALT6+P1-MD

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	C	xxxxx	0.737	C	xxxxx	0.796	+ 0.059
# 8 Beach Blvd & Warner Ave	B	xxxxx	0.695	C	xxxxx	0.736	+ 0.041
# 16 Beach Blvd & Adams Ave	A	xxxxx	0.594	B	xxxxx	0.640	+ 0.046
# 20 Beach Blvd & PCH (SR-1)	A	xxxxx	0.498	A	xxxxx	0.552	+ 0.054
# 21 Newland St & Atlanta Ave	A	xxxxx	0.451	A	xxxxx	0.458	+ 0.008
# 22 Newland St & Hamilton Ave	A	xxxxx	0.476	A	xxxxx	0.570	+ 0.094
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.419	A	xxxxx	0.426	+ 0.007
# 26 Brookhurst St & Hamilton Ave	A	xxxxx	0.426	A	xxxxx	0.442	+ 0.016
# 30 Brookhurst Street & Talbert Av	B	xxxxx	0.661	B	xxxxx	0.673	+ 0.011
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.533	A	xxxxx	0.551	+ 0.018
# 32 Brookhurst Street & Quail Aven	B	xxxxx	0.640	B	xxxxx	0.658	+ 0.018
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.611	B	xxxxx	0.639	+ 0.028
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.628	B	xxxxx	0.649	+ 0.021
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.564	A	xxxxx	0.589	+ 0.025
# 36 Brookhurst Street & Adams Aven	A	xxxxx	0.556	A	xxxxx	0.577	+ 0.021
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.323	A	xxxxx	0.338	+ 0.015
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.367	A	xxxxx	0.387	+ 0.020
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.199	A	xxxxx	0.214	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.232	A	xxxxx	0.247	+ 0.015

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.737
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	-	R	L	- T	-	R	L	- T	-	R	L	- T	-	R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0 3	0	1	2	0 4	0	2	2	0 3	0	1	2	0 2	0	1
Volume Module:																
Base Vol:	385	1729	465		218	2101	653		393	826	301		148	371	87	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	409	1835	494		231	2230	693		417	877	320		157	394	92	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	409	1835	494		231	2230	693		417	877	320		157	394	92	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	409	1835	494		231	2230	693		417	877	320		157	394	92	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	409	1835	494		231	2230	693		417	877	320		157	394	92	
OvlAdjVol:							276				115					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.36	0.29		0.07	0.33	0.20		0.12	0.17	0.19		0.05	0.12	0.05	
OvlAdjV/S:							0.08				0.07					
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	251	1682	179	154	1634	256	339	759	139	241	853	135				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	266	1785	190	163	1734	272	360	806	148	256	905	143				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	266	1785	190	163	1734	272	360	806	148	256	905	143				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	266	1785	190	163	1734	272	360	806	148	256	905	143				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	266	1785	190	163	1734	272	360	806	148	256	905	143				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.62	0.38	2.00	4.00	1.00	2.00	2.54	0.46	2.00	2.59	0.41				
Final Sat.:	3400	6146	654	3400	6800	1700	3400	4311	789	3400	4403	697				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.29	0.29	0.05	0.26	0.16	0.11	0.19	0.19	0.08	0.21	0.21				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	85	785	97	236	924	134	179	385	63	170	415	254				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	90	833	103	251	981	142	190	409	67	180	441	270				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	90	833	103	251	981	142	190	409	67	180	441	270				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	90	833	103	251	981	142	190	409	67	180	441	270				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	90	833	103	251	981	142	190	409	67	180	441	270				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.67	0.33	2.00	2.62	0.38	1.00	2.58	0.42	1.00	2.00	1.00				
Final Sat.:	1700	4539	561	3400	4454	646	1700	4383	717	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.18	0.18	0.07	0.22	0.22	0.11	0.09	0.09	0.11	0.13	0.16				
Crit Moves:	****				****		****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.498
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	22	46	29		309	63	249		172	798	33		28	907	296	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	23	49	31		328	67	264		183	847	35		30	963	314	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	23	49	0		328	67	0		183	847	35		30	963	314	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	23	49	0		328	67	0		183	847	35		30	963	314	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	23	49	0		328	67	0		183	847	35		30	963	314	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.88	0.12		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	4897	203		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.01	0.00		0.10	0.04	0.00		0.05	0.17	0.17		0.02	0.28	0.18	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.451
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	151	255	38		88	231	95		64	372	142		31	389	138	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	160	271	40		93	245	101		68	395	151		33	413	146	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	160	271	40		93	245	101		68	395	151		33	413	146	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	160	271	40		93	245	101		68	395	151		33	413	146	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	160	271	40		93	245	101		68	395	151		33	413	146	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.74	0.26		1.00	1.42	0.58		1.00	1.45	0.55		1.00	1.48	0.52	
Final Sat.:	1700	2959	441		1700	2409	991		1700	2461	939		1700	2510	890	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.09	0.09		0.05	0.10	0.10		0.04	0.16	0.16		0.02	0.16	0.16	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.476
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	158	62		195	170	0		0	0	0		116	0	267	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	0	168	66		207	180	0		0	0	0		123	0	283	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	0	168	66		207	180	0		0	0	0		123	0	283	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	0	168	66		207	180	0		0	0	0		123	0	283	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	0	168	66		207	180	0		0	0	0		123	0	283	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	0.00	0.72	0.28		1.00	1.00	0.00		0.00	0.00	0.00		1.00	0.00	1.00	
Final Sat.:	0	1221	479		1700	1700	0		0	0	0		1700	0	1700	
Capacity Analysis Module:																
Vol/Sat:	0.00	0.14	0.14		0.12	0.11	0.00		0.00	0.00	0.00		0.07	0.00	0.17	
Crit Moves:		****			****										****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.419
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	17	148	14		210	158	36		52	209	30		21	248	218	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	18	157	15		223	168	38		55	222	32		22	263	231	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	18	157	15		223	168	38		55	222	32		22	263	231	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	18	157	15		223	168	38		55	222	32		22	263	231	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	18	157	15		223	168	38		55	222	32		22	263	231	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.87	0.13		1.00	1.00	1.00	
Final Sat.:	1700	3106	294		1700	3400	1700		1700	1487	213		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.05	0.05		0.13	0.05	0.02		0.03	0.15	0.15		0.01	0.15	0.14	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.426
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	90	333	106		319	351	68		82	322	41		116	437	249	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	96	353	113		339	373	72		87	342	44		123	464	264	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	96	353	113		339	373	72		87	342	44		123	464	264	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	96	353	113		339	373	72		87	342	44		123	464	264	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	96	353	113		339	373	72		87	342	44		123	464	264	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.51	0.49		1.00	1.77	0.23		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4272	828		1700	3016	384		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.07	0.07		0.10	0.09	0.09		0.05	0.11	0.11		0.07	0.14	0.16	
Crit Moves:		****			****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.661
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	157	1203	480		309	1488	374		194	671	198		242	370	194	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	167	1277	510		328	1580	397		206	712	210		257	393	206	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	167	1277	510		328	1580	397		206	712	210		257	393	206	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	167	1277	510		328	1580	397		206	712	210		257	393	206	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	167	1277	510		328	1580	397		206	712	210		257	393	206	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.25	0.30		0.10	0.31	0.23		0.06	0.14	0.12		0.08	0.12	0.12	
Crit Moves:			****		****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.533
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	29	1705	5		39	1941	63		67	0	26		4	0	8	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	31	1810	5		41	2060	67		71	0	28		4	0	8	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	31	1810	5		41	2060	0		71	0	28		4	0	8	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	31	1810	5		41	2060	0		71	0	28		4	0	8	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	31	1810	5		41	2060	0		71	0	28		4	0	8	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		0.72	0.00	0.28		0.33	0.00	0.67	
Final Sat.:	1700	5085	15		1700	5100	1700		1225	0	475		567	0	1133	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.36	0.36		0.02	0.40	0.00		0.04	0.00	0.06		0.00	0.00	0.01	
Crit Moves:	****					****					****		****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.640
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	58	1443	7		30	1516	225		279	3	78		12	1	14	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	62	1532	7		32	1609	239		296	3	83		13	1	15	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	62	1532	7		32	1609	239		296	3	83		13	1	15	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	62	1532	7		32	1609	239		296	3	83		13	1	15	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	62	1532	7		32	1609	239		296	3	83		13	1	15	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	2.61	0.39		0.99	0.01	1.00		0.44	0.04	0.52	
Final Sat.:	1700	5075	25		1700	4441	659		1682	18	1700		756	63	881	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.30	0.30		0.02	0.36	0.36		0.17	0.18	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.611
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	79	933	180	160	1153	198	278	512	94	250	419	115				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	84	990	191	170	1224	210	295	543	100	265	445	122				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	84	990	191	170	1224	210	295	543	100	265	445	122				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	84	990	191	170	1224	210	295	543	100	265	445	122				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	84	990	191	170	1224	210	295	543	100	265	445	122				
OvlAdjVol:			58			63										
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	1.69	0.31	2.00	1.57	0.43				
Final Sat.:	1700	5100	1700	1700	5100	1700	3400	2873	527	3400	2668	732				
Capacity Analysis Module:																
Vol/Sat:	0.05	0.19	0.11	0.10	0.24	0.12	0.09	0.19	0.19	0.08	0.17	0.17				
OvlAdjV/S:			0.03			0.04										
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.628
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	138	1118	109	169	1107	214	229	231	111	176	219	110				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	146	1187	116	179	1175	227	243	245	118	187	232	117				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	146	1187	116	179	1175	227	243	245	118	187	232	117				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	146	1187	116	179	1175	227	243	245	118	187	232	117				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	146	1187	116	179	1175	227	243	245	118	187	232	117				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.73	0.27	1.00	3.00	1.00	1.00	1.35	0.65	1.00	2.00	1.00				
Final Sat.:	1700	4647	453	1700	5100	1700	1700	2296	1104	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.26	0.26	0.11	0.23	0.13	0.14	0.11	0.11	0.11	0.07	0.07				
Crit Moves:		****		****				****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.564
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	27	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	97	1006	80		21	1177	198		160	183	95		119	196	20	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	103	1068	85		22	1249	210		170	194	101		126	208	21	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	103	1068	85		22	1249	210		170	194	101		126	208	21	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	103	1068	85		22	1249	210		170	194	101		126	208	21	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	103	1068	85		22	1249	210		170	194	101		126	208	21	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.57	0.43		1.00	1.32	0.68		1.00	1.81	0.19	
Final Sat.:	1700	4724	376		1700	4366	734		1700	2238	1162		1700	3085	315	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.23	0.23		0.01	0.29	0.29		0.10	0.09	0.09		0.07	0.07	0.07	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.556
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	26	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	172	631	128		308	712	173		293	684	84		197	771	220	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	183	670	136		327	756	184		311	726	89		209	818	234	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	183	670	136		327	756	184		311	726	89		209	818	234	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	183	670	136		327	756	184		311	726	89		209	818	234	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	183	670	136		327	756	184		311	726	89		209	818	234	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.49	0.51		2.00	2.41	0.59		2.00	3.00	1.00		2.00	3.00	1.00	
Final Sat.:	3400	4240	860		3400	4103	997		3400	5100	1700		3400	5100	1700	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.16	0.16		0.10	0.18	0.18		0.09	0.14	0.05		0.06	0.16	0.14	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.323
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	48	879	0	0	895	125	98	0	49	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	51	933	0	0	950	133	104	0	52	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	51	933	0	0	950	133	104	0	52	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	51	933	0	0	950	133	104	0	52	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	51	933	0	0	950	133	104	0	52	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.63	0.37	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4475	625	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.18	0.00	0.00	0.21	0.21	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.367
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	89	615	14	25	623	145	141	26	143	15	25	17				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	94	653	15	27	661	154	150	28	152	16	27	18				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	94	653	15	27	661	154	150	28	152	16	27	18				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	94	653	15	27	661	154	150	28	152	16	27	18				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	94	653	15	27	661	154	150	28	152	16	27	18				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.93	0.07	1.00	2.43	0.57	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4986	114	1700	4137	963	1700	1700	1700	1700	2024	1376				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.13	0.13	0.02	0.16	0.16	0.09	0.02	0.09	0.01	0.01	0.01				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.199
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 15 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	8	412	0	0	340	107	81	0	6	0	0	0	0	0	0	0
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	8	437	0	0	361	114	86	0	6	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	8	437	0	0	361	114	86	0	6	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	8	437	0	0	361	114	86	0	6	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	8	437	0	0	361	114	86	0	6	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.28	0.72	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	3879	1221	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.09	0.00	0.00	0.09	0.09	0.05	0.00	0.00	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
MD PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.232
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	0	0 1
Volume Module:																
Base Vol:	102	374	3	9	294	26	11	1	91	0	0	6				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	108	397	3	10	312	28	12	1	97	0	0	6				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	108	397	3	10	312	28	12	1	97	0	0	6				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	108	397	3	10	312	28	12	1	97	0	0	6				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	108	397	3	10	312	28	12	1	97	0	0	6				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.98	0.02	1.00	3.00	1.00	1.00	0.01	0.99	0.00	0.00	1.00				
Final Sat.:	1700	5059	41	1700	5100	1700	1700	18	1682	0	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.08	0.08	0.01	0.06	0.02	0.01	0.06	0.06	0.00	0.00	0.00				
Crit Moves:	****				****			****		****						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	417	401	153	396	447	150	260	2943	259	207	2440	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6309	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6309	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	434	418	159	412	466	156	271	3066	270	216	2542	291
RTOR Reduction (vph)	0	27	0	0	24	0	0	9	0	0	13	0
Lane Group Flow (vph)	434	550	0	412	598	0	271	3327	0	216	2820	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.8	39.4		15.7	32.3		12.0	65.5		11.0	64.5	
Effective Green, g (s)	22.8	39.4		15.7	32.3		12.0	65.5		11.0	64.5	
Actuated g/C Ratio	0.15	0.26		0.10	0.22		0.08	0.44		0.07	0.43	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	521	891		359	733		274	2764		251	2712	
v/s Ratio Prot	c0.13	0.16		c0.12	c0.18		0.08	c0.53		0.06	c0.45	
v/s Ratio Perm												
v/c Ratio	0.83	0.62		1.15	0.82		0.99	1.20		0.86	1.04	
Uniform Delay, d1	61.8	48.7		67.2	56.0		68.9	42.2		68.7	42.8	
Progression Factor	1.00	1.00		1.00	1.00		0.96	0.93		1.00	1.00	
Incremental Delay, d2	11.0	1.3		94.0	7.0		42.7	94.3		24.7	28.7	
Delay (s)	72.7	50.0		161.1	63.0		108.8	133.7		93.4	71.5	
Level of Service	E	D		F	E		F	F		F	E	
Approach Delay (s)		59.7			102.1			131.8			73.0	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	99.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	376	1089	0	3339	2576	1067
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	384	1111	0	3407	2629	1089
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	384	1110	0	3407	2629	1089
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	20.7	62.2		119.5	72.0	150.0
Effective Green, g (s)	20.7	62.2		119.5	72.0	150.0
Actuated g/C Ratio	0.14	0.41		0.80	0.48	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	473	1239		5105	3075	1583
v/s Ratio Prot	0.11	c0.25		0.53	c0.41	
v/s Ratio Perm		0.15		0.01		0.69
v/c Ratio	0.81	0.90		0.67	0.85	0.69
Uniform Delay, d1	62.8	40.9		6.6	34.4	0.0
Progression Factor	1.00	1.00		0.68	0.51	1.00
Incremental Delay, d2	10.7	8.9		0.0	1.6	1.2
Delay (s)	73.5	49.8		4.5	19.2	1.2
Level of Service	E	D		A	B	A
Approach Delay (s)	55.9			4.5	13.9	
Approach LOS	E			A	B	

Intersection Summary			
HCM 2000 Control Delay	17.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	84.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	535	1082	312	187	744	183	510	2586	541	353	2548	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	557	1127	325	195	775	191	531	2694	564	368	2654	842
RTOR Reduction (vph)	0	0	48	0	0	133	0	0	143	0	0	48
Lane Group Flow (vph)	557	1127	277	195	775	58	531	2694	421	368	2654	794
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	24.5	50.1	66.5	13.3	38.9	38.9	16.4	53.7	53.7	12.6	49.5	74.0
Effective Green, g (s)	24.5	50.1	66.5	13.3	38.9	38.9	16.4	53.7	53.7	12.6	49.5	74.0
Actuated g/C Ratio	0.16	0.33	0.44	0.09	0.26	0.26	0.11	0.36	0.36	0.08	0.33	0.49
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	560	1698	701	304	917	410	375	1820	566	288	2114	1460
v/s Ratio Prot	c0.16	0.22	0.04	0.06	c0.22		0.15	c0.53		0.11	c0.41	0.09
v/s Ratio Perm			0.13			0.04			0.27			0.20
v/c Ratio	0.99	0.66	0.39	0.64	0.85	0.14	1.42	1.48	0.74	1.28	1.26	0.54
Uniform Delay, d1	62.7	42.7	28.2	66.0	52.7	42.7	66.8	48.1	42.1	68.7	50.2	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.77	0.70	0.53	1.05	0.69	0.52
Incremental Delay, d2	36.4	1.0	0.1	3.4	7.2	0.2	196.4	217.9	5.2	138.5	117.1	0.1
Delay (s)	99.1	43.7	28.3	69.5	59.9	42.9	247.6	251.4	27.3	210.9	152.0	13.9
Level of Service	F	D	C	E	E	D	F	F	C	F	F	B
Approach Delay (s)		56.6			58.7			217.5			127.5	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	138.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.20		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	112.8%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	20	44	135	34	186	127	3095	76	259	2727	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1669		1770	1863	1583	1770	6385		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1669		1770	1863	1583	1770	6385		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	20	45	138	35	190	130	3158	78	264	2783	30
RTOR Reduction (vph)	0	41	0	0	0	159	0	2	0	0	1	0
Lane Group Flow (vph)	26	24	0	138	35	31	130	3234	0	264	2812	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	14.6		17.9	24.7	24.7	16.2	80.3		17.6	81.7	
Effective Green, g (s)	7.8	14.6		17.9	24.7	24.7	16.2	80.3		17.6	81.7	
Actuated g/C Ratio	0.05	0.10		0.12	0.16	0.16	0.11	0.54		0.12	0.54	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	162		211	306	260	191	3418		402	3484	
v/s Ratio Prot	c0.01	c0.01		c0.08	0.02		0.07	c0.51		c0.08	0.44	
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.15		0.65	0.11	0.12	0.68	0.95		0.66	0.81	
Uniform Delay, d1	68.4	62.0		63.1	53.3	53.4	64.4	32.8		63.3	27.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.37	0.18		1.35	0.33	
Incremental Delay, d2	1.7	0.4		7.1	0.2	0.2	5.0	4.0		0.4	0.2	
Delay (s)	70.1	62.5		70.2	53.5	53.6	93.5	9.9		85.7	9.4	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		64.6			59.9			13.2			16.0	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	81.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	5	19	263	4	175	67	3039	105	338	2667	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1642		1681	1576	1504	1770	6376		3433	6401	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1642		1681	1576	1504	1770	6376		3433	6401	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	31	5	19	266	4	177	68	3070	106	341	2694	20
RTOR Reduction (vph)	0	17	0	0	7	119	0	2	0	0	0	0
Lane Group Flow (vph)	31	7	0	154	146	21	68	3174	0	341	2714	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		22.7	22.7	22.7	8.8	81.6		14.6	87.4	
Effective Green, g (s)	13.2	13.2		22.7	22.7	22.7	8.8	81.6		14.6	87.4	
Actuated g/C Ratio	0.09	0.09		0.15	0.15	0.15	0.06	0.54		0.10	0.58	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	144		254	238	227	103	3468		334	3729	
v/s Ratio Prot	c0.02	0.00		0.09	c0.09		0.04	c0.50		c0.10	0.42	
v/s Ratio Perm						0.01						
v/c Ratio	0.20	0.05		0.61	0.61	0.09	0.66	0.92		1.02	0.73	
Uniform Delay, d1	63.5	62.6		59.5	59.6	54.8	69.1	31.1		67.7	22.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.36	0.25		0.60	0.42	
Incremental Delay, d2	0.6	0.1		4.1	4.6	0.2	1.4	0.5		44.7	0.8	
Delay (s)	64.1	62.8		63.5	64.2	55.0	95.2	8.2		85.2	10.4	
Level of Service	E	E		E	E	D	F	A		F	B	
Approach Delay (s)		63.5			61.1			10.0			18.7	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	82.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	331	190	44	326	167	175	3023	52	172	2530	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3345		1770	3359		1770	6391		1770	6323	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3345		1770	3359		1770	6391		1770	6323	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	272	341	196	45	336	172	180	3116	54	177	2608	253
RTOR Reduction (vph)	0	53	0	0	48	0	0	2	0	0	11	0
Lane Group Flow (vph)	272	484	0	45	460	0	180	3168	0	177	2850	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	30.7	48.8		8.8	26.9		13.4	60.2		13.4	60.2	
Effective Green, g (s)	30.7	48.8		8.8	26.9		13.4	60.2		13.4	60.2	
Actuated g/C Ratio	0.20	0.33		0.06	0.18		0.09	0.40		0.09	0.40	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	362	1088		103	602		158	2564		158	2537	
v/s Ratio Prot	c0.15	0.14		0.03	c0.14		0.10	c0.50		0.10	c0.45	
v/s Ratio Perm												
v/c Ratio	0.75	0.45		0.44	0.76		1.14	1.24		1.12	1.12	
Uniform Delay, d1	56.1	39.9		68.2	58.5		68.3	44.9		68.3	44.9	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.77		0.91	0.89	
Incremental Delay, d2	8.5	0.3		2.9	5.8		104.2	108.7		96.7	59.8	
Delay (s)	64.6	40.2		71.2	64.3		168.9	143.2		159.1	100.0	
Level of Service	E	D		E	E		F	F		F	F	
Approach Delay (s)		48.4			64.9			144.6			103.5	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	112.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	98.9%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	18	41	63	11	21	161	2955	69	74	2399	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1669	1478		1667	1478	1770	6386		1770	6387	
Flt Permitted		0.69	1.00		0.57	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1196	1478		992	1478	1770	6386		1770	6387	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	92	19	42	65	11	22	166	3046	71	76	2473	56
RTOR Reduction (vph)	0	0	36	0	0	19	0	2	0	0	2	0
Lane Group Flow (vph)	0	111	6	0	76	3	166	3115	0	76	2527	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		21.3	21.3		21.3	21.3	24.0	101.9		11.5	89.4	
Effective Green, g (s)		21.3	21.3		21.3	21.3	24.0	101.9		11.5	89.4	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.68		0.08	0.60	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		169	209		140	209	283	4338		135	3806	
v/s Ratio Prot							0.09	c0.49		0.04	c0.40	
v/s Ratio Perm		c0.09	0.00		0.08	0.00						
v/c Ratio		0.66	0.03		0.54	0.01	0.59	0.72		0.56	0.66	
Uniform Delay, d1		60.9	55.4		59.8	55.3	58.4	15.1		66.8	20.3	
Progression Factor		1.00	1.00		1.00	1.00	0.58	0.60		1.03	0.57	
Incremental Delay, d2		8.9	0.1		4.2	0.0	0.3	0.1		0.5	0.1	
Delay (s)		69.8	55.5		64.1	55.4	34.4	9.2		69.5	11.6	
Level of Service		E	E		E	E	C	A		E	B	
Approach Delay (s)		65.8			62.1			10.4			13.3	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	76.8%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	441	1196	187	260	1356	229	385	2595	193	192	2011	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4982		3433	4975		3433	6341		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4982		3433	4975		3433	6341		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	464	1259	197	274	1427	241	405	2732	203	202	2117	394
RTOR Reduction (vph)	0	14	0	0	16	0	0	7	0	0	0	157
Lane Group Flow (vph)	464	1442	0	274	1652	0	405	2928	0	202	2117	237
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.8	46.7		13.8	42.7		18.3	58.5		12.0	52.2	52.2
Effective Green, g (s)	17.8	46.7		13.8	42.7		18.3	58.5		12.0	52.2	52.2
Actuated g/C Ratio	0.12	0.31		0.09	0.28		0.12	0.39		0.08	0.35	0.35
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	407	1551		315	1416		418	2472		274	2229	550
v/s Ratio Prot	c0.14	0.29		0.08	c0.33		c0.12	c0.46		0.06	0.33	
v/s Ratio Perm												0.15
v/c Ratio	1.14	0.93		0.87	1.17		0.97	1.18		0.74	0.95	0.43
Uniform Delay, d1	66.1	50.1		67.2	53.6		65.6	45.8		67.5	47.6	37.5
Progression Factor	1.00	1.00		1.00	1.00		0.90	0.76		1.25	0.57	0.60
Incremental Delay, d2	88.6	10.1		21.0	83.1		7.3	83.4		6.9	8.7	1.9
Delay (s)	154.7	60.2		88.2	136.8		66.1	118.0		91.2	36.0	24.5
Level of Service	F	E		F	F		E	F		F	D	C
Approach Delay (s)		83.0			129.9			111.7			38.5	
Approach LOS		F			F			F			D	

Intersection Summary				
HCM 2000 Control Delay	89.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.16			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0	
Intersection Capacity Utilization	110.5%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

9: Beach Blvd & Slater Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	510	162	116	639	160	206	2688	69	182	2224	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3433		1770	6384		1770	6343	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3433		1770	6384		1770	6343	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	212	531	169	121	666	167	215	2800	72	190	2317	169
RTOR Reduction (vph)	0	21	0	0	15	0	0	2	0	0	8	0
Lane Group Flow (vph)	212	679	0	121	818	0	215	2870	0	190	2478	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.3	35.6		19.3	37.6		18.3	58.5		15.9	56.1	
Effective Green, g (s)	17.3	35.6		19.3	37.6		18.3	58.5		15.9	56.1	
Actuated g/C Ratio	0.12	0.24		0.13	0.25		0.12	0.39		0.11	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	809		227	860		215	2489		187	2372	
v/s Ratio Prot	c0.12	0.20		0.07	c0.24		0.12	c0.45		0.11	c0.39	
v/s Ratio Perm												
v/c Ratio	1.04	0.84		0.53	0.95		1.00	1.15		1.02	1.04	
Uniform Delay, d1	66.3	54.5		61.1	55.3		65.8	45.8		67.0	47.0	
Progression Factor	1.00	1.00		1.00	1.00		0.86	0.80		1.02	0.50	
Incremental Delay, d2	73.7	7.6		2.4	19.8		51.3	72.4		45.8	25.8	
Delay (s)	140.0	62.1		63.5	75.1		107.7	109.0		114.4	49.3	
Level of Service	F	E		E	E		F	F		F	D	
Approach Delay (s)		80.2			73.6			108.9			53.9	
Approach LOS		F			E			F			D	

Intersection Summary				
HCM 2000 Control Delay	81.8	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.08			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	101.5%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

10: Beach Blvd & Newman Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	1	17	114	8	167	17	2678	85	83	2478	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1717			1684		1770	6378		1770	6397	
Flt Permitted		0.68			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1195			1477		1770	6378		1770	6397	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	29	1	18	118	8	172	18	2761	88	86	2555	30
RTOR Reduction (vph)	0	14	0	0	36	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	34	0	0	262	0	18	2847	0	86	2584	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		31.6			31.6		6.0	90.1		12.4	96.5	
Effective Green, g (s)		31.6			31.6		6.0	90.1		12.4	96.5	
Actuated g/C Ratio		0.21			0.21		0.04	0.60		0.08	0.64	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		251			311		70	3831		146	4115	
v/s Ratio Prot							0.01	c0.45		c0.05	0.40	
v/s Ratio Perm		0.03			c0.18							
v/c Ratio		0.13			0.84		0.26	0.74		0.59	0.63	
Uniform Delay, d1		48.1			56.8		69.8	21.6		66.3	16.0	
Progression Factor		1.00			1.00		1.41	0.48		1.43	0.30	
Incremental Delay, d2		0.2			18.2		0.2	0.1		1.7	0.2	
Delay (s)		48.3			75.0		98.9	10.4		96.7	5.0	
Level of Service		D			E		F	B		F	A	
Approach Delay (s)		48.3			75.0			11.0			8.0	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	436	171	206	527	299	226	2362	186	272	2247	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3390		1770	3347		1770	6338		1770	6350	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3390		1770	3347		1770	6338		1770	6350	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	176	454	178	215	549	311	235	2460	194	283	2341	150
RTOR Reduction (vph)	0	29	0	0	53	0	0	8	0	0	6	0
Lane Group Flow (vph)	176	603	0	215	807	0	235	2646	0	283	2485	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.8	32.0		22.3	38.5		19.3	53.7		21.3	55.7	
Effective Green, g (s)	15.8	32.0		22.3	38.5		19.3	53.7		21.3	55.7	
Actuated g/C Ratio	0.11	0.21		0.15	0.26		0.13	0.36		0.14	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	186	723		263	859		227	2269		251	2357	
v/s Ratio Prot	0.10	c0.18		0.12	c0.24		0.13	c0.42		c0.16	0.39	
v/s Ratio Perm												
v/c Ratio	0.95	0.83		0.82	0.94		1.04	1.17		1.13	1.05	
Uniform Delay, d1	66.7	56.5		61.9	54.6		65.3	48.1		64.3	47.1	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.54		0.69	0.60	
Incremental Delay, d2	49.7	8.4		16.8	17.8		55.2	77.8		90.0	33.2	
Delay (s)	116.4	64.9		78.6	72.4		107.6	103.7		134.6	61.5	
Level of Service	F	E		E	E		F	F		F	E	
Approach Delay (s)		76.1			73.7			104.0			69.0	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	83.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	103.8%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	473	479	111	181	531	170	181	1962	176	304	1762	557
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6329		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6329		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	483	489	113	185	542	173	185	2002	180	310	1798	568
RTOR Reduction (vph)	0	0	79	0	0	94	0	9	0	0	0	21
Lane Group Flow (vph)	483	489	34	185	542	79	185	2173	0	310	1798	547
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	31.2	31.2	31.2	28.1	28.1	28.1	10.4	52.7		15.3	57.6	94.8
Effective Green, g (s)	31.2	31.2	31.2	28.1	28.1	28.1	10.4	52.7		15.3	57.6	94.8
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19	0.19	0.07	0.35		0.10	0.38	0.63
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	714	736	329	331	662	296	238	2223		350	1952	1000
v/s Ratio Prot	c0.14	0.14		0.10	c0.15		0.05	c0.34		c0.09	0.35	0.35
v/s Ratio Perm			0.02			0.05						
v/c Ratio	0.68	0.66	0.10	0.56	0.82	0.27	0.78	0.98		0.89	0.92	0.55
Uniform Delay, d1	54.7	54.6	48.1	55.3	58.5	52.1	68.7	48.1		66.5	44.0	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.32	0.58		1.15	0.57	1.03
Incremental Delay, d2	2.1	1.9	0.1	1.2	7.4	0.2	1.4	2.5		2.7	0.9	0.0
Delay (s)	56.9	56.5	48.1	56.5	65.9	52.3	91.9	30.4		79.2	26.2	16.0
Level of Service	E	E	D	E	E	D	F	C		E	C	B
Approach Delay (s)		55.8			61.4			35.2			30.2	
Approach LOS		E			E			D			C	

Intersection Summary					
HCM 2000 Control Delay	39.8	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.86				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7		
Intersection Capacity Utilization	89.5%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

13: Beach Blvd & Garfield Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	546	142	162	423	143	220	1858	113	208	1721	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3405		1770	5042		1770	5013	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3405		1770	5042		1770	5013	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	222	563	146	167	436	147	227	1915	116	214	1774	186
RTOR Reduction (vph)	0	0	109	0	24	0	0	4	0	0	8	0
Lane Group Flow (vph)	222	563	37	167	559	0	227	2027	0	214	1952	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	23.3	37.6	37.6	16.5	30.8		19.2	55.0		19.7	55.5	
Effective Green, g (s)	23.3	37.6	37.6	16.5	30.8		19.2	55.0		19.7	55.5	
Actuated g/C Ratio	0.16	0.25	0.25	0.11	0.21		0.13	0.37		0.13	0.37	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	274	887	396	194	699		226	1848		232	1854	
v/s Ratio Prot	c0.13	0.16		0.09	c0.16		0.13	c0.40		0.12	c0.39	
v/s Ratio Perm			0.02									
v/c Ratio	0.81	0.63	0.09	0.86	0.80		1.00	1.10		0.92	1.05	
Uniform Delay, d1	61.2	50.1	43.1	65.6	56.7		65.4	47.5		64.4	47.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.61	0.48		0.48	0.88	
Incremental Delay, d2	15.6	1.7	0.1	29.3	6.8		38.4	47.4		25.0	31.6	
Delay (s)	76.8	51.8	43.3	94.9	63.4		78.5	70.1		56.1	73.2	
Level of Service	E	D	D	F	E		E	E		E	E	
Approach Delay (s)		56.4			70.4			71.0			71.5	
Approach LOS		E			E			E			E	

Intersection Summary					
HCM 2000 Control Delay	68.9	HCM 2000 Level of Service	E		
HCM 2000 Volume to Capacity ratio	0.98				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.2		
Intersection Capacity Utilization	95.8%	ICU Level of Service	F		
Analysis Period (min)	15				
c Critical Lane Group					

14: Beach Blvd & Yorktown Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	442	156	137	386	146	215	1873	188	146	1713	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3393		1770	5016		1770	5021	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3393		1770	5016		1770	5021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	465	164	144	406	154	226	1972	198	154	1803	165
RTOR Reduction (vph)	0	0	120	0	28	0	0	8	0	0	7	0
Lane Group Flow (vph)	156	465	44	144	532	0	226	2162	0	154	1961	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.8	34.0	34.0	13.4	29.6		21.7	68.1		14.1	60.5	
Effective Green, g (s)	17.8	34.0	34.0	13.4	29.6		21.7	68.1		14.1	60.5	
Actuated g/C Ratio	0.12	0.23	0.23	0.09	0.20		0.14	0.45		0.09	0.40	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	210	802	358	158	669		256	2277		166	2025	
v/s Ratio Prot	c0.09	0.13		c0.08	c0.16		0.13	c0.43		0.09	c0.39	
v/s Ratio Perm			0.03									
v/c Ratio	0.74	0.58	0.12	0.91	0.80		0.88	0.95		0.93	0.97	
Uniform Delay, d1	63.9	51.6	46.1	67.7	57.3		62.9	39.3		67.4	43.8	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.98	0.60		0.81	0.79	
Incremental Delay, d2	13.2	1.0	0.2	46.4	6.5		25.3	9.3		22.0	5.9	
Delay (s)	77.1	52.7	46.3	114.1	63.8		87.1	32.9		76.8	40.4	
Level of Service	E	D	D	F	E		F	C		E	D	
Approach Delay (s)		56.2			74.1			38.0			43.0	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.91			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	91.0%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	19	58	153	31	98	107	1833	89	122	1703	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5050		1770	5044	
Flt Permitted		0.67			0.61	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1169			1142	1583	1770	5050		1770	5044	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	42	19	59	155	31	99	108	1852	90	123	1720	98
RTOR Reduction (vph)	0	26	0	0	0	80	0	3	0	0	3	0
Lane Group Flow (vph)	0	94	0	0	186	19	108	1939	0	123	1815	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		28.4			28.4	28.4	17.8	90.7		15.7	88.6	
Effective Green, g (s)		28.4			28.4	28.4	17.8	90.7		15.7	88.6	
Actuated g/C Ratio		0.19			0.19	0.19	0.12	0.60		0.10	0.59	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		221			216	299	210	3053		185	2979	
v/s Ratio Prot							0.06	c0.38		0.07	c0.36	
v/s Ratio Perm		0.08			c0.16	0.01						
v/c Ratio		0.43			0.86	0.06	0.51	0.64		0.66	0.61	
Uniform Delay, d1		53.6			58.9	49.9	62.0	19.0		64.6	19.6	
Progression Factor		1.00			1.00	1.00	0.70	0.47		0.64	1.37	
Incremental Delay, d2		1.3			27.8	0.1	1.0	0.5		3.5	0.4	
Delay (s)		54.9			86.7	50.0	44.2	9.5		44.7	27.2	
Level of Service		D			F	D	D	A		D	C	
Approach Delay (s)		54.9			73.9			11.3			28.3	
Approach LOS		D			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	24.1	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.69			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	75.2%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	498	63	212	893	400	138	1396	120	345	1316	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	5025		3433	4998	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	5025		3433	4998	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	191	530	67	226	950	426	147	1485	128	367	1400	181
RTOR Reduction (vph)	0	10	0	0	0	62	0	7	0	0	11	0
Lane Group Flow (vph)	191	587	0	226	950	364	147	1606	0	367	1570	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	17.7	39.1		20.6	42.0	59.8	16.2	50.7		17.8	52.3	
Effective Green, g (s)	17.7	39.1		20.6	42.0	59.8	16.2	50.7		17.8	52.3	
Actuated g/C Ratio	0.12	0.26		0.14	0.28	0.40	0.11	0.34		0.12	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	208	1303		243	990	631	191	1698		407	1742	
v/s Ratio Prot	0.11	0.12		c0.13	c0.27	0.07	0.08	c0.32		0.11	c0.31	
v/s Ratio Perm						0.16						
v/c Ratio	0.92	0.45		0.93	0.96	0.58	0.77	0.95		0.90	0.90	
Uniform Delay, d1	65.4	46.4		64.0	53.2	35.2	65.1	48.3		65.2	46.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.67	0.56		1.30	0.44	
Incremental Delay, d2	39.4	0.5		38.6	19.7	0.8	13.6	11.1		18.8	6.6	
Delay (s)	104.8	47.0		102.6	72.9	36.0	56.9	38.2		103.6	27.1	
Level of Service	F	D		F	E	D	E	D		F	C	
Approach Delay (s)		61.0			67.3			39.7			41.5	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	92.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	116	40	35	131	166	33	1507	34	167	1235	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1791		1770	1863	1583	1770	5068		1770	5045	
Flt Permitted	0.50	1.00		0.42	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	941	1791		789	1863	1583	1770	5068		1770	5045	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	73	118	41	36	134	169	34	1538	35	170	1260	70
RTOR Reduction (vph)	0	10	0	0	0	146	0	1	0	0	3	0
Lane Group Flow (vph)	73	149	0	36	134	23	34	1572	0	170	1327	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	20.0	20.0		20.0	20.0	20.0	8.3	84.3		29.3	105.3	
Effective Green, g (s)	20.0	20.0		20.0	20.0	20.0	8.3	84.3		29.3	105.3	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.06	0.56		0.20	0.70	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	238		105	248	211	97	2848		345	3541	
v/s Ratio Prot		c0.08			0.07		0.02	c0.31		c0.10	0.26	
v/s Ratio Perm	0.08			0.05		0.01						
v/c Ratio	0.58	0.63		0.34	0.54	0.11	0.35	0.55		0.49	0.37	
Uniform Delay, d1	61.1	61.5		59.0	60.7	57.1	68.3	20.9		53.7	9.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.43	0.40		0.49	0.23	
Incremental Delay, d2	6.8	5.1		2.0	2.4	0.2	1.1	0.4		0.5	0.1	
Delay (s)	67.9	66.6		61.0	63.1	57.4	98.9	8.8		27.0	2.2	
Level of Service	E	E		E	E	E	F	A		C	A	
Approach Delay (s)		67.0			60.0			10.7			5.0	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	383	34	83	551	222	125	992	91	362	673	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3386		1770	5021		1770	4870	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3386		1770	5021		1770	4870	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	269	391	35	85	562	227	128	1012	93	369	687	271
RTOR Reduction (vph)	0	4	0	0	29	0	0	7	0	0	51	0
Lane Group Flow (vph)	269	422	0	85	760	0	128	1098	0	369	907	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.4	47.7		11.7	35.0		26.3	37.0		32.5	43.2	
Effective Green, g (s)	24.4	47.7		11.7	35.0		26.3	37.0		32.5	43.2	
Actuated g/C Ratio	0.16	0.32		0.08	0.23		0.18	0.25		0.22	0.29	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	287	1111		138	790		310	1238		383	1402	
v/s Ratio Prot	c0.15	0.12		0.05	c0.22		0.07	c0.22		c0.21	0.19	
v/s Ratio Perm												
v/c Ratio	0.94	0.38		0.62	0.96		0.41	0.89		0.96	0.65	
Uniform Delay, d1	62.0	39.7		67.0	56.8		55.0	54.5		58.2	46.7	
Progression Factor	1.00	1.00		1.00	1.00		1.10	1.11		0.88	0.56	
Incremental Delay, d2	36.0	0.1		5.6	22.9		0.3	9.4		34.9	2.2	
Delay (s)	98.0	39.8		72.6	79.7		60.8	69.6		86.0	28.2	
Level of Service	F	D		E	E		E	E		F	C	
Approach Delay (s)		62.3			79.0			68.7			44.3	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	62.0	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.94		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	95.8%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

19: Beach Blvd & Pacific View Ave

Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	0	135	0	0	0	129	1157	0	0	680	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5030	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5030	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	84	0	144	0	0	0	137	1231	0	0	723	56
RTOR Reduction (vph)	0	0	129	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	84	0	15	0	0	0	137	1231	0	0	776	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	16.1		16.1				17.0	122.9			101.0	
Effective Green, g (s)	16.1		16.1				17.0	122.9			101.0	
Actuated g/C Ratio	0.11		0.11				0.11	0.82			0.67	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	189		169				200	4166			3386	
v/s Ratio Prot							c0.08	c0.24			0.15	
v/s Ratio Perm	c0.05		0.01									
v/c Ratio	0.44		0.09				0.69	0.30			0.23	
Uniform Delay, d1	62.8		60.4				63.9	3.2			9.5	
Progression Factor	1.00		1.00				1.08	0.49			0.50	
Incremental Delay, d2	1.7		0.2				2.9	0.1			0.1	
Delay (s)	64.4		60.6				71.8	1.6			4.9	
Level of Service	E		E				E	A			A	
Approach Delay (s)		62.0			0.0			8.7			4.9	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	295	1234	54	23	1601	950	30	52	39	513	56	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	307	1285	56	24	1668	990	31	54	41	534	58	265
RTOR Reduction (vph)	0	3	0	0	0	278	0	0	38	0	0	0
Lane Group Flow (vph)	307	1338	0	24	1668	712	31	54	3	534	58	265
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.3	77.5		4.3	68.5	68.5	3.6	11.7	11.7	34.8	42.9	150.0
Effective Green, g (s)	13.3	77.5		4.3	68.5	68.5	3.6	11.7	11.7	34.8	42.9	150.0
Actuated g/C Ratio	0.09	0.52		0.03	0.46	0.46	0.02	0.08	0.08	0.23	0.29	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	304	2610		50	1616	722	42	276	123	796	532	1583
v/s Ratio Prot	c0.09	0.26		0.01	c0.47		c0.02	0.02		c0.16	0.03	
v/s Ratio Perm						0.45			0.00			c0.17
v/c Ratio	1.01	0.51		0.48	1.03	0.99	0.74	0.20	0.03	0.67	0.11	0.17
Uniform Delay, d1	68.3	23.8		71.7	40.8	40.3	72.7	64.7	63.9	52.4	39.5	0.0
Progression Factor	1.00	1.00		1.18	0.36	0.74	1.00	1.00	1.00	1.24	1.15	1.00
Incremental Delay, d2	54.1	0.7		1.8	27.3	24.3	44.0	0.1	0.0	1.7	0.0	0.2
Delay (s)	122.5	24.6		86.1	42.1	54.1	116.7	64.9	63.9	66.6	45.5	0.2
Level of Service	F	C		F	D	D	F	E	E	E	D	A
Approach Delay (s)		42.8			46.9			77.3			44.6	
Approach LOS		D			D			E			D	

Intersection Summary			
HCM 2000 Control Delay	46.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	87.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	174	1597	16	5	2392	309	13	12	16	93	6	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1699		1770	1592	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.26	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	485	1699		1375	1592	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	181	1664	17	5	2492	322	14	12	17	97	6	181
RTOR Reduction (vph)	0	0	4	0	0	88	0	15	0	0	159	0
Lane Group Flow (vph)	181	1664	13	5	2492	234	14	14	0	97	28	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	19.9	116.3	116.3	1.2	97.6	97.6	18.6	18.6		18.6	18.6	
Effective Green, g (s)	19.9	116.3	116.3	1.2	97.6	97.6	18.6	18.6		18.6	18.6	
Actuated g/C Ratio	0.13	0.78	0.78	0.01	0.65	0.65	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	234	3942	1227	14	3308	1030	60	210		170	197	
v/s Ratio Prot	c0.10	0.33		c0.00	c0.49			0.01			0.02	
v/s Ratio Perm			0.01			0.15	0.03			c0.07		
v/c Ratio	0.77	0.42	0.01	0.36	0.75	0.23	0.23	0.07		0.57	0.14	
Uniform Delay, d1	62.9	5.6	3.8	74.0	18.0	10.7	59.3	58.0		61.9	58.6	
Progression Factor	0.73	1.96	1.00	0.58	0.37	0.09	1.00	1.00		1.00	1.00	
Incremental Delay, d2	11.7	0.3	0.0	2.4	0.7	0.2	0.7	0.0		2.9	0.1	
Delay (s)	57.3	11.3	3.8	45.5	7.3	1.2	60.0	58.1		64.8	58.7	
Level of Service	E	B	A	D	A	A	E	E		E	E	
Approach Delay (s)		15.7			6.7			58.7			60.8	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1560	38	52	2554	239	18	47	32	170	52	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1723	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.97	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1723	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	149	1660	40	55	2717	254	19	50	34	181	55	177
RTOR Reduction (vph)	0	0	16	0	0	68	0	16	0	0	0	155
Lane Group Flow (vph)	149	1660	24	55	2717	186	19	68	0	116	120	22
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.8	88.6	88.6	7.3	85.1	85.1	17.0	17.0		18.3	18.3	18.3
Effective Green, g (s)	10.8	88.6	88.6	7.3	85.1	85.1	17.0	17.0		18.3	18.3	18.3
Actuated g/C Ratio	0.07	0.59	0.59	0.05	0.57	0.57	0.11	0.11		0.12	0.12	0.12
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	127	3003	935	86	2884	898	200	198		205	210	193
v/s Ratio Prot	c0.08	0.33		0.03	c0.53		0.01	c0.04		0.07	c0.07	
v/s Ratio Perm			0.01			0.12						0.01
v/c Ratio	1.17	0.55	0.03	0.64	0.94	0.21	0.10	0.34		0.57	0.57	0.11
Uniform Delay, d1	69.6	18.7	12.8	70.1	30.2	15.9	59.6	61.4		62.1	62.1	58.6
Progression Factor	0.88	0.56	0.92	1.39	0.21	0.03	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	131.5	0.7	0.0	1.0	0.9	0.0	0.1	0.4		2.1	2.3	0.1
Delay (s)	192.5	11.2	11.8	98.3	7.2	0.5	59.7	61.7		64.2	64.5	58.7
Level of Service	F	B	B	F	A	A	E	E		E	E	E
Approach Delay (s)		25.8			8.3			61.4			61.9	
Approach LOS		C			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	19.4	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.83			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	86.1%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	244	1524	7	20	2584	700	25	30	14	336	8	242
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	262	1639	8	22	2778	753	27	32	15	361	9	260
RTOR Reduction (vph)	0	0	3	0	0	40	0	12	0	0	0	193
Lane Group Flow (vph)	262	1639	5	22	2778	713	27	35	0	361	9	67
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	29.4	95.6	95.6	3.7	69.9	94.2	5.7	5.7		24.3	24.3	24.3
Effective Green, g (s)	29.4	95.6	95.6	3.7	69.9	94.2	5.7	5.7		24.3	24.3	24.3
Actuated g/C Ratio	0.20	0.64	0.64	0.02	0.47	0.63	0.04	0.04		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	346	3240	1008	43	2369	994	67	67		556	301	256
v/s Ratio Prot	c0.15	0.32		0.01	c0.55	c0.12	0.02	c0.02		0.11	0.00	
v/s Ratio Perm			0.00			0.33						0.04
v/c Ratio	0.76	0.51	0.01	0.51	1.17	0.72	0.40	0.53		0.65	0.03	0.26
Uniform Delay, d1	56.9	14.6	9.9	72.3	40.0	18.9	70.5	70.8		58.9	52.9	55.0
Progression Factor	0.72	1.14	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	7.2	0.5	0.0	4.2	82.5	2.1	1.4	3.4		2.0	0.0	0.2
Delay (s)	48.0	17.1	9.9	76.5	122.6	21.0	71.9	74.3		60.8	52.9	55.2
Level of Service	D	B	A	E	F	C	E	E		E	D	E
Approach Delay (s)		21.3			100.8			73.4			58.4	
Approach LOS		C			F			E			E	

Intersection Summary				
HCM 2000 Control Delay	71.5	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	93.2%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Scenario Report

Scenario:	ALT6+P1-PM
Command:	ALT6+P1-PM
Volume:	EX-PM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	2018-CUMUL+P2-PM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	ALT6+P1-PM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	E	xxxxx	0.935	F	xxxxx	1.037	+ 0.102
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.894	E	xxxxx	0.957	+ 0.063
# 16 Beach Blvd & Adams Ave	C	xxxxx	0.745	D	xxxxx	0.817	+ 0.072
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.693	D	xxxxx	0.862	+ 0.169
# 21 Newland St & Atlanta Ave	A	xxxxx	0.578	A	xxxxx	0.594	+ 0.015
# 22 Newland St & Hamilton Ave	C	xxxxx	0.717	D	xxxxx	0.800	+ 0.084
# 24 Magnolia St & Hamilton Ave	B	xxxxx	0.627	B	xxxxx	0.637	+ 0.010
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.676	B	xxxxx	0.693	+ 0.018
# 30 Brookhurst Street & Talbert Av	D	xxxxx	0.821	D	xxxxx	0.844	+ 0.023
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.520	A	xxxxx	0.540	+ 0.020
# 32 Brookhurst Street & Quail Aven	B	xxxxx	0.614	B	xxxxx	0.636	+ 0.023
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.730	C	xxxxx	0.770	+ 0.040
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.641	B	xxxxx	0.670	+ 0.029
# 35 Brookhurst Street & Yorktown A	B	xxxxx	0.612	B	xxxxx	0.641	+ 0.029
# 36 Brookhurst Street & Adams Aven	D	xxxxx	0.801	D	xxxxx	0.829	+ 0.028
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.362	A	xxxxx	0.377	+ 0.015
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.452	A	xxxxx	0.478	+ 0.026
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.232	A	xxxxx	0.247	+ 0.015
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.292	A	xxxxx	0.307	+ 0.015

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.935
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	113	Level Of Service:	E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	441	2379	540		353	2335	678		442	963	260		185	627	183	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	441	2379	540		353	2335	678		442	963	260		185	627	183	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	441	2379	540		353	2335	678		442	963	260		185	627	183	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	441	2379	540		353	2335	678		442	963	260		185	627	183	
OvlAdjVol:							237				40					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.47	0.32		0.10	0.34	0.20		0.13	0.19	0.15		0.05	0.18	0.11	
OvlAdjV/S:							0.07				0.02					
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.894
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	83	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.37	0.37		0.06	0.26	0.21		0.13	0.25	0.25		0.07	0.29	0.29	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.745
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	137	1162	106	306	1107	161	166	483	63	199	879	360				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	137	1162	106	306	1107	161	166	483	63	199	879	360				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	137	1162	106	306	1107	161	166	483	63	199	879	360				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	137	1162	106	306	1107	161	166	483	63	199	879	360				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.75	0.25	2.00	2.62	0.38	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4673	427	3400	4451	649	1700	4515	585	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.25	0.25	0.09	0.25	0.25	0.10	0.11	0.11	0.12	0.26	0.21				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.693
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37	303	53	232	267	1070	51	22	1417	720				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	30	52	39	322	56	246	283	1136	54	23	1504	764				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	30	52	0	322	56	0	283	1136	54	23	1504	764				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	30	52	0	322	56	0	283	1136	54	23	1504	764				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	30	52	0	322	56	0	283	1136	54	23	1504	764				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.86	0.14	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4868	232	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.02	0.00	0.09	0.03	0.00	0.08	0.23	0.23	0.01	0.44	0.45				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34	96	264	97	80	474	203	52	473	114				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	292	553	36	102	280	103	85	503	215	55	502	121				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	292	553	36	102	280	103	85	503	215	55	502	121				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	292	553	36	102	280	103	85	503	215	55	502	121				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	292	553	36	102	280	103	85	503	215	55	502	121				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.88	0.12	1.00	1.46	0.54	1.00	1.40	0.60	1.00	1.61	0.39				
Final Sat.:	1700	3192	208	1700	2486	914	1700	2381	1019	1700	2740	660				
Capacity Analysis Module:																
Vol/Sat:	0.17	0.17	0.17	0.06	0.11	0.11	0.05	0.21	0.21	0.03	0.18	0.18				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.717
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	304	65	223	203	0	0	0	0	153	0	476				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	0	323	69	237	215	0	0	0	0	162	0	505				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	323	69	237	215	0	0	0	0	162	0	505				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	323	69	237	215	0	0	0	0	162	0	505				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	323	69	237	215	0	0	0	0	162	0	505				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.82	0.18	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1401	299	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.23	0.23	0.14	0.13	0.00	0.00	0.00	0.00	0.10	0.00	0.30				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.627
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	30	300	28	189	178	42	25	257	29	15	546	327				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	32	318	30	201	189	45	27	273	31	16	580	347				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	32	318	30	201	189	45	27	273	31	16	580	347				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	32	318	30	201	189	45	27	273	31	16	580	347				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	32	318	30	201	189	45	27	273	31	16	580	347				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.83	0.17	1.00	2.00	1.00	1.00	0.90	0.10	1.00	1.00	1.00				
Final Sat.:	1700	3110	290	1700	3400	1700	1700	1528	172	1700	1700	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10	0.12	0.06	0.03	0.02	0.18	0.18	0.01	0.34	0.20				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.676
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153	387	389	88	89	350	67	231	1060	500				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	118	604	162	411	413	93	94	372	71	245	1125	531				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	118	604	162	411	413	93	94	372	71	245	1125	531				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	118	604	162	411	413	93	94	372	71	245	1125	531				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	118	604	162	411	413	93	94	372	71	245	1125	531				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	1.00	2.00	2.45	0.55	1.00	1.68	0.32	1.00	2.00	1.00				
Final Sat.:	1700	5100	1700	3400	4159	941	1700	2854	546	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.07	0.12	0.10	0.12	0.10	0.10	0.06	0.13	0.13	0.14	0.33	0.31				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.821
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314	237	1392	244	212	635	156	243	1059	461				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	204	1533	333	252	1478	259	225	674	166	258	1124	489				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	5100	1700	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.30	0.20	0.07	0.29	0.15	0.07	0.13	0.10	0.08	0.33	0.29				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.520
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16	29	1774	25	83	0	28	8	0	11				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	23	1908	17	31	1883	27	88	0	30	8	0	12				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	23	1908	17	31	1883	0	88	0	30	8	0	12				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	23	1908	17	31	1883	0	88	0	30	8	0	12				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	23	1908	17	31	1883	0	88	0	30	8	0	12				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.97	0.03	1.00	3.00	1.00	0.74	0.01	0.25	0.42	0.00	0.58				
Final Sat.:	1700	5055	45	1700	5100	1700	1271	0	429	716	0	984				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.38	0.38	0.02	0.37	0.00	0.05	0.00	0.07	0.00	0.00	0.01				
Crit Moves:		****		****					****	****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.614
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	73	1686	14		42	1645	226		234	8	87		14	3	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	73	1686	14		42	1645	226		234	8	87		14	3	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	73	1686	14		42	1645	226		234	8	87		14	3	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	73	1686	14		42	1645	226		234	8	87		14	3	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.33	0.33		0.02	0.37	0.37		0.14	0.14	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	113	1348	136		163	1264	193		263	501	92		352	708	115	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	113	1348	136		163	1264	193		263	501	92		352	708	115	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	113	1348	136		163	1264	193		263	501	92		352	708	115	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	113	1348	136		163	1264	193		263	501	92		352	708	115	
OvlAdjVol:			0				62									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.26	0.08		0.10	0.25	0.11		0.08	0.17	0.17		0.10	0.24	0.24	
OvlAdjV/S:			0.00				0.04									
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.641
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	195	1465	82		109	1220	251		188	224	144		196	257	102	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	195	1465	82		109	1220	251		188	224	144		196	257	102	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	195	1465	82		109	1220	251		188	224	144		196	257	102	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	195	1465	82		109	1220	251		188	224	144		196	257	102	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.30	0.30		0.06	0.24	0.15		0.11	0.11	0.11		0.12	0.08	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.612
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	163	1497	117		39	1180	212		156	232	116		154	264	28	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	163	1497	117		39	1180	212		156	232	116		154	264	28	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	163	1497	117		39	1180	212		156	232	116		154	264	28	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	163	1497	117		39	1180	212		156	232	116		154	264	28	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.54	0.46		1.00	1.34	0.66		1.00	1.81	0.19	
Final Sat.:	1700	4731	369		1700	4323	777		1700	2270	1130		1700	3079	321	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.32	0.32		0.02	0.27	0.27		0.09	0.10	0.10		0.09	0.09	0.09	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.801
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	52	Level Of Service:	D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	277	927	153	323	902	190	291	793	131	298	1829	376				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	277	927	153	323	902	190	291	793	131	298	1829	376				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	277	927	153	323	902	190	291	793	131	298	1829	376				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	277	927	153	323	902	190	291	793	131	298	1829	376				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.21	0.21	0.09	0.21	0.21	0.09	0.16	0.08	0.09	0.36	0.22				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.362
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	19	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	47	1326	0	0	1120	176	103	0	54	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	47	1326	0	0	1120	176	103	0	54	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	47	1326	0	0	1120	176	103	0	54	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	47	1326	0	0	1120	176	103	0	54	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.26	0.00	0.00	0.25	0.25	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.452
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 22 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	156	1049	22	21	732	179	188	25	144	27	42	29				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	156	1049	22	21	732	179	188	25	144	27	42	29				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	156	1049	22	21	732	179	188	25	144	27	42	29				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	156	1049	22	21	732	179	188	25	144	27	42	29				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.94	0.06	1.00	2.41	0.59	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4994	106	1700	4097	1003	1700	1700	1700	1700	2030	1370				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.21	0.21	0.01	0.18	0.18	0.11	0.01	0.08	0.02	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.232
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	15	731	0	0	432	90	66	0	13	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	15	731	0	0	432	90	66	0	13	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	15	731	0	0	432	90	66	0	13	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	15	731	0	0	432	90	66	0	13	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.48	0.52	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4219	881	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00	0.00	0.10	0.10	0.04	0.00	0.01	0.00	0.00	0.00				
Crit Moves:		****		****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
ALTERNATIVE 6 WITH PROJECT CONDITIONS (2020)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.292
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1		12	378	26		7	0	86		0	1	0	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	186	719	1		13	401	28		7	0	91		0	1	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	186	719	1		13	401	28		7	0	91		0	1	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	186	719	1		13	401	28		7	0	91		0	1	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	186	719	1		13	401	28		7	0	91		0	1	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		1.00	0.00	1.00		0.00	1.00	0.00	
Final Sat.:	1700	5092	8		1700	5100	1700		1700	0	1700		0	1700	0	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.14	0.14		0.01	0.08	0.02		0.00	0.00	0.05		0.00	0.00	0.00	
Crit Moves:	****					****					****		****			

APPENDIX I: MITIGATION MEASURES LOS RESULTS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	393	378	144	356	421	141	245	2616	230	195	2141	263
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6303	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6303	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	409	394	150	371	439	147	255	2725	240	203	2230	274
RTOR Reduction (vph)	0	28	0	0	24	0	0	10	0	0	15	0
Lane Group Flow (vph)	409	516	0	371	562	0	255	2955	0	203	2489	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	18.8	29.2		16.9	27.3		12.1	64.5		11.0	63.4	
Effective Green, g (s)	18.8	29.2		16.9	27.3		12.1	64.5		11.0	63.4	
Actuated g/C Ratio	0.13	0.21		0.12	0.20		0.09	0.46		0.08	0.45	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	461	707		414	664		296	2916		269	2854	
v/s Ratio Prot	c0.12	0.15		0.11	c0.16		0.07	c0.47		0.06	c0.39	
v/s Ratio Perm												
v/c Ratio	0.89	0.73		0.90	0.85		0.86	1.01		0.75	0.87	
Uniform Delay, d1	59.6	51.7		60.7	54.3		63.1	37.8		63.2	34.6	
Progression Factor	1.00	1.00		1.00	1.00		0.84	1.06		1.00	1.00	
Incremental Delay, d2	18.3	3.8		21.2	9.7		18.3	18.4		11.4	4.0	
Delay (s)	77.8	55.5		81.9	64.1		71.0	58.4		74.6	38.6	
Level of Service	E	E		F	E		E	E		E	D	
Approach Delay (s)		65.1			71.0			59.4			41.3	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	55.3	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.95		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	329	917	0	2895	2243	947
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	336	936	0	2954	2289	966
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	336	935	0	2954	2289	966
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	18.5	65.5		111.7	58.7	140.0
Effective Green, g (s)	18.5	65.5		111.7	58.7	140.0
Actuated g/C Ratio	0.13	0.47		0.80	0.42	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	453	1393		5112	2686	1583
v/s Ratio Prot	0.10	c0.23		0.45	c0.36	
v/s Ratio Perm		0.11		0.01		c0.61
v/c Ratio	0.74	0.67		0.58	0.85	0.61
Uniform Delay, d1	58.5	28.9		5.3	36.7	0.0
Progression Factor	1.00	1.00		0.58	0.66	1.00
Incremental Delay, d2	6.9	1.4		0.0	2.5	1.2
Delay (s)	65.3	30.3		3.1	26.7	1.2
Level of Service	E	C		A	C	A
Approach Delay (s)	39.5			3.1	19.1	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	416	907	245	174	591	172	415	2273	509	333	2230	639
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	433	945	255	181	616	179	432	2368	530	347	2323	666
RTOR Reduction (vph)	0	0	65	0	0	144	0	0	155	0	0	45
Lane Group Flow (vph)	433	945	190	181	616	35	432	2368	375	347	2323	621
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	14.9	29.0	43.0	13.0	27.1	27.1	14.0	63.7	63.7	14.0	63.3	78.2
Effective Green, g (s)	14.9	29.0	43.0	13.0	27.1	27.1	14.0	63.7	63.7	14.0	63.3	78.2
Actuated g/C Ratio	0.11	0.21	0.31	0.09	0.19	0.19	0.10	0.46	0.46	0.10	0.45	0.56
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	365	1053	486	318	685	306	343	2313	720	343	2897	1648
v/s Ratio Prot	c0.13	c0.19	0.04	0.05	c0.17		c0.13	c0.47		c0.10	0.36	0.04
v/s Ratio Perm			0.08			0.02			0.24			0.18
v/c Ratio	1.19	0.90	0.39	0.57	0.90	0.11	1.26	1.02	0.52	1.01	0.80	0.38
Uniform Delay, d1	62.5	54.1	38.2	60.8	55.1	46.5	63.0	38.1	27.3	63.0	33.0	17.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.59	0.41	1.35	0.59	0.65
Incremental Delay, d2	108.2	10.1	0.2	1.4	14.6	0.2	133.3	22.5	2.0	41.0	1.5	0.0
Delay (s)	170.7	64.2	38.4	62.2	69.7	46.7	179.7	45.1	13.2	125.8	21.0	11.2
Level of Service	F	E	D	E	E	D	F	D	B	F	C	B
Approach Delay (s)		88.4			64.1			57.5			29.9	
Approach LOS		F			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	53.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	98.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

4: Beach Blvd & Stark Dr

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	24	19	41	127	32	175	120	2687	72	244	2348	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1670		1770	1863	1583	1770	6383		3433	6397	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1670		1770	1863	1583	1770	6383		3433	6397	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	24	19	42	130	33	179	122	2742	73	249	2396	28
RTOR Reduction (vph)	0	38	0	0	0	152	0	2	0	0	1	0
Lane Group Flow (vph)	24	23	0	130	33	27	122	2813	0	249	2423	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	12.6		16.0	20.8	20.8	15.1	77.0		14.8	76.7	
Effective Green, g (s)	7.8	12.6		16.0	20.8	20.8	15.1	77.0		14.8	76.7	
Actuated g/C Ratio	0.06	0.09		0.11	0.15	0.15	0.11	0.55		0.11	0.55	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	98	150		202	276	235	190	3510		362	3504	
v/s Ratio Prot	c0.01	c0.01		c0.07	0.02		0.07	c0.44		c0.07	0.38	
v/s Ratio Perm						0.02						
v/c Ratio	0.24	0.15		0.64	0.12	0.11	0.64	0.80		0.69	0.69	
Uniform Delay, d1	63.3	58.8		59.3	51.7	51.6	59.9	25.3		60.4	23.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.28	0.21		1.34	0.34	
Incremental Delay, d2	1.3	0.5		6.9	0.2	0.2	4.7	1.3		3.5	0.7	
Delay (s)	64.6	59.2		66.1	51.9	51.8	81.6	6.6		84.2	8.6	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		60.8			57.3			9.8			15.6	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	75.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

5: Beach Blvd & MacDonald Dr

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	29	5	18	248	4	165	63	2634	99	318	2292	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1644		1681	1576	1504	1770	6373		3433	6400	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1644		1681	1576	1504	1770	6373		3433	6400	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	29	5	18	251	4	167	64	2661	100	321	2315	19
RTOR Reduction (vph)	0	17	0	0	8	116	0	3	0	0	0	0
Lane Group Flow (vph)	29	6	0	146	136	17	64	2758	0	321	2334	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	10.6	10.6		17.5	17.5	17.5	8.7	74.1		19.9	85.3	
Effective Green, g (s)	10.6	10.6		17.5	17.5	17.5	8.7	74.1		19.9	85.3	
Actuated g/C Ratio	0.08	0.08		0.12	0.12	0.12	0.06	0.53		0.14	0.61	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	134	124		210	197	188	109	3373		487	3899	
v/s Ratio Prot	c0.02	0.00		c0.09	0.09		0.04	c0.43		c0.09	0.36	
v/s Ratio Perm						0.01						
v/c Ratio	0.22	0.05		0.70	0.69	0.09	0.59	0.82		0.66	0.60	
Uniform Delay, d1	60.8	60.0		58.7	58.7	54.2	63.9	27.3		56.8	16.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.37	0.11		0.63	0.12	
Incremental Delay, d2	0.8	0.2		9.6	10.0	0.2	0.7	0.2		2.5	0.5	
Delay (s)	61.6	60.2		68.3	68.6	54.4	88.5	3.1		38.3	2.5	
Level of Service	E	E		E	E	D	F	A		D	A	
Approach Delay (s)		61.0			64.1			5.0			6.9	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	75.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

6: Beach Blvd & Heil Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	249	312	179	41	307	157	165	2619	49	162	2163	231
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3359		1770	6390		1770	6315	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3359		1770	6390		1770	6315	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	257	322	185	42	316	162	170	2700	51	167	2230	238
RTOR Reduction (vph)	0	56	0	0	48	0	0	2	0	0	13	0
Lane Group Flow (vph)	257	451	0	42	430	0	170	2749	0	167	2455	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	21.7	36.1		8.8	23.2		14.0	56.3		20.0	62.3	
Effective Green, g (s)	21.7	36.1		8.8	23.2		14.0	56.3		20.0	62.3	
Actuated g/C Ratio	0.15	0.26		0.06	0.17		0.10	0.40		0.14	0.44	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	274	862		111	556		177	2569		252	2810	
v/s Ratio Prot	c0.15	0.13		0.02	c0.13		0.10	c0.43		0.09	c0.39	
v/s Ratio Perm												
v/c Ratio	0.94	0.52		0.38	0.77		0.96	1.07		0.66	0.87	
Uniform Delay, d1	58.5	44.6		63.0	55.9		62.7	41.9		56.8	35.3	
Progression Factor	1.00	1.00		1.00	1.00		0.84	0.87		0.73	0.57	
Incremental Delay, d2	37.6	0.6		2.2	6.6		50.5	38.8		5.3	3.4	
Delay (s)	96.1	45.1		65.1	62.5		103.4	75.3		46.9	23.6	
Level of Service	F	D		E	E		F	E		D	C	
Approach Delay (s)		62.3			62.7			77.0			25.1	
Approach LOS		E			E			E			C	

Intersection Summary			
HCM 2000 Control Delay	54.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	90.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

7: Beach Blvd & Terry Dr

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	84	17	39	59	10	20	152	2555	65	70	2039	51
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1669	1478		1667	1478	1770	6384		1770	6384	
Flt Permitted		0.71	1.00		0.59	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1241	1478		1027	1478	1770	6384		1770	6384	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	87	18	40	61	10	21	157	2634	67	72	2102	53
RTOR Reduction (vph)	0	0	35	0	0	18	0	2	0	0	2	0
Lane Group Flow (vph)	0	105	5	0	71	3	157	2699	0	72	2153	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		18.5	18.5		18.5	18.5	22.9	97.0		9.2	83.3	
Effective Green, g (s)		18.5	18.5		18.5	18.5	22.9	97.0		9.2	83.3	
Actuated g/C Ratio		0.13	0.13		0.13	0.13	0.16	0.69		0.07	0.59	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		163	195		135	195	289	4423		116	3798	
v/s Ratio Prot							0.09	c0.42		0.04	c0.34	
v/s Ratio Perm		c0.08	0.00		0.07	0.00						
v/c Ratio		0.64	0.03		0.53	0.01	0.54	0.61		0.62	0.57	
Uniform Delay, d1		57.6	52.9		56.7	52.8	53.7	11.4		63.7	17.3	
Progression Factor		1.00	1.00		1.00	1.00	0.64	0.50		1.20	0.33	
Incremental Delay, d2		8.4	0.1		3.7	0.0	0.6	0.2		5.4	0.3	
Delay (s)		66.1	53.0		60.3	52.9	35.0	5.9		82.1	6.1	
Level of Service		E	D		E	D	D	A		F	A	
Approach Delay (s)		62.4			58.6			7.5			8.5	
Approach LOS		E			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

8: Beach Blvd & Warner Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	402	1076	144	240	1190	211	315	2234	179	178	1694	335
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4995		3433	4970		3433	6337		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4995		3433	4970		3433	6337		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	423	1133	152	253	1253	222	332	2352	188	187	1783	353
RTOR Reduction (vph)	0	12	0	0	18	0	0	9	0	0	0	179
Lane Group Flow (vph)	423	1273	0	253	1457	0	332	2531	0	187	1783	174
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	16.0	33.0		15.0	32.0		13.0	61.0		12.0	60.0	60.0
Effective Green, g (s)	16.0	33.0		15.0	32.0		13.0	61.0		12.0	60.0	60.0
Actuated g/C Ratio	0.11	0.24		0.11	0.23		0.09	0.44		0.09	0.43	0.43
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	392	1177		367	1136		318	2761		294	2746	678
v/s Ratio Prot	0.12	c0.25		0.07	c0.29		c0.10	c0.40		0.05	0.28	
v/s Ratio Perm												0.11
v/c Ratio	1.08	1.08		0.69	1.28		1.04	0.92		0.64	0.65	0.26
Uniform Delay, d1	62.0	53.5		60.3	54.0		63.5	37.1		61.9	31.7	25.7
Progression Factor	1.00	1.00		1.00	1.00		1.22	0.59		1.38	0.39	0.57
Incremental Delay, d2	68.3	51.2		4.3	134.1		43.6	2.6		2.9	1.0	0.8
Delay (s)	130.3	104.7		64.5	188.1		120.9	24.5		88.1	13.5	15.4
Level of Service	F	F		E	F		F	C		F	B	B
Approach Delay (s)		111.0			170.0			35.6			19.8	
Approach LOS		F			F			D			B	

Intersection Summary			
HCM 2000 Control Delay	73.2	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	100.6%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

9: Beach Blvd & Slater Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	192	473	150	109	598	151	192	2270	65	171	1858	153
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3412		1770	3432		1770	6381		1770	6335	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3412		1770	3432		1770	6381		1770	6335	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	200	493	156	114	623	157	200	2365	68	178	1935	159
RTOR Reduction (vph)	0	22	0	0	16	0	0	2	0	0	9	0
Lane Group Flow (vph)	200	627	0	114	764	0	200	2431	0	178	2085	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	16.0	29.3		15.7	29.0		18.0	55.8		18.5	56.3	
Effective Green, g (s)	16.0	29.3		15.7	29.0		18.0	55.8		18.5	56.3	
Actuated g/C Ratio	0.11	0.21		0.11	0.21		0.13	0.40		0.13	0.40	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	202	714		198	710		227	2543		233	2547	
v/s Ratio Prot	0.11	c0.18		0.06	c0.22		0.11	c0.38		0.10	c0.33	
v/s Ratio Perm												
v/c Ratio	0.99	0.88		0.58	1.08		0.88	0.96		0.76	0.82	
Uniform Delay, d1	61.9	53.6		59.0	55.5		59.9	40.9		58.6	37.3	
Progression Factor	1.00	1.00		1.00	1.00		0.77	0.71		0.54	0.75	
Incremental Delay, d2	60.3	11.8		4.0	56.2		26.0	8.7		10.6	2.3	
Delay (s)	122.2	65.4		63.0	111.7		72.1	37.6		42.4	30.2	
Level of Service	F	E		E	F		E	D		D	C	
Approach Delay (s)		78.8			105.5			40.2			31.1	
Approach LOS		E			F			D			C	

Intersection Summary			
HCM 2000 Control Delay	50.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	92.7%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

10: Beach Blvd & Newman Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	26	1	16	107	8	157	16	2261	80	78	2094	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	0.99		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1719			1684		1770	6375		1770	6396	
Flt Permitted		0.66			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1177			1485		1770	6375		1770	6396	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	27	1	16	110	8	162	16	2331	82	80	2159	28
RTOR Reduction (vph)	0	13	0	0	37	0	0	3	0	0	1	0
Lane Group Flow (vph)	0	31	0	0	243	0	16	2410	0	80	2186	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		26.1			26.1		4.0	88.0		10.0	94.0	
Effective Green, g (s)		26.1			26.1		4.0	88.0		10.0	94.0	
Actuated g/C Ratio		0.19			0.19		0.03	0.63		0.07	0.67	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		219			276		50	4007		126	4294	
v/s Ratio Prot							0.01	c0.38		c0.05	0.34	
v/s Ratio Perm		0.03			c0.16							
v/c Ratio		0.14			0.88		0.32	0.60		0.63	0.51	
Uniform Delay, d1		47.6			55.4		66.7	15.5		63.2	11.5	
Progression Factor		1.00			1.00		1.29	0.17		1.36	0.15	
Incremental Delay, d2		0.3			26.3		0.9	0.2		6.1	0.3	
Delay (s)		47.9			81.8		87.2	2.7		91.9	2.0	
Level of Service		D			F		F	A		F	A	
Approach Delay (s)		47.9			81.8			3.3			5.2	
Approach LOS		D			F			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	72.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	373	141	194	479	277	157	1990	175	253	1891	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.94		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	3345		1770	6330		1770	6349	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3394		1770	3345		1770	6330		1770	6349	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	143	389	147	202	499	289	164	2073	182	264	1970	129
RTOR Reduction (vph)	0	29	0	0	59	0	0	10	0	0	7	0
Lane Group Flow (vph)	143	507	0	202	729	0	164	2245	0	264	2092	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	14.0	25.7		20.3	32.0		14.3	49.3		24.0	59.0	
Effective Green, g (s)	14.0	25.7		20.3	32.0		14.3	49.3		24.0	59.0	
Actuated g/C Ratio	0.10	0.18		0.15	0.23		0.10	0.35		0.17	0.42	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	177	623		256	764		180	2229		303	2675	
v/s Ratio Prot	0.08	c0.15		0.11	c0.22		0.09	c0.35		c0.15	0.33	
v/s Ratio Perm												
v/c Ratio	0.81	0.81		0.79	0.95		0.91	1.01		0.87	0.78	
Uniform Delay, d1	61.7	54.9		57.8	53.3		62.2	45.4		56.5	35.0	
Progression Factor	1.00	1.00		1.00	1.00		0.75	0.60		0.45	0.25	
Incremental Delay, d2	21.9	8.3		13.8	22.1		35.9	18.8		20.2	2.1	
Delay (s)	83.5	63.1		71.6	75.4		82.6	45.8		45.5	10.7	
Level of Service	F	E		E	E		F	D		D	B	
Approach Delay (s)		67.4			74.6			48.3			14.6	
Approach LOS		E			E			D			B	

Intersection Summary			
HCM 2000 Control Delay	42.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	95.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

12: Beach Blvd & Main St/Ellis Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	396	428	102	137	482	127	168	1651	149	252	1487	481
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6328		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6328		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	404	437	104	140	492	130	171	1685	152	257	1517	491
RTOR Reduction (vph)	0	0	85	0	0	109	0	9	0	0	0	21
Lane Group Flow (vph)	404	437	19	140	492	21	171	1828	0	257	1517	470
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	25.6	25.6	25.6	22.4	22.4	22.4	10.5	55.5		13.8	58.8	90.4
Effective Green, g (s)	25.6	25.6	25.6	22.4	22.4	22.4	10.5	55.5		13.8	58.8	90.4
Actuated g/C Ratio	0.18	0.18	0.18	0.16	0.16	0.16	0.08	0.40		0.10	0.42	0.65
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	627	647	289	283	566	253	257	2508		338	2135	1022
v/s Ratio Prot	0.12	c0.12		0.08	c0.14		0.05	0.29		c0.07	c0.30	0.30
v/s Ratio Perm			0.01			0.01						
v/c Ratio	0.64	0.68	0.07	0.49	0.87	0.08	0.67	0.73		0.76	0.71	0.46
Uniform Delay, d1	53.0	53.3	47.3	53.6	57.4	50.1	63.0	35.9		61.5	33.6	12.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.49		1.28	0.43	0.62
Incremental Delay, d2	1.8	2.3	0.0	0.5	13.0	0.1	3.0	1.1		5.4	1.2	0.1
Delay (s)	54.8	55.7	47.4	54.1	70.3	50.1	92.0	18.6		84.2	15.8	7.9
Level of Service	D	E	D	D	E	D	F	B		F	B	A
Approach Delay (s)		54.4			63.9			24.9			21.8	
Approach LOS		D			E			C			C	

Intersection Summary				
HCM 2000 Control Delay	33.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.75			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	22.7	
Intersection Capacity Utilization	80.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

13: Beach Blvd & Garfield Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	188	501	134	140	386	121	207	1548	93	187	1430	161
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3412		1770	5042		1770	5008	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3412		1770	5042		1770	5008	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	194	516	138	144	398	125	213	1596	96	193	1474	166
RTOR Reduction (vph)	0	0	108	0	22	0	0	4	0	0	10	0
Lane Group Flow (vph)	194	516	30	144	501	0	213	1688	0	193	1630	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.5	30.7	30.7	12.6	25.8		19.2	57.0		18.5	56.3	
Effective Green, g (s)	17.5	30.7	30.7	12.6	25.8		19.2	57.0		18.5	56.3	
Actuated g/C Ratio	0.12	0.22	0.22	0.09	0.18		0.14	0.41		0.13	0.40	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	221	776	347	159	628		242	2052		233	2013	
v/s Ratio Prot	c0.11	0.15		0.08	c0.15		c0.12	c0.33		0.11	c0.33	
v/s Ratio Perm			0.02									
v/c Ratio	0.88	0.66	0.09	0.91	0.80		0.88	0.82		0.83	0.81	
Uniform Delay, d1	60.2	49.9	43.5	63.1	54.6		59.3	37.0		59.2	37.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.58	0.46		0.48	0.93	
Incremental Delay, d2	29.3	2.4	0.1	43.8	7.4		17.1	2.1		16.0	2.8	
Delay (s)	89.5	52.3	43.6	107.0	62.0		51.3	19.1		44.5	37.3	
Level of Service	F	D	D	F	E		D	B		D	D	
Approach Delay (s)		59.4			71.7			22.7			38.0	
Approach LOS		E			E			C			D	

Intersection Summary				
HCM 2000 Control Delay	40.2	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.84			
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.2	
Intersection Capacity Utilization	85.3%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

14: Beach Blvd & Yorktown Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	133	402	145	114	351	128	202	1565	161	129	1422	143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3397		1770	5014		1770	5015	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3397		1770	5014		1770	5015	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	140	423	153	120	369	135	213	1647	169	136	1497	151
RTOR Reduction (vph)	0	0	123	0	28	0	0	8	0	0	8	0
Lane Group Flow (vph)	140	423	30	120	476	0	213	1808	0	136	1640	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	15.2	27.7	27.7	12.0	24.5		20.8	58.9		21.0	59.1	
Effective Green, g (s)	15.2	27.7	27.7	12.0	24.5		20.8	58.9		21.0	59.1	
Actuated g/C Ratio	0.11	0.20	0.20	0.09	0.18		0.15	0.42		0.15	0.42	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	192	700	313	151	594		262	2109		265	2117	
v/s Ratio Prot	c0.08	0.12		0.07	c0.14		0.12	c0.36		0.08	c0.33	
v/s Ratio Perm			0.02									
v/c Ratio	0.73	0.60	0.10	0.79	0.80		0.81	0.86		0.51	0.77	
Uniform Delay, d1	60.4	51.2	45.9	62.8	55.4		57.7	36.7		54.8	34.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.74	0.74		0.50	0.35	
Incremental Delay, d2	13.0	1.5	0.1	24.3	7.7		16.2	4.5		1.1	1.9	
Delay (s)	73.4	52.6	46.1	87.1	63.1		59.2	31.8		28.4	14.1	
Level of Service	E	D	D	F	E		E	C		C	B	
Approach Delay (s)		55.3			67.7			34.7			15.2	
Approach LOS		E			E			C			B	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	20.4
Intersection Capacity Utilization	82.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

15: Beach Blvd & Utica Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	40	18	55	144	29	92	65	1510	84	115	1396	91
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5045		1770	5039	
Flt Permitted		0.69			0.62	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1200			1154	1583	1770	5045		1770	5039	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	40	18	56	145	29	93	66	1525	85	116	1410	92
RTOR Reduction (vph)	0	26	0	0	0	77	0	4	0	0	5	0
Lane Group Flow (vph)	0	88	0	0	174	16	66	1606	0	116	1497	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		24.6			24.6	24.6	9.6	86.4		13.8	90.6	
Effective Green, g (s)		24.6			24.6	24.6	9.6	86.4		13.8	90.6	
Actuated g/C Ratio		0.18			0.18	0.18	0.07	0.62		0.10	0.65	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		210			202	278	121	3113		174	3260	
v/s Ratio Prot							c0.04	c0.32		c0.07	0.30	
v/s Ratio Perm		0.07			c0.15	0.01						
v/c Ratio		0.42			0.86	0.06	0.55	0.52		0.67	0.46	
Uniform Delay, d1		51.3			56.0	48.1	63.1	15.1		60.9	12.4	
Progression Factor		1.00			1.00	1.00	0.69	0.50		0.98	0.62	
Incremental Delay, d2		1.3			29.3	0.1	3.6	0.4		6.2	0.3	
Delay (s)		52.7			85.3	48.1	47.0	8.0		65.8	8.0	
Level of Service		D			F	D	D	A		E	A	
Approach Delay (s)		52.7			72.4			9.6			12.1	
Approach LOS		D			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	15.2
Intersection Capacity Utilization	68.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

16: Beach Blvd & Adams Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	156	455	59	187	829	339	130	1130	100	288	1073	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	4997		1770	3539	1583	1770	5023		3433	4990	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	4997		1770	3539	1583	1770	5023		3433	4990	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	166	484	63	199	882	361	138	1202	106	306	1141	162
RTOR Reduction (vph)	0	12	0	0	0	69	0	7	0	0	13	0
Lane Group Flow (vph)	166	535	0	199	882	292	138	1301	0	306	1290	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	16.0	35.5		17.3	36.8	52.5	17.0	49.7		15.7	48.4	
Effective Green, g (s)	16.0	35.5		17.3	36.8	52.5	17.0	49.7		15.7	48.4	
Actuated g/C Ratio	0.11	0.25		0.12	0.26	0.38	0.12	0.36		0.11	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	202	1267		218	930	593	214	1783		384	1725	
v/s Ratio Prot	0.09	0.11		c0.11	c0.25	0.06	0.08	c0.26		0.09	c0.26	
v/s Ratio Perm						0.13						
v/c Ratio	0.82	0.42		0.91	0.95	0.49	0.64	0.73		0.80	0.75	
Uniform Delay, d1	60.6	43.7		60.6	50.7	33.5	58.6	39.3		60.6	40.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.84	0.77		1.17	0.32	
Incremental Delay, d2	21.8	0.5		37.2	18.6	0.2	4.6	2.5		9.3	2.7	
Delay (s)	82.4	44.2		97.8	69.2	33.8	53.7	32.6		80.2	15.5	
Level of Service	F	D		F	E	C	D	C		F	B	
Approach Delay (s)		53.1			64.3			34.6			27.8	
Approach LOS		D			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	43.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	21.8
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

17: Beach Blvd & Indianapolis Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	109	38	33	123	156	31	1221	32	157	984	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1790		1770	1863	1583	1770	5066		1770	5038	
Flt Permitted	0.53	1.00		0.45	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	992	1790		835	1863	1583	1770	5066		1770	5038	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	69	111	39	34	126	159	32	1246	33	160	1004	66
RTOR Reduction (vph)	0	10	0	0	0	139	0	2	0	0	3	0
Lane Group Flow (vph)	69	140	0	34	126	20	32	1277	0	160	1067	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	17.5	17.5		17.5	17.5	17.5	6.2	89.2		16.9	99.9	
Effective Green, g (s)	17.5	17.5		17.5	17.5	17.5	6.2	89.2		16.9	99.9	
Actuated g/C Ratio	0.12	0.12		0.12	0.12	0.12	0.04	0.64		0.12	0.71	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	124	223		104	232	197	78	3227		213	3594	
v/s Ratio Prot		c0.08			0.07		0.02	c0.25		c0.09	0.21	
v/s Ratio Perm	0.07			0.04		0.01						
v/c Ratio	0.56	0.63		0.33	0.54	0.10	0.41	0.40		0.75	0.30	
Uniform Delay, d1	57.6	58.2		55.9	57.5	54.3	65.1	12.3		59.5	7.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.57	0.54	
Incremental Delay, d2	5.3	5.5		1.8	2.6	0.2	3.5	0.4		9.2	0.1	
Delay (s)	62.9	63.6		57.7	60.1	54.5	68.6	12.7		43.0	4.1	
Level of Service	E	E		E	E	D	E	B		D	A	
Approach Delay (s)		63.4			57.1			14.1			9.2	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	20.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	140.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	67.9%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	141	330	32	78	490	203	118	850	86	336	555	155
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.97	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3492		1770	3384		1770	5015		1770	4919	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3492		1770	3384		1770	5015		1770	4919	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	144	337	33	80	500	207	120	867	88	343	566	158
RTOR Reduction (vph)	0	4	0	0	28	0	0	9	0	0	32	0
Lane Group Flow (vph)	144	366	0	80	679	0	120	946	0	343	692	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.3	33.9		11.6	30.2		13.4	39.2		25.2	51.0	
Effective Green, g (s)	15.3	33.9		11.6	30.2		13.4	39.2		25.2	51.0	
Actuated g/C Ratio	0.12	0.26		0.09	0.23		0.10	0.30		0.19	0.39	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	206	903		156	780		181	1500		340	1915	
v/s Ratio Prot	c0.08	c0.10		0.05	c0.20		0.07	c0.19		c0.19	0.14	
v/s Ratio Perm												
v/c Ratio	0.70	0.40		0.51	0.87		0.66	0.63		1.01	0.36	
Uniform Delay, d1	55.6	40.2		57.0	48.5		56.6	39.6		52.9	28.4	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	8.1	0.1		1.2	10.2		6.9	1.2		51.0	0.2	
Delay (s)	63.7	40.3		58.2	58.7		63.5	40.9		103.9	28.7	
Level of Service	E	D		E	E		E	D		F	C	
Approach Delay (s)		46.9			58.6			43.4			52.9	
Approach LOS		D			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	131.0	Sum of lost time (s)	21.1	
Intersection Capacity Utilization	84.6%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

19: Beach Blvd & Pacific View Ave

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	74	0	50	0	0	0	50	1005	0	0	561	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5023	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5023	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	79	0	53	0	0	0	53	1069	0	0	597	53
RTOR Reduction (vph)	0	0	42	0	0	0	0	0	0	0	10	0
Lane Group Flow (vph)	79	0	11	0	0	0	53	1069	0	0	640	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	10.6		10.6				3.1	30.2			22.2	
Effective Green, g (s)	10.6		10.6				3.1	30.2			22.2	
Actuated g/C Ratio	0.20		0.20				0.06	0.58			0.43	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	362		323				105	2964			2152	
v/s Ratio Prot							0.03	c0.21			0.13	
v/s Ratio Perm	c0.04		0.01									
v/c Ratio	0.22		0.03				0.50	0.36			0.30	
Uniform Delay, d1	17.2		16.5				23.6	5.7			9.7	
Progression Factor	1.00		1.00				1.00	1.00			1.00	
Incremental Delay, d2	0.3		0.0				3.8	0.1			0.1	
Delay (s)	17.5		16.5				27.4	5.8			9.8	
Level of Service	B		B				C	A			A	
Approach Delay (s)		17.1			0.0			6.8			9.8	
Approach LOS		B			A			A			A	

Intersection Summary				
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A	
HCM 2000 Volume to Capacity ratio	0.37			
Actuated Cycle Length (s)	51.8	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	44.0%	ICU Level of Service	A	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	267	1070	51	22	1422	750	28	49	37	333	53	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5051		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5051		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	278	1115	53	23	1481	781	29	51	39	347	55	242
RTOR Reduction (vph)	0	3	0	0	0	256	0	0	36	0	0	0
Lane Group Flow (vph)	278	1165	0	23	1481	525	29	51	3	347	55	242
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	12.8	69.7		4.5	61.4	61.4	4.5	9.6	9.6	14.5	19.6	120.0
Effective Green, g (s)	12.8	69.7		4.5	61.4	61.4	4.5	9.6	9.6	14.5	19.6	120.0
Actuated g/C Ratio	0.11	0.58		0.04	0.51	0.51	0.04	0.08	0.08	0.12	0.16	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	366	2933		66	1810	809	66	283	126	414	304	1583
v/s Ratio Prot	c0.08	0.23		0.01	c0.42		0.02	0.01		c0.10	0.03	
v/s Ratio Perm						0.33			0.00			c0.15
v/c Ratio	0.76	0.40		0.35	0.82	0.65	0.44	0.18	0.02	0.84	0.18	0.15
Uniform Delay, d1	52.1	13.7		56.3	24.6	21.4	56.5	51.5	50.9	51.6	43.3	0.0
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.8	0.4		1.2	4.3	4.0	1.7	0.1	0.0	13.2	0.1	0.2
Delay (s)	59.9	14.1		57.5	28.9	25.4	58.2	51.6	50.9	64.8	43.4	0.2
Level of Service	E	B		E	C	C	E	D	D	E	D	A
Approach Delay (s)		22.9			28.0			53.0			38.7	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	28.6	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	21.7	
Intersection Capacity Utilization	77.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	137	1289	15	5	2022	265	12	11	15	88	6	164
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1697		1770	1593	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.43	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	792	1697		1378	1593	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	143	1343	16	5	2106	276	12	11	16	92	6	171
RTOR Reduction (vph)	0	0	5	0	0	111	0	14	0	0	146	0
Lane Group Flow (vph)	143	1343	11	5	2106	165	12	13	0	92	31	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	11.3	70.0	70.0	1.2	59.9	59.9	14.9	14.9		14.9	14.9	
Effective Green, g (s)	11.3	70.0	70.0	1.2	59.9	59.9	14.9	14.9		14.9	14.9	
Actuated g/C Ratio	0.11	0.70	0.70	0.01	0.60	0.60	0.15	0.15		0.15	0.15	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	200	3559	1108	21	3045	948	118	252		205	237	
v/s Ratio Prot	c0.08	0.26		0.00	c0.41			0.01			0.02	
v/s Ratio Perm			0.01			0.10	0.02			c0.07		
v/c Ratio	0.71	0.38	0.01	0.24	0.69	0.17	0.10	0.05		0.45	0.13	
Uniform Delay, d1	42.8	6.1	4.5	48.9	13.7	9.0	36.8	36.5		38.8	36.9	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	
Incremental Delay, d2	9.7	0.3	0.0	2.1	1.3	0.4	0.1	0.0		0.6	0.1	
Delay (s)	52.5	6.4	4.5	51.1	15.0	9.4	36.9	36.5		39.4	37.0	
Level of Service	D	A	A	D	B	A	D	D		D	D	
Approach Delay (s)		10.8			14.5			36.6			37.8	
Approach LOS		B			B			D			D	

Intersection Summary				
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.65			
Actuated Cycle Length (s)	100.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	69.8%	ICU Level of Service	C	
Analysis Period (min)	15			
c Critical Lane Group				

25: Magnolia Ave & Pacific Coast Highway

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	132	1254	36	49	2175	220	17	44	30	132	49	130
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1729	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1729	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	140	1334	38	52	2314	234	18	47	32	140	52	138
RTOR Reduction (vph)	0	0	17	0	0	91	0	21	0	0	0	122
Lane Group Flow (vph)	140	1334	21	52	2314	143	18	58	0	95	97	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	12.8	67.6	67.6	6.8	61.6	61.6	12.8	12.8		14.0	14.0	14.0
Effective Green, g (s)	12.8	67.6	67.6	6.8	61.6	61.6	12.8	12.8		14.0	14.0	14.0
Actuated g/C Ratio	0.11	0.56	0.56	0.06	0.51	0.51	0.11	0.11		0.12	0.12	0.12
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	188	2864	891	100	2610	812	188	186		196	201	184
v/s Ratio Prot	c0.08	0.26		0.03	c0.46		0.01	c0.03		c0.06	0.06	
v/s Ratio Perm			0.01			0.09						0.01
v/c Ratio	0.74	0.47	0.02	0.52	0.89	0.18	0.10	0.31		0.48	0.48	0.09
Uniform Delay, d1	52.0	15.5	11.6	55.0	26.1	15.6	48.4	49.5		49.6	49.6	47.3
Progression Factor	1.00	1.00	1.00	1.23	1.17	2.67	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	13.0	0.5	0.0	0.6	1.5	0.1	0.1	0.3		0.7	0.7	0.1
Delay (s)	65.1	16.1	11.6	68.6	32.1	41.8	48.5	49.9		50.3	50.3	47.4
Level of Service	E	B	B	E	C	D	D	D		D	D	D
Approach Delay (s)		20.5			33.7			49.6			49.1	
Approach LOS		C			C			D			D	

Intersection Summary				
HCM 2000 Control Delay	30.7	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.74			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	76.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

27: Brookhurst St & Pacific Coast Highway

Mitigated Existing Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	1217	7	19	2224	657	24	28	13	315	8	202
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	219	1309	8	20	2391	706	26	30	14	339	9	217
RTOR Reduction (vph)	0	0	3	0	0	205	0	13	0	0	0	181
Lane Group Flow (vph)	219	1309	5	20	2391	501	26	31	0	339	9	36
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	20.1	71.0	71.0	2.8	53.7	73.4	5.8	5.8		19.7	19.7	19.7
Effective Green, g (s)	20.1	71.0	71.0	2.8	53.7	73.4	5.8	5.8		19.7	19.7	19.7
Actuated g/C Ratio	0.17	0.59	0.59	0.02	0.45	0.61	0.05	0.05		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	296	3008	936	41	2275	968	85	85		563	305	259
v/s Ratio Prot	c0.12	0.26		0.01	c0.47	0.08	0.01	c0.02		c0.10	0.00	
v/s Ratio Perm			0.00			0.23						0.02
v/c Ratio	0.74	0.44	0.01	0.49	1.05	0.52	0.31	0.36		0.60	0.03	0.14
Uniform Delay, d1	47.5	13.5	10.0	57.9	33.1	13.2	55.2	55.3		46.5	42.1	42.9
Progression Factor	0.66	1.23	1.00	1.00	1.00	1.00	1.00	1.00		0.88	0.91	2.91
Incremental Delay, d2	7.5	0.4	0.0	3.3	34.0	0.2	0.7	1.0		1.2	0.0	0.1
Delay (s)	39.0	17.0	10.0	61.2	67.1	13.4	55.9	56.3		42.2	38.6	125.1
Level of Service	D	B	B	E	E	B	E	E		D	D	F
Approach Delay (s)		20.1			54.9			56.1			74.0	
Approach LOS		C			D			E			E	

Intersection Summary				
HCM 2000 Control Delay	46.9	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.86			
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	83.4%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Scenario Report

Scenario:	EX+P1-PM
Command:	EX+P1-PM
Volume:	EX-PM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	P1-PM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	EX+P1-PM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	D	xxxxx	0.884	D	xxxxx	0.890	+ 0.006
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.845	D	xxxxx	0.850	+ 0.005
# 16 Beach Blvd & Adams Ave	B	xxxxx	0.695	C	xxxxx	0.702	+ 0.007
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.649	B	xxxxx	0.682	+ 0.033
# 21 Newland St & Atlanta Ave	A	xxxxx	0.548	A	xxxxx	0.552	+ 0.004
# 22 Newland St & Hamilton Ave	B	xxxxx	0.678	C	xxxxx	0.726	+ 0.048
# 24 Magnolia St & Hamilton Ave	A	xxxxx	0.594	B	xxxxx	0.602	+ 0.009
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.640	B	xxxxx	0.651	+ 0.011
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.777	C	xxxxx	0.786	+ 0.009
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.493	A	xxxxx	0.502	+ 0.009
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.581	A	xxxxx	0.590	+ 0.009
# 33 Brookhurst Street & Ellis Aven	B	xxxxx	0.690	B	xxxxx	0.700	+ 0.009
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.607	B	xxxxx	0.616	+ 0.009
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.580	A	xxxxx	0.588	+ 0.009
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.757	C	xxxxx	0.767	+ 0.009
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.344	A	xxxxx	0.353	+ 0.009
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.429	A	xxxxx	0.438	+ 0.009
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.222	A	xxxxx	0.230	+ 0.009
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.278	A	xxxxx	0.286	+ 0.009

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.884
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 78 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	415	2241	509		333	2200	639		416	907	245		174	591	172	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	415	2241	509		333	2200	639		416	907	245		174	591	172	
OvlAdjVol:							223				37					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.44	0.30		0.10	0.32	0.19		0.12	0.18	0.14		0.05	0.17	0.10	
OvlAdjV/S:							0.07				0.02					
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.845
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 63 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.35	0.35		0.05	0.24	0.20		0.12	0.24	0.24		0.07	0.27	0.27	
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.695
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	129	1095	100	288	1043	152	156	455	59	187	828	339				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.75	0.25	2.00	2.62	0.38	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4673	427	3400	4451	649	1700	4515	585	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.23	0.23	0.08	0.23	0.23	0.09	0.10	0.10	0.11	0.24	0.20				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.649
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37	303	53	232	267	1070	51	22	1417	720				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	28	49	37	303	53	232	267	1070	51	22	1417	720				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	28	49	0	303	53	0	267	1070	51	22	1417	720				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	28	49	0	303	53	0	267	1070	51	22	1417	720				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	28	49	0	303	53	0	267	1070	51	22	1417	720				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.86	0.14	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4868	232	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.01	0.00	0.09	0.03	0.00	0.08	0.22	0.22	0.01	0.42	0.42				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.548
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 26 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34	96	264	97	80	474	203	52	473	114				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	275	521	34	96	264	97	80	474	203	52	473	114				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	275	521	34	96	264	97	80	474	203	52	473	114				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	275	521	34	96	264	97	80	474	203	52	473	114				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	275	521	34	96	264	97	80	474	203	52	473	114				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.88	0.12	1.00	1.46	0.54	1.00	1.40	0.60	1.00	1.61	0.39				
Final Sat.:	1700	3192	208	1700	2486	914	1700	2381	1019	1700	2740	660				
Capacity Analysis Module:																
Vol/Sat:	0.16	0.16	0.16	0.06	0.11	0.11	0.05	0.20	0.20	0.03	0.17	0.17				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.678
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	304	65	223	203	0	0	0	0	153	0	476				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	0	304	65	223	203	0	0	0	0	153	0	476				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	304	65	223	203	0	0	0	0	153	0	476				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	304	65	223	203	0	0	0	0	153	0	476				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	304	65	223	203	0	0	0	0	153	0	476				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.82	0.18	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1401	299	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.22	0.22	0.13	0.12	0.00	0.00	0.00	0.00	0.09	0.00	0.28				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	30	300	28		189	178	42		25	257	29		15	546	327	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	30	300	28		189	178	42		25	257	29		15	546	327	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	30	300	28		189	178	42		25	257	29		15	546	327	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.90	0.10		1.00	1.00	1.00	
Final Sat.:	1700	3110	290		1700	3400	1700		1700	1528	172		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10		0.11	0.05	0.02		0.01	0.17	0.17		0.01	0.32	0.19	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.640
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	111	569	153		387	389	88		89	350	67		231	1060	500	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	111	569	153		387	389	88		89	350	67		231	1060	500	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	111	569	153		387	389	88		89	350	67		231	1060	500	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.45	0.55		1.00	1.68	0.32		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4159	941		1700	2854	546		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.09		0.11	0.09	0.09		0.05	0.12	0.12		0.14	0.31	0.29	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.777
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314	237	1392	244	212	635	156	243	1059	461				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	192	1444	314	237	1392	244	212	635	156	243	1059	461				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	192	1444	314	237	1392	244	212	635	156	243	1059	461				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	192	1444	314	237	1392	244	212	635	156	243	1059	461				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	192	1444	314	237	1392	244	212	635	156	243	1059	461				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00				
Final Sat.:	3400	5100	1700	3400	5100	1700	3400	5100	1700	3400	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.06	0.28	0.18	0.07	0.27	0.14	0.06	0.12	0.09	0.07	0.31	0.27				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.493
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 23 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16	29	1774	25	83	0	28	8	0	11				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	22	1797	16	29	1774	25	83	0	28	8	0	11				
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	22	1797	16	29	1774	0	83	0	28	8	0	11				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	22	1797	16	29	1774	0	83	0	28	8	0	11				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	22	1797	16	29	1774	0	83	0	28	8	0	11				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.97	0.03	1.00	3.00	1.00	0.75	0.00	0.25	0.42	0.00	0.58				
Final Sat.:	1700	5055	45	1700	5100	1700	1271	0	429	716	0	984				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.36	0.36	0.02	0.35	0.00	0.05	0.00	0.07	0.00	0.00	0.01				
Crit Moves:		****		****					****	****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.581
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	69	1588	13		40	1550	213		220	8	82		13	3	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.31	0.31		0.02	0.35	0.35		0.13	0.13	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.690
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	106	1270	128		154	1191	182		248	472	87		332	667	108	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	106	1270	128		154	1191	182		248	472	87		332	667	108	
OvlAdjVol:			0				58									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.25	0.08		0.09	0.23	0.11		0.07	0.16	0.16		0.10	0.23	0.23	
OvlAdjV/S:			0.00				0.03									
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.607
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	184	1380	77		103	1149	236		177	211	136		185	242	96	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.29	0.29		0.06	0.23	0.14		0.10	0.10	0.10		0.11	0.07	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.580
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	154	1410	110		37	1112	200		147	219	109		145	249	26	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.54	0.46		1.00	1.34	0.66		1.00	1.81	0.19	
Final Sat.:	1700	4731	369		1700	4323	777		1700	2270	1130		1700	3079	321	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.30	0.30		0.02	0.26	0.26		0.09	0.10	0.10		0.09	0.08	0.08	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.757
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 44 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	261	873	144	304	850	179	274	747	123	281	1723	354				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	261	873	144	304	850	179	274	747	123	281	1723	354				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	261	873	144	304	850	179	274	747	123	281	1723	354				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.20	0.20	0.09	0.20	0.20	0.08	0.15	0.07	0.08	0.34	0.21				
Crit Moves:	****			****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.344
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 18 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	44	1249	0	0	1055	166	97	0	51	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.24	0.00	0.00	0.24	0.24	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.429
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21		20	690	169		177	24	136		25	40	27	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	147	988	21		20	690	169		177	24	136		25	40	27	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	147	988	21		20	690	169		177	24	136		25	40	27	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	147	988	21		20	690	169		177	24	136		25	40	27	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	147	988	21		20	690	169		177	24	136		25	40	27	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.94	0.06		1.00	2.41	0.59		1.00	1.00	1.00		1.00	1.19	0.81	
Final Sat.:	1700	4994	106		1700	4097	1003		1700	1700	1700		1700	2030	1370	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.20	0.20		0.01	0.17	0.17		0.10	0.01	0.08		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.222
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0		0	407	85		62	0	12		0	0	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	14	689	0		0	407	85		62	0	12		0	0	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	14	689	0		0	407	85		62	0	12		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	14	689	0		0	407	85		62	0	12		0	0	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	14	689	0		0	407	85		62	0	12		0	0	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	0.00		0.00	2.48	0.52		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	1700	5100	0		0	4219	881		1700	0	1700		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00		0.00	0.10	0.10		0.04	0.00	0.01		0.00	0.00	0.00	
Crit Moves:		****			****				****							

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED EXISTING PLUS PROJECT CONDITIONS (2014)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.278
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	17	Level Of Service:	A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1		12	378	26		7	0	86		0	1	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	175	677	1		12	378	26		7	0	86		0	1	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	175	677	1		12	378	26		7	0	86		0	1	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	175	677	1		12	378	26		7	0	86		0	1	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	175	677	1		12	378	26		7	0	86		0	1	0	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.99	0.01		1.00	3.00	1.00		1.00	0.00	1.00		0.00	1.00	0.00	
Final Sat.:	1700	5092	8		1700	5100	1700		1700	0	1700		0	1700	0	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.13	0.13		0.01	0.07	0.02		0.00	0.00	0.05		0.00	0.00	0.00	
Crit Moves:	****					****					****	****				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	405	389	148	385	434	145	252	2860	252	201	2372	271
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6309	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6309	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	422	405	154	401	452	151	262	2979	262	209	2471	282
RTOR Reduction (vph)	0	27	0	0	24	0	0	9	0	0	13	0
Lane Group Flow (vph)	422	532	0	401	579	0	262	3232	0	209	2740	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	23.5	39.4		15.7	31.6		12.0	65.5		11.0	64.5	
Effective Green, g (s)	23.5	39.4		15.7	31.6		12.0	65.5		11.0	64.5	
Actuated g/C Ratio	0.16	0.26		0.10	0.21		0.08	0.44		0.07	0.43	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	537	891		359	717		274	2764		251	2712	
v/s Ratio Prot	c0.12	0.16		c0.12	c0.17		0.08	c0.51		0.06	c0.43	
v/s Ratio Perm												
v/c Ratio	0.79	0.60		1.12	0.81		0.96	1.17		0.83	1.01	
Uniform Delay, d1	60.8	48.4		67.2	56.3		68.7	42.2		68.6	42.8	
Progression Factor	1.00	1.00		1.00	1.00		0.94	0.96		1.00	1.00	
Incremental Delay, d2	7.4	1.1		83.0	6.7		35.2	79.4		20.4	19.8	
Delay (s)	68.3	49.5		150.2	63.0		99.7	119.8		89.0	62.6	
Level of Service	E	D		F	E		F	F		F	E	
Approach Delay (s)		57.5			97.8			118.3			64.5	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	89.9	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.04		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	98.3%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	366	1031	0	3219	2505	1037
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	373	1052	0	3285	2556	1058
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	373	1051	0	3285	2556	1058
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	20.5	62.0		119.7	72.2	150.0
Effective Green, g (s)	20.5	62.0		119.7	72.2	150.0
Actuated g/C Ratio	0.14	0.41		0.80	0.48	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	469	1235		5113	3084	1583
v/s Ratio Prot	0.11	c0.24		0.51	c0.40	
v/s Ratio Perm		0.14		0.01		0.67
v/c Ratio	0.80	0.85		0.64	0.83	0.67
Uniform Delay, d1	62.7	39.8		6.3	33.6	0.0
Progression Factor	1.00	1.00		0.58	0.51	1.00
Incremental Delay, d2	9.5	6.0		0.0	1.4	1.2
Delay (s)	72.3	45.8		3.7	18.4	1.2
Level of Service	E	D		A	B	A
Approach Delay (s)	52.8			3.7	13.3	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	81.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	521	1053	304	181	726	177	496	2485	525	343	2449	788
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	543	1097	317	189	756	184	517	2589	547	357	2551	821
RTOR Reduction (vph)	0	0	48	0	0	133	0	0	144	0	0	47
Lane Group Flow (vph)	543	1097	269	189	756	51	517	2589	403	357	2551	774
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	25.1	50.2	66.6	13.2	38.3	38.3	16.4	53.7	53.7	12.6	49.5	74.6
Effective Green, g (s)	25.1	50.2	66.6	13.2	38.3	38.3	16.4	53.7	53.7	12.6	49.5	74.6
Actuated g/C Ratio	0.17	0.33	0.44	0.09	0.26	0.26	0.11	0.36	0.36	0.08	0.33	0.50
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	574	1701	702	302	903	404	375	1820	566	288	2114	1471
v/s Ratio Prot	c0.16	0.22	0.04	0.06	c0.21		0.15	c0.51		0.10	c0.40	0.09
v/s Ratio Perm			0.13			0.03			0.25			0.19
v/c Ratio	0.95	0.64	0.38	0.63	0.84	0.13	1.38	1.42	0.71	1.24	1.21	0.53
Uniform Delay, d1	61.8	42.3	27.9	66.0	52.9	43.0	66.8	48.1	41.5	68.7	50.2	25.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.69	0.50	1.05	0.69	0.50
Incremental Delay, d2	24.4	0.8	0.1	2.9	6.8	0.1	181.0	192.3	4.9	123.7	95.8	0.1
Delay (s)	86.2	43.2	28.1	68.9	59.7	43.1	231.8	225.4	25.8	195.7	130.3	13.0
Level of Service	F	D	C	E	E	D	F	F	C	F	F	B
Approach Delay (s)		52.7			58.6			196.4			110.8	
Approach LOS		D			E			F			F	

Intersection Summary				
HCM 2000 Control Delay	124.2	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.16			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	109.6%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	20	42	131	33	180	124	2982	74	251	2624	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1672		1770	1863	1583	1770	6384		3433	6398	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1672		1770	1863	1583	1770	6384		3433	6398	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	20	43	134	34	184	127	3043	76	256	2678	29
RTOR Reduction (vph)	0	39	0	0	0	154	0	2	0	0	1	0
Lane Group Flow (vph)	26	24	0	134	34	30	127	3117	0	256	2706	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	14.6		17.4	24.2	24.2	15.8	81.6		16.8	82.6	
Effective Green, g (s)	7.8	14.6		17.4	24.2	24.2	15.8	81.6		16.8	82.6	
Actuated g/C Ratio	0.05	0.10		0.12	0.16	0.16	0.11	0.54		0.11	0.55	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	162		205	300	255	186	3472		384	3523	
v/s Ratio Prot	c0.01	c0.01		c0.08	0.02		0.07	c0.49		c0.07	0.42	
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.15		0.65	0.11	0.12	0.68	0.90		0.67	0.77	
Uniform Delay, d1	68.4	62.0		63.4	53.7	53.8	64.7	30.5		63.9	26.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.35	0.16		1.33	0.32	
Incremental Delay, d2	1.7	0.4		7.3	0.2	0.2	5.8	2.5		0.4	0.2	
Delay (s)	70.1	62.4		70.7	53.9	54.0	92.9	7.3		85.6	8.6	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		64.7			60.3			10.6			15.3	
Approach LOS		E			E			B			B	

Intersection Summary				
HCM 2000 Control Delay	16.0	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.76			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6	
Intersection Capacity Utilization	80.0%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	30	5	19	255	4	170	65	2927	102	328	2566	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1642		1681	1576	1504	1770	6375		3433	6400	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1642		1681	1576	1504	1770	6375		3433	6400	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	30	5	19	258	4	172	66	2957	103	331	2592	20
RTOR Reduction (vph)	0	17	0	0	7	117	0	3	0	0	0	0
Lane Group Flow (vph)	30	7	0	150	141	19	66	3057	0	331	2612	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		21.5	21.5	21.5	8.7	82.8		14.6	88.7	
Effective Green, g (s)	13.2	13.2		21.5	21.5	21.5	8.7	82.8		14.6	88.7	
Actuated g/C Ratio	0.09	0.09		0.14	0.14	0.14	0.06	0.55		0.10	0.59	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	144		240	225	215	102	3519		334	3784	
v/s Ratio Prot	c0.02	0.00		0.09	c0.09		0.04	c0.48		c0.10	0.41	
v/s Ratio Perm						0.01						
v/c Ratio	0.19	0.05		0.62	0.63	0.09	0.65	0.87		0.99	0.69	
Uniform Delay, d1	63.5	62.6		60.5	60.5	55.8	69.1	28.9		67.6	21.2	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.35	0.19		0.57	0.39	
Incremental Delay, d2	0.6	0.1		5.0	5.4	0.2	1.3	0.3		38.2	0.7	
Delay (s)	64.1	62.8		65.5	65.9	55.9	94.3	5.8		76.7	8.9	
Level of Service	E	E		E	E	E	F	A		E	A	
Approach Delay (s)		63.5			62.6			7.7			16.6	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	15.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	80.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	256	321	184	42	316	162	170	2912	50	167	2433	238
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3346		1770	3359		1770	6391		1770	6322	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3346		1770	3359		1770	6391		1770	6322	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	264	331	190	43	326	167	175	3002	52	172	2508	245
RTOR Reduction (vph)	0	53	0	0	48	0	0	2	0	0	11	0
Lane Group Flow (vph)	264	468	0	43	445	0	175	3052	0	172	2742	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	31.1	48.7		8.8	26.4		13.5	60.3		13.4	60.2	
Effective Green, g (s)	31.1	48.7		8.8	26.4		13.5	60.3		13.4	60.2	
Actuated g/C Ratio	0.21	0.32		0.06	0.18		0.09	0.40		0.09	0.40	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	366	1086		103	591		159	2569		158	2537	
v/s Ratio Prot	c0.15	0.14		0.02	c0.13		0.10	c0.48		0.10	c0.43	
v/s Ratio Perm												
v/c Ratio	0.72	0.43		0.42	0.75		1.10	1.19		1.09	1.08	
Uniform Delay, d1	55.4	39.8		68.1	58.7		68.2	44.9		68.3	44.9	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.76		0.92	0.91	
Incremental Delay, d2	6.9	0.3		2.7	5.4		92.1	87.9		87.6	42.5	
Delay (s)	62.3	40.1		70.9	64.1		157.2	122.1		150.7	83.2	
Level of Service	E	D		E	E		F	F		F	F	
Approach Delay (s)		47.5			64.7			124.0			87.2	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	97.3	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	96.1%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	87	18	40	61	10	21	157	2846	67	72	2305	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1670	1478		1667	1478	1770	6386		1770	6386	
Flt Permitted		0.70	1.00		0.57	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1214	1478		997	1478	1770	6386		1770	6386	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	90	19	41	63	10	22	162	2934	69	74	2376	55
RTOR Reduction (vph)	0	0	35	0	0	19	0	2	0	0	2	0
Lane Group Flow (vph)	0	109	6	0	73	3	162	3001	0	74	2429	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		21.1	21.1		21.1	21.1	24.0	102.2		11.4	89.6	
Effective Green, g (s)		21.1	21.1		21.1	21.1	24.0	102.2		11.4	89.6	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.68		0.08	0.60	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		170	207		140	207	283	4350		134	3814	
v/s Ratio Prot							0.09	c0.47		0.04	c0.38	
v/s Ratio Perm		c0.09	0.00		0.07	0.00						
v/c Ratio		0.64	0.03		0.52	0.01	0.57	0.69		0.55	0.64	
Uniform Delay, d1		60.9	55.6		59.8	55.5	58.3	14.4		66.8	19.6	
Progression Factor		1.00	1.00		1.00	1.00	0.58	0.55		1.03	0.54	
Incremental Delay, d2		8.0	0.1		3.5	0.0	0.3	0.1		0.4	0.1	
Delay (s)		68.9	55.7		63.2	55.5	34.3	8.0		69.5	10.7	
Level of Service		E	E		E	E	C	A		E	B	
Approach Delay (s)		65.3			61.5			9.3			12.4	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	12.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	75.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	428	1162	182	252	1319	222	375	2496	187	186	1929	363
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4982		3433	4975		3433	6341		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4982		3433	4975		3433	6341		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	451	1223	192	265	1388	234	395	2627	197	196	2031	382
RTOR Reduction (vph)	0	15	0	0	16	0	0	7	0	0	0	158
Lane Group Flow (vph)	451	1400	0	265	1606	0	395	2817	0	196	2031	224
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.8	46.2		14.3	42.7		18.2	58.5		12.0	52.3	52.3
Effective Green, g (s)	17.8	46.2		14.3	42.7		18.2	58.5		12.0	52.3	52.3
Actuated g/C Ratio	0.12	0.31		0.10	0.28		0.12	0.39		0.08	0.35	0.35
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	407	1534		327	1416		416	2472		274	2234	551
v/s Ratio Prot	c0.13	0.28		0.08	c0.32		c0.12	c0.44		0.06	0.32	
v/s Ratio Perm												0.14
v/c Ratio	1.11	0.91		0.81	1.13		0.95	1.14		0.72	0.91	0.41
Uniform Delay, d1	66.1	50.0		66.5	53.6		65.4	45.8		67.3	46.6	37.1
Progression Factor	1.00	1.00		1.00	1.00		0.90	0.76		1.24	0.56	0.66
Incremental Delay, d2	77.2	8.6		13.4	69.8		5.3	63.3		5.9	5.7	1.8
Delay (s)	143.3	58.6		79.9	123.4		63.9	98.0		89.6	31.9	26.4
Level of Service	F	E		E	F		E	F		F	C	C
Approach Delay (s)		79.1			117.3			93.8			35.4	
Approach LOS		E			F			F			D	

Intersection Summary			
HCM 2000 Control Delay	79.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0
Intersection Capacity Utilization	107.8%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	198	495	158	112	620	156	200	2587	67	176	2137	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3433		1770	6384		1770	6342	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3433		1770	6384		1770	6342	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	206	516	165	117	646	162	208	2695	70	183	2226	165
RTOR Reduction (vph)	0	22	0	0	15	0	0	2	0	0	7	0
Lane Group Flow (vph)	206	659	0	117	793	0	208	2763	0	183	2384	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.3	34.8		19.7	37.2		18.3	58.5		16.3	56.5	
Effective Green, g (s)	17.3	34.8		19.7	37.2		18.3	58.5		16.3	56.5	
Actuated g/C Ratio	0.12	0.23		0.13	0.25		0.12	0.39		0.11	0.38	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	791		232	851		215	2489		192	2388	
v/s Ratio Prot	c0.12	0.19		0.07	c0.23		0.12	c0.43		0.10	c0.38	
v/s Ratio Perm												
v/c Ratio	1.01	0.83		0.50	0.93		0.97	1.11		0.95	1.00	
Uniform Delay, d1	66.3	54.8		60.6	55.2		65.6	45.8		66.5	46.7	
Progression Factor	1.00	1.00		1.00	1.00		0.82	0.74		1.00	0.51	
Incremental Delay, d2	65.6	7.5		1.7	16.6		43.3	54.3		32.5	12.2	
Delay (s)	131.9	62.4		62.3	71.8		97.2	88.4		99.1	36.1	
Level of Service	F	E		E	E		F	F		F	D	
Approach Delay (s)		78.5			70.6			89.0			40.6	
Approach LOS		E			E			F			D	

Intersection Summary				
HCM 2000 Control Delay	68.5	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.05			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	98.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	27	1	16	110	8	162	16	2578	82	80	2383	28
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1720			1684		1770	6378		1770	6397	
Flt Permitted		0.67			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1191			1481		1770	6378		1770	6397	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	28	1	16	113	8	167	16	2658	85	82	2457	29
RTOR Reduction (vph)	0	13	0	0	37	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	32	0	0	251	0	16	2741	0	82	2485	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		30.7			30.7		4.0	91.0		12.4	99.4	
Effective Green, g (s)		30.7			30.7		4.0	91.0		12.4	99.4	
Actuated g/C Ratio		0.20			0.20		0.03	0.61		0.08	0.66	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		243			303		47	3869		146	4239	
v/s Ratio Prot							0.01	c0.43		c0.05	0.39	
v/s Ratio Perm		0.03			c0.17							
v/c Ratio		0.13			0.83		0.34	0.71		0.56	0.59	
Uniform Delay, d1		48.8			57.1		71.7	20.3		66.2	14.0	
Progression Factor		1.00			1.00		1.39	0.45		1.43	0.28	
Incremental Delay, d2		0.2			16.9		0.4	0.1		1.7	0.2	
Delay (s)		49.0			74.0		100.4	9.3		96.2	4.2	
Level of Service		D			E		F	A		F	A	
Approach Delay (s)		49.0			74.0			9.9			7.1	
Approach LOS		D			E			A			A	

Intersection Summary				
HCM 2000 Control Delay	12.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.72			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9	
Intersection Capacity Utilization	77.8%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	165	424	166	200	512	290	221	2271	180	264	2159	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3390		1770	3347		1770	6337		1770	6349	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3390		1770	3347		1770	6337		1770	6349	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	172	442	173	208	533	302	230	2366	188	275	2249	146
RTOR Reduction (vph)	0	29	0	0	53	0	0	8	0	0	6	0
Lane Group Flow (vph)	172	586	0	208	782	0	230	2546	0	275	2389	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.6	31.4		22.2	38.0		19.9	54.4		21.3	55.8	
Effective Green, g (s)	15.6	31.4		22.2	38.0		19.9	54.4		21.3	55.8	
Actuated g/C Ratio	0.10	0.21		0.15	0.25		0.13	0.36		0.14	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	184	709		261	847		234	2298		251	2361	
v/s Ratio Prot	0.10	c0.17		0.12	c0.23		0.13	c0.40		c0.16	0.38	
v/s Ratio Perm												
v/c Ratio	0.93	0.83		0.80	0.92		0.98	1.11		1.10	1.01	
Uniform Delay, d1	66.7	56.7		61.7	54.6		64.9	47.8		64.3	47.1	
Progression Factor	1.00	1.00		1.00	1.00		0.79	0.55		0.66	0.56	
Incremental Delay, d2	47.1	8.0		14.5	15.6		42.7	53.3		80.2	19.9	
Delay (s)	113.8	64.7		76.2	70.2		93.9	79.6		122.7	46.1	
Level of Service	F	E		E	E		F	E		F	D	
Approach Delay (s)		75.4			71.4			80.8			54.0	
Approach LOS		E			E			F			D	

Intersection Summary			
HCM 2000 Control Delay	69.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	101.2%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	461	466	108	177	515	166	176	1882	171	297	1686	541
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6328		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6328		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	470	476	110	181	526	169	180	1920	174	303	1720	552
RTOR Reduction (vph)	0	0	80	0	0	96	0	9	0	0	0	20
Lane Group Flow (vph)	470	476	30	181	526	73	180	2085	0	303	1720	532
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	30.3	30.3	30.3	27.2	27.2	27.2	10.4	54.3		15.5	59.4	95.7
Effective Green, g (s)	30.3	30.3	30.3	27.2	27.2	27.2	10.4	54.3		15.5	59.4	95.7
Actuated g/C Ratio	0.20	0.20	0.20	0.18	0.18	0.18	0.07	0.36		0.10	0.40	0.64
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	693	714	319	320	641	287	238	2290		354	2013	1009
v/s Ratio Prot	c0.14	0.13		0.10	c0.15		0.05	c0.33		c0.09	0.34	0.34
v/s Ratio Perm			0.02			0.05						
v/c Ratio	0.68	0.67	0.09	0.57	0.82	0.26	0.76	0.91		0.86	0.85	0.53
Uniform Delay, d1	55.3	55.2	48.7	56.0	59.1	52.7	68.6	45.5		66.2	41.4	14.8
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.32	0.59		1.18	0.55	0.97
Incremental Delay, d2	2.2	2.0	0.1	1.4	7.9	0.2	4.1	2.5		5.6	1.4	0.1
Delay (s)	57.6	57.1	48.8	57.4	67.0	52.9	94.7	29.2		83.5	24.2	14.4
Level of Service	E	E	D	E	E	D	F	C		F	C	B
Approach Delay (s)		56.5			62.3			34.4			29.1	
Approach LOS		E			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	39.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7
Intersection Capacity Utilization	87.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	530	138	157	411	140	213	1780	110	202	1647	175
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3405		1770	5041		1770	5012	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3405		1770	5041		1770	5012	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	215	546	142	162	424	144	220	1835	113	208	1698	180
RTOR Reduction (vph)	0	0	108	0	24	0	0	4	0	0	8	0
Lane Group Flow (vph)	215	546	34	162	544	0	220	1944	0	208	1870	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	22.4	36.4	36.4	16.3	30.3		19.2	56.4		19.7	56.9	
Effective Green, g (s)	22.4	36.4	36.4	16.3	30.3		19.2	56.4		19.7	56.9	
Actuated g/C Ratio	0.15	0.24	0.24	0.11	0.20		0.13	0.38		0.13	0.38	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	264	858	384	192	687		226	1895		232	1901	
v/s Ratio Prot	c0.12	0.15		0.09	c0.16		0.12	c0.39		0.12	c0.37	
v/s Ratio Perm			0.02									
v/c Ratio	0.81	0.64	0.09	0.84	0.79		0.97	1.03		0.90	0.98	
Uniform Delay, d1	61.8	50.9	44.0	65.6	56.9		65.1	46.8		64.1	46.1	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.60	0.44		0.49	0.92	
Incremental Delay, d2	16.4	1.8	0.1	26.2	6.6		33.7	21.2		22.6	12.9	
Delay (s)	78.2	52.6	44.1	91.8	63.4		73.0	41.7		53.9	55.1	
Level of Service	E	D	D	F	E		E	D		D	E	
Approach Delay (s)		57.4			69.7			44.9			55.0	
Approach LOS		E			E			D			E	

Intersection Summary					
HCM 2000 Control Delay	53.5	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.94				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.2		
Intersection Capacity Utilization	93.1%	ICU Level of Service	F		
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	429	151	133	375	142	209	1795	183	142	1639	152
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3394		1770	5015		1770	5021	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3394		1770	5015		1770	5021	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	152	452	159	140	395	149	220	1889	193	149	1725	160
RTOR Reduction (vph)	0	0	120	0	28	0	0	8	0	0	7	0
Lane Group Flow (vph)	152	452	39	140	516	0	220	2074	0	149	1878	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.5	33.3	33.3	13.3	29.1		21.4	68.9		14.1	61.6	
Effective Green, g (s)	17.5	33.3	33.3	13.3	29.1		21.4	68.9		14.1	61.6	
Actuated g/C Ratio	0.12	0.22	0.22	0.09	0.19		0.14	0.46		0.09	0.41	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	206	785	351	156	658		252	2303		166	2061	
v/s Ratio Prot	c0.09	0.13		c0.08	c0.15		0.12	c0.41		0.08	c0.37	
v/s Ratio Perm			0.02									
v/c Ratio	0.74	0.58	0.11	0.90	0.78		0.87	0.90		0.90	0.91	
Uniform Delay, d1	64.0	52.0	46.6	67.7	57.5		63.0	37.4		67.2	41.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.98	0.61		0.78	0.74	
Incremental Delay, d2	12.9	1.0	0.1	43.0	6.1		24.3	5.6		22.0	3.4	
Delay (s)	76.9	53.1	46.7	110.7	63.5		85.9	28.6		74.4	34.2	
Level of Service	E	D	D	F	E		F	C		E	C	
Approach Delay (s)		56.5			73.2			34.1			37.2	
Approach LOS		E			E			C			D	

Intersection Summary					
HCM 2000 Control Delay	42.7	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.87				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.4		
Intersection Capacity Utilization	89.0%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	19	57	148	30	95	105	1756	87	118	1630	94
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5049		1770	5044	
Flt Permitted		0.68			0.61	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1187			1141	1583	1770	5049		1770	5044	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	41	19	58	149	30	96	106	1774	88	119	1646	95
RTOR Reduction (vph)	0	26	0	0	0	78	0	3	0	0	3	0
Lane Group Flow (vph)	0	92	0	0	179	18	106	1859	0	119	1738	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		27.6			27.6	27.6	17.8	91.8		15.4	89.4	
Effective Green, g (s)		27.6			27.6	27.6	17.8	91.8		15.4	89.4	
Actuated g/C Ratio		0.18			0.18	0.18	0.12	0.61		0.10	0.60	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		218			209	291	210	3089		181	3006	
v/s Ratio Prot							0.06	c0.37		c0.07	0.34	
v/s Ratio Perm		0.08			c0.16	0.01						
v/c Ratio		0.42			0.86	0.06	0.50	0.60		0.66	0.58	
Uniform Delay, d1		54.1			59.3	50.5	62.0	17.9		64.8	18.7	
Progression Factor		1.00			1.00	1.00	0.71	0.50		0.65	1.34	
Incremental Delay, d2		1.3			27.4	0.1	1.1	0.5		4.1	0.4	
Delay (s)		55.5			86.7	50.6	45.1	9.4		46.4	25.4	
Level of Service		E			F	D	D	A		D	C	
Approach Delay (s)		55.5			74.1			11.3			26.7	
Approach LOS		E			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	23.4	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.66			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	73.3%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	175	484	61	206	867	389	134	1332	117	336	1253	166
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	5024		3433	4996	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	5024		3433	4996	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	186	515	65	219	922	414	143	1417	124	357	1333	177
RTOR Reduction (vph)	0	10	0	0	0	62	0	7	0	0	11	0
Lane Group Flow (vph)	186	570	0	219	922	352	143	1534	0	357	1499	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	17.5	38.6		20.4	41.5	59.1	16.2	51.6		17.6	53.0	
Effective Green, g (s)	17.5	38.6		20.4	41.5	59.1	16.2	51.6		17.6	53.0	
Actuated g/C Ratio	0.12	0.26		0.14	0.28	0.39	0.11	0.34		0.12	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	206	1286		240	979	623	191	1728		402	1765	
v/s Ratio Prot	0.11	0.11		c0.12	c0.26	0.07	0.08	c0.31		0.10	c0.30	
v/s Ratio Perm						0.16						
v/c Ratio	0.90	0.44		0.91	0.94	0.56	0.75	0.89		0.89	0.85	
Uniform Delay, d1	65.4	46.7		63.9	53.1	35.4	64.9	46.5		65.2	44.8	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.68	0.58		1.29	0.39	
Incremental Delay, d2	36.4	0.5		34.8	17.0	0.7	11.7	6.5		17.2	4.5	
Delay (s)	101.8	47.2		98.7	70.0	36.1	56.1	33.3		101.5	21.8	
Level of Service	F	D		F	E	D	E	C		F	C	
Approach Delay (s)		60.5			65.0			35.3			37.0	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	47.0	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.93			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8	
Intersection Capacity Utilization	89.8%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

17: Beach Blvd & Indianapolis Ave

Mitigated Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	70	112	39	34	127	161	32	1440	33	162	1175	67
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1790		1770	1863	1583	1770	5068		1770	5044	
Flt Permitted	0.51	1.00		0.43	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	957	1790		808	1863	1583	1770	5068		1770	5044	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	71	114	40	35	130	164	33	1469	34	165	1199	68
RTOR Reduction (vph)	0	10	0	0	0	143	0	1	0	0	3	0
Lane Group Flow (vph)	71	144	0	35	130	21	33	1502	0	165	1264	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	19.6	19.6		19.6	19.6	19.6	8.2	84.8		29.2	105.8	
Effective Green, g (s)	19.6	19.6		19.6	19.6	19.6	8.2	84.8		29.2	105.8	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.05	0.57		0.19	0.71	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	233		105	243	206	96	2865		344	3557	
v/s Ratio Prot		c0.08			0.07		0.02	c0.30		c0.09	0.25	
v/s Ratio Perm	0.07			0.04		0.01						
v/c Ratio	0.57	0.62		0.33	0.53	0.10	0.34	0.52		0.48	0.36	
Uniform Delay, d1	61.2	61.7		59.3	60.9	57.5	68.3	20.1		53.7	8.7	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.44	0.41		0.51	0.23	
Incremental Delay, d2	5.8	4.9		1.9	2.3	0.2	1.3	0.4		0.5	0.1	
Delay (s)	67.0	66.5		61.1	63.2	57.7	99.4	8.7		27.7	2.2	
Level of Service	E	E		E	E	E	F	A		C	A	
Approach Delay (s)		66.7			60.2			10.6			5.1	
Approach LOS		E			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	16.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.4
Intersection Capacity Utilization	72.4%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

18: Beach Blvd & Atlanta Ave

Mitigated Opening Year Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	259	373	33	80	536	216	122	937	89	351	627	261
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3387		1770	5019		1770	4861	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3387		1770	5019		1770	4861	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	264	381	34	82	547	220	124	956	91	358	640	266
RTOR Reduction (vph)	0	4	0	0	29	0	0	7	0	0	53	0
Lane Group Flow (vph)	264	411	0	82	738	0	124	1040	0	358	853	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.3	47.3		11.6	34.6		28.4	38.1		31.9	41.6	
Effective Green, g (s)	24.3	47.3		11.6	34.6		28.4	38.1		31.9	41.6	
Actuated g/C Ratio	0.16	0.32		0.08	0.23		0.19	0.25		0.21	0.28	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	286	1102		136	781		335	1274		376	1348	
v/s Ratio Prot	c0.15	0.12		0.05	c0.22		0.07	c0.21		c0.20	0.18	
v/s Ratio Perm												
v/c Ratio	0.92	0.37		0.60	0.94		0.37	0.82		0.95	0.63	
Uniform Delay, d1	61.9	39.8		67.0	56.8		53.0	52.7		58.3	47.5	
Progression Factor	1.00	1.00		1.00	1.00		1.08	1.08		0.87	0.60	
Incremental Delay, d2	33.1	0.1		5.1	19.6		0.2	5.7		32.8	2.2	
Delay (s)	95.0	39.9		72.1	76.4		57.6	62.3		83.5	30.6	
Level of Service	F	D		E	E		E	E		F	C	
Approach Delay (s)		61.3			76.0			61.8			45.5	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	59.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.90		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	76	0	134	0	0	0	128	1096	0	0	633	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5028	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5028	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	81	0	143	0	0	0	136	1166	0	0	673	55
RTOR Reduction (vph)	0	0	128	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	81	0	15	0	0	0	136	1166	0	0	725	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	16.0		16.0				16.9	123.0			101.2	
Effective Green, g (s)	16.0		16.0				16.9	123.0			101.2	
Actuated g/C Ratio	0.11		0.11				0.11	0.82			0.67	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	188		168				199	4169			3392	
v/s Ratio Prot							c0.08	c0.23			0.14	
v/s Ratio Perm	c0.05		0.01									
v/c Ratio	0.43		0.09				0.68	0.28			0.21	
Uniform Delay, d1	62.7		60.4				64.0	3.2			9.3	
Progression Factor	1.00		1.00				1.11	0.50			0.52	
Incremental Delay, d2	1.6		0.2				3.9	0.1			0.1	
Delay (s)	64.3		60.7				74.6	1.6			4.9	
Level of Service	E		E				E	A			A	
Approach Delay (s)		62.0			0.0			9.3			4.9	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	45.9%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	287	1200	53	23	1557	898	29	50	38	473	55	247
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	299	1250	55	24	1622	935	30	52	40	493	57	257
RTOR Reduction (vph)	0	3	0	0	0	258	0	0	37	0	0	0
Lane Group Flow (vph)	299	1302	0	24	1622	677	30	52	3	493	57	257
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.3	81.2		4.3	72.2	72.2	3.6	11.6	11.6	31.2	39.2	150.0
Effective Green, g (s)	13.3	81.2		4.3	72.2	72.2	3.6	11.6	11.6	31.2	39.2	150.0
Actuated g/C Ratio	0.09	0.54		0.03	0.48	0.48	0.02	0.08	0.08	0.21	0.26	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	304	2735		50	1703	761	42	273	122	714	486	1583
v/s Ratio Prot	c0.09	0.26		0.01	c0.46		c0.02	0.01		c0.14	0.03	
v/s Ratio Perm						0.43			0.00			c0.16
v/c Ratio	0.98	0.48		0.48	0.95	0.89	0.71	0.19	0.03	0.69	0.12	0.16
Uniform Delay, d1	68.2	21.3		71.7	37.3	35.3	72.7	64.8	64.0	54.9	42.2	0.0
Progression Factor	1.00	1.00		1.22	0.32	0.60	1.00	1.00	1.00	1.20	1.14	1.00
Incremental Delay, d2	46.7	0.6		1.9	10.5	11.5	38.0	0.1	0.0	2.3	0.0	0.2
Delay (s)	114.9	21.9		89.7	22.4	32.8	110.7	64.9	64.0	68.2	48.0	0.2
Level of Service	F	C		F	C	C	F	E	E	E	D	A
Approach Delay (s)		39.2			26.8			75.9			45.1	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	34.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	85.3%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1557	15	5	2300	272	12	11	15	91	6	169
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1697		1770	1593	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.27	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	512	1697		1378	1593	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	146	1622	16	5	2396	283	12	11	16	95	6	176
RTOR Reduction (vph)	0	0	4	0	0	73	0	14	0	0	154	0
Lane Group Flow (vph)	146	1622	12	5	2396	210	12	13	0	95	28	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	15.6	116.4	116.4	1.2	102.0	102.0	18.5	18.5		18.5	18.5	
Effective Green, g (s)	15.6	116.4	116.4	1.2	102.0	102.0	18.5	18.5		18.5	18.5	
Actuated g/C Ratio	0.10	0.78	0.78	0.01	0.68	0.68	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	184	3945	1228	14	3457	1076	63	209		169	196	
v/s Ratio Prot	c0.08	0.32		c0.00	c0.47			0.01			0.02	
v/s Ratio Perm			0.01			0.13	0.02			c0.07		
v/c Ratio	0.79	0.41	0.01	0.36	0.69	0.19	0.19	0.06		0.56	0.14	
Uniform Delay, d1	65.6	5.5	3.8	74.0	14.5	8.9	59.0	58.1		61.9	58.7	
Progression Factor	0.73	2.17	1.00	0.55	0.37	0.09	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.1	0.3	0.0	2.8	0.6	0.2	0.5	0.0		2.5	0.1	
Delay (s)	64.9	12.2	3.8	43.6	6.0	1.0	59.6	58.1		64.5	58.8	
Level of Service	E	B	A	D	A	A	E	E		E	E	
Approach Delay (s)		16.5			5.5			58.6			60.7	
Approach LOS		B			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	13.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.9	
Intersection Capacity Utilization	75.5%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	136	1521	37	50	2457	232	18	45	31	138	50	133
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1749		1681	1728	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1749		1681	1728	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	145	1618	39	53	2614	247	19	48	33	147	53	141
RTOR Reduction (vph)	0	0	16	0	0	68	0	17	0	0	0	125
Lane Group Flow (vph)	145	1618	23	53	2614	179	19	64	0	98	102	16
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.8	89.9	89.9	7.2	86.3	86.3	17.0	17.0		17.1	17.1	17.1
Effective Green, g (s)	10.8	89.9	89.9	7.2	86.3	86.3	17.0	17.0		17.1	17.1	17.1
Actuated g/C Ratio	0.07	0.60	0.60	0.05	0.58	0.58	0.11	0.11		0.11	0.11	0.11
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	127	3047	948	84	2925	910	200	198		191	196	180
v/s Ratio Prot	c0.08	0.32		0.03	c0.51		0.01	c0.04		0.06	c0.06	
v/s Ratio Perm			0.01			0.11						0.01
v/c Ratio	1.14	0.53	0.02	0.63	0.89	0.20	0.10	0.32		0.51	0.52	0.09
Uniform Delay, d1	69.6	17.7	12.2	70.1	27.8	15.3	59.6	61.2		62.5	62.6	59.5
Progression Factor	0.87	0.54	1.04	1.39	0.16	0.03	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	120.7	0.6	0.0	1.0	0.5	0.0	0.1	0.3		1.0	1.1	0.1
Delay (s)	181.0	10.2	12.7	98.4	5.0	0.5	59.7	61.6		63.5	63.7	59.6
Level of Service	F	B	B	F	A	A	E	E		E	E	E
Approach Delay (s)		24.0			6.3			61.2			61.9	
Approach LOS		C			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	17.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.79			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	82.2%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	209	1485	7	20	2514	680	25	29	13	326	8	207
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1776		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1776		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	225	1597	8	22	2703	731	27	31	14	351	9	223
RTOR Reduction (vph)	0	0	3	0	0	46	0	11	0	0	0	187
Lane Group Flow (vph)	225	1597	5	22	2703	685	27	34	0	351	9	36
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	26.3	96.0	96.0	3.7	73.4	97.4	5.6	5.6		24.0	24.0	24.0
Effective Green, g (s)	26.3	96.0	96.0	3.7	73.4	97.4	5.6	5.6		24.0	24.0	24.0
Actuated g/C Ratio	0.18	0.64	0.64	0.02	0.49	0.65	0.04	0.04		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	310	3254	1013	43	2488	1027	66	66		549	298	253
v/s Ratio Prot	c0.13	0.31		0.01	c0.53	c0.11	0.02	c0.02		0.10	0.00	
v/s Ratio Perm			0.00			0.33						0.02
v/c Ratio	0.73	0.49	0.01	0.51	1.09	0.67	0.41	0.52		0.64	0.03	0.14
Uniform Delay, d1	58.4	14.2	9.8	72.3	38.3	16.3	70.6	70.9		59.0	53.2	54.1
Progression Factor	0.73	1.10	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.2	0.5	0.0	4.2	46.5	1.3	1.5	3.4		1.8	0.0	0.1
Delay (s)	48.8	16.1	9.8	76.5	84.8	17.6	72.1	74.3		60.8	53.2	54.2
Level of Service	D	B	A	E	F	B	E	E		E	D	D
Approach Delay (s)		20.1			70.5			73.5			58.1	
Approach LOS		C			E			E			E	

Intersection Summary			
HCM 2000 Control Delay	53.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	89.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			


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OY+P1-PM                    Fri Aug 8, 2014 11:29:57                    Page 1-1
-------------------------------------------------------------------------------
                ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
            MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
                                PM PEAK HOUR
-------------------------------------------------------------------------------
                                Scenario Report
Scenario:              OY+P1-PM

Command:               OY+P1-PM
Volume:                EX-PM
Geometry:              EX
Impact Fee:            Default Impact Fee
Trip Generation:       OY-CUMUL+P1-PM
Trip Distribution:     DIST-1
Paths:                 Default Path
Routes:                Default Route
Configuration:         OY+P1-PM

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in V/C
# 3 Beach Blvd & Edinger Ave	E	xxxxx	0.909	F	xxxxx	1.005	+ 0.096
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.869	E	xxxxx	0.927	+ 0.058
# 16 Beach Blvd & Adams Ave	C	xxxxx	0.724	C	xxxxx	0.791	+ 0.067
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.674	D	xxxxx	0.816	+ 0.143
# 21 Newland St & Atlanta Ave	A	xxxxx	0.563	A	xxxxx	0.578	+ 0.015
# 22 Newland St & Hamilton Ave	B	xxxxx	0.697	C	xxxxx	0.745	+ 0.048
# 24 Magnolia St & Hamilton Ave	B	xxxxx	0.610	B	xxxxx	0.620	+ 0.010
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.657	B	xxxxx	0.669	+ 0.012
# 30 Brookhurst Street & Talbert Av	C	xxxxx	0.798	D	xxxxx	0.815	+ 0.017
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.506	A	xxxxx	0.520	+ 0.014
# 32 Brookhurst Street & Quail Aven	A	xxxxx	0.594	B	xxxxx	0.611	+ 0.017
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.710	C	xxxxx	0.744	+ 0.034
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.624	B	xxxxx	0.647	+ 0.023
# 35 Brookhurst Street & Yorktown A	A	xxxxx	0.595	B	xxxxx	0.619	+ 0.023
# 36 Brookhurst Street & Adams Aven	C	xxxxx	0.778	D	xxxxx	0.801	+ 0.023
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.353	A	xxxxx	0.362	+ 0.009
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.440	A	xxxxx	0.460	+ 0.020
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.227	A	xxxxx	0.236	+ 0.009
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.284	A	xxxxx	0.294	+ 0.009

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.909
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 92 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	R		L	T	R		L	T	R		L	T	R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0	1	2	0	4	0	2	2	0	3	0	1	2	0	2	0	1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	427	2308	524		343	2266	658		428	934	252		179	609	177	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	427	2308	524		343	2266	658		428	934	252		179	609	177	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	427	2308	524		343	2266	658		428	934	252		179	609	177	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	427	2308	524		343	2266	658		428	934	252		179	609	177	
OvlAdjVol:							230				39					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.45	0.31		0.10	0.33	0.19		0.13	0.18	0.15		0.05	0.18	0.10	
OvlAdjV/S:							0.07				0.02					
Crit Moves:	****				****				****				****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.869
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 72 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	323	2269	184		183	1714	345		414	1108	148		247	1225	216	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.36	0.36		0.05	0.25	0.20		0.12	0.25	0.25		0.07	0.28	0.28	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.724
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 40 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100		288	1043	152		156	455	59		187	828	339	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	133	1128	103		297	1074	157		161	469	61		193	853	349	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	133	1128	103		297	1074	157		161	469	61		193	853	349	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	133	1128	103		297	1074	157		161	469	61		193	853	349	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	133	1128	103		297	1074	157		161	469	61		193	853	349	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.75	0.25		2.00	2.62	0.38		1.00	2.66	0.34		1.00	2.00	1.00	
Final Sat.:	1700	4673	427		3400	4451	649		1700	4515	585		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.08	0.24	0.24		0.09	0.24	0.24		0.09	0.10	0.10		0.11	0.25	0.21	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.674
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37		303	53	232		267	1070	51		22	1417	720	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	29	50	38		312	55	239		275	1102	53		23	1460	742	
User Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	29	50	0		312	55	0		275	1102	53		23	1460	742	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	29	50	0		312	55	0		275	1102	53		23	1460	742	
PCE Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	0.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	29	50	0		312	55	0		275	1102	53		23	1460	742	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.00	1.00		2.00	1.00	1.00		2.00	2.86	0.14		1.00	2.00	1.00	
Final Sat.:	1700	3400	1700		3400	1700	1700		3400	4868	232		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.01	0.00		0.09	0.03	0.00		0.08	0.23	0.23		0.01	0.43	0.44	
Crit Moves:	****				****				****						****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.563
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 27 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34		96	264	97		80	474	203		52	473	114	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	283	537	35		99	272	100		82	488	209		54	487	117	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	283	537	35		99	272	100		82	488	209		54	487	117	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	283	537	35		99	272	100		82	488	209		54	487	117	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	283	537	35		99	272	100		82	488	209		54	487	117	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.88	0.12		1.00	1.46	0.54		1.00	1.40	0.60		1.00	1.61	0.39	
Final Sat.:	1700	3192	208		1700	2486	914		1700	2381	1019		1700	2740	660	
Capacity Analysis Module:																
Vol/Sat:	0.17	0.17	0.17		0.06	0.11	0.11		0.05	0.21	0.21		0.03	0.18	0.18	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
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Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.697
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 37 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	304	65	223	203	0	0	0	0	0	0	0	153	0	0	476
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03
Initial Bse:	0	313	67	230	209	0	0	0	0	158	0	0	158	0	0	490
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	313	67	230	209	0	0	0	0	158	0	0	158	0	0	490
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	313	67	230	209	0	0	0	0	158	0	0	158	0	0	490
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	313	67	230	209	0	0	0	0	158	0	0	158	0	0	490
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	0.82	0.18	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00
Final Sat.:	0	1401	299	1700	1700	0	0	0	0	1700	0	0	1700	0	0	1700
Capacity Analysis Module:																
Vol/Sat:	0.00	0.22	0.22	0.14	0.12	0.00	0.00	0.00	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.29
Crit Moves:		****		****												****

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.610
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	30	300	28	189	178	42	25	257	29	15	546	327				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	31	309	29	195	183	43	26	265	30	15	562	337				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	31	309	29	195	183	43	26	265	30	15	562	337				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	31	309	29	195	183	43	26	265	30	15	562	337				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	31	309	29	195	183	43	26	265	30	15	562	337				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.83	0.17	1.00	2.00	1.00	1.00	0.90	0.10	1.00	1.00	1.00				
Final Sat.:	1700	3110	290	1700	3400	1700	1700	1528	172	1700	1700	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10	0.11	0.05	0.03	0.02	0.17	0.17	0.01	0.33	0.20				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.657
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 33 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	114	586	158		399	401	91		92	361	69		238	1092	515	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	114	586	158		399	401	91		92	361	69		238	1092	515	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	114	586	158		399	401	91		92	361	69		238	1092	515	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	114	586	158		399	401	91		92	361	69		238	1092	515	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.45	0.55		1.00	1.68	0.32		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4159	941		1700	2854	546		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.11	0.09		0.12	0.10	0.10		0.05	0.13	0.13		0.14	0.32	0.30	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.798
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	198	1487	323		244	1434	251		218	654	161		250	1091	475	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.29	0.19		0.07	0.28	0.15		0.06	0.13	0.09		0.07	0.32	0.28	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.506
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 24 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16		29	1774	25		83	0	28		8	0	11	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	23	1851	16		30	1827	26		85	0	29		8	0	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	23	1851	16		30	1827	0		85	0	29		8	0	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	23	1851	16		30	1827	0		85	0	29		8	0	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	23	1851	16		30	1827	0		85	0	29		8	0	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.97	0.03		1.00	3.00	1.00		0.74	0.01	0.25		0.42	0.00	0.58	
Final Sat.:	1700	5055	45		1700	5100	1700		1271	0	429		716	0	984	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.37	0.37		0.02	0.36	0.00		0.05	0.00	0.07		0.00	0.00	0.01	
Crit Moves:		****			****						****		****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.594
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	71	1636	13		41	1597	219		227	8	84		13	3	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	71	1636	13		41	1597	219		227	8	84		13	3	10	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	71	1636	13		41	1597	219		227	8	84		13	3	10	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	71	1636	13		41	1597	219		227	8	84		13	3	10	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.32	0.32		0.02	0.36	0.36		0.13	0.14	0.05		0.01	0.02	0.02	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.710
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 38 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	109	1308	132		159	1227	187		255	486	90		342	687	111	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	109	1308	132		159	1227	187		255	486	90		342	687	111	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	109	1308	132		159	1227	187		255	486	90		342	687	111	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	109	1308	132		159	1227	187		255	486	90		342	687	111	
OvlAdjVol:			0				60									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.26	0.08		0.09	0.24	0.11		0.08	0.17	0.17		0.10	0.23	0.23	
OvlAdjV/S:			0.00				0.04									
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.624
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03		1.03	1.03	1.03	
Initial Bse:	190	1421	79		106	1183	243		182	217	140		191	249	99	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	190	1421	79		106	1183	243		182	217	140		191	249	99	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	190	1421	79		106	1183	243		182	217	140		191	249	99	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	190	1421	79		106	1183	243		182	217	140		191	249	99	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.29	0.29		0.06	0.23	0.14		0.11	0.11	0.11		0.11	0.07	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.595
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 29 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110	37	1112	200	147	219	109	145	249	26				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	159	1452	113	38	1145	206	151	226	112	149	256	27				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	159	1452	113	38	1145	206	151	226	112	149	256	27				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	159	1452	113	38	1145	206	151	226	112	149	256	27				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	159	1452	113	38	1145	206	151	226	112	149	256	27				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.78	0.22	1.00	2.54	0.46	1.00	1.34	0.66	1.00	1.81	0.19				
Final Sat.:	1700	4731	369	1700	4323	777	1700	2270	1130	1700	3079	321				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.31	0.31	0.02	0.26	0.26	0.09	0.10	0.10	0.09	0.08	0.08				
Crit Moves:	****				****			****			****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.778
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 48 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	269	899	148	313	876	184	282	769	127	289	1775	365				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	269	899	148	313	876	184	282	769	127	289	1775	365				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	269	899	148	313	876	184	282	769	127	289	1775	365				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	269	899	148	313	876	184	282	769	127	289	1775	365				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.21	0.21	0.09	0.21	0.21	0.08	0.15	0.07	0.09	0.35	0.21				
Crit Moves:		****			****			****				****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.353
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	45	1286	0	0	1087	171	100	0	53	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	45	1286	0	0	1087	171	100	0	53	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	45	1286	0	0	1087	171	100	0	53	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	45	1286	0	0	1087	171	100	0	53	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.25	0.00	0.00	0.25	0.25	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Brookhurst Street & Atlanta Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.440
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 21 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	147	988	21	20	690	169	177	24	136	25	40	27				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	151	1018	22	21	711	174	182	25	140	26	41	28				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	151	1018	22	21	711	174	182	25	140	26	41	28				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	151	1018	22	21	711	174	182	25	140	26	41	28				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	151	1018	22	21	711	174	182	25	140	26	41	28				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.94	0.06	1.00	2.41	0.59	1.00	1.00	1.00	1.00	1.19	0.81				
Final Sat.:	1700	4994	106	1700	4097	1003	1700	1700	1700	1700	2030	1370				
Capacity Analysis Module:																
Vol/Sat:	0.09	0.20	0.20	0.01	0.17	0.17	0.11	0.01	0.08	0.02	0.02	0.02				
Crit Moves:	****				****		****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Brookhurst Street & Banning Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.227
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 16 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	1	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	14	689	0	0	407	85	62	0	12	0	0	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	14	710	0	0	419	88	64	0	12	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	14	710	0	0	419	88	64	0	12	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	14	710	0	0	419	88	64	0	12	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	14	710	0	0	419	88	64	0	12	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.48	0.52	1.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4219	881	1700	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.01	0.14	0.00	0.00	0.10	0.10	0.04	0.00	0.01	0.00	0.00	0.00				
Crit Moves:	****			****			****									

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED OPERATING YEAR PLUS PROJECT CONDITIONS (2017)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Brookhurst Street & Bushard Street

Cycle (sec): 100 Critical Vol./Cap.(X): 0.284
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 17 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	0	1 0	0	0	1	0 0
Volume Module:																
Base Vol:	175	677	1	12	378	26	7	0	86	0	1	0				
Growth Adj:	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03	1.03				
Initial Bse:	180	697	1	12	389	27	7	0	89	0	1	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	180	697	1	12	389	27	7	0	89	0	1	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	180	697	1	12	389	27	7	0	89	0	1	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	180	697	1	12	389	27	7	0	89	0	1	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.99	0.01	1.00	3.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00				
Final Sat.:	1700	5092	8	1700	5100	1700	1700	0	1700	0	1700	0				
Capacity Analysis Module:																
Vol/Sat:	0.11	0.14	0.14	0.01	0.08	0.02	0.00	0.00	0.05	0.00	0.00	0.00				
Crit Moves:	****				****				****	****						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	417	401	153	396	447	150	260	2943	259	207	2440	279
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Lane Util. Factor	0.97	0.95		0.97	0.95		0.97	0.86		0.97	0.86	
Frt	1.00	0.96		1.00	0.96		1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	3433	3393		3433	3406		3433	6330		3433	6309	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	3433	3393		3433	3406		3433	6330		3433	6309	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	434	418	159	412	466	156	271	3066	270	216	2542	291
RTOR Reduction (vph)	0	27	0	0	24	0	0	9	0	0	13	0
Lane Group Flow (vph)	434	550	0	412	598	0	271	3327	0	216	2820	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	22.8	39.4		15.7	32.3		12.0	65.5		11.0	64.5	
Effective Green, g (s)	22.8	39.4		15.7	32.3		12.0	65.5		11.0	64.5	
Actuated g/C Ratio	0.15	0.26		0.10	0.22		0.08	0.44		0.07	0.43	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	521	891		359	733		274	2764		251	2712	
v/s Ratio Prot	c0.13	0.16		c0.12	c0.18		0.08	c0.53		0.06	c0.45	
v/s Ratio Perm												
v/c Ratio	0.83	0.62		1.15	0.82		0.99	1.20		0.86	1.04	
Uniform Delay, d1	61.8	48.7		67.2	56.0		68.9	42.2		68.7	42.8	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.94		1.00	1.00	
Incremental Delay, d2	11.0	1.3		94.0	7.0		42.8	94.4		24.7	28.7	
Delay (s)	72.7	50.0		161.1	63.0		108.6	134.1		93.4	71.5	
Level of Service	E	D		F	E		F	F		F	E	
Approach Delay (s)		59.7			102.1			132.2			73.0	
Approach LOS		E			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	99.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.4
Intersection Capacity Utilization	100.5%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Volume (vph)	376	1059	0	3309	2576	1067
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3	4.5		6.0	6.0	4.0
Lane Util. Factor	0.97	0.88		0.86	0.86	1.00
Frt	1.00	0.85		1.00	1.00	0.85
Flt Protected	0.95	1.00		1.00	1.00	1.00
Satd. Flow (prot)	3433	2787		6408	6408	1583
Flt Permitted	0.95	1.00		1.00	1.00	1.00
Satd. Flow (perm)	3433	2787		6408	6408	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	384	1081	0	3377	2629	1089
RTOR Reduction (vph)	0	1	0	0	0	0
Lane Group Flow (vph)	384	1080	0	3377	2629	1089
Turn Type	Prot	custom		NA	NA	Free
Protected Phases	4	5		2	6	
Permitted Phases		4		5		Free
Actuated Green, G (s)	20.7	62.2		119.5	72.0	150.0
Effective Green, g (s)	20.7	62.2		119.5	72.0	150.0
Actuated g/C Ratio	0.14	0.41		0.80	0.48	1.00
Clearance Time (s)	5.3	4.5		6.0	6.0	
Vehicle Extension (s)	4.0	3.8		4.0	4.0	
Lane Grp Cap (vph)	473	1239		5105	3075	1583
v/s Ratio Prot	0.11	c0.24		0.52	c0.41	
v/s Ratio Perm		0.15		0.01		0.69
v/c Ratio	0.81	0.87		0.66	0.85	0.69
Uniform Delay, d1	62.8	40.3		6.6	34.4	0.0
Progression Factor	1.00	1.00		0.65	0.51	1.00
Incremental Delay, d2	10.7	7.2		0.0	1.6	1.2
Delay (s)	73.5	47.4		4.3	19.2	1.2
Level of Service	E	D		A	B	A
Approach Delay (s)	54.3			4.3	13.9	
Approach LOS	D			A	B	

Intersection Summary			
HCM 2000 Control Delay	17.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.8
Intersection Capacity Utilization	83.1%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	535	1082	312	187	744	183	510	2556	541	353	2518	808
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Lane Util. Factor	0.97	0.91	1.00	0.97	0.95	1.00	0.97	0.91	1.00	0.97	0.86	0.88
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	3539	1583	3433	5085	1583	3433	6408	2787
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	557	1127	325	195	775	191	531	2662	564	368	2623	842
RTOR Reduction (vph)	0	0	48	0	0	133	0	0	143	0	0	48
Lane Group Flow (vph)	557	1127	277	195	775	58	531	2662	421	368	2623	794
Turn Type	Prot	NA	pm+ov	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	pm+ov
Protected Phases	7	4	5	3	8		5	2		1	6	7
Permitted Phases			4			8			2			6
Actuated Green, G (s)	24.5	50.1	66.5	13.3	38.9	38.9	16.4	53.7	53.7	12.6	49.5	74.0
Effective Green, g (s)	24.5	50.1	66.5	13.3	38.9	38.9	16.4	53.7	53.7	12.6	49.5	74.0
Actuated g/C Ratio	0.16	0.33	0.44	0.09	0.26	0.26	0.11	0.36	0.36	0.08	0.33	0.49
Clearance Time (s)	4.6	5.5	4.6	4.6	5.5	5.5	4.6	5.8	5.8	4.4	6.0	4.6
Vehicle Extension (s)	1.0	3.0	1.0	1.0	3.0	3.0	1.0	4.0	4.0	1.0	4.0	1.0
Lane Grp Cap (vph)	560	1698	701	304	917	410	375	1820	566	288	2114	1460
v/s Ratio Prot	c0.16	0.22	0.04	0.06	c0.22		0.15	c0.52		0.11	c0.41	0.09
v/s Ratio Perm			0.13			0.04			0.27			0.20
v/c Ratio	0.99	0.66	0.39	0.64	0.85	0.14	1.42	1.46	0.74	1.28	1.24	0.54
Uniform Delay, d1	62.7	42.7	28.2	66.0	52.7	42.7	66.8	48.1	42.1	68.7	50.2	26.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	0.76	0.69	0.52	1.06	0.69	0.52
Incremental Delay, d2	36.4	1.0	0.1	3.4	7.2	0.2	196.6	210.1	5.3	138.7	110.6	0.1
Delay (s)	99.1	43.7	28.3	69.5	59.9	42.9	247.6	243.4	27.3	211.4	145.3	13.8
Level of Service	F	D	C	E	E	D	F	F	C	F	F	B
Approach Delay (s)		56.6			58.7			211.6			122.8	
Approach LOS		E			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	134.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.19		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	112.2%	ICU Level of Service	H
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	25	20	44	135	34	186	127	3065	76	259	2697	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.86		0.97	0.86	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1669		1770	1863	1583	1770	6384		3433	6397	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1669		1770	1863	1583	1770	6384		3433	6397	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	26	20	45	138	35	190	130	3128	78	264	2752	30
RTOR Reduction (vph)	0	41	0	0	0	159	0	2	0	0	1	0
Lane Group Flow (vph)	26	24	0	138	35	31	130	3204	0	264	2781	0
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	7.8	14.6		17.9	24.7	24.7	16.2	80.3		17.6	81.7	
Effective Green, g (s)	7.8	14.6		17.9	24.7	24.7	16.2	80.3		17.6	81.7	
Actuated g/C Ratio	0.05	0.10		0.12	0.16	0.16	0.11	0.54		0.12	0.54	
Clearance Time (s)	4.7	4.9		4.7	4.9	4.9	4.7	5.3		4.7	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	92	162		211	306	260	191	3417		402	3484	
v/s Ratio Prot	c0.01	c0.01		c0.08	0.02		0.07	c0.50		c0.08	0.43	
v/s Ratio Perm						0.02						
v/c Ratio	0.28	0.15		0.65	0.11	0.12	0.68	0.94		0.66	0.80	
Uniform Delay, d1	68.4	62.0		63.1	53.3	53.4	64.4	32.5		63.3	27.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.37	0.17		1.35	0.33	
Incremental Delay, d2	1.7	0.4		7.1	0.2	0.2	5.2	3.7		0.4	0.2	
Delay (s)	70.1	62.5		70.2	53.5	53.6	93.2	9.3		85.8	9.3	
Level of Service	E	E		E	D	D	F	A		F	A	
Approach Delay (s)		64.6			59.9			12.6			15.9	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.6
Intersection Capacity Utilization	81.4%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	31	5	19	263	4	175	67	3009	105	338	2637	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Lane Util. Factor	1.00	1.00		0.95	0.91	0.95	1.00	0.86		0.97	0.86	
Frt	1.00	0.88		1.00	0.96	0.85	1.00	0.99		1.00	1.00	
Flt Protected	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1642		1681	1576	1504	1770	6375		3433	6401	
Flt Permitted	0.95	1.00		0.95	0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	1642		1681	1576	1504	1770	6375		3433	6401	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	31	5	19	266	4	177	68	3039	106	341	2664	20
RTOR Reduction (vph)	0	17	0	0	7	119	0	3	0	0	0	0
Lane Group Flow (vph)	31	7	0	154	146	21	68	3142	0	341	2684	0
Turn Type	Split	NA		Split	NA	Perm	Prot	NA		Prot	NA	
Protected Phases	4	4		3	3		5	2		1	6	
Permitted Phases						3						
Actuated Green, G (s)	13.2	13.2		22.7	22.7	22.7	8.8	81.6		14.6	87.4	
Effective Green, g (s)	13.2	13.2		22.7	22.7	22.7	8.8	81.6		14.6	87.4	
Actuated g/C Ratio	0.09	0.09		0.15	0.15	0.15	0.06	0.54		0.10	0.58	
Clearance Time (s)	4.2	4.2		4.2	4.2	4.2	4.2	5.3		4.2	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	155	144		254	238	227	103	3468		334	3729	
v/s Ratio Prot	c0.02	0.00		0.09	c0.09		0.04	c0.49		c0.10	0.42	
v/s Ratio Perm						0.01						
v/c Ratio	0.20	0.05		0.61	0.61	0.09	0.66	0.91		1.02	0.72	
Uniform Delay, d1	63.5	62.6		59.5	59.6	54.8	69.1	30.8		67.7	22.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.36	0.23		0.59	0.41	
Incremental Delay, d2	0.6	0.1		4.1	4.6	0.2	1.4	0.4		45.1	0.8	
Delay (s)	64.1	62.8		63.5	64.2	55.0	95.1	7.5		85.0	10.0	
Level of Service	E	E		E	E	D	F	A		F	B	
Approach Delay (s)		63.5			61.1			9.4			18.5	
Approach LOS		E			E			A			B	

Intersection Summary			
HCM 2000 Control Delay	17.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.80		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	17.9
Intersection Capacity Utilization	82.2%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	331	190	44	326	167	175	2993	52	172	2500	245
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.95		1.00	0.95		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3345		1770	3359		1770	6391		1770	6322	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3345		1770	3359		1770	6391		1770	6322	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	272	341	196	45	336	172	180	3086	54	177	2577	253
RTOR Reduction (vph)	0	53	0	0	48	0	0	2	0	0	11	0
Lane Group Flow (vph)	272	484	0	45	460	0	180	3138	0	177	2819	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	30.7	48.8		8.8	26.9		13.4	60.2		13.4	60.2	
Effective Green, g (s)	30.7	48.8		8.8	26.9		13.4	60.2		13.4	60.2	
Actuated g/C Ratio	0.20	0.33		0.06	0.18		0.09	0.40		0.09	0.40	
Clearance Time (s)	4.3	4.6		4.3	4.6		4.6	5.3		4.6	5.3	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	362	1088		103	602		158	2564		158	2537	
v/s Ratio Prot	c0.15	0.14		0.03	c0.14		0.10	c0.49		0.10	c0.45	
v/s Ratio Perm												
v/c Ratio	0.75	0.45		0.44	0.76		1.14	1.22		1.12	1.11	
Uniform Delay, d1	56.1	39.9		68.2	58.5		68.3	44.9		68.3	44.9	
Progression Factor	1.00	1.00		1.00	1.00		0.95	0.77		0.92	0.90	
Incremental Delay, d2	8.5	0.3		2.9	5.8		104.5	103.6		97.0	54.7	
Delay (s)	64.6	40.2		71.2	64.3		169.4	138.0		159.6	95.0	
Level of Service	E	D		E	E		F	F		F	F	
Approach Delay (s)		48.4			64.9			139.7			98.8	
Approach LOS		D			E			F			F	

Intersection Summary			
HCM 2000 Control Delay	108.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.02		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8
Intersection Capacity Utilization	98.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	89	18	41	63	11	21	161	2925	69	74	2369	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	10	10	10	10	10	10	12	12	12	12	12	12
Total Lost time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Lane Util. Factor		1.00	1.00		1.00	1.00	1.00	0.86		1.00	0.86	
Frt		1.00	0.85		1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected		0.96	1.00		0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1669	1478		1667	1478	1770	6386		1770	6386	
Flt Permitted		0.69	1.00		0.57	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1196	1478		992	1478	1770	6386		1770	6386	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	92	19	42	65	11	22	166	3015	71	76	2442	56
RTOR Reduction (vph)	0	0	36	0	0	19	0	2	0	0	2	0
Lane Group Flow (vph)	0	111	6	0	76	3	166	3084	0	76	2496	0
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4		4	8		8						
Actuated Green, G (s)		21.3	21.3		21.3	21.3	24.0	101.9		11.5	89.4	
Effective Green, g (s)		21.3	21.3		21.3	21.3	24.0	101.9		11.5	89.4	
Actuated g/C Ratio		0.14	0.14		0.14	0.14	0.16	0.68		0.08	0.60	
Clearance Time (s)		5.0	5.0		5.0	5.0	4.6	5.7		4.6	5.7	
Vehicle Extension (s)		3.0	3.0		3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		169	209		140	209	283	4338		135	3806	
v/s Ratio Prot							0.09	c0.48		0.04	c0.39	
v/s Ratio Perm		c0.09	0.00		0.08	0.00						
v/c Ratio		0.66	0.03		0.54	0.01	0.59	0.71		0.56	0.66	
Uniform Delay, d1		60.9	55.4		59.8	55.3	58.4	14.9		66.8	20.1	
Progression Factor		1.00	1.00		1.00	1.00	0.59	0.59		1.03	0.56	
Incremental Delay, d2		8.9	0.1		4.2	0.0	0.3	0.1		0.5	0.1	
Delay (s)		69.8	55.5		64.1	55.4	34.5	8.8		69.4	11.4	
Level of Service		E	E		E	E	C	A		E	B	
Approach Delay (s)		65.8			62.1			10.1			13.1	
Approach LOS		E			E			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.3
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	441	1196	187	260	1356	229	385	2565	193	192	1981	374
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Lane Util. Factor	0.97	0.91		0.97	0.91		0.97	0.86		0.97	0.86	1.00
Frt	1.00	0.98		1.00	0.98		1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	4982		3433	4975		3433	6341		3433	6408	1583
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	4982		3433	4975		3433	6341		3433	6408	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	464	1259	197	274	1427	241	405	2700	203	202	2085	394
RTOR Reduction (vph)	0	14	0	0	16	0	0	7	0	0	0	159
Lane Group Flow (vph)	464	1442	0	274	1652	0	405	2896	0	202	2085	235
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												6
Actuated Green, G (s)	17.8	46.7		13.8	42.7		18.3	58.5		12.0	52.2	52.2
Effective Green, g (s)	17.8	46.7		13.8	42.7		18.3	58.5		12.0	52.2	52.2
Actuated g/C Ratio	0.12	0.31		0.09	0.28		0.12	0.39		0.08	0.35	0.35
Clearance Time (s)	4.2	5.3		4.2	5.3		4.2	5.3		4.2	5.3	5.3
Vehicle Extension (s)	1.1	3.0		1.1	3.0		1.1	6.0		1.1	6.0	6.0
Lane Grp Cap (vph)	407	1551		315	1416		418	2472		274	2229	550
v/s Ratio Prot	c0.14	0.29		0.08	c0.33		c0.12	c0.46		0.06	0.33	
v/s Ratio Perm												0.15
v/c Ratio	1.14	0.93		0.87	1.17		0.97	1.17		0.74	0.94	0.43
Uniform Delay, d1	66.1	50.1		67.2	53.6		65.6	45.8		67.5	47.3	37.4
Progression Factor	1.00	1.00		1.00	1.00		0.90	0.76		1.25	0.57	0.62
Incremental Delay, d2	88.6	10.1		21.0	83.1		7.3	77.6		6.9	7.4	1.9
Delay (s)	154.7	60.2		88.2	136.8		66.1	112.2		91.1	34.3	25.2
Level of Service	F	E		F	F		E	F		F	C	C
Approach Delay (s)		83.0			129.9			106.6			37.3	
Approach LOS		F			F			F			D	

Intersection Summary				
HCM 2000 Control Delay	87.7	HCM 2000 Level of Service	F	
HCM 2000 Volume to Capacity ratio	1.16			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	19.0	
Intersection Capacity Utilization	110.1%	ICU Level of Service	H	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	204	510	162	116	639	160	206	2658	69	182	2194	162
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.97		1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3411		1770	3433		1770	6383		1770	6342	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3411		1770	3433		1770	6383		1770	6342	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	212	531	169	121	666	167	215	2769	72	190	2285	169
RTOR Reduction (vph)	0	21	0	0	15	0	0	2	0	0	8	0
Lane Group Flow (vph)	212	679	0	121	818	0	215	2839	0	190	2446	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	17.3	35.6		19.3	37.6		18.3	58.5		15.9	56.1	
Effective Green, g (s)	17.3	35.6		19.3	37.6		18.3	58.5		15.9	56.1	
Actuated g/C Ratio	0.12	0.24		0.13	0.25		0.12	0.39		0.11	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	204	809		227	860		215	2489		187	2371	
v/s Ratio Prot	c0.12	0.20		0.07	c0.24		0.12	c0.44		0.11	c0.39	
v/s Ratio Perm												
v/c Ratio	1.04	0.84		0.53	0.95		1.00	1.14		1.02	1.03	
Uniform Delay, d1	66.3	54.5		61.1	55.3		65.8	45.8		67.0	47.0	
Progression Factor	1.00	1.00		1.00	1.00		0.85	0.79		1.02	0.51	
Incremental Delay, d2	73.7	7.6		2.4	19.8		51.6	67.1		46.9	21.3	
Delay (s)	140.0	62.1		63.5	75.1		107.7	103.4		115.0	45.1	
Level of Service	F	E		E	E		F	F		F	D	
Approach Delay (s)		80.2			73.6			103.7			50.1	
Approach LOS		F			E			F			D	

Intersection Summary				
HCM 2000 Control Delay	78.3	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	1.08			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	101.1%	ICU Level of Service	G	
Analysis Period (min)	15			
c Critical Lane Group				

10: Beach Blvd & Newman Ave

Mitigated Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	28	1	17	114	8	167	17	2648	85	83	2448	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Lane Util. Factor		1.00			1.00		1.00	0.86		1.00	0.86	
Frt		0.95			0.92		1.00	1.00		1.00	1.00	
Flt Protected		0.97			0.98		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1717			1684		1770	6378		1770	6397	
Flt Permitted		0.68			0.86		0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1195			1477		1770	6378		1770	6397	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	29	1	18	118	8	172	18	2730	88	86	2524	30
RTOR Reduction (vph)	0	14	0	0	36	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	34	0	0	262	0	18	2816	0	86	2553	0
Turn Type	Perm	NA		Perm	NA		Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8								
Actuated Green, G (s)		31.6			31.6		6.0	90.1		12.4	96.5	
Effective Green, g (s)		31.6			31.6		6.0	90.1		12.4	96.5	
Actuated g/C Ratio		0.21			0.21		0.04	0.60		0.08	0.64	
Clearance Time (s)		5.0			5.0		4.7	6.2		4.7	6.2	
Vehicle Extension (s)		3.0			3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		251			311		70	3831		146	4115	
v/s Ratio Prot							0.01	c0.44		c0.05	0.40	
v/s Ratio Perm		0.03			c0.18							
v/c Ratio		0.13			0.84		0.26	0.73		0.59	0.62	
Uniform Delay, d1		48.1			56.8		69.8	21.4		66.3	15.9	
Progression Factor		1.00			1.00		1.41	0.48		1.43	0.30	
Incremental Delay, d2		0.2			18.2		0.2	0.1		1.8	0.2	
Delay (s)		48.3			75.0		98.5	10.3		97.0	4.9	
Level of Service		D			E		F	B		F	A	
Approach Delay (s)		48.3			75.0			10.9			7.9	
Approach LOS		D			E			B			A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.75		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	79.5%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

11: Beach Blvd & Talbert Ave

Mitigated Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	169	436	171	206	527	299	226	2332	186	272	2217	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.86		1.00	0.86	
Frt	1.00	0.96		1.00	0.95		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3390		1770	3347		1770	6337		1770	6349	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3390		1770	3347		1770	6337		1770	6349	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	176	454	178	215	549	311	235	2429	194	283	2309	150
RTOR Reduction (vph)	0	29	0	0	53	0	0	8	0	0	6	0
Lane Group Flow (vph)	176	603	0	215	807	0	235	2615	0	283	2453	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	15.8	32.0		22.3	38.5		19.3	53.7		21.3	55.7	
Effective Green, g (s)	15.8	32.0		22.3	38.5		19.3	53.7		21.3	55.7	
Actuated g/C Ratio	0.11	0.21		0.15	0.26		0.13	0.36		0.14	0.37	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	5.8		4.7	5.8	
Vehicle Extension (s)	1.0	3.5		1.0	3.5		1.0	5.0		1.0	5.0	
Lane Grp Cap (vph)	186	723		263	859		227	2268		251	2357	
v/s Ratio Prot	0.10	c0.18		0.12	c0.24		0.13	c0.41		c0.16	0.39	
v/s Ratio Perm												
v/c Ratio	0.95	0.83		0.82	0.94		1.04	1.15		1.13	1.04	
Uniform Delay, d1	66.7	56.5		61.9	54.6		65.3	48.1		64.3	47.1	
Progression Factor	1.00	1.00		1.00	1.00		0.80	0.54		0.68	0.59	
Incremental Delay, d2	49.7	8.4		16.8	17.8		55.8	72.2		90.1	28.5	
Delay (s)	116.4	64.9		78.6	72.4		108.2	98.2		134.1	56.2	
Level of Service	F	E		E	E		F	F		F	E	
Approach Delay (s)		76.1			73.7			99.0			64.2	
Approach LOS		E			E			F			E	

Intersection Summary			
HCM 2000 Control Delay	80.2	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7
Intersection Capacity Utilization	103.4%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	473	479	111	181	531	170	181	1932	176	304	1732	557
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	1.00	0.95	1.00	0.97	0.86		0.97	0.91	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	3433	3539	1583	1770	3539	1583	3433	6327		3433	5085	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	3433	3539	1583	1770	3539	1583	3433	6327		3433	5085	1583
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	483	489	113	185	542	173	185	1971	180	310	1767	568
RTOR Reduction (vph)	0	0	79	0	0	94	0	10	0	0	0	21
Lane Group Flow (vph)	483	489	34	185	542	79	185	2141	0	310	1767	547
Turn Type	Split	NA	Perm	Split	NA	Perm	Prot	NA		Prot	NA	pt+ov
Protected Phases	7	7		8	8		5	2		1	6	6 7
Permitted Phases			7			8						
Actuated Green, G (s)	31.2	31.2	31.2	28.1	28.1	28.1	10.4	52.7		15.3	57.6	94.8
Effective Green, g (s)	31.2	31.2	31.2	28.1	28.1	28.1	10.4	52.7		15.3	57.6	94.8
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19	0.19	0.07	0.35		0.10	0.38	0.63
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	4.7	6.0		4.7	6.0	
Vehicle Extension (s)	2.2	2.2	2.2	1.2	1.2	1.2	1.2	5.0		1.2	5.0	
Lane Grp Cap (vph)	714	736	329	331	662	296	238	2222		350	1952	1000
v/s Ratio Prot	c0.14	0.14		0.10	c0.15		0.05	c0.34		c0.09	0.35	0.35
v/s Ratio Perm			0.02			0.05						
v/c Ratio	0.68	0.66	0.10	0.56	0.82	0.27	0.78	0.96		0.89	0.91	0.55
Uniform Delay, d1	54.7	54.6	48.1	55.3	58.5	52.1	68.7	47.7		66.5	43.6	15.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.32	0.58		1.15	0.57	1.03
Incremental Delay, d2	2.1	1.9	0.1	1.2	7.4	0.2	3.6	4.2		2.7	0.8	0.0
Delay (s)	56.9	56.5	48.1	56.5	65.9	52.3	94.0	32.0		79.1	25.8	16.0
Level of Service	E	E	D	E	E	D	F	C		E	C	B
Approach Delay (s)		55.8			61.4			36.9			30.0	
Approach LOS		E			E			D			C	

Intersection Summary					
HCM 2000 Control Delay	40.4	HCM 2000 Level of Service	D		
HCM 2000 Volume to Capacity ratio	0.85				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	22.7		
Intersection Capacity Utilization	88.9%	ICU Level of Service	E		
Analysis Period (min)	15				
c Critical Lane Group					

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	215	546	142	162	423	143	220	1828	113	208	1691	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3405		1770	5041		1770	5012	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3405		1770	5041		1770	5012	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	222	563	146	167	436	147	227	1885	116	214	1743	186
RTOR Reduction (vph)	0	0	109	0	24	0	0	4	0	0	8	0
Lane Group Flow (vph)	222	563	37	167	559	0	227	1997	0	214	1921	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	23.3	37.6	37.6	16.5	30.8		19.2	55.0		19.7	55.5	
Effective Green, g (s)	23.3	37.6	37.6	16.5	30.8		19.2	55.0		19.7	55.5	
Actuated g/C Ratio	0.16	0.25	0.25	0.11	0.21		0.13	0.37		0.13	0.37	
Clearance Time (s)	4.6	5.8	5.8	4.6	5.8		4.6	6.2		4.6	6.2	
Vehicle Extension (s)	1.5	4.0	4.0	1.5	4.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	274	887	396	194	699		226	1848		232	1854	
v/s Ratio Prot	c0.13	0.16		0.09	c0.16		0.13	c0.40		0.12	c0.38	
v/s Ratio Perm			0.02									
v/c Ratio	0.81	0.63	0.09	0.86	0.80		1.00	1.08		0.92	1.04	
Uniform Delay, d1	61.2	50.1	43.1	65.6	56.7		65.4	47.5		64.4	47.2	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.61	0.47		0.48	0.88	
Incremental Delay, d2	15.6	1.7	0.1	29.3	6.8		39.5	40.9		25.6	26.0	
Delay (s)	76.8	51.8	43.3	94.9	63.4		79.2	63.2		56.6	67.8	
Level of Service	E	D	D	F	E		E	E		E	E	
Approach Delay (s)		56.4			70.4			64.8			66.7	
Approach LOS		E			E			E			E	

Intersection Summary					
HCM 2000 Control Delay	64.9	HCM 2000 Level of Service	E		
HCM 2000 Volume to Capacity ratio	0.97				
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.2		
Intersection Capacity Utilization	95.2%	ICU Level of Service	F		
Analysis Period (min)	15				
c Critical Lane Group					

14: Beach Blvd & Yorktown Ave

Mitigated Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	148	442	156	137	386	146	215	1843	188	146	1683	157
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	1.00	0.85	1.00	0.96		1.00	0.99		1.00	0.99	
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3393		1770	5015		1770	5020	
Flt Permitted	0.95	1.00	1.00	0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3393		1770	5015		1770	5020	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	156	465	164	144	406	154	226	1940	198	154	1772	165
RTOR Reduction (vph)	0	0	120	0	28	0	0	8	0	0	7	0
Lane Group Flow (vph)	156	465	44	144	532	0	226	2130	0	154	1930	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4									
Actuated Green, G (s)	17.8	34.0	34.0	13.4	29.6		21.7	68.1		14.1	60.5	
Effective Green, g (s)	17.8	34.0	34.0	13.4	29.6		21.7	68.1		14.1	60.5	
Actuated g/C Ratio	0.12	0.23	0.23	0.09	0.20		0.14	0.45		0.09	0.40	
Clearance Time (s)	4.3	5.6	5.6	4.3	5.6		4.3	6.2		4.3	6.2	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	210	802	358	158	669		256	2276		166	2024	
v/s Ratio Prot	c0.09	0.13		c0.08	c0.16		0.13	c0.42		0.09	c0.38	
v/s Ratio Perm			0.03									
v/c Ratio	0.74	0.58	0.12	0.91	0.80		0.88	0.94		0.93	0.95	
Uniform Delay, d1	63.9	51.6	46.1	67.7	57.3		62.9	38.9		67.4	43.4	
Progression Factor	1.00	1.00	1.00	1.00	1.00		0.97	0.61		0.81	0.78	
Incremental Delay, d2	13.2	1.0	0.2	46.4	6.5		25.4	8.0		23.5	4.9	
Delay (s)	77.1	52.7	46.3	114.1	63.8		86.7	31.6		78.0	38.8	
Level of Service	E	D	D	F	E		F	C		E	D	
Approach Delay (s)		56.2			74.1			36.9			41.7	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	45.5	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.90			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.4	
Intersection Capacity Utilization	90.5%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

15: Beach Blvd & Utica Ave

Mitigated Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	42	19	58	153	31	98	107	1803	89	122	1673	97
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Lane Util. Factor		1.00			1.00	1.00	1.00	0.91		1.00	0.91	
Frt		0.93			1.00	0.85	1.00	0.99		1.00	0.99	
Flt Protected		0.98			0.96	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		1709			1788	1583	1770	5049		1770	5043	
Flt Permitted		0.67			0.61	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		1169			1142	1583	1770	5049		1770	5043	
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	42	19	59	155	31	99	108	1821	90	123	1690	98
RTOR Reduction (vph)	0	26	0	0	0	80	0	3	0	0	4	0
Lane Group Flow (vph)	0	94	0	0	186	19	108	1908	0	123	1784	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)		28.4			28.4	28.4	17.8	90.7		15.7	88.6	
Effective Green, g (s)		28.4			28.4	28.4	17.8	90.7		15.7	88.6	
Actuated g/C Ratio		0.19			0.19	0.19	0.12	0.60		0.10	0.59	
Clearance Time (s)		4.8			4.8	4.8	4.2	6.2		4.2	6.2	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		221			216	299	210	3052		185	2978	
v/s Ratio Prot							0.06	c0.38		c0.07	0.35	
v/s Ratio Perm		0.08			c0.16	0.01						
v/c Ratio		0.43			0.86	0.06	0.51	0.63		0.66	0.60	
Uniform Delay, d1		53.6			58.9	49.9	62.0	18.8		64.6	19.5	
Progression Factor		1.00			1.00	1.00	0.70	0.49		0.64	1.35	
Incremental Delay, d2		1.3			27.8	0.1	1.1	0.5		3.7	0.4	
Delay (s)		54.9			86.7	50.0	44.8	9.7		45.1	26.7	
Level of Service		D			F	D	D	A		D	C	
Approach Delay (s)		54.9			73.9			11.5			27.9	
Approach LOS		D			E			B			C	

Intersection Summary				
HCM 2000 Control Delay	24.0	HCM 2000 Level of Service	C	
HCM 2000 Volume to Capacity ratio	0.68			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.2	
Intersection Capacity Utilization	74.6%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

16: Beach Blvd & Adams Ave

Mitigated Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	180	498	63	212	893	400	138	1366	120	345	1286	170
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.91		1.00	0.95	1.00	1.00	0.91		0.97	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5000		1770	3539	1583	1770	5024		3433	4996	
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	5000		1770	3539	1583	1770	5024		3433	4996	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	191	530	67	226	950	426	147	1453	128	367	1368	181
RTOR Reduction (vph)	0	10	0	0	0	62	0	7	0	0	11	0
Lane Group Flow (vph)	191	587	0	226	950	364	147	1574	0	367	1538	0
Turn Type	Prot	NA		Prot	NA	pm+ov	Prot	NA		Prot	NA	
Protected Phases	7	4		3	8	1	5	2		1	6	
Permitted Phases						8						
Actuated Green, G (s)	17.7	39.1		20.6	42.0	59.8	16.2	50.7		17.8	52.3	
Effective Green, g (s)	17.7	39.1		20.6	42.0	59.8	16.2	50.7		17.8	52.3	
Actuated g/C Ratio	0.12	0.26		0.14	0.28	0.40	0.11	0.34		0.12	0.35	
Clearance Time (s)	4.7	6.2		4.7	6.2	4.7	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	1.8	5.0		1.8	5.0	1.5	1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	208	1303		243	990	631	191	1698		407	1741	
v/s Ratio Prot	0.11	0.12		c0.13	c0.27	0.07	0.08	c0.31		0.11	c0.31	
v/s Ratio Perm						0.16						
v/c Ratio	0.92	0.45		0.93	0.96	0.58	0.77	0.93		0.90	0.88	
Uniform Delay, d1	65.4	46.4		64.0	53.2	35.2	65.1	47.9		65.2	46.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.67	0.57		1.30	0.43	
Incremental Delay, d2	39.4	0.5		38.6	19.7	0.8	13.7	9.2		18.9	5.7	
Delay (s)	104.8	47.0		102.6	72.9	36.0	57.5	36.6		103.5	25.4	
Level of Service	F	D		F	E	D	E	D		F	C	
Approach Delay (s)		61.0			67.3			38.4			40.4	
Approach LOS		E			E			D			D	

Intersection Summary				
HCM 2000 Control Delay	49.6	HCM 2000 Level of Service	D	
HCM 2000 Volume to Capacity ratio	0.96			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.8	
Intersection Capacity Utilization	91.7%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

17: Beach Blvd & Indianapolis Ave

Mitigated Alternative 6 Plus Project PM Peak Hour

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	72	116	40	35	131	166	33	1477	34	167	1205	69
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	1.00		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1791		1770	1863	1583	1770	5068		1770	5044	
Flt Permitted	0.50	1.00		0.42	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)	941	1791		789	1863	1583	1770	5068		1770	5044	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	73	118	41	36	134	169	34	1507	35	170	1230	70
RTOR Reduction (vph)	0	10	0	0	0	146	0	1	0	0	3	0
Lane Group Flow (vph)	73	149	0	36	134	23	34	1541	0	170	1297	0
Turn Type	Perm	NA		Perm	NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		5	2		1	6	
Permitted Phases	4			8		8						
Actuated Green, G (s)	20.0	20.0		20.0	20.0	20.0	8.3	84.3		29.3	105.3	
Effective Green, g (s)	20.0	20.0		20.0	20.0	20.0	8.3	84.3		29.3	105.3	
Actuated g/C Ratio	0.13	0.13		0.13	0.13	0.13	0.06	0.56		0.20	0.70	
Clearance Time (s)	5.5	5.5		5.5	5.5	5.5	4.7	6.2		4.7	6.2	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	125	238		105	248	211	97	2848		345	3540	
v/s Ratio Prot		c0.08			0.07		0.02	c0.30		c0.10	0.26	
v/s Ratio Perm	0.08			0.05		0.01						
v/c Ratio	0.58	0.63		0.34	0.54	0.11	0.35	0.54		0.49	0.37	
Uniform Delay, d1	61.1	61.5		59.0	60.7	57.1	68.3	20.7		53.7	9.0	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.44	0.41		0.50	0.23	
Incremental Delay, d2	6.8	5.1		2.0	2.4	0.2	1.2	0.4		0.5	0.1	
Delay (s)	67.9	66.6		61.0	63.1	57.4	99.1	8.9		27.5	2.2	
Level of Service	E	E		E	E	E	F	A		C	A	
Approach Delay (s)		67.0			60.0			10.8			5.1	
Approach LOS		E			E			B			A	

Intersection Summary				
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.54			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.4	
Intersection Capacity Utilization	73.7%	ICU Level of Service	D	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	264	383	34	83	551	222	125	962	91	362	643	266
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	
Frt	1.00	0.99		1.00	0.96		1.00	0.99		1.00	0.96	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3496		1770	3386		1770	5019		1770	4862	
Flt Permitted	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (perm)	1770	3496		1770	3386		1770	5019		1770	4862	
Peak-hour factor, PHF	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Adj. Flow (vph)	269	391	35	85	562	227	128	982	93	369	656	271
RTOR Reduction (vph)	0	4	0	0	29	0	0	8	0	0	53	0
Lane Group Flow (vph)	269	422	0	85	760	0	128	1067	0	369	874	0
Turn Type	Prot	NA		Prot	NA		Prot	NA		Prot	NA	
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	24.4	47.7		11.7	35.0		27.4	37.0		32.5	42.1	
Effective Green, g (s)	24.4	47.7		11.7	35.0		27.4	37.0		32.5	42.1	
Actuated g/C Ratio	0.16	0.32		0.08	0.23		0.18	0.25		0.22	0.28	
Clearance Time (s)	4.7	5.5		4.7	5.5		4.7	6.2		4.7	6.2	
Vehicle Extension (s)	2.0	2.0		2.0	2.0		1.5	5.0		1.5	5.0	
Lane Grp Cap (vph)	287	1111		138	790		323	1238		383	1364	
v/s Ratio Prot	c0.15	0.12		0.05	c0.22		0.07	c0.21		c0.21	0.18	
v/s Ratio Perm												
v/c Ratio	0.94	0.38		0.62	0.96		0.40	0.86		0.96	0.64	
Uniform Delay, d1	62.0	39.7		67.0	56.8		54.0	54.1		58.2	47.3	
Progression Factor	1.00	1.00		1.00	1.00		1.09	1.08		0.87	0.58	
Incremental Delay, d2	36.0	0.1		5.6	22.9		0.3	7.9		35.0	2.2	
Delay (s)	98.0	39.8		72.6	79.7		59.1	66.4		85.8	29.8	
Level of Service	F	D		E	E		E	E		F	C	
Approach Delay (s)		62.3			79.0			65.6			45.7	
Approach LOS		E			E			E			D	

Intersection Summary			
HCM 2000 Control Delay	61.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.1
Intersection Capacity Utilization	95.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	79	0	135	0	0	0	129	1127	0	0	650	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.3		5.3				4.9	5.7			5.7	
Lane Util. Factor	1.00		1.00				1.00	0.91			0.91	
Frt	1.00		0.85				1.00	1.00			0.99	
Flt Protected	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (prot)	1770		1583				1770	5085			5028	
Flt Permitted	0.95		1.00				0.95	1.00			1.00	
Satd. Flow (perm)	1770		1583				1770	5085			5028	
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	84	0	144	0	0	0	137	1199	0	0	691	56
RTOR Reduction (vph)	0	0	129	0	0	0	0	0	0	0	3	0
Lane Group Flow (vph)	84	0	15	0	0	0	137	1199	0	0	744	0
Turn Type	Perm		Perm				Prot	NA		Prot	NA	
Protected Phases							5	2		1	6	
Permitted Phases	4		4									
Actuated Green, G (s)	16.1		16.1				17.0	122.9			101.0	
Effective Green, g (s)	16.1		16.1				17.0	122.9			101.0	
Actuated g/C Ratio	0.11		0.11				0.11	0.82			0.67	
Clearance Time (s)	5.3		5.3				4.9	5.7			5.7	
Vehicle Extension (s)	3.0		3.0				3.0	3.0			3.0	
Lane Grp Cap (vph)	189		169				200	4166			3385	
v/s Ratio Prot							c0.08	c0.24			0.15	
v/s Ratio Perm	c0.05		0.01									
v/c Ratio	0.44		0.09				0.69	0.29			0.22	
Uniform Delay, d1	62.8		60.4				63.9	3.2			9.4	
Progression Factor	1.00		1.00				1.10	0.52			0.52	
Incremental Delay, d2	1.7		0.2				3.4	0.1			0.1	
Delay (s)	64.4		60.6				73.5	1.7			5.0	
Level of Service	E		E				E	A			A	
Approach Delay (s)		62.0			0.0			9.1			5.0	
Approach LOS		E			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	15.9
Intersection Capacity Utilization	46.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	295	1234	54	23	1601	920	30	52	39	483	56	254
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	4.0
Lane Util. Factor	0.97	0.91		1.00	0.95	1.00	1.00	0.95	1.00	0.97	1.00	1.00
Frt	1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Flt Permitted	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5053		1770	3539	1583	1770	3539	1583	3433	1863	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	307	1285	56	24	1668	958	31	54	41	503	58	265
RTOR Reduction (vph)	0	3	0	0	0	261	0	0	38	0	0	0
Lane Group Flow (vph)	307	1338	0	24	1668	697	31	54	3	503	58	265
Turn Type	Prot	NA		Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Free
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases						2			4			Free
Actuated Green, G (s)	13.3	80.2		4.3	71.2	71.2	3.6	11.7	11.7	32.1	40.2	150.0
Effective Green, g (s)	13.3	80.2		4.3	71.2	71.2	3.6	11.7	11.7	32.1	40.2	150.0
Actuated g/C Ratio	0.09	0.53		0.03	0.47	0.47	0.02	0.08	0.08	0.21	0.27	1.00
Clearance Time (s)	4.5	6.0		4.5	6.0	6.0	5.0	6.2	6.2	5.0	6.2	
Vehicle Extension (s)	1.5	4.6		2.0	4.5	4.5	2.0	1.8	1.8	2.0	1.8	
Lane Grp Cap (vph)	304	2701		50	1679	751	42	276	123	734	499	1583
v/s Ratio Prot	c0.09	0.26		0.01	c0.47		c0.02	0.02		c0.15	0.03	
v/s Ratio Perm						0.44			0.00			c0.17
v/c Ratio	1.01	0.50		0.48	0.99	0.93	0.74	0.20	0.03	0.69	0.12	0.17
Uniform Delay, d1	68.3	22.1		71.7	39.2	37.0	72.7	64.7	63.9	54.3	41.5	0.0
Progression Factor	1.00	1.00		1.21	0.35	0.66	1.00	1.00	1.00	1.21	1.14	1.00
Incremental Delay, d2	54.1	0.7		1.9	17.1	15.2	44.0	0.1	0.0	2.1	0.0	0.2
Delay (s)	122.5	22.7		88.7	30.7	39.5	116.7	64.9	63.9	67.5	47.3	0.2
Level of Service	F	C		F	C	D	F	E	E	E	D	A
Approach Delay (s)		41.3			34.4			77.3			44.5	
Approach LOS		D			C			E			D	

Intersection Summary			
HCM 2000 Control Delay	39.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	21.7
Intersection Capacity Utilization	87.0%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	144	1597	16	5	2362	279	13	12	16	93	6	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91		1.00	0.85	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1699		1770	1592	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.26	1.00		0.74	1.00	
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	485	1699		1375	1592	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	150	1664	17	5	2460	291	14	12	17	97	6	181
RTOR Reduction (vph)	0	0	4	0	0	74	0	15	0	0	159	0
Lane Group Flow (vph)	150	1664	13	5	2460	217	14	14	0	97	28	0
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases			6			2	4			8		
Actuated Green, G (s)	16.0	116.3	116.3	1.2	101.5	101.5	18.6	18.6		18.6	18.6	
Effective Green, g (s)	16.0	116.3	116.3	1.2	101.5	101.5	18.6	18.6		18.6	18.6	
Actuated g/C Ratio	0.11	0.78	0.78	0.01	0.68	0.68	0.12	0.12		0.12	0.12	
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.2	4.2		4.2	4.2	
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	
Lane Grp Cap (vph)	188	3942	1227	14	3440	1071	60	210		170	197	
v/s Ratio Prot	c0.08	0.33		c0.00	c0.48			0.01			0.02	
v/s Ratio Perm			0.01			0.14	0.03			c0.07		
v/c Ratio	0.80	0.42	0.01	0.36	0.72	0.20	0.23	0.07		0.57	0.14	
Uniform Delay, d1	65.4	5.6	3.8	74.0	15.2	9.1	59.3	58.0		61.9	58.6	
Progression Factor	0.73	2.11	1.00	0.57	0.39	0.10	1.00	1.00		1.00	1.00	
Incremental Delay, d2	17.0	0.3	0.0	2.6	0.6	0.2	0.7	0.0		2.9	0.1	
Delay (s)	64.7	12.2	3.8	44.6	6.6	1.1	60.0	58.1		64.8	58.7	
Level of Service	E	B	A	D	A	A	E	E		E	E	
Approach Delay (s)		16.4			6.1			58.7			60.8	
Approach LOS		B			A			E			E	

Intersection Summary			
HCM 2000 Control Delay	13.5	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.70		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	13.9
Intersection Capacity Utilization	77.0%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	140	1560	38	52	2524	239	18	47	32	140	52	136
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.94		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1729	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	0.98	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1750		1681	1729	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	149	1660	40	55	2685	254	19	50	34	149	55	145
RTOR Reduction (vph)	0	0	16	0	0	68	0	16	0	0	0	128
Lane Group Flow (vph)	149	1660	24	55	2685	186	19	68	0	101	103	17
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2		7	7		8	8	
Permitted Phases			6			2						8
Actuated Green, G (s)	10.8	89.7	89.7	7.3	86.2	86.2	17.0	17.0		17.2	17.2	17.2
Effective Green, g (s)	10.8	89.7	89.7	7.3	86.2	86.2	17.0	17.0		17.2	17.2	17.2
Actuated g/C Ratio	0.07	0.60	0.60	0.05	0.57	0.57	0.11	0.11		0.11	0.11	0.11
Clearance Time (s)	4.0	5.7	5.7	4.0	5.7	5.7	4.5	4.5		4.6	4.6	4.6
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	4.6	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	127	3040	946	86	2922	909	200	198		192	198	181
v/s Ratio Prot	c0.08	0.33		0.03	c0.53		0.01	c0.04		c0.06	0.06	
v/s Ratio Perm			0.02			0.12						0.01
v/c Ratio	1.17	0.55	0.03	0.64	0.92	0.20	0.10	0.34		0.53	0.52	0.09
Uniform Delay, d1	69.6	18.0	12.3	70.1	28.7	15.4	59.6	61.4		62.6	62.5	59.4
Progression Factor	0.87	0.55	0.91	1.39	0.19	0.03	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	131.5	0.7	0.0	1.0	0.6	0.0	0.1	0.4		1.2	1.1	0.1
Delay (s)	192.1	10.6	11.2	98.2	6.1	0.5	59.7	61.7		63.8	63.7	59.5
Level of Service	F	B	B	F	A	A	E	E		E	E	E
Approach Delay (s)		25.2			7.3			61.4			62.0	
Approach LOS		C			A			E			E	

Intersection Summary				
HCM 2000 Control Delay	18.2	HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio	0.81			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	18.8	
Intersection Capacity Utilization	83.7%	ICU Level of Service	E	
Analysis Period (min)	15			
c Critical Lane Group				

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	214	1524	7	20	2584	700	25	30	14	336	8	212
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Lane Util. Factor	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.95		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (perm)	1770	5085	1583	1770	5085	1583	1770	1774		3433	1863	1583
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	230	1639	8	22	2778	753	27	32	15	361	9	228
RTOR Reduction (vph)	0	0	3	0	0	44	0	12	0	0	0	191
Lane Group Flow (vph)	230	1639	5	22	2778	709	27	35	0	361	9	37
Turn Type	Prot	NA	Perm	Prot	NA	pm+ov	Split	NA		Split	NA	Perm
Protected Phases	1	6		5	2	3	4	4		3	3	
Permitted Phases			6			2						3
Actuated Green, G (s)	26.7	95.6	95.6	3.7	72.6	96.9	5.7	5.7		24.3	24.3	24.3
Effective Green, g (s)	26.7	95.6	95.6	3.7	72.6	96.9	5.7	5.7		24.3	24.3	24.3
Actuated g/C Ratio	0.18	0.64	0.64	0.02	0.48	0.65	0.04	0.04		0.16	0.16	0.16
Clearance Time (s)	4.5	5.7	5.7	4.5	5.7	6.0	4.5	4.5		6.0	6.0	6.0
Vehicle Extension (s)	1.7	4.6	4.6	1.7	4.6	2.0	2.0	2.0		2.0	2.0	2.0
Lane Grp Cap (vph)	315	3240	1008	43	2461	1022	67	67		556	301	256
v/s Ratio Prot	c0.13	0.32		0.01	c0.55	c0.11	0.02	c0.02		0.11	0.00	
v/s Ratio Perm			0.00			0.34						0.02
v/c Ratio	0.73	0.51	0.01	0.51	1.13	0.69	0.40	0.53		0.65	0.03	0.14
Uniform Delay, d1	58.2	14.6	9.9	72.3	38.7	17.0	70.5	70.8		58.9	52.9	53.9
Progression Factor	0.72	1.11	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00
Incremental Delay, d2	6.4	0.5	0.0	4.2	63.8	1.7	1.4	3.4		2.0	0.0	0.1
Delay (s)	48.3	16.7	9.9	76.5	102.5	18.7	71.9	74.3		60.8	52.9	54.0
Level of Service	D	B	A	E	F	B	E	E		E	D	D
Approach Delay (s)		20.5			84.6			73.4			58.1	
Approach LOS		C			F			E			E	

Intersection Summary				
HCM 2000 Control Delay	62.1	HCM 2000 Level of Service	E	
HCM 2000 Volume to Capacity ratio	0.94			
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	20.7	
Intersection Capacity Utilization	91.5%	ICU Level of Service	F	
Analysis Period (min)	15			
c Critical Lane Group				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Scenario Report

Scenario:	ALT6+P1-PM
Command:	ALT6+P1-PM
Volume:	EX-PM
Geometry:	EX
Impact Fee:	Default Impact Fee
Trip Generation:	2018-CUMUL+P2-PM
Trip Distribution:	DIST-1
Paths:	Default Path
Routes:	Default Route
Configuration:	ALT6+P1-PM

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in V/C
# 3 Beach Blvd & Edinger Ave	E	xxxxx	0.935	F	xxxxx	1.031	+ 0.096
# 8 Beach Blvd & Warner Ave	D	xxxxx	0.894	E	xxxxx	0.953	+ 0.058
# 16 Beach Blvd & Adams Ave	C	xxxxx	0.745	D	xxxxx	0.811	+ 0.067
# 20 Beach Blvd & PCH (SR-1)	B	xxxxx	0.693	D	xxxxx	0.835	+ 0.143
# 21 Newland St & Atlanta Ave	A	xxxxx	0.578	A	xxxxx	0.594	+ 0.015
# 22 Newland St & Hamilton Ave	C	xxxxx	0.717	C	xxxxx	0.765	+ 0.048
# 24 Magnolia St & Hamilton Ave	B	xxxxx	0.627	B	xxxxx	0.637	+ 0.010
# 26 Brookhurst St & Hamilton Ave	B	xxxxx	0.676	B	xxxxx	0.688	+ 0.012
# 30 Brookhurst Street & Talbert Av	D	xxxxx	0.821	D	xxxxx	0.838	+ 0.017
# 31 Brookhurst Street & Stonefield	A	xxxxx	0.520	A	xxxxx	0.534	+ 0.014
# 32 Brookhurst Street & Quail Aven	B	xxxxx	0.614	B	xxxxx	0.630	+ 0.017
# 33 Brookhurst Street & Ellis Aven	C	xxxxx	0.730	C	xxxxx	0.764	+ 0.034
# 34 Brookhurst Street & Garfield A	B	xxxxx	0.641	B	xxxxx	0.664	+ 0.023
# 35 Brookhurst Street & Yorktown A	B	xxxxx	0.612	B	xxxxx	0.636	+ 0.023
# 36 Brookhurst Street & Adams Aven	D	xxxxx	0.801	D	xxxxx	0.823	+ 0.023
# 37 Brookhurst Street & Indianapol	A	xxxxx	0.362	A	xxxxx	0.371	+ 0.009
# 38 Brookhurst Street & Atlanta Av	A	xxxxx	0.452	A	xxxxx	0.472	+ 0.020
# 39 Brookhurst Street & Banning Av	A	xxxxx	0.232	A	xxxxx	0.242	+ 0.009
# 40 Brookhurst Street & Bushard St	A	xxxxx	0.292	A	xxxxx	0.301	+ 0.009

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ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Beach Blvd & Edinger Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.935
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 113 Level Of Service: E

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Ovl				Ovl				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	4	0 2	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	415	2241	509		333	2200	639		416	907	245		174	591	172	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	441	2379	540		353	2335	678		442	963	260		185	627	183	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	441	2379	540		353	2335	678		442	963	260		185	627	183	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	441	2379	540		353	2335	678		442	963	260		185	627	183	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	441	2379	540		353	2335	678		442	963	260		185	627	183	
OvlAdjVol:							237				40					
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	4.00	2.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	6800	3400		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.47	0.32		0.10	0.34	0.20		0.13	0.19	0.15		0.05	0.18	0.11	
OvlAdjV/S:							0.07				0.02					
Crit Moves:	****				****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Beach Blvd & Warner Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.894
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 83 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	1 0	2	0	4	0 1	2	0	2	1 0	2	0	2	1 0
Volume Module:																
Base Vol:	314	2203	179		178	1664	335		402	1076	144		240	1189	210	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	333	2338	190		189	1766	356		427	1142	153		255	1262	223	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.70	0.30		2.00	4.00	1.00		2.00	2.65	0.35		2.00	2.55	0.45	
Final Sat.:	3400	6289	511		3400	6800	1700		3400	4498	602		3400	4334	766	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.37	0.37		0.06	0.26	0.21		0.13	0.25	0.25		0.07	0.29	0.29	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Beach Blvd & Adams Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.745
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 43 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	2	0	2	1 0	1	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	129	1095	100	288	1043	152	156	455	59	187	828	339				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	137	1162	106	306	1107	161	166	483	63	199	879	360				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	137	1162	106	306	1107	161	166	483	63	199	879	360				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	137	1162	106	306	1107	161	166	483	63	199	879	360				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	137	1162	106	306	1107	161	166	483	63	199	879	360				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.75	0.25	2.00	2.62	0.38	1.00	2.66	0.34	1.00	2.00	1.00				
Final Sat.:	1700	4673	427	3400	4451	649	1700	4515	585	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.25	0.25	0.09	0.25	0.25	0.10	0.11	0.11	0.12	0.26	0.21				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Beach Blvd & PCH (SR-1)

Cycle (sec): 100 Critical Vol./Cap.(X): 0.693
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 36 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ignore				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	0 1	2	0	1	0 1	2	0	2	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	28	49	37	303	53	232	267	1070	51	22	1417	720				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	30	52	39	322	56	246	283	1136	54	23	1504	764				
User Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	30	52	0	322	56	0	283	1136	54	23	1504	764				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	30	52	0	322	56	0	283	1136	54	23	1504	764				
PCE Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	30	52	0	322	56	0	283	1136	54	23	1504	764				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	2.00	1.00	2.00	1.00	1.00	2.00	2.86	0.14	1.00	2.00	1.00				
Final Sat.:	1700	3400	1700	3400	1700	1700	3400	4868	232	1700	3400	1700				
Capacity Analysis Module:																
Vol/Sat:	0.02	0.02	0.00	0.09	0.03	0.00	0.08	0.23	0.23	0.01	0.44	0.45				
Crit Moves:		****		****			****					****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Newland St & Atlanta Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.578
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 28 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	275	521	34	96	264	97	80	474	203	52	473	114				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	292	553	36	102	280	103	85	503	215	55	502	121				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	292	553	36	102	280	103	85	503	215	55	502	121				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	292	553	36	102	280	103	85	503	215	55	502	121				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	292	553	36	102	280	103	85	503	215	55	502	121				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	1.88	0.12	1.00	1.46	0.54	1.00	1.40	0.60	1.00	1.61	0.39				
Final Sat.:	1700	3192	208	1700	2486	914	1700	2381	1019	1700	2740	660				
Capacity Analysis Module:																
Vol/Sat:	0.17	0.17	0.17	0.06	0.11	0.11	0.05	0.21	0.21	0.03	0.18	0.18				
Crit Moves:	****				****			****		****						

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Newland St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.717
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 39 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Prot+Permit				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	0	0	0	1 0	1	0	1	0 0	0	0	0	0 0	1	0	0	0 1
Volume Module:																
Base Vol:	0	304	65	223	203	0	0	0	0	153	0	476				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	0	323	69	237	215	0	0	0	0	162	0	505				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	0	323	69	237	215	0	0	0	0	162	0	505				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	0	323	69	237	215	0	0	0	0	162	0	505				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	0	323	69	237	215	0	0	0	0	162	0	505				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	0.00	0.82	0.18	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	1.00				
Final Sat.:	0	1401	299	1700	1700	0	0	0	0	1700	0	1700				
Capacity Analysis Module:																
Vol/Sat:	0.00	0.23	0.23	0.14	0.13	0.00	0.00	0.00	0.00	0.10	0.00	0.30				
Crit Moves:		****		****								****				

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Magnolia St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.627
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 31 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	1	1 0	1	0	2	0 1	1	0	0	1 0	1	0	1	0 1
Volume Module:																
Base Vol:	30	300	28		189	178	42		25	257	29		15	546	327	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	32	318	30		201	189	45		27	273	31		16	580	347	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	32	318	30		201	189	45		27	273	31		16	580	347	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	32	318	30		201	189	45		27	273	31		16	580	347	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	32	318	30		201	189	45		27	273	31		16	580	347	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.83	0.17		1.00	2.00	1.00		1.00	0.90	0.10		1.00	1.00	1.00	
Final Sat.:	1700	3110	290		1700	3400	1700		1700	1528	172		1700	1700	1700	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.10	0.10		0.12	0.06	0.03		0.02	0.18	0.18		0.01	0.34	0.20	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Brookhurst St & Hamilton Ave

Cycle (sec): 100 Critical Vol./Cap.(X): 0.676
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 35 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	2	0	2	1 0	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	111	569	153		387	389	88		89	350	67		231	1060	500	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	118	604	162		411	413	93		94	372	71		245	1125	531	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	118	604	162		411	413	93		94	372	71		245	1125	531	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	118	604	162		411	413	93		94	372	71		245	1125	531	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	118	604	162		411	413	93		94	372	71		245	1125	531	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		2.00	2.45	0.55		1.00	1.68	0.32		1.00	2.00	1.00	
Final Sat.:	1700	5100	1700		3400	4159	941		1700	2854	546		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.12	0.10		0.12	0.10	0.10		0.06	0.13	0.13		0.14	0.33	0.31	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Brookhurst Street & Talbert Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.821
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 57 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	3	0 1	2	0	3	0 1	2	0	3	0 1	2	0	2	0 1
Volume Module:																
Base Vol:	192	1444	314		237	1392	244		212	635	156		243	1059	461	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	204	1533	333		252	1478	259		225	674	166		258	1124	489	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	204	1533	333		252	1478	259		225	674	166		258	1124	489	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	204	1533	333		252	1478	259		225	674	166		258	1124	489	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	204	1533	333		252	1478	259		225	674	166		258	1124	489	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	3.00	1.00		2.00	3.00	1.00		2.00	3.00	1.00		2.00	2.00	1.00	
Final Sat.:	3400	5100	1700		3400	5100	1700		3400	5100	1700		3400	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.30	0.20		0.07	0.29	0.15		0.07	0.13	0.10		0.08	0.33	0.29	
Crit Moves:		****			****				****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Brookhurst Street & Stonefield Drive

Cycle (sec): 100 Critical Vol./Cap.(X): 0.520
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 25 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Ignore				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	2	1 0	1	0	3	0 1	0	0	1!	0 0	0	0	1!	0 0
Volume Module:																
Base Vol:	22	1797	16		29	1774	25		83	0	28		8	0	11	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	23	1908	17		31	1883	27		88	0	30		8	0	12	
User Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	23	1908	17		31	1883	0		88	0	30		8	0	12	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	23	1908	17		31	1883	0		88	0	30		8	0	12	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	23	1908	17		31	1883	0		88	0	30		8	0	12	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.97	0.03		1.00	3.00	1.00		0.74	0.01	0.25		0.42	0.00	0.58	
Final Sat.:	1700	5055	45		1700	5100	1700		1271	0	429		716	0	984	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.38	0.38		0.02	0.37	0.00		0.05	0.00	0.07		0.00	0.00	0.01	
Crit Moves:		****			****						****		****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Brookhurst Street & Quail Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.614
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Prot+Permit				Prot+Permit				Permitted				Permitted			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	0	1	0	0 1	0	0	1!	0 0
Volume Module:																
Base Vol:	69	1588	13		40	1550	213		220	8	82		13	3	10	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	73	1686	14		42	1645	226		234	8	87		14	3	11	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	73	1686	14		42	1645	226		234	8	87		14	3	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	73	1686	14		42	1645	226		234	8	87		14	3	11	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	73	1686	14		42	1645	226		234	8	87		14	3	11	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.98	0.02		1.00	2.64	0.36		0.96	0.04	1.00		0.50	0.12	0.38	
Final Sat.:	1700	5059	41		1700	4484	616		1640	60	1700		850	196	654	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.33	0.33		0.02	0.37	0.37		0.14	0.14	0.05		0.01	0.02	0.02	
Crit Moves:	****					****			****					****		

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Brookhurst Street & Ellis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.730
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 41 Level Of Service: C

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Ovl				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	3	0 1	1	0	3	0 1	2	0	1	1 0	2	0	1	1 0
Volume Module:																
Base Vol:	106	1270	128		154	1191	182		248	472	87		332	667	108	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	113	1348	136		163	1264	193		263	501	92		352	708	115	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	113	1348	136		163	1264	193		263	501	92		352	708	115	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	113	1348	136		163	1264	193		263	501	92		352	708	115	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	113	1348	136		163	1264	193		263	501	92		352	708	115	
OvlAdjVol:			0				62									
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	3.00	1.00		1.00	3.00	1.00		2.00	1.69	0.31		2.00	1.72	0.28	
Final Sat.:	1700	5100	1700		1700	5100	1700		3400	2871	529		3400	2926	474	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.26	0.08		0.10	0.25	0.11		0.08	0.17	0.17		0.10	0.24	0.24	
OvlAdjV/S:			0.00				0.04									
Crit Moves:		****				****				****					****	

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Brookhurst Street & Garfield Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.641
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 32 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Prot+Permit				Prot+Permit			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	3	0 1	1	0	1	1 0	1	0	2	0 1
Volume Module:																
Base Vol:	184	1380	77		103	1149	236		177	211	136		185	242	96	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	195	1465	82		109	1220	251		188	224	144		196	257	102	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	195	1465	82		109	1220	251		188	224	144		196	257	102	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	195	1465	82		109	1220	251		188	224	144		196	257	102	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	195	1465	82		109	1220	251		188	224	144		196	257	102	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.84	0.16		1.00	3.00	1.00		1.00	1.22	0.78		1.00	2.00	1.00	
Final Sat.:	1700	4830	270		1700	5100	1700		1700	2067	1333		1700	3400	1700	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.30	0.30		0.06	0.24	0.15		0.11	0.11	0.11		0.12	0.08	0.06	
Crit Moves:		****			****					****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Brookhurst Street & Yorktown Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.612
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 30 Level Of Service: B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	2	1 0	1	0	2	1 0	1	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	154	1410	110		37	1112	200		147	219	109		145	249	26	
Growth Adj:	1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06		1.06	1.06	1.06	
Initial Bse:	163	1497	117		39	1180	212		156	232	116		154	264	28	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	163	1497	117		39	1180	212		156	232	116		154	264	28	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	163	1497	117		39	1180	212		156	232	116		154	264	28	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	163	1497	117		39	1180	212		156	232	116		154	264	28	
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700		1700	1700	1700		1700	1700	1700		1700	1700	1700	
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.78	0.22		1.00	2.54	0.46		1.00	1.34	0.66		1.00	1.81	0.19	
Final Sat.:	1700	4731	369		1700	4323	777		1700	2270	1130		1700	3079	321	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.32	0.32		0.02	0.27	0.27		0.09	0.10	0.10		0.09	0.09	0.09	
Crit Moves:	****					****				****			****			

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Brookhurst Street & Adams Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.801
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 52 Level Of Service: D

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	2	0	2	1 0	2	0	2	1 0	2	0	3	0 1	2	0	3	0 1
Volume Module:																
Base Vol:	261	873	144	304	850	179	274	747	123	281	1723	354				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	277	927	153	323	902	190	291	793	131	298	1829	376				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	277	927	153	323	902	190	291	793	131	298	1829	376				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	277	927	153	323	902	190	291	793	131	298	1829	376				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	277	927	153	323	902	190	291	793	131	298	1829	376				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	2.00	2.58	0.42	2.00	2.48	0.52	2.00	3.00	1.00	2.00	3.00	1.00				
Final Sat.:	3400	4378	722	3400	4213	887	3400	5100	1700	3400	5100	1700				
Capacity Analysis Module:																
Vol/Sat:	0.08	0.21	0.21	0.09	0.21	0.21	0.09	0.16	0.08	0.09	0.36	0.22				
Crit Moves:		****		****			****				****					

ASCON LANDFILL SITE TRANSPORTATION IMPACT STUDY
MITIGATED ALTERNATIVE 6 WITH PROJECT CONDITIONS (2018)
PM PEAK HOUR

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Brookhurst Street & Indianapolis Avenue

Cycle (sec): 100 Critical Vol./Cap.(X): 0.362
Loss Time (sec): 5 Average Delay (sec/veh): xxxxxx
Optimal Cycle: 19 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Protected				Protected				Protected				Protected			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1	0	3	0 0	0	0	2	1 0	2	0	0	0 1	0	0	0	0 0
Volume Module:																
Base Vol:	44	1249	0	0	1055	166	97	0	51	0	0	0				
Growth Adj:	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06				
Initial Bse:	47	1326	0	0	1120	176	103	0	54	0	0	0				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Volume:	47	1326	0	0	1120	176	103	0	54	0	0	0				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	47	1326	0	0	1120	176	103	0	54	0	0	0				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	47	1326	0	0	1120	176	103	0	54	0	0	0				
Saturation Flow Module:																
Sat/Lane:	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700				
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Lanes:	1.00	3.00	0.00	0.00	2.59	0.41	2.00	0.00	1.00	0.00	0.00	0.00				
Final Sat.:	1700	5100	0	0	4407	693	3400	0	1700	0	0	0				
Capacity Analysis Module:																
Vol/Sat:	0.03	0.26	0.00	0.00	0.25	0.25	0.03	0.00	0.03	0.00	0.00	0.00				
Crit Moves:	****				****		****									