Volume III

Appendices K – L

SANTA ANA GENERAL PLAN UPDATE

golden city beyond
A SHARED VISION FOR SANTA ANA

Draft Program Environmental Impact Report

State Clearinghouse #2020029087

August 2020

Prepared for:

City of Santa Ana

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PLACEWORKS

Appendix K Transportation Impact Study

Appendices

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Santa Ana General Plan Update
Traffic Impact Study
Revised DRAFT Report

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1.0 Introduction

1.1 STUDY PURPOSE

This traffic analysis report has been prepared in support of the General Plan Update (GPU) Draft Program Environmental Impact Report (PEIR) for the City of Santa Ana and to assess requested changes to the Orange County Transportation Authority's (OCTA) Master Plan of Arterial Highways (MPAH) by the City of Santa Ana. This traffic analysis report reviews existing and future traffic conditions under the current General Plan and with the proposed Land Use Element and Circulation Element Updates.

This report is used as part of the Program EIR prepared for the General Plan Update. The Program EIR includes the results and findings of this traffic study report and identifies the significant impacts of the proposed project. The draft Program EIR will be available to the public for review and comment.

1.2 REPORT ORGANIZATION

This report consists of 11 sections.

1.0 Introduction
2.0 Project Description
3.0 Circulation Element Roadway Classifications
4.0 Analysis Methodology
5.0 Existing Year (2020) Conditions
6.0 Future Year 2045 Forecast Modeling
7.0 Future Year (2045) No Project
8.0 Future Year (2045) With Project
9.0 Significant Impacts and Mitigation Measures
10.0 Conclusions
11.0 Appendices

Section 1 provides a brief introduction to the study area and report organization. Section 2 provides a summary of the project description, background history, and project alternatives. Section 3 describes the various roadway classifications within the Circulation Element. Section 4 includes the methodology utilized in the analysis and the referenced standards. The study area roadways and Existing Year (2020) intersection geometry, turning movement volumes, and level of service are presented in Section 5. The Future Year (2045) forecast modeling methodology is provided in Section 6. Section 7 describes the Future Year (2045) No Project condition and provides the roadway segment and intersection level of service results. Section 8 describes the Future Year (2045) With Project Network Alternative condition and provides the roadway segment and intersection level of service results. Section 9 presents the mitigation measures to address facilities operating at an unacceptable level of service. Findings and conclusions from this study are presented in Section 10. Appendices are provided in Section 11.

The City boundaries/project study area is shown in Exhibits 1.1 and 1.2.

Exhibit 1.1 Project Location

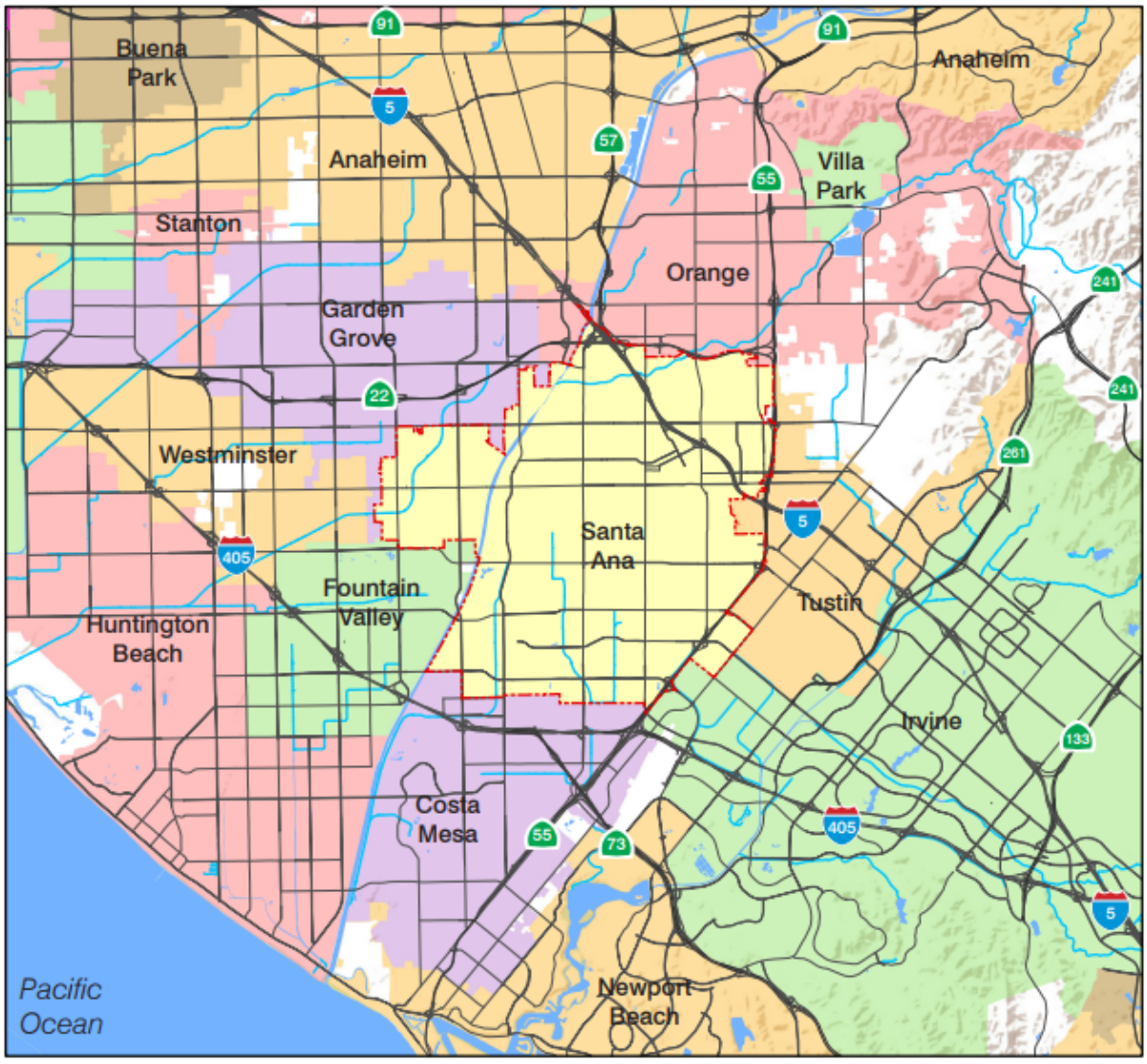
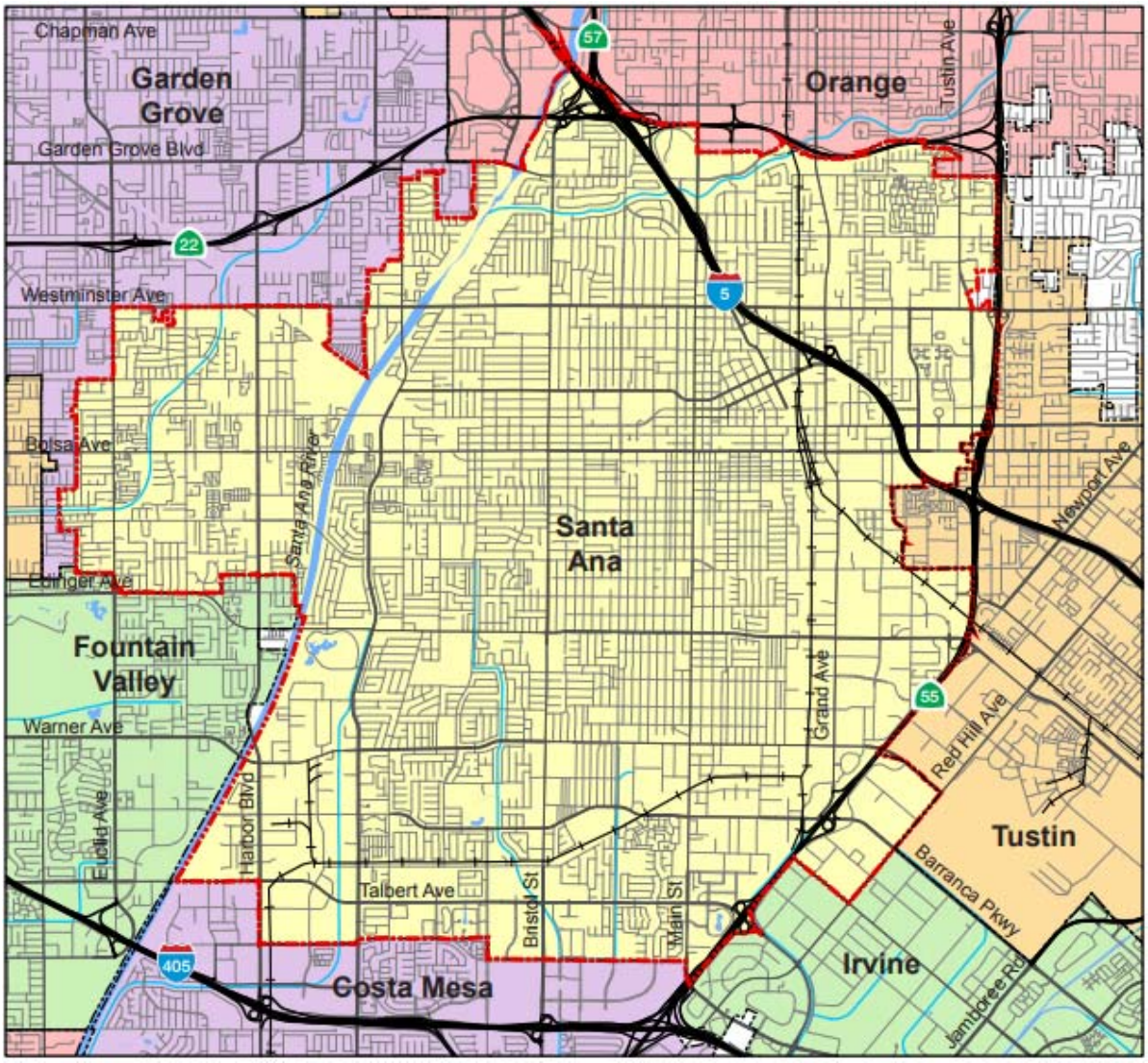


Exhibit 1.2 Project Study Area



2.0 Project Description

This section provides an overview of the project background and traffic study for the General Plan Update. This section also includes a description of the land use and Circulation Element network derived throughout the public outreach and planning process.

2.1 BACKGROUND

The City of Santa Ana's General Plan is comprised of 16 elements, serving as the principal long-range policy and planning document guiding the development, conservation, and enhancement of the City. Each element contains goals and policies related to the physical development of the City. The General Plan was adopted by City Council in 1998 and has been partially amended several times since then. For this analysis, the Land Use and Circulation Elements are of particular interest.

The Land Use Element serves as a long-range guide for land use and development within the City. The primary objective is to manage future growth, minimize land use conflicts, and facilitate growth and development as part of the City's overall vision.

The Circulation Element of the Santa Ana General Plan serves as the City's primary guide for transportation planning. The Circulation Element focuses on roadways and other transportation modes including public transit, railroads, pedestrian and bicycle paths that provide a full range of travel options.

The most recent update to the City of Santa Ana Circulation Element was authorized by City Council in 2011. The project was initiated to update the Circulation Element in its entirety to include the following key components:

- A Complete Streets Policy compliant with the requirements of Assembly Bill (AB) 1358
- OC Streetcar – a proposed streetcar service that would link the Santa Ana Regional Transportation Center (SARTC) with the Civic Center and Garden Grove. The project is currently under construction (at the time this report was written).

Over the last six years, the draft Circulation Element has gone through significant changes, including a new vision, completion of the Santa Ana Safe Mobility Plan, changes to the policy framework and roadway designations, OCTA modeling updates, work by the City on two separate Complete Street studies, advancement of a fixed-guideway/streetcar system and BRT routes, and incorporation of Complete Street Principals.

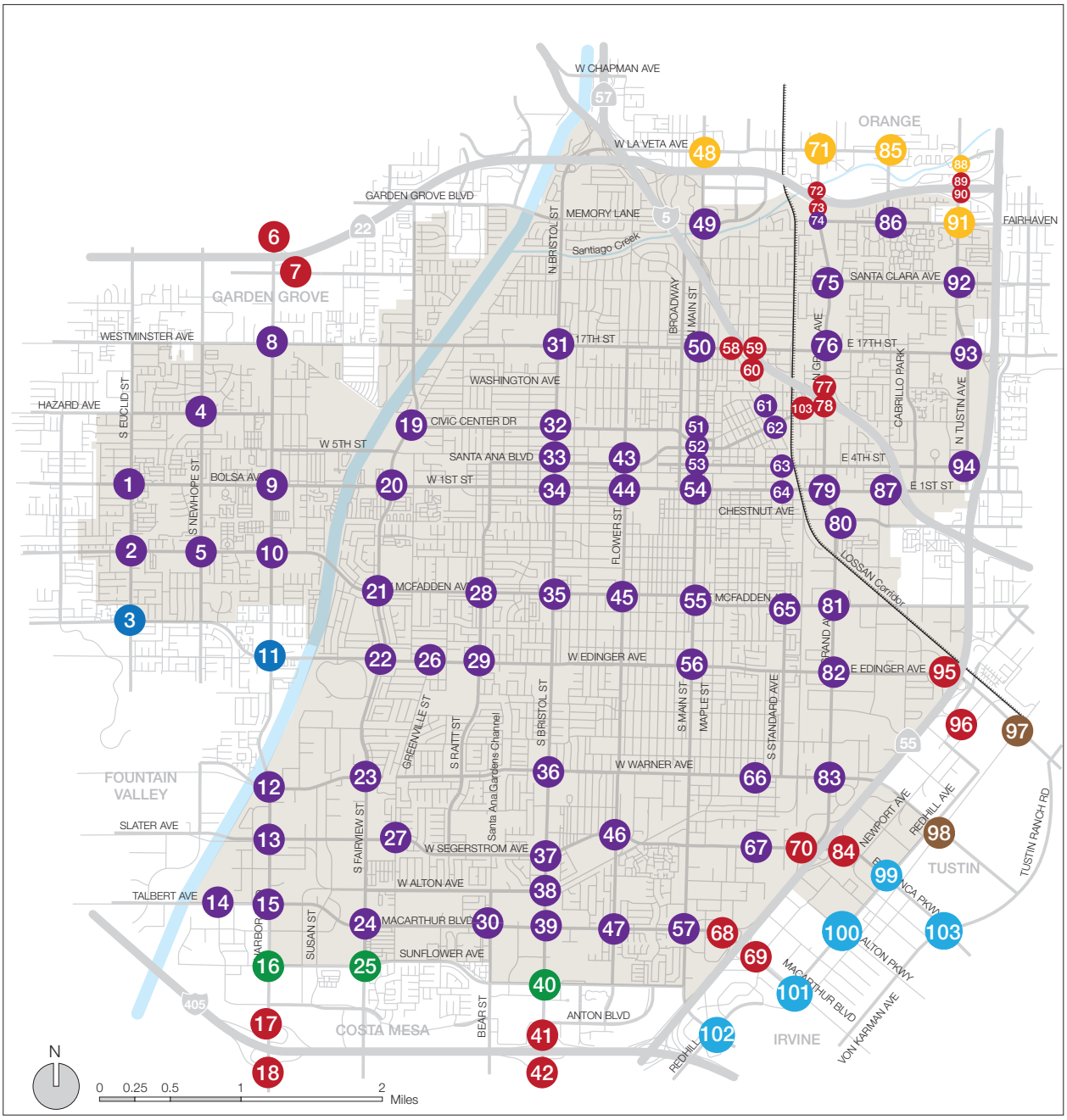
The updates to both the Circulation Element and the EIR are based on a proposed new roadway network scenario, updated OCTA modeling and new modal split, work on the Bikeway Master Plan and Pedestrian Opportunity Area Plan, regulatory changes (e.g., air quality/GHG requirements per 2015 Climate Action Plan, SB743, etc.), integrating related plans (Safe Mobility Santa Ana Plan, and complete street plans (Downtown and Central Santa Ana Transit Zone plans).

2.2 STUDY AREA

As noted, the project consists of changes to both land uses and the transportation network within the City of Santa Ana. The study area was chosen such that the direct and indirect effects of the project could be assessed, within the City of Santa Ana as well as in the adjacent cities. Study intersections were developed based on the locations of the proposed changes as well as in consideration of input provided by OCTA, Caltrans, and neighboring cities during outreach for the Circulation Element Update. Prior to merging with the GPU, the CEU was in the process of evaluating various transportation network

scenarios. The transportation network proposed in this study is a result of those efforts. Study roadway segments and intersections are shown in Exhibit 2.1 and 2.2, respectively.

Exhibit 2.1 Study Intersections



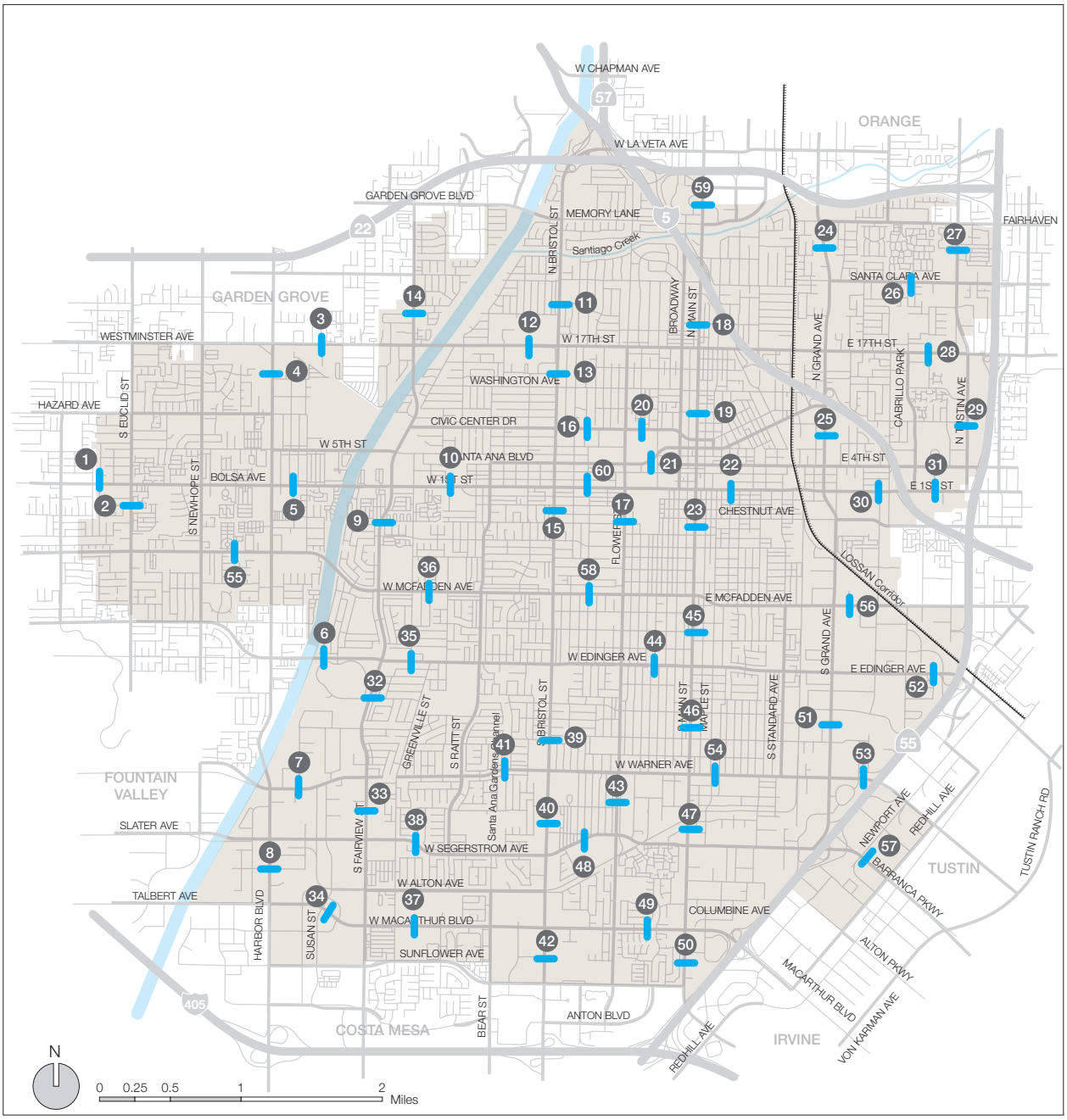
LEGEND

Freeway

Santa Ana | Fountain Valley | Irvine | Orange

Costa Mesa | Caltrans | Tustin

Exhibit 2.2 Study Roadway Segments



LEGEND

Study Segment

2.3 CIRCULATION ELEMENT ROADWAY CLASSIFICATIONS

The Circulation Element contains a Master Plan of Streets and Highways (MPSH) that uses a hierarchy of roadway classifications. Each roadway classification is described by size and function and has specific physical dimensions and characteristics. The MPSH contains regional arterials that connect to the countywide arterial network. OCTA's Master Plan of Arterial Highways (MPAH) is the County's planning document to ensure that the regional arterial highway network is maintained and developed in a coordinated manner between local jurisdictions to support mobility and future growth in the region. Consistency between the MPSH and MPAH is essential in order to maintain a functional regional arterial network and to receive funding from Measure M2 for street improvement projects.

Freeways

Freeways are multi-lane, limited-access, high-volume, high-speed roadways constructed for regional and interregional vehicular travel. Access to these facilities is restricted to interchange ramps at selected roadways along their route. Freeways are under the jurisdiction of the California Department of Transportation (Caltrans).

Principal Arterial

Typically, an eight-lane, divided roadway designed to accommodate between 45,000 to 67,500 vehicle trips daily. The typical right of way width is 144 feet.

Major Arterial

Generally consists of six-travel lanes, and is also divided. Typically, the right-of-way width for this type of roadway is 120 feet. A major arterial is designed to accommodate between 33,900 and 50,600 vehicle trips daily.

Primary Arterial

Generally consists of a four-lane, divided roadway. Typically, the right-of-way width is 100 feet. A primary arterial is designed to accommodate between 22,500 and 33,800 vehicle trips daily.

Secondary Arterial

Generally a four-lane, undivided roadway. The typical right-of-way width for this category of roadway is 80 feet. A secondary arterial is typically designed to accommodate between 15,000 and 22,500 vehicle trips daily.

Divided Collector Arterial

Generally a two-lane roadway with a continuous center two-way left-turn lane. The typical right-of-way width is 80 feet, for the purpose of allocating right-of-way to bicycle and pedestrian use. A divided collector arterial is designed to accommodate up to 22,000 vehicle trips per day.

Collector Street

A two-lane, undivided roadway carrying less than 10,000 vehicle trips per day. The right-of way width for this roadway classification is 60 feet. Collector Streets are also two-lane undivided roadways with a right-of-way width of 56 feet.

2.4 SCENARIO SUMMARY

This report presents the baseline analysis results for the existing year (2020) and future year (2045) baseline scenarios as well as future year (2045) project alternative scenario. These scenarios are listed below and described in the following sections:

- Existing Year (2020)
- Future Year (2045) No Project
- Future Year (2045) With Project – Proposed GPU

2.5 EXISTING YEAR (2020)

This scenario is representative of on-the-ground conditions for the transportation network and socio-economic makeup of the city for the year 2020. This scenario serves as a point of reference for future baseline and project alternative scenarios. The network and land use assumptions are as follows:

- The transportation network is reflective of configurations as of April 2020.
- Socio-economic data is representative of December 2019 conditions.

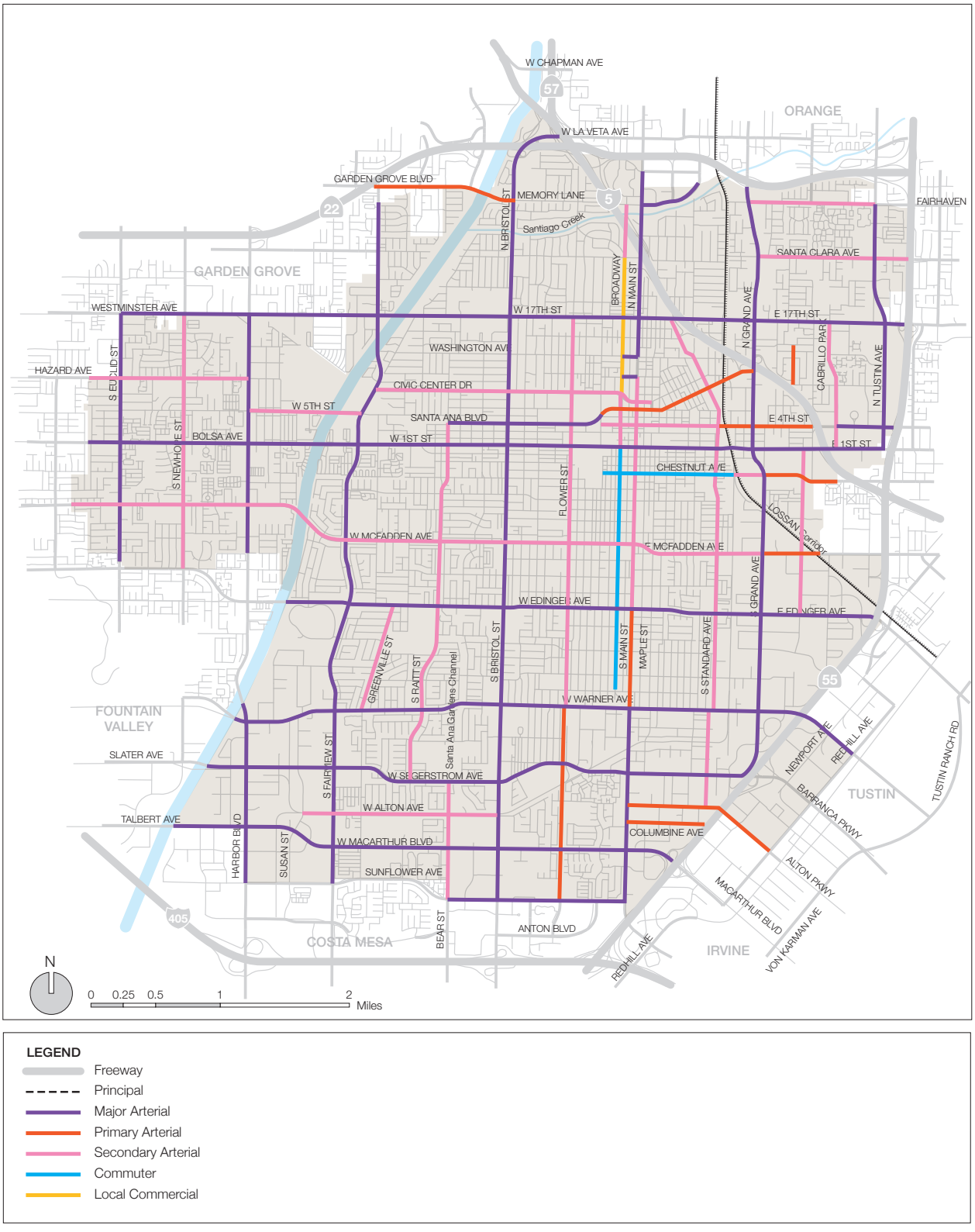
2.6 FUTURE YEAR (2045) NO PROJECT

This scenario serves as the baseline for future year (2045) analysis and consists of the following key assumptions:

- Transportation network and socio-economic data for OCTAM 5.0 Year 2045 Baseline scenario.
- Buildout of roadways consistent with the City of Santa Ana Master Plan of Streets and Highways map (MPSH) as shown in the Circulation Element (1998).
- Buildout of the Orange County Transportation Authority's (OCTA) Master Plan of Arterial Highways (MPAH)
- Freeway and transit improvements considered in the Preferred Alternative of OCTA's LRTP
    - OC Streetcar – The OC Streetcar Project is a proposed streetcar service that would travel between the Santa Ana Regional Transportation Center (SARTC) and Garden Grove. The streetcar is proposed to travel along an exclusive guideway or path on rails that are embedded in the pavement. The streetcar is proposed to travel primarily along Santa Ana Boulevard and along the Pacific Electric Right-of-Way.
    - Bus Rapid Transit (BRT) - These improvements include the Bus Rapid Transit projects along Harbor Boulevard, Bristol Street, and Westminster Avenue/17th Street.
- Modification of mode split for automobile, bicycle, and pedestrians to reflect new bicycle/pedestrian trips.

Exhibit 2.3 presents the current MPSH, which is consistent with the No Project Alternative. Exhibit 2.4 shows current MPAH designations. Exhibit 2.5 shows the Santa Ana Fixed Guideway (OC Streetcar) alignment.

Exhibit 2.3 Master Plan of Streets and Highways (MPSH)



LEGEND

- Freeway
- Principal
- Major Arterial
- Primary Arterial
- Secondary Arterial
- Commuter
- Local Commercial

Exhibit 2.4 OCTA Master Plan of Arterial Highways (MPAH)

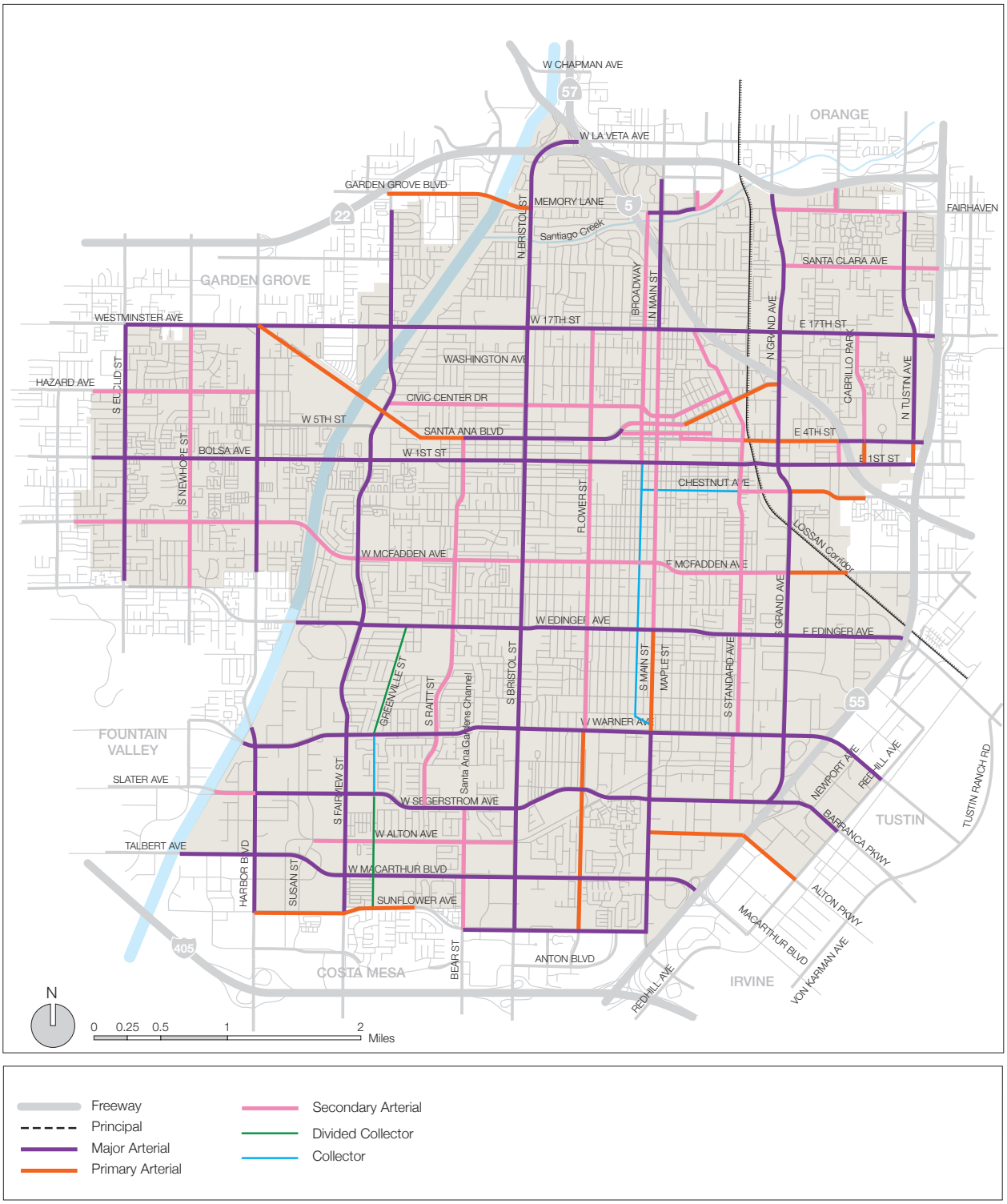


Exhibit 2.5 OC Streetcar Alignment

Source: Orange County Transportation Authority

2.7 FUTURE YEAR (2045) WITH PROJECT

This scenario is based on the Future Year (2045) No Project scenario, with modifications to both the transportation network and socio-economic data. Reclassifications to some roadways are proposed to facilitate the implementation of Complete Streets throughout the City as well as reconcile inconsistencies between the MPSH and MPAH. Additionally, this scenario considers the buildout of an updated Land Use Element for the General Plan.

The transportation network was developed through the evaluation of alternatives in the Circulation Element Update and in consideration of input provided by OCTA, Caltrans, and neighboring cities during outreach. This network is based on that of the No Project scenario, with the addition of the following modifications.

Classify the following streets as Divided Collector Arterials

- Santa Clara between Grand Avenue and SR-55 Freeway (currently Secondary)
- Flower Street between Warner Avenue and First Street (currently Secondary)
- Chestnut Avenue between Standard Avenue and East City Limit (currently Secondary/Primary)
- Raitt Street between Segerstrom and Santa Ana Boulevard (currently Secondary)
- Civic Center Drive between Fairview Street and Bristol Street (currently Secondary)
- Penn Way between I-5 on/off ramps and Washington Avenue (currently a secondary)
- Santiago Street between Washington Avenue and 6th Street (currently a secondary)
- Standard Avenue between 6th Street and Warner Avenue (currently a Secondary Arterial)
- Santa Ana Boulevard between French Street and Santiago Street (currently a Primary Arterial)
- Santa Ana Boulevard between Raitt and Flower (currently a Major)
- Cambridge Street between Fairhaven and SR-22 Freeway (currently Secondary)
- Hazard Avenue between Euclid and Harbor (currently Secondary)
- Halladay Avenue between Warner and Dyer (currently Secondary)
- McFadden Avenue between Harbor Blvd and Grand Ave (currently Secondary)
- Broadway between 1st and 17th (currently Secondary)
- 4th Street between French and Grand (currently Secondary/Primary)
- Fairhaven Avenue from Grand to Tustin (currently Secondary)

Classify the following streets as Primary Arterials

- Santa Ana Boulevard between Flower and Ross (currently a Major)
- 1st Street between Bristol Street and Tustin Avenue (currently Major)

Classify the following streets as Collector Arterials

- Civic Center Drive between French and Santiago (currently a Secondary Arterial)

Add the following streets to the MPAH as Divided Collector Arterials

- Greenville Street between Segerstrom Avenue and Warner Avenue

Add the following streets to the MPAH as Collector Streets

- Greenville Street between Edinger Avenue and Warner Avenue

Remove the following streets from the MPAH

- Flower Street between 17th Street and its northern terminus
- Logan Street between Civic Center Drive and Santa Ana Boulevard

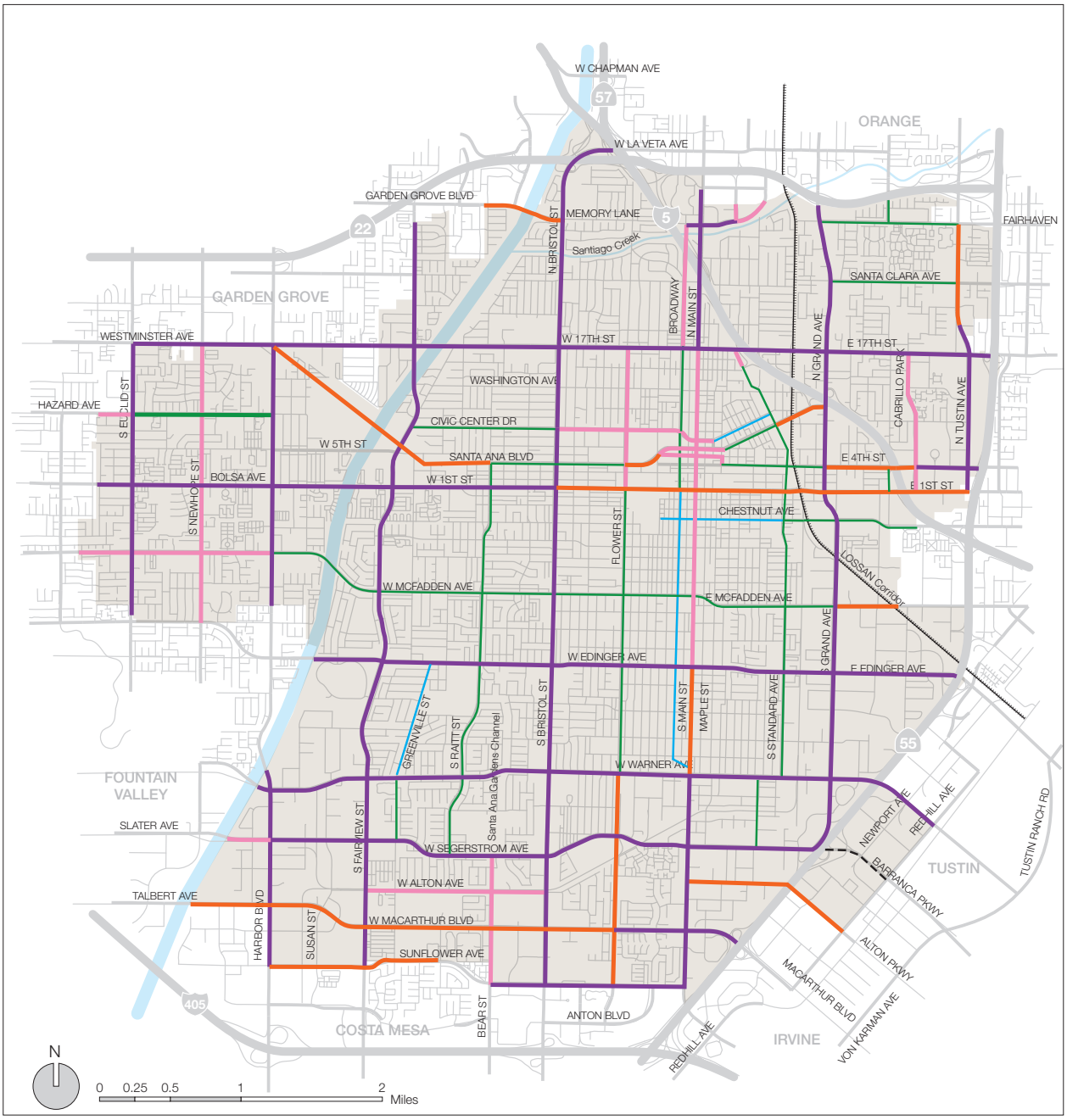
Exhibit 2.6 presents the proposed street reclassifications. Exhibit 2.7 presents the With Project transportation network.

Exhibit 2.6 Proposed Arterial Roadway Reclassifications

LEGEND

- Freeway
- Classify as Primary Arterial
- Classify as Divided Collector Arterial
- Classify as Collector
- Classify as Local Street / Delete from MPAH Network

Exhibit 2.7 Proposed Santa Ana Circulation Element Transportation Network



3.0 Analysis Methodology

The analysis methodology and impact criteria used in this analysis conform to the California Environmental Quality Act (CEQA) guidelines for a traffic impact analysis. CEQA identifies VMT as the preferred metric for identifying environmental impacts. Although VMT governs CEQA impacts, vehicle LOS is also assessed in order to address local operational performance and impacts. Additionally, roadway performance is assessed in order to monitor conformance with the Orange County Transportation Authority's (OCTA) Master Plan of Arterial Highways (MPAH) operational requirements.

Study intersections and roadway segments were assessed using the method specified by the City Santa Ana, Orange County Congestion Management Program (CMP) guidelines, and other governing agency guidelines. As such, intersections under the jurisdiction of the Cities of Santa Ana, Costa Mesa, Irvine, Tustin, Garden Grove, Fountain Valley, and Orange were assessed using the Intersection Capacity Utilization (ICU) method. Intersections under the jurisdiction of Caltrans were assessed using the Highway Capacity Manual 2000 method (HCM 2000).

3.1 VEHICLE MILES TRAVELED (VMT) ANALYSIS

The VMT analysis was prepared in conformance with the City of Santa Ana VMT Analysis Guidelines (VMT Guidelines; September 2019). The City's VMT Guidelines are based on the Office of Planning and Research's (OPR) Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018). A VMT analysis is to be conducted for land use and transportation projects that have the potential to increase the average VMT per service population (VMT/SP).

VMT is defined as the total miles traveled by vehicles (within a transportation network). Service population is described as the population generating the VMT of interest. A VMT analysis may be conducted for large-scale projects such as land use plans or individual transportation/development projects. For large-scale projects, it is appropriate to assess VMT impacts based on total VMT/SP. For individual projects, the VMT analysis may consider VMT and VMT/SP based on specific trip types (e.g. work-based trips) and the corresponding population which generates said VMT (e.g. employees).

VMT was generated with data from OCTAM 5.0 using the full-accounting, origin-destination (OD) methodology. The full-accounting, origin-destination methodology considers the VMT generated by all internal-internal (I-I), internal-external (I-X), and external-internal (X-I) trips. These trip types refer to trips that include an origin and/or destination within the study areas (City of Santa Ana and Orange County). For example, an internal-internal trip refers to a trip which begins in the City and also ends in the City; an internal-external trip refers to a trip which begins in the City but ends outside of the City; an external-internal trip refers to a trip which begins outside of the City but ends in the City. It should be noted that while the majority of trips are captured in their entirety, a small portion are cut off at the OCTAM 5.0 boundaries. Thus, while the number of trips to and from the City of Santa Ana which cross the model boundary are known at various locations along major access points (highways, freeways, etc.) the trip length past the OCTAM 5.0 boundary is not.

In order to account for the VMT generated by the portions of trips outside the model boundaries, trip length assumptions were developed. These assumptions are based on the destinations/attractions near the model boundary as well as likely attractions/destinations beyond the immediate developments near the boundary limits. For example, northbound and southbound trips along I-5 at the San Diego County Line were assigned a trip length of 20 miles past the model's southern boundary (the San Diego County Line). This assumption is intended to provide a general account for VMT which considers trips to various locations such as Camp Pendleton, the US-Mexico Border, and various cities within San Diego County. Trip lengths of zero (0) miles are assigned to those trips which are not considered to extend further than 5 miles past the OCTAM boundary; due to the approximate boundary of the model, it would not be appropriate to pursue such a level of accuracy. A summary of the trip length assumptions to/from major OCTAM 5.0 boundary access points is provided below:

- SR-101 near Ventura (20 miles)
- SR-150 near Ojai (0 miles)
- SR-33 near Ventura (0 miles)
- I-5 near Santa Clarita (50 miles)
- SR-14 near Santa Clarita (20 miles)
- I-15 north of I-215 (50 miles)
- I-10 near Banning (30 miles)
- SR-243 south of Banning (10 miles)
- SR-74 east of Hemet (20 miles)
- SR-79 near Temecula (20 miles)
- I-15 near Temecula (0 miles)
- I-5 at San Diego County Line (20 miles)

Due to the nature and scale of the proposed project, the analysis considers the total VMT and service population which consists of the aggregate of total employees and population within the study area. When aggregating employees and residents, an employee reduction factor was applied to account for overlaps in the two (employees who are also residents). Reduction factors were applied to both the City of Santa Ana and County of Orange employees then aggregated to the resident population. Reduction factors are based on employment data within the Southern California Association of Governments (SCAG) Local Profiles Reports (2019) for the City of Santa Ana and Orange County. The SCAG reports show that 20.8% of employees within the City are also residents of the City and that 65.3% of employees within the County are also residents of the County.

VMT and VMT/SP is provided for all scenarios. Existing year (2020) VMT, SP, and VMT/SP values were developed through linear interpolation of 2016 and 2045 baseline OCTAM scenarios. This method was chosen due to the availability of consistent VMT and socio-economic data (SED) used to derive VMT/SP. Although existing year (2020) SED is available, it does not have an accompanying VMT dataset since there is no baseline OCTAM roadway/highway network for existing year (2020) conditions. Therefore, the traffic study uses both interpolated VMT and SED based on OCTAM 2016 baseline and the 2045 forecasts to develop the existing year (2020) values.

Per the City of Santa Ana Traffic Impact Study Guidelines (2019), the project should be screened to determine the need for a full VMT analysis based on the following screening criteria. Firstly, two conditions should be considered:

- Does the project have the potential to reduce VMT/SP?
- Is the project consistent with the Regional Transportation Plan (RTP) / Sustainable Communities Strategy's (SCS)?

If both conditions are met, then a project may be precluded from a full VMT analysis if any of the following criteria are met:

- Projects which serve the local community and have the potential to reduce VMT, such as neighborhood K-12 schools and local-serving retail less than 50,000 square feet (Charter schools are excluded from this criteria.
- Projects that generate less than 110 net daily trips.
- Projects located within Transit Priority Areas (TPAs)
- Projects located in a low-VMT generating Traffic Analysis Zone (TAZ).
    - Proposed land use shall be consistent with the existing land use generating the low VMT/SP.
    - Proposed land use shall be consistent with the RTP/SCS assumptions or decreases VMT/SP compared to RTP/SCS.

The criteria above is presented in a compact manner. Detailed criteria descriptions and supporting material are provided in the City of Santa Ana Traffic Impact Study Guidelines (2019).

VMT impacts are assessed for the Future Year (2045) With Project scenario, based on changes from both the Existing Year (2020) and Future Year (2045) No Project scenarios. VMT impact thresholds for land use plans (such as General Plans and Specific Plans) are listed below:

- Project Level Impact
    - A project is considered to have a significant impact if the project VMT/SP (for the land use plan) exceeds 15% below the existing total daily VMT/SP for the County; or
- Cumulative Impact
    - A project is considered to have a significant impact if the project results in a negative effect on VMT/SP at the citywide level (City VMT/SP is higher with the project than without it.

Where an impact is identified, the project's VMT/SP should be mitigated to be at or less than 15% below the existing Countywide VMT/SP. Mitigation measures may include changes to the project, implementation of transportation demand management (TDM) measures, impact fees, a mitigation exchange, or any other measure approved by the City's Traffic Engineering Division and Planning Department.

3.2 ROADWAY LEVEL OF SERVICE ANALYSIS

Roadway performance was assessed based on the volume-to-capacity (V/C) ratio, as specified in the Santa Ana Circulation Element (1998). The V/C ratio is calculated by dividing the roadway volume by the capacity of the roadway. Roadway capacities are presented in Table 3-1 and resemble those presented in the Santa Ana Circulation Element. The Santa Ana Circulation Element, however, does not provide roadway capacities for the Divided Collector and five-lane divided arterial roadway types. Capacities for the Divided Collector roadway were taken from the Orange County Master Plan of Arterial and Highways (OC MPAH); capacities for the five-lane divided arterial roadway were developed by averaging the capacities of the Major and Primary Arterial roadway types. The capacities shown

correspond to the maximum volume that can be experienced in order to achieve the corresponding level of service (LOS). Therefore, a volume greater than that listed in the column labeled "LOS E" will result in LOS F. The minimum level of service for roadways in the City of Santa Ana is LOS D, per the Circulation Element (1998). The OC MPAH suggests a minimum LOS of C be maintained for roadways. Descriptions of operation and the range of volume-to-capacity ratios for each LOS grade are presented in Table 3-2.

Table 3-1 Roadway Capacity and LOS

CLASSIFICATION	LANES	LOS A	LOS B	LOS C	LOS D	LOS E
Principal Arterial	8D	45,000	52,500	60,000	67,500	75,000
Major Arterial	6D	33,900	39,400	45,000	50,600	56,300
Major / Primary Arterial	5D	28,200	32,850	37,500	42,200	46,900
Primary Arterial	4D	22,500	26,300	30,000	33,800	37,500
Secondary Arterial	4U	15,000	17,500	20,000	22,500	25,000
Divided Collector	2D	9,000	10,500	12,000	13,500	15,000
Collector	2U	7,500	8,800	10,000	11,300	12,500

Sources: City of Santa Ana, General Plan – Circulation Element (1998); Orange County Master Plan of Arterials and Highways (2017).

3.3 INTERSECTION LEVEL OF SERVICE ANALYSIS

Study intersections were assessed using the methodology described in the governing agency's traffic impact analysis guidelines. As such, intersections were assessed using the Intersection Capacity Utilization (ICU) methodology or the Highway Capacity Manual 2000 method (HCM 2000). A description of each as well as the level of service criteria is provided in the following sections.

3.3.1 ICU Methodology

Signalized intersections under the jurisdiction of the Cities of Santa Ana, Costa Mesa, Orange, Irvine, Tustin, and Fountain Valley were assessed using the ICU methodology. The ICU methodology is based on intersection V/C ratio. The V/C ratio value for each movement is the observed volume divided by the saturation flow volume. The intersection ICU value is the sum of the V/C values for the critical movement on each leg, where critical movements are the pairs of conflicting movements with the highest combined V/C values. ICU is expressed as a decimal value (e.g. 0.74), where 1.00 represents the saturated condition where the volume of traffic flow is equal to the capacity. LOS descriptions and their corresponding ranges of V/C ratios are provided in Table 3-2.

This study uses maximum saturation volumes of 1,600 vehicles per hour per lane (VPHPL) for turn lanes and 1,700 VPHPL for through lanes. A 5% loss time per cycle length was applied.

Table 3-2 ADT / ICU Level of Service Descriptions

LOS	V/C	Definition
A	0.00 – 0.60	Free Flow. Individual users are virtually unaffected by the presence of others in the traffic stream. Freedom to select desired speeds and to maneuver within the traffic stream is extremely high. The general level of comfort and convenience provided to the motorist, passenger, or pedestrian is excellent.
B	0.61 – 0.70	Stable flow. The presence of other users in the traffic stream begins to be noticeable. Freedom to select desired speeds is relatively unaffected, but there is a slight decline in the freedom to maneuver within the traffic stream with LOS A. The general level of comfort and convenience provided is somewhat less than that of LOS A, because the presence of others in the traffic stream begins to affect individual behavior.
C	0.71 – 0.80	Stable flow. This LOS marks the beginning of the range of flow in which the operation of individual users becomes significantly affected by interactions with others in the traffic stream. The selection of speed is affected by the presence of others, and maneuvering within the traffic stream requires substantial vigilance on the part of the user. The general level of comfort and convenience declines noticeably at this level.
D	0.81 – 0.90	High density, but stable flow. Speed and freedom to maneuver are severely restricted, and the drive or pedestrian experiences a generally poor level of comfort and convenience. Small increases in traffic flow will generally cause operational problems at this level.
E	0.91 – 1.00	Operating conditions at or near the capacity level. All speeds are reduced to a slow but relatively uniform value. Freedom to maneuver within the traffic stream is extremely difficult, and generally accomplished by forcing a vehicle or pedestrian to "give way" to accommodate such maneuvers. Comfort and convenience levels are extremely poor, and drivers or pedestrian frustration is generally high. Operations at this level are usually unstable because small increases in flow or minor variations within the stream will cause a breakdown.
F	> 1.00	Forced or breakdown flow. This condition exists wherever the amount of traffic approaching a point exceeds the amount which can traverse that point. Queues form up behind such locations as arrival flow exceeds discharge flow.

Source: City of Santa Ana, General Plan – Circulation Element, 1998

3.3.2 Highway Capacity Manual (HCM) Methodology

Study intersections that are Caltrans operated intersections were evaluated using the Highway Capacity Manual 2000 (HCM 2000) Operations methodology consistent with Caltrans guidelines. Chapter 16 of the Highway Capacity Manual (HCM) 2000 contains the operations methodology for signalized intersections, which evaluates LOS based on controlled delay per vehicle. Controlled delay is defined as the portion of the total delay attributed to the traffic signal operation including deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Consistent with HCM 2000 methodology the maximum saturation flow rate for intersections analyzed using HCM 2000 is 1,900 VPHPL. The relationship between controlled delay per vehicle and LOS for signalized intersections is summarized in Table 3-3.

Table 3-3 HCM 2000 Level of Service Descriptions

LOS	Description of Traffic Conditions	Delay (sec/veh)
A	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication.	≤ 10
B	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted.	> 10 – 20
C	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted.	> 20 – 35
D	Tolerable delays: drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays.	> 35 – 55
E	Significant delays: volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues form upstream.	> 55 – 80
F	Excessive delays: represents conditions at capacity, with extremely long delays. Queues may block upstream intersections.	> 80

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

Unsignalized intersections were evaluated using the methodology described in Chapter 17 of the HCM. The criteria for unsignalized intersections have different threshold values than do those for signalized intersections because drivers expect signalized intersections to carry higher traffic volumes, so higher levels of control delay are acceptable. The relationship between controlled delay per vehicle and LOS for unsignalized intersections is summarized in Table 3-4.

Table 3-4 Level of Service for Unsignalized Intersections

LOS	Control Delay (sec/veh)
A	≤ 10
B	> 10 – 15
C	> 15 – 25
D	> 25 – 35
E	> 35 – 50
F	> 50

Source: Highway Capacity Manual, Transportation Research Board, 2000. Exhibit 17-22

The intersection Level of Service analysis for this report was performed using TRAFFIX software. TRAFFIX is a network-based interactive computer program that enables calculation of levels of service at signalized and unsignalized intersections for multiple locations and scenarios. TRAFFIX also calculates signal timing (green times and cycle lengths) and maximum queue lengths to assist in evaluating signalized intersections.

3.4 INTERSECTION LOS AND SIGNIFICANT IMPACT CRITERIA

3.4.1 Cities of Santa Ana, Costa Mesa, Fountain Valley, and Orange

The minimum LOS for intersections in the Cities of Santa Ana, Costa Mesa, and Fountain Valley is LOS D. Impacts are considered significant if:

- An intersection degrades from an acceptable LOS (LOS D or better) to an unacceptable LOS (LOS E or F) during the peak hours; or
- The project increases traffic demand at the study intersection by 1% of capacity (0.01) if the intersection already operates at an unacceptable level (LOS E or F).

3.4.2 City of Tustin

The minimum LOS for intersections in the City of Tustin is LOS D. Significant impacts are not explicitly outlined, but the preservation of the minimum LOS with and without the project is required. Therefore, a significant impact can be assumed to occur if:

- An intersection is expected to operate at an unacceptable LOS (LOS E or F) in the With Project scenario; an effort to return the intersection LOS to an acceptable level is to be made.

3.4.3 City of Irvine

The minimum LOS for intersections in the City of Irvine is LOS D. Impacts are considered significant if:

- An intersection degrades from an acceptable LOS (LOS D or better) to an unacceptable LOS (LOS E or F) during the peak hours; or

- An intersection is operating at an unacceptable LOS (LOS E or F) and experiences an increase in V/C of 0.02 or more.

3.4.4 Orange County Congestion Management Program

The minimum LOS for intersections part of the Orange County Congestion Management Program (OC CMP) establishes LOS E as the minimum level of operation for CMP roadways (freeways and Smart Streets). Impacts are considered significant if:

- An intersection degrades from an acceptable LOS (LOS E or better) to an unacceptable LOS (LOS F) during the peak hours; or
- The project increases traffic demand at the study intersection by 10% of capacity (0.10) if the intersection already operates at an unacceptable level (LOS F)

OC CMP intersections included in this analysis are:

- INT 9 – Harbor Boulevard and 1st Street
- INT 12 – Harbor Boulevard and Warner Avenue
- INT 87 – Mabury Street and 1st Street
- INT 95 – SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue

3.4.5 Caltrans

The minimum LOS for Caltrans intersections is LOS C. Impacts are considered significant if:

- An intersection degrades from an acceptable LOS (LOS C or better) to an unacceptable LOS (LOS D or worse) during the peak hours; or
- Any increase in delay is expected at an intersection already operating at an unacceptable LOS.

3.5 TRAFFIC VOLUMES

This study assesses both roadway and intersection performance for all existing and future year scenarios. Roadway and intersection counts were utilized to determine existing year (2020) average daily traffic (ADT) on study roadway segments and peak hour turning movement counts at study intersections. To determine future year (2045) volumes, an annual growth rate applied to existing traffic volumes was applied developed through the Orange County Transportation Analysis Model (OCTAM). The traffic volume development procedure is further detailed in the following sections.

3.5.1 Traffic Count Data

Roadway ADT was taken from the City of Santa Ana count database, with counts conducted in September and October 2019. A compound annual growth rate of 1% was applied to the volumes to bring them to levels consistent with those expected in the year 2020.

Intersection turning movement volumes were taken from a combination of historic and recent counts. Updated traffic counts were in the process of being scheduled when widespread closures of schools, businesses, and other facilities were ordered due to the onset of the COVID-19 pandemic, disrupting normal traffic patterns. Updated counts were only partially conducted and were supplemented with

historic count data. Counts were conducted during the morning peak period (6:00 AM to 9:00 AM) and the afternoon peak period (4:00 PM to 7:00 PM). The AM and PM peak analyses are based on the hour of highest total intersection volume during the morning and afternoon periods. A compound annual growth rate (CAGR) of 1% was applied to the volumes for traffic counts conducted prior to 2020 to bring them to levels consistent with those expected in the year 2020. The CAGR 1% was selected based on comparisons of historical ADT data for various locations throughout the City. An inventory of intersection count data is provided in Table 3-5.

3.5.2 Travel Demand Forecasting

The horizon year 2045 volumes were derived based on existing peak hour count data and forecast link volumes obtained from the Orange County Transportation Analysis Model (OCTAM) version 5.0. OCTAM 5.0 is the accepted sub-regional model for forecasting travel demand in Orange County, and is based on socioeconomic data from Orange County Projections 2018. Growth factors for each intersection approach and departure were interpolated from OCTAM forecast for the 2016 and 2045 baseline scenarios. These growth factors were then applied to existing counts to forecast future turning movement volumes. OCTAM 5.0 was recently updated by OCTA and this traffic analysis update utilizes this new TransCad version of the model.

Table 3-5 Intersection Count Inventory

ID	INTERSECTION	COUNT YEAR
1	Euclid Street and Bolsa Avenue	2019
2	Euclid Street and McFadden Avenue	2016
3	Euclid Street and Edinger Avenue	2019
4	Newhope Street and Hazard Avenue	2016
5	Newhope Street and McFadden Avenue	2016
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	2016
7	Trask Avenue and SR-22 EB On-Ramp	2013
8	Harbor Boulevard and Westminster Avenue	2019
9	Harbor Boulevard and 1st Street	2019
10	Harbor Boulevard and McFadden Avenue	2016
11	Harbor Boulevard and Edinger Avenue	2019
12	Harbor Boulevard and Warner Avenue	2019
13	Harbor Boulevard and Segerstrom Avenue	2016
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	2016
15	Harbor Boulevard and MacArthur Boulevard	2019
16	Harbor Boulevard and Sunflower Avenue	2016
17	Harbor Boulevard and I-405 NB Off-Ramp	2019
18	Harbor Boulevard and I-405 SB Off-Ramp	2019
19	Fairview Street and Civic Center Drive	2016
20	Fairview Street and 1st Street	2018
21	Fairview Street and McFadden Avenue	2016
22	Fairview Street and Edinger Avenue	2019
23	Fairview Street and Warner Avenue	2016
24	Fairview Street and MacArthur Boulevard	2019
25	Fairview Road and Sunflower Avenue	2016
26	Greenville Street and Edinger Avenue	2017
27	Greenville Street and Segerstrom Avenue	2017
28	Raitt Street and McFadden Avenue	2016
29	Raitt Street and Edinger Avenue	2016
30	Bear Street and MacArthur Boulevard	2017
31	Bristol Street and 17th Street	2019
32	Bristol Street and Civic Center Drive	2016

ID	INTERSECTION	COUNT YEAR
33	Bristol Street and Santa Ana Boulevard	2016
34	Bristol Street and 1st Street	2019
35	Bristol Street and McFadden Avenue	2017
36	Bristol Street and Warner Avenue	2019
37	Bristol Street and Segerstrom Avenue	2016
38	Bristol Street and Alton Avenue	2017
39	Bristol Street and MacArthur Boulevard	2017
40	Bristol Street and Sunflower Avenue	2016
41	Bristol Street and I-405 NB Ramps	2018
42	Bristol Street and I-405 SB Ramps	2018
43	Flower Street and Santa Ana Boulevard	2016
44	Flower Street and 1st Street	2017
45	Flower Street and McFadden Avenue	2016
46	Flower Street and Segerstrom Avenue	2016
47	Flower Street and MacArthur Boulevard	2016
48	Main Street and La Veta Avenue	2018
49	Main Street and Mainplace Drive / Memory Lane	2019
50	Main Street and 17th Street	2019
51	Main Street and Civic Center Drive	2016
52	Main Street and Santa Ana Boulevard	2016
53	Main Street and 4th Street	2016
54	Main Street and 1st Street	2019
55	Main Street and McFadden Avenue	2016
56	Main Street and Edinger Avenue	2019
57	Main Street and MacArthur Boulevard	2019
58	Penn Way and 17th Street	2017
59	Santiago Street / I-5 NB Ramps and 17th Street	2016
60	Penn Way and I-5 SB Ramps	2017
61	Santiago Street and Civic Center Drive	2017
62	Santiago Street and Santa Ana Boulevard	2016
63	Standard Avenue and 4th Street	-
64	Standard Avenue and 1st Street	2017
65	Standard Avenue and McFadden Avenue	2018

ID	INTERSECTION	COUNT YEAR
66	Halladay Street and Warner Avenue	2016
67	Halladay Street and Dyer Road	2019
68	SR-55 SB Ramps and MacArthur Boulevard	2019
69	SR-55 NB Ramps and MacArthur Boulevard	2019
70	SR-55 SB Ramps and Dyer Road	2019
71	Glassell Street and La Veta Avenue	2016
72	Glassell Street and SR-22 WB Ramps	2016
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	2016
74	Grand Avenue and Fairhaven Avenue	2016
75	Grand Avenue and Santa Clara Avenue	2017
76	Grand Avenue and 17th Street	2019
77	Grand Avenue and I-5 NB Ramps	2017
78	Grand Avenue and Santa Ana Boulevard	2017
79	Grand Avenue and 1st Street	2019
80	Grand Avenue and Chestnut Avenue	2016
81	Grand Avenue and McFadden Avenue	2016
82	Grand Avenue and Edinger Avenue	2019
83	Grand Avenue and Warner Avenue	2019
84	SR-55 NB Ramps and Dyer Road	2019
85	Cambridge Street and La Veta Avenue	2016
86	Cambridge Street and Fairhaven Avenue	2020
87	Mabury Street and 1st Street	2020
88	Tustin Street and La Veta Avenue	2020
89	Tustin Street and SR-22 WB On-Ramp	2020
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	2020
91	Tustin Street and Fairhaven Avenue	2020
92	Tustin Avenue and Santa Clara Avenue	2020
93	Tustin Avenue and 17th Street	2020
94	Tustin Avenue and 4th Street	2020
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	2020
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	2020
97	Red Hill Avenue and Edinger Avenue	2020
98	Red Hill Avenue and Warner Avenue	2020

ID	INTERSECTION	COUNT YEAR
99	Red Hill Avenue and Barranca Parkway	2020
100	Red Hill Avenue and Alton Parkway	2020
101	Red Hill Avenue and MacArthur Boulevard	2020
102	Red Hill Avenue and Main Street	2020
103	I-5 SB Ramps and Santa Ana Boulevard	2017
104	Tustin Ranch Road and Warner Avenue	2020
105	Von Karman Avenue and Barranca Parkway	2020

4.0 Existing Year (2020) Conditions

The project study area includes arterial roadways and signalized intersections in the vicinity of the project corridor. Descriptions of geometrical features and intersection level of service analysis results for the year 2020 are included in this section.

4.1 EXISTING ROADWAY NETWORK

Selected arterials that are located in the vicinity of the project corridor are described in this section. Items of note include existing geometry, pedestrian and bicycle facilities, and adjacent land uses.

Euclid Street is classified as a Major Arterial that travels north and south through the study area. Within the study area, there are three travel lanes in each direction with a striped center median functioning as a two-way left-turn lane. Euclid Street is five lanes (2 northbound and 3 southbound) south of Davit Avenue. The posted speed limit is 45 miles per hour. On-street parking is not permitted and no bike facilities are provided. OCTA provides service along this corridor via Route 37 at approximately 30 minute headways.

Newhope Street is classified as a Secondary Arterial that travels north and south on the west end of Santa Ana. Within the study area, there are two travel lanes in each direction with a striped center median functioning as a two-way left-turn lane. The posted speed limit is 40 miles per hour. On-street parking is generally not permitted north of McFadden Avenue, except between 1st Street and 5th Street. Class II bike lanes were recently implemented between Westminster Avenue and McFadden Avenue. There are currently no bus routes that serve this corridor.

Hazard Avenue is classified as a Secondary Arterial that travels east and west through the study area. Within the study area, there are two travel lanes in each direction with a striped center median functioning as a two-way left-turn lane. Hazard Avenue transitions to a Divided Collector west of Harbor Boulevard, and Undivided Collector east of Harbor Boulevard. Limited on-street parking is permitted adjacent to Rosita Park. The posted speed limit is 35 miles per hour and 25 miles per hour near the school zone. No bus routes or bike facilities are provided along this corridor.

McFadden Avenue is classified as a Secondary Arterial (between Euclid Street and Grand Avenue) and a Primary Arterial (east of Grand Avenue) that travels east and west through the study area. Within the study area, there are two travel lanes in each direction with a striped center median functioning as a two-way left-turn lane and a raised, landscaped median on occasion. McFadden Avenue narrows to a two-lane undivided roadway between Bristol Street and Standard Avenue. The posted speed limit is 30-45 miles per hour. On-street parking is permitted along parts of the corridor. Bike lanes are provided west of Harbor Boulevard. OCTA provides service along this corridor via Route 66 and Route 145 at approximately 15-45 minute headways.

Harbor Boulevard is classified as a Major Arterial that travels north and south through the study area. Within the study area, there are three travel lanes in each direction with a raised, landscaped median. The posted speed limit is 40-45 miles per hour. On-street parking is not permitted and limited bike facilities are provided. OCTA provides service along this corridor via Route 43 and Route 543 at approximately 15-20 minute headways.

Fairview Avenue is classified as a Major Arterial that travels north and south through the study area. Within the study area, there are three lanes in each direction with a raised, landscaped median. Fairview Avenue transitions to a five-lane divided roadway then a Primary Arterial north of Civic Center Drive. The posted speed limit is 45 miles per hour. On-street parking is not permitted and bike facilities are not provided. OCTA provides service along this corridor via Route 47 at approximately 15 minute headways.

Civic Center Drive is classified as a Secondary Arterial that travels east and west through the study area. Within the study area, Civic Center Drive is a four-lane undivided roadway; Civic Center Drive becomes a four-lane divided with bike facilities east of Bristol Street until Broadway. It is a four-lane

divided road until Minter Street and then becomes a two-lane undivided. The posted speed limit is 35 miles per hour, unless otherwise noted to be 25 miles per hour in a school zone. On-street parking is allowed along some sections of Civic Center Drive. On-street parking is permitted along certain segments. There are some bike lanes or bike routes provided along this roadway. OCTA provides service along this corridor via Routes 83, 145, and 862 with headways of approximately 30 minutes for each route.

MacArthur Boulevard is classified as a Major Arterial that travels east and west through the study area. Within the study area, there are three travel lanes in each direction with a raised, landscaped median. MacArthur Boulevard is classified as a Primary Arterial west of Hyland Avenue. The posted speed limit is 40 miles per hour. On-street parking is not permitted throughout the corridor and there are currently no bike facilities provided. OCTA operates four bus routes along this corridor via Routes 53, 55, 76 and 173. Headways range between every 10 minutes for Route 53, 30 minutes for Route 55, 60 minutes for Route 76, and 45 minutes for Route 173.

Raitt Street is classified as a Secondary Arterial that travels north and south through the study area. Between MacArthur Boulevard and Edinger Avenue, Raitt Street is a four-lane divided roadway. Between Edinger Avenue and Myrtle Street, Raitt Street is a four-lane undivided roadway. Then from Myrtle Street to 1st Street it is a two-lane divided roadway. Between First Street and Washington Avenue, Raitt Street narrows down to a two-lane undivided roadway. The speed limit is limited to 25 miles per hour in school zones and 35-40 miles per hour outside of the school zone. On-street parking is permitted along the west side of the street between McFadden Avenue and Edinger Avenue and on both sides of the street north of McFadden Avenue to Richland Avenue. Currently bike facilities are not provided along this roadway. OCTA operates Route 145 approximately every 45 minutes during peak operation.

1st Street is classified as a Major Arterial that travels east and west through the study area. Within the study area, there are three lanes in each direction with a raised, landscaped median. The posted speed limit is 40 miles per hour. On-street parking is not permitted along this corridor. There are currently no bike lanes or bike routes provided. OCTA provides service along this corridor via Route 64 at approximately 15 minute headways.

Bristol Street is classified as a Major Arterial that travels north and south through the study area. Within the study area, there are three travel lanes in each direction with a raised, landscaped median. The posted speed limit is 40 miles per hour. Bikeways exist between 17th Street and Edinger Avenue. On-street parking is not permitted along this corridor. OCTA provides service along this corridor via Route 57 at approximately 30 minute headways.

17th Street/ Westminster Avenue is classified as a Major Arterial traveling east and west through the northern region in Santa Ana. There are three lanes in each direction divided by a center median. The posted speed limit is 40 miles per hour. On-street parking is not permitted and there are currently no bike facilities provided along the corridor. Several OCTA bus routes serve this corridor, including Routes 51 and 60 with approximately 15-20 minute headways.

Santa Ana Boulevard is classified as a Major Arterial (between Raitt Street and Ross Street) and a Primary Arterial (between Ross Street and Grand Avenue). The roadway fluctuates between a four-lane undivided roadway (Raitt Street to Flower Street), six-lane divided roadway (Flower Street to Ross Street and Santiago Street to Grand Avenue), and a three-lane one-way roadway (Ross Street to French Street). On-street parking is permitted along certain segments of the corridor. There are currently no bike lanes or bike routes provided. The posted speed limit is 35 miles per hour. Several OCTA bus routes serve this corridor, including Routes 83, 145, and 206 with approximately 30-45 minute headways.

Segerstrom Avenue is classified as a Major Arterial that travels east and west through the study area. Segerstrom Avenue is a six-lane divided roadway between Susan Street and Harbor Boulevard and a four-lane divided roadway along the rest of the corridor. The posted speed limit is 40 miles per hour.

On-street parking is not permitted and there are currently no bike facilities provided along this corridor. There are currently no transit services that operate along Segerstrom Avenue within the study area.

Memory Lane is classified as a Major Arterial that travels east and west through the study area. There are three travel lanes in each direction with a raised, landscaped median. The posted speed limit is 40 miles per hour. On-street parking is not permitted along this roadway. Class II bike lanes are provided between Bristol Street and Flower Street. OCTA provides service along this corridor via Route 453 at approximately 30 minute headways.

Tustin Avenue is classified as a Major Arterial that travels north and south parallel to the SR-55 Freeway. There are three travel lanes in each direction with a striped center median. The posted speed limit is 40 miles per hour. On-street parking is not permitted and bike lanes are not available along Tustin Avenue. Two OCTA bus routes operate along Tustin Avenue. Routes 60 and 71 operate at frequencies of 45 minutes and 1 hour respectively.

Warner Avenue is classified as a Major Arterial that travels east and west through the study area. Within the study area, Warner Avenue is a four-lane undivided roadway. The posted speed limit is 40-45 miles per hour. On-street parking is not permitted and there are currently limited bike lanes provided along the corridor. There are two OCTA bus routes that serve Warner Avenue in the study area. Routes 72 and 463 operate with headways at approximately 20-60 minutes.

Edinger Avenue is classified as a Major Arterial that travels east and west through the study area. The roadway is a four-lane divided roadway between Euclid Street and Main Street and six-lane divided roadway between Main Street and SR-55 freeway. The posted speed limit is 40 miles per hour. On-street parking is not permitted throughout most of the corridor, with the exception of the eastbound direction between Main Street and Maple Street; and between Cedar Street and Evergreen Street. There are bike facilities provided along parts of the corridor. OCTA provides service along Edinger Avenue via Route 70 at approximately 30 minute headways.

Flower Street is classified as a Collector Street (north of 17th Street), Secondary Arterial (between 17th Street and Warner Avenue), and Primary Arterial (south of Warner Avenue) that travels north and south through the study area. The roadway fluctuates between a two-lane divided roadway (Warner Avenue to First Street and 17th Street to Memory Lane) and a four-lane divided roadway (Sunflower Avenue to Warner Avenue and First Street to 17th Street). On-street parking is permitted along residential areas. There are currently no bike facilities provided along the corridor. OCTA provides service along this corridor via Route 51 at approximately 30 minute headways.

Main Street is classified as a Major Arterial (north of Washington Avenue and south of Warner Avenue), Secondary Arterial (between Washington Avenue to Edinger Avenue), and a Primary Arterial (between Edinger Avenue and Warner Avenue) that travels north and south through the study area. There are two travel lanes in each direction, with a striped center median operating as a two-way left-turn lane. The posted speed limit is 35-40 miles per hour. Parking is permitted on the east side of the street between Goetz Avenue and Dyer Road, and prohibited on Main Street through the rest of the study area. South of Dyer Road, Main Street widens to a six-lane facility with a center two-way left-turn lane. OCTA provides service along this corridor via Route 53 at approximately 20 minute headways.

Grand Avenue is classified as a Major Arterial that travels north and south through the study area. From the SR-55 freeway to the northern study area boundary, Grand Avenue is a six-lane major arterial with a center two-way left-turn lane. Approximately 900 feet north of Warner Avenue, Grand Avenue narrows to two lanes in the southbound direction, and the third southbound lane is restored about 300 feet north of Warner Avenue. South of the SR-55 freeway, Grand Avenue has two northbound and three southbound lanes divided by a landscaped median. Parking is not permitted and there are currently no bike lanes or bike routes along Grand Avenue. The posted speed limit is 45 miles per hour. OCTA provides service along this corridor via Route 59 at approximately 30 minute headways.

4.2 STUDY INTERSECTION GEOMETRY AND PEAK HOUR VOLUMES

Intersections were selected in consultation with the City of Santa Ana based on expected traffic impacts and vehicle volumes. The existing study intersection lane geometries are provided in the Appendix. Year 2020 AM peak hour turning movement volumes are shown in Table 4-1, and the PM peak hour volumes are shown in Table 4-2.

Table 4-1 Existing Year 2020 Volumes – AM Peak Hour

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Euclid Street and Bolsa Avenue	124	1044	179	207	1844	104	218	811	153	184	586	188
2	Euclid Street and McFadden Avenue	145	1100	131	137	1906	158	227	463	287	166	368	140
3	Euclid Street and Edinger Avenue	134	845	72	127	1842	169	172	753	460	100	609	111
4	Newhope Street and Hazard Avenue	98	738	105	91	1341	123	78	199	147	51	170	68
5	Newhope Street and McFadden Avenue	110	491	173	119	1183	110	135	492	160	176	449	100
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	70	1274	0	0	1354	18	74	0	121	836	44	117
7	Trask Avenue and SR-22 EB On-Ramp	0	0	0	0	0	0	651	815	0	0	738	138
8	Harbor Boulevard and Westminster Avenue	178	1173	251	212	1663	95	176	927	33	212	574	156
9	Harbor Boulevard and 1st Street	117	935	202	227	1914	124	140	932	181	245	621	145
10	Harbor Boulevard and McFadden Avenue	104	1059	101	182	1919	64	167	435	130	190	430	123
11	Harbor Boulevard and Edinger Avenue	103	772	146	183	2105	61	107	644	323	221	491	204
12	Harbor Boulevard and Warner Avenue	115	701	178	457	2059	123	97	1385	364	151	792	134
13	Harbor Boulevard and Segerstrom Avenue	111	791	50	171	2299	86	88	737	297	117	362	82
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	69	3	19	8	2	19	7	1953	775	64	490	20
15	Harbor Boulevard and MacArthur Boulevard	128	898	92	316	1820	126	126	1141	344	133	443	132
16	Harbor Boulevard and Sunflower Avenue	217	1107	205	246	2324	57	9	109	42	130	166	94
17	Harbor Boulevard and I-405 NB Off-Ramp	0	1567	0	0	2327	0	0	0	0	508	0	894
18	Harbor Boulevard and I-405 SB Off-Ramp	0	1729	0	0	1504	0	385	0	429	0	0	0
19	Fairview Street and Civic Center Drive	6	1278	414	243	1402	6	6	23	23	300	9	155
20	Fairview Street and 1st Street	157	1206	227	241	1401	161	214	1233	191	163	732	245
21	Fairview Street and McFadden Avenue	121	1294	173	142	1727	125	221	522	120	194	500	40

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
22	Fairview Street and Edinger Avenue	188	831	116	215	1503	127	237	657	176	421	553	110
23	Fairview Street and Warner Avenue	215	952	125	205	1628	119	69	1010	301	307	926	300
24	Fairview Street and MacArthur Boulevard	248	771	89	307	1546	173	125	1019	150	235	494	140
25	Fairview Road and Sunflower Avenue	185	1071	163	204	1738	111	49	322	65	306	256	132
26	Greenville Street and Edinger Avenue	186	0	251	0	0	0	0	960	234	172	915	0
27	Greenville Street and Segerstrom Avenue	47	193	78	154	472	160	33	739	118	164	662	76
28	Raitt Street and McFadden Avenue	62	570	90	100	762	104	116	704	90	172	542	97
29	Raitt Street and Edinger Avenue	188	501	181	152	716	85	165	1008	145	117	916	54
30	Bear Street and MacArthur Boulevard	81	280	119	199	756	300	97	1663	114	70	1180	100
31	Bristol Street and 17th Street	192	988	167	335	1376	181	324	963	156	359	824	273
32	Bristol Street and Civic Center Drive	123	1087	96	318	1284	80	149	755	93	121	401	83
33	Bristol Street and Santa Ana Boulevard	65	1419	197	137	1507	41	83	403	35	96	240	41
34	Bristol Street and 1st Street	183	1278	162	275	1133	160	206	1268	128	108	813	119
35	Bristol Street and McFadden Avenue	118	1054	53	161	1571	162	275	472	232	155	432	50
36	Bristol Street and Warner Avenue	192	862	159	386	1307	148	206	1149	286	188	860	146
37	Bristol Street and Segerstrom Avenue	65	725	136	283	1011	119	189	913	84	122	554	71
38	Bristol Street and Alton Avenue	9	628	47	227	1571	36	190	117	244	41	87	31
39	Bristol Street and MacArthur Boulevard	92	478	120	326	1419	148	192	1394	283	191	910	132
40	Bristol Street and Sunflower Avenue	94	461	136	245	1388	104	114	942	381	246	400	138
41	Bristol Street and I-405 NB Ramps	0	1489	191	0	1967	8	0	0	34	121	73	665
42	Bristol Street and I-405 SB Ramps	113	1108	0	0	985	847	573	0	524	0	0	0
43	Flower Street and Santa Ana Boulevard	87	811	118	168	568	76	114	710	81	101	323	135
44	Flower Street and 1st Street	139	602	159	175	554	58	165	1514	60	209	861	123
45	Flower Street and McFadden Avenue	60	438	38	66	367	53	51	581	44	64	432	58
46	Flower Street and Segerstrom Avenue	63	331	73	98	544	120	155	1065	297	74	546	60
47	Flower Street and MacArthur Boulevard	22	142	73	163	352	264	165	1879	80	54	909	58
48	Main Street and La Veta Avenue	84	579	300	198	1034	173	350	495	215	316	276	230

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
49	Main Street and Mainplace Drive / Memory Lane	28	764	250	32	1244	260	148	233	16	198	226	15
50	Main Street and 17th Street	128	760	163	195	1086	70	116	1225	61	325	1300	19
51	Main Street and Civic Center Drive	138	901	79	59	1042	159	90	545	99	43	566	34
52	Main Street and Santa Ana Boulevard	68	1083	0	0	1107	98	0	0	0	61	848	65
53	Main Street and 4th Street	0	977	23	0	1098	27	0	93	14	0	114	28
54	Main Street and 1st Street	116	596	60	88	882	65	119	1393	147	88	1097	61
55	Main Street and McFadden Avenue	89	838	42	175	1364	27	42	396	43	140	373	107
56	Main Street and Edinger Avenue	109	617	67	228	1052	55	75	971	131	122	709	87
57	Main Street and MacArthur Boulevard	54	311	264	645	848	192	240	1393	252	146	435	218
58	Penn Way and 17th Street	43	0	217	0	0	0	0	1238	631	214	1722	0
59	Santiago Street / I-5 NB Ramps and 17th Street	768	35	22	57	0	295	99	1040	376	0	1245	20
60	Penn Way and I-5 SB Ramps	0	158	140	799	165	0	0	0	0	179	0	100
61	Santiago Street and Civic Center Drive	206	143	20	5	303	74	121	46	246	72	66	13
62	Santiago Street and Santa Ana Boulevard	24	71	56	311	161	133	48	474	14	108	807	271
63	Standard Avenue and 4th Street	-	-	-	-	-	-	-	-	-	-	-	-
64	Standard Avenue and 1st Street	108	191	119	12	231	25	86	1317	214	64	1012	12
65	Standard Avenue and McFadden Avenue	74	284	128	220	531	37	17	589	71	138	366	82
66	Halladay Street and Warner Avenue	43	0	100	0	0	0	0	1283	145	160	607	0
67	Halladay Street and Dyer Road	11	18	49	183	37	39	41	1375	10	115	626	101
68	SR-55 SB Ramps and MacArthur Boulevard	0	0	0	961	0	870	0	1441	1027	0	1275	145
69	SR-55 NB Ramps and MacArthur Boulevard	908	0	976	0	0	0	0	1609	796	0	517	244
70	SR-55 SB Ramps and Dyer Road	221	26	505	50	242	60	35	1338	285	408	647	108
71	Glassell Street and La Veta Avenue	263	412	125	17	358	79	38	195	375	236	249	6
72	Glassell Street and SR-22 WB Ramps	500	561	0	0	743	346	0	0	0	285	5	426
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	0	818	218	280	733	0	258	0	1012	0	0	0
74	Grand Avenue and Fairhaven Avenue	18	737	106	174	1444	32	99	60	59	254	28	229
75	Grand Avenue and Santa Clara Avenue	66	463	119	290	1418	319	143	233	48	120	231	211
76	Grand Avenue and 17th Street	163	476	327	286	1198	235	224	835	106	309	807	88

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
77	Grand Avenue and I-5 NB Ramps	0	831	480	58	1869	0	0	0	0	456	0	126
78	Grand Avenue and Santa Ana Boulevard	71	1003	51	141	1166	1029	263	217	428	5	373	34
79	Grand Avenue and 1st Street	213	751	35	99	1432	174	332	793	225	247	867	99
80	Grand Avenue and Chestnut Avenue	53	737	163	149	1788	49	60	419	110	118	347	216
81	Grand Avenue and McFadden Avenue	171	722	108	237	1590	155	186	601	182	117	420	106
82	Grand Avenue and Edinger Avenue	47	472	92	224	1146	224	319	1332	128	151	579	126
83	Grand Avenue and Warner Avenue	169	510	218	199	574	194	256	914	359	88	388	131
84	SR-55 NB Ramps and Dyer Road	557	0	456	0	0	0	0	1533	613	0	719	433
85	Cambridge Street and La Veta Avenue	160	204	0	0	480	245	117	0	187	0	0	0
86	Cambridge Street and Fairhaven Avenue	0	0	0	515	0	166	80	216	0	0	247	192
87	Mabury Street and 1st Street	10	0	244	238	141	533	0	1062	11	46	701	0
88	Tustin Street and La Veta Avenue	8	333	96	74	1452	4	9	11	35	447	2	69
89	Tustin Street and SR-22 WB On-Ramp	656	610	0	0	1395	833	0	0	0	0	0	0
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	0	996	5	22	1349	0	244	24	1051	6	0	43
91	Tustin Street and Fairhaven Avenue	89	514	90	235	2026	40	68	258	444	306	338	442
92	Tustin Avenue and Santa Clara Avenue	73	397	74	127	2600	82	101	255	186	118	244	122
93	Tustin Avenue and 17th Street	111	198	236	602	1737	19	187	738	126	488	770	188
94	Tustin Avenue and 4th Street	48	245	219	664	845	262	114	676	28	103	579	376
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	421	63	498	50	30	8	28	1104	408	399	940	123
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	227	60	38	14	344	504	253	153	146	8	223	4
97	Red Hill Avenue and Edinger Avenue	81	299	85	226	960	450	190	611	130	224	1085	152
98	Red Hill Avenue and Warner Avenue	56	339	46	19	891	179	202	343	253	98	349	62
99	Red Hill Avenue and Barranca Parkway	127	316	104	199	876	115	118	710	281	578	645	126
100	Red Hill Avenue and Alton Parkway	174	512	321	251	1141	183	9	28	28	223	189	106
101	Red Hill Avenue and MacArthur Boulevard	64	569	10	208	537	492	1248	645	106	23	223	571
102	Red Hill Avenue and Main Street	162	556	361	67	313	108	139	1309	254	154	309	73
103	I-5 SB Ramps and Santa Ana Boulevard	0	0	0	367	0	36	323	554	0	0	1130	330

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
104	Tustin Ranch Road and Warner Avenue	0	0	0	265	0	33	18	238	0	0	1717	395
105	Von Karman Avenue and Barranca Parkway	107	142	85	119	1164	509	130	488	163	769	1263	39

Table 4-2 Existing Year 2020 Volumes – PM Peak Hour

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Euclid Street and Bolsa Avenue	159	1477	119	185	1053	199	212	678	106	217	909	217
2	Euclid Street and McFadden Avenue	175	1426	92	110	1354	164	183	419	185	127	532	246
3	Euclid Street and Edinger Avenue	526	1572	112	122	803	204	161	622	186	91	840	136
4	Newhope Street and Hazard Avenue	116	1281	50	49	1038	124	108	214	131	32	202	58
5	Newhope Street and McFadden Avenue	202	1084	190	164	733	142	81	496	72	107	589	168
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	88	1992	0	0	1519	49	93	0	78	593	80	170
7	Trask Avenue and SR-22 EB On-Ramp	0	0	0	0	0	0	838	628	0	0	606	57
8	Harbor Boulevard and Westminster Avenue	276	1374	325	207	1430	165	187	667	32	230	797	181
9	Harbor Boulevard and 1st Street	287	1480	164	278	1218	164	188	766	145	230	1073	175
10	Harbor Boulevard and McFadden Avenue	167	1716	125	298	1273	115	214	520	65	211	506	146
11	Harbor Boulevard and Edinger Avenue	282	1773	214	283	822	75	134	564	100	140	813	271
12	Harbor Boulevard and Warner Avenue	774	3713	279	274	1525	182	241	1707	390	260	2700	862
13	Harbor Boulevard and Segerstrom Avenue	299	1881	60	91	1027	91	111	552	181	99	1074	390
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	1201	7	70	12	4	14	36	891	160	25	2350	12
15	Harbor Boulevard and MacArthur Boulevard	588	1519	88	213	1073	176	140	489	181	87	1467	276
16	Harbor Boulevard and Sunflower Avenue	178	1771	263	112	1393	42	67	182	189	254	533	199
17	Harbor Boulevard and I-405 NB Off-Ramp	0	1529	0	0	2475	0	0	0	0	701	0	1132
18	Harbor Boulevard and I-405 SB Off-Ramp	0	1861	0	0	2147	0	157	0	722	0	0	0
19	Fairview Street and Civic Center Drive	5	1430	402	144	1338	0	2	5	4	438	0	162
20	Fairview Street and 1st Street	149	1094	99	203	1264	251	215	870	151	159	1204	186
21	Fairview Street and McFadden Avenue	159	1462	127	155	1257	196	244	659	163	158	545	134
22	Fairview Street and Edinger Avenue	188	1793	110	198	616	151	230	703	188	373	789	173
23	Fairview Street and Warner Avenue	217	1728	161	188	951	96	197	955	148	188	1108	240
24	Fairview Street and MacArthur Boulevard	243	1672	91	171	955	88	280	731	246	179	1365	239
25	Fairview Road and Sunflower Avenue	201	1806	393	144	1196	83	203	430	95	265	664	173

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
26	Greenville Street and Edinger Avenue	327	0	218	0	0	0	0	982	200	95	1128	0
27	Greenville Street and Segerstrom Avenue	57	476	36	61	200	61	108	823	47	27	1037	148
28	Raitt Street and McFadden Avenue	58	835	130	45	474	76	126	747	65	88	742	102
29	Raitt Street and Edinger Avenue	190	816	229	111	384	96	139	961	137	86	972	87
30	Bear Street and MacArthur Boulevard	200	962	251	112	271	82	97	910	94	93	1673	266
31	Bristol Street and 17th Street	236	1148	191	243	1293	220	336	750	136	284	1069	362
32	Bristol Street and Civic Center Drive	200	1399	73	136	1250	128	190	534	63	169	723	82
33	Bristol Street and Santa Ana Boulevard	75	1524	87	105	1402	53	59	163	38	233	371	100
34	Bristol Street and 1st Street	286	1235	182	206	1115	252	189	1062	136	217	1330	126
35	Bristol Street and McFadden Avenue	213	1566	85	84	1171	270	262	512	102	97	504	59
36	Bristol Street and Warner Avenue	309	1157	211	251	838	163	193	868	153	173	1021	299
37	Bristol Street and Segerstrom Avenue	179	1322	233	92	843	176	200	716	57	119	1074	54
38	Bristol Street and Alton Avenue	43	1681	158	119	896	56	75	105	195	91	150	29
39	Bristol Street and MacArthur Boulevard	335	1428	260	223	821	129	357	796	169	265	1536	290
40	Bristol Street and Sunflower Avenue	645	1363	220	201	750	215	293	573	222	263	1012	322
41	Bristol Street and I-405 NB Ramps	0	2094	183	0	2148	20	0	0	194	357	306	1184
42	Bristol Street and I-405 SB Ramps	127	1555	0	0	1506	880	740	0	331	0	0	0
43	Flower Street and Santa Ana Boulevard	124	754	62	104	530	48	134	386	63	146	510	151
44	Flower Street and 1st Street	132	625	149	170	466	135	139	1217	101	210	1415	147
45	Flower Street and McFadden Avenue	42	567	35	46	352	57	64	478	19	48	595	85
46	Flower Street and Segerstrom Avenue	120	843	80	66	369	106	158	786	83	75	1258	81
47	Flower Street and MacArthur Boulevard	133	634	74	85	205	197	209	994	63	62	1989	177
48	Main Street and La Veta Avenue	307	938	439	145	911	235	296	422	189	257	513	206
49	Main Street and Mainplace Drive / Memory Lane	90	945	179	51	1055	139	293	325	87	185	151	73
50	Main Street and 17th Street	197	1019	222	173	757	117	221	1237	73	178	1089	72
51	Main Street and Civic Center Drive	89	1126	94	61	995	63	159	881	105	38	384	39
52	Main Street and Santa Ana Boulevard	54	1229	0	0	1083	53	0	0	0	65	656	85
53	Main Street and 4th Street	0	1055	50	0	1037	47	0	98	55	0	181	46

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
54	Main Street and 1st Street	169	826	72	175	671	143	120	1214	90	114	1275	89
55	Main Street and McFadden Avenue	146	1147	71	134	908	66	78	345	42	85	480	216
56	Main Street and Edinger Avenue	99	1050	48	122	609	83	127	752	84	97	1296	134
57	Main Street and MacArthur Boulevard	488	1169	321	283	368	278	298	613	59	198	1570	456
58	Penn Way and 17th Street	848	0	414	0	0	0	0	1590	513	123	1440	0
59	Santiago Street / I-5 NB Ramps and 17th Street	345	46	18	51	0	133	120	1099	722	0	1525	41
60	Penn Way and I-5 SB Ramps	0	363	238	550	127	0	0	0	0	175	0	150
61	Santiago Street and Civic Center Drive	97	299	30	13	187	48	266	76	269	14	19	18
62	Santiago Street and Santa Ana Boulevard	36	133	84	297	120	61	71	649	20	73	492	187
63	Standard Avenue and 4th Street	-	-	-	-	-	-	-	-	-	-	-	-
64	Standard Avenue and 1st Street	185	367	119	19	189	23	177	1218	129	91	1148	21
65	Standard Avenue and McFadden Avenue	169	667	82	137	300	52	53	351	60	117	712	206
66	Halladay Street and Warner Avenue	169	0	352	0	0	0	2	926	93	141	1121	0
67	Halladay Street and Dyer Road	41	180	208	114	15	32	150	1298	9	45	1451	116
68	SR-55 SB Ramps and MacArthur Boulevard	0	0	0	288	0	697	0	1167	1040	0	1532	602
69	SR-55 NB Ramps and MacArthur Boulevard	641	0	426	0	0	0	0	711	731	0	1501	1081
70	SR-55 SB Ramps and Dyer Road	319	10	240	103	226	110	65	1523	207	556	991	64
71	Glassell Street and La Veta Avenue	472	490	160	15	499	37	82	268	461	155	280	11
72	Glassell Street and SR-22 WB Ramps	557	910	0	0	878	255	0	0	0	201	7	357
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	0	1202	307	381	681	0	229	4	503	0	0	0
74	Grand Avenue and Fairhaven Avenue	46	1214	243	222	894	82	79	45	33	255	48	181
75	Grand Avenue and Santa Clara Avenue	88	1185	246	220	868	220	159	194	36	136	244	260
76	Grand Avenue and 17th Street	246	877	221	270	582	128	346	886	149	300	1107	201
77	Grand Avenue and I-5 NB Ramps	0	1297	1001	48	1164	0	0	0	0	143	0	172
78	Grand Avenue and Santa Ana Boulevard	167	1888	31	34	750	532	328	200	316	20	134	97
79	Grand Avenue and 1st Street	165	1261	38	120	706	282	277	918	91	151	941	173
80	Grand Avenue and Chestnut Avenue	140	1050	182	149	664	112	93	285	62	107	333	194
81	Grand Avenue and McFadden Avenue	202	1150	198	138	626	168	128	476	83	86	686	151

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
82	Grand Avenue and Edinger Avenue	242	1397	121	165	408	229	201	868	70	74	1333	173
83	Grand Avenue and Warner Avenue	242	873	193	146	471	217	342	656	142	151	964	316
84	SR-55 NB Ramps and Dyer Road	188	0	51	0	0	0	0	1339	681	0	1545	965
85	Cambridge Street and La Veta Avenue	191	266	0	0	196	181	219	0	144	0	0	0
86	Cambridge Street and Fairhaven Avenue	0	0	0	219	0	76	141	246	0	0	273	340
87	Mabury Street and 1st Street	25	0	256	207	88	390	0	1512	24	40	549	0
88	Tustin Street and La Veta Avenue	46	1033	245	90	801	15	13	5	20	183	5	112
89	Tustin Street and SR-22 WB On-Ramp	532	1529	0	0	711	365	0	0	0	0	0	0
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	0	1547	4	52	707	0	458	41	581	28	0	67
91	Tustin Street and Fairhaven Avenue	239	1275	113	327	862	99	80	180	147	94	208	196
92	Tustin Avenue and Santa Clara Avenue	163	789	121	183	1444	100	61	192	113	125	157	148
93	Tustin Avenue and 17th Street	216	926	476	346	371	37	444	872	118	229	753	419
94	Tustin Avenue and 4th Street	55	598	194	459	339	124	180	642	33	88	596	367
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	377	30	398	110	50	37	35	1258	354	385	1003	120
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	583	174	34	8	97	373	104	36	21	23	348	16
97	Red Hill Avenue and Edinger Avenue	159	1146	182	145	289	234	327	838	102	62	803	392
98	Red Hill Avenue and Warner Avenue	382	1308	150	58	223	283	222	603	94	25	525	69
99	Red Hill Avenue and Barranca Parkway	356	1339	345	185	313	147	203	753	99	127	966	282
100	Red Hill Avenue and Alton Parkway	27	1499	217	124	528	4	132	324	166	433	74	267
101	Red Hill Avenue and MacArthur Boulevard	125	809	10	286	594	1042	597	275	42	39	818	574
102	Red Hill Avenue and Main Street	416	897	242	74	538	292	198	705	191	279	1589	89
103	I-5 SB Ramps and Santa Ana Boulevard	0	0	0	278	0	61	561	634	0	0	668	183
104	Tustin Ranch Road and Warner Avenue	0	0	0	653	0	45	54	1795	0	0	548	236
105	Von Karman Avenue and Barranca Parkway	224	1290	281	67	343	236	560	1023	143	204	646	220

4.3 EXISTING YEAR (2020) VEHICLE MILES TRAVELED (VMT)

Table 4-3 presents the VMT analysis results for the existing year (2020) scenario. VMT calculations are based on the scenario parameters and methodology as described in Sections 2.5 and 3.1, respectively.

Table 4-3 Existing Year (2020) VMT Summary

	I – I VMT	I – X VMT	X – I VMT	Total VMT	Service Population	VMT/SP
City	697,779	5,356,504	5,352,841	11,407,124	507,924	22.5
County	48,242,429	25,463,887	25,637,825	99,344,141	3,834,949	25.9

SP = Service Population = Total Employees + Total Population. Reduction factor applied to Total Employees as noted in Section 3.1 and shown in Appendix F. I-I = Internal-Internal; I-X = Internal-External; X-I = External-Internal.

4.4 EXISTING YEAR (2020) ROADWAY SEGMENT LEVEL OF SERVICE

Table 4-4 includes the 24-hour count locations, volumes, and corresponding roadway segment level of service. The following study roadway segments currently operate at a deficient LOS:

- Segment 4 – Harbor Boulevard from Westminster Avenue/17th Street to Hazard Avenue
- Segment 11 – Bristol Street from 17th Street to Santa Clara Avenue
- Segment 13 – Bristol Street from 17th Street to Washington Avenue
- Segment 14 – Fairview Street from Trask Avenue to 17th Street
- Segment 17 – Flower Street from 1st Street to Bishop Street
- Segment 23 – Main Street from 1st Street to Bishop Street
- Segment 25 – Grand Avenue from Santa Ana Boulevard to 4th Street
- Segment 39 – Bristol Street from Edinger Avenue to Warner Avenue
- Segment 44 – Edinger Avenue from Flower Street to Main Street
- Segment 45 – Main Street from McFadden Avenue to Edinger Avenue
- Segment 58 – McFadden Avenue from Bristol Street to Flower Street

Table 4-4 Existing Year (2020) Roadway Segment LOS

ID	Street	Segment	Lanes	ADT	LOS
1	1st Street	Euclid Street to Ward Street	6D	25,233	A
2	Euclid Street	1st Street to McFadden Avenue	6D	40,731	C
3	Westminster Avenue	Harbor Boulevard to Fairview Street	6D	30,459	A
4	Harbor Boulevard	Westminster Avenue/17th Street to Hazard Avenue	6D	54,137	E
5	1st Street	Harbor Boulevard to Jackson	6D	32,736	A
6	Edinger Avenue	Harbor Boulevard to Fairview Street	4D	27,838	C
7	Warner Avenue	Harbor Boulevard to Fairview Street	6D	31,945	A
8	Harbor Boulevard	Segerstrom Avenue to MacArthur Boulevard	6D	15,622	A
9	Fairview Street	1st Street to Willits Street	6D	42,605	C
10	1st Street	Sullivan Street to Raitt Street	6D	36,377	B
11	Bristol Street	17th Street to Santa Clara Avenue	4D	45,676	F
12	17th Street	College Avenue to Bristol Street	6D	37,345	B
13	Bristol Street	17th Street to Washington Avenue	4D	42,005	F
14	Fairview Street	Trask Avenue to 17th Street	4D	40,432	F
15	Bristol Street	1st Street to Bishop Street	6D	42,663	C
16	Civic Center Drive	Bristol Street to Flower Street	4D	17,589	A
17	Flower Street	1st Street to Bishop Street	2U	15,622	F
18	Main Street	17th Street to 20th Street	4D	32,044	D
19	Main Street	Washington Street to Civic Center Drive	4D	33,489	D
20	Civic Center Drive	Flower Street to Ross Street	4D	17,427	A
21	Santa Ana Boulevard	Flower Street to Ross Street	6D	14,689	A
22	1st Street	Main Street to Standard Avenue	6D	42,699	C
23	Main Street	1st Street to Bishop Street	4U	30,125	F
24	Grand Avenue	Santa Clara Avenue to Fairhaven Street	4D	30,206	D
25	Grand Avenue	Santa Ana Boulevard to 4th Street	4D	36,678	E
26	Santa Clara Avenue	Grand Avenue to Tustin Avenue	2U	10,585	D
27	Tustin Avenue	Santa Clara Avenue to Fairhaven Street	6D	35,410	B
28	17th Street	Cabrillo Park Drive to Tustin Avenue	4D	32,080	D
29	Tustin Avenue	Fruit Street to 4th Street	6D	25,174	A
30	1st Street	Grand Avenue to Elk Lane	6D	28,638	A
31	1st Street	Cabrillo Park Drive to Tustin Avenue	6D	22,083	A
32	Fairview Street	Edinger Avenue to Harvard Street	6D	37,524	B
33	Fairview Street	Warner Avenue to Segerstrom Avenue	6D	39,878	C
34	MacArthur Boulevard	Harbor Boulevard to Fairview Street	6D	26,235	A
35	Edinger Avenue	Fairview Street to Greenville Street	4D	29,115	C
36	McFadden Avenue	Fairview Street to Raitt Street	4D	20,997	A
37	MacArthur Boulevard	Fairview Street to Raitt Street	6D	28,809	A
38	Segerstrom Avenue	Fairview Street to Raitt Street	4D	19,326	A
39	Bristol Street	Edinger Avenue to Warner Avenue	4D	37,238	E
40	Bristol Street	Warner Avenue to Segerstrom Avenue	6D	38,007	B

ID	Street	Segment	Lanes	ADT	LOS
41	Warner Avenue	Raitt Street to Bristol Street	5D	34,555	C
42	Bristol Street	MacArthur Boulevard to Sunflower Avenue	6D	34,731	B
43	Flower Street	Warner Avenue to Segerstrom Avenue	4D	15,378	A
44	Edinger Avenue	Flower Street to Main Street	4D	36,534	E
45	Main Street	McFadden Avenue to Edinger Avenue	4U	28,622	F
46	Main Street	Edinger Avenue to Warner Avenue	4D	27,972	C
47	Main Street	Warner Avenue to Dyer Road	5D	30,484	B
48	Segerstrom Avenue	Bristol Street to Flower Street	4D	22,959	B
49	MacArthur Boulevard	Flower Street to Main Street	6D	37,946	B
50	Main Street	MacArthur Boulevard to Sunflower Avenue	6D	23,692	A
51	Grand Avenue	Edinger Avenue to Warner Avenue	6D	17,735	A
52	Edinger Avenue	Richie Street to Newport Avenue	6D	40,435	C
53	Warner Avenue	Grand Avenue to Red Hill Avenue	6D	22,435	A
54	Warner Avenue	Main Street to Standard Avenue	6D	27,391	A
55	McFadden Avenue	Newhope Street to Harbor Boulevard	4D	18,495	A
56	McFadden Avenue	Standard Avenue to Grand Avenue	4D	20,188	A
57	Dyer Road	Red Hill Avenue to Pullman Street	6D	31,248	A
58	McFadden Avenue	Bristol Street to Flower Street	2U	14,951	F
59	Main Street	La Veta Avenue to Memory Lane	6D	31,004	A
60	1st Street	Bristol Street to Flower Street	6D	39,006	B

Notes:
(1) ADT – Average Daily Traffic Volumes
(2) LOS – Level of Service
(3) #D – total number of lanes in both directions divided by raised or striped median; #U – total number of undivided lanes in both directions
(4) LOS E is based on criteria established by the City of Santa Ana

4.5 EXISTING YEAR (2020) INTERSECTION LEVEL OF SERVICE

A summary of the AM and PM peak hour level of service analysis results for the existing year (2020) existing condition are included in Table 4-5. Intersections are general considered unacceptable if the level of service (LOS) is “E” or “F”. It should be noted that Caltrans and CMP intersection have a minimum acceptable LOS of C and E, respectively. The following intersections are forecast to have unacceptable level of service in the existing year (2020) condition; all intersections are under the jurisdiction of the City of Santa Ana.

- INT 2 – Euclid street and McFadden Avenue (City of Santa Ana)
- INT 12 – Harbor Boulevard and Warner Avenue (City of Santa Ana – CMP)
- INT 13 – Harbor Boulevard and Segerstrom Avenue (City of Santa Ana)
- INT 14 – Hyland Avenue and MacArthur Boulevard (City of Santa Ana)
- INT 37 – Bristol Street and Segerstrom Avenue (City of Santa Ana)
- INT 45 – Flower Street and McFadden Avenue (City of Santa Ana)
- INT 47 – Flower Street and MacArthur Boulevard (City of Santa Ana)
- INT 82 – Grand Avenue and Edinger Avenue (City of Santa Ana)
- INT 91 – Tustin Street and Fairhaven Avenue (City of Santa Ana)

Table 4-5: Existing Year (2020) LOS Summary

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
1	Euclid Street and Bolsa Avenue	0.85	D	0.87	D
2	Euclid Street and McFadden Avenue	0.91	E	0.83	D
3	Euclid Street and Edinger Avenue	0.86	D	0.79	C
4	Newhope Street and Hazard Avenue	0.71	C	0.64	B
5	Newhope Street and McFadden Avenue	0.83	D	0.84	D
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	27.4	C	23.6	C
7	Trask Avenue and SR-22 EB On-Ramp	11.5	B	12.4	B
8	Harbor Boulevard and Westminster Avenue	0.82	D	0.79	C
9	Harbor Boulevard and 1st Street	0.81	D	0.83	D
10	Harbor Boulevard and McFadden Avenue	0.79	C	0.81	D
11	Harbor Boulevard and Edinger Avenue	0.77	C	0.70	B
12	Harbor Boulevard and Warner Avenue	0.81	D	1.58	F
13	Harbor Boulevard and Segerstrom Avenue	0.98	E	0.90	D
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	0.61	B	0.92	E
15	Harbor Boulevard and MacArthur Boulevard	0.75	C	0.82	D
16	Harbor Boulevard and Sunflower Avenue	0.70	B	0.78	C
17	Harbor Boulevard and I-405 NB Off-Ramp	19.7	B	23.7	C
18	Harbor Boulevard and I-405 SB Off-Ramp	13.2	B	19.4	B
19	Fairview Street and Civic Center Drive	0.67	B	0.66	B
20	Fairview Street and 1st Street	0.87	D	0.88	D
21	Fairview Street and McFadden Avenue	0.79	C	0.80	C
22	Fairview Street and Edinger Avenue	0.75	C	0.81	D
23	Fairview Street and Warner Avenue	0.85	D	0.85	D
24	Fairview Street and MacArthur Boulevard	0.70	B	0.83	D
25	Fairview Road and Sunflower Avenue	0.71	C	0.71	C
26	Greenville Street and Edinger Avenue	0.56	A	0.59	A
27	Greenville Street and Segerstrom Avenue	0.73	C	0.69	B
28	Raitt Street and McFadden Avenue	0.72	C	0.72	C
29	Raitt Street and Edinger Avenue	0.85	D	0.86	D
30	Bear Street and MacArthur Boulevard	0.74	C	0.87	D
31	Bristol Street and 17th Street	0.73	C	0.69	B
32	Bristol Street and Civic Center Drive	0.83	D	0.83	D
33	Bristol Street and Santa Ana Boulevard	0.67	B	0.66	B
34	Bristol Street and 1st Street	0.75	C	0.78	C
35	Bristol Street and McFadden Avenue	0.75	C	0.75	C
36	Bristol Street and Warner Avenue	0.77	C	0.79	C
37	Bristol Street and Segerstrom Avenue	0.79	C	0.91	E
38	Bristol Street and Alton Avenue	0.56	A	0.69	B
39	Bristol Street and MacArthur Boulevard	0.74	C	0.81	D

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
40	Bristol Street and Sunflower Avenue	0.64	B	0.69	B
41	Bristol Street and I-405 NB Ramps	19.1	B	28.2	C
42	Bristol Street and I-405 SB Ramps	22.3	C	18.4	B
43	Flower Street and Santa Ana Boulevard	0.60	A	0.57	A
44	Flower Street and 1st Street	0.80	C	0.75	C
45	Flower Street and McFadden Avenue	0.82	D	0.92	E
46	Flower Street and Segerstrom Avenue	0.77	C	0.90	D
47	Flower Street and MacArthur Boulevard	0.70	B	0.91	E
48	Main Street and La Veta Avenue	0.57	A	0.63	B
49	Main Street and Mainplace Drive / Memory Lane	0.49	A	0.47	A
50	Main Street and 17th Street	0.82	D	0.73	C
51	Main Street and Civic Center Drive	0.76	C	0.80	C
52	Main Street and Santa Ana Boulevard	0.67	B	0.61	B
53	Main Street and 4th Street	0.49	A	0.54	A
54	Main Street and 1st Street	0.76	C	0.80	C
55	Main Street and McFadden Avenue	0.90	D	0.85	D
56	Main Street and Edinger Avenue	0.83	D	0.85	D
57	Main Street and MacArthur Boulevard	0.74	C	0.78	C
58	Penn Way and 17th Street	11.2	B	20.7	C
59	Santiago Street / I-5 NB Ramps and 17th Street	31.2	C	19.5	B
60	Penn Way and I-5 SB Ramps	19.0	B	22.0	C
61	Santiago Street and Civic Center Drive	16.9	C	17.1	C
62	Santiago Street and Santa Ana Boulevard	0.55	A	0.57	A
63*	Standard Avenue and 4th Street	-	-	-	-
64	Standard Avenue and 1st Street	0.80	C	0.84	D
65	Standard Avenue and McFadden Avenue	0.61	B	0.68	B
66	Halladay Street and Warner Avenue	0.66	B	0.68	B
67	Halladay Street and Dyer Road	0.57	A	0.78	C
68	SR-55 SB Ramps and MacArthur Boulevard	19.8	B	17.3	B
69	SR-55 NB Ramps and MacArthur Boulevard	19.2	B	14.8	B
70	SR-55 SB Ramps and Dyer Road	23.7	C	25.7	C
71	Glassell Street and La Veta Avenue	0.60	A	0.62	B
72	Glassell Street and SR-22 WB Ramps	28.5	C	24.8	C
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	27.0	C	26.5	C
74	Grand Avenue and Fairhaven Avenue	0.68	B	0.68	B
75	Grand Avenue and Santa Clara Avenue	0.89	D	0.75	C
76	Grand Avenue and 17th Street	0.80	C	0.83	D
77	Grand Avenue and I-5 NB Ramps	12.9	B	10.0	A
78	Grand Avenue and Santa Ana Boulevard	23.8	C	21.1	C
79	Grand Avenue and 1st Street	0.80	C	0.79	C

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
80	Grand Avenue and Chestnut Avenue	0.71	C	0.62	B
81	Grand Avenue and McFadden Avenue	0.83	D	0.76	C
82	Grand Avenue and Edinger Avenue	0.76	C	0.91	E
83	Grand Avenue and Warner Avenue	0.53	A	0.70	B
84	SR-55 NB Ramps and Dyer Road	16.3	B	5.7	A
85	Cambridge Street and La Veta Avenue	17.3	C	12.5	B
86	Cambridge Street and Fairhaven Avenue	0.56	A	0.58	A
87	Mabury Street and 1st Street	28.3	C	26.1	C
88	Tustin Street and La Veta Avenue	0.52	A	0.44	A
89	Tustin Street and SR-22 WB On-Ramp	12.9	B	12.1	B
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	24.2	C	23.7	C
91	Tustin Street and Fairhaven Avenue	0.98	E	0.61	B
92	Tustin Avenue and Santa Clara Avenue	0.87	D	0.65	B
93	Tustin Avenue and 17th Street	0.75	C	0.72	C
94	Tustin Avenue and 4th Street	0.70	B	0.69	B
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	24.4	C	25.1	C
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	24.0	C	27.4	C
97	Red Hill Avenue and Edinger Avenue	0.57	A	0.67	B
98	Red Hill Avenue and Warner Avenue	0.49	A	0.59	A
99	Red Hill Avenue and Barranca Parkway	0.58	A	0.56	A
100	Red Hill Avenue and Alton Parkway	0.52	A	0.67	B
101	Red Hill Avenue and MacArthur Boulevard	0.66	B	0.66	B
102	Red Hill Avenue and Main Street	0.67	B	0.77	C
103	I-5 SB Ramps and Santa Ana Boulevard	17.4	B	18.9	B
104	Tustin Ranch Road and Warner Avenue	0.48	A	0.61	B
105	Von Karman Avenue and Barranca Parkway	0.76	C	0.87	D

Notes: (1) LOS – Level of Service; (2) V/C – Volume to Capacity
*Intersection does not currently exist; assessed in future scenarios only.

5.0 Future Year 2045 Forecast Modeling

5.1 ORANGE COUNTY TRANSPORTATION AUTHORITY MODEL (OCTAM)

The Orange County Transportation Authority (OCTA) is responsible for regional transportation planning in Orange County. OCTA's role as the regional planning agency is to plan for and evaluate multi-modal transportation alternatives to support regional planning activities. The Orange County Transportation Authority Model (OCTAM) is OCTA's regional model that is based on the traditional four-step sequential modeling methodology with "feedback loops" procedures to insure internal modeling consistency. The model incorporates multi-modal analytical capabilities to analyze the following modes of travel: local and express bus transit, urban rail, commuter rail, toll roads, carpools, truck traffic, as well as non-motorized transportation which includes pedestrian and bicycle trips. The model responds to changes in land use types, household characteristics, transportation infrastructure, and travel costs such as transit fares, parking costs, tolls, and auto operating costs.

5.2 PEAK HOUR FORECASTS

The future year 2040 volumes were derived based on existing peak hour count data and forecast link volumes obtained from the Orange County Transportation Analysis Model (OCTAM 5.0). OCTAM 5.0 (TransCad) is the accepted sub-regional model for forecasting travel demand for Orange County. Growth factors for each intersection approach and departure were interpolated from OCTAM 5.0 link plots for the baseline 2016 and 2045 scenarios. These growth factors were then applied to existing counts to forecast future turning movement volumes at each of the study intersections.

5.2.1 Turning Movement Development

It should be noted that Intersection #63 (Standard Avenue and 4th Street) does not currently exist, but is assumed to be constructed in the future year (2045) scenarios. Turning movement volumes for this intersection were developed through use of a post-processor. Because this intersection may affect local travel patterns, turning movement volumes for two adjacent intersections were also developed using this method. These intersections are #62 (Santiago Street and Santa Ana Boulevard) and #64 (Standard Avenue and 1st Street).

The process of converting link level traffic volumes to turning movement volumes is called "post processing." The fundamental theory behind the post-processor is the belief that with proper calibration, travel demand models provide good forecasts at the link level. Turning level forecasts are obtainable from the model, but the reliability of the forecast breaks down at this level of detail, and the abstraction of reality into numerical methods becomes apparent. The frictionless nature of left and right turns in the travel demand model allow them to occur as easily as through movements, which does not represent a realistic situation.

IBI Group has developed a spreadsheet-based postprocessor that uses existing turning movement volumes or split percentages along with forecast link-level data to determine future turn movement volumes at selected intersections. For intersections where existing data is not available (#63), assumed split percentages of 50% for the through movements, 25% for the right turn movements, and 25% for the left turn movements are used.

The postprocessor generates another solution to the possible combination of turning movements at a given intersection. There are numerous approaches to post processing. The IBI Group postprocessor utilizes a procedure documented in Chapter 8 of the National Cooperative Highway Research Program Report 255. It uses an iterative process to balance the intersection throughput volumes, which provides the best combination of reasonable turning movement volumes and traceability of results. Most

importantly, the model link volumes (especially the approach intersection volumes) are maintained when using this methodology.

The "post processing" method can be summarized into the following steps:

1. If existing peak hour turning movement volumes are not available, calculate a base set of turning volumes from the known/assumed splits and the peak hour approach link volumes.
2. Calculate the inbound and outbound volumes for each leg of the intersection from the initial set of turning volumes.
3. Multiply the inbound volumes by the ratio of the forecast inbound volume to the calculated inbound volume for each leg. The calculated inbound volumes should now match the forecast inbound volumes.
4. Multiply the new volumes by the ratio of the forecast outbound volume to the calculated outbound volume for each leg. The calculated outbound volumes should now match the forecast outbound volumes for each leg, but the calculated inbound volumes may no longer be equal to the forecast inbound volumes.
5. Compare the calculated approach and departure volumes with the forecast approach and departure volumes.
6. If the deviation is within the tolerance level, the solution is obtained.
7. If the deviation is not within the tolerance level, repeat steps 3 and 4.
8. Repeat this process until the tolerance is met.

5.2.2 Roadway Segment Forecasts

Forecast roadway segment volumes were also derived based on existing average daily traffic (ADT) volumes and forecast ADT link volumes obtained from OCTAM 5.0. Growth factors for each study roadway segment were interpolated from OCTAM 5.0 link plots for the 2016 and 2045 baseline scenarios. The growth factors were then applied to existing ADT counts to forecast future roadway segment ADT.

5.2.3 Santa Ana Fixed Guideway (OC Streetcar)

As described in Section 2.0 of this report, the OC Streetcar is a proposed streetcar service that would travel primarily along Santa Ana Boulevard and the Pacific Electric Right-of-Way (PEROW) between the Santa Ana Regional Transportation Center (SARTC) and Garden Grove (4 miles long). The streetcar is proposed to travel along an exclusive guideway or path on rails that are embedded in the pavement. The streetcar would adhere to the same signal operations as on-street automobiles for most locations where Transit Signal Priority is not implemented. Santa Ana Boulevard is reclassified between Raitt Street and Shelton Street from a four lane undivided roadway to a two lane roadway (divided with a center left turn lane or raised median with left turn pockets. The project also proposes to reconfigure portions of Santa Ana Boulevard between Raitt Street and SARTC to accommodate a bike lane on the north side of the street throughout the alignment as well as 14-inch high platforms. The Fixed Guideway service is proposed to run every 10 to 15 minutes from approximately 6:00 AM to 11:00 PM. Within OCTAM, the Fixed Guideway is modeled as ‘bus transit,’ which would translate to six extra trips assigned during the peak hour in the direction of operations.

6.0 Future Year (2045) No Project

This scenario is used as the point of comparison for the network alternatives and consists of the key elements presented in Section 2.6.

This scenario will serve as a base for comparison and establish impacts of the proposed With Project network. The Future Year 2045 No Project intersection geometries are the same as existing. The future year 2045 No Project volumes for the AM peak hour are shown in Table 6-1 and the PM peak hour volumes are shown in Table 6-2.

Table 6-1 Future Year (2045) No Project Volumes – AM Peak Hour

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Euclid Street and Bolsa Avenue	103	870	149	200	1785	101	252	937	177	190	606	194
2	Euclid Street and McFadden Avenue	162	1227	146	148	2062	171	255	521	323	151	335	127
3	Euclid Street and Edinger Avenue	127	801	68	168	2442	224	160	700	428	125	761	139
4	Newhope Street and Hazard Avenue	78	590	84	88	1302	119	108	276	204	119	397	159
5	Newhope Street and McFadden Avenue	77	342	120	122	1213	113	135	492	160	190	484	108
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	84	1534	0	0	1465	19	81	0	133	836	44	117
7	Trask Avenue and SR-22 EB On-Ramp	0	0	0	0	0	0	713	893	0	0	852	159
8	Harbor Boulevard and Westminster Avenue	178	1173	251	258	2021	115	192	1010	36	415	1124	306
9	Harbor Boulevard and 1st Street	95	756	163	236	1989	129	138	919	178	196	497	116
10	Harbor Boulevard and McFadden Avenue	104	1059	101	190	2004	67	177	462	138	138	311	89
11	Harbor Boulevard and Edinger Avenue	103	772	146	204	2349	68	123	743	373	191	424	176
12	Harbor Boulevard and Warner Avenue	109	665	169	429	1933	116	101	1440	379	138	723	122
13	Harbor Boulevard and Segerstrom Avenue	107	759	48	169	2274	85	82	689	278	140	434	98
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	86	4	24	8	2	19	7	1934	767	68	517	21
15	Harbor Boulevard and MacArthur Boulevard	131	920	94	295	1701	118	131	1183	357	128	427	127
16	Harbor Boulevard and Sunflower Avenue	221	1128	209	233	2204	54	13	153	59	139	178	101
17	Harbor Boulevard and I-405 NB Off-Ramp	0	1915	0	0	1978	0	0	0	0	399	0	702
18	Harbor Boulevard and I-405 SB Off-Ramp	0	1963	0	0	1253	0	475	0	529	0	0	0
19	Fairview Street and Civic Center Drive	7	1569	508	332	1915	8	7	25	25	100	3	52
20	Fairview Street and 1st Street	200	1538	289	245	1426	164	200	1153	179	120	539	181

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
21	Fairview Street and McFadden Avenue	141	1510	202	154	1878	136	221	522	120	147	380	30
22	Fairview Street and Edinger Avenue	200	883	123	223	1558	132	361	1002	268	421	553	110
23	Fairview Street and Warner Avenue	222	981	129	194	1543	113	68	991	295	267	807	261
24	Fairview Street and MacArthur Boulevard	261	811	94	290	1460	163	121	984	145	235	494	140
25	Fairview Road and Sunflower Avenue	185	1071	163	191	1627	104	49	322	65	357	299	154
26	Greenville Street and Edinger Avenue	186	0	251	0	0	0	0	1821	444	153	813	0
27	Greenville Street and Segerstrom Avenue	47	193	78	154	472	160	46	1035	165	190	768	88
28	Raitt Street and McFadden Avenue	67	618	98	123	938	128	122	743	95	146	461	82
29	Raitt Street and Edinger Avenue	197	524	189	163	770	91	324	1980	285	122	954	56
30	Bear Street and MacArthur Boulevard	71	245	104	199	756	300	92	1581	108	62	1041	88
31	Bristol Street and 17th Street	251	1292	218	487	2001	263	324	963	156	368	845	280
32	Bristol Street and Civic Center Drive	133	1178	104	403	1628	101	165	836	103	127	421	87
33	Bristol Street and Santa Ana Boulevard	69	1502	209	153	1684	46	171	831	72	185	462	79
34	Bristol Street and 1st Street	205	1430	181	315	1298	183	200	1231	124	90	678	99
35	Bristol Street and McFadden Avenue	125	1117	56	204	1986	205	309	531	261	262	729	84
36	Bristol Street and Warner Avenue	221	993	183	600	2033	230	165	919	229	231	1058	180
37	Bristol Street and Segerstrom Avenue	70	778	146	283	1011	119	280	1354	125	134	607	78
38	Bristol Street and Alton Avenue	11	739	55	230	1591	36	164	101	211	41	87	31
39	Bristol Street and MacArthur Boulevard	102	531	133	329	1434	150	166	1203	244	159	758	110
40	Bristol Street and Sunflower Avenue	111	546	161	242	1370	103	112	926	375	295	480	166
41	Bristol Street and I-405 NB Ramps	0	1638	210	0	1918	8	0	0	36	145	87	796
42	Bristol Street and I-405 SB Ramps	125	1225	0	0	1030	886	696	0	636	0	0	0
43	Flower Street and Santa Ana Boulevard	100	936	136	214	723	97	211	1315	150	143	458	191
44	Flower Street and 1st Street	139	602	159	334	1058	111	148	1355	54	209	861	123
45	Flower Street and McFadden Avenue	70	511	44	118	655	95	112	1278	97	113	764	103
46	Flower Street and Segerstrom Avenue	86	451	100	98	544	120	223	1531	427	104	764	84
47	Flower Street and MacArthur Boulevard	26	170	88	167	361	270	151	1716	73	62	1049	67

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
48	Main Street and La Veta Avenue	105	724	375	198	1034	173	361	510	222	316	276	230
49	Main Street and Mainplace Drive / Memory Lane	34	920	301	36	1386	290	185	291	20	132	151	10
50	Main Street and 17th Street	133	788	169	237	1322	85	127	1336	67	356	1425	21
51	Main Street and Civic Center Drive	142	925	81	55	970	148	120	727	132	43	566	34
52	Main Street and Santa Ana Boulevard	66	1050	0	0	1135	100	0	0	0	90	1250	96
53	Main Street and 4th Street	0	939	22	0	961	24	0	70	11	0	140	34
54	Main Street and 1st Street	103	532	54	77	772	57	106	1241	131	86	1072	60
55	Main Street and McFadden Avenue	93	874	44	162	1259	25	86	815	89	164	438	126
56	Main Street and Edinger Avenue	99	561	61	211	975	51	96	1248	168	108	630	77
57	Main Street and MacArthur Boulevard	51	295	250	539	709	160	230	1336	242	138	411	206
58	Penn Way and 17th Street	52	0	260	0	0	0	0	1341	684	214	1722	0
59	Santiago Street / I-5 NB Ramps and 17th Street	720	33	21	54	0	279	89	932	337	0	1245	20
60	Penn Way and I-5 SB Ramps	0	260	230	951	196	0	0	0	0	196	0	110
61	Santiago Street and Civic Center Drive	487	338	47	10	590	144	182	69	369	108	99	20
62	Santiago Street and Santa Ana Boulevard	188	611	303	409	972	253	118	732	99	297	699	258
63	Standard Avenue and 4th Street	191	473	248	431	604	332	298	624	219	250	550	340
64	Standard Avenue and 1st Street	45	631	312	123	901	41	161	1,959	121	194	1,282	120
65	Standard Avenue and McFadden Avenue	94	360	162	226	547	38	34	1178	142	150	397	89
66	Halladay Street and Warner Avenue	95	0	220	0	0	0	0	1833	207	260	986	0
67	Halladay Street and Dyer Road	15	24	65	450	91	96	46	1537	11	104	566	91
68	SR-55 SB Ramps and MacArthur Boulevard	0	0	0	998	0	903	0	1349	961	0	1187	135
69	SR-55 NB Ramps and MacArthur Boulevard	946	0	1017	0	0	0	0	1468	726	0	517	244
70	SR-55 SB Ramps and Dyer Road	286	34	654	50	242	60	37	1422	303	348	552	92
71	Glassell Street and La Veta Avenue	263	412	125	14	295	65	57	293	563	367	387	9
72	Glassell Street and SR-22 WB Ramps	511	574	0	0	1017	473	0	0	0	323	6	483
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	0	918	245	373	977	0	270	0	1058	0	0	0
74	Grand Avenue and Fairhaven Avenue	25	1007	145	239	1981	44	99	60	59	213	24	192
75	Grand Avenue and Santa Clara Avenue	81	566	145	413	2021	455	143	233	48	200	385	352

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
76	Grand Avenue and 17th Street	219	640	439	429	1797	353	198	739	94	342	894	98
77	Grand Avenue and I-5 NB Ramps	0	1056	610	90	2893	0	0	0	0	507	0	140
78	Grand Avenue and Santa Ana Boulevard	49	694	35	202	1670	1473	268	221	436	6	475	43
79	Grand Avenue and 1st Street	208	732	34	99	1432	174	436	1041	295	216	759	87
80	Grand Avenue and Chestnut Avenue	53	737	163	161	1937	53	34	239	63	130	384	239
81	Grand Avenue and McFadden Avenue	181	764	114	249	1672	163	205	663	201	123	440	111
82	Grand Avenue and Edinger Avenue	47	472	92	243	1244	243	347	1447	139	189	724	158
83	Grand Avenue and Warner Avenue	142	429	184	183	528	178	333	1188	467	92	406	137
84	SR-55 NB Ramps and Dyer Road	610	0	499	0	0	0	0	1618	647	0	599	361
85	Cambridge Street and La Veta Avenue	185	235	0	0	480	245	273	0	436	0	0	0
86	Cambridge Street and Fairhaven Avenue	0	0	0	567	0	183	80	216	0	0	195	152
87	Mabury Street and 1st Street	6	0	157	248	147	554	0	1230	13	38	579	0
88	Tustin Street and La Veta Avenue	7	301	87	67	1307	4	9	11	35	307	1	47
89	Tustin Street and SR-22 WB On-Ramp	614	571	0	0	1171	699	0	0	0	0	0	0
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	0	953	5	17	1049	0	275	27	1182	6	0	43
91	Tustin Street and Fairhaven Avenue	74	428	75	218	1879	37	68	258	444	239	265	346
92	Tustin Avenue and Santa Clara Avenue	78	422	79	108	2208	70	808	2040	1488	236	488	244
93	Tustin Avenue and 17th Street	111	198	236	650	1876	21	182	717	122	638	1007	246
94	Tustin Avenue and 4th Street	80	408	365	601	765	237	126	748	31	125	704	457
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	456	68	540	50	30	8	36	1426	527	510	1202	157
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	392	104	66	21	512	750	269	163	155	8	223	4
97	Red Hill Avenue and Edinger Avenue	101	374	106	195	828	388	397	1276	271	255	1234	173
98	Red Hill Avenue and Warner Avenue	68	414	56	20	935	188	273	464	342	120	427	76
99	Red Hill Avenue and Barranca Parkway	152	379	125	163	719	94	124	748	296	511	571	111
100	Red Hill Avenue and Alton Parkway	225	663	415	212	962	154	158	490	490	342	290	163
101	Red Hill Avenue and MacArthur Boulevard	83	742	13	186	481	441	1153	596	98	32	308	789
102	Red Hill Avenue and Main Street	201	691	449	56	261	90	139	1309	254	154	309	73

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
103	I-5 SB Ramps and Santa Ana Boulevard	0	0	0	382	0	38	332	569	0	0	1267	370
104	Tustin Ranch Road and Warner Avenue	0	0	0	141	0	18	27	357	0	0	2130	490
105	Von Karman Avenue and Barranca Parkway	401	533	319	104	1021	446	219	823	275	902	1482	46

Table 6-2 Future Year (2045) No Project Volumes – PM Peak Hour

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Euclid Street and Bolsa Avenue	169	1569	126	152	866	164	212	678	106	209	877	209
2	Euclid Street and McFadden Avenue	242	1973	127	96	1179	143	207	475	210	114	479	221
3	Euclid Street and Edinger Avenue	539	1610	115	136	897	228	141	544	163	128	1181	191
4	Newhope Street and Hazard Avenue	105	1159	45	46	982	117	75	148	91	88	556	160
5	Newhope Street and McFadden Avenue	188	1009	177	140	625	121	61	372	54	104	574	164
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	109	2457	0	0	1801	58	102	0	86	576	78	165
7	Trask Avenue and SR-22 EB On-Ramp	0	0	0	0	0	0	927	695	0	0	786	74
8	Harbor Boulevard and Westminster Avenue	237	1178	279	254	1752	202	215	768	37	357	1238	281
9	Harbor Boulevard and 1st Street	290	1497	166	245	1073	145	179	730	138	199	929	151
10	Harbor Boulevard and McFadden Avenue	169	1737	127	256	1094	99	241	585	73	198	474	137
11	Harbor Boulevard and Edinger Avenue	254	1597	193	290	843	77	109	460	81	196	1138	379
12	Harbor Boulevard and Warner Avenue	762	3656	275	262	1457	174	217	1539	352	249	2589	827
13	Harbor Boulevard and Segerstrom Avenue	273	1717	55	87	986	87	118	585	192	117	1269	461
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	1201	7	70	12	4	14	36	891	160	25	2350	12
15	Harbor Boulevard and MacArthur Boulevard	558	1441	83	204	1028	169	140	489	181	81	1373	258
16	Harbor Boulevard and Sunflower Avenue	154	1532	228	114	1417	43	81	220	229	301	632	236
17	Harbor Boulevard and I-405 NB Off-Ramp	0	1529	0	0	2570	0	0	0	0	496	0	801
18	Harbor Boulevard and I-405 SB Off-Ramp	0	1881	0	0	2281	0	177	0	815	0	0	0
19	Fairview Street and Civic Center Drive	6	1690	475	192	1784	0	2	6	4	424	0	157
20	Fairview Street and 1st Street	169	1241	112	236	1468	291	193	781	136	140	1060	164
21	Fairview Street and McFadden Avenue	164	1507	131	191	1553	242	158	427	106	158	545	134
22	Fairview Street and Edinger Avenue	184	1759	108	204	635	156	205	628	168	650	1375	302
23	Fairview Street and Warner Avenue	213	1695	158	182	921	93	168	815	126	168	989	214
24	Fairview Street and MacArthur Boulevard	225	1550	84	171	955	88	240	627	211	167	1272	223
25	Fairview Road and Sunflower Avenue	192	1725	375	140	1162	81	262	555	123	227	569	148

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
26	Greenville Street and Edinger Avenue	293	0	195	0	0	0	0	1061	216	153	1811	0
27	Greenville Street and Segerstrom Avenue	50	414	31	52	171	52	127	967	55	37	1414	202
28	Raitt Street and McFadden Avenue	61	872	136	51	533	86	108	640	56	98	827	114
29	Raitt Street and Edinger Avenue	171	736	206	114	396	99	125	862	123	192	2171	194
30	Bear Street and MacArthur Boulevard	273	1314	343	115	278	84	80	753	78	67	1211	193
31	Bristol Street and 17th Street	375	1823	303	337	1794	305	238	530	96	311	1170	396
32	Bristol Street and Civic Center Drive	222	1550	81	159	1458	149	195	549	65	184	789	89
33	Bristol Street and Santa Ana Boulevard	84	1702	97	117	1558	59	155	428	100	392	624	168
34	Bristol Street and 1st Street	392	1693	250	223	1209	273	160	900	115	196	1204	114
35	Bristol Street and McFadden Avenue	224	1649	90	111	1554	358	245	478	95	209	1088	127
36	Bristol Street and Warner Avenue	316	1182	216	338	1128	219	176	791	140	251	1481	434
37	Bristol Street and Segerstrom Avenue	182	1347	237	101	927	194	224	803	64	145	1313	66
38	Bristol Street and Alton Avenue	43	1681	158	116	870	54	25	35	65	91	150	29
39	Bristol Street and MacArthur Boulevard	321	1369	249	233	858	135	335	746	158	236	1370	259
40	Bristol Street and Sunflower Avenue	651	1376	222	215	804	230	301	588	228	247	952	303
41	Bristol Street and I-405 NB Ramps	0	2094	183	0	2375	22	0	0	204	350	300	1162
42	Bristol Street and I-405 SB Ramps	128	1570	0	0	1611	942	740	0	331	0	0	0
43	Flower Street and Santa Ana Boulevard	198	1206	99	87	442	40	357	1029	168	186	649	192
44	Flower Street and 1st Street	224	1063	253	200	549	159	102	895	74	210	1415	147
45	Flower Street and McFadden Avenue	91	1234	76	46	352	57	124	928	37	93	1159	166
46	Flower Street and Segerstrom Avenue	122	859	82	84	469	135	203	1011	107	92	1545	99
47	Flower Street and MacArthur Boulevard	130	621	72	93	224	215	199	947	60	62	1989	177
48	Main Street and La Veta Avenue	347	1059	496	164	1031	266	327	466	209	282	563	226
49	Main Street and Mainplace Drive / Memory Lane	113	1186	225	52	1083	143	391	433	116	278	227	110
50	Main Street and 17th Street	197	1019	222	222	969	150	224	1256	74	199	1220	81
51	Main Street and Civic Center Drive	92	1169	98	52	853	54	239	1322	158	38	384	39
52	Main Street and Santa Ana Boulevard	51	1152	0	0	1083	53	0	0	0	92	924	120
53	Main Street and 4th Street	0	950	45	0	864	39	0	70	39	0	229	58

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
54	Main Street and 1st Street	152	745	65	146	559	119	116	1172	87	111	1244	87
55	Main Street and McFadden Avenue	132	1037	64	123	834	61	182	805	98	133	752	338
56	Main Street and Edinger Avenue	101	1069	49	129	646	88	118	698	78	102	1364	141
57	Main Street and MacArthur Boulevard	446	1067	293	265	345	260	313	643	62	193	1529	444
58	Penn Way and 17th Street	1113	0	543	0	0	0	0	1672	539	123	1440	0
59	Santiago Street / I-5 NB Ramps and 17th Street	330	44	17	50	0	130	114	1047	688	0	1564	42
60	Penn Way and I-5 SB Ramps	0	631	414	592	137	0	0	0	0	214	0	183
61	Santiago Street and Civic Center Drive	194	598	60	32	456	117	266	76	269	14	19	18
62	Santiago Street and Santa Ana Boulevard	135	833	236	378	639	103	164	673	87	255	546	347
63	Standard Avenue and 4th Street	251	543	214	254	428	297	302	477	201	233	648	351
64	Standard Avenue and 1st Street	109	724	259	142	679	47	168	1,279	65	264	1,888	116
65	Standard Avenue and McFadden Avenue	194	765	94	237	520	90	95	632	108	123	749	217
66	Halladay Street and Warner Avenue	338	0	704	0	0	0	2	868	87	272	2159	0
67	Halladay Street and Dyer Road	61	266	307	296	39	83	147	1271	9	51	1655	132
68	SR-55 SB Ramps and MacArthur Boulevard	0	0	0	299	0	724	0	1187	1058	0	1474	579
69	SR-55 NB Ramps and MacArthur Boulevard	620	0	412	0	0	0	0	711	731	0	1467	1056
70	SR-55 SB Ramps and Dyer Road	386	12	291	103	226	110	59	1379	187	566	1008	65
71	Glassell Street and La Veta Avenue	573	595	194	14	471	35	106	346	594	211	382	15
72	Glassell Street and SR-22 WB Ramps	660	1079	0	0	1007	293	0	0	0	251	9	446
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	0	1450	370	461	824	0	229	4	503	0	0	0
74	Grand Avenue and Fairhaven Avenue	59	1555	311	258	1040	95	79	45	33	221	42	157
75	Grand Avenue and Santa Clara Avenue	129	1743	362	284	1119	284	114	139	26	157	282	300
76	Grand Avenue and 17th Street	398	1419	358	332	715	157	321	823	138	279	1031	187
77	Grand Avenue and I-5 NB Ramps	0	1855	1432	62	1501	0	0	0	0	151	0	182
78	Grand Avenue and Santa Ana Boulevard	185	2091	34	38	839	595	377	230	363	34	228	165
79	Grand Avenue and 1st Street	188	1435	43	113	667	266	326	1080	107	154	958	176
80	Grand Avenue and Chestnut Avenue	152	1142	198	161	716	121	70	214	47	139	433	252
81	Grand Avenue and McFadden Avenue	222	1264	218	153	696	187	122	454	79	96	762	168

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
82	Grand Avenue and Edinger Avenue	244	1411	122	203	501	281	182	787	63	93	1673	217
83	Grand Avenue and Warner Avenue	183	660	146	140	452	208	306	587	127	241	1539	504
84	SR-55 NB Ramps and Dyer Road	181	0	49	0	0	0	0	1183	602	0	1488	929
85	Cambridge Street and La Veta Avenue	235	327	0	0	206	191	375	0	247	0	0	0
86	Cambridge Street and Fairhaven Avenue	0	0	0	219	0	76	132	230	0	0	237	295
87	Mabury Street and 1st Street	23	0	233	195	83	367	0	1334	21	40	549	0
88	Tustin Street and La Veta Avenue	38	863	205	79	701	13	13	5	20	146	4	90
89	Tustin Street and SR-22 WB On-Ramp	466	1340	0	0	573	294	0	0	0	0	0	0
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	0	1416	4	40	550	0	440	39	558	28	0	67
91	Tustin Street and Fairhaven Avenue	200	1068	95	314	828	95	80	180	147	101	224	211
92	Tustin Avenue and Santa Clara Avenue	148	718	110	178	1403	97	88	277	163	125	157	148
93	Tustin Avenue and 17th Street	189	810	417	319	342	34	488	957	130	253	833	463
94	Tustin Avenue and 4th Street	28	299	97	459	339	124	208	743	38	118	798	491
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	401	32	423	110	50	37	47	1677	472	468	1220	146
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	879	262	51	17	209	803	156	54	32	23	348	16
97	Red Hill Avenue and Edinger Avenue	204	1469	233	105	209	169	410	1051	128	90	1161	567
98	Red Hill Avenue and Warner Avenue	374	1281	147	79	304	385	246	668	104	76	1598	210
99	Red Hill Avenue and Barranca Parkway	338	1270	327	241	408	192	172	637	84	110	839	245
100	Red Hill Avenue and Alton Parkway	26	1458	211	122	519	4	434	1065	545	1299	222	801
101	Red Hill Avenue and MacArthur Boulevard	175	1133	14	315	654	1148	499	230	35	39	810	568
102	Red Hill Avenue and Main Street	436	941	254	88	640	348	200	714	193	277	1575	88
103	I-5 SB Ramps and Santa Ana Boulevard	0	0	0	304	0	67	765	865	0	0	621	170
104	Tustin Ranch Road and Warner Avenue	0	0	0	553	0	38	65	2154	0	0	856	369
105	Von Karman Avenue and Barranca Parkway	346	1992	434	80	407	280	765	1397	195	232	734	250

6.1 FUTURE YEAR (2045) NO PROJECT VEHICLE MILES TRAVELED (VMT)

Table 7-6 presents the VMT analysis results for the Future Year (2045) No Project scenario. VMT calculations are based on the scenario parameters and methodology as described in Sections 2.6 and 3.1, respectively.

Table 6-3 Future Year (2045) VMT Summary

	I – I VMT	I – X VMT	X – I VMT	Total VMT	Service Population	VMT/SP
City	692,704	5,737,798	5,733,292	12,163,794	534,238	22.8
County	52,994,916	29,554,879	29,660,308	112,210,103	4,221,830	26.6

SP = Service Population = Total Employees + Total Population. Reduction factor applied to Total Employees as noted in Section 3.1 and shown in Appendix F. I-I = Internal-Internal; I-X = Internal-External; X-I = External-Internal.

6.2 ROADWAY LEVEL OF SERVICE

A summary of the forecast roadway segment volumes and corresponding level of service results for the future year 2045 No Project condition is shown in Table 6-4. The following roadway segments are forecast to operate at a deficient LOS:

- Segment 8 – Harbor Boulevard from Segerstrom Avenue to MacArthur Boulevard
- Segment 23 – Main Street from 1st Street to Bishop Street
- Segment 39 – Bristol Street from Edinger Avenue to Warner Avenue
- Segment 43 – Flower Street from Warner Avenue to Segerstrom Avenue
- Segment 45 – Main Street from McFadden Avenue to Edinger Avenue
- Segment 52 – Edinger Avenue from Richie Street to Newport Avenue
- Segment 57 – Dyer Road from Red Hill Avenue to Pullman Street
- Segment 58 – McFadden Avenue from Bristol Street to Flower Street

Table 6-4 Future Year (2045) No Project Roadway Segment LOS

ID	Street	Segment	Lanes	ADT	LOS
1	1st Street	Euclid Street to Ward Street	6D	21,700	A
2	Euclid Street	1st Street to McFadden Avenue	6D	35,900	B
3	Westminster Avenue	Harbor Boulevard to Fairview Street	6D	25,400	A
4	Harbor Boulevard	Westminster Avenue/17th Street to Hazard Avenue	6D	41,100	C
5	1st Street	Harbor Boulevard to Jackson	6D	23,700	A
6	Edinger Avenue	Harbor Boulevard to Fairview Street	6D	23,300	A
7	Warner Avenue	Harbor Boulevard to Fairview Street	6D	28,500	A
8	Harbor Boulevard	Segerstrom Avenue to MacArthur Boulevard	6D	59,600	F
9	Fairview Street	1st Street to Willits Street	6D	38,800	B
10	1st Street	Sullivan Street to Raitt Street	6D	24,400	A
11	Bristol Street	17th Street to Santa Clara Avenue	6D	43,200	C
12	17th Street	College Avenue to Bristol Street	6D	30,800	A
13	Bristol Street	17th Street to Washington Avenue	6D	47,300	D
14	Fairview Street	Trask Avenue to 17th Street	6D	47,400	D
15	Bristol Street	1st Street to Bishop Street	6D	45,500	D
16	Civic Center Drive	Bristol Street to Flower Street	4U	18,400	C
17	Flower Street	1st Street to Bishop Street	4U	9,400	A
18	Main Street	17th Street to 20th Street	6D	40,800	C
19	Main Street	Washington Street to Civic Center Drive	4U	16,600	B
20	Civic Center Drive	Flower Street to Ross Street	4U	10,200	A
21	Santa Ana Boulevard	Flower Street to Ross Street	6D	22,200	A
22	1st Street	Main Street to Standard Avenue	6D	38,200	B
23	Main Street	1st Street to Bishop Street	4U	29,400	F
24	Grand Avenue	Santa Clara Avenue to Fairhaven Street	6D	31,200	A
25	Grand Avenue	Santa Ana Boulevard to 4th Street	6D	24,600	A
26	Santa Clara Avenue	Grand Avenue to Tustin Avenue	4U	10,800	A
27	Tustin Avenue	Santa Clara Avenue to Fairhaven Street	6D	23,400	A
28	17th Street	Cabrillo Park Drive to Tustin Avenue	6D	32,700	A
29	Tustin Avenue	Fruit Street to 4th Street	6D	22,100	A
30	1st Street	Grand Avenue to Elk Lane	6D	29,300	A
31	1st Street	Cabrillo Park Drive to Tustin Avenue	6D	15,600	A
32	Fairview Street	Edinger Avenue to Harvard Street	6D	46,200	D
33	Fairview Street	Warner Avenue to Segerstrom Avenue	6D	43,200	C
34	MacArthur Boulevard	Harbor Boulevard to Fairview Street	6D	33,500	A
35	Edinger Avenue	Fairview Street to Greenville Street	6D	20,400	A
36	McFadden Avenue	Fairview Street to Raitt Street	4U	20,000	D
37	MacArthur Boulevard	Fairview Street to Raitt Street	6D	29,700	A
38	Segerstrom Avenue	Fairview Street to Raitt Street	6D	26,300	A
39	Bristol Street	Edinger Avenue to Warner Avenue	6D	53,500	E
40	Bristol Street	Warner Avenue to Segerstrom Avenue	6D	45,100	D

ID	Street	Segment	Lanes	ADT	LOS
41	Warner Avenue	Raitt Street to Bristol Street	6D	22,600	A
42	Bristol Street	MacArthur Boulevard to Sunflower Avenue	6D	49,100	D
43	Flower Street	Warner Avenue to Segerstrom Avenue	4D	36,200	E
44	Edinger Avenue	Flower Street to Main Street	6D	23,200	A
45	Main Street	McFadden Avenue to Edinger Avenue	4U	25,100	F
46	Main Street	Edinger Avenue to Warner Avenue	5D	34,400	C
47	Main Street	Warner Avenue to Dyer Road	6D	36,700	B
48	Segerstrom Avenue	Bristol Street to Flower Street	6D	24,400	A
49	MacArthur Boulevard	Flower Street to Main Street	6D	35,400	B
50	Main Street	MacArthur Boulevard to Sunflower Avenue	6D	26,300	A
51	Grand Avenue	Edinger Avenue to Warner Avenue	6D	34,100	B
52	Edinger Avenue	Richie Street to Newport Avenue	6D	52,800	E
53	Warner Avenue	Grand Avenue to Red Hill Avenue	6D	31,800	A
54	Warner Avenue	Main Street to Standard Avenue	6D	22,700	A
55	McFadden Avenue	Newhope Street to Harbor Boulevard	4U	13,800	A
56	McFadden Avenue	Standard Avenue to Grand Avenue	4U	16,100	B
57	Dyer Road	Red Hill Avenue to Pullman Street	6D	73,900	F
58	McFadden Avenue	Bristol Street to Flower Street	4U	23,300	E
59	Main Street	La Veta Avenue to Memory Lane	8D	48,800	B
60	1st Street	Bristol Street to Flower Street	6D	26,600	A

Notes:
(1) ADT – Average Daily Traffic Volumes
(2) LOS – Level of Service
(3) #D – total number of lanes in both directions divided by raised or striped median; #U – total number of undivided lanes in both directions; #TWLT – total number of lanes in both directions with a center continuous two-way left turn lane.
(4) LOS E is based on criteria established by the City of Santa Ana

6.3 INTERSECTION LEVEL OF SERVICE

A summary of the AM and PM peak hour level of service analysis results for the Future Year (2045) No Project condition is provided in Table 6-5. Intersections are considered unacceptable if the level of service (LOS) is “E” or “F”. It should be noted that Caltrans and CMP intersection have a minimum LOS of C and E, respectively. The following intersections are forecast to have unacceptable level of service in the Future Year (2045) No Project condition:

- INT 2 – Euclid Street and McFadden Avenue (City of Santa Ana)
- INT 3 – Euclid Street and Edinger Avenue (City of Fountain Valley)
- INT 8 – Harbor Boulevard and Westminster Avenue (City of Santa Ana)
- INT 12 – Harbor Boulevard and Warner Avenue (City of Santa Ana – CMP)
- INT 13 – Harbor Boulevard and Segerstrom Avenue (City of Santa Ana)
- INT 14 – Hyland Avenue and MacArthur Boulevard (City of Santa Ana)
- INT 22 – Fairview Street and Edinger Avenue (City of Santa Ana)
- INT 29 – Raitt Street and Edinger Avenue (City of Santa Ana)

- INT 32 – Bristol Street and Civic Center Drive (City of Santa Ana)
- INT 35 – Bristol Street and McFadden Avenue (City of Santa Ana)
- INT 36 – Bristol Street and Warner Avenue (City of Santa Ana)
- INT 44 – Flower Street and 1st Street (City of Santa Ana)
- INT 45 – Flower Street and McFadden Avenue (City of Santa Ana)
- INT 51 – Main Street and Civic Center Drive (City of Santa Ana)
- INT 52 – Main Street and Santa Ana Boulevard (City of Santa Ana)
- INT 55 – Main Street and McFadden Avenue (City of Santa Ana)
- INT 61 – Santiago Street and Civic Center Drive (City of Santa Ana)
- INT 62 – Santiago Street and Santa Ana Boulevard (City of Santa Ana)
- INT 63 – Standard Avenue and 4th Street (City of Santa Ana)
- INT 64 – Standard Avenue and 1st Street (City of Santa Ana)
- INT 66 – Halladay Street and Warner Avenue (City of Santa Ana)
- INT 67 – Halladay Street and Dyer Road (City of Santa Ana)
- INT 75 – Grand Avenue and Santa Clara Avenue (City of Santa Ana)
- INT 76 – Grand Avenue and 17th Street (City of Santa Ana)
- INT 82 – Grand Avenue and Edinger Avenue (City of Santa Ana)
- INT 92 – Tustin Avenue and Santa Clara Avenue (City of Santa Ana)
- INT 96 – SR-55 NB Ramps / Del Amo Avenue and Newport Avenue (Caltrans)
- INT 100 – Red Hill Avenue and Alton Parkway (City of Irvine)
- INT 101 – Red Hill Avenue and MacArthur Boulevard (City of Irvine)
- INT 105 – Von Karman Avenue and Barranca Parkway (City of Irvine)

Table 6-5: Future Year (2045) No Project Intersection LOS Summary

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
1	Euclid Street and Bolsa Avenue	0.86	D	0.86	D
2	Euclid Street and McFadden Avenue	0.98	E	0.90	D
3	Euclid Street and Edinger Avenue	0.99	E	0.89	D
4	Newhope Street and Hazard Avenue	0.78	C	0.72	C
5	Newhope Street and McFadden Avenue	0.83	D	0.78	C
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	28.4	C	24.2	C
7	Trask Avenue and SR-22 EB On-Ramp	12.0	B	13.6	B
8	Harbor Boulevard and Westminster Avenue	0.99	E	0.88	D
9	Harbor Boulevard and 1st Street	0.79	C	0.78	C
10	Harbor Boulevard and McFadden Avenue	0.79	C	0.81	D
11	Harbor Boulevard and Edinger Avenue	0.84	D	0.73	C
12	Harbor Boulevard and Warner Avenue	0.79	C	1.54	F
13	Harbor Boulevard and Segerstrom Avenue	0.97	E	0.92	E
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	0.61	B	0.92	E
15	Harbor Boulevard and MacArthur Boulevard	0.74	C	0.78	C
16	Harbor Boulevard and Sunflower Avenue	0.70	B	0.72	C
17	Harbor Boulevard and I-405 NB Off-Ramp	18.0	B	18.3	B
18	Harbor Boulevard and I-405 SB Off-Ramp	15.0	B	17.9	B
19	Fairview Street and Civic Center Drive	0.74	C	0.76	C
20	Fairview Street and 1st Street	0.86	D	0.90	D
21	Fairview Street and McFadden Avenue	0.80	C	0.78	C
22	Fairview Street and Edinger Avenue	0.86	D	0.92	E
23	Fairview Street and Warner Avenue	0.82	D	0.80	C
24	Fairview Street and MacArthur Boulevard	0.68	B	0.77	C
25	Fairview Road and Sunflower Avenue	0.70	B	0.72	C
26	Greenville Street and Edinger Avenue	0.77	C	0.60	A
27	Greenville Street and Segerstrom Avenue	0.84	D	0.78	C
28	Raitt Street and McFadden Avenue	0.78	C	0.76	C
29	Raitt Street and Edinger Avenue	0.99	E	0.99	E
30	Bear Street and MacArthur Boulevard	0.71	C	0.85	D
31	Bristol Street and 17th Street	0.87	D	0.82	D
32	Bristol Street and Civic Center Drive	0.94	E	0.91	E
33	Bristol Street and Santa Ana Boulevard	0.81	D	0.85	D
34	Bristol Street and 1st Street	0.77	C	0.83	D
35	Bristol Street and McFadden Avenue	0.96	E	1.03	F
36	Bristol Street and Warner Avenue	0.92	E	0.85	D
37	Bristol Street and Segerstrom Avenue	0.81	D	0.87	D
38	Bristol Street and Alton Avenue	0.55	A	0.63	B
39	Bristol Street and MacArthur Boulevard	0.70	B	0.77	C

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
40	Bristol Street and Sunflower Avenue	0.65	B	0.69	B
41	Bristol Street and I-405 NB Ramps	20.8	C	28.5	C
42	Bristol Street and I-405 SB Ramps	23.9	C	18.3	B
43	Flower Street and Santa Ana Boulevard	0.81	D	0.86	D
44	Flower Street and 1st Street	0.93	E	0.88	D
45	Flower Street and McFadden Avenue	0.90	D	1.04	F
46	Flower Street and Segerstrom Avenue	0.78	C	0.87	D
47	Flower Street and MacArthur Boulevard	0.68	B	0.90	D
48	Main Street and La Veta Avenue	0.59	A	0.70	B
49	Main Street and Mainplace Drive / Memory Lane	0.51	A	0.56	A
50	Main Street and 17th Street	0.88	D	0.76	C
51	Main Street and Civic Center Drive	0.78	C	0.97	E
52	Main Street and Santa Ana Boulevard	0.93	E	0.79	C
53	Main Street and 4th Street	0.41	A	0.45	A
54	Main Street and 1st Street	0.68	B	0.74	C
55	Main Street and McFadden Avenue	0.89	D	0.93	E
56	Main Street and Edinger Avenue	0.80	C	0.87	D
57	Main Street and MacArthur Boulevard	0.68	B	0.75	C
58	Penn Way and 17th Street	12.2	B	25.5	C
59	Santiago Street / I-5 NB Ramps and 17th Street	30.0	C	19.0	B
60	Penn Way and I-5 SB Ramps	21.2	C	23.0	C
61	Santiago Street and Civic Center Drive	159.2	F	110.0	F
62	Santiago Street and Santa Ana Boulevard	1.04	F	1.02	F
63*	Standard Avenue and 4th Street	0.94	E	0.89	D
64	Standard Avenue and 1st Street	0.98	E	0.97	E
65	Standard Avenue and McFadden Avenue	0.85	D	0.83	D
66	Halladay Street and Warner Avenue	0.78	C	0.97	E
67	Halladay Street and Dyer Road	0.77	C	1.06	F
68	SR-55 SB Ramps and MacArthur Boulevard	19.9	B	17.8	B
69	SR-55 NB Ramps and MacArthur Boulevard	19.3	B	14.6	B
70	SR-55 SB Ramps and Dyer Road	25.7	C	26.5	C
71	Glassell Street and La Veta Avenue	0.80	C	0.74	C
72	Glassell Street and SR-22 WB Ramps	32.6	C	30.5	C
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	30.6	C	31.6	C
74	Grand Avenue and Fairhaven Avenue	0.67	B	0.76	C
75	Grand Avenue and Santa Clara Avenue	0.93	E	0.93	E
76	Grand Avenue and 17th Street	0.91	E	0.98	E
77	Grand Avenue and I-5 NB Ramps	13.2	B	10.1	B
78	Grand Avenue and Santa Ana Boulevard	26.0	C	25.3	C
79	Grand Avenue and 1st Street	0.74	C	0.73	C

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
80	Grand Avenue and Chestnut Avenue	0.70	B	0.69	B
81	Grand Avenue and McFadden Avenue	0.89	D	0.82	D
82	Grand Avenue and Edinger Avenue	0.84	D	1.00	E
83	Grand Avenue and Warner Avenue	0.61	B	0.83	D
84	SR-55 NB Ramps and Dyer Road	17.1	B	5.7	A
85	Cambridge Street and La Veta Avenue	31.6	D	19.7	C
86	Cambridge Street and Fairhaven Avenue	0.56	A	0.45	A
87	Mabury Street and 1st Street	27.4	C	27.1	C
88	Tustin Street and La Veta Avenue	0.45	A	0.38	A
89	Tustin Street and SR-22 WB On-Ramp	12.2	B	11.1	B
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	25.0	C	23.1	C
91	Tustin Street and Fairhaven Avenue	0.90	D	0.57	A
92	Tustin Avenue and Santa Clara Avenue	1.82	F	0.67	B
93	Tustin Avenue and 17th Street	0.82	D	0.73	C
94	Tustin Avenue and 4th Street	0.83	D	0.71	C
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	25.2	C	25.5	C
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	25.4	C	39.1	D
97	Red Hill Avenue and Edinger Avenue	0.61	B	0.85	D
98	Red Hill Avenue and Warner Avenue	0.51	A	0.83	D
99	Red Hill Avenue and Barranca Parkway	0.55	A	0.54	A
100	Red Hill Avenue and Alton Parkway	0.86	D	1.18	F
101	Red Hill Avenue and MacArthur Boulevard	1.21	F	1.33	F
102	Red Hill Avenue and Main Street	0.72	C	0.81	D
103	I-5 SB Ramps and Santa Ana Boulevard	17.4	B	18.4	B
104	Tustin Ranch Road and Warner Avenue	0.52	A	0.65	B
105	Von Karman Avenue and Barranca Parkway	0.93	E	1.23	F

Notes: (1) LOS – Level of Service; (2) V/C – Volume to Capacity

7.0 Future Year (2045) With Project

This network alternative includes all the improvements listed in the No Project alternative, in addition to the improvements presented in Section 2.7.

Separate OCTAM 5.0 forecasts were produced for the With Project condition in order to understand traffic changes resulting from the proposed roadway improvements listed above. The Future Year (2045) With Project – AM and PM peak hour intersection turning movement volumes are shown in Tables 7-1 and 7-2.

Table 7-1 Future Year (2045) With Project Volumes – AM Peak Hour

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Euclid Street and Bolsa Avenue	100	845	145	194	1725	97	194	721	136	190	606	194
2	Euclid Street and McFadden Avenue	156	1185	141	146	2031	168	227	463	287	106	234	89
3	Euclid Street and Edinger Avenue	127	801	68	180	2613	240	136	595	364	133	812	148
4	Newhope Street and Hazard Avenue	94	708	101	86	1262	116	17	44	33	17	57	23
5	Newhope Street and McFadden Avenue	77	342	120	116	1153	107	106	386	125	122	311	69
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	83	1508	0	0	1354	18	81	0	133	836	44	117
7	Trask Avenue and SR-22 EB On-Ramp	0	0	0	0	0	0	558	699	0	0	624	117
8	Harbor Boulevard and Westminster Avenue	159	1045	224	251	1970	113	173	910	32	406	1100	299
9	Harbor Boulevard and 1st Street	102	816	176	223	1876	122	118	788	153	229	580	135
10	Harbor Boulevard and McFadden Avenue	101	1026	98	179	1891	63	136	353	106	85	193	55
11	Harbor Boulevard and Edinger Avenue	95	713	135	212	2441	71	123	743	373	211	469	195
12	Harbor Boulevard and Warner Avenue	106	647	164	451	2034	122	100	1422	374	125	654	111
13	Harbor Boulevard and Segerstrom Avenue	107	759	48	173	2324	87	90	753	303	146	453	103
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	86	4	24	8	2	19	7	1915	760	82	626	26
15	Harbor Boulevard and MacArthur Boulevard	128	898	92	289	1662	115	133	1204	363	152	506	151
16	Harbor Boulevard and Sunflower Avenue	221	1128	209	242	2284	56	9	109	42	149	190	107
17	Harbor Boulevard and I-405 NB Off-Ramp	0	1915	0	0	2007	0	0	0	0	399	0	702
18	Harbor Boulevard and I-405 SB Off-Ramp	0	1993	0	0	1278	0	475	0	529	0	0	0
19	Fairview Street and Civic Center Drive	7	1435	465	314	1812	8	7	25	25	50	2	26
20	Fairview Street and 1st Street	196	1508	284	272	1579	181	170	977	151	180	809	271

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
21	Fairview Street and McFadden Avenue	138	1479	198	184	2242	162	92	216	50	93	240	19
22	Fairview Street and Edinger Avenue	212	935	131	225	1576	133	361	1002	268	463	608	121
23	Fairview Street and Warner Avenue	235	1039	136	205	1628	119	69	1010	301	277	836	271
24	Fairview Street and MacArthur Boulevard	280	870	100	269	1357	152	121	984	145	298	627	178
25	Fairview Road and Sunflower Avenue	182	1051	160	191	1627	104	44	286	58	357	299	154
26	Greenville Street and Edinger Avenue	140	0	188	0	0	0	0	1788	436	178	949	0
27	Greenville Street and Segerstrom Avenue	47	193	78	154	472	160	50	1127	180	210	847	97
28	Raitt Street and McFadden Avenue	34	309	49	69	528	72	52	313	40	60	190	34
29	Raitt Street and Edinger Avenue	85	228	82	80	376	45	330	2016	290	127	992	59
30	Bear Street and MacArthur Boulevard	61	210	89	192	728	289	99	1690	116	103	1735	147
31	Bristol Street and 17th Street	241	1241	210	449	1845	243	341	1015	164	386	886	293
32	Bristol Street and Civic Center Drive	129	1141	101	396	1597	100	80	404	50	145	481	100
33	Bristol Street and Santa Ana Boulevard	68	1482	206	172	1891	51	54	264	23	52	129	22
34	Bristol Street and 1st Street	208	1451	184	315	1298	183	206	1268	128	126	949	139
35	Bristol Street and McFadden Avenue	130	1159	58	228	2223	229	155	266	131	145	405	47
36	Bristol Street and Warner Avenue	221	993	183	643	2178	247	172	958	238	231	1058	180
37	Bristol Street and Segerstrom Avenue	70	778	146	283	1011	119	306	1480	136	157	712	91
38	Bristol Street and Alton Avenue	10	702	53	224	1551	36	190	117	244	41	87	31
39	Bristol Street and MacArthur Boulevard	95	491	123	319	1389	145	211	1531	311	191	910	132
40	Bristol Street and Sunflower Avenue	119	583	172	232	1316	99	135	1115	451	295	480	166
41	Bristol Street and I-405 NB Ramps	0	1638	210	0	2088	8	0	0	36	147	89	807
42	Bristol Street and I-405 SB Ramps	122	1195	0	0	1097	943	675	0	618	0	0	0
43	Flower Street and Santa Ana Boulevard	64	593	86	275	929	124	63	394	45	118	377	158
44	Flower Street and 1st Street	89	387	102	366	1158	121	107	983	39	161	664	95
45	Flower Street and McFadden Avenue	30	219	19	66	367	53	58	658	50	54	366	49
46	Flower Street and Segerstrom Avenue	86	451	100	98	544	120	237	1631	455	115	846	93
47	Flower Street and MacArthur Boulevard	26	170	88	163	352	264	163	1852	79	79	1329	85

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
48	Main Street and La Veta Avenue	123	844	438	161	843	141	350	495	215	334	291	243
49	Main Street and Mainplace Drive / Memory Lane	35	955	313	27	1066	223	123	194	13	264	301	20
50	Main Street and 17th Street	156	929	199	225	1251	81	114	1203	60	369	1475	22
51	Main Street and Civic Center Drive	138	901	79	69	1222	186	75	454	83	52	679	41
52	Main Street and Santa Ana Boulevard	66	1050	0	0	1162	103	0	0	0	61	848	65
53	Main Street and 4th Street	0	1052	25	0	1098	27	0	93	14	0	105	26
54	Main Street and 1st Street	103	532	54	94	937	69	69	805	85	78	972	54
55	Main Street and McFadden Avenue	93	874	44	184	1434	28	44	419	46	97	259	74
56	Main Street and Edinger Avenue	104	589	64	239	1103	58	99	1288	174	149	867	106
57	Main Street and MacArthur Boulevard	60	344	292	539	709	160	230	1336	242	187	556	279
58	Penn Way and 17th Street	49	0	250	0	0	0	0	1279	652	236	1901	0
59	Santiago Street / I-5 NB Ramps and 17th Street	720	33	21	60	0	312	101	1062	384	0	1508	24
60	Penn Way and I-5 SB Ramps	0	192	170	837	173	0	0	0	0	170	0	95
61	Santiago Street and Civic Center Drive	318	221	31	6	335	82	212	81	431	126	116	23
62	Santiago Street and Santa Ana Boulevard	188	611	303	409	972	253	118	732	99	297	699	258
63	Standard Avenue and 4th Street	191	473	248	431	604	332	298	624	219	250	550	340
64	Standard Avenue and 1st Street	45	631	312	123	901	41	161	1959	121	194	1282	120
65	Standard Avenue and McFadden Avenue	44	170	77	123	297	21	21	736	89	81	214	48
66	Halladay Street and Warner Avenue	69	0	160	0	0	0	0	1772	200	210	797	0
67	Halladay Street and Dyer Road	16	26	71	155	31	33	54	1820	13	126	686	111
68	SR-55 SB Ramps and MacArthur Boulevard	0	0	0	998	0	903	0	1423	1014	0	1363	155
69	SR-55 NB Ramps and MacArthur Boulevard	965	0	1037	0	0	0	0	1503	744	0	591	279
70	SR-55 SB Ramps and Dyer Road	312	37	713	50	242	60	34	1282	273	418	663	111
71	Glassell Street and La Veta Avenue	292	458	139	13	274	60	57	293	563	380	401	10
72	Glassell Street and SR-22 WB Ramps	568	638	0	0	1017	473	0	0	0	247	4	369
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	0	968	258	345	904	0	258	0	1012	0	0	0
74	Grand Avenue and Fairhaven Avenue	28	1155	166	214	1780	39	99	60	59	152	17	137
75	Grand Avenue and Santa Clara Avenue	93	652	167	370	1808	407	179	291	60	140	270	246

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
76	Grand Avenue and 17th Street	229	669	460	414	1734	340	246	915	116	401	1047	114
77	Grand Avenue and I-5 NB Ramps	0	1145	662	104	3338	0	0	0	0	557	0	154
78	Grand Avenue and Santa Ana Boulevard	79	1119	57	231	1908	1684	242	200	394	5	407	37
79	Grand Avenue and 1st Street	186	655	31	121	1753	213	318	760	216	268	939	107
80	Grand Avenue and Chestnut Avenue	53	737	163	174	2086	57	64	449	118	81	237	148
81	Grand Avenue and McFadden Avenue	262	1104	165	294	1974	192	109	352	107	95	340	86
82	Grand Avenue and Edinger Avenue	65	649	127	253	1293	253	396	1654	159	170	651	142
83	Grand Avenue and Warner Avenue	187	564	241	204	589	199	314	1120	440	140	617	208
84	SR-55 NB Ramps and Dyer Road	637	0	521	0	0	0	0	1550	620	0	859	517
85	Cambridge Street and La Veta Avenue	185	235	0	0	480	245	195	0	312	0	0	0
86	Cambridge Street and Fairhaven Avenue	0	0	0	618	0	199	69	185	0	0	130	101
87	Mabury Street and 1st Street	5	0	122	276	164	618	0	922	10	46	701	0
88	Tustin Street and La Veta Avenue	9	365	105	48	944	3	9	11	35	279	1	43
89	Tustin Street and SR-22 WB On-Ramp	762	708	0	0	897	536	0	0	0	0	0	0
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	0	1213	6	13	779	0	252	25	1084	6	0	43
91	Tustin Street and Fairhaven Avenue	89	514	90	174	1497	30	63	240	412	239	265	346
92	Tustin Avenue and Santa Clara Avenue	91	496	93	89	1816	57	606	1530	1116	118	244	122
93	Tustin Avenue and 17th Street	194	347	413	578	1668	18	187	738	126	588	928	227
94	Tustin Avenue and 4th Street	40	204	183	743	946	293	159	942	39	129	727	472
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	456	68	540	50	30	8	34	1334	493	510	1202	157
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	413	109	69	20	497	728	269	163	155	8	223	4
97	Red Hill Avenue and Edinger Avenue	122	449	128	203	861	403	397	1276	271	250	1213	170
98	Red Hill Avenue and Warner Avenue	118	716	97	20	949	191	239	407	300	152	543	96
99	Red Hill Avenue and Barranca Parkway	184	458	151	184	809	106	126	758	300	522	583	114
100	Red Hill Avenue and Alton Parkway	235	693	434	233	1059	170	185	574	574	335	284	159
101	Red Hill Avenue and MacArthur Boulevard	83	742	13	205	529	485	1194	617	101	34	329	843
102	Red Hill Avenue and Main Street	201	691	449	78	365	126	139	1309	254	167	335	79

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
103	I-5 SB Ramps and Santa Ana Boulevard	0	0	0	382	0	38	287	492	0	0	1027	300
104	Tustin Ranch Road and Warner Avenue	0	0	0	174	0	22	27	357	0	0	2130	490
105	Von Karman Avenue and Barranca Parkway	375	497	298	98	960	420	247	928	310	917	1506	47

Table 7-2 Future Year (2045) With Project Volumes – PM Peak Hour

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
1	Euclid Street and Bolsa Avenue	165	1532	123	137	781	148	201	641	100	168	702	168
2	Euclid Street and McFadden Avenue	248	2020	130	87	1070	130	134	307	136	86	359	166
3	Euclid Street and Edinger Avenue	551	1648	117	136	897	228	121	467	140	119	1103	179
4	Newhope Street and Hazard Avenue	102	1129	44	45	954	114	33	66	40	8	51	15
5	Newhope Street and McFadden Avenue	188	1009	177	121	539	104	45	273	40	72	398	113
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	103	2324	0	0	1823	59	102	0	86	558	75	160
7	Trask Avenue and SR-22 EB On-Ramp	0	0	0	0	0	0	785	588	0	0	449	42
8	Harbor Boulevard and Westminster Avenue	222	1106	262	254	1752	202	227	808	39	294	1018	231
9	Harbor Boulevard and 1st Street	280	1446	160	240	1053	142	192	784	148	185	865	141
10	Harbor Boulevard and McFadden Avenue	182	1866	136	261	1114	101	147	358	45	63	151	43
11	Harbor Boulevard and Edinger Avenue	262	1645	199	283	822	75	109	460	81	188	1089	363
12	Harbor Boulevard and Warner Avenue	768	3685	277	250	1389	166	198	1399	320	253	2626	838
13	Harbor Boulevard and Segerstrom Avenue	275	1732	55	86	973	86	118	585	192	121	1308	475
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	1139	7	66	12	4	14	35	869	156	25	2320	12
15	Harbor Boulevard and MacArthur Boulevard	527	1362	79	206	1039	170	143	501	185	85	1429	269
16	Harbor Boulevard and Sunflower Avenue	156	1552	230	118	1464	44	85	230	239	282	592	221
17	Harbor Boulevard and I-405 NB Off-Ramp	0	1488	0	0	2570	0	0	0	0	513	0	828
18	Harbor Boulevard and I-405 SB Off-Ramp	0	1881	0	0	2254	0	181	0	833	0	0	0
19	Fairview Street and Civic Center Drive	6	1777	499	205	1903	0	2	6	4	164	0	61
20	Fairview Street and 1st Street	182	1339	121	236	1468	291	215	870	151	126	952	147
21	Fairview Street and McFadden Avenue	174	1596	139	195	1577	246	79	214	53	51	177	43
22	Fairview Street and Edinger Avenue	190	1810	111	198	616	151	205	628	168	639	1353	297
23	Fairview Street and Warner Avenue	211	1679	156	179	906	92	163	792	123	178	1049	227
24	Fairview Street and MacArthur Boulevard	228	1568	85	162	902	83	253	661	223	159	1210	212
25	Fairview Road and Sunflower Avenue	190	1705	371	138	1145	79	245	520	115	208	522	136

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
26	Greenville Street and Edinger Avenue	327	0	218	0	0	0	0	1178	240	155	1840	0
27	Greenville Street and Segerstrom Avenue	50	414	31	44	143	44	138	1049	60	39	1490	213
28	Raitt Street and McFadden Avenue	34	482	75	24	252	40	59	347	30	38	318	44
29	Raitt Street and Edinger Avenue	84	361	101	61	209	52	177	1226	175	195	2203	197
30	Bear Street and MacArthur Boulevard	262	1258	328	115	278	84	90	847	88	82	1475	235
31	Bristol Street and 17th Street	370	1801	300	347	1847	314	243	543	98	280	1055	357
32	Bristol Street and Civic Center Drive	214	1494	78	173	1589	163	130	366	43	149	635	72
33	Bristol Street and Santa Ana Boulevard	85	1722	98	120	1597	60	70	194	45	125	199	54
34	Bristol Street and 1st Street	434	1872	276	216	1169	264	259	1454	186	155	953	90
35	Bristol Street and McFadden Avenue	249	1833	99	116	1618	373	114	222	44	82	424	50
36	Bristol Street and Warner Avenue	312	1170	213	343	1144	223	159	715	126	282	1662	487
37	Bristol Street and Segerstrom Avenue	177	1309	231	98	894	187	279	998	79	156	1408	71
38	Bristol Street and Alton Avenue	43	1667	157	114	858	54	50	70	130	0	0	0
39	Bristol Street and MacArthur Boulevard	335	1428	260	237	871	137	357	796	169	247	1432	270
40	Bristol Street and Sunflower Avenue	687	1452	234	226	844	242	391	764	296	254	976	311
41	Bristol Street and I-405 NB Ramps	0	2235	195	0	2458	23	0	0	204	357	306	1184
42	Bristol Street and I-405 SB Ramps	135	1647	0	0	1657	968	740	0	331	0	0	0
43	Flower Street and Santa Ana Boulevard	215	1307	107	95	486	44	104	300	49	106	371	110
44	Flower Street and 1st Street	211	1000	238	140	383	111	135	1181	98	144	969	101
45	Flower Street and McFadden Avenue	54	734	45	26	201	33	56	422	17	43	532	76
46	Flower Street and Segerstrom Avenue	120	843	80	80	449	129	241	1198	126	101	1699	109
47	Flower Street and MacArthur Boulevard	116	553	65	97	233	224	264	1254	80	61	1967	175
48	Main Street and La Veta Avenue	310	948	444	191	1199	309	347	495	222	332	662	266
49	Main Street and Mainplace Drive / Memory Lane	102	1075	204	48	999	132	195	217	58	370	302	146
50	Main Street and 17th Street	239	1237	270	243	1062	164	174	975	58	187	1147	76
51	Main Street and Civic Center Drive	98	1234	103	63	1031	65	168	930	111	38	384	39
52	Main Street and Santa Ana Boulevard	56	1280	0	0	1108	54	0	0	0	65	656	85
53	Main Street and 4th Street	0	1108	53	0	951	43	0	112	63	0	157	40

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
54	Main Street and 1st Street	179	875	76	160	615	131	91	921	68	75	834	58
55	Main Street and McFadden Avenue	149	1169	72	138	933	68	78	345	42	71	400	180
56	Main Street and Edinger Avenue	111	1181	54	129	646	88	159	940	105	117	1569	162
57	Main Street and MacArthur Boulevard	488	1169	321	271	352	266	385	792	76	188	1488	432
58	Penn Way and 17th Street	795	0	388	0	0	0	0	1712	552	126	1480	0
59	Santiago Street / I-5 NB Ramps and 17th Street	375	50	20	55	0	142	128	1168	767	0	1622	44
60	Penn Way and I-5 SB Ramps	0	363	238	508	117	0	0	0	0	214	0	183
61	Santiago Street and Civic Center Drive	133	411	41	20	281	72	266	76	269	14	19	18
62	Santiago Street and Santa Ana Boulevard	135	833	236	378	639	103	164	673	87	255	546	347
63	Standard Avenue and 4th Street	251	543	214	254	428	297	302	477	201	233	648	351
64	Standard Avenue and 1st Street	109	724	259	142	679	47	168	1279	65	264	1888	116
65	Standard Avenue and McFadden Avenue	103	407	50	110	240	42	53	351	60	68	412	119
66	Halladay Street and Warner Avenue	200	0	417	0	0	0	2	955	96	287	2284	0
67	Halladay Street and Dyer Road	57	249	287	125	17	35	166	1433	10	52	1680	134
68	SR-55 SB Ramps and MacArthur Boulevard	0	0	0	321	0	777	0	1305	1163	0	1547	608
69	SR-55 NB Ramps and MacArthur Boulevard	726	0	483	0	0	0	0	764	785	0	1444	1040
70	SR-55 SB Ramps and Dyer Road	386	12	291	103	226	110	66	1544	210	507	904	58
71	Glassell Street and La Veta Avenue	573	595	194	15	499	37	112	367	631	225	407	16
72	Glassell Street and SR-22 WB Ramps	640	1045	0	0	1110	323	0	0	0	268	9	476
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	0	1316	336	505	903	0	238	4	522	0	0	0
74	Grand Avenue and Fairhaven Avenue	53	1406	281	279	1122	103	79	45	33	153	29	109
75	Grand Avenue and Santa Clara Avenue	116	1557	323	307	1211	307	114	139	26	115	206	220
76	Grand Avenue and 17th Street	420	1499	378	332	715	157	371	949	160	284	1046	190
77	Grand Avenue and I-5 NB Ramps	0	2036	1571	67	1623	0	0	0	0	168	0	202
78	Grand Avenue and Santa Ana Boulevard	213	2411	40	44	964	684	370	226	356	44	295	213
79	Grand Avenue and 1st Street	195	1493	45	133	784	313	272	900	89	121	753	138
80	Grand Avenue and Chestnut Avenue	180	1352	234	149	664	112	47	143	31	91	283	165
81	Grand Avenue and McFadden Avenue	232	1320	227	176	800	215	64	238	42	96	762	168

ID	Intersection	Northbound			Southbound			Eastbound			Westbound		
		L	T	R	L	T	R	L	T	R	L	T	R
82	Grand Avenue and Edinger Avenue	259	1494	129	236	583	327	207	895	72	98	1758	228
83	Grand Avenue and Warner Avenue	218	788	174	178	575	265	342	656	142	244	1556	510
84	SR-55 NB Ramps and Dyer Road	188	0	51	0	0	0	0	1355	689	0	1411	882
85	Cambridge Street and La Veta Avenue	176	246	0	0	206	191	469	0	309	0	0	0
86	Cambridge Street and Fairhaven Avenue	0	0	0	195	0	68	85	148	0	0	218	272
87	Mabury Street and 1st Street	25	0	256	164	70	310	0	1275	20	31	423	0
88	Tustin Street and La Veta Avenue	31	693	164	96	851	16	13	5	20	134	4	82
89	Tustin Street and SR-22 WB On-Ramp	383	1100	0	0	642	330	0	0	0	0	0	0
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	0	1155	3	43	589	0	440	39	558	28	0	67
91	Tustin Street and Fairhaven Avenue	155	827	73	333	879	101	58	130	106	123	272	256
92	Tustin Avenue and Santa Clara Avenue	136	659	101	146	1155	80	34	107	63	45	57	54
93	Tustin Avenue and 17th Street	176	752	387	293	314	31	470	923	125	250	821	457
94	Tustin Avenue and 4th Street	35	381	123	536	396	145	226	806	41	123	833	513
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	401	32	423	110	50	37	46	1649	464	437	1139	136
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	879	262	51	19	231	889	165	57	33	23	348	16
97	Red Hill Avenue and Edinger Avenue	208	1501	238	108	214	173	410	1051	128	91	1176	574
98	Red Hill Avenue and Warner Avenue	343	1175	135	89	341	432	324	880	137	78	1643	216
99	Red Hill Avenue and Barranca Parkway	344	1293	333	314	531	249	178	662	87	129	979	286
100	Red Hill Avenue and Alton Parkway	27	1513	219	148	628	5	453	1111	569	2003	342	1235
101	Red Hill Avenue and MacArthur Boulevard	179	1160	14	340	707	1240	515	237	36	39	818	574
102	Red Hill Avenue and Main Street	467	1006	272	88	640	348	212	757	205	284	1617	91
103	I-5 SB Ramps and Santa Ana Boulevard	0	0	0	357	0	78	595	672	0	0	590	162
104	Tustin Ranch Road and Warner Avenue	0	0	0	653	0	45	64	2124	0	0	925	398
105	Von Karman Avenue and Barranca Parkway	362	2082	454	80	407	280	785	1435	201	254	805	274

7.1 FUTURE YEAR (2045) WITH PROJECT VEHICLE MILES TRAVELED (VMT)

Table 7-3 presents the VMT analysis results for the Future Year (2045) With Project scenario. VMT calculations are based on the scenario parameters and methodology as described in Sections 2.7 and 3.1, respectively.

Table 7-3 Future Year (2045) VMT Summary

	I – I VMT	I – X VMT	X – I VMT	Total VMT	Service Population	VMT/SP
City	637,655	5,432,337	5,448,967	11,518,959	566,616	20.3
County	52,931,787	29,642,498	29,748,229	112,322,514	4,262,124	26.4

SP = Service Population = Total Employees + Total Population. Reduction factor applied to Total Employees as noted in Section 3.1 and shown in Appendix F. I-I = Internal-Internal; I-X = Internal-External; X-I = External-Internal.

7.2 ROADWAY SEGMENT LEVEL OF SERVICE

A summary of the forecast roadway segment volumes and corresponding level of service results for the Future Year (2045) With Project condition is shown in Table 7-4. The following roadway segments are forecast to operate at a deficient LOS:

- Segment 8 – Harbor Boulevard from Segerstrom Avenue to MacArthur Boulevard
- Segment 23 – Main Street from 1st Street to Bishop Street
- Segment 39 – Bristol Street from Edinger Avenue to Warner Avenue
- Segment 42 – Bristol Street from MacArthur Boulevard to Sunflower Avenue
- Segment 45 – Main Street from McFadden Avenue to Edinger Avenue
- Segment 46 – Main Street from Edinger Avenue to Warner Avenue
- Segment 57 – Dyer Road from Red Hill Avenue to Pullman Street

Table 7-4 Future Year (2045) With Project Roadway Segment LOS

ID	Street	Segment	Lanes	ADT	LOS
1	1st Street	Euclid Street to Ward Street	6D	18,700	A
2	Euclid Street	1st Street to McFadden Avenue	6D	34,000	B
3	Westminster Avenue	Harbor Boulevard to Fairview Street	6D	17,400	A
4	Harbor Boulevard	Westminster Avenue/17th Street to Hazard Avenue	6D	36,200	B
5	1st Street	Harbor Boulevard to Jackson	6D	23,100	A
6	Edinger Avenue	Harbor Boulevard to Fairview Street	6D	23,300	A
7	Warner Avenue	Harbor Boulevard to Fairview Street	6D	26,300	A
8	Harbor Boulevard	Segerstrom Avenue to MacArthur Boulevard	6D	56,900	F
9	Fairview Street	1st Street to Willits Street	6D	38,600	B
10	1st Street	Sullivan Street to Raitt Street	6D	26,600	A
11	Bristol Street	17th Street to Santa Clara Avenue	6D	41,500	C
12	17th Street	College Avenue to Bristol Street	6D	29,500	A
13	Bristol Street	17th Street to Washington Avenue	6D	45,100	D
14	Fairview Street	Trask Avenue to 17th Street	6D	48,100	D
15	Bristol Street	1st Street to Bishop Street	6D	49,000	D
16	Civic Center Drive	Bristol Street to Flower Street	4U	18,600	C
17	Flower Street	1st Street to Bishop Street	2D	6,900	A
18	Main Street	17th Street to 20th Street	6D	43,000	C
19	Main Street	Washington Street to Civic Center Drive	4U	19,000	C
20	Civic Center Drive	Flower Street to Ross Street	4U	10,200	A
21	Santa Ana Boulevard	Flower Street to Ross Street	4D	15,800	A
22	1st Street	Main Street to Standard Avenue	4D	32,900	D
23	Main Street	1st Street to Bishop Street	4U	30,500	F
24	Grand Avenue	Santa Clara Avenue to Fairhaven Street	6D	31,100	A
25	Grand Avenue	Santa Ana Boulevard to 4th Street	6D	35,000	B
26	Santa Clara Avenue	Grand Avenue to Tustin Avenue	2D	8,700	A
27	Tustin Avenue	Santa Clara Avenue to Fairhaven Street	6D	20,400	A
28	17th Street	Cabrillo Park Drive to Tustin Avenue	6D	34,600	B
29	Tustin Avenue	Fruit Street to 4th Street	6D	28,100	A
30	1st Street	Grand Avenue to Elk Lane	4D	30,800	D
31	1st Street	Cabrillo Park Drive to Tustin Avenue	4D	14,600	A
32	Fairview Street	Edinger Avenue to Harvard Street	6D	45,100	D
33	Fairview Street	Warner Avenue to Segerstrom Avenue	6D	41,800	C
34	MacArthur Boulevard	Harbor Boulevard to Fairview Street	6D	32,600	A
35	Edinger Avenue	Fairview Street to Greenville Street	6D	22,200	A
36	McFadden Avenue	Fairview Street to Raitt Street	2D	8,200	A
37	MacArthur Boulevard	Fairview Street to Raitt Street	6D	28,900	A
38	Segerstrom Avenue	Fairview Street to Raitt Street	6D	29,600	A
39	Bristol Street	Edinger Avenue to Warner Avenue	6D	54,500	E
40	Bristol Street	Warner Avenue to Segerstrom Avenue	6D	44,800	C

ID	Street	Segment	Lanes	ADT	LOS
41	Warner Avenue	Raitt Street to Bristol Street	6D	22,300	A
42	Bristol Street	MacArthur Boulevard to Sunflower Avenue	6D	50,800	E
43	Flower Street	Warner Avenue to Segerstrom Avenue	4D	33,300	D
44	Edinger Avenue	Flower Street to Main Street	6D	25,200	A
45	Main Street	McFadden Avenue to Edinger Avenue	4U	27,500	F
46	Main Street	Edinger Avenue to Warner Avenue	4D	38,200	F
47	Main Street	Warner Avenue to Dyer Road	6D	38,600	B
48	Segerstrom Avenue	Bristol Street to Flower Street	6D	25,900	A
49	MacArthur Boulevard	Flower Street to Main Street	6D	39,800	C
50	Main Street	MacArthur Boulevard to Sunflower Avenue	6D	29,000	A
51	Grand Avenue	Edinger Avenue to Warner Avenue	6D	37,300	B
52	Edinger Avenue	Richie Street to Newport Avenue	6D	49,700	D
53	Warner Avenue	Grand Avenue to Red Hill Avenue	6D	34,600	B
54	Warner Avenue	Main Street to Standard Avenue	6D	23,900	A
55	McFadden Avenue	Newhope Street to Harbor Boulevard	4U	8,700	A
56	McFadden Avenue	Standard Avenue to Grand Avenue	2D	8,600	A
57	Dyer Road	Red Hill Avenue to Pullman Street	6D	80,700	F
58	McFadden Avenue	Bristol Street to Flower Street	2D	11,800	C
59	Main Street	La Veta Avenue to Memory Lane	8D	50,200	B
60	1st Street	Bristol Street to Flower Street	4D	25,700	B

Notes:
(1) ADT – Average Daily Traffic Volumes
(2) LOS – Level of Service
(3) #D – total number of lanes in both directions divided by raised or striped median; #U – total number of undivided lanes in both directions; #TWLT – total number of lanes in both directions with a center continuous two-way left turn lane.
(4) LOS E is based on criteria established by the City of Santa Ana
(5) **Bold** indicates an unacceptable level of service
(6) *Italic text* indicates a change from the 2040 NP condition

7.3 INTERSECTION LEVEL OF SERVICE

A summary of the AM and PM peak hour intersection level of service analysis results for the Future Year (2045) With Project condition is included in Table 7-5. The following intersections are expected to operate at an unacceptable level of service:

- INT 2 – Euclid street and McFadden Avenue (City of Santa Ana)
- INT 3 – Euclid Street and Edinger Avenue (City of Fountain Valley)
- INT 8 – Harbor Boulevard and Westminster Avenue (City of Santa Ana)
- INT 12 – Harbor Boulevard and Warner Avenue (City of Santa Ana – CMP)
- INT 13 – Harbor Boulevard and Segerstrom Avenue (City of Santa Ana)
- INT 22 – Fairview Street and Edinger Avenue (City of Santa Ana)
- INT 29 – Raitt Street and Edinger Avenue (City of Santa Ana)
- INT 32 – Bristol Street and Civic Center Drive (City of Santa Ana)

- INT 34 – Bristol Street and 1st Street (City of Santa Ana)
- INT 35 – Bristol Street and McFadden Avenue (City of Santa Ana)
- INT 36 – Bristol Street and Warner Avenue (City of Santa Ana)
- INT 37 – Bristol Street and Segerstrom Avenue (City of Santa Ana)
- INT 44 – Flower Street and 1st Street (City of Santa Ana)
- INT 45 – Flower Street and McFadden Avenue (City of Santa Ana)
- INT 46 – Flower Street and Segerstrom Avenue (City of Santa Ana)
- INT 47 – Flower Street and MacArthur Boulevard (City of Santa Ana)
- INT 55 – Main Street and McFadden Avenue (City of Santa Ana)
- INT 56 – Main Street and Edinger Avenue (City of Santa Ana)
- INT 61 – Santiago Street and Civic Center Drive (City of Santa Ana)
- INT 62 – Santiago Street and Santa Ana Boulevard (City of Santa Ana)
- INT 63 – Standard Avenue and 4th Street (City of Santa Ana)
- INT 64 – Standard Avenue and 1st Street (City of Santa Ana)
- INT 67 – Halladay Street and Dyer Road (City of Santa Ana)
- INT 76 – Grand Avenue and 17th Street (City of Santa Ana)
- INT 80 – Grand Avenue and Chestnut Avenue (City of Santa Ana)
- INT 81 – Grand Avenue and McFadden Avenue (City of Santa Ana)
- INT 82 – Grand Avenue and Edinger Avenue (City of Santa Ana)
- INT 91 – Tustin Street and Fairhaven Avenue (City of Santa Ana)
- INT 92 – Tustin Avenue and Santa Clara Avenue (City of Santa Ana)
- INT 96 – SR-55 NB Ramps / Del Amo Avenue and Newport Avenue (Caltrans)
- INT 100 – Red Hill Avenue and Alton Parkway (City of Irvine)
- INT 101 – Red Hill Avenue and MacArthur Boulevard (City of Irvine)
- INT 105 – Von Karman Avenue and Barranca Parkway (City of Irvine)

Table 7-5: Future Year (2045) With Project Intersection LOS Summary

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
1	Euclid Street and Bolsa Avenue	0.79	C	0.79	C
2	Euclid Street and McFadden Avenue	0.91	E	0.79	C
3	Euclid Street and Edinger Avenue	1.01	F	0.86	D
4	Newhope Street and Hazard Avenue	0.60	A	0.52	A
5	Newhope Street and McFadden Avenue	0.73	C	0.68	B
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	28.5	C	23.8	C
7	Trask Avenue and SR-22 EB On-Ramp	11.0	B	11.0	B
8	Harbor Boulevard and Westminster Avenue	0.94	E	0.84	D
9	Harbor Boulevard and 1st Street	0.75	C	0.75	C
10	Harbor Boulevard and McFadden Avenue	0.73	C	0.71	C
11	Harbor Boulevard and Edinger Avenue	0.86	D	0.72	C
12	Harbor Boulevard and Warner Avenue	0.80	C	1.54	F
13	Harbor Boulevard and Segerstrom Avenue	1.01	F	0.93	E
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	0.62	B	0.89	D
15	Harbor Boulevard and MacArthur Boulevard	0.75	C	0.79	C
16	Harbor Boulevard and Sunflower Avenue	0.71	C	0.71	C
17	Harbor Boulevard and I-405 NB Off-Ramp	17.9	B	18.8	B
18	Harbor Boulevard and I-405 SB Off-Ramp	15.0	B	18.1	B
19	Fairview Street and Civic Center Drive	0.68	B	0.71	C
20	Fairview Street and 1st Street	0.89	D	0.89	D
21	Fairview Street and McFadden Avenue	0.80	C	0.68	B
22	Fairview Street and Edinger Avenue	0.88	D	0.92	E
23	Fairview Street and Warner Avenue	0.85	D	0.81	D
24	Fairview Street and MacArthur Boulevard	0.69	B	0.76	C
25	Fairview Road and Sunflower Avenue	0.69	B	0.69	B
26	Greenville Street and Edinger Avenue	0.74	C	0.65	B
27	Greenville Street and Segerstrom Avenue	0.88	D	0.80	C
28	Raitt Street and McFadden Avenue	0.70	B	0.68	B
29	Raitt Street and Edinger Avenue	0.93	E	0.99	E
30	Bear Street and MacArthur Boulevard	0.76	C	0.90	D
31	Bristol Street and 17th Street	0.85	D	0.81	D
32	Bristol Street and Civic Center Drive	0.93	E	0.90	D
33	Bristol Street and Santa Ana Boulevard	0.72	C	0.73	C
34	Bristol Street and 1st Street	0.90	D	0.97	E
35	Bristol Street and McFadden Avenue	0.95	E	0.89	D
36	Bristol Street and Warner Avenue	0.96	E	0.87	D
37	Bristol Street and Segerstrom Avenue	0.85	D	0.92	E
38	Bristol Street and Alton Avenue	0.55	A	0.58	A
39	Bristol Street and MacArthur Boulevard	0.76	C	0.80	C

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
40	Bristol Street and Sunflower Avenue	0.68	B	0.74	C
41	Bristol Street and I-405 NB Ramps	20.9	C	29.0	C
42	Bristol Street and I-405 SB Ramps	23.6	C	18.2	B
43	Flower Street and Santa Ana Boulevard	0.59	A	0.67	B
44	Flower Street and 1st Street	0.93	E	1.22	F
45	Flower Street and McFadden Avenue	0.81	D	0.97	E
46	Flower Street and Segerstrom Avenue	0.82	D	0.92	E
47	Flower Street and MacArthur Boulevard	0.71	C	0.91	E
48	Main Street and La Veta Avenue	0.54	A	0.76	C
49	Main Street and Mainplace Drive / Memory Lane	0.46	A	0.50	A
50	Main Street and 17th Street	0.85	D	0.80	C
51	Main Street and Civic Center Drive	0.85	D	0.86	D
52	Main Street and Santa Ana Boulevard	0.79	C	0.70	B
53	Main Street and 4th Street	0.44	A	0.47	A
54	Main Street and 1st Street	0.75	C	0.80	C
55	Main Street and McFadden Avenue	0.92	E	0.94	E
56	Main Street and Edinger Avenue	0.88	D	0.98	E
57	Main Street and MacArthur Boulevard	0.72	C	0.78	C
58	Penn Way and 17th Street	12.1	B	20.3	C
59	Santiago Street / I-5 NB Ramps and 17th Street	31.4	C	20.3	C
60	Penn Way and I-5 SB Ramps	19.5	B	22.8	C
61	Santiago Street and Civic Center Drive	62.6	F	27.6	D
62	Santiago Street and Santa Ana Boulevard	1.44	F	1.41	F
63*	Standard Avenue and 4th Street	1.340	F	1.340	F
64	Standard Avenue and 1st Street	1.52	F	1.48	F
65	Standard Avenue and McFadden Avenue	0.84	D	0.77	C
66	Halladay Street and Warner Avenue	0.69	B	0.82	D
67	Halladay Street and Dyer Road	0.67	B	0.95	E
68	SR-55 SB Ramps and MacArthur Boulevard	20.2	C	18.4	B
69	SR-55 NB Ramps and MacArthur Boulevard	19.5	B	16.2	B
70	SR-55 SB Ramps and Dyer Road	25.9	C	26.5	C
71	Glassell Street and La Veta Avenue	0.83	D	0.77	C
72	Glassell Street and SR-22 WB Ramps	30.1	C	33.4	C
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	29.6	C	31.8	C
74	Grand Avenue and Fairhaven Avenue	0.62	B	0.71	C
75	Grand Avenue and Santa Clara Avenue	0.88	D	0.84	D
76	Grand Avenue and 17th Street	0.96	E	1.02	F
77	Grand Avenue and I-5 NB Ramps	15.3	B	11.3	B
78	Grand Avenue and Santa Ana Boulevard	26.3	C	28.5	C
79	Grand Avenue and 1st Street	0.83	D	0.72	C

ID	INTERSECTION	AM		PM	
		V/C or Delay	LOS	V/C or Delay	LOS
80	Grand Avenue and Chestnut Avenue	0.94	E	0.78	C
81	Grand Avenue and McFadden Avenue	1.01	F	0.81	D
82	Grand Avenue and Edinger Avenue	0.90	D	1.08	F
83	Grand Avenue and Warner Avenue	0.66	B	0.90	D
84	SR-55 NB Ramps and Dyer Road	17.3	B	6.0	A
85	Cambridge Street and La Veta Avenue	23.4	C	26.1	D
86	Cambridge Street and Fairhaven Avenue	0.62	B	0.53	A
87	Mabury Street and 1st Street	27.4	C	27.2	C
88	Tustin Street and La Veta Avenue	0.36	A	0.34	A
89	Tustin Street and SR-22 WB On-Ramp	13.2	B	7.7	A
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	23.8	C	23.3	C
91	Tustin Street and Fairhaven Avenue	0.95	E	0.71	C
92	Tustin Avenue and Santa Clara Avenue	2.23	F	0.53	A
93	Tustin Avenue and 17th Street	0.79	C	0.70	B
94	Tustin Avenue and 4th Street	0.79	C	0.78	C
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	25.1	C	25.4	C
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	25.6	C	46.2	D
97	Red Hill Avenue and Edinger Avenue	0.62	B	0.87	D
98	Red Hill Avenue and Warner Avenue	0.53	A	0.90	D
99	Red Hill Avenue and Barranca Parkway	0.58	A	0.59	A
100	Red Hill Avenue and Alton Parkway	0.93	E	1.49	F
101	Red Hill Avenue and MacArthur Boulevard	1.28	F	1.40	F
102	Red Hill Avenue and Main Street	0.73	C	0.84	D
103	I-5 SB Ramps and Santa Ana Boulevard	17.8	B	19.9	B
104	Tustin Ranch Road and Warner Avenue	0.53	A	0.67	B
105	Von Karman Avenue and Barranca Parkway	0.93	E	1.28	F

Notes: (1) LOS – Level of Service; (2) V/C – Volume to Capacity

8.0 VMT and LOS Analysis

This section presents the significant impact analysis for the Future Year (2045) With Project scenario. Significant impacts are identified based on the criteria established in Section 3.1.

8.1 VMT IMPACT ANALYSIS

Per the City's VMT Guidelines, VMT impacts are to be identified for the Future Year (2045) With Project scenario. VMT impacts were assessed using the methodology described in Section 3.1. The following presents the screening and impact analysis process. First, the two general conditions are considered:

- **Does the project have the potential to reduce VMT/SP?**
    - It should be noted that the project consists of land use and the transportation network changes. Due to the scale of land use changes not all land uses are high-density and/or transit-oriented, thus the land use changes cannot be assumed to have the same VMT-reducing effect as, for example, a TOD Specific Plan. The proposed transportation network, however, has the potential to reduce VMT/SP since it proposes to reclassify streets in order to implement transit, Complete Streets, and active transportation improvements.
- **Is the project consistent with the Regional Transportation Plan (RTP) / Sustainable Communities Strategy's (SCS)?**
    - While the proposed General Plan does forecast growth beyond the RTP/SCS, it is occurring in a manner consistent with the goals of the RTP/SCS in that growth occurs in high density in/near high-quality transit corridors (HQTC). Additionally, the proposed transportation network supports active transportation and the reduction of VMT.

Since it is not clear that the land use changes will reduce VMT/SP, the project is not eligible to be screened from a full VMT analysis. Project and cumulative impacts are assessed below.

Project Level Impact

A project is considered to have a significant impact if the project VMT/SP (for the land use plan) exceeds 15% below the existing total daily VMT/SP for the County. Table 8-1 provides a summary of the VMT impact analysis for project level impacts. A significant impact at the project level is not expected due to the implementation of the project.

Table 8-1: Future Year (2045) VMT Impact Analysis – Project Impact

Metric	2045 – With Project City VMT/SP	2020 – No Project County VMT/SP	VMT Threshold 15% below 2020 – No Project County VMT/SP	Impact?
VMT/SP	20.3	25.9	22.0	NO

Cumulative Impact

A project is considered to have a significant cumulative impact if the project results in a negative effect on VMT/SP at the citywide level (City VMT/SP is higher with the project than without it). Table 8-2 provides a summary of the VMT impact analysis for project level impacts. A significant cumulative impact is not expected due to the implementation of the project.

Table 8-2: Future Year (2045) VMT Impact Analysis – Cumulative Impact

Metric	2045 – No Project City VMT/SP	2045 – With Project City VMT/SP	Impact?
VMT/SP	22.8	20.3	NO

The VMT impact analysis results show that the project is not expected to cause a significant project level or cumulative impact.

8.2 LEVEL OF SERVICE ASSESSMENT

If an intersection is expected to be significantly impacted due to the implementation of the proposed project, mitigation measures are to be identified such that the project impact is mitigated. This is generally accomplished by returning the V/C or Delay to pre-project levels and/or the resulting LOS to an acceptable LOS. This analysis for intersection LOS is provided here only for analysis with regard to MPAH reclassifications and consistency with OCTA's MPAH guidelines. Intersection LOS analysis is no longer required under CEQA, and the deficient LOS values identified here are not considered to be significant environmental impacts.

The cities of Santa Ana, Costa Mesa, Irvine, Fountain Valley, Tustin, and Orange have established LOS D as their minimum acceptable LOS. Caltrans and the OC CMP established LOS C and E as their minimum acceptable LOS, respectively.

Strategies and improvements to provide acceptable intersection LOS are developed in a manner which first considers lower intensity modifications, such as striping modifications, before considering more complex modifications such as signal controls or physical improvements. All strategies and improvements are subject to the approval of the presiding public authority, including funding and implementation. The City of Santa Ana will pursue the development of a Transportation System Improvement Assessment (TSIA) in order to provide funding for the implementation of the full transportation network buildout, including the strategies and improvements identified in this report.

The Future Year (2045) significant impact summary is provided in Table 8-3. Improvements are identified in Table 8-4. Table 8-5 provides a summary of the intersection performance with the implementation of the mitigation measures.

Unacceptable LOS and traffic impacts are expected at the intersections listed below (peak hour / jurisdiction). The intersection impacts were investigated to determine a probable cause for the impact (land use, transportation network, or both). In order to do this, link volumes and intersection LOS were compared for two scenarios: 1) a year 2045 scenario which includes the proposed General Plan land use updates and utilizes the 2045 baseline (No Project) network described in Section 2.6; and 2) the 2045 With Project scenario which includes all proposed General Plan land use updates and transportation network modifications described in Section 2.7. OCTAM volume comparison plots and a LOS comparison table are provided in Appendix G.

- **INT 3 – Euclid Street and Edinger Avenue (AM peak hour / Fountain Valley)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications, specifically along McFadden Avenue. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 13 – Harbor Boulevard and Segerstrom Avenue (AM peak hour / Santa Ana)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed land use changes. Improvements related to this impact are to be addressed through the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.
- **INT 34 – Bristol Street and 1st Street (AM and PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications along multiple roadways in the area such as those along Santa Ana Boulevard, Raitt Street, 1st Street, and Flower Street. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 36 – Bristol Street and Warner Avenue (AM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications, particularly along Raitt Street and Flower Street. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 37 – Bristol Street and Segerstrom Avenue (PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a result of both the proposed land use changes and reclassifications. As a result, improvements related to this impact are to be addressed through a combination of a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation as well as the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.

- **INT 44 – Flower Street 1st Street (PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a result of both the proposed land use changes and reclassifications. As a result, improvements related to this impact are to be addressed through a combination of a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation as well as the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.
- **INT 46 – Flower Street and Segerstrom Avenue (PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a result of both the proposed land use changes and reclassifications. As a result, improvements related to this impact are to be addressed through a combination of a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation as well as the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.
- **INT 47 – Flower Street and MacArthur Boulevard (PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed land use changes. Improvements related to this impact are to be addressed through the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.
- **INT 55 – Main Street and McFadden Avenue (AM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a result of both the proposed land use changes and reclassifications. As a result, improvements related to this impact are to be addressed through a combination of a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation as well as the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.
- **INT 56 – Main Street and Edinger Avenue (PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications such as those along McFadden Avenue Flower Street. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.

- **INT 62 – Santiago Street & Santa Ana Boulevard (AM & PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed reclassifications. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 63 – Standard Avenue and 4th Street (AM and PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications along both roadways as well as along roadways in the vicinity. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 64 – Standard Avenue and 1st Street (AM and PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications along both roadways as well as along roadways in the vicinity. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 76 – Grand Avenue and 17th Street (AM and PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed reclassifications. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 80 – Grand Avenue and Chestnut Avenue (AM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 81 – Grand Avenue and McFadden Avenue (AM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed reclassifications. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.

- **INT 82 – Grand Avenue and Edinger Avenue (PM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 91 – Tustin Street and Fairhaven Avenue (AM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 92 – Tustin Avenue and Santa Clara Avenue (AM peak hour / City of Santa Ana)**
    - The impact at this intersection is expected to occur as a byproduct of the proposed reclassifications. Improvements related to this impact are to be addressed through a memorandum of understanding (MOU) between OCTA and the City of Santa Ana which describes the timing and triggers for implementation.
- **INT 96 – SR-55 NB Ramps/Del Amo Avenue & Newport Avenue (PM peak hour / Caltrans)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed land use changes. Improvements related to this impact are to be addressed through the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.
- **INT 100 – Red Hill Avenue and Alton Parkway (AM and PM peak hour / City of Irvine)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed land use changes. Improvements related to this impact are to be addressed through the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.
- **INT 101 – Red Hill Avenue & MacArthur Boulevard (AM & PM peak hour / City of Irvine)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed land use changes. Improvements related to this impact are to be addressed through the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.

- **INT 105 – Von Karman Avenue and Barranca Parkway (PM peak hour / City of Irvine)**
    - The impact at this intersection is expected to occur primarily as a result of the proposed land use changes. Improvements related to this impact are to be addressed through the application of local and/or regional development impact fees (DIF's); the City of Santa Ana will explore applicable options.

Table 8-3: Future Year (2045) LOS Impact Summary

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
1	Euclid Street and Bolsa Avenue	AM	0.86	D	0.79	C	-0.07	NO
		PM	0.86	D	0.79	C	-0.07	NO
2	Euclid Street and McFadden Avenue	AM	0.98	E	0.91	E	-0.07	NO
		PM	0.90	D	0.79	C	-0.11	NO
3	Euclid Street and Edinger Avenue	AM	0.99	E	1.01	F	0.02	YES
		PM	0.89	D	0.86	D	-0.03	NO
4	Newhope Street and Hazard Avenue	AM	0.78	C	0.60	A	-0.18	NO
		PM	0.72	C	0.52	A	-0.20	NO
5	Newhope Street and McFadden Avenue	AM	0.83	D	0.73	C	-0.10	NO
		PM	0.78	C	0.68	B	-0.10	NO
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	AM	28.4	C	28.5	C	0.1	NO
		PM	24.2	C	23.8	C	-0.4	NO
7	Trask Avenue and SR-22 EB On-Ramp	AM	12.0	B	11.0	B	-1.0	NO
		PM	13.6	B	11.0	B	-2.6	NO
8	Harbor Boulevard and Westminster Avenue	AM	0.99	E	0.94	E	-0.05	NO
		PM	0.88	D	0.84	D	-0.04	NO
9	Harbor Boulevard and 1st Street	AM	0.79	C	0.75	C	-0.04	NO
		PM	0.78	C	0.75	C	-0.03	NO
10	Harbor Boulevard and McFadden Avenue	AM	0.79	C	0.73	C	-0.06	NO
		PM	0.81	D	0.71	C	-0.10	NO
11	Harbor Boulevard and Edinger Avenue	AM	0.84	D	0.86	D	0.02	NO
		PM	0.73	C	0.72	C	-0.01	NO
12	Harbor Boulevard and Warner Avenue	AM	0.79	C	0.80	C	0.01	NO
		PM	1.54	F	1.54	F	0.00	NO
13	Harbor Boulevard and Segerstrom Avenue	AM	0.97	E	1.01	F	0.04	YES

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
		PM	0.92	E	0.93	E	0.01	NO
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	AM	0.61	B	0.62	B	0.01	NO
		PM	0.92	E	0.89	D	-0.03	NO
15	Harbor Boulevard and MacArthur Boulevard	AM	0.74	C	0.75	C	0.01	NO
		PM	0.78	C	0.79	C	0.01	NO
16	Harbor Boulevard and Sunflower Avenue	AM	0.70	B	0.71	C	0.01	NO
		PM	0.72	C	0.71	C	-0.01	NO
17	Harbor Boulevard and I-405 NB Off-Ramp	AM	18.0	B	17.9	B	-0.1	NO
		PM	18.3	B	18.8	B	0.5	NO
18	Harbor Boulevard and I-405 SB Off-Ramp	AM	15.0	B	15.0	B	0.0	NO
		PM	17.9	B	18.1	B	0.2	NO
19	Fairview Street and Civic Center Drive	AM	0.74	C	0.68	B	-0.06	NO
		PM	0.76	C	0.71	C	-0.05	NO
20	Fairview Street and 1st Street	AM	0.86	D	0.89	D	0.03	NO
		PM	0.90	D	0.89	D	-0.01	NO
21	Fairview Street and McFadden Avenue	AM	0.80	C	0.80	C	0.00	NO
		PM	0.78	C	0.68	B	-0.10	NO
22	Fairview Street and Edinger Avenue	AM	0.86	D	0.88	D	0.02	NO
		PM	0.92	E	0.92	E	0.00	NO
23	Fairview Street and Warner Avenue	AM	0.82	D	0.85	D	0.03	NO
		PM	0.80	C	0.81	D	0.01	NO
24	Fairview Street and MacArthur Boulevard	AM	0.68	B	0.69	B	0.01	NO
		PM	0.77	C	0.76	C	-0.01	NO
25	Fairview Road and Sunflower Avenue	AM	0.70	B	0.69	B	-0.01	NO
		PM	0.72	C	0.69	B	-0.03	NO
26	Greenville Street and Edinger Avenue	AM	0.77	C	0.74	C	-0.03	NO
		PM	0.60	A	0.65	B	0.05	NO

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
27	Greenville Street and Segerstrom Avenue	AM	0.84	D	0.88	D	0.04	NO
		PM	0.78	C	0.80	C	0.02	NO
28	Raitt Street and McFadden Avenue	AM	0.78	C	0.70	B	-0.08	NO
		PM	0.76	C	0.68	B	-0.08	NO
29	Raitt Street and Edinger Avenue	AM	0.99	E	0.93	E	-0.06	NO
		PM	0.99	E	0.99	E	0.00	NO
30	Bear Street and MacArthur Boulevard	AM	0.71	C	0.76	C	0.05	NO
		PM	0.85	D	0.90	D	0.05	NO
31	Bristol Street and 17th Street	AM	0.87	D	0.85	D	-0.02	NO
		PM	0.82	D	0.81	D	-0.01	NO
32	Bristol Street and Civic Center Drive	AM	0.94	E	0.93	E	-0.01	NO
		PM	0.91	E	0.90	D	-0.01	NO
33	Bristol Street and Santa Ana Boulevard	AM	0.81	D	0.72	C	-0.09	NO
		PM	0.85	D	0.73	C	-0.12	NO
34	Bristol Street and 1st Street	AM	0.77	C	0.90	D	0.13	NO
		PM	0.83	D	0.97	E	0.14	YES
35	Bristol Street and McFadden Avenue	AM	0.96	E	0.95	E	-0.01	NO
		PM	1.03	F	0.89	D	-0.14	NO
36	Bristol Street and Warner Avenue	AM	0.92	E	0.96	E	0.04	YES
		PM	0.85	D	0.87	D	0.02	NO
37	Bristol Street and Segerstrom Avenue	AM	0.81	D	0.85	D	0.04	NO
		PM	0.87	D	0.92	E	0.05	YES
38	Bristol Street and Alton Avenue	AM	0.55	A	0.55	A	0.00	NO
		PM	0.63	B	0.58	A	-0.05	NO
39	Bristol Street and MacArthur Boulevard	AM	0.70	B	0.76	C	0.06	NO
		PM	0.77	C	0.80	C	0.03	NO
40	Bristol Street and Sunflower Avenue	AM	0.65	B	0.68	B	0.03	NO

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
		PM	0.69	B	0.74	C	0.05	NO
41	Bristol Street and I-405 NB Ramps	AM	20.8	C	20.9	C	0.1	NO
		PM	28.5	C	29.0	C	0.5	NO
42	Bristol Street and I-405 SB Ramps	AM	23.9	C	23.6	C	-0.3	NO
		PM	18.3	B	18.2	B	-0.1	NO
43	Flower Street and Santa Ana Boulevard	AM	0.81	D	0.59	A	-0.22	NO
		PM	0.86	D	0.67	B	-0.19	NO
44	Flower Street and 1st Street	AM	0.93	E	0.93	E	0.00	NO
		PM	0.88	D	1.22	F	0.34	YES
45	Flower Street and McFadden Avenue	AM	0.90	D	0.81	D	-0.09	NO
		PM	1.04	F	0.97	E	-0.07	NO
46	Flower Street and Segerstrom Avenue	AM	0.78	C	0.82	D	0.04	NO
		PM	0.87	D	0.92	E	0.05	YES
47	Flower Street and MacArthur Boulevard	AM	0.68	B	0.71	C	0.03	NO
		PM	0.90	D	0.91	E	0.01	YES
48	Main Street and La Veta Avenue	AM	0.59	A	0.54	A	-0.05	NO
		PM	0.70	B	0.76	C	0.06	NO
49	Main Street and Mainplace Drive / Memory Lane	AM	0.51	A	0.46	A	-0.05	NO
		PM	0.56	A	0.50	A	-0.06	NO
50	Main Street and 17th Street	AM	0.88	D	0.85	D	-0.03	NO
		PM	0.76	C	0.80	C	0.04	NO
51	Main Street and Civic Center Drive	AM	0.78	C	0.85	D	0.07	NO
		PM	0.97	E	0.86	D	-0.11	NO
52	Main Street and Santa Ana Boulevard	AM	0.93	E	0.79	C	-0.14	NO
		PM	0.79	C	0.70	B	-0.09	NO
53	Main Street and 4th Street	AM	0.41	A	0.44	A	0.03	NO
		PM	0.45	A	0.47	A	0.02	NO

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
54	Main Street and 1st Street	AM	0.68	B	0.75	C	0.07	NO
		PM	0.74	C	0.80	C	0.06	NO
55	Main Street and McFadden Avenue	AM	0.89	D	0.92	E	0.03	YES
		PM	0.93	E	0.94	E	0.01	NO
56	Main Street and Edinger Avenue	AM	0.80	C	0.88	D	0.08	NO
		PM	0.87	D	0.98	E	0.11	YES
57	Main Street and MacArthur Boulevard	AM	0.68	B	0.72	C	0.04	NO
		PM	0.75	C	0.78	C	0.03	NO
58	Penn Way and 17th Street	AM	12.2	B	12.1	B	-0.1	NO
		PM	25.5	C	20.3	C	-5.2	NO
59	Santiago Street / I-5 NB Ramps and 17th Street	AM	30.0	C	31.4	C	1.4	NO
		PM	19.0	B	20.3	C	1.3	NO
60	Penn Way and I-5 SB Ramps	AM	21.2	C	19.5	B	-1.7	NO
		PM	23.0	C	22.8	C	-0.2	NO
61	Santiago Street and Civic Center Drive	AM	159.2	F	62.6	F	-96.6	NO
		PM	110.0	F	27.6	D	-82.4	NO
62	Santiago Street and Santa Ana Boulevard	AM	1.04	F	1.44	F	0.40	YES
		PM	1.02	F	1.41	F	0.39	YES
63	Standard Avenue and 4th Street	AM	0.94	E	1.34	F	0.40	YES
		PM	0.89	D	1.34	F	0.45	YES
64	Standard Avenue and 1st Street	AM	0.98	E	1.52	F	0.54	YES
		PM	0.97	E	1.48	F	0.51	YES
65	Standard Avenue and McFadden Avenue	AM	0.85	D	0.84	D	-0.01	NO
		PM	0.83	D	0.77	C	-0.06	NO
66	Halladay Street and Warner Avenue	AM	0.78	C	0.69	B	-0.09	NO
		PM	0.97	E	0.82	D	-0.16	NO
67	Halladay Street and Dyer Road	AM	0.77	C	0.67	B	-0.10	NO

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
		PM	1.06	F	0.95	E	-0.11	NO
68	SR-55 SB Ramps and MacArthur Boulevard	AM	19.9	B	20.2	C	0.3	NO
		PM	17.8	B	18.4	B	0.6	NO
69	SR-55 NB Ramps and MacArthur Boulevard	AM	19.3	B	19.5	B	0.2	NO
		PM	14.6	B	16.2	B	1.6	NO
70	SR-55 SB Ramps and Dyer Road	AM	25.7	C	25.9	C	0.2	NO
		PM	26.5	C	26.5	C	0.0	NO
71	Glassell Street and La Veta Avenue	AM	0.80	C	0.83	D	0.03	NO
		PM	0.74	C	0.77	C	0.03	NO
72	Glassell Street and SR-22 WB Ramps	AM	32.6	C	30.1	C	-2.5	NO
		PM	30.5	C	33.4	C	2.9	NO
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	AM	30.6	C	29.6	C	-1.0	NO
		PM	31.6	C	31.8	C	0.2	NO
74	Grand Avenue and Fairhaven Avenue	AM	0.67	B	0.62	B	-0.05	NO
		PM	0.76	C	0.71	C	-0.05	NO
75	Grand Avenue and Santa Clara Avenue	AM	0.93	E	0.88	D	-0.05	NO
		PM	0.93	E	0.84	D	-0.09	NO
76	Grand Avenue and 17th Street	AM	0.91	E	0.96	E	0.05	YES
		PM	0.98	E	1.02	F	0.04	YES
77	Grand Avenue and I-5 NB Ramps	AM	13.2	B	15.3	B	2.1	NO
		PM	10.1	B	11.3	B	1.2	NO
78	Grand Avenue and Santa Ana Boulevard	AM	26.0	C	26.3	C	0.3	NO
		PM	25.3	C	28.5	C	3.2	NO
79	Grand Avenue and 1st Street	AM	0.74	C	0.83	D	0.09	NO
		PM	0.73	C	0.72	C	-0.01	NO
80	Grand Avenue and Chestnut Avenue	AM	0.70	B	0.94	E	0.24	YES
		PM	0.69	B	0.78	C	0.09	NO

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
81	Grand Avenue and McFadden Avenue	AM	0.89	D	1.01	F	0.12	YES
		PM	0.82	D	0.81	D	-0.01	NO
82	Grand Avenue and Edinger Avenue	AM	0.84	D	0.90	D	0.06	NO
		PM	1.00	E	1.08	F	0.08	YES
83	Grand Avenue and Warner Avenue	AM	0.61	B	0.66	B	0.05	NO
		PM	0.83	D	0.90	D	0.07	NO
84	SR-55 NB Ramps and Dyer Road	AM	17.1	B	17.3	B	0.2	NO
		PM	5.7	A	6.0	A	0.3	NO
85	Cambridge Street and La Veta Avenue	AM	31.6	D	23.4	C	-8.2	NO
		PM	19.7	C	26.1	D	6.4	NO
86	Cambridge Street and Fairhaven Avenue	AM	0.56	A	0.62	B	0.06	NO
		PM	0.45	A	0.53	A	0.08	NO
87	Mabury Street and 1st Street	AM	27.4	C	27.4	C	0.0	NO / NO *
		PM	27.1	C	27.2	C	0.1	NO / NO *
88	Tustin Street and La Veta Avenue	AM	0.45	A	0.36	A	-0.09	NO
		PM	0.38	A	0.34	A	-0.04	NO
89	Tustin Street and SR-22 WB On-Ramp	AM	12.2	B	13.2	B	1.0	NO
		PM	11.1	B	7.7	A	-3.4	NO
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	AM	25.0	C	23.8	C	-1.2	NO
		PM	23.1	C	23.3	C	0.2	NO
91	Tustin Street and Fairhaven Avenue	AM	0.90	D	0.95	E	0.05	YES
		PM	0.57	A	0.71	C	0.14	NO
92	Tustin Avenue and Santa Clara Avenue	AM	1.82	F	2.23	F	0.41	YES
		PM	0.67	B	0.53	A	-0.14	NO
93	Tustin Avenue and 17th Street	AM	0.82	D	0.79	C	-0.03	NO
		PM	0.73	C	0.70	B	-0.03	NO
94	Tustin Avenue and 4th Street	AM	0.83	D	0.79	C	-0.04	NO

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	LOS IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS		
		PM	0.71	C	0.78	C	0.07	NO
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	AM	25.2	C	25.1	C	-0.1	NO / NO *
		PM	25.5	C	25.4	C	-0.1	NO / NO *
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	AM	25.4	C	25.6	C	0.2	NO
		PM	39.1	D	46.2	D	7.1	YES
97	Red Hill Avenue and Edinger Avenue	AM	0.61	B	0.62	B	0.01	NO
		PM	0.85	D	0.87	D	0.02	NO
98	Red Hill Avenue and Warner Avenue	AM	0.51	A	0.53	A	0.02	NO
		PM	0.83	D	0.90	D	0.07	NO
99	Red Hill Avenue and Barranca Parkway	AM	0.55	A	0.58	A	0.03	NO
		PM	0.54	A	0.59	A	0.05	NO
100	Red Hill Avenue and Alton Parkway	AM	0.86	D	0.93	E	0.07	YES
		PM	1.18	F	1.49	F	0.31	YES
101	Red Hill Avenue and MacArthur Boulevard	AM	1.21	F	1.28	F	0.07	YES
		PM	1.33	F	1.4	F	0.07	YES
102	Red Hill Avenue and Main Street	AM	0.72	C	0.73	C	0.01	NO
		PM	0.81	D	0.84	D	0.03	NO
103	I-5 SB Ramps and Santa Ana Boulevard	AM	17.4	B	17.8	B	0.4	NO
		PM	18.4	B	19.9	B	1.5	NO
104	Tustin Ranch Road and Warner Avenue	AM	0.52	A	0.53	A	0.01	NO
		PM	0.65	B	0.67	B	0.02	NO
105	Von Karman Avenue and Barranca Parkway	AM	0.93	E	0.93	E	0.00	NO
		PM	1.23	F	1.28	F	0.05	YES

**Intersection is a Caltrans intersection and also part of OC CMP; XX/YY denotes LOS impacts per Caltrans/CMP impact criteria, respectively.*

Table 8-4: LOS Improvement Measures

ID	INTERSECTION	IMPROVEMENT
3	Euclid Street and Edinger Avenue	• Convert the WB right-turn lane into a shared thru-right • Convert one (1) EB thru lane into a shared thru-right
13	Harbor Boulevard and Segerstrom Avenue	• Add a second WB left-turn lane • Change WB and EB left-turn control to protected
34	Bristol Street and 1st Street	• Maintain 2045 NP configuration for WB approach o WB approach to be: 1L, 2T, 1TR • Add EB right-turn pocket
36	Bristol Street and Warner Avenue	• Feasible improvements could not be identified.
37	Bristol Street and Segerstrom Avenue	• Maintain 2045 NP configurations for EB/WB approaches • EB/WB approaches to be: 1LT, 2T, 1TR • Add NB right-turn pocket
44	Flower Street and 1st Street	• Maintain 2045 NP configurations for NB approach o NB approach to be: 1L, 2T, 1R
46	Flower Street and Segerstrom Avenue	• Feasible improvements could not be identified.
47	Flower Street and MacArthur Boulevard	• Feasible improvements could not be identified.
55	Main Street and McFadden Avenue	• Feasible improvements could not be identified.
56	Main Street and Edinger Avenue	• Feasible improvements could not be identified.
62	Santiago Street and Santa Ana Boulevard	• Convert the EB left-turn lane into a shared thru-left • Change signal timing and controls for EB and WB approaches be split phases
63	Standard Avenue and 4th Street	• Maintain 2045 NP conditions for EB and WB approaches o NB / SB to be: 1L, 1T, 1 R o EB / WB to be: 1L, 1T, 1TR

ID	INTERSECTION	IMPROVEMENT
64	Standard Avenue and 1st Street	• Feasible improvements could not be identified.
76	Grand Avenue and 17th Street	• Add a NB right-turn pocket • Convert the SB right-turn lane into a shared thru-right
80	Grand Avenue and Chestnut Avenue	• Feasible improvements could not be identified.
81	Grand Avenue and McFadden Avenue	• Maintain 2045 NP configuration for EB approach o EB approach to be: 1L, 1T, 1TR
82	Grand Avenue and Edinger Avenue	• Feasible improvements could not be identified.
91	Tustin Street and Fairhaven Avenue	• Maintain 2045 NP lane configurations for EB and WB approaches o EB approach to be: 1L, 1T, 1TR o WB approach to be: 1L, 1T, 1R
92	Tustin Avenue and Santa Clara Avenue	• Maintain 2045 NP lane configurations for EB and WB approaches • EB and WB approaches to be: 1L, 1T, 1TR
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	• Add a second SB right-turn lane
100	Red Hill Avenue and Alton Parkway	• Add a NB thru lane • Add a left-turn lane and a shared thru-right to the EB approach • Convert the WB right-turn lane into a shared thru-right
101	Red Hill Avenue and MacArthur Boulevard	• Convert one (1) EB thru lane into a left-turn lane
105	Von Karman Avenue and Barranca Parkway	• Convert one (1) WB thru lane into a shared thru-right

Table 8-5: Future Year (2045) With Project – Mitigated Impact Summary

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	IMPACT?	2045 With Project – Mit.		DELTA	IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS		
3	Euclid Street and Edinger Avenue	AM	0.99	E	1.01	F	0.02	YES	0.97	E	-0.02	NO
		PM	0.89	D	0.86	D	-0.03	NO	0.80	D	-0.09	NO
13	Harbor Boulevard and Segerstrom Avenue	AM	0.97	E	1.01	F	0.04	YES	0.96	E	-0.01	NO
		PM	0.92	E	0.93	E	0.01	NO	0.93	E	0.01	NO
34	Bristol Street and 1st Street	AM	0.77	C	0.90	D	0.13	NO	0.79	C	0.02	NO
		PM	0.83	D	0.97	E	0.14	YES	0.87	D	0.04	NO
36	Bristol Street and Warner Avenue	AM	0.92	E	0.96	E	0.04	YES	0.96	E	0.04	YES
		PM	0.85	D	0.87	D	0.02	NO	0.87	D	0.02	NO
37	Bristol Street and Segerstrom Avenue	AM	0.81	D	0.85	D	0.04	NO	0.81	D	0.00	NO
		PM	0.87	D	0.92	E	0.05	YES	0.87	D	0.00	NO
44	Flower Street and 1st Street	AM	0.93	E	0.93	E	0.00	NO	0.93	E	0.00	NO
		PM	0.88	D	1.22	F	0.34	YES	0.92	E	0.04	YES
46	Flower Street and Segerstrom Avenue	AM	0.78	C	0.82	D	0.04	NO	0.82	D	0.04	NO
		PM	0.87	D	0.92	E	0.05	YES	0.92	E	0.05	YES
47	Flower Street and Macarthur Boulevard	AM	0.68	B	0.71	C	0.03	NO	0.71	C	0.03	NO
		PM	0.90	D	0.91	E	0.01	YES	0.91	E	0.01	YES
55	Main Street and McFadden Avenue	AM	0.89	D	0.92	E	0.03	YES	0.92	E	0.03	YES
		PM	0.93	E	0.94	E	0.01	NO	0.94	E	0.01	NO
56	Main Street and Edinger Avenue	AM	0.80	C	0.88	D	0.08	NO	0.88	D	0.08	NO
		PM	0.87	D	0.98	E	0.11	YES	0.98	E	0.11	YES
62	Santiago Street and Santa Ana Boulevard	AM	1.04	F	1.44	F	0.40	YES	1.24	F	0.20	YES
		PM	1.02	F	1.41	F	0.39	YES	1.28	F	0.26	YES
63	Standard Avenue and 4th Street	AM	0.94	E	1.34	F	0.40	YES	1.06	F	0.12	YES
		PM	0.89	D	1.34	F	0.45	YES	1.03	F	0.14	YES

ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project		DELTA	IMPACT?	2045 With Project – Mit.		DELTA	IMPACT?
			V/C or Delay	LOS	V/C or Delay	LOS			V/C or Delay	LOS		
64	Standard Avenue and 1st Street	AM	0.98	E	1.52	F	0.54	YES	1.52	F	0.54	YES
		PM	0.97	E	1.48	F	0.51	YES	1.48	F	0.51	YES
76	Grand Avenue and 17th Street	AM	0.91	E	0.96	E	0.05	YES	0.82	D	-0.09	NO
		PM	0.98	E	1.02	F	0.04	YES	0.93	E	-0.05	NO
80	Grand Avenue and Chestnut Avenue	AM	0.70	B	0.94	E	0.24	YES	0.94	E	0.24	YES
		PM	0.69	B	0.78	C	0.09	NO	0.78	C	0.09	NO
81	Grand Avenue and McFadden Avenue	AM	0.89	D	1.01	F	0.12	YES	0.86	D	-0.03	NO
		PM	0.82	D	0.81	D	-0.01	NO	0.81	D	-0.01	NO
82	Grand Avenue and Edinger Avenue	AM	0.84	D	0.90	D	0.06	NO	0.90	D	0.06	NO
		PM	1.00	E	1.08	F	0.08	YES	1.08	F	0.08	YES
91	Tustin Street and Fairhaven Avenue	AM	0.90	D	0.95	E	0.05	YES	0.80	D	-0.10	NO
		PM	0.57	A	0.71	C	0.14	NO	0.53	A	-0.04	NO
92	Tustin Avenue and Santa Clara Avenue	AM	1.82	F	2.23	F	0.41	YES	1.40	F	-0.42	NO
		PM	0.67	B	0.53	A	-0.14	NO	0.47	A	-0.20	NO
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	AM	25.4	C	25.6	C	0.2	NO	24.4	C	-1.0	NO
		PM	39.1	D	46.2	D	7.1	YES	28.5	C	-10.6	NO
100	Red Hill Avenue and Alton Parkway	AM	0.86	D	0.93	E	0.07	YES	0.68	B	-0.18	NO
		PM	1.18	F	1.49	F	0.31	YES	1.21	F	0.03	YES
101	Red Hill Avenue and MacArthur Boulevard	AM	1.21	F	1.28	F	0.07	YES	1.16	F	-0.05	NO
		PM	1.33	F	1.40	F	0.07	YES	1.35	F	0.02	NO
105	Von Karman Avenue and Barranca Parkway	AM	0.93	E	0.93	E	0.00	NO	0.93	E	0.00	NO
		PM	1.23	F	1.28	F	0.05	YES	1.24	F	0.01	NO

As shown in Table 8-5, impacts are expected to remain at the following intersections:

- **INT 36 – Bristol Street and Warner Avenue (City of Santa Ana)**
    - Due to limited right-of-way, feasible improvements could not be developed. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the AM peak hour.
- **INT 44 – Flower Street and 1st Street (City of Santa Ana)**
    - A mitigation measure was developed but only resulted in partial mitigation of the impact. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the PM peak hour.
- **INT 46 – Flower Street and Segerstrom Avenue (City of Santa Ana)**
    - Due to limited right-of-way, feasible improvements could not be developed. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the PM peak hour.
- **INT 47 – Flower Street and Segerstrom Avenue (City of Santa Ana)**
    - Due to limited right-of-way, feasible improvements could not be developed. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the PM peak hour.
- **INT 55 – Main Street and McFadden Avenue (City of Santa Ana)**
    - Due to limited right-of-way, feasible improvements could not be developed. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the AM peak hour.
- **INT 56 – Main Street and Edinger Avenue (City of Santa Ana)**
    - Due to limited right-of-way, feasible improvements could not be developed. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the PM peak hour.
- **INT 62 – Santiago Street and Santa Ana Boulevard (City of Santa Ana)**
    - Due to limited right-of-way and the implementation of the OC Streetcar, a mitigation measure was developed but only resulted in partial mitigation of the impact. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the AM and PM peak hours.
- **INT 63 – Standard Avenue and 4th Street (City of Santa Ana)**
    - A mitigation measure was developed but only resulted in partial mitigation of the impact. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the AM and PM peak hours.

- **INT 64 – Standard Avenue and 1st Street (City of Santa Ana)**
    - Due to limited right-of-way and the planned implementation of the bike lanes along both Standard Avenue and First Street, no feasible improvements were identified.The LOS cannot be returned to an acceptable LOS; the impact is to remain in the AM and PM peak hours.
- **INT 80 – Grand Avenue and Chestnut Avenue (City of Santa Ana)**
    - Due to limited right-of-way and the planned implementation of the bike lanes along Chestnut Avenue, no feasible improvements were identified. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the AM peak hour.
- **INT 82 – Grand Avenue and Edinger Avenue (City of Santa Ana)**
    - Due to limited right-of-way, feasible improvements could not be developed. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the PM peak hour.
- **INT 100 – Red Hill Avenue and Alton Parkway (City of Irvine)**
    - Due to limited right-of-way, a mitigation measure was developed and resulted in mitigating the impacts in the AM peak hour. The LOS cannot be returned to an acceptable LOS; the impact is to remain in the PM peak hour.

9.0 Conclusions

This traffic analysis report has been prepared in support of the General Plan Update (GPU) Draft Program Environmental Impact Report (PEIR) for the City of Santa Ana and to assess requested changes to the Orange County Transportation Authority's (OCTA) Master Plan of Arterial Highways (MPAH) by the City of Santa Ana. The purpose of this study is to identify traffic impacts due to the implementation of the proposed project (General Plan update). This study was prepared in conformance with CEQA guidelines and in consultation with the OPR Technical Advisory as well as the traffic impact analysis guidelines for the City of Santa Ana and local jurisdictions. CEQA identifies VMT as the preferred metric for identifying environmental impacts. However, intersection impacts and roadway LOS are also evaluated in order to address local network performance. A summary of the analysis is provided below.

9.1 VMT IMPACT ANALYSIS

A VMT analysis was conducted to determine impacts due to the implementation of the project. The project was evaluated to determine the potential project level and cumulative impacts.

A project is considered to have a significant impact at the project level if the project VMT/SP (for the land use plan) exceeds 15% below the existing total daily VMT/SP for the County. The VMT impact threshold (15% below the 2020 – No Project County VMT/SP) is 22.0 VMT/SP. The project resulted in a 2045 – With Project City VMT/SP of 20.3 VMT/SP. Thus, the project does not result in a project level VMT impact.

A project is considered to have a significant cumulative impact if the project results in a negative effect on VMT/SP at the citywide level (City VMT/SP is higher with the project than without it). The VMT impact threshold (2045 – No Project City VMT/SP) is 22.8 VMT/SP. The project resulted in a 2045 – With Project City VMT/SP of 20.3 VMT/SP. The project does not result in a negative impact on citywide VMT, therefore does not result in a cumulative impact.

9.2 INTERSECTION LOS ANALYSIS

An intersection impact analysis was conducted in order to determine projects impacts related to the OCTA MPAH and City-level LOS guidelines at study intersections. It should be noted that intersection impacts may be identified but are not indicative of an environmental impact, per CEQA. Significant impacts are expected at twenty-four (24) study intersections for the Future year (2045) With Project scenario. Mitigation of the impacts is not required for CEQA conformance, but measures were developed to address local network performance. All mitigation measures are subject to the approval of the presiding public authority, including funding and implementation. The City of Santa Ana will pursue the development of a Transportation System Improvement Assessment (TSIA) in order to provide funding for the implementation of the full transportation network buildout, including the mitigation measures identified in this report.

All identified impacts are expected to be mitigated with the exception of:

- INT 36 – Bristol Street and Warner Avenue (City of Santa Ana)
- INT 44 – Flower Street and 1st Street (City of Santa Ana)
- INT 46 – Flower Street and Segerstrom Avenue (City of Santa Ana)
- INT 47 – Flower Street and Segerstrom Avenue (City of Santa Ana)
- INT 55 – Main Street and McFadden Avenue (City of Santa Ana)

- INT 56 – Main Street and Edinger Avenued (City of Santa Ana)
- INT 62 – Santiago Street and Santa Ana Boulevard (City of Santa Ana)
- INT 63 – Standard Avenue and 4th Street (City of Santa Ana)
- INT 64 – Standard Avenue and 1st Street (City of Santa Ana)
- INT 80 – Grand Avenue and Chestnut Avenue (City of Santa Ana)
- INT 82 – Grand Avenued and Alton Parkway (City of Santa Ana)
- INT 100 – Red Hill Avenue and Alton Parkway (City of Irvine)

9.3 ROADWAY LOS

Roadway LOS was assessed to determine conformance with the City of Santa Ana MPSH minimum level of service requirements. Eleven study roadways currently operate at an unacceptable LOS. Eight study roadways are expected to operate at an unacceptable LOS in the Future Year (2045) No Project scenario. Seven roadways are expected to operate at an unacceptable LOS in the Future Year (2045) With Project scenario. Although the LOS exceeds the standard established in the Circulation Element, physical improvements are not feasible due to right-of-way constraints.

10.0 Appendices

- APPENDIX A – LANE GEOMETRIES
- APPENDIX B – INTERSECTION VOLUMES
- APPENDIX C – OCTAM VOLUME PLOTS
- APPENDIX D – ANALYSIS WORKSHEETS
- APPENDIX E – MITIGATION WORKSHEETS
- APPENDIX F – VMT CALCULATIONS
- APPENDIX G – OCTAM 2045 VOLUME COMPARISON PLOTS

Santa Ana Circulation Element

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Euclid St and 1st St	102100	102100	102100	102100
2	Euclid St and McFadden Ave	102100	102100	101100	101100
3	Euclid St and Edinger Ave	202100	202100	102010	102010
4	Newhope St and Hazard Ave	101100	101100	101100	101100
5	Newhope St and McFadden Ave	101100	101100	101100	101100
6	Harbor Blvd and SR-22 WB Off-Ramp /	103000	002100	000001	110010
7	Trask Avenue and SR-22 EB On-Ramp	000000	000000	201000	001100
8	Harbor Blvd and Westminster Ave	103010	103010	102100	103010
9	Harbor Blvd and 1st St	103010	103010	202100	202100
10	Harbor Blvd and McFadden Ave	203010	202100	101100	101100
11	Harbor Blvd and Edinger Ave	203010	203010	202100	203010
12	Harbor Blvd and Warner Ave	202100	203010	203010	203010
13	Harbor Blvd and Segerstrom Ave	202100	102100	101100	102010
14	MacArthur Blvd and Hyland Ave	200100	101010	103010	103010
15	MacArthur Blvd and Harbor Blvd	203010	203010	103010	103010
16	Harbor Blvd and Sunflower Ave	203010	203010	101100	110100
17	Harbor Blvd and I-405 WB Off-Ramp	004000	004000	000000	100011
18	Harbor Blvd and I-405 EB Off-Ramp	003010	004000	100011	000000
19	Fairview St and Civic Center Dr	102100	102100	010100	110010
20	Fairview St and 1st St	103010	102100	102100	102100
21	Fairview St and McFadden Ave	103010	103010	101100	101100
22	Fairview St and Edinger Ave	202100	202100	202100	202100
23	Fairview St and Warner Ave	202100	202100	202100	202100
24	Fairview St and MacArthur Blvd	202100	203010	203010	203010
25	Fairview Rd and Sunflower Ave	203010	202100	201100	202010
26	Greenville St and Edinger Ave	100010	000000	002100	102000
27	Greenville St and Segerstrom Ave	101100	101010	101100	101100
28	Raitt St and McFadden Ave	101100	101100	101100	101100
29	Raitt St and Edinger Ave	101100	101100	101100	101100
30	Bear St and MacArthur Blvd	102010	102010	102100	102100
31	Bristol St and 17th St	203010	203010	202100	203010
32	Bristol St and Civic Center Dr	102100	102100	101100	101100
33	Bristol St and Santa Ana Blvd	102100	102100	101100	101100
34	Bristol St and 1st St	203010	203010	102100	102100
35	Bristol St and McFadden Ave	103010	103010	101100	101100
36	Bristol St and Warner Ave	202010	202100	103010	103010
37	Bristol St and Segerstrom Ave	102100	102100	101100	101100
38	Bristol St and Alton Ave	102100	103010	101100	100100
39	Bristol St and MacArthur Blvd	203010	202100	203010	203010

40	Bristol St and Sunflower Ave	202110	203010	202110	203010
41	Bristol St and I-405 WB Ramps	004010	004100	000020	111020
42	Bristol St and I-405 EB Ramps	104000	002110	300010	000000
43	Flower St and Santa Ana Blvd	102010	102010	103010	102010
44	Flower St and 1st St	102010	101100	102100	102100
45	Flower St and McFadden Ave	100100	100100	100100	100100
46	Flower St and Segerstrom Ave	101100	101100	101100	101100
47	Flower St and MacArthur Blvd	101100	101100	102100	102100

Santa Ana Circulation Element

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
48	Main St and La Veta Ave	203010	202100	202100	202010
49	Main St and Mainplace Dr / Memory L	202100	202100	202100	202010
50	Main St and 17th St	202010	201100	202100	202100
51	Main St and Civic Center Dr	101100	101100	101100	101100
52	Main St and Santa Ana Blvd	102000	001100	000000	011100
53	Main St and 4th St	001100	001100	000100	000100
54	Main St and 1st St	101100	102010	102100	102100
55	Main St and McFadden Ave	101100	101100	100100	101010
56	Main St and Edinger Ave	101100	101100	102010	102100
57	Main St and MacArthur Blvd	203010	203010	203010	203010
58	Penn Wy and 17th St	200020	000000	002100	103000
59	I-5 NB Off Ramps/17th Street	110010	100010	103010	002100
60	Penn Wy and I-5 SB Ramps	002010	202000	000000	100020
61	Santiago St and Civic Center Dr	100100	100100	010010	000001
62	Santiago St and Santa Ana Blvd	101010	101010	101100	102010
64	Standard Ave and 1st St	100100	000001	101100	101100
65	Standard Ave and Mcfadden Ave	101100	101100	101100	101100
66	Halladay St and Warner Ave	100010	000000	001100	011000
67	Halladay St and Dyer Rd	100100	100100	102100	102100
68	SR-55 SB Ramps and MacArthur Blvd	000000	200020	002110	003010
69	SR-55 NB Ramps and MacArthur Blvd	200010	000000	002020	003010
70	SR-55 SB Ramps and Dyer Rd	110020	011010	103010	203010
71	Glassell St and La Veta Ave	201010	101100	101010	101100
72	Glassell St and SR-22 WB Ramps	102000	002010	000000	100011
73	Grand Ave / Glassell St and SR-22 E	002010	102000	100011	000000
74	Grand Ave and Fairhaven Ave	102100	102010	101100	101010
75	Grand Ave and Santa Clara Ave	102100	101100	100100	101010
76	Grand Ave and 17th St	102100	102010	202100	202100
77	Grand Ave and I-5 NB Ramps	002010	103000	000000	200010
78	Grand Ave and Santa Ana Blvd	102100	102020	201020	010100
79	Grand Ave and 1st St	202100	203010	202100	201100
80	Grand Ave and Chestnut Ave	102100	102100	101100	101100
81	Grand Ave and McFadden Ave	102100	102100	101100	101100
82	Grand Ave and Edinger Ave	102100	102100	102100	102100
83	Grand Ave and Warner Ave	102100	102100	203010	202010
84	SR-55 NB Ramps and Dyer Rd	100011	000000	003010	002100
85	Cambridge St and La Veta Ave	101000	001010	100010	000000
86	Cambridge St and Fairhaven Ave	000000	100010	102000	001100
87	Mabury St and 1st Street	100010	100011	002100	102100
88	Tustin St and La Veta Ave	102100	102100	101100	110010
89	Tustin St and SR-22 WB On-Ramp	202000	002100	000000	000000
90	Tustin St and SR-22 EB Off-Ramp / S	002100	103000	100011	000001
91	Tustin Ave and Fairhaven Ave	202100	202100	101100	101010
92	Tustin Ave and Santa Clara Ave	102100	202100	101100	101100
93	Tustin Ave and 17th St	202010	202100	203010	203010
94	Tustin Ave and 4th St	102100	202010	102100	102100
95	SR-55 SB Ramps / Auto Mall Dr and E	110020	101010	103010	202100
96	SR-55 NB Ramps / Del Amo Ave and Ne	202100	103010	201100	101100
97	Red Hill Ave and Edinger Ave	203010	203010	203010	203010
98	Red Hill Ave and Warner Ave	203100	202100	102100	203010

Santa Ana Circulation Element

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
99	Red Hill Ave and Dyer Rd / barranca	204010	204010	203100	204010
100	Red Hill Ave and Alton Pkwy	103010	103010	102010	201010
101	Red Hill Ave and MacArthur Blvd	202100	203010	203010	103010
102	Red Hill Ave and Main St	202010	202010	202100	202100
103	I-5 SB Ramps and Santa Ana Blvd	000000	200010	203000	002100
104	Tustin Ranch Rd and Warner Ave	000000	200010	203000	003010
105	Von Karman Ave and Barranca Pkwy	201100	202020	203010	204010

Santa Ana Circulation Element

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Euclid St and 1st St	102100	102100	102100	102100
2	Euclid St and McFadden Ave	102100	102100	101100	101100
3	Euclid St and Edinger Ave	202100	202100	102010	102010
4	Newhope St and Hazard Ave	101100	101100	101100	101100
5	Newhope St and McFadden Ave	101100	101100	101100	101100
6	Harbor Blvd and SR-22 WB Off-Ramp /	103000	002100	000001	110010
7	Trask Avenue and SR-22 EB On-Ramp	000000	000000	201000	001100
8	Harbor Blvd and Westminster Ave	103010	103010	102100	103010
9	Harbor Blvd and 1st St	103010	103010	202100	202100
10	Harbor Blvd and McFadden Ave	203010	202100	101100	101100
11	Harbor Blvd and Edinger Ave	203010	203010	202100	203010
12	Harbor Blvd and Warner Ave	202100	203010	203010	203010
13	Harbor Blvd and Segerstrom Ave	202100	102100	101100	102010
14	MacArthur Blvd and Hyland Ave	200100	101010	103010	103010
15	MacArthur Blvd and Harbor Blvd	203010	203010	103010	103010
16	Harbor Blvd and Sunflower Ave	203010	203010	101100	110100
17	Harbor Blvd and I-405 NB Off-Ramp	004000	004000	000000	100011
18	Harbor Blvd and I-405 SB Off-Ramp	003010	004000	100011	000000
19	Fairview St and Civic Center Dr	102100	102100	010100	110010
20	Fairview St and 1st St	103010	102100	102100	102100
21	Fairview St and McFadden Ave	103010	103010	101100	101100
22	Fairview St and Edinger Ave	202100	202100	202100	202100
23	Fairview St and Warner Ave	202100	202100	202100	202100
24	Fairview St and MacArthur Blvd	202100	203010	203010	203010
25	Fairview Rd and Sunflower Ave	203010	202100	201100	202010
26	Greenville St and Edinger Ave	100010	000000	002100	103000
27	Greenville St and Segerstrom Ave	100100	100100	102100	102100
28	Raitt St and McFadden Ave	101100	101100	101100	101100
29	Raitt St and Edinger Ave	101100	101100	102100	102100
30	Bear St and MacArthur Blvd	102010	102010	102100	102100
31	Bristol St and 17th St	203010	203010	202100	203010
32	Bristol St and Civic Center Dr	102100	102100	101100	101100
33	Bristol St and Santa Ana Blvd	102100	102100	102100	102100
34	Bristol St and 1st St	203010	203010	102100	102100
35	Bristol St and McFadden Ave	103010	103010	101100	101100
36	Bristol St and Warner Ave	202100	202100	103010	103010
37	Bristol St and Segerstrom Ave	102100	102100	102100	102100
38	Bristol St and Alton Ave	102100	103010	101100	100100

39	Bristol St and MacArthur Blvd	203010	202100	203010	203010
40	Bristol St and Sunflower Ave	202110	203010	202110	203010
41	Bristol St and I-405 NB Ramps	004010	004100	000020	111020
42	Bristol St and I-405 SB Ramps	104000	002110	300010	000000
43	Flower St and Santa Ana Blvd	102010	102010	103010	102100
44	Flower St and 1st St	102010	101100	102100	102100
45	Flower St and McFadden Ave	010100	010100	010100	010100
46	Flower St and Segerstrom Ave	101100	101100	102100	102100

47	Flower St and MacArthur Blvd	101100	101100	102100	102100

Santa Ana Circulation Element

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
48	Main St and La Veta Ave	203010	202100	202100	202010
49	Main St and Mainplace Dr / Memory L	202100	202100	202100	202010
50	Main St and 17th St	202010	202010	202100	202100
51	Main St and Civic Center Dr	101100	101100	101100	101100
52	Main St and Santa Ana Blvd	102000	001100	000000	010100
53	Main St and 4th St	001100	001100	001100	001100
54	Main St and 1st St	101100	102010	102100	102100
55	Main St and McFadden Ave	101100	101100	101100	101100
56	Main St and Edinger Ave	101100	101100	102100	102100
57	Main St and MacArthur Blvd	203010	203010	203010	203010
58	Penn Wy and 17th St	200020	000000	002100	103000
59	I-5 NB Off Ramps/17th Street	110010	100010	103010	002100
60	Penn Wy and I-5 SB Ramps	002010	202000	000000	100020
61	Santiago St and Civic Center Dr	100100	100100	010010	000001
62	Santiago St and Santa Ana Blvd	101100	101100	101100	102010
63	Standard Ave and 4th St	102010	102010	101100	101100
64	Standard Ave and 1st St	101100	101100	102100	102100
65	Standard Ave and Mcfadden Ave	101100	101100	101100	101100
66	Halladay St and Warner Ave	100010	000000	002100	012000
67	Halladay St and Dyer Rd	100100	100100	102100	102100
68	SR-55 SB Ramps and MacArthur Blvd	000000	200020	002110	003010
69	SR-55 NB Ramps and MacArthur Blvd	200010	000000	002020	003010
70	SR-55 SB Ramps and Dyer Rd	110020	011010	103010	203010
71	Glassell St and La Veta Ave	201010	101100	101010	101100
72	Glassell St and SR-22 WB Ramps	102000	002010	000000	100011
73	Grand Ave / Glassell St and SR-22 E	002010	102000	100011	000000
74	Grand Ave and Fairhaven Ave	102100	102100	101100	101010
75	Grand Ave and Santa Clara Ave	102100	102100	100100	101010
76	Grand Ave and 17th St	102100	102100	202100	202100
77	Grand Ave and I-5 NB Ramps	002010	103000	000000	200010
78	Grand Ave and Santa Ana Blvd	102100	102020	201020	010100
79	Grand Ave and 1st St	202100	203010	202100	202100
80	Grand Ave and Chestnut Ave	102100	102100	101100	101100
81	Grand Ave and McFadden Ave	102100	102100	101100	101100
82	Grand Ave and Edinger Ave	102100	102100	102100	102100
83	Grand Ave and Warner Ave	102100	102100	203010	202100
84	SR-55 NB Ramps and Dyer Rd	100011	000000	003010	002100
85	Cambridge St and La Veta Ave	101000	001010	100010	000000
86	Cambridge St and Fairhaven Ave	000000	100010	102000	001100
87	Mabury St and 1st Street	100010	100011	002100	102100
88	Tustin St and La Veta Ave	102100	102100	101100	110010
89	Tustin St and SR-22 WB On-Ramp	202000	002100	000000	000000
90	Tustin St and SR-22 EB Off-Ramp / S	002100	103000	100011	000001
91	Tustin Ave and Fairhaven Ave	202100	202100	101100	101010
92	Tustin Ave and Santa Clara Ave	102100	202100	101100	101100
93	Tustin Ave and 17th St	202010	202100	203010	203010
94	Tustin Ave and 4th St	102100	202010	102110	102100
95	SR-55 SB Ramps / Auto Mall Dr and E	110020	101010	103010	202100
96	SR-55 NB Ramps / Del Amo Ave and Ne	202100	103010	201100	101100

Node	Intersection	NB	SB	EB	WB
97	Red Hill Ave and Edinger Ave	203010	203010	203010	203010

Santa Ana Circulation Element

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
98	Red Hill Ave and Warner Ave	203100	202100	102100	203010
99	Red Hill Ave and Dyer Rd / barranca	204010	204010	203100	204010
100	Red Hill Ave and Alton Pkwy	103010	103010	102010	201010
101	Red Hill Ave and MacArthur Blvd	202100	203010	203010	103010
102	Red Hill Ave and Main St	202010	202010	202100	202100
103	I-5 SB Ramps and Santa Ana Blvd	000000	200010	203000	002100
104	Tustin Ranch Rd and Warner Ave	000000	200010	203000	003010
105	Von Karman Ave and Barranca Pkwy	201100	202020	203010	204010

Santa Ana Circulation Element

Lane Geometry Report

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
1	Euclid St and 1st St	102100	102100	102100	102100
2	Euclid St and McFadden Ave	102100	102100	101100	101100
3	Euclid St and Edinger Ave	202100	202100	102010	102010
4	Newhope St and Hazard Ave	101100	101100	100100	100100
5	Newhope St and McFadden Ave	101100	101100	101100	101100
6	Harbor Blvd and SR-22 WB Off-Ramp /	103000	002100	000001	110010
7	Trask Avenue and SR-22 EB On-Ramp	000000	000000	201000	001100
8	Harbor Blvd and Westminster Ave	103010	103010	102100	103010
9	Harbor Blvd and 1st St	103010	103010	202100	202100
10	Harbor Blvd and McFadden Ave	203010	202100	101100	100100
11	Harbor Blvd and Edinger Ave	203010	203010	202100	203010
12	Harbor Blvd and Warner Ave	202100	203010	203010	203010
13	Harbor Blvd and Segerstrom Ave	202100	102100	101100	102010
14	MacArthur Blvd and Hyland Ave	200100	101010	103010	103010
15	MacArthur Blvd and Harbor Blvd	203010	203010	103010	103010
16	Harbor Blvd and Sunflower Ave	203010	203010	101100	110100
17	Harbor Blvd and I-405 NB Off-Ramp	004000	004000	000000	100011
18	Harbor Blvd and I-405 SB Off-Ramp	003010	004000	100011	000000
19	Fairview St and Civic Center Dr	102100	102100	010100	110010
20	Fairview St and 1st St	103010	102100	102100	102100
21	Fairview St and McFadden Ave	103010	103010	100100	100100
22	Fairview St and Edinger Ave	202100	202100	202100	202100
23	Fairview St and Warner Ave	202100	202100	202100	202100
24	Fairview St and MacArthur Blvd	202100	203010	203010	203010
25	Fairview Rd and Sunflower Ave	203010	202100	201100	202010
26	Greenville St and Edinger Ave	100010	000000	002100	103000
27	Greenville St and Segerstrom Ave	100100	100100	102100	102100
28	Raitt St and McFadden Ave	100100	100100	100100	100100
29	Raitt St and Edinger Ave	100100	100100	102100	102100
30	Bear St and MacArthur Blvd	102010	102010	102100	102100
31	Bristol St and 17th St	203010	203010	202100	203010
32	Bristol St and Civic Center Dr	102100	102100	100100	101100
33	Bristol St and Santa Ana Blvd	102100	102100	100100	100100
34	Bristol St and 1st St	203010	203010	102100	101100
35	Bristol St and McFadden Ave	103010	103010	100100	100100
36	Bristol St and Warner Ave	202100	202100	103010	103010
37	Bristol St and Segerstrom Ave	102100	102100	102100	102100
38	Bristol St and Alton Ave	102100	103010	101100	100100
39	Bristol St and MacArthur Blvd	203010	202100	203010	203010

40	Bristol St and Sunflower Ave	202110	203010	202110	203010
41	Bristol St and I-405 NB Ramps	004010	004100	000020	111020
42	Bristol St and I-405 SB Ramps	104000	002110	300010	000000
43	Flower St and Santa Ana Blvd	102010	102010	102010	102010
44	Flower St and 1st St	101010	101100	101100	101100
45	Flower St and McFadden Ave	100100	100100	100100	100100
46	Flower St and Segerstrom Ave	101100	101100	102100	102100
47	Flower St and MacArthur Blvd	101100	101100	102100	102100

Santa Ana Circulation Element

Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
48	Main St and La Veta Ave	203010	202100	202100	202010
49	Main St and Mainplace Dr / Memory L	202100	202100	202100	202010
50	Main St and 17th St	202010	202010	202100	202100
51	Main St and Civic Center Dr	101100	101100	101100	101100
52	Main St and Santa Ana Blvd	102000	001100	000000	010100
53	Main St and 4th St	001100	001100	001100	001100
54	Main St and 1st St	101100	102010	101100	101100
55	Main St and McFadden Ave	101100	101100	100100	100100
56	Main St and Edinger Ave	101100	101100	102100	102100
57	Main St and MacArthur Blvd	203010	203010	203010	203010
58	Penn Wy and 17th St	200020	000000	002100	103000
59	I-5 NB Off Ramps/17th Street	110010	100010	103010	002100
60	Penn Wy and I-5 SB Ramps	002010	202000	000000	100020
61	Santiago St and Civic Center Dr	100100	100100	100100	000001
62	Santiago St and Santa Ana Blvd	101010	101010	100100	102010
63	Standard Ave and 4th St	101010	101010	100100	100100
64	Standard Ave and 1st St	100100	000001	101100	101100
65	Standard Ave and Mcfadden Ave	100100	100100	100100	100100
66	Halladay St and Warner Ave	100010	000000	002100	012000
67	Halladay St and Dyer Rd	100100	100100	102100	102100
68	SR-55 SB Ramps and MacArthur Blvd	000000	200020	002110	003010
69	SR-55 NB Ramps and MacArthur Blvd	200010	000000	002020	003010
70	SR-55 SB Ramps and Dyer Rd	110020	011010	103010	203010
71	Glassell St and La Veta Ave	201010	101100	101010	101100
72	Glassell St and SR-22 WB Ramps	102000	002010	000000	100011
73	Grand Ave / Glassell St and SR-22 E	002010	102000	100011	000000
74	Grand Ave and Fairhaven Ave	102100	102100	101100	100100
75	Grand Ave and Santa Clara Ave	102100	102100	100100	101010
76	Grand Ave and 17th St	102100	102100	202100	202100
77	Grand Ave and I-5 NB Ramps	002010	103000	000000	200010
78	Grand Ave and Santa Ana Blvd	102100	102020	201020	010100
79	Grand Ave and 1st St	202100	203010	202010	202010
80	Grand Ave and Chestnut Ave	102100	102100	100100	100100
81	Grand Ave and McFadden Ave	102100	102100	100100	101100
82	Grand Ave and Edinger Ave	102100	102100	102100	102100
83	Grand Ave and Warner Ave	102100	102100	203010	202100
84	SR-55 NB Ramps and Dyer Rd	100011	000000	003010	002100
85	Cambridge St and La Veta Ave	101000	001010	100010	000000
86	Cambridge St and Fairhaven Ave	000000	100010	101000	000100
87	Mabury St and 1st Street	100010	100011	001100	101100
88	Tustin St and La Veta Ave	102100	102100	101100	110010
89	Tustin St and SR-22 WB On-Ramp	202000	002100	000000	000000
90	Tustin St and SR-22 EB Off-Ramp / S	002100	103000	100011	000001
91	Tustin Ave and Fairhaven Ave	202100	202100	100100	100100
92	Tustin Ave and Santa Clara Ave	102100	202100	100100	100100
93	Tustin Ave and 17th St	202010	202100	203010	203010
94	Tustin Ave and 4th St	102100	202010	102110	102100
95	SR-55 SB Ramps / Auto Mall Dr and E	110020	101010	103010	202100
96	SR-55 NB Ramps / Del Amo Ave and Ne	202100	103010	201100	101100
97	Red Hill Ave and Edinger Ave	203010	203010	203010	203010

Santa Ana Circulation Element

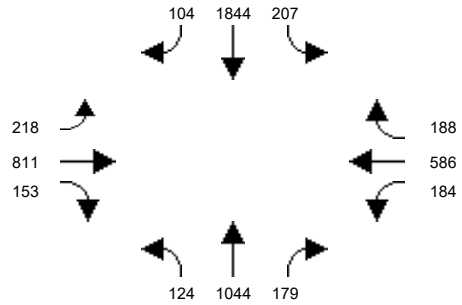
Number of approach lanes: (L) (LT) (T) (RT) (R) (LTR)

Node	Intersection	NB	SB	EB	WB
98	Red Hill Ave and Warner Ave	203100	202100	102100	203010
99	Red Hill Ave and Dyer Rd / barranca	204010	204010	203100	204010
100	Red Hill Ave and Alton Pkwy	103010	103010	102010	201010
101	Red Hill Ave and MacArthur Blvd	202100	203010	203010	103010
102	Red Hill Ave and Main St	202010	202010	202100	202100
103	I-5 SB Ramps and Santa Ana Blvd	000000	200010	203000	002100
104	Tustin Ranch Rd and Warner Ave	000000	200010	203000	003010
105	Von Karman Ave and Barranca Pkwy	201100	202020	203010	204010

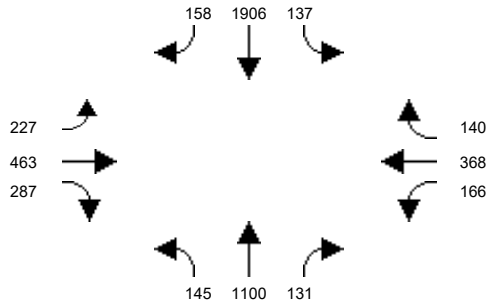
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP AM Peak Hour

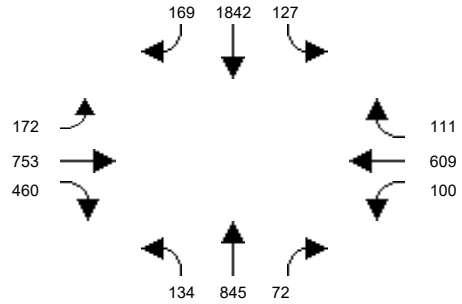
Intersection #1: Euclid St and 1st St



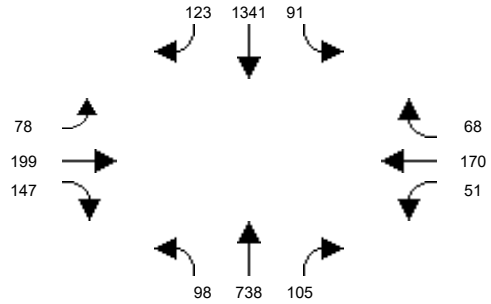
Intersection #2: Euclid St and McFadden Ave



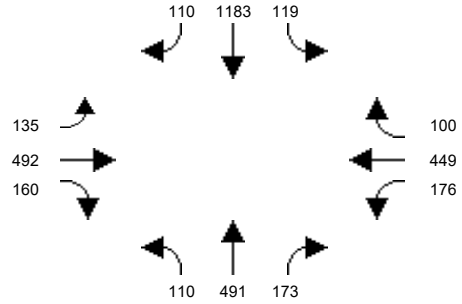
Intersection #3: Euclid St and Edinger Ave



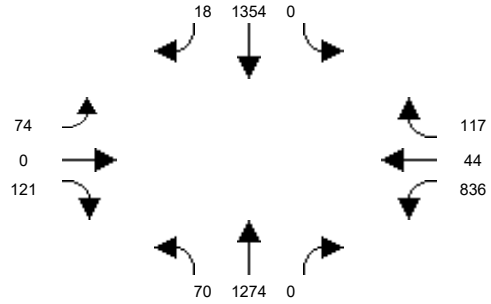
Intersection #4: Newhope St and Hazard Ave



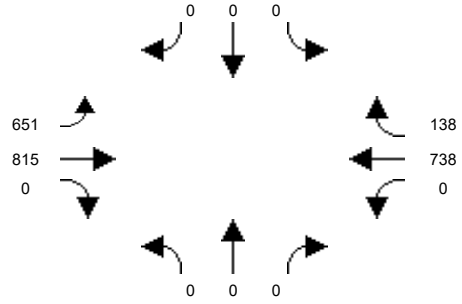
Intersection #5: Newhope St and McFadden Ave



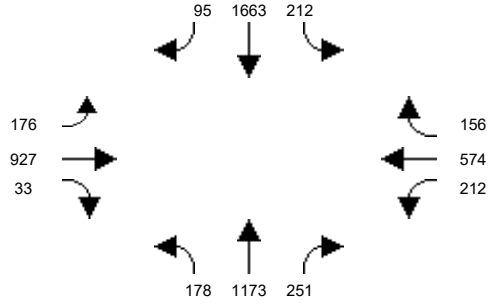
Intersection #6: Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr



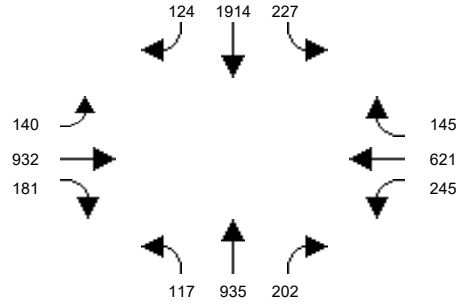
Intersection #7: Trask Avenue and SR-22 EB On-Ramp



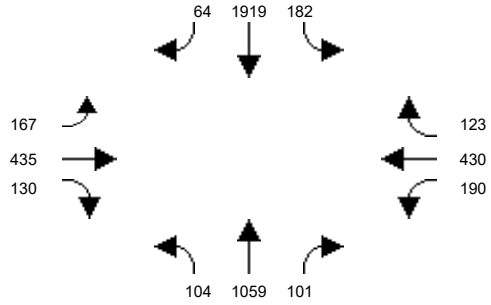
Intersection #8: Harbor Blvd and Westminster Ave



Intersection #9: Harbor Blvd and 1st St



Intersection #10: Harbor Blvd and McFadden Ave



Santa Ana Circulation Element

Intersection Graphic Report
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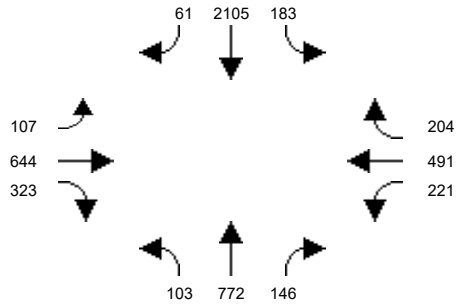
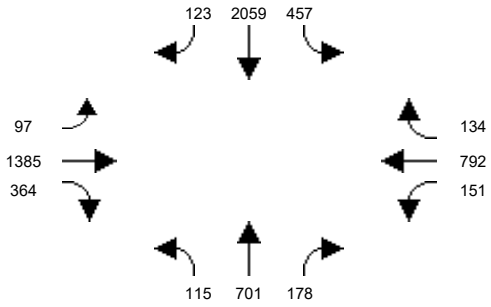
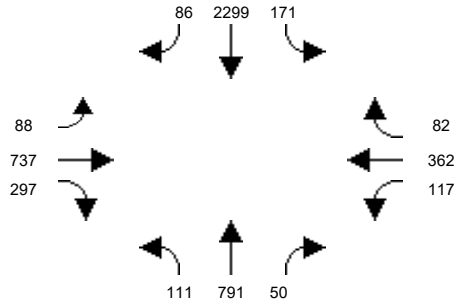
Intersection #11: Harbor Blvd and Edinger Ave



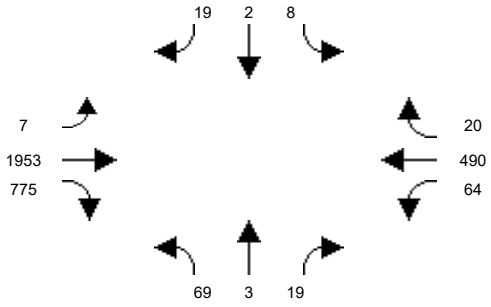
Intersection #12: Harbor Blvd and Warner Ave



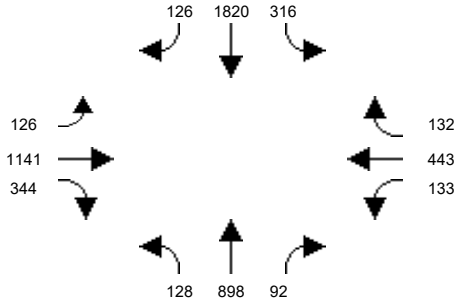
Intersection #13: Harbor Blvd and Segerstrom Ave



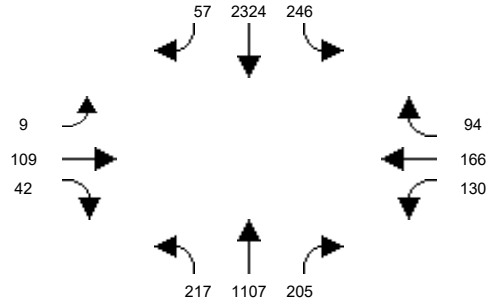
Intersection #14: MacArthur Blvd and Hyland Ave



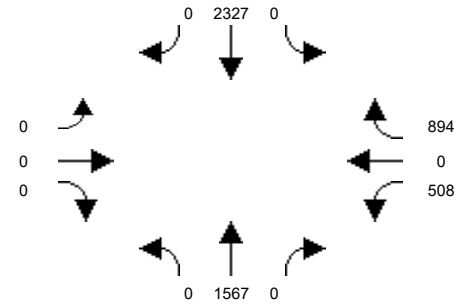
Intersection #15: MacArthur Blvd and Harbor Blvd



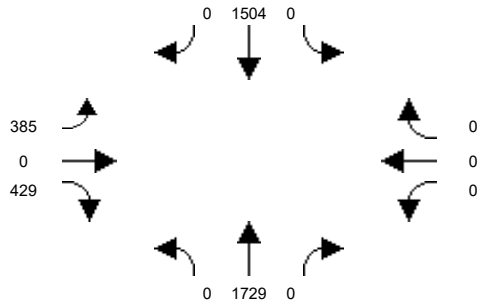
Intersection #16: Harbor Blvd and Sunflower Ave



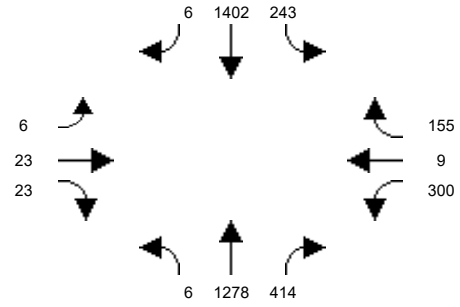
Intersection #17: Harbor Blvd and I-405 WB Off-Ramp



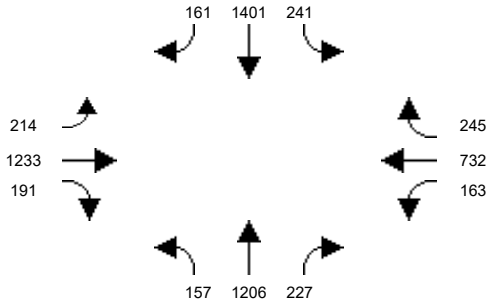
Intersection #18: Harbor Blvd and I-405 EB Off-Ramp



Intersection #19: Fairview St and Civic Center Dr



Intersection #20: Fairview St and 1st St



Santa Ana Circulation Element

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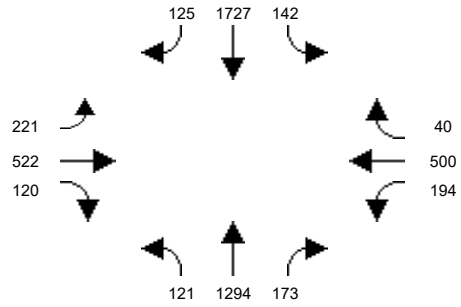
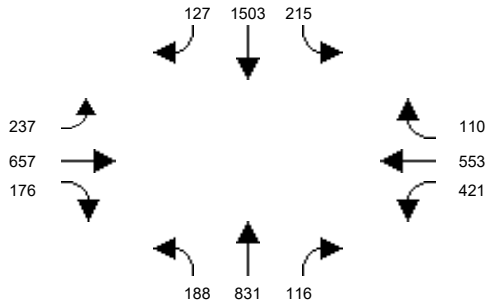
Entered Volume (Base Alternative)
2020 NP AM Peak Hour

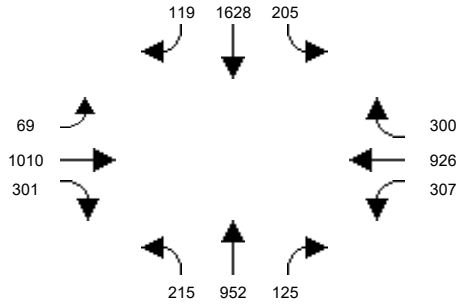
Intersection #21: Fairview St and McFadden Ave



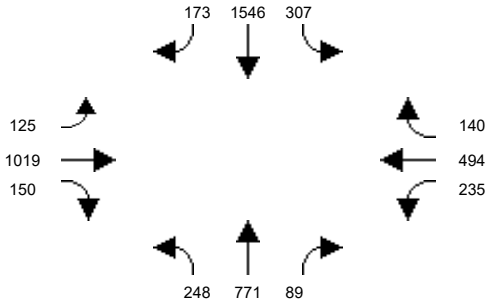
Intersection #22: Fairview St and Edinger Ave



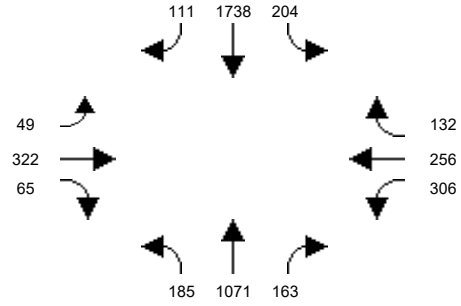
Intersection #23: Fairview St and Warner Ave



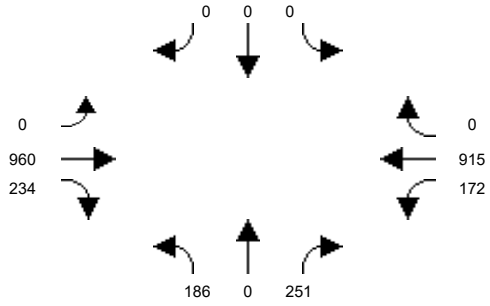
Intersection #24: Fairview St and MacArthur Blvd



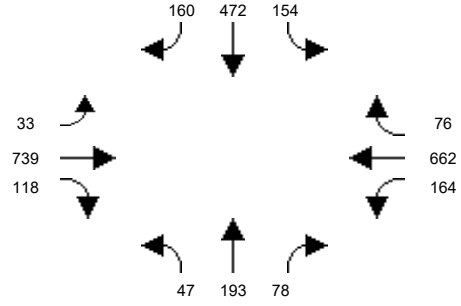
Intersection #25: Fairview Rd and Sunflower Ave



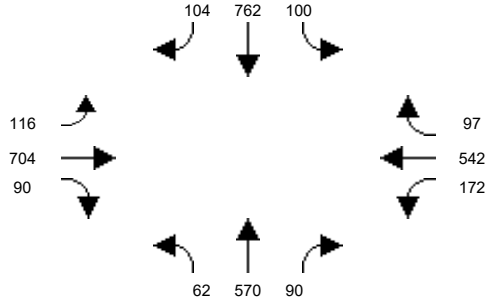
Intersection #26: Greenville St and Edinger Ave



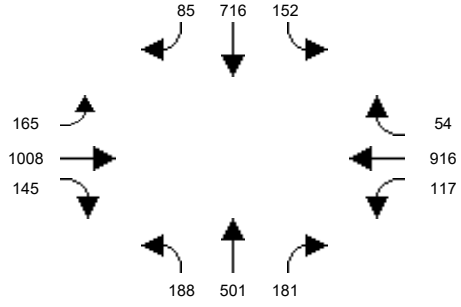
Intersection #27: Greenville St and Segerstrom Ave



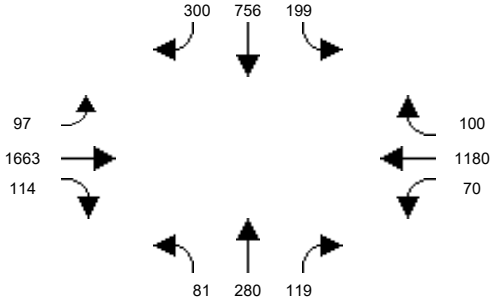
Intersection #28: Raitt St and McFadden Ave



Intersection #29: Raitt St and Edinger Ave



Intersection #30: Bear St and MacArthur Blvd



Santa Ana Circulation Element

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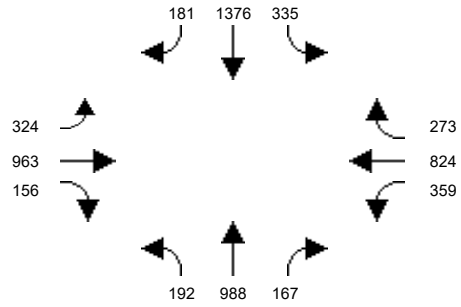
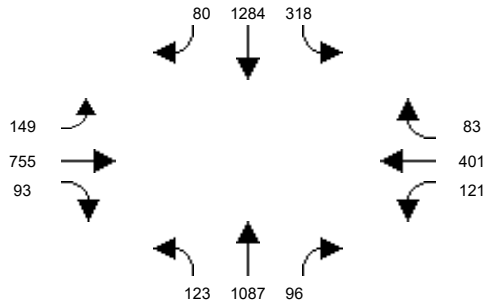
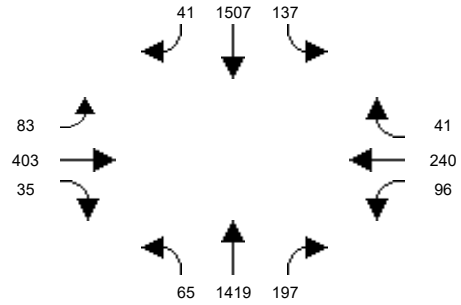
Intersection #31: Bristol St and 17th St



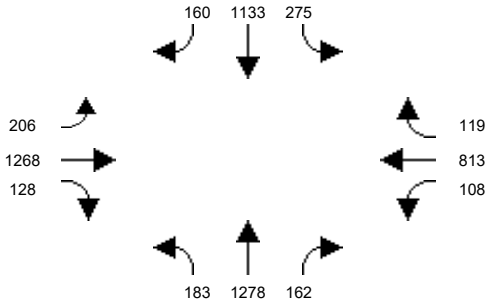
Intersection #32: Bristol St and Civic Center Dr



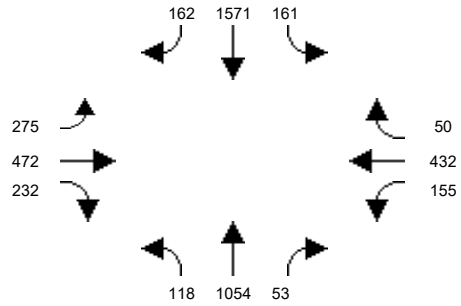
Intersection #33: Bristol St and Santa Ana Blvd



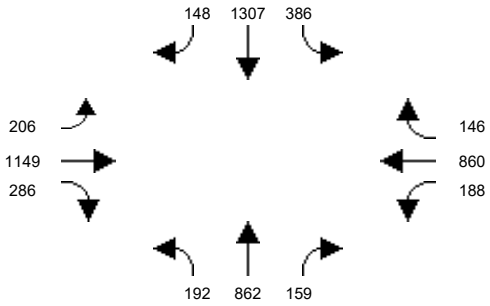
Intersection #34: Bristol St and 1st St



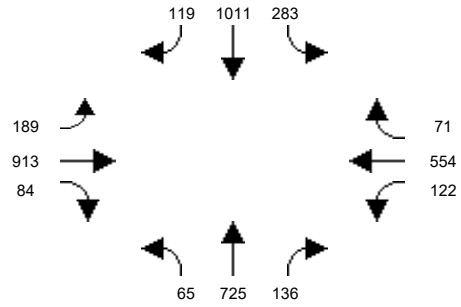
Intersection #35: Bristol St and McFadden Ave



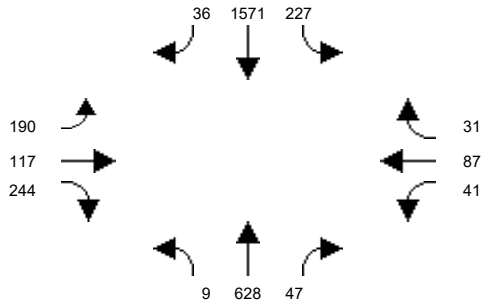
Intersection #36: Bristol St and Warner Ave



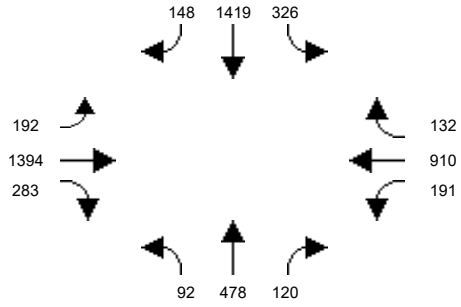
Intersection #37: Bristol St and Segerstrom Ave



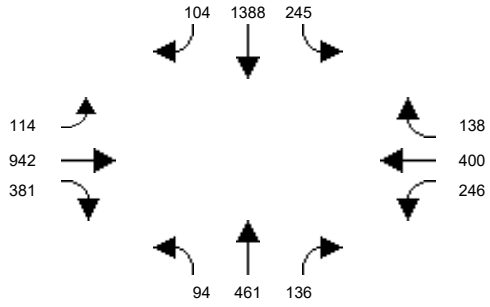
Intersection #38: Bristol St and Alton Ave



Intersection #39: Bristol St and MacArthur Blvd



Intersection #40: Bristol St and Sunflower Ave



Santa Ana Circulation Element

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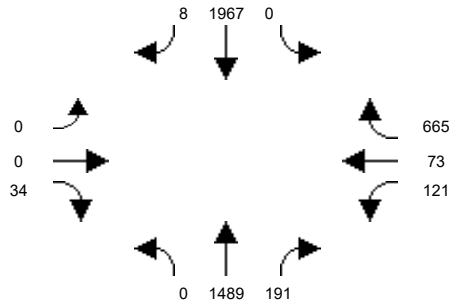
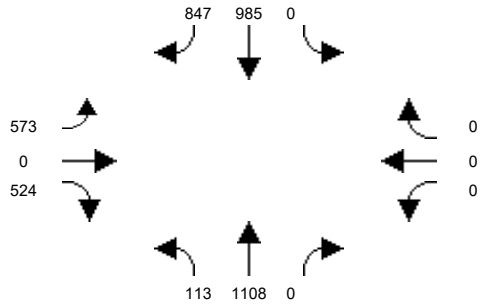
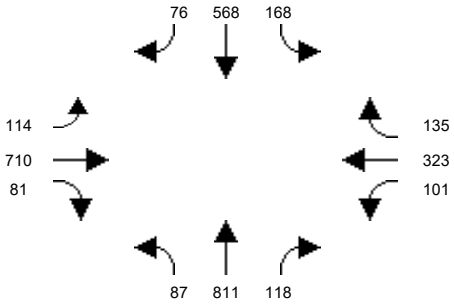
Intersection #41: Bristol St and I-405 WB Ramps



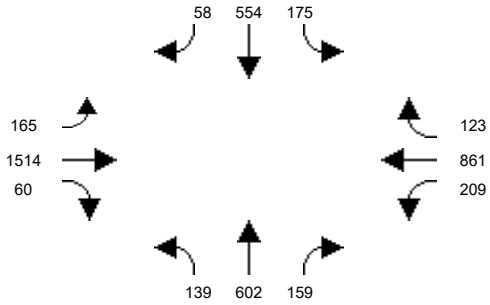
Intersection #42: Bristol St and I-405 EB Ramps



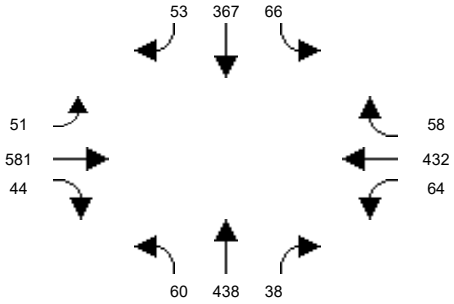
Intersection #43: Flower St and Santa Ana Blvd



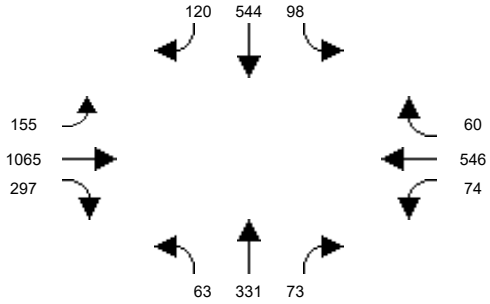
Intersection #44: Flower St and 1st St



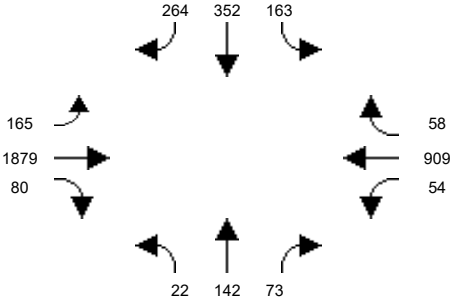
Intersection #45: Flower St and McFadden Ave



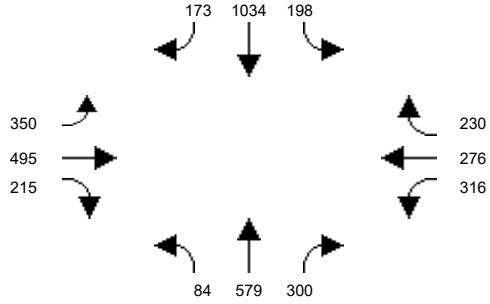
Intersection #46: Flower St and Segerstrom Ave



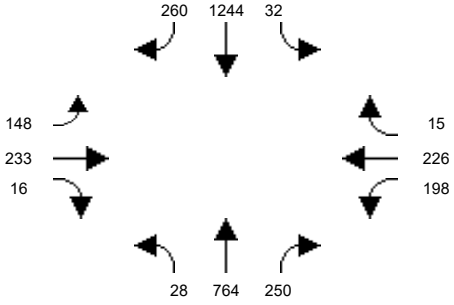
Intersection #47: Flower St and MacArthur Blvd



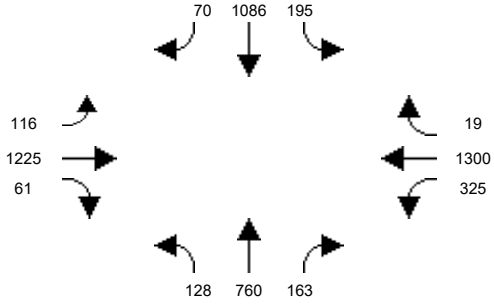
Intersection #48: Main St and La Veta Ave



Intersection #49: Main St and Mainplace Dr / Memory Ln



Intersection #50: Main St and 17th St



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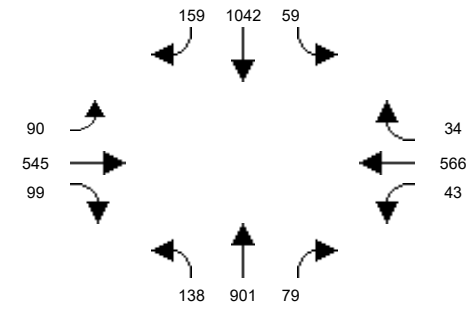
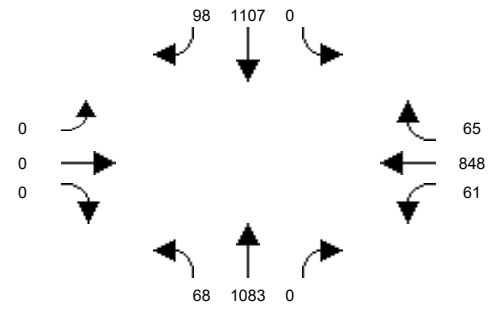
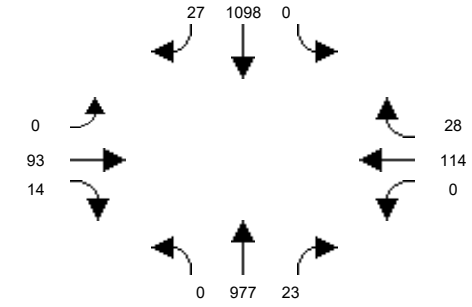
Intersection #51: Main St and Civic Center Dr



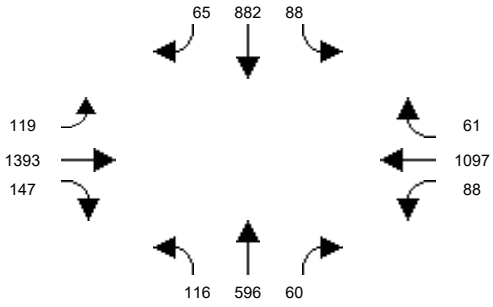
Intersection #52: Main St and Santa Ana Blvd



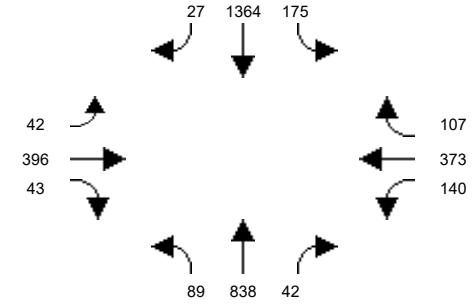
Intersection #53: Main St and 4th St



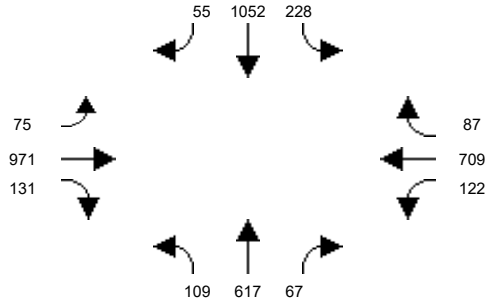
Intersection #54: Main St and 1st St



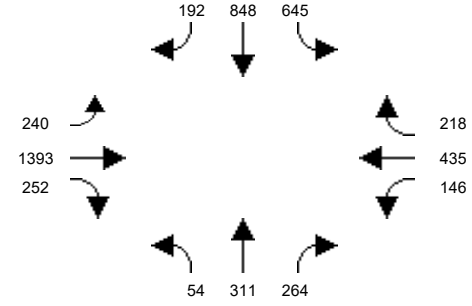
Intersection #55: Main St and McFadden Ave



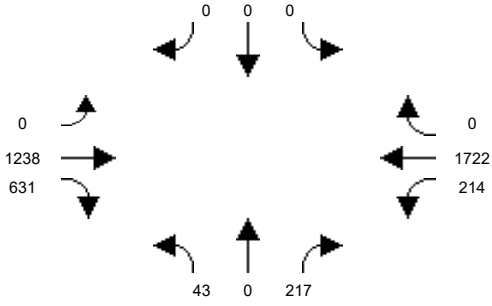
Intersection #56: Main St and Edinger Ave



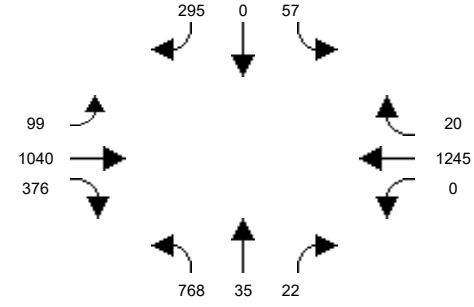
Intersection #57: Main St and MacArthur Blvd



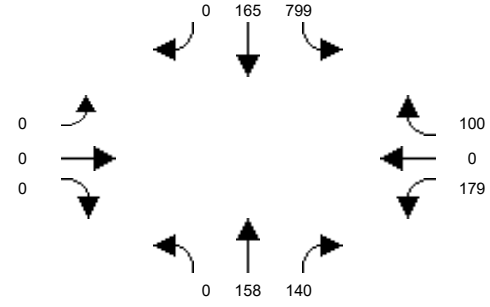
Intersection #58: Penn Wy and 17th St



Intersection #59: I-5 NB Off Ramps/17th Street



Intersection #60: Penn Wy and I-5 SB Ramps



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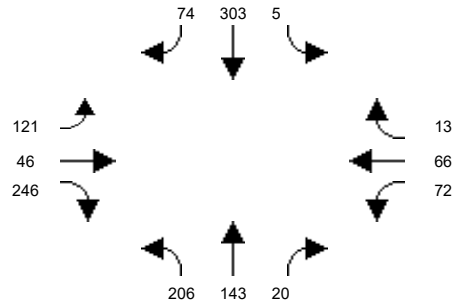
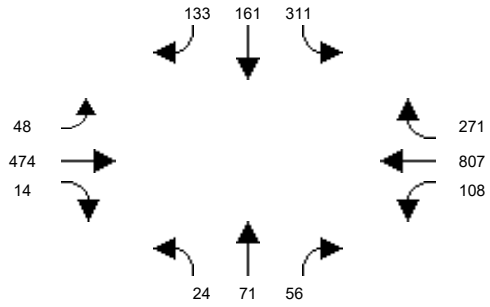
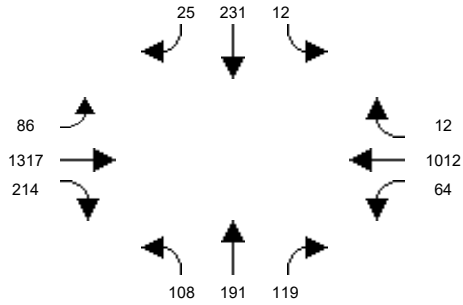
Intersection #61: Santiago St and Civic Center Dr



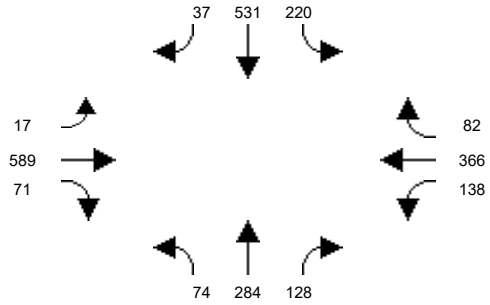
Intersection #62: Santiago St and Santa Ana Blvd



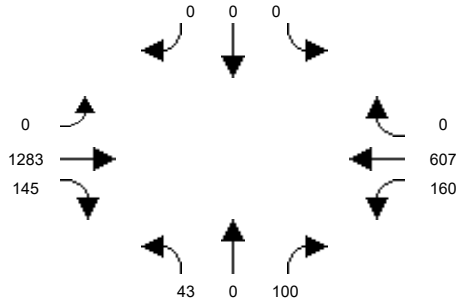
Intersection #64: Standard Ave and 1st St



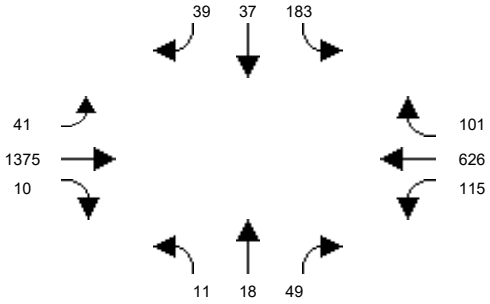
Intersection #65: Standard Ave and Mcfadden Ave



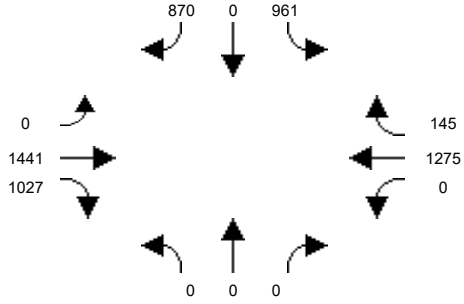
Intersection #66: Halladay St and Warner Ave



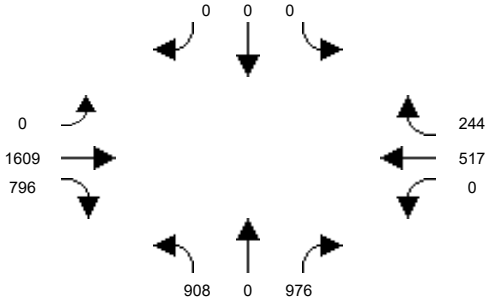
Intersection #67: Halladay St and Dyer Rd



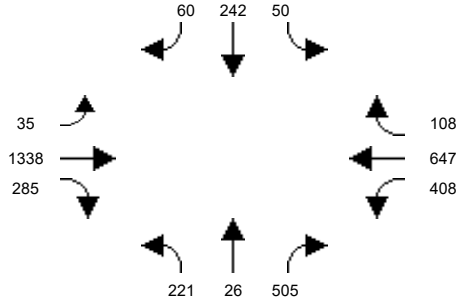
Intersection #68: SR-55 SB Ramps and MacArthur Blvd



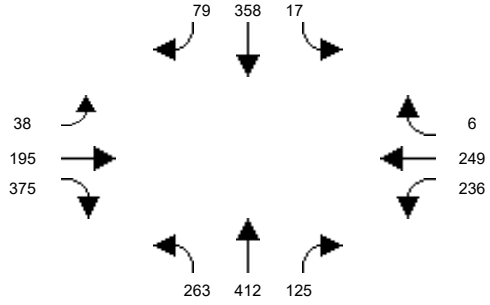
Intersection #69: SR-55 NB Ramps and MacArthur Blvd



Intersection #70: SR-55 SB Ramps and Dyer Rd



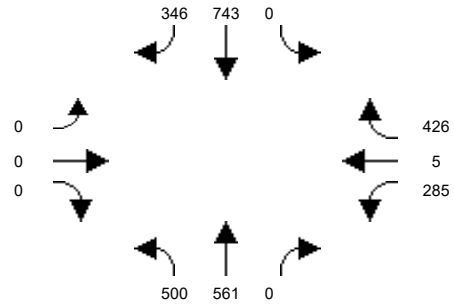
Intersection #71: Glassell St and La Veta Ave



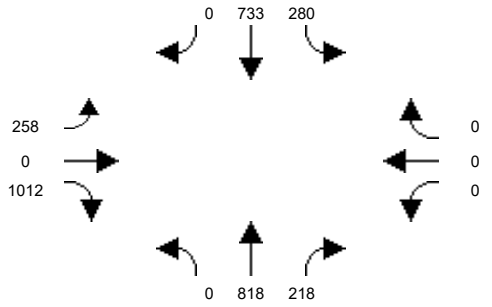
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP AM Peak Hour

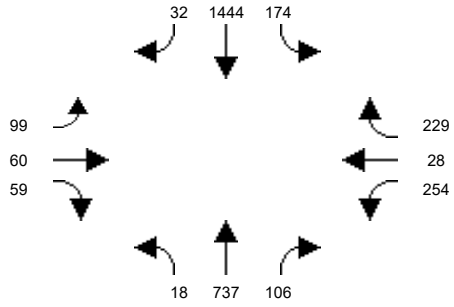
Intersection #72: Glassell St and SR-22 WB Ramps



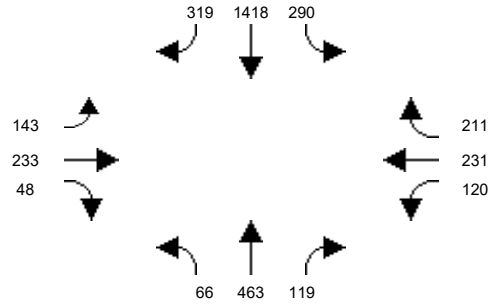
Intersection #73: Grand Ave / Glassell St and SR-22 EB Ramps



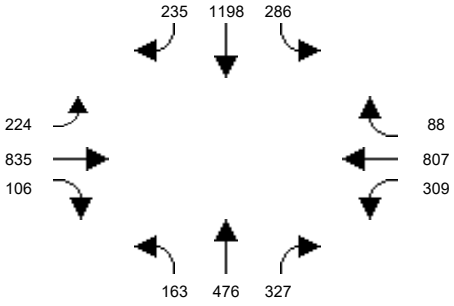
Intersection #74: Grand Ave and Fairhaven Ave



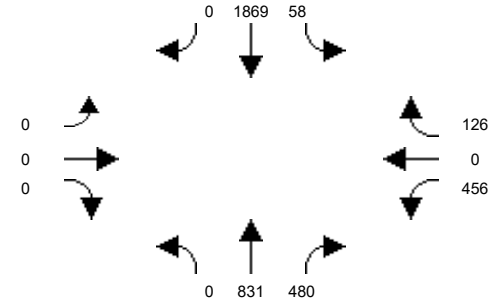
Intersection #75: Grand Ave and Santa Clara Ave



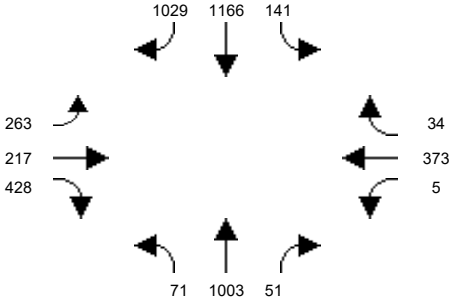
Intersection #76: Grand Ave and 17th St



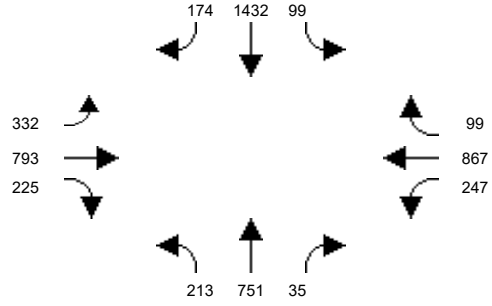
Intersection #77: Grand Ave and I-5 NB Ramps



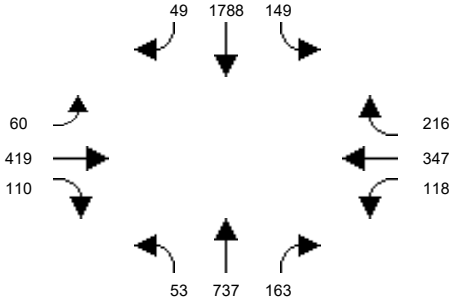
Intersection #78: Grand Ave and Santa Ana Blvd



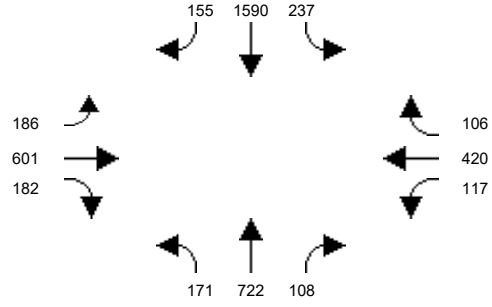
Intersection #79: Grand Ave and 1st St



Intersection #80: Grand Ave and Chestnut Ave



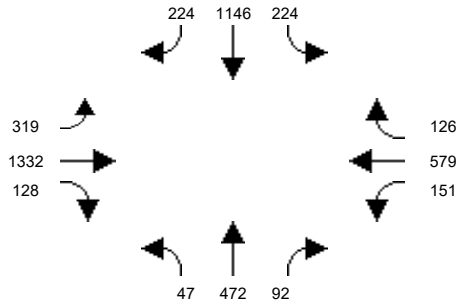
Intersection #81: Grand Ave and McFadden Ave



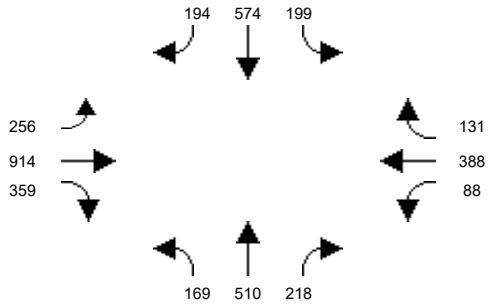
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP AM Peak Hour

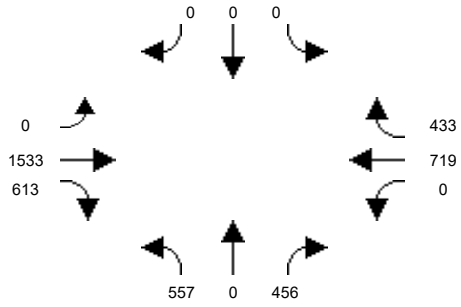
Intersection #82: Grand Ave and Edinger Ave



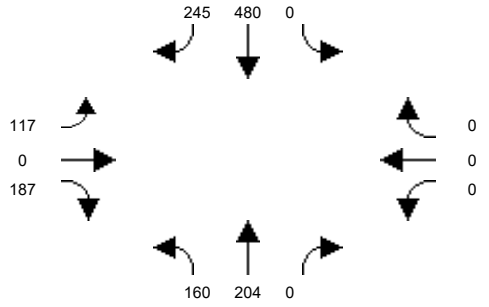
Intersection #83: Grand Ave and Warner Ave



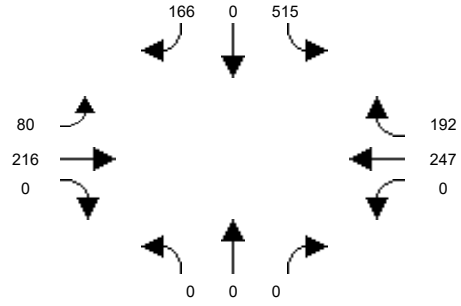
Intersection #84: SR-55 NB Ramps and Dyer Rd



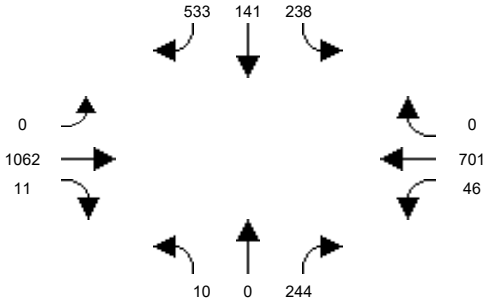
Intersection #85: Cambridge St and La Veta Ave



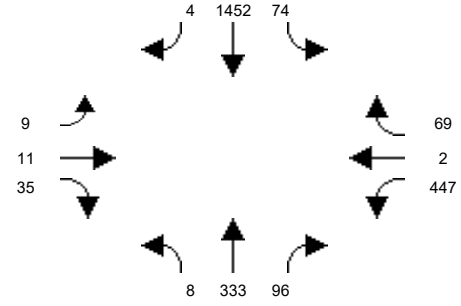
Intersection #86: Cambridge St and Fairhaven Ave



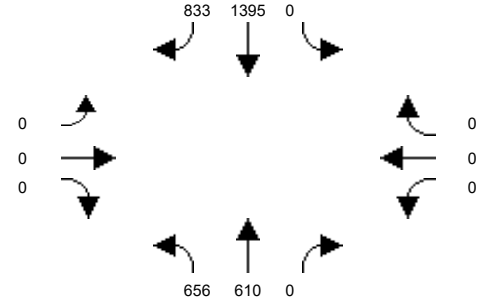
Intersection #87: Mabury St and 1st Street



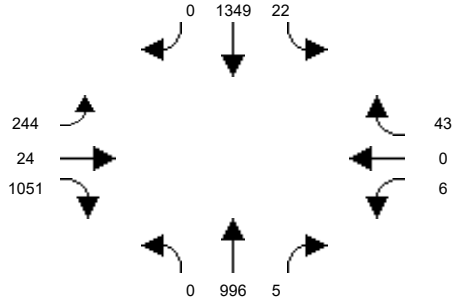
Intersection #88: Tustin St and La Veta Ave



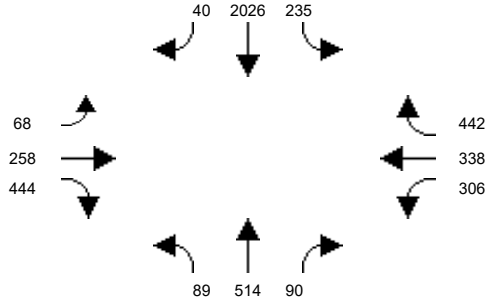
Intersection #89: Tustin St and SR-22 WB On-Ramp



Intersection #90: Tustin St and SR-22 EB Off-Ramp / Seba Ave



Intersection #91: Tustin Ave and Fairhaven Ave



Santa Ana Circulation Element

Intersection Graphic Report
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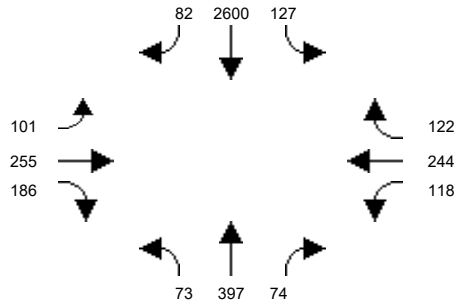
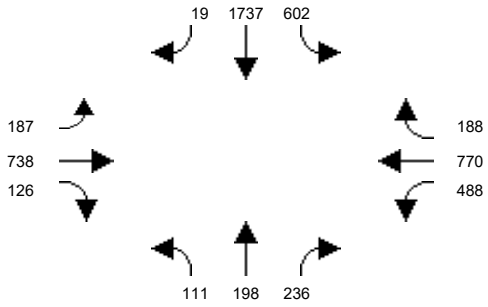
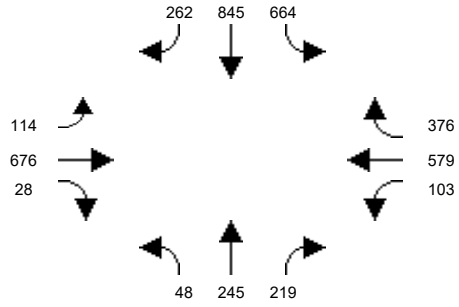
Intersection #92: Tustin Ave and Santa Clara Ave



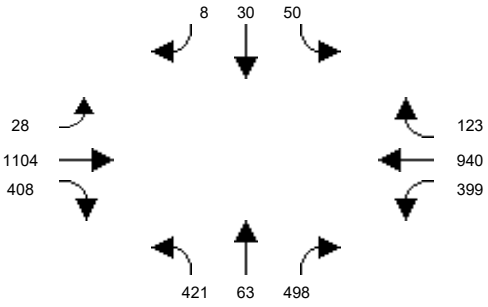
Intersection #93: Tustin Ave and 17th St



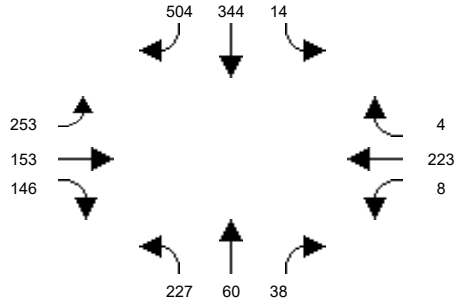
Intersection #94: Tustin Ave and 4th St



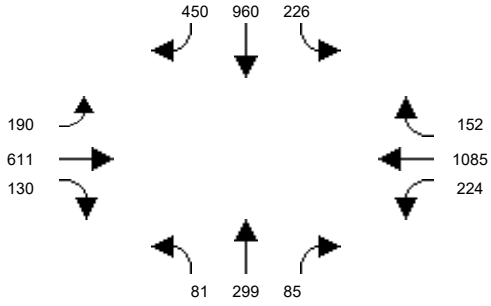
Intersection #95: SR-55 SB Ramps / Auto Mall Dr and Edinger Ave



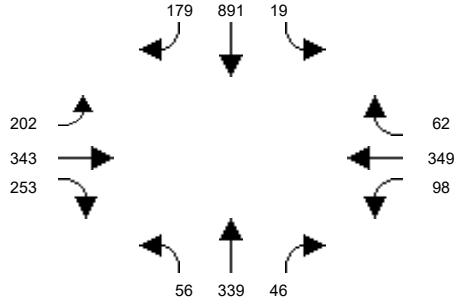
Intersection #96: SR-55 NB Ramps / Del Amo Ave and Newport



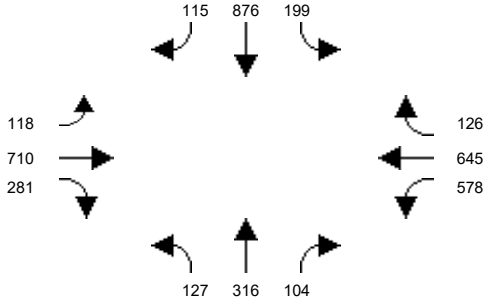
Intersection #97: Red Hill Ave and Edinger Ave



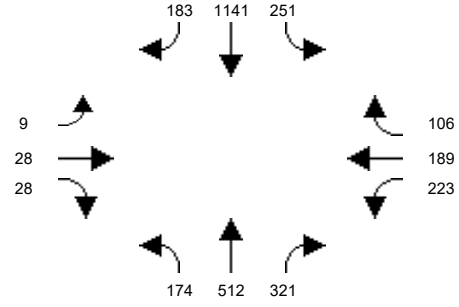
Intersection #98: Red Hill Ave and Warner Ave



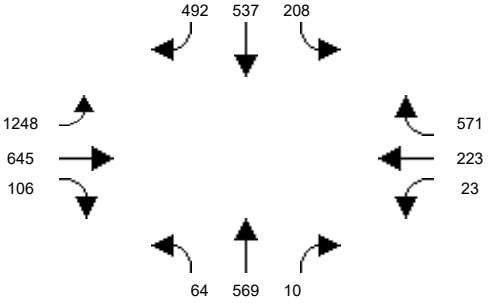
Intersection #99: Red Hill Ave and Dyer Rd / barranca Pkwy



Intersection #100: Red Hill Ave and Alton Pkwy



Intersection #101: Red Hill Ave and MacArthur Blvd



Santa Ana Circulation Element

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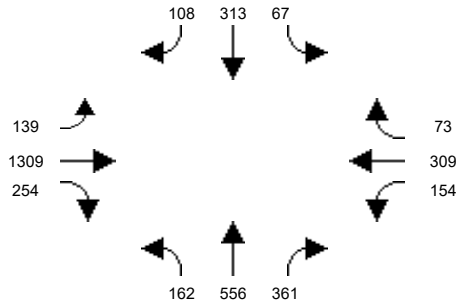
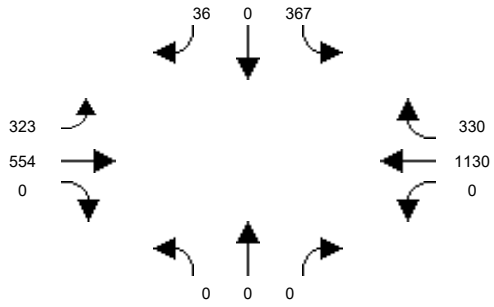
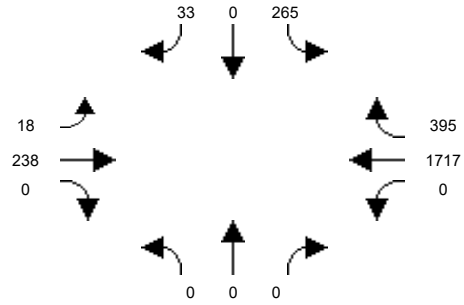
Intersection #102: Red Hill Ave and Main St



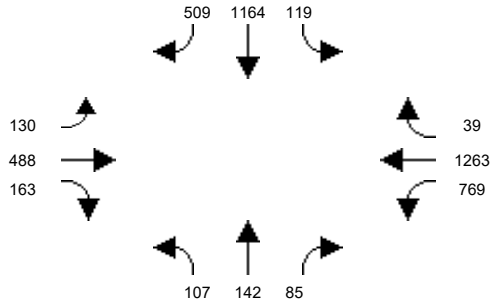
Intersection #103: I-5 SB Ramps and Santa Ana Blvd



Intersection #104: Tustin Ranch Rd and Warner Ave



Intersection #105: Von Karman Ave and Barranca Pkwy



Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
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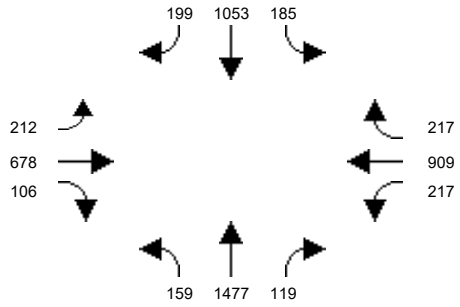
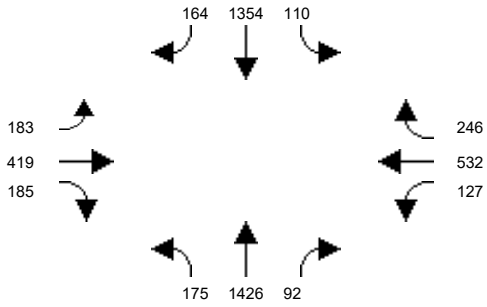
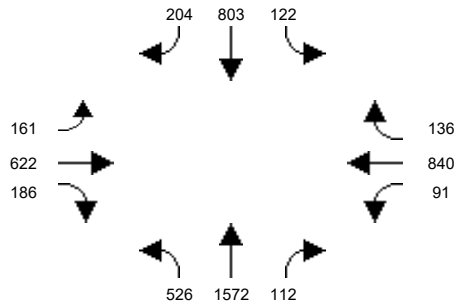
Intersection #1: Euclid St and 1st St



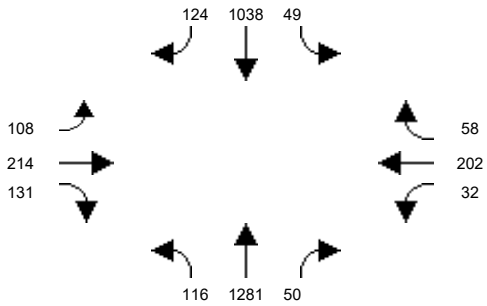
Intersection #2: Euclid St and McFadden Ave



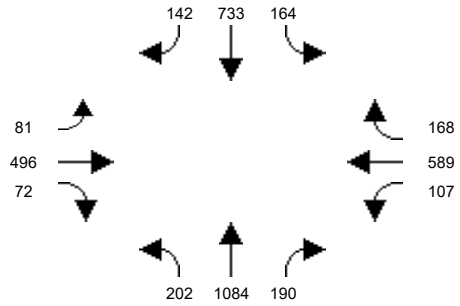
Intersection #3: Euclid St and Edinger Ave



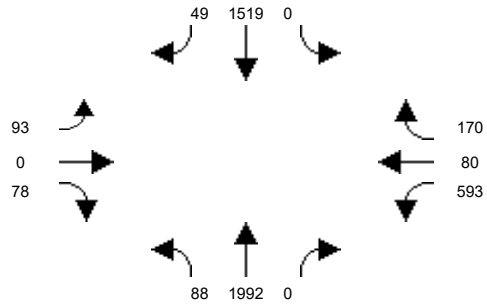
Intersection #4: Newhope St and Hazard Ave



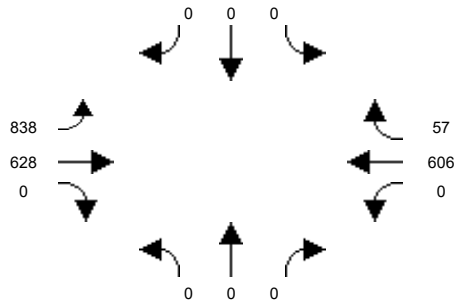
Intersection #5: Newhope St and McFadden Ave



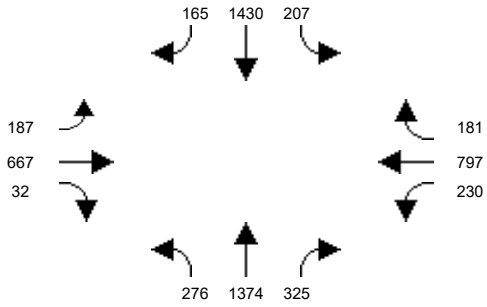
Intersection #6: Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr



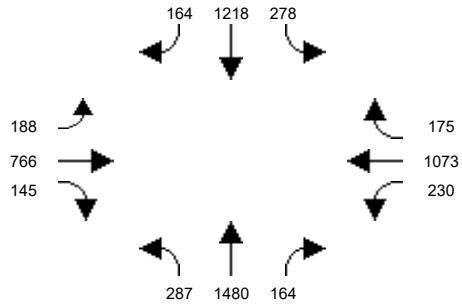
Intersection #7: Trask Avenue and SR-22 EB On-Ramp



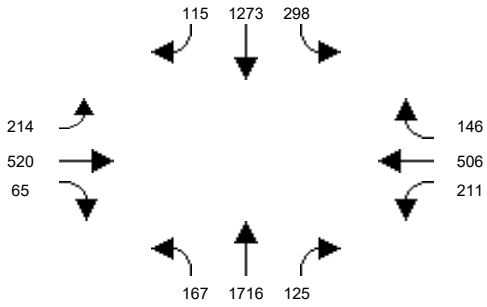
Intersection #8: Harbor Blvd and Westminster Ave



Intersection #9: Harbor Blvd and 1st St



Intersection #10: Harbor Blvd and McFadden Ave



Santa Ana Circulation Element

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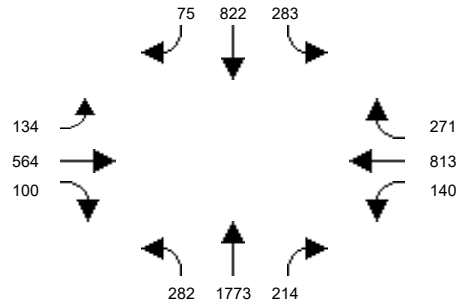
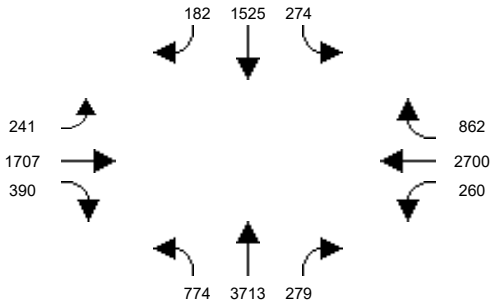
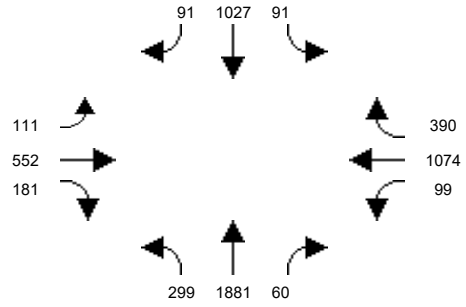
Intersection #11: Harbor Blvd and Edinger Ave



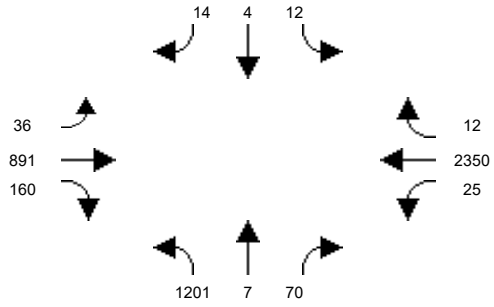
Intersection #12: Harbor Blvd and Warner Ave



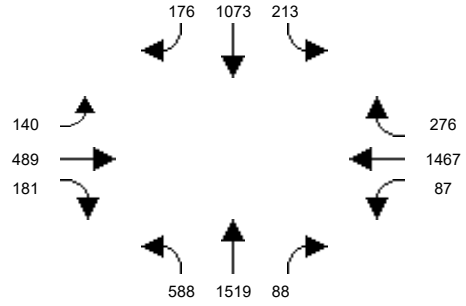
Intersection #13: Harbor Blvd and Segerstrom Ave



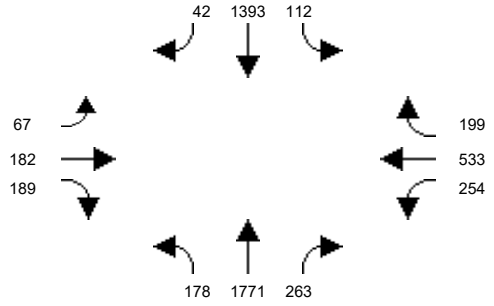
Intersection #14: MacArthur Blvd and Hyland Ave



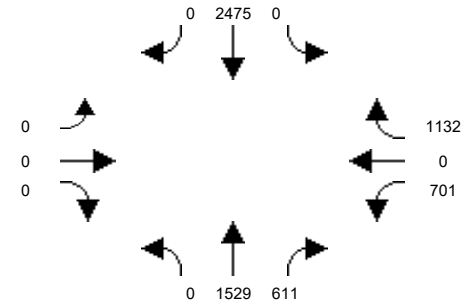
Intersection #15: MacArthur Blvd and Harbor Blvd



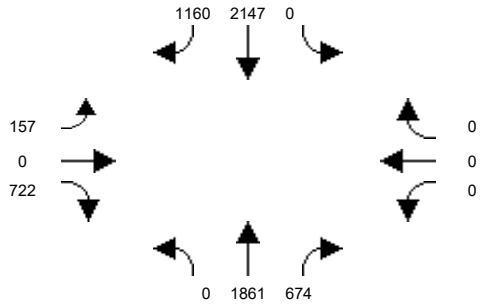
Intersection #16: Harbor Blvd and Sunflower Ave



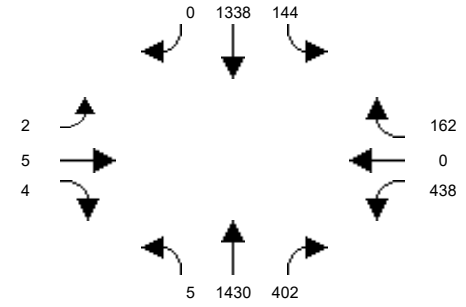
Intersection #17: Harbor Blvd and I-405 WB Off-Ramp



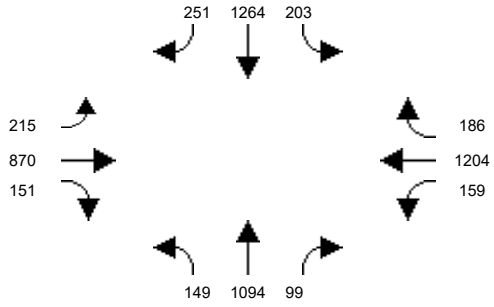
Intersection #18: Harbor Blvd and I-405 EB Off-Ramp



Intersection #19: Fairview St and Civic Center Dr



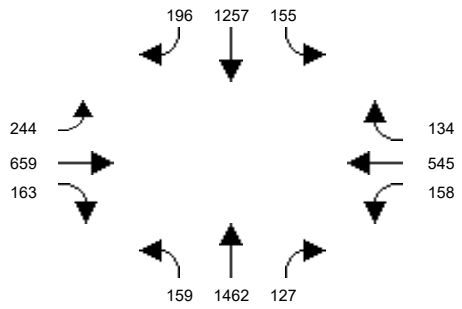
Intersection #20: Fairview St and 1st St



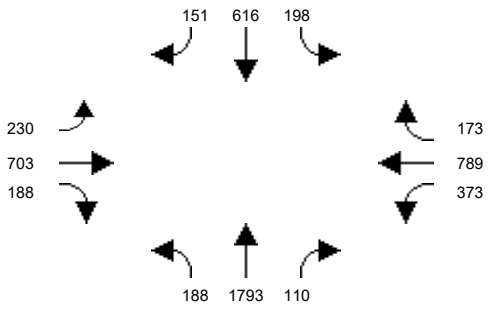
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP PM Peak Hour

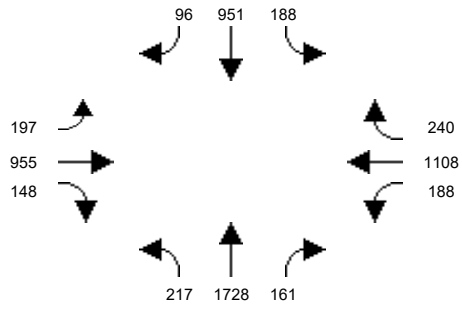
Intersection #21: Fairview St and McFadden Ave



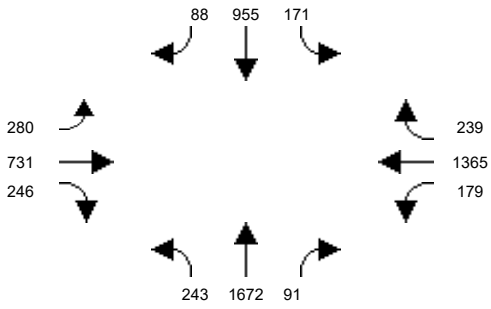
Intersection #22: Fairview St and Edinger Ave



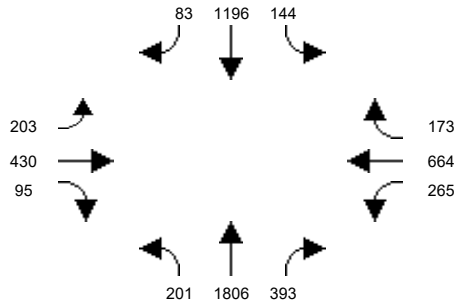
Intersection #23: Fairview St and Warner Ave



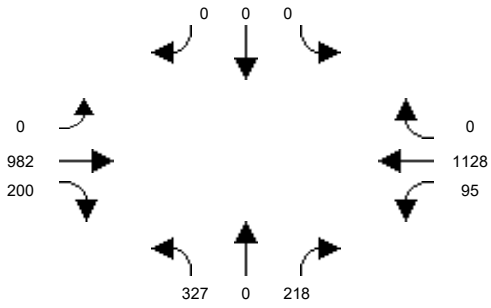
Intersection #24: Fairview St and MacArthur Blvd



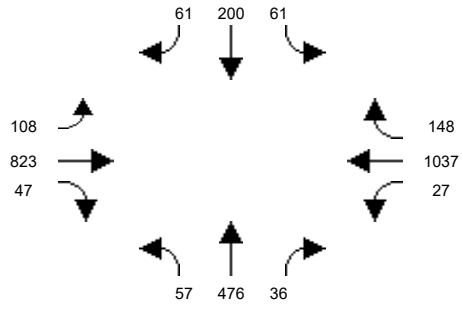
Intersection #25: Fairview Rd and Sunflower Ave



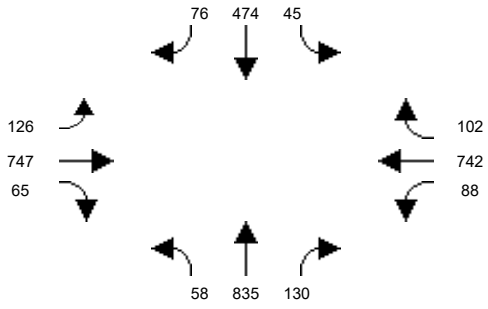
Intersection #26: Greenville St and Edinger Ave



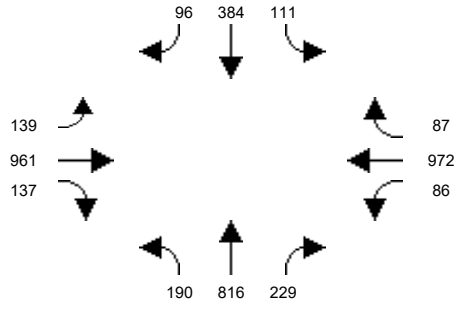
Intersection #27: Greenville St and Segerstrom Ave



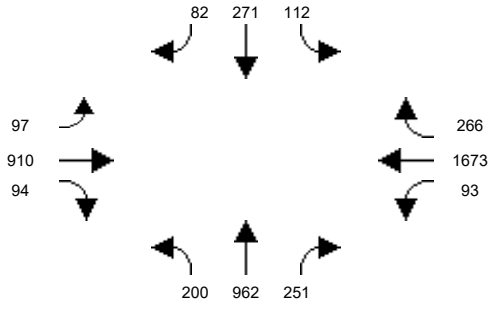
Intersection #28: Raitt St and McFadden Ave



Intersection #29: Raitt St and Edinger Ave



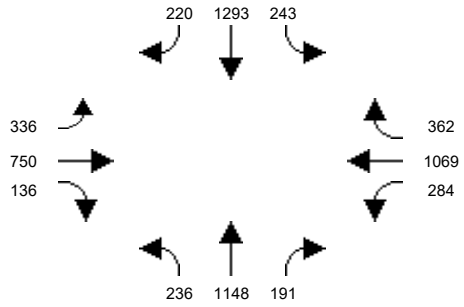
Intersection #30: Bear St and MacArthur Blvd



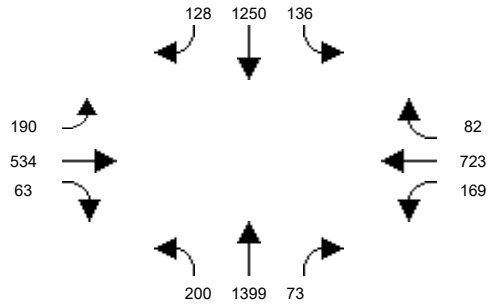
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP PM Peak Hour

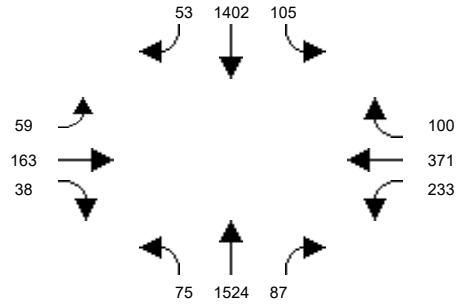
Intersection #31: Bristol St and 17th St



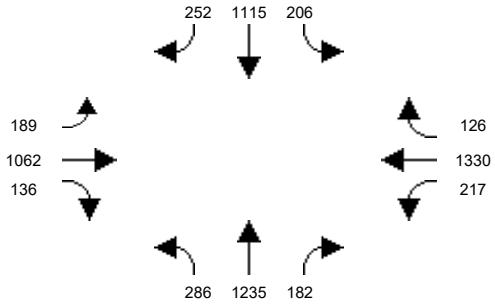
Intersection #32: Bristol St and Civic Center Dr



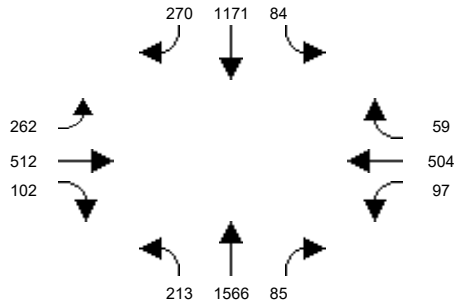
Intersection #33: Bristol St and Santa Ana Blvd



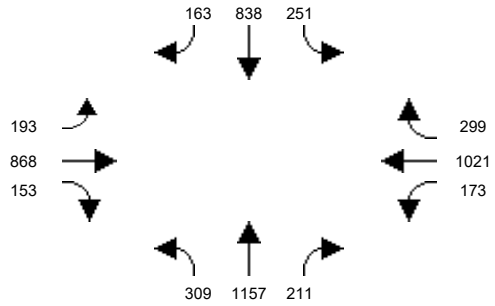
Intersection #34: Bristol St and 1st St



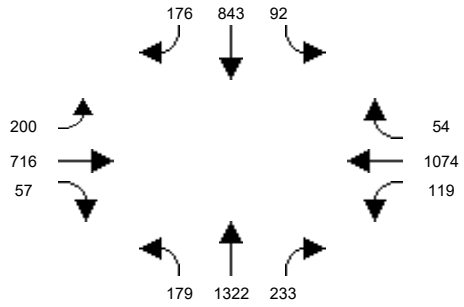
Intersection #35: Bristol St and McFadden Ave



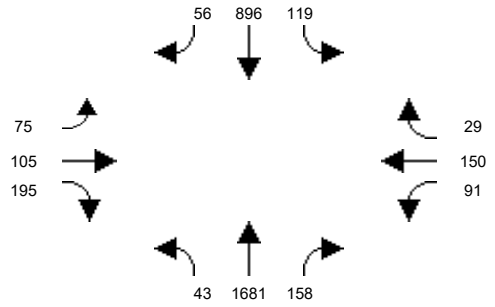
Intersection #36: Bristol St and Warner Ave



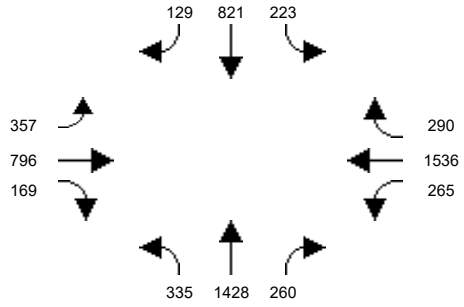
Intersection #37: Bristol St and Segerstrom Ave



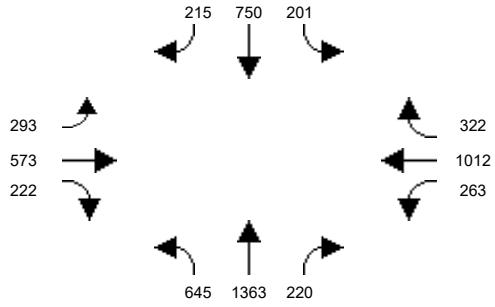
Intersection #38: Bristol St and Alton Ave



Intersection #39: Bristol St and MacArthur Blvd



Intersection #40: Bristol St and Sunflower Ave



Santa Ana Circulation Element

Intersection Graphic Report
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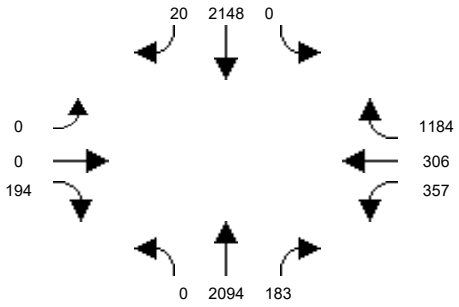
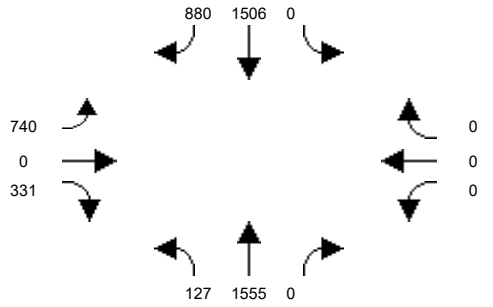
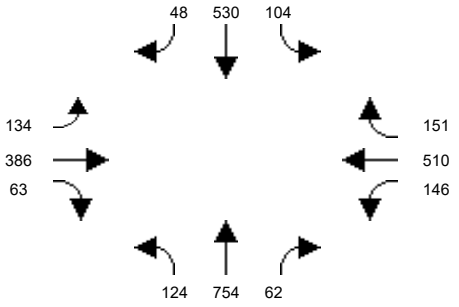
Intersection #41: Bristol St and I-405 WB Ramps



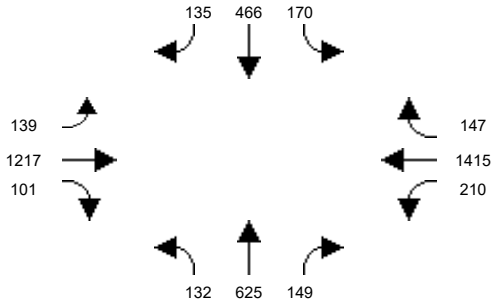
Intersection #42: Bristol St and I-405 EB Ramps



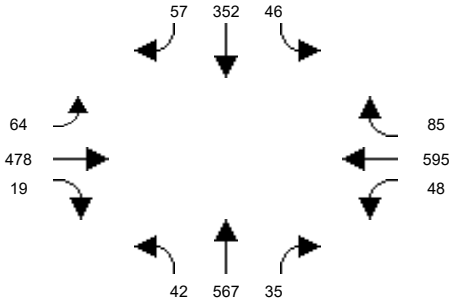
Intersection #43: Flower St and Santa Ana Blvd



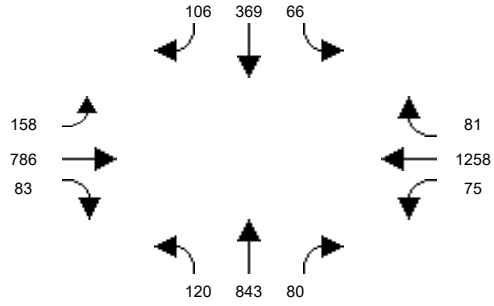
Intersection #44: Flower St and 1st St



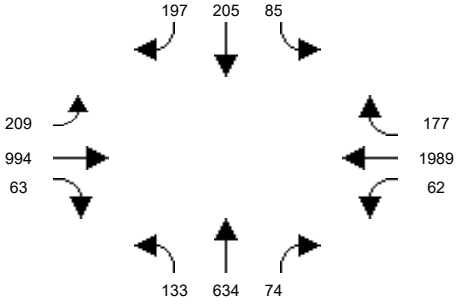
Intersection #45: Flower St and McFadden Ave



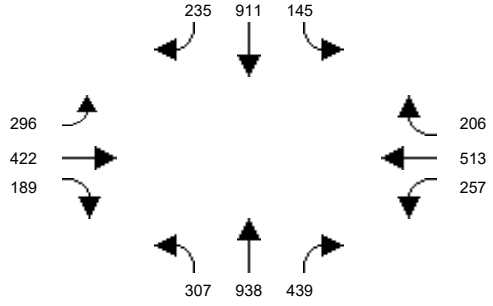
Intersection #46: Flower St and Segerstrom Ave



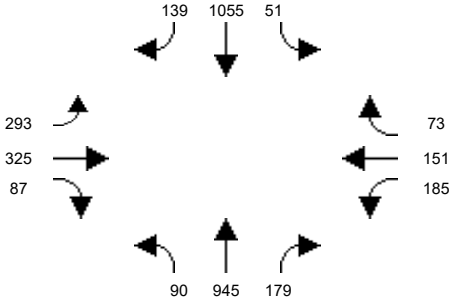
Intersection #47: Flower St and MacArthur Blvd



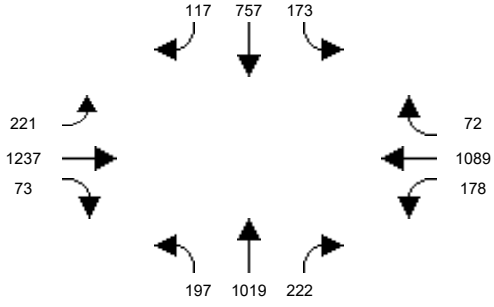
Intersection #48: Main St and La Veta Ave



Intersection #49: Main St and Mainplace Dr / Memory Ln



Intersection #50: Main St and 17th St



Santa Ana Circulation Element

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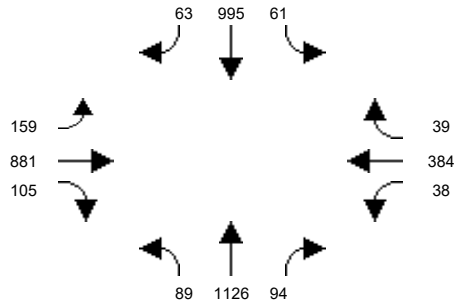
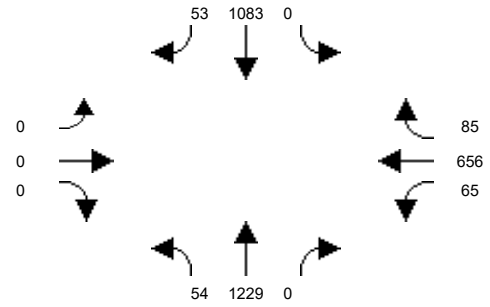
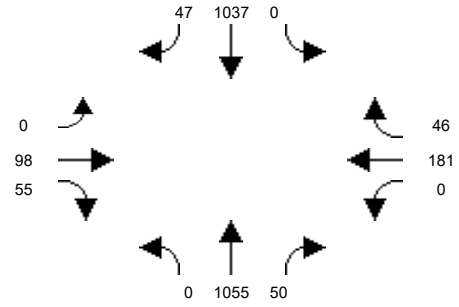
Intersection #51: Main St and Civic Center Dr



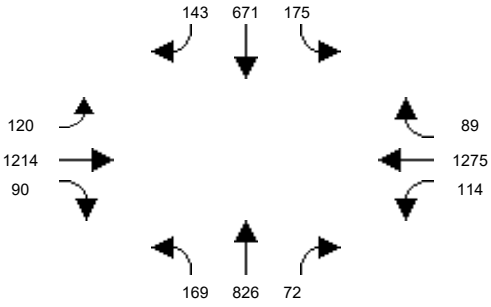
Intersection #52: Main St and Santa Ana Blvd



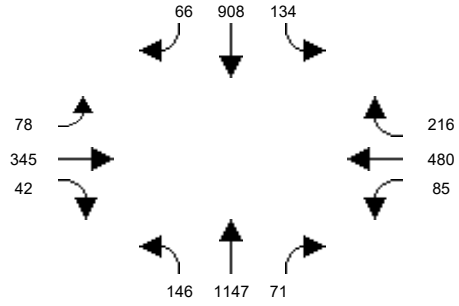
Intersection #53: Main St and 4th St



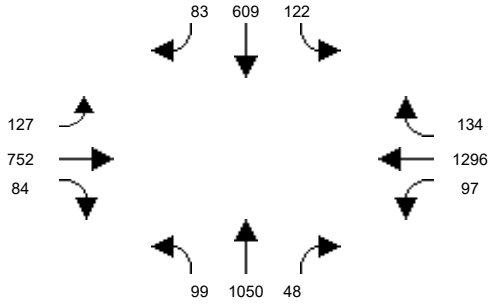
Intersection #54: Main St and 1st St



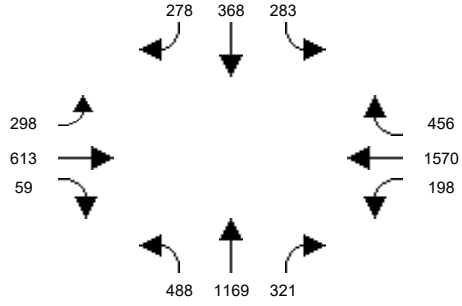
Intersection #55: Main St and McFadden Ave



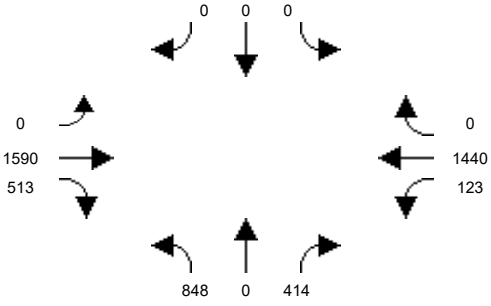
Intersection #56: Main St and Edinger Ave



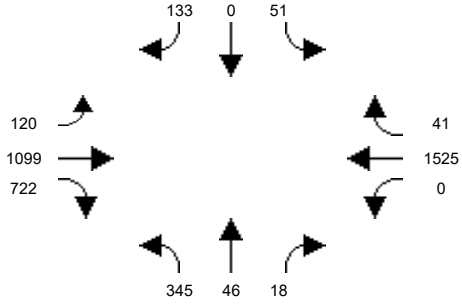
Intersection #57: Main St and MacArthur Blvd



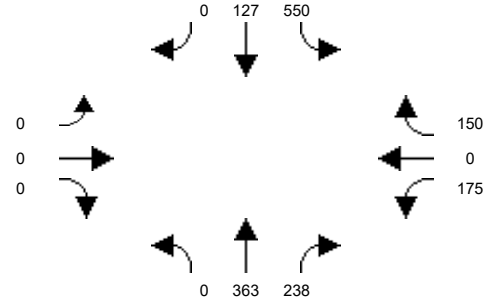
Intersection #58: Penn Wy and 17th St



Intersection #59: I-5 NB Off Ramps/17th Street



Intersection #60: Penn Wy and I-5 SB Ramps



Santa Ana Circulation Element

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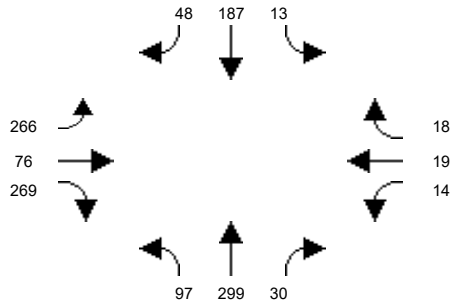
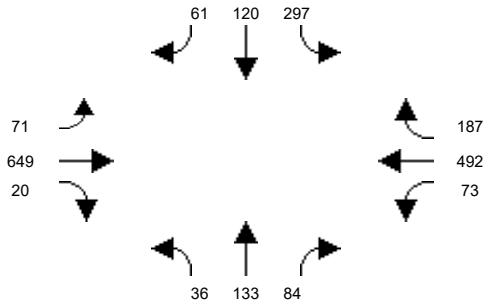
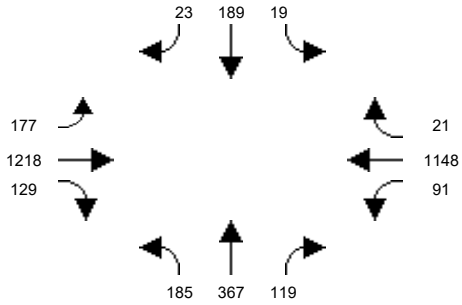
Intersection #61: Santiago St and Civic Center Dr



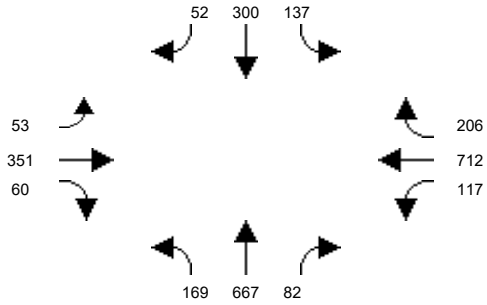
Intersection #62: Santiago St and Santa Ana Blvd



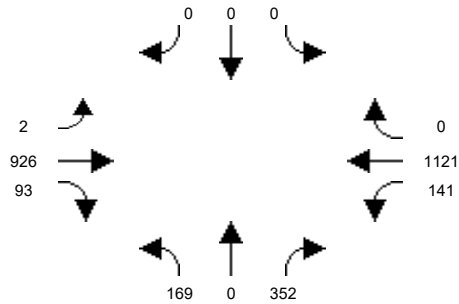
Intersection #64: Standard Ave and 1st St



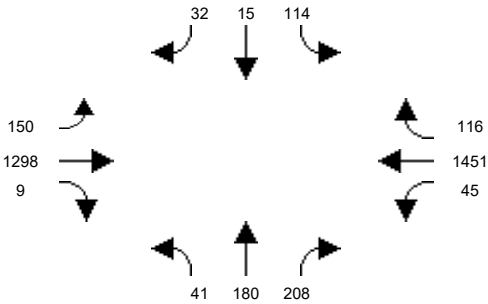
Intersection #65: Standard Ave and Mcfadden Ave



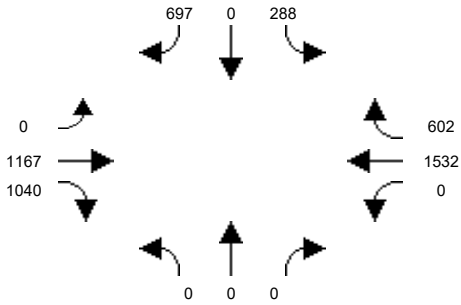
Intersection #66: Halladay St and Warner Ave



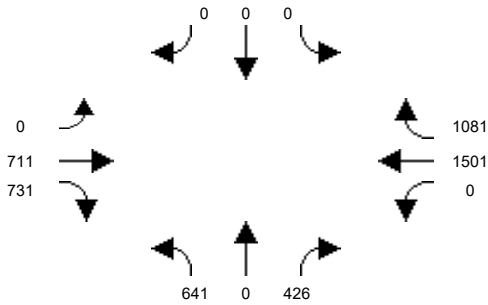
Intersection #67: Halladay St and Dyer Rd



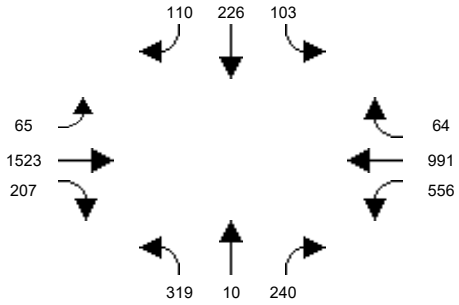
Intersection #68: SR-55 SB Ramps and MacArthur Blvd



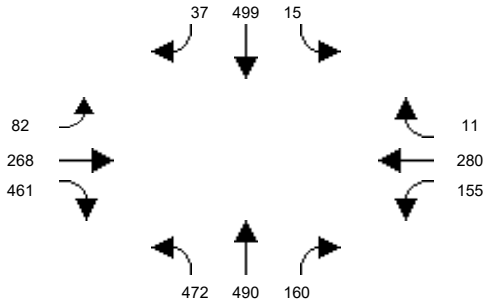
Intersection #69: SR-55 NB Ramps and MacArthur Blvd



Intersection #70: SR-55 SB Ramps and Dyer Rd



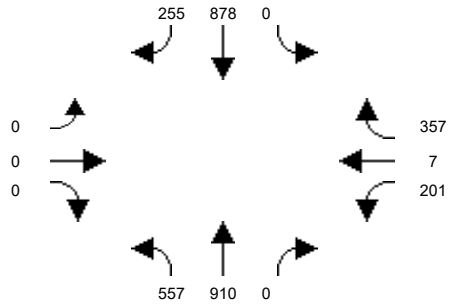
Intersection #71: Glassell St and La Veta Ave



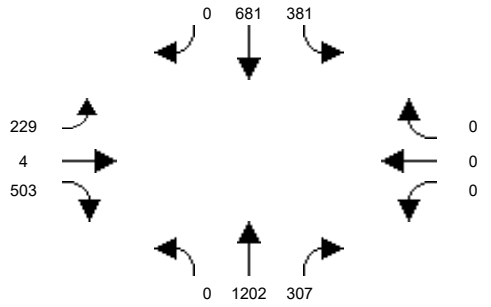
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP PM Peak Hour

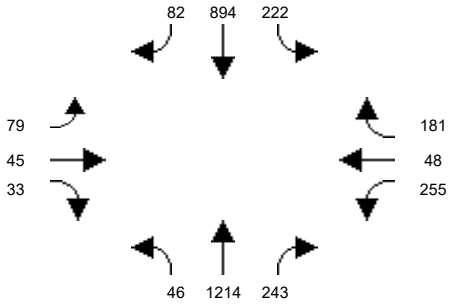
Intersection #72: Glassell St and SR-22 WB Ramps



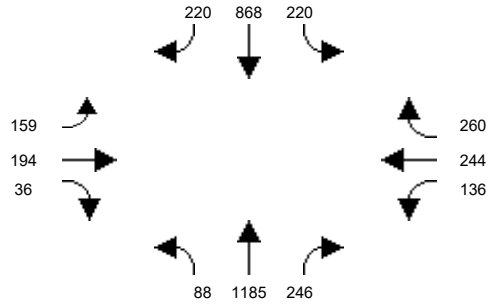
Intersection #73: Grand Ave / Glassell St and SR-22 EB Ramps



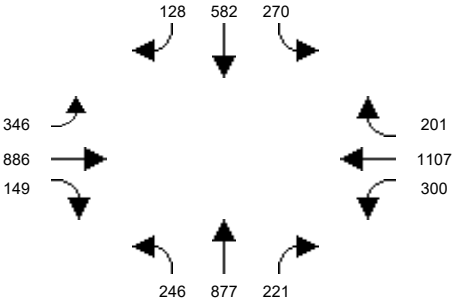
Intersection #74: Grand Ave and Fairhaven Ave



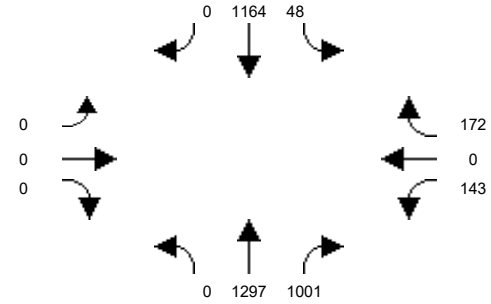
Intersection #75: Grand Ave and Santa Clara Ave



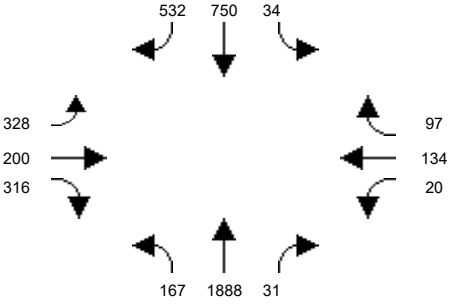
Intersection #76: Grand Ave and 17th St



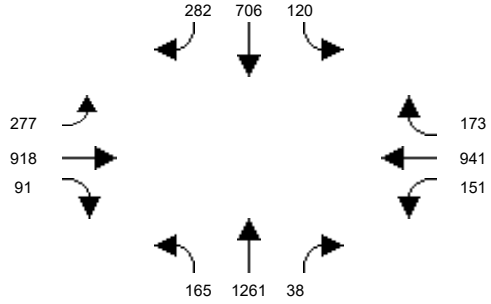
Intersection #77: Grand Ave and I-5 NB Ramps



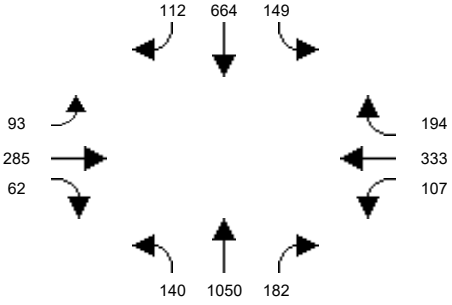
Intersection #78: Grand Ave and Santa Ana Blvd



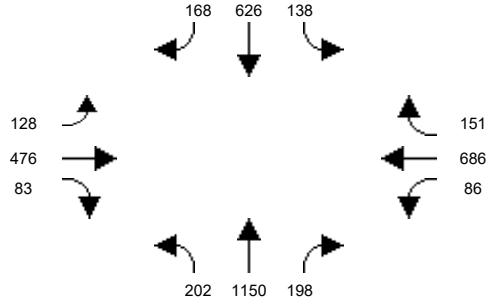
Intersection #79: Grand Ave and 1st St



Intersection #80: Grand Ave and Chestnut Ave



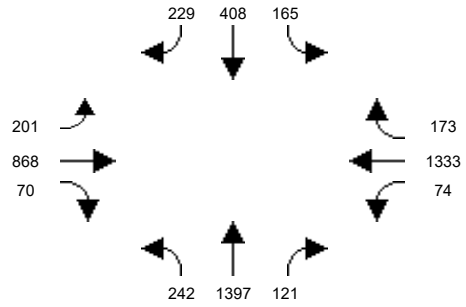
Intersection #81: Grand Ave and McFadden Ave



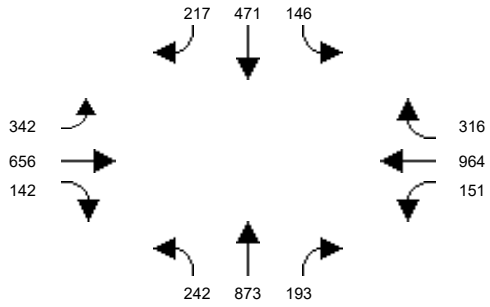
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP PM Peak Hour

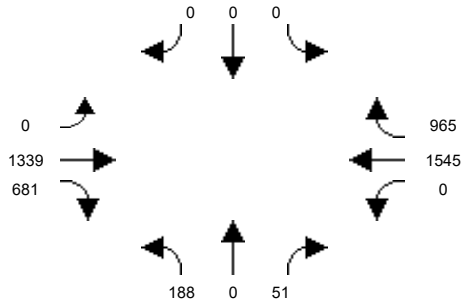
Intersection #82: Grand Ave and Edinger Ave



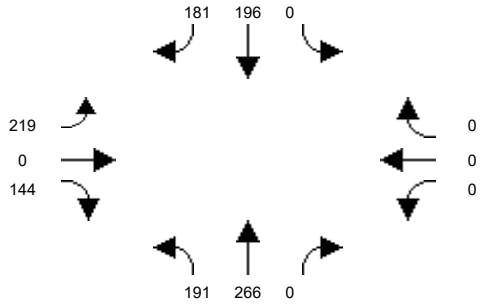
Intersection #83: Grand Ave and Warner Ave



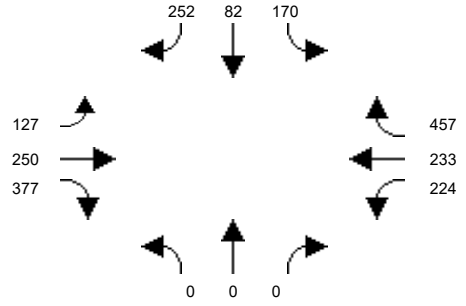
Intersection #84: SR-55 NB Ramps and Dyer Rd



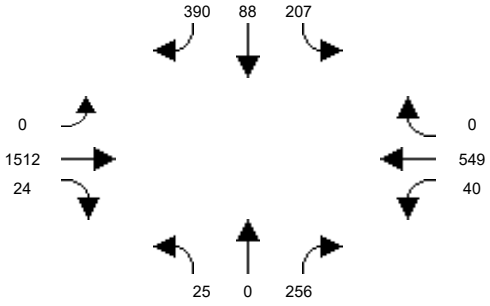
Intersection #85: Cambridge St and La Veta Ave



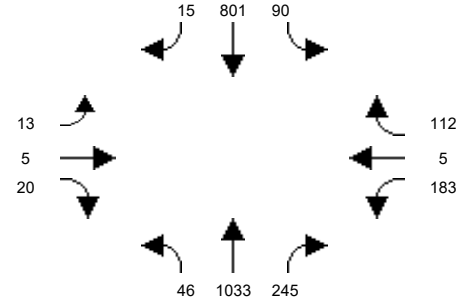
Intersection #86: Cambridge St and Fairhaven Ave



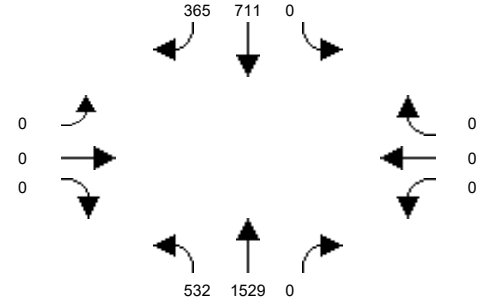
Intersection #87: Mabury St and 1st Street



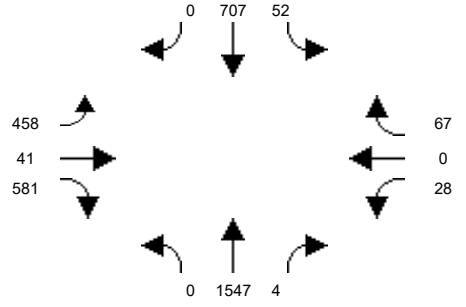
Intersection #88: Tustin St and La Veta Ave



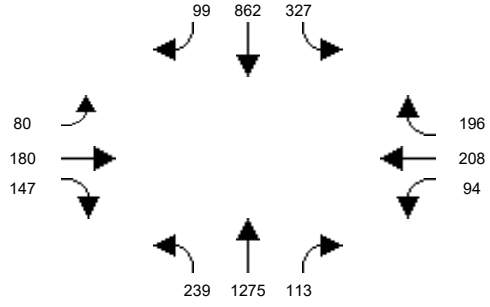
Intersection #89: Tustin St and SR-22 WB On-Ramp



Intersection #90: Tustin St and SR-22 EB Off-Ramp / Seba Ave



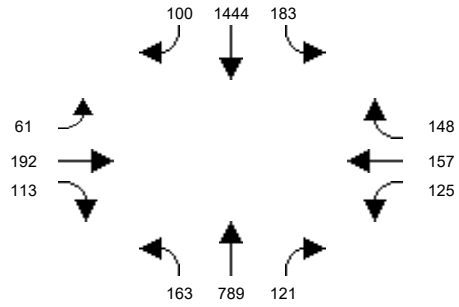
Intersection #91: Tustin Ave and Fairhaven Ave



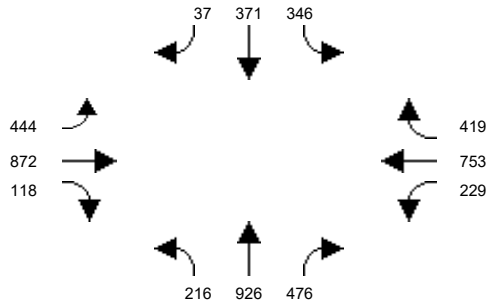
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP PM Peak Hour

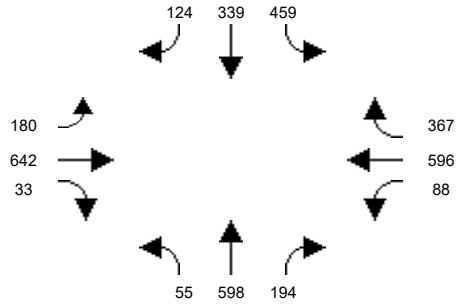
Intersection #92: Tustin Ave and Santa Clara Ave



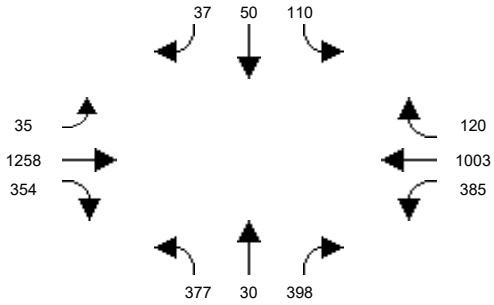
Intersection #93: Tustin Ave and 17th St



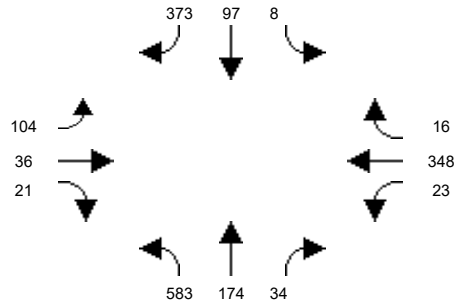
Intersection #94: Tustin Ave and 4th St



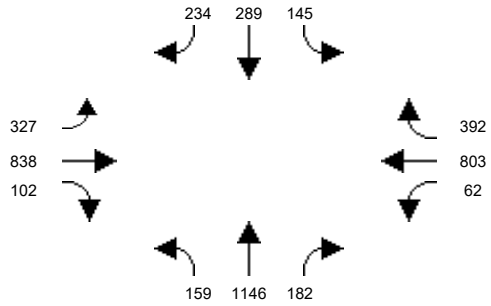
Intersection #95: SR-55 SB Ramps / Auto Mall Dr and Edinger Ave



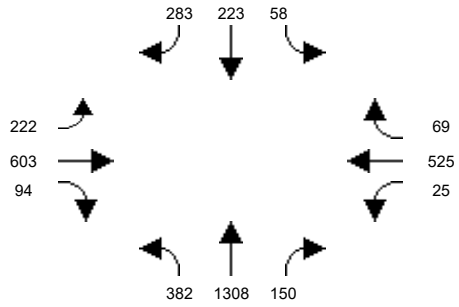
Intersection #96: SR-55 NB Ramps / Del Amo Ave and Newport



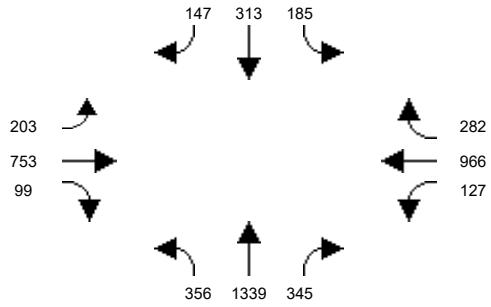
Intersection #97: Red Hill Ave and Edinger Ave



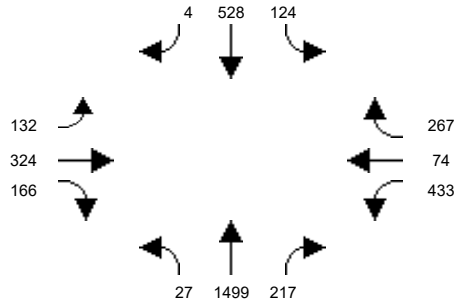
Intersection #98: Red Hill Ave and Warner Ave



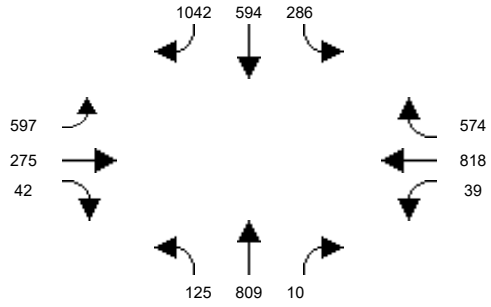
Intersection #99: Red Hill Ave and Dyer Rd / barranca Pkwy



Intersection #100: Red Hill Ave and Alton Pkwy



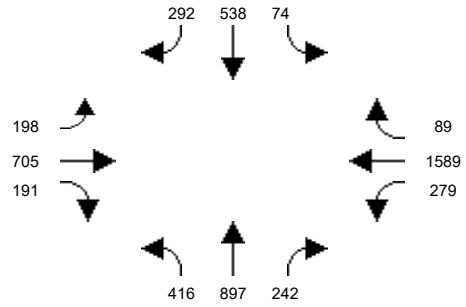
Intersection #101: Red Hill Ave and MacArthur Blvd



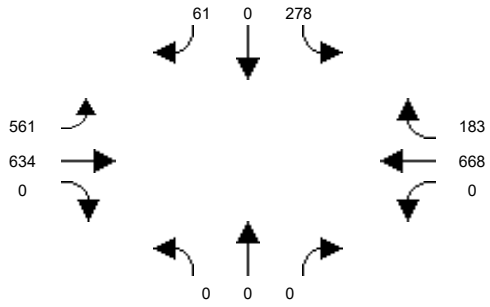
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2020 NP PM Peak Hour

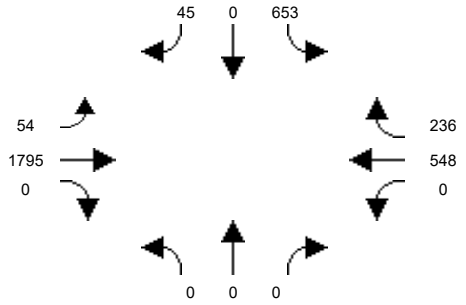
Intersection #102: Red Hill Ave and Main St



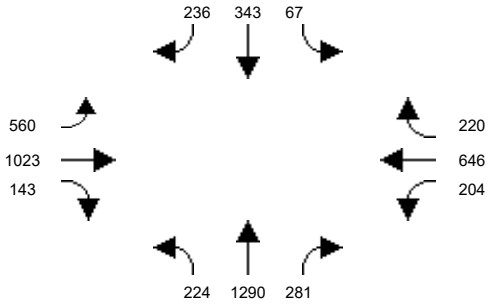
Intersection #103: I-5 SB Ramps and Santa Ana Blvd



Intersection #104: Tustin Ranch Rd and Warner Ave



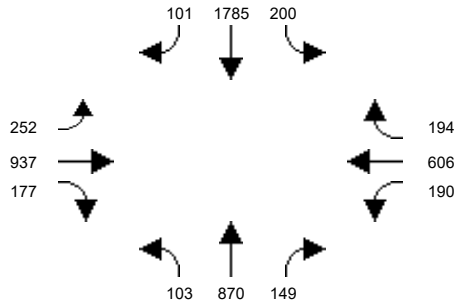
Intersection #105: Von Karman Ave and Barranca Pkwy



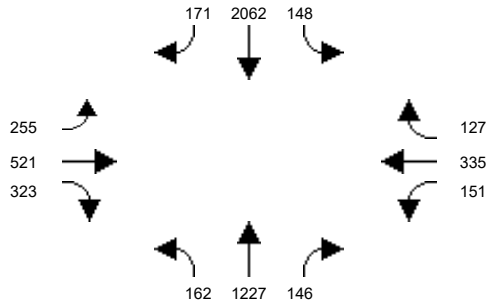
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP AM Peak Hour

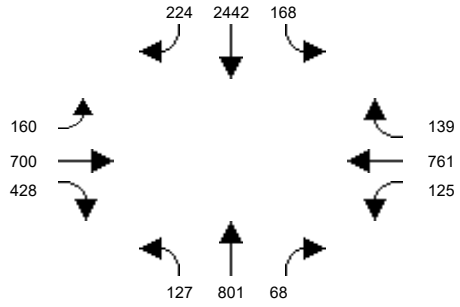
Intersection #1: Euclid St and 1st St



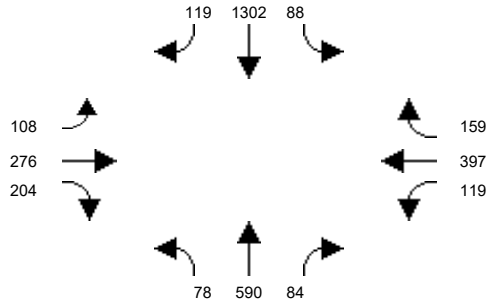
Intersection #2: Euclid St and McFadden Ave



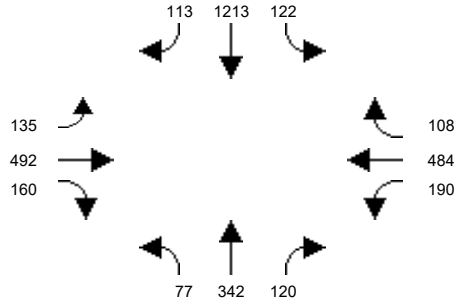
Intersection #3: Euclid St and Edinger Ave



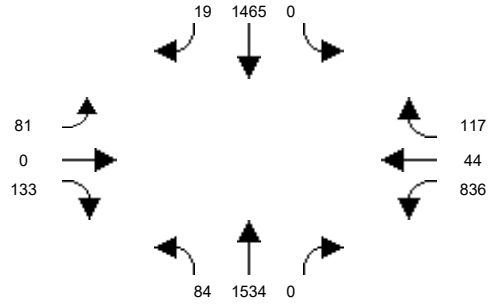
Intersection #4: Newhope St and Hazard Ave



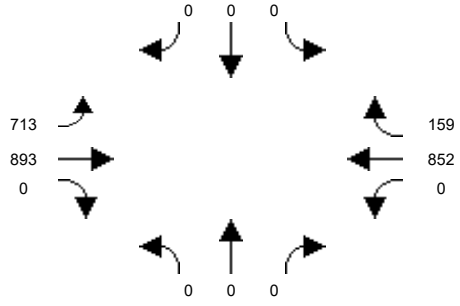
Intersection #5: Newhope St and McFadden Ave



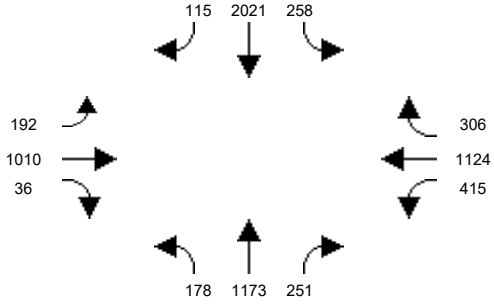
Intersection #6: Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr



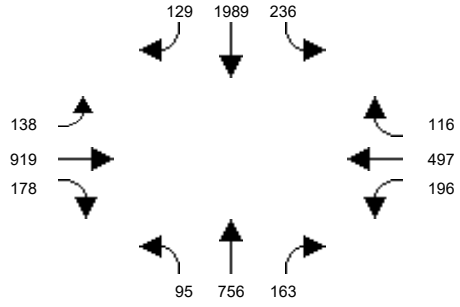
Intersection #7: Trask Avenue and SR-22 EB On-Ramp



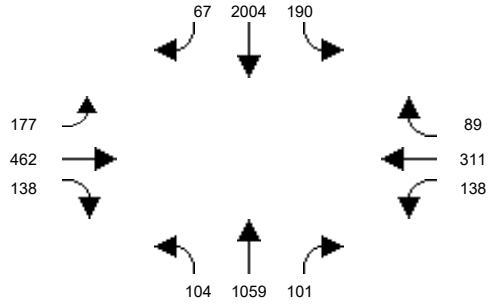
Intersection #8: Harbor Blvd and Westminster Ave



Intersection #9: Harbor Blvd and 1st St



Intersection #10: Harbor Blvd and McFadden Ave



Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
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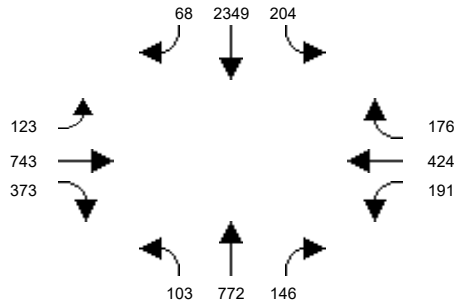
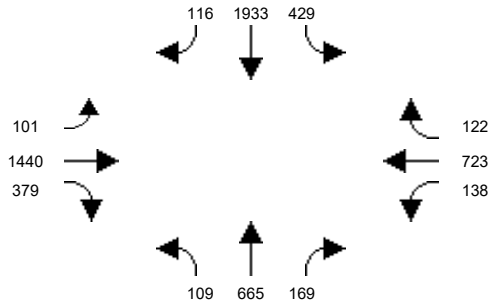
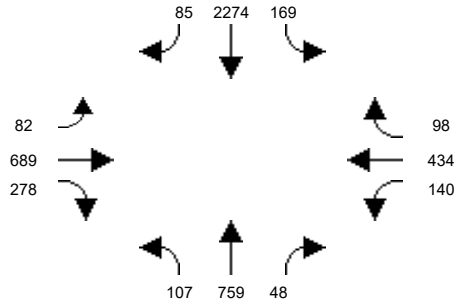
Intersection #11: Harbor Blvd and Edinger Ave



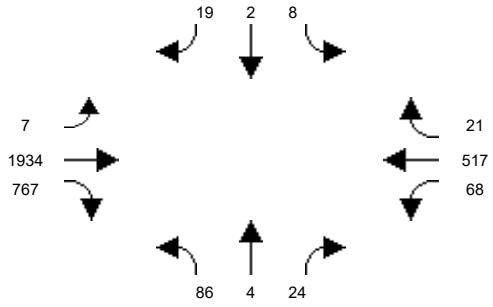
Intersection #12: Harbor Blvd and Warner Ave



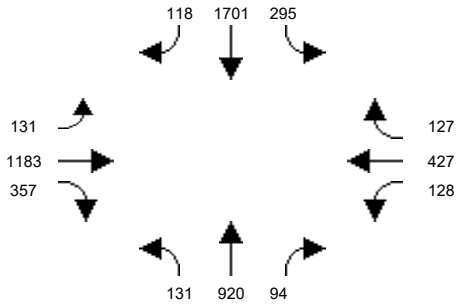
Intersection #13: Harbor Blvd and Segerstrom Ave



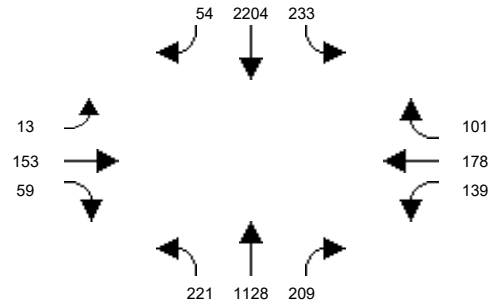
Intersection #14: MacArthur Blvd and Hyland Ave



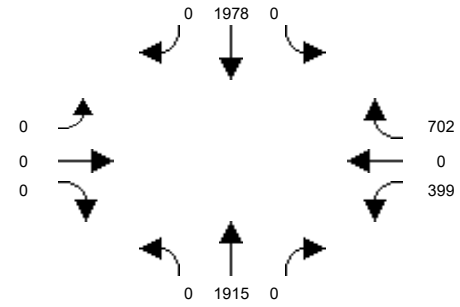
Intersection #15: MacArthur Blvd and Harbor Blvd



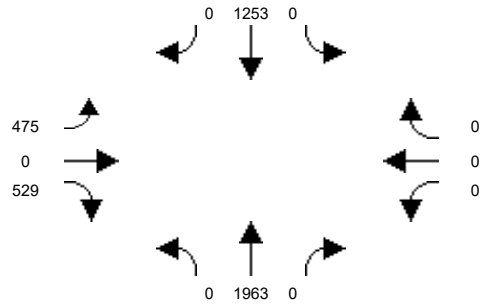
Intersection #16: Harbor Blvd and Sunflower Ave



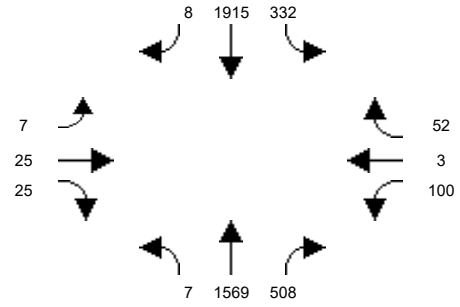
Intersection #17: Harbor Blvd and I-405 NB Off-Ramp



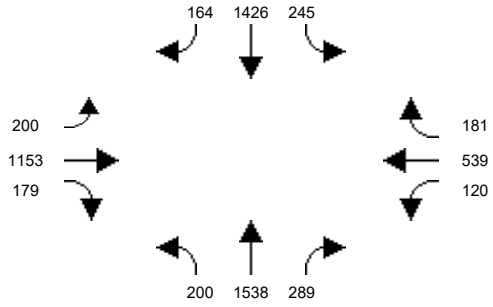
Intersection #18: Harbor Blvd and I-405 SB Off-Ramp



Intersection #19: Fairview St and Civic Center Dr



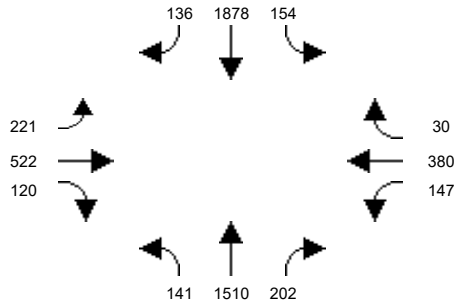
Intersection #20: Fairview St and 1st St



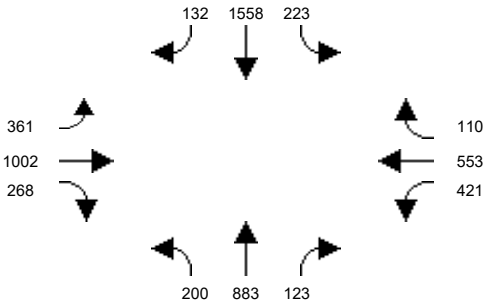
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP AM Peak Hour

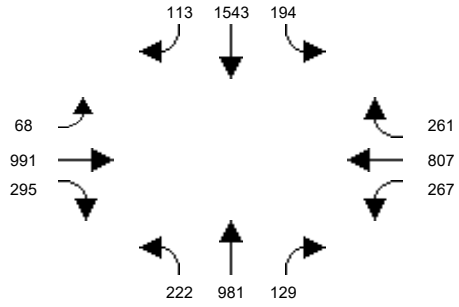
Intersection #21: Fairview St and McFadden Ave



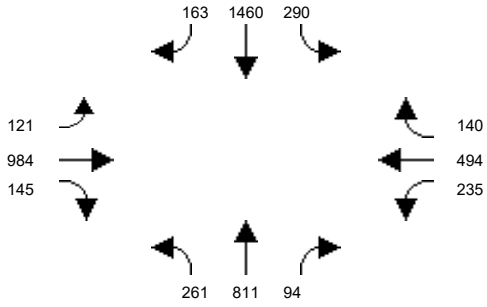
Intersection #22: Fairview St and Edinger Ave



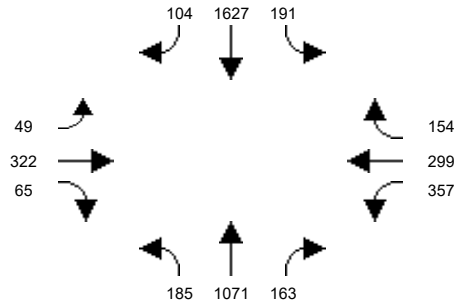
Intersection #23: Fairview St and Warner Ave



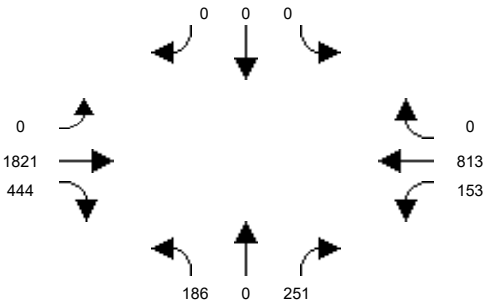
Intersection #24: Fairview St and MacArthur Blvd



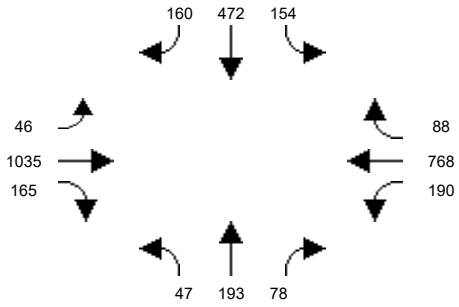
Intersection #25: Fairview Rd and Sunflower Ave



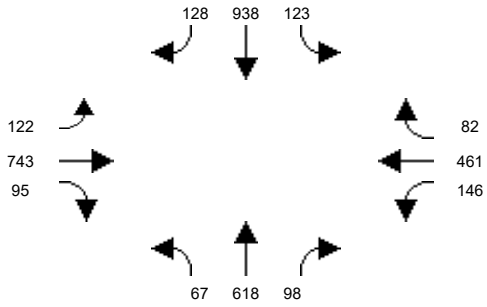
Intersection #26: Greenville St and Edinger Ave



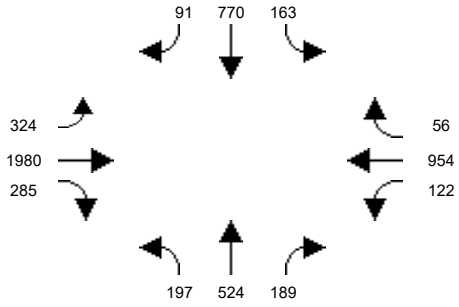
Intersection #27: Greenville St and Segerstrom Ave



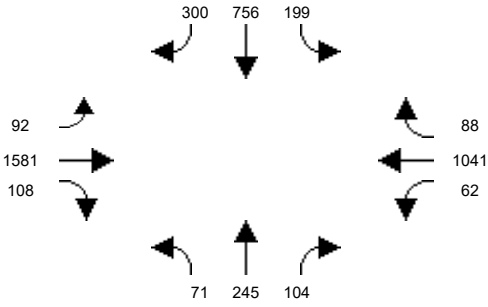
Intersection #28: Raitt St and McFadden Ave



Intersection #29: Raitt St and Edinger Ave



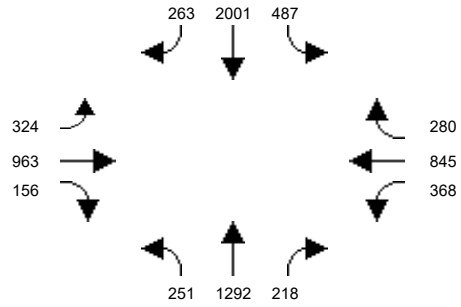
Intersection #30: Bear St and MacArthur Blvd



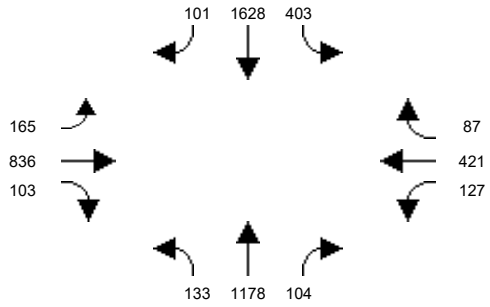
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP AM Peak Hour

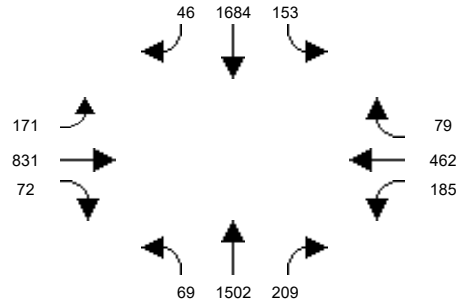
Intersection #31: Bristol St and 17th St



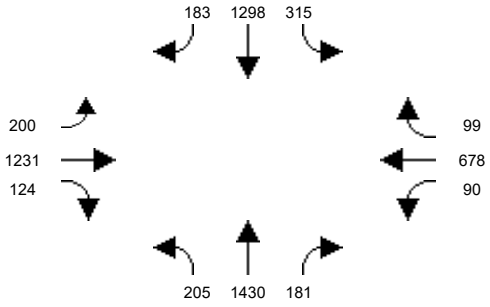
Intersection #32: Bristol St and Civic Center Dr



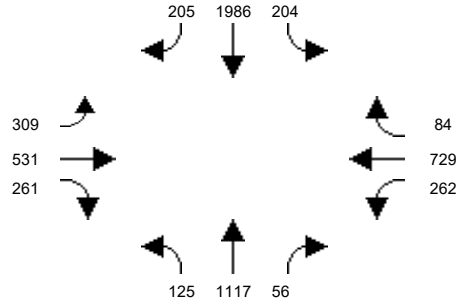
Intersection #33: Bristol St and Santa Ana Blvd



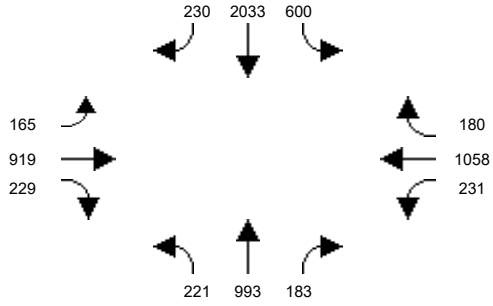
Intersection #34: Bristol St and 1st St



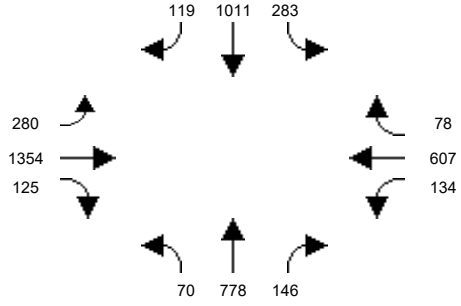
Intersection #35: Bristol St and McFadden Ave



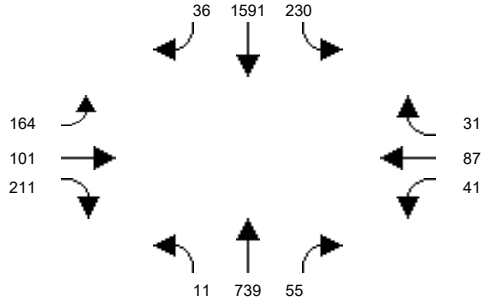
Intersection #36: Bristol St and Warner Ave



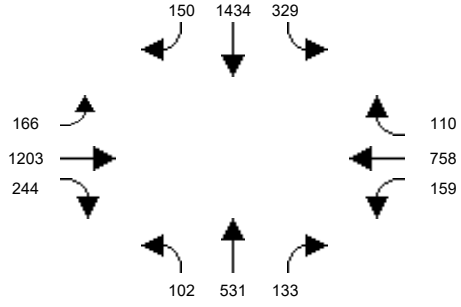
Intersection #37: Bristol St and Segerstrom Ave



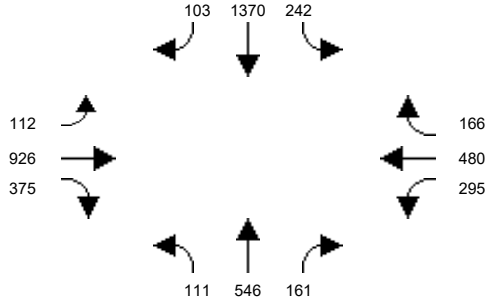
Intersection #38: Bristol St and Alton Ave



Intersection #39: Bristol St and MacArthur Blvd



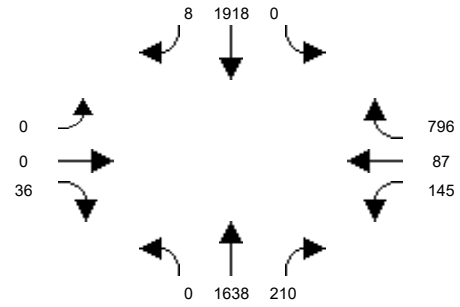
Intersection #40: Bristol St and Sunflower Ave



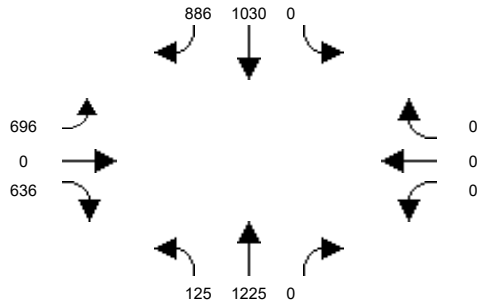
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP AM Peak Hour

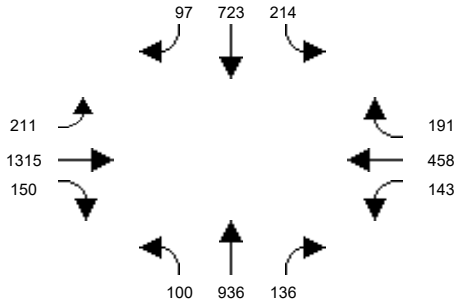
Intersection #41: Bristol St and I-405 NB Ramps



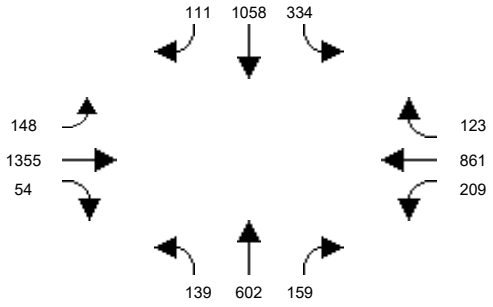
Intersection #42: Bristol St and I-405 SB Ramps



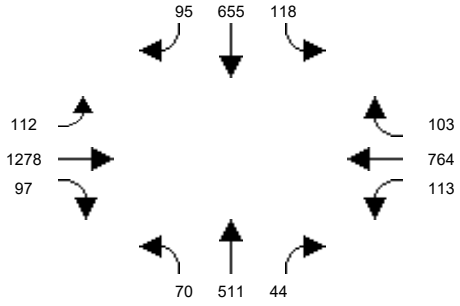
Intersection #43: Flower St and Santa Ana Blvd



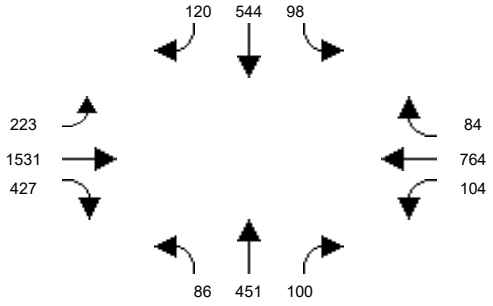
Intersection #44: Flower St and 1st St



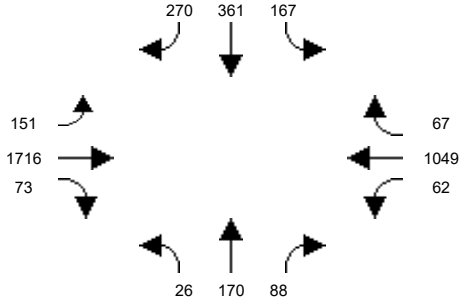
Intersection #45: Flower St and McFadden Ave



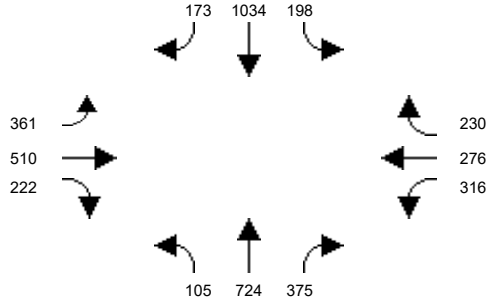
Intersection #46: Flower St and Segerstrom Ave



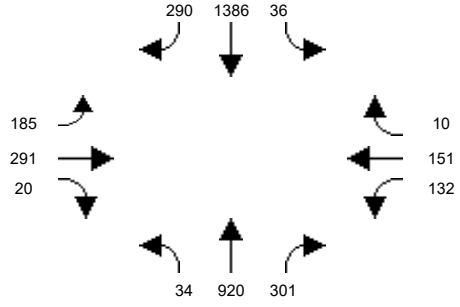
Intersection #47: Flower St and MacArthur Blvd



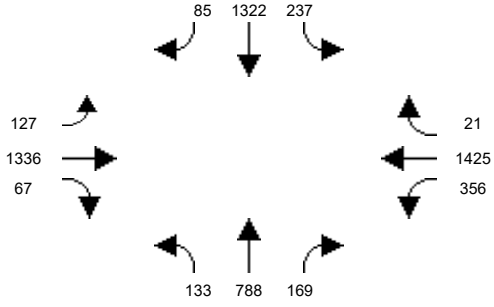
Intersection #48: Main St and La Veta Ave



Intersection #49: Main St and Mainplace Dr / Memory Ln



Intersection #50: Main St and 17th St



Santa Ana Circulation Element

Intersection Graphic Report
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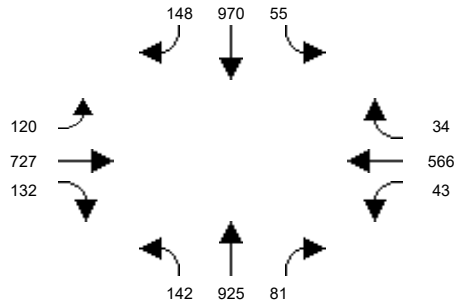
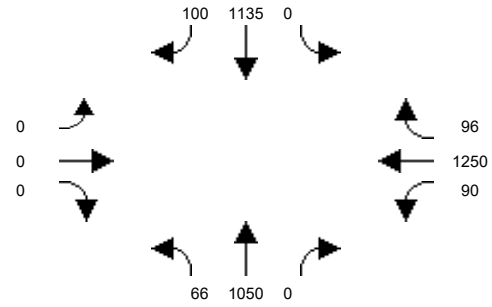
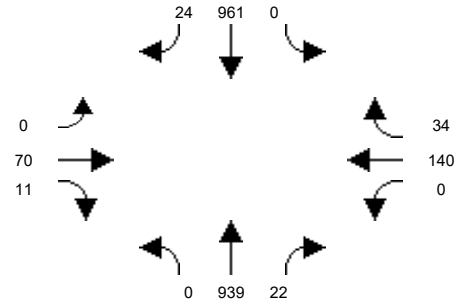
Intersection #51: Main St and Civic Center Dr



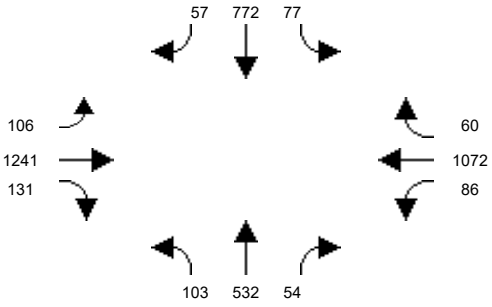
Intersection #52: Main St and Santa Ana Blvd



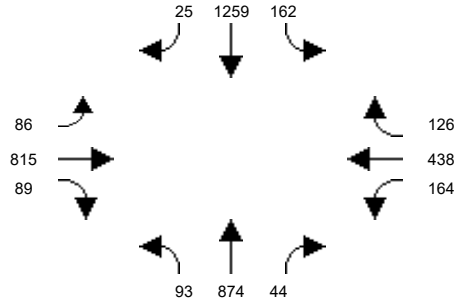
Intersection #53: Main St and 4th St



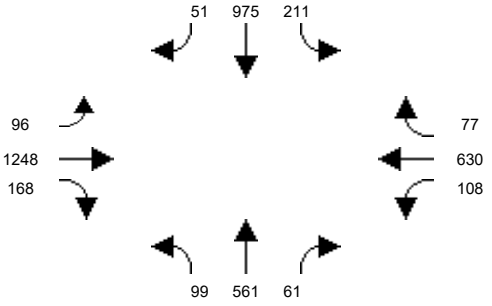
Intersection #54: Main St and 1st St



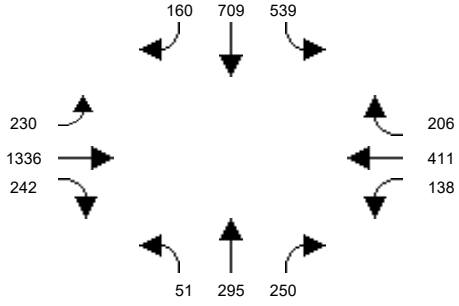
Intersection #55: Main St and McFadden Ave



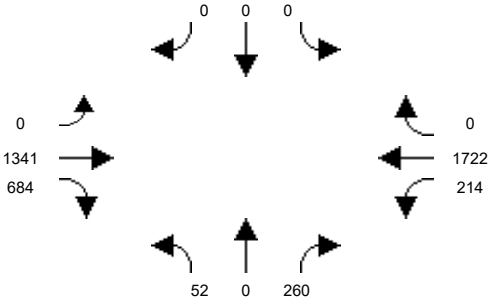
Intersection #56: Main St and Edinger Ave



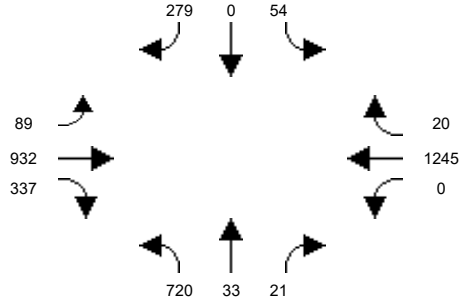
Intersection #57: Main St and MacArthur Blvd



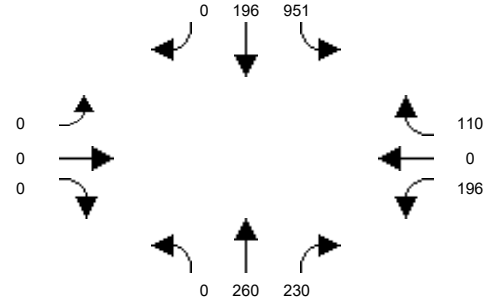
Intersection #58: Penn Wy and 17th St



Intersection #59: I-5 NB Off Ramps/17th Street



Intersection #60: Penn Wy and I-5 SB Ramps



Santa Ana Circulation Element

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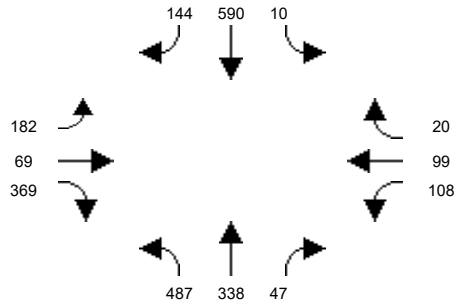
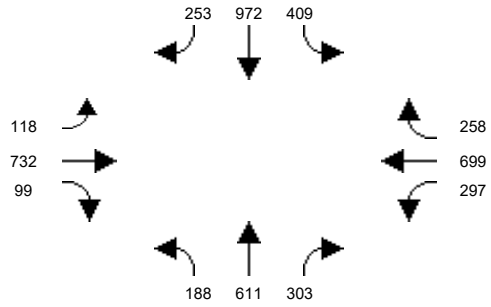
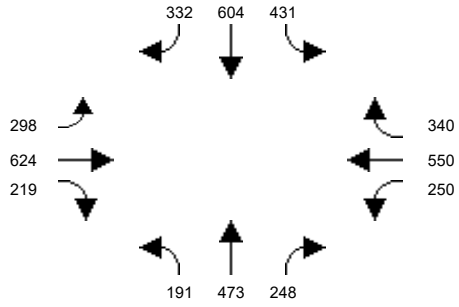
Intersection #61: Santiago St and Civic Center Dr



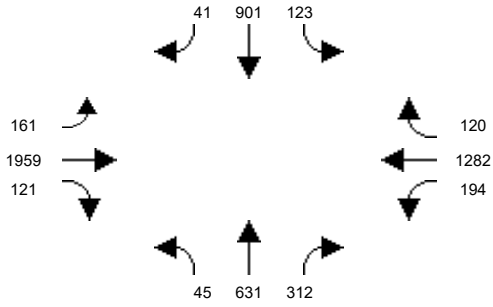
Intersection #62: Santiago St and Santa Ana Blvd



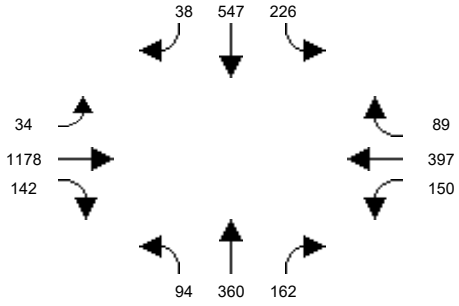
Intersection #63: Standard Ave and 4th St



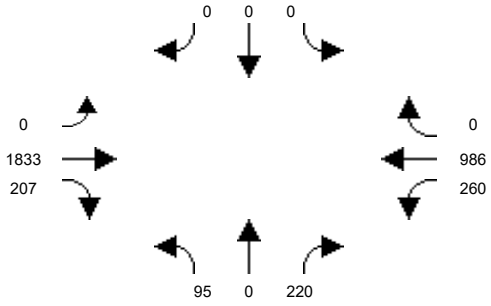
Intersection #64: Standard Ave and 1st St



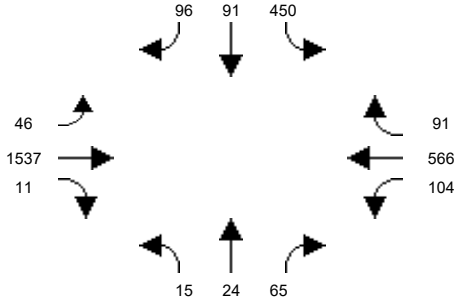
Intersection #65: Standard Ave and Mcfadden Ave



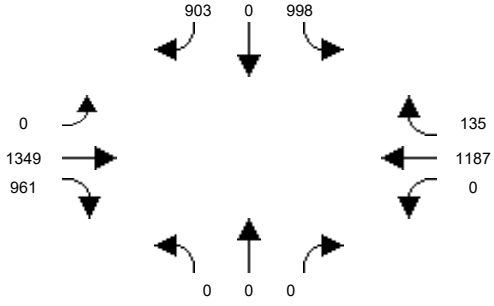
Intersection #66: Halladay St and Warner Ave



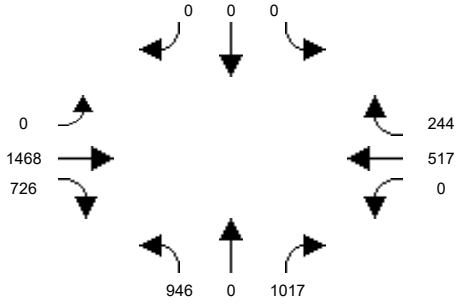
Intersection #67: Halladay St and Dyer Rd



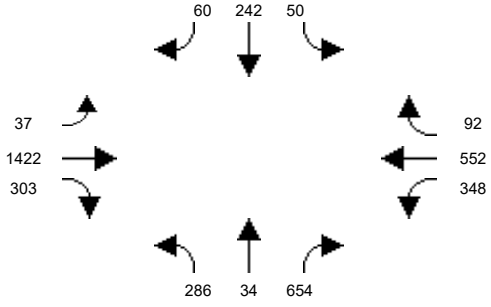
Intersection #68: SR-55 SB Ramps and MacArthur Blvd



Intersection #69: SR-55 NB Ramps and MacArthur Blvd



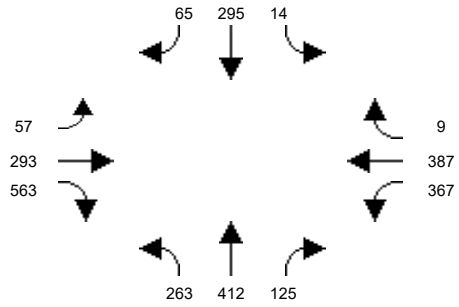
Intersection #70: SR-55 SB Ramps and Dyer Rd



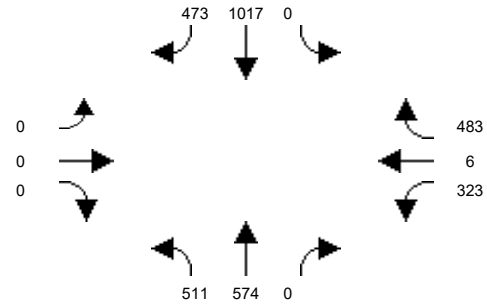
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP AM Peak Hour

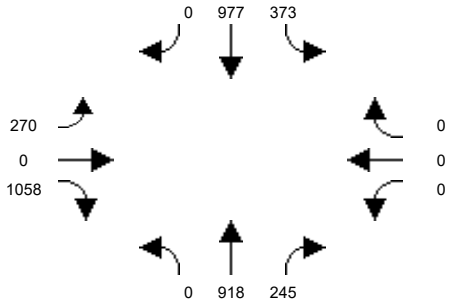
Intersection #71: Glassell St and La Veta Ave



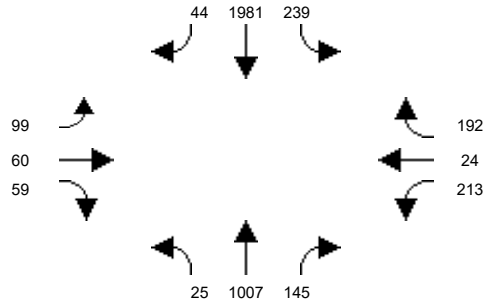
Intersection #72: Glassell St and SR-22 WB Ramps



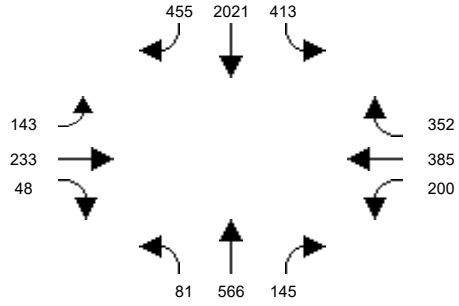
Intersection #73: Grand Ave / Glassell St and SR-22 EB Ramps



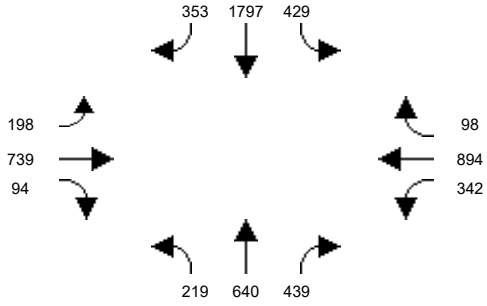
Intersection #74: Grand Ave and Fairhaven Ave



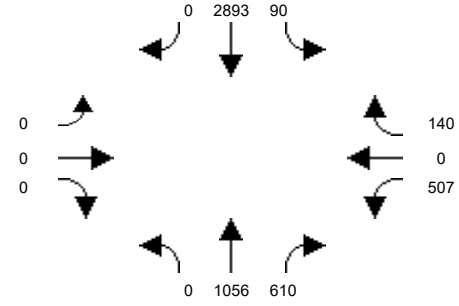
Intersection #75: Grand Ave and Santa Clara Ave



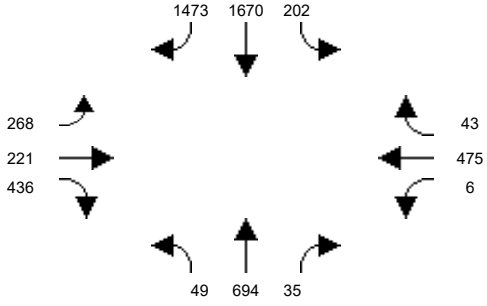
Intersection #76: Grand Ave and 17th St



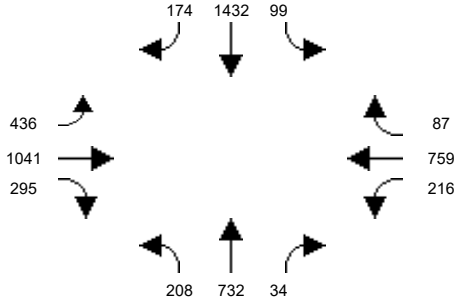
Intersection #77: Grand Ave and I-5 NB Ramps



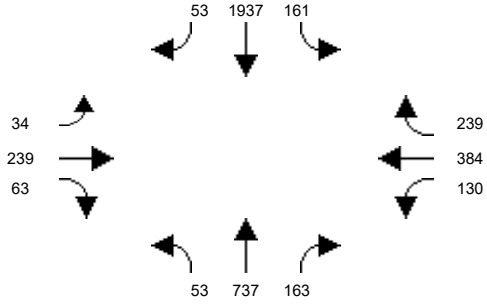
Intersection #78: Grand Ave and Santa Ana Blvd



Intersection #79: Grand Ave and 1st St



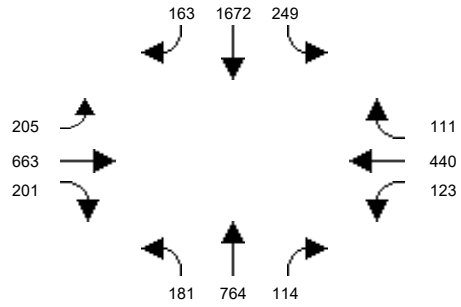
Intersection #80: Grand Ave and Chestnut Ave



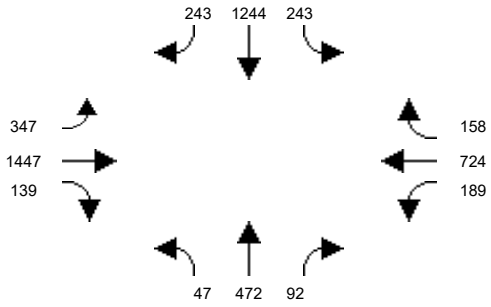
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP AM Peak Hour

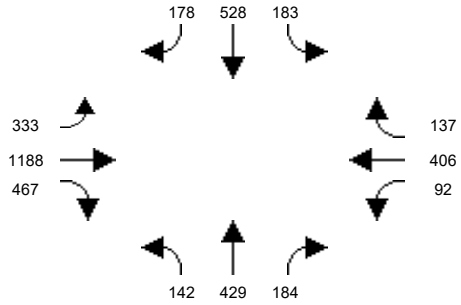
Intersection #81: Grand Ave and McFadden Ave



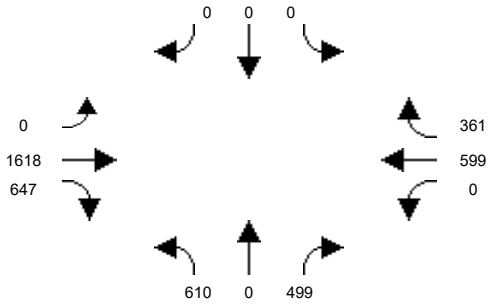
Intersection #82: Grand Ave and Edinger Ave



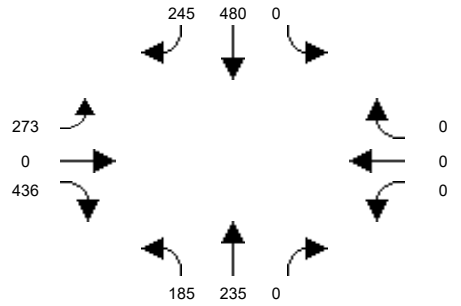
Intersection #83: Grand Ave and Warner Ave



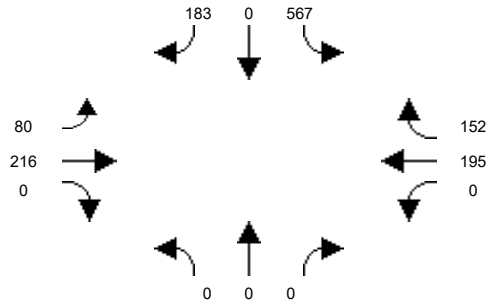
Intersection #84: SR-55 NB Ramps and Dyer Rd



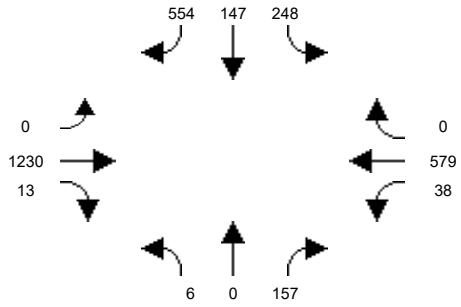
Intersection #85: Cambridge St and La Veta Ave



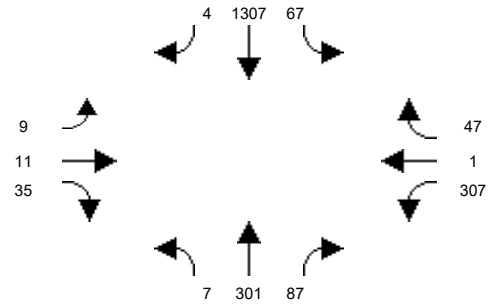
Intersection #86: Cambridge St and Fairhaven Ave



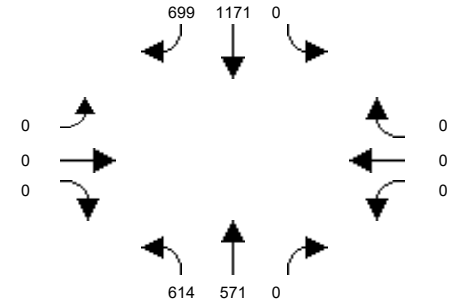
Intersection #87: Mabury St and 1st Street



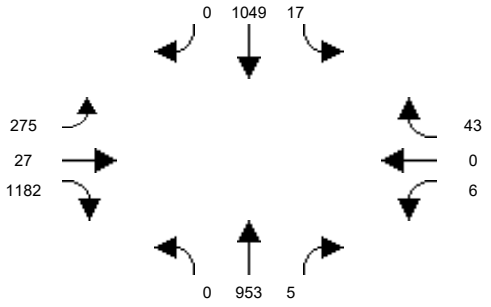
Intersection #88: Tustin St and La Veta Ave



Intersection #89: Tustin St and SR-22 WB On-Ramp



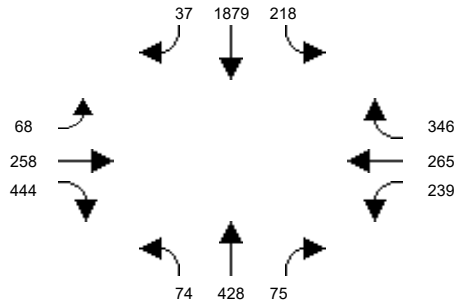
Intersection #90: Tustin St and SR-22 EB Off-Ramp / Seba Ave



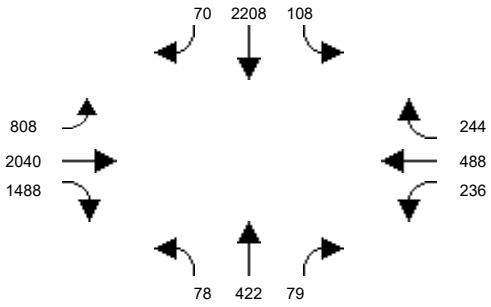
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP AM Peak Hour

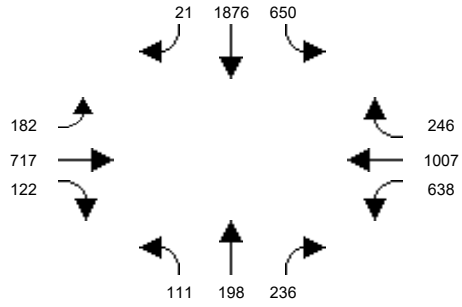
Intersection #91: Tustin Ave and Fairhaven Ave



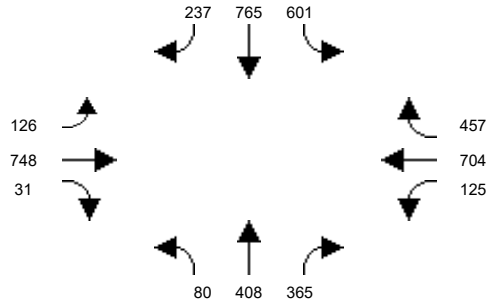
Intersection #92: Tustin Ave and Santa Clara Ave



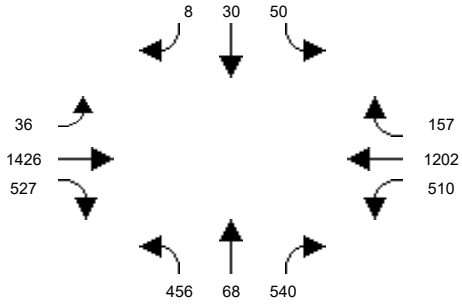
Intersection #93: Tustin Ave and 17th St



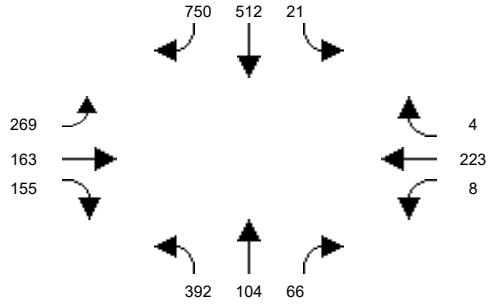
Intersection #94: Tustin Ave and 4th St



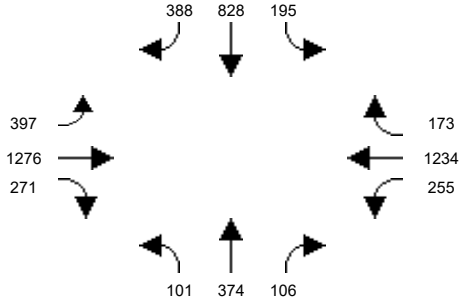
Intersection #95: SR-55 SB Ramps / Auto Mall Dr and Edinger Ave



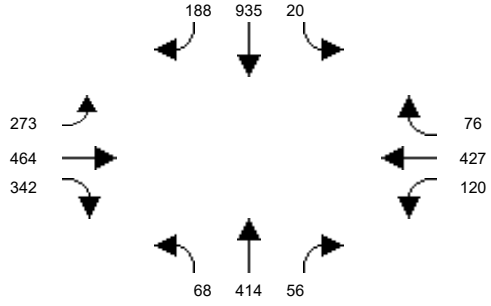
Intersection #96: SR-55 NB Ramps / Del Amo Ave and Newport Avenue



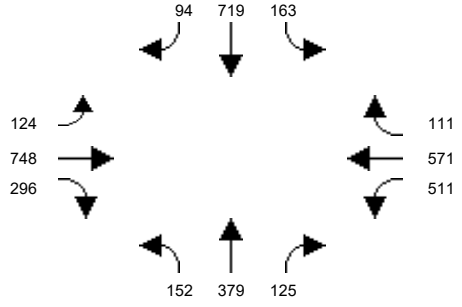
Intersection #97: Red Hill Ave and Edinger Ave



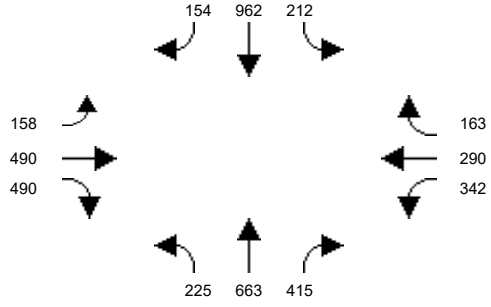
Intersection #98: Red Hill Ave and Warner Ave



Intersection #99: Red Hill Ave and Dyer Rd / barranca Pkwy



Intersection #100: Red Hill Ave and Alton Pkwy



Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
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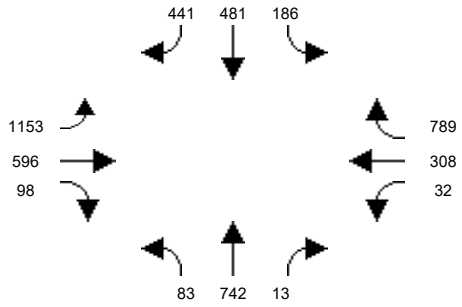
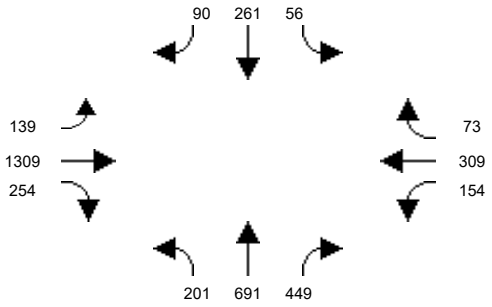
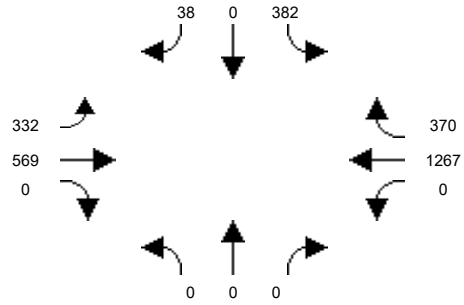
Intersection #101: Red Hill Ave and MacArthur Blvd



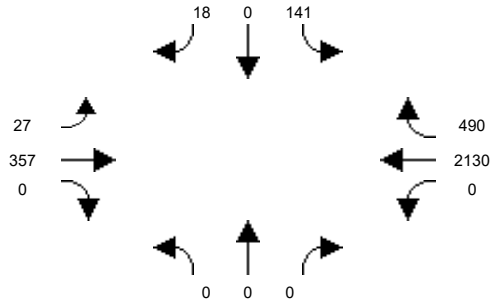
Intersection #102: Red Hill Ave and Main St



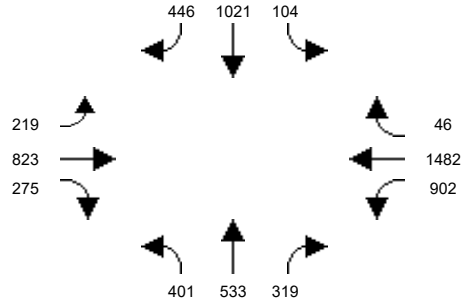
Intersection #103: I-5 SB Ramps and Santa Ana Blvd



Intersection #104: Tustin Ranch Rd and Warner Ave



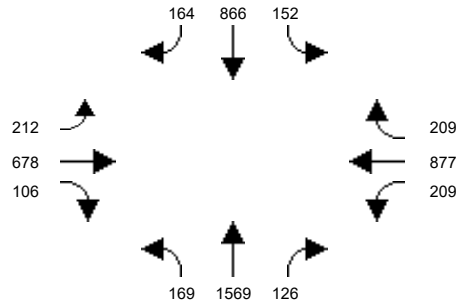
Intersection #105: Von Karman Ave and Barranca Pkwy



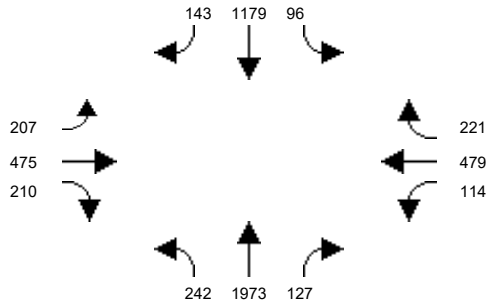
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

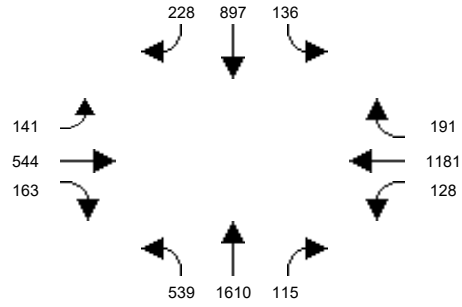
Intersection #1: Euclid St and 1st St



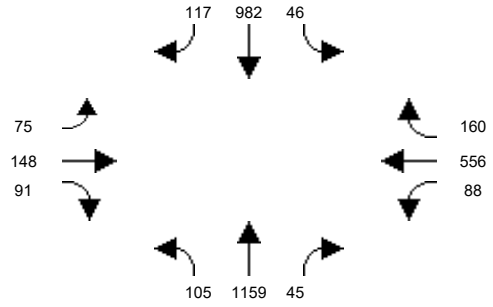
Intersection #2: Euclid St and McFadden Ave



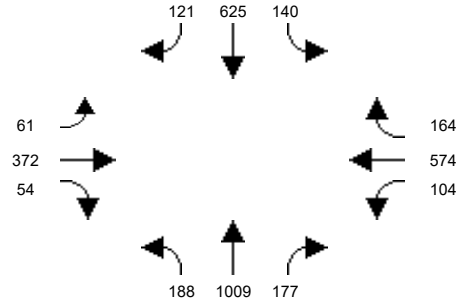
Intersection #3: Euclid St and Edinger Ave



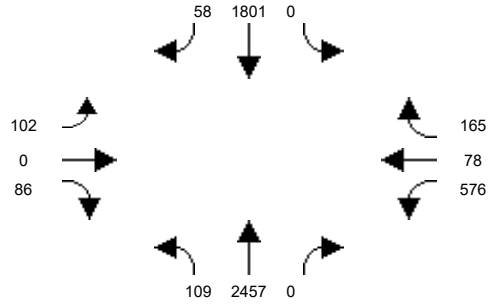
Intersection #4: Newhope St and Hazard Ave



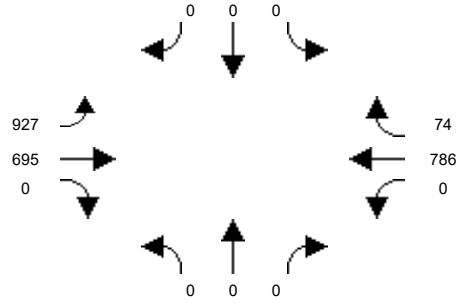
Intersection #5: Newhope St and McFadden Ave



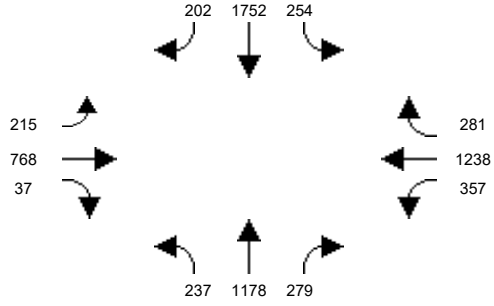
Intersection #6: Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr



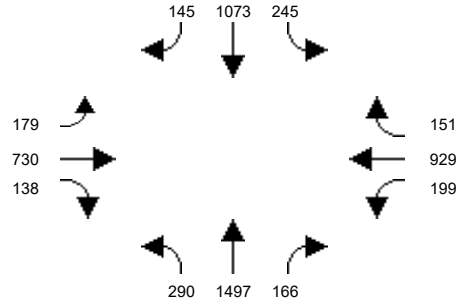
Intersection #7: Trask Avenue and SR-22 EB On-Ramp



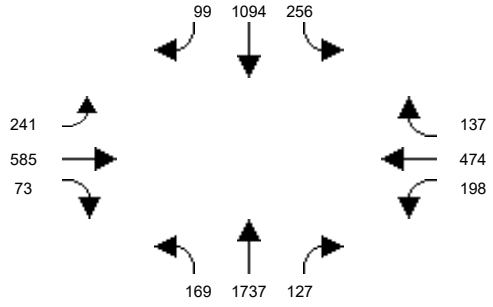
Intersection #8: Harbor Blvd and Westminster Ave



Intersection #9: Harbor Blvd and 1st St



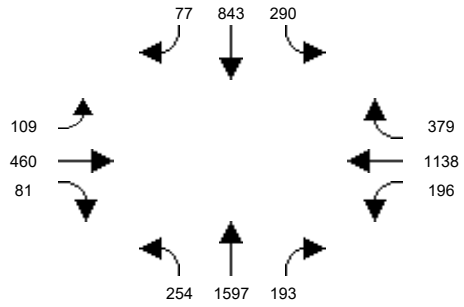
Intersection #10: Harbor Blvd and McFadden Ave



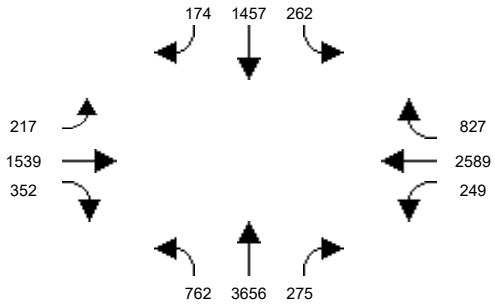
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

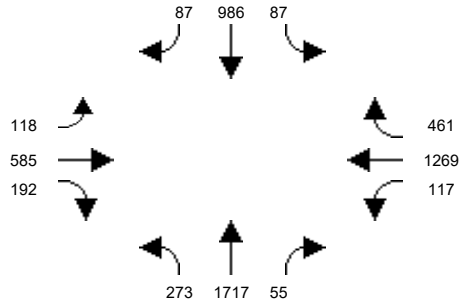
Intersection #11: Harbor Blvd and Edinger Ave



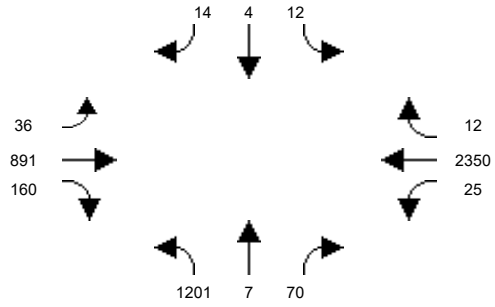
Intersection #12: Harbor Blvd and Warner Ave



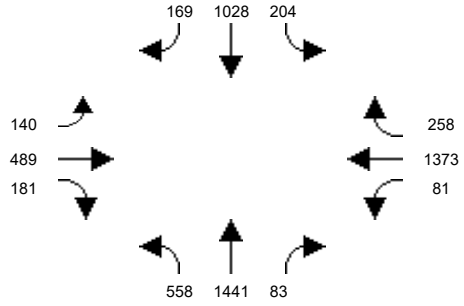
Intersection #13: Harbor Blvd and Segerstrom Ave



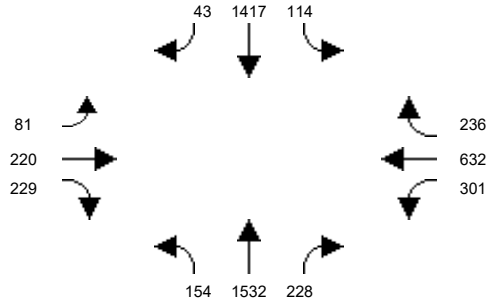
Intersection #14: MacArthur Blvd and Hyland Ave



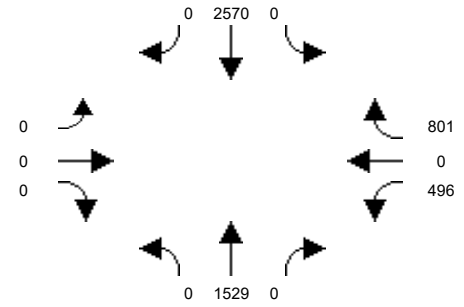
Intersection #15: MacArthur Blvd and Harbor Blvd



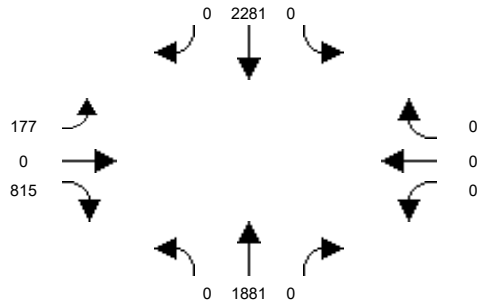
Intersection #16: Harbor Blvd and Sunflower Ave



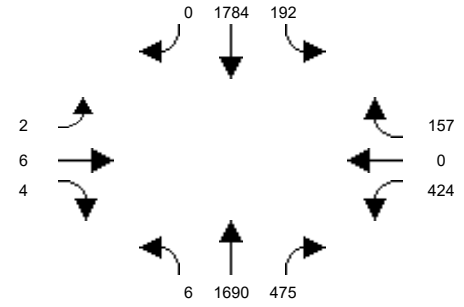
Intersection #17: Harbor Blvd and I-405 NB Off-Ramp



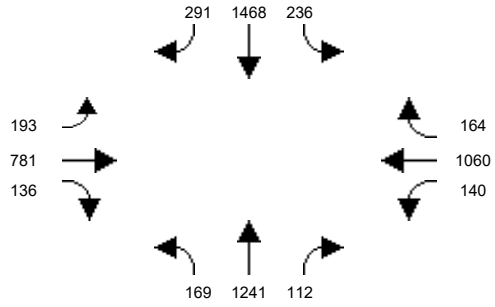
Intersection #18: Harbor Blvd and I-405 SB Off-Ramp



Intersection #19: Fairview St and Civic Center Dr



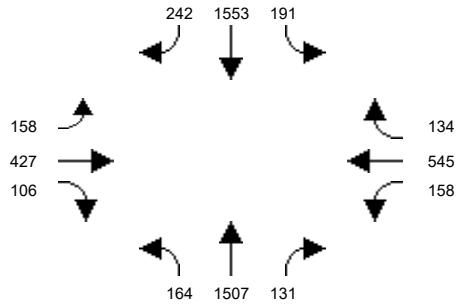
Intersection #20: Fairview St and 1st St



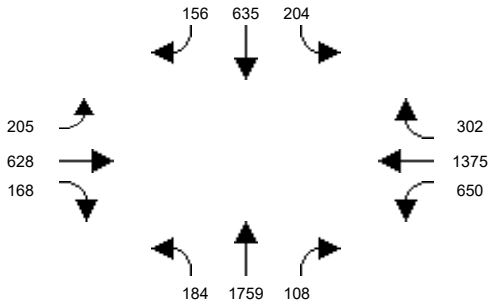
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

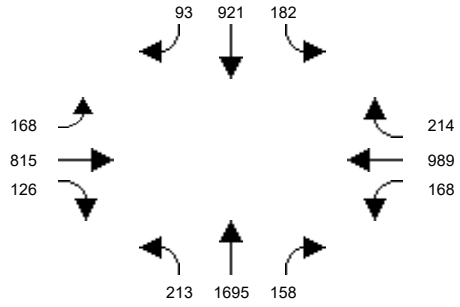
Intersection #21: Fairview St and McFadden Ave



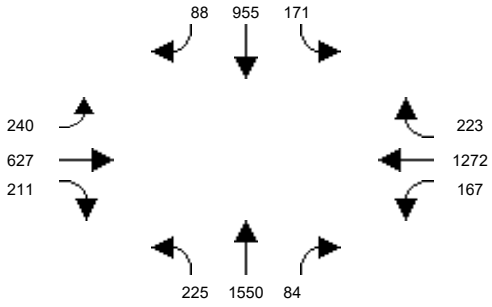
Intersection #22: Fairview St and Edinger Ave



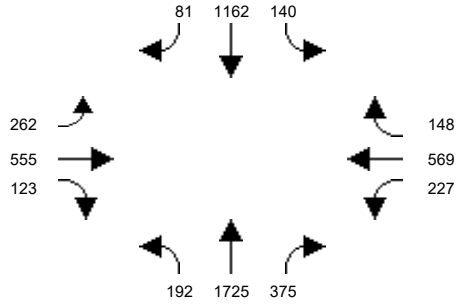
Intersection #23: Fairview St and Warner Ave



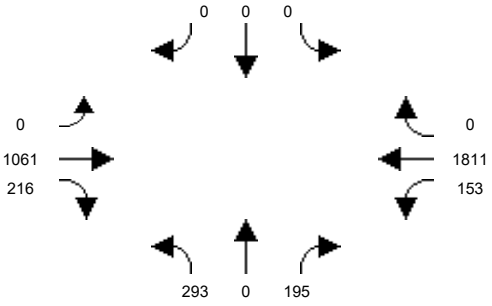
Intersection #24: Fairview St and MacArthur Blvd



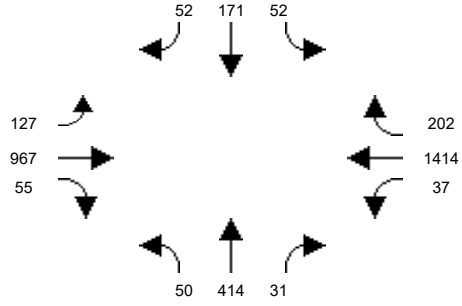
Intersection #25: Fairview Rd and Sunflower Ave



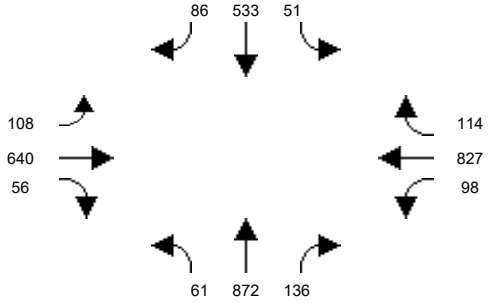
Intersection #26: Greenville St and Edinger Ave



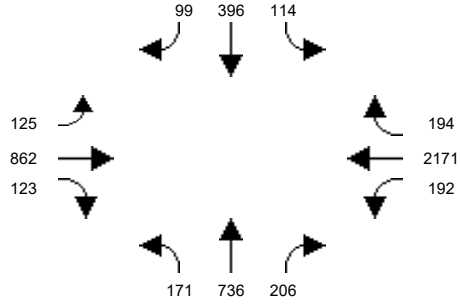
Intersection #27: Greenville St and Segerstrom Ave



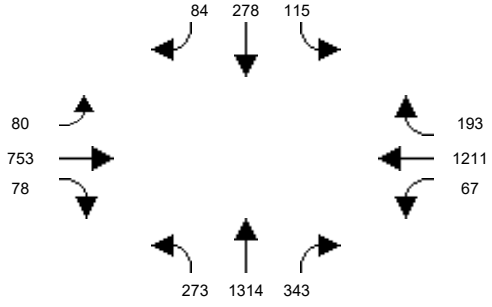
Intersection #28: Raitt St and McFadden Ave



Intersection #29: Raitt St and Edinger Ave



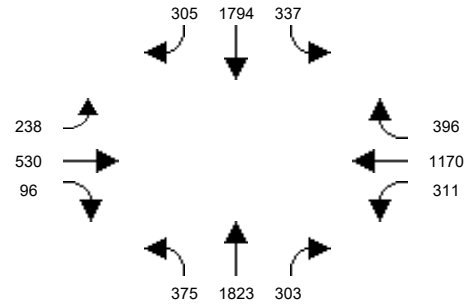
Intersection #30: Bear St and MacArthur Blvd



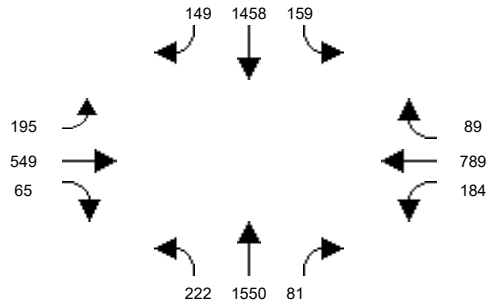
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

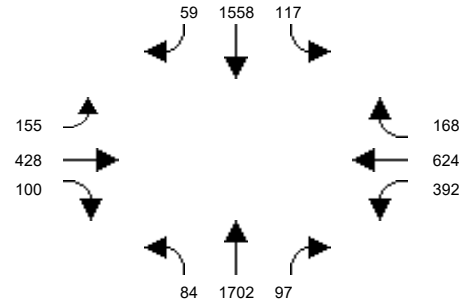
Intersection #31: Bristol St and 17th St



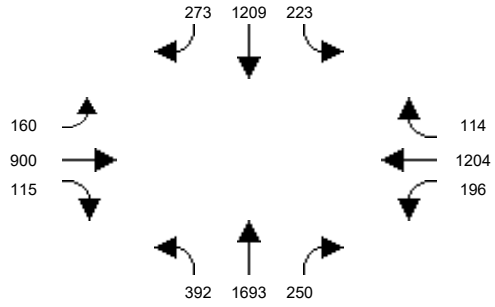
Intersection #32: Bristol St and Civic Center Dr



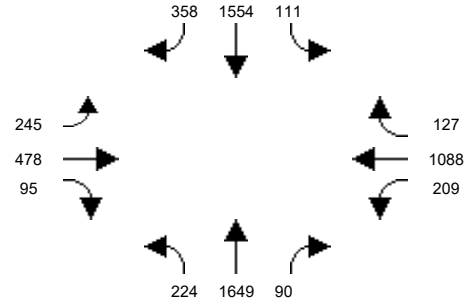
Intersection #33: Bristol St and Santa Ana Blvd



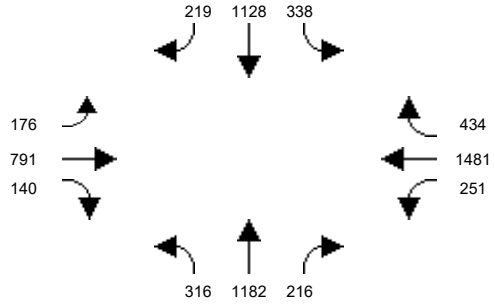
Intersection #34: Bristol St and 1st St



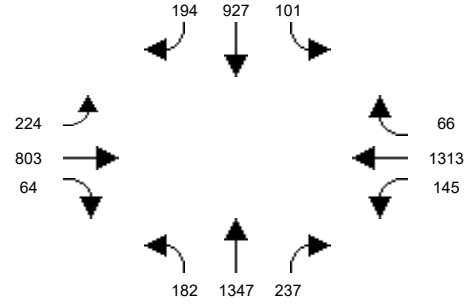
Intersection #35: Bristol St and McFadden Ave



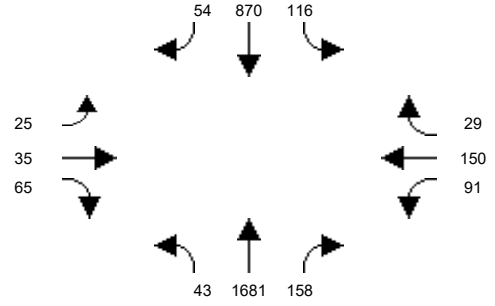
Intersection #36: Bristol St and Warner Ave



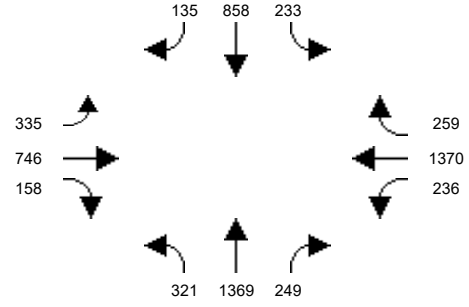
Intersection #37: Bristol St and Segerstrom Ave



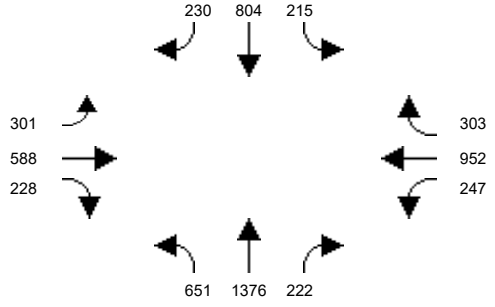
Intersection #38: Bristol St and Alton Ave



Intersection #39: Bristol St and MacArthur Blvd



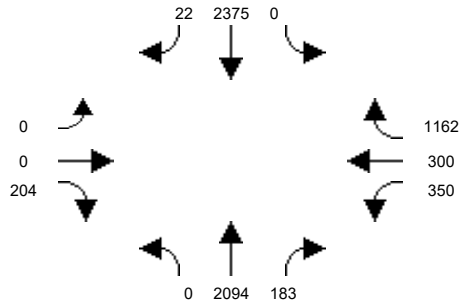
Intersection #40: Bristol St and Sunflower Ave



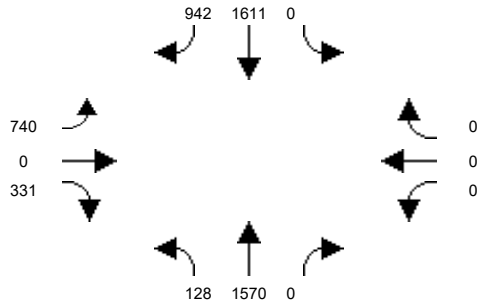
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

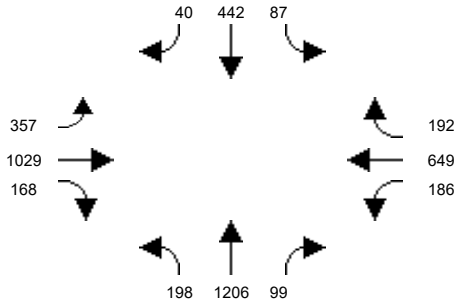
Intersection #41: Bristol St and I-405 NB Ramps



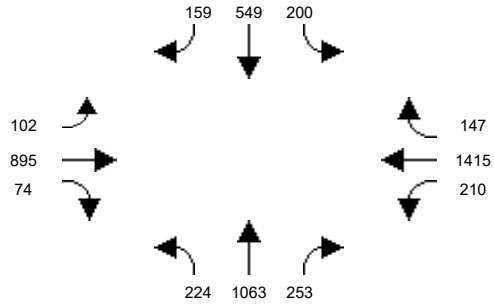
Intersection #42: Bristol St and I-405 SB Ramps



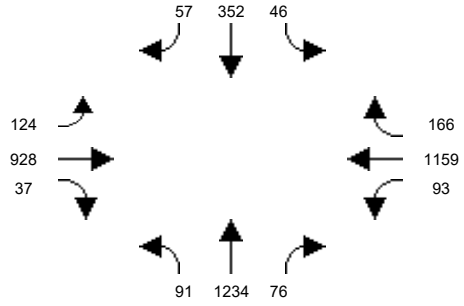
Intersection #43: Flower St and Santa Ana Blvd



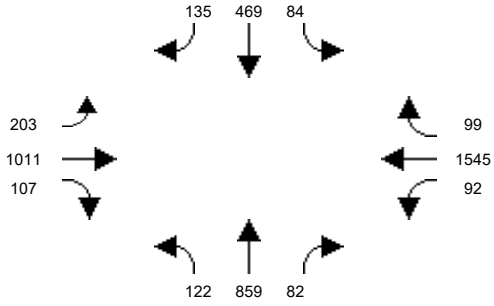
Intersection #44: Flower St and 1st St



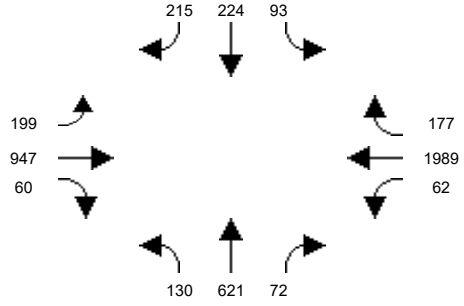
Intersection #45: Flower St and McFadden Ave



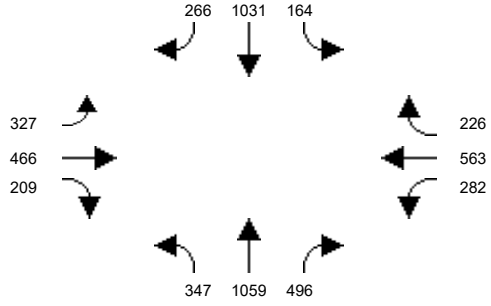
Intersection #46: Flower St and Segerstrom Ave



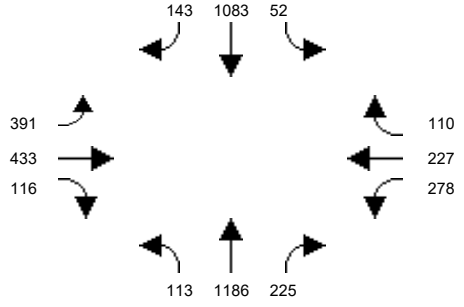
Intersection #47: Flower St and MacArthur Blvd



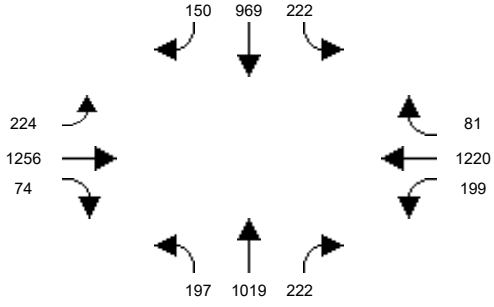
Intersection #48: Main St and La Veta Ave



Intersection #49: Main St and Mainplace Dr / Memory Ln



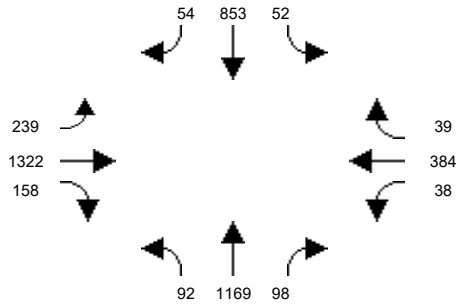
Intersection #50: Main St and 17th St



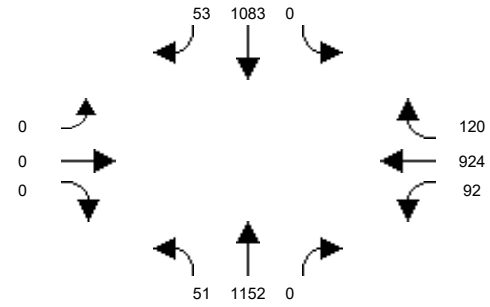
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

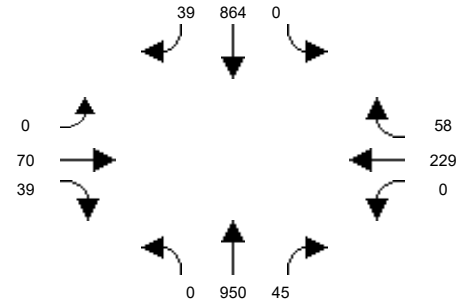
Intersection #51: Main St and Civic Center Dr



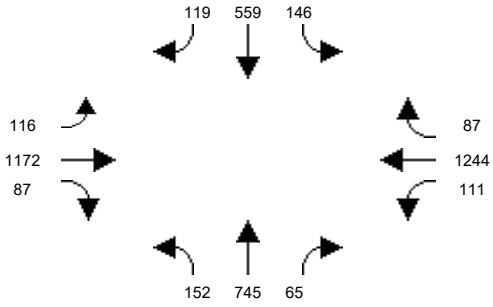
Intersection #52: Main St and Santa Ana Blvd



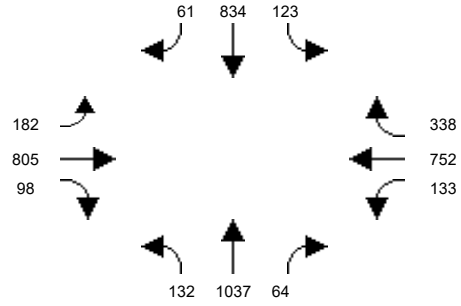
Intersection #53: Main St and 4th St



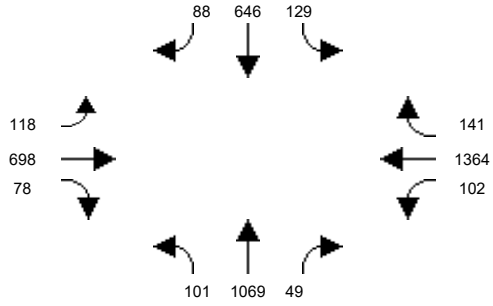
Intersection #54: Main St and 1st St



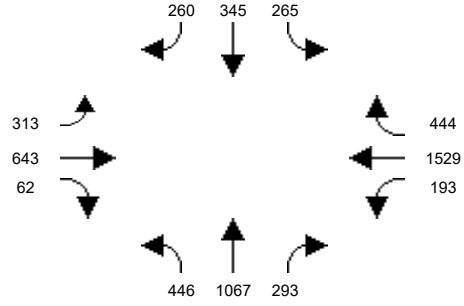
Intersection #55: Main St and McFadden Ave



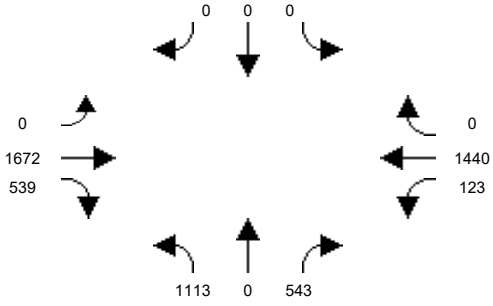
Intersection #56: Main St and Edinger Ave



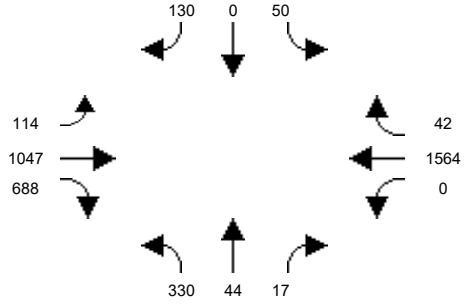
Intersection #57: Main St and MacArthur Blvd



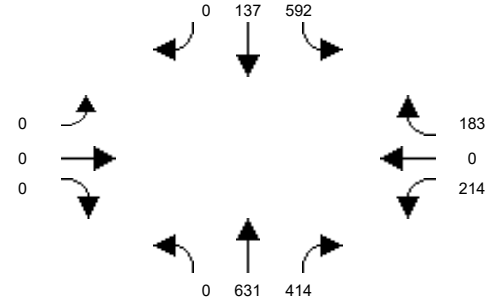
Intersection #58: Penn Wy and 17th St



Intersection #59: I-5 NB Off Ramps/17th Street



Intersection #60: Penn Wy and I-5 SB Ramps



Santa Ana Circulation Element

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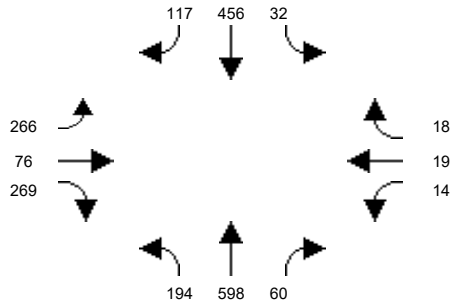
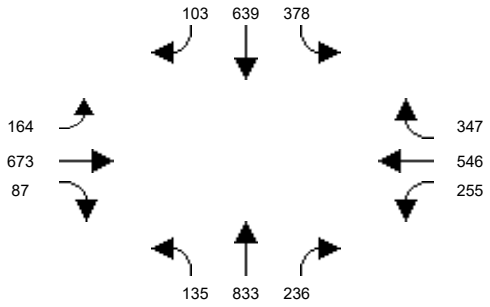
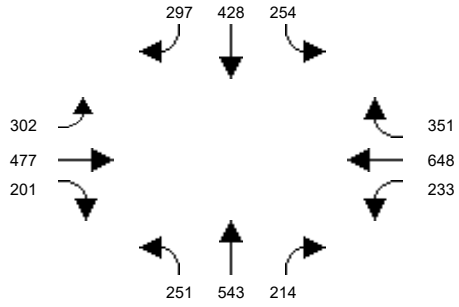
Intersection #61: Santiago St and Civic Center Dr



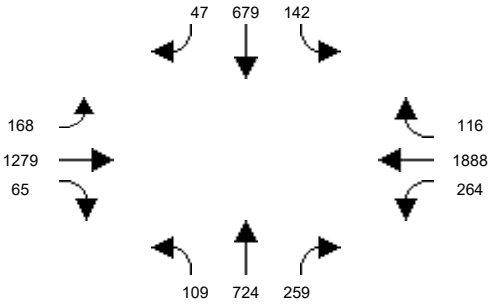
Intersection #62: Santiago St and Santa Ana Blvd



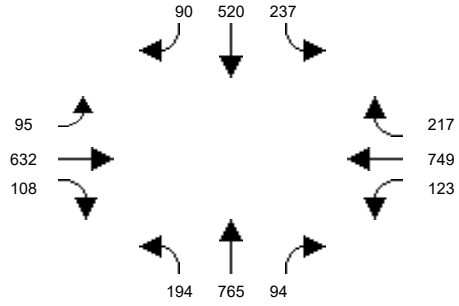
Intersection #63: Standard Ave and 4th St



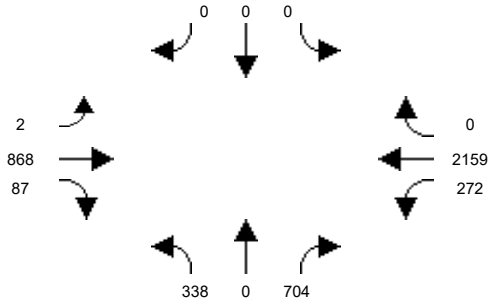
Intersection #64: Standard Ave and 1st St



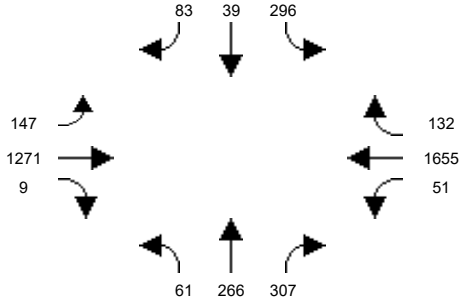
Intersection #65: Standard Ave and Mcfadden Ave



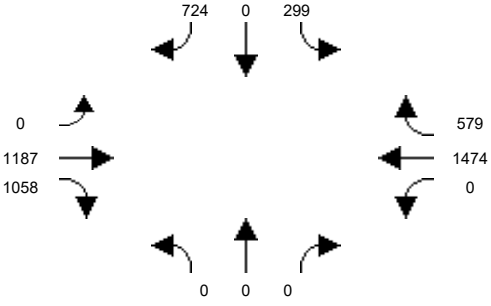
Intersection #66: Halladay St and Warner Ave



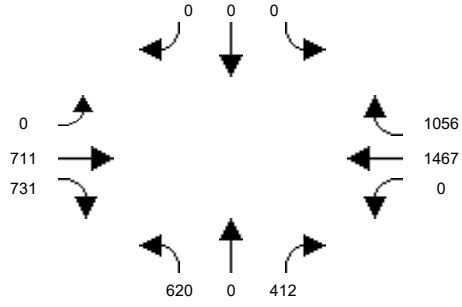
Intersection #67: Halladay St and Dyer Rd



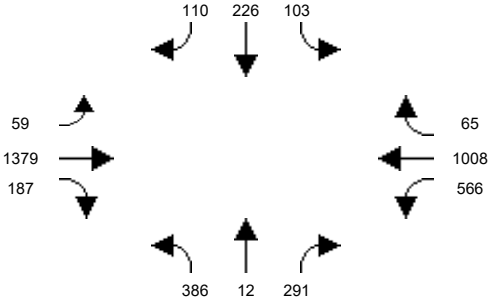
Intersection #68: SR-55 SB Ramps and MacArthur Blvd



Intersection #69: SR-55 NB Ramps and MacArthur Blvd



Intersection #70: SR-55 SB Ramps and Dyer Rd



Santa Ana Circulation Element

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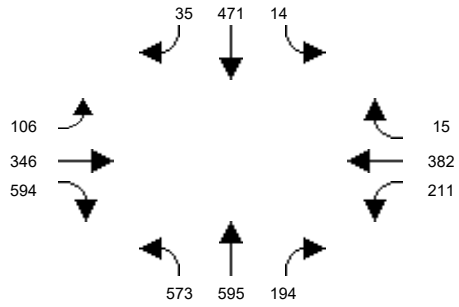
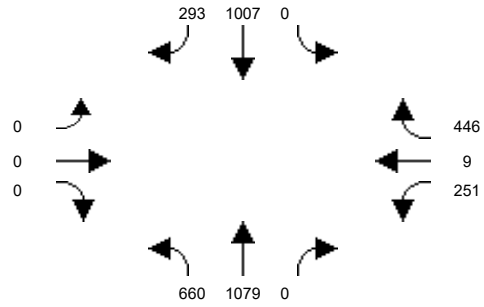
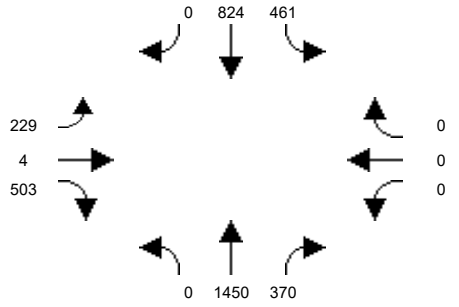
Intersection #71: Glassell St and La Veta Ave



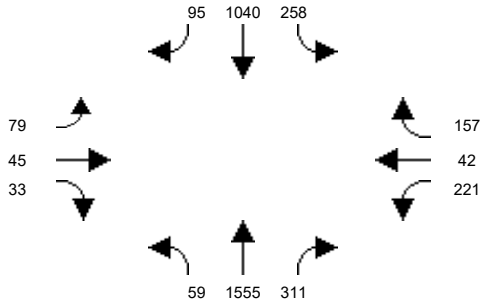
Intersection #72: Glassell St and SR-22 WB Ramps



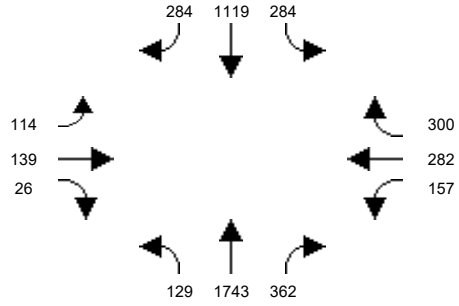
Intersection #73: Grand Ave / Glassell St and SR-22 EB Ramps



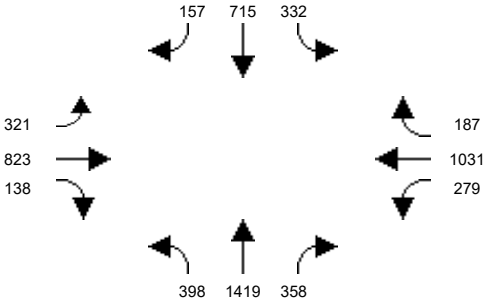
Intersection #74: Grand Ave and Fairhaven Ave



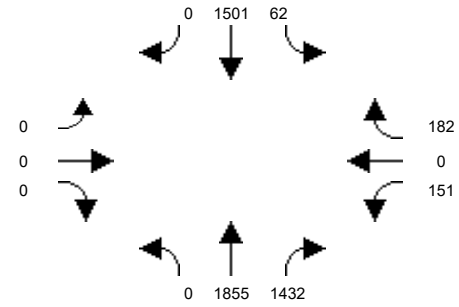
Intersection #75: Grand Ave and Santa Clara Ave



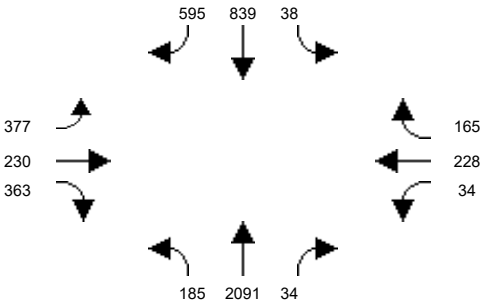
Intersection #76: Grand Ave and 17th St



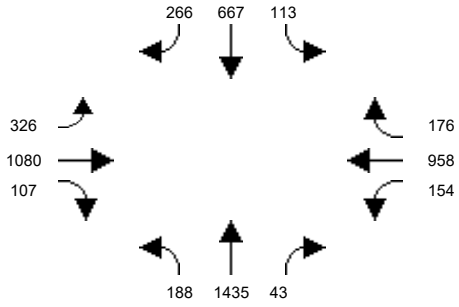
Intersection #77: Grand Ave and I-5 NB Ramps



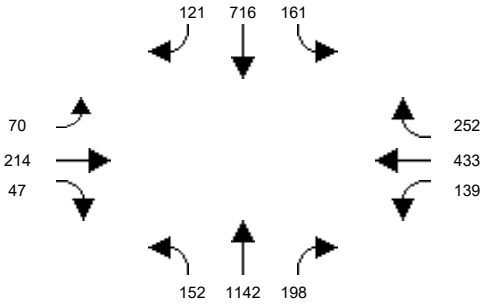
Intersection #78: Grand Ave and Santa Ana Blvd



Intersection #79: Grand Ave and 1st St



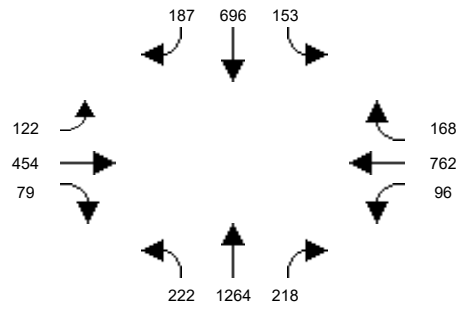
Intersection #80: Grand Ave and Chestnut Ave



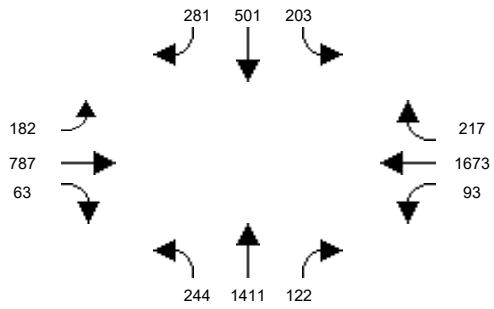
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

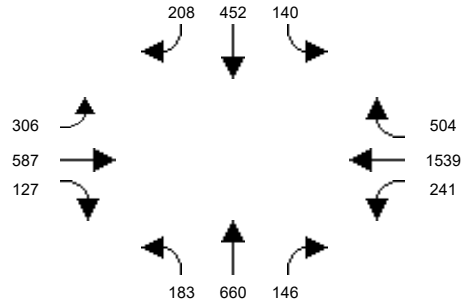
Intersection #81: Grand Ave and McFadden Ave



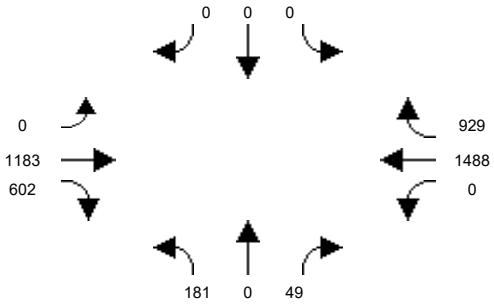
Intersection #82: Grand Ave and Edinger Ave



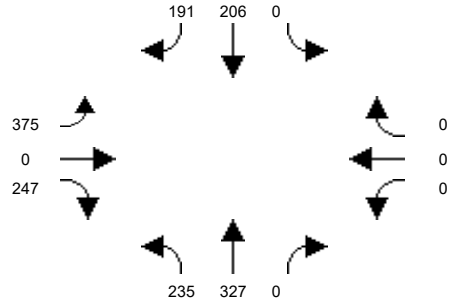
Intersection #83: Grand Ave and Warner Ave



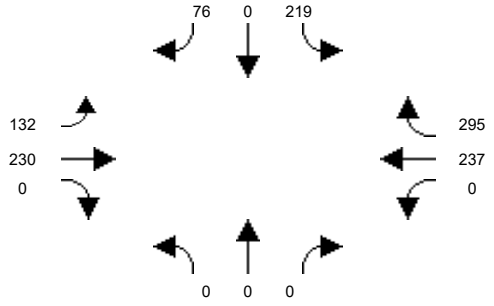
Intersection #84: SR-55 NB Ramps and Dyer Rd



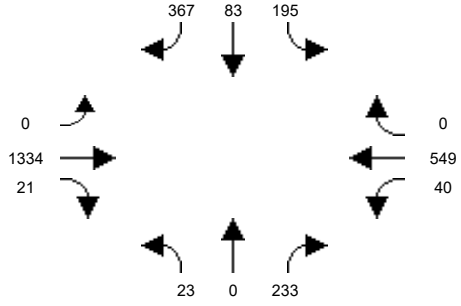
Intersection #85: Cambridge St and La Veta Ave



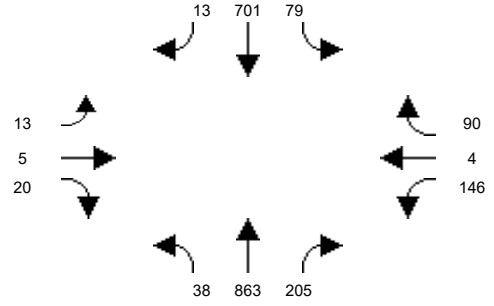
Intersection #86: Cambridge St and Fairhaven Ave



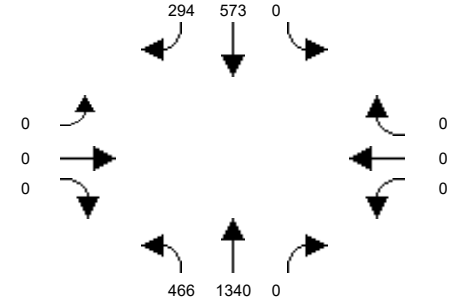
Intersection #87: Mabury St and 1st Street



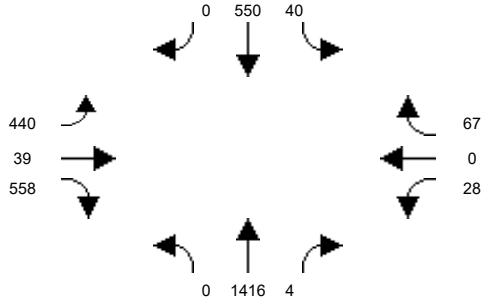
Intersection #88: Tustin St and La Veta Ave



Intersection #89: Tustin St and SR-22 WB On-Ramp



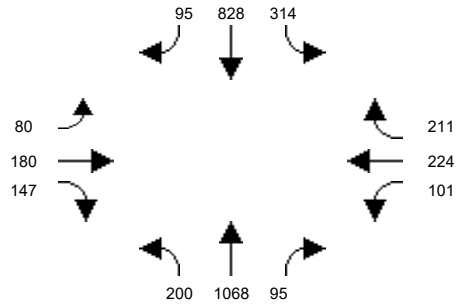
Intersection #90: Tustin St and SR-22 EB Off-Ramp / Seba Ave



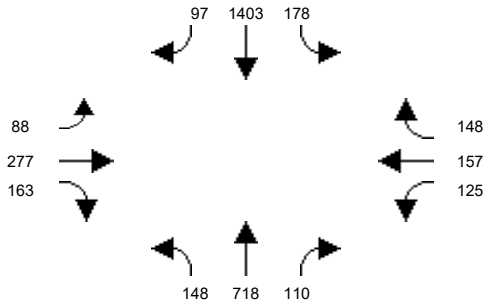
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

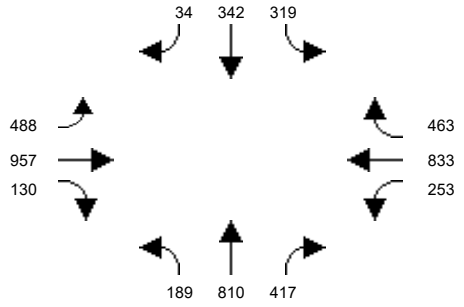
Intersection #91: Tustin Ave and Fairhaven Ave



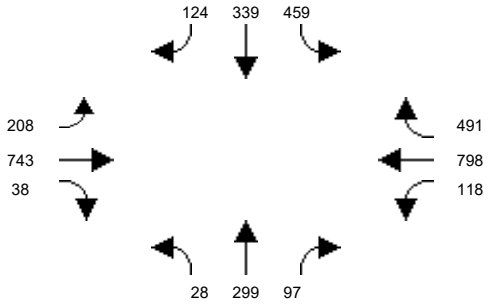
Intersection #92: Tustin Ave and Santa Clara Ave



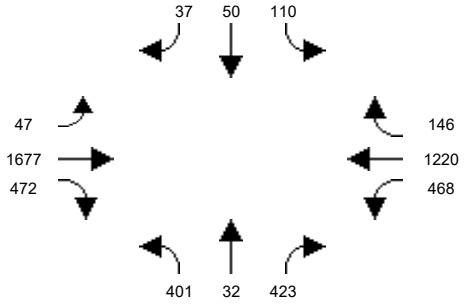
Intersection #93: Tustin Ave and 17th St



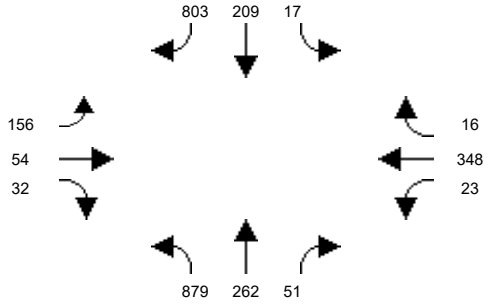
Intersection #94: Tustin Ave and 4th St



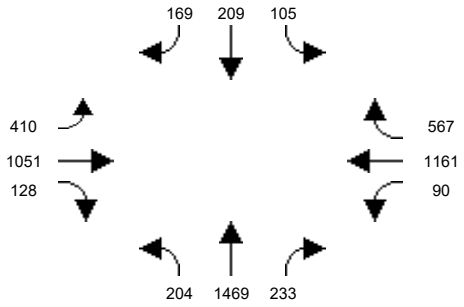
Intersection #95: SR-55 SB Ramps / Auto Mall Dr and Edinger Ave



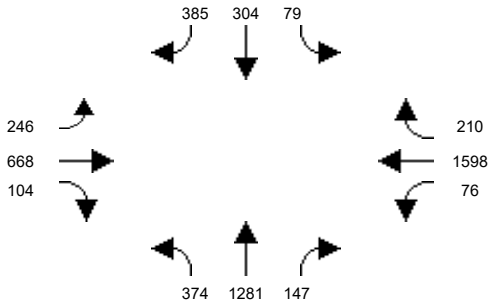
Intersection #96: SR-55 NB Ramps / Del Amo Ave and Newport Avenue



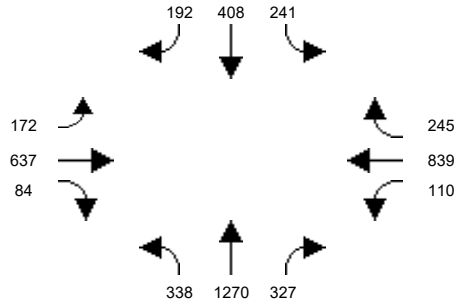
Intersection #97: Red Hill Ave and Edinger Ave



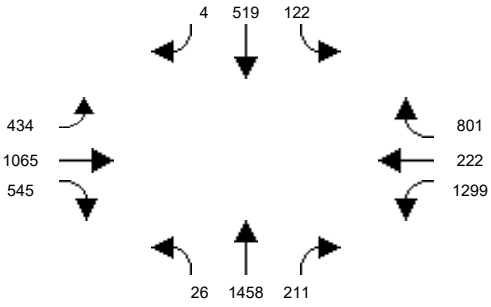
Intersection #98: Red Hill Ave and Warner Ave



Intersection #99: Red Hill Ave and Dyer Rd / barranca Pkwy



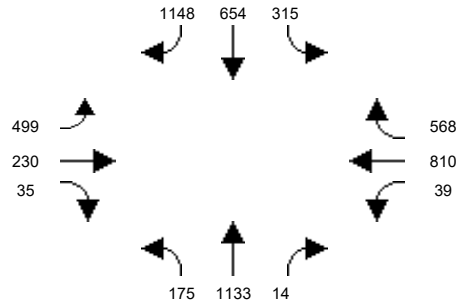
Intersection #100: Red Hill Ave and Alton Pkwy



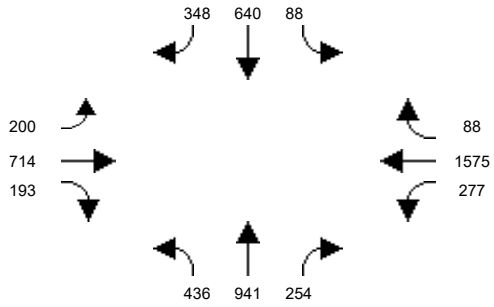
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 NP PM Peak Hour

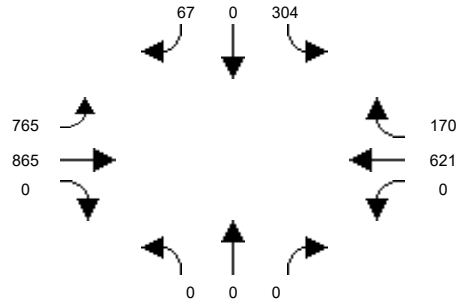
Intersection #101: Red Hill Ave and MacArthur Blvd



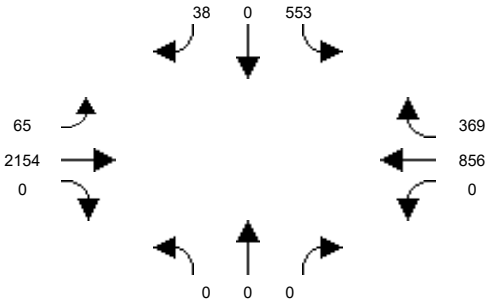
Intersection #102: Red Hill Ave and Main St



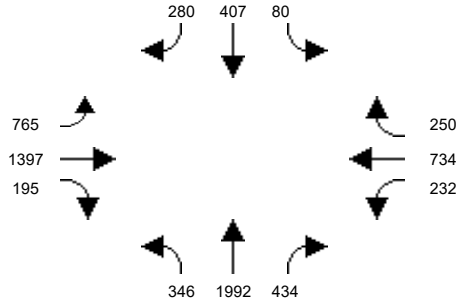
Intersection #103: I-5 SB Ramps and Santa Ana Blvd



Intersection #104: Tustin Ranch Rd and Warner Ave



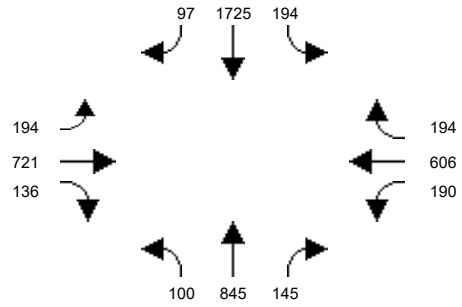
Intersection #105: Von Karman Ave and Barranca Pkwy



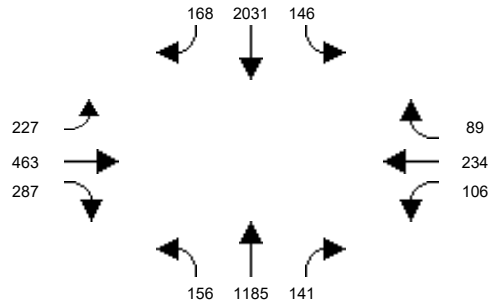
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP AM Peak Hour

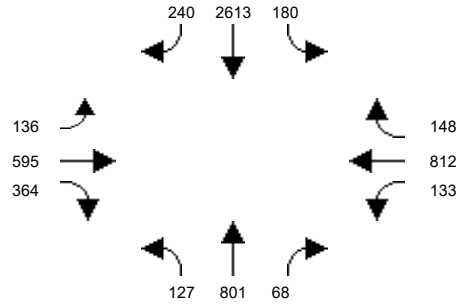
Intersection #1: Euclid St and 1st St



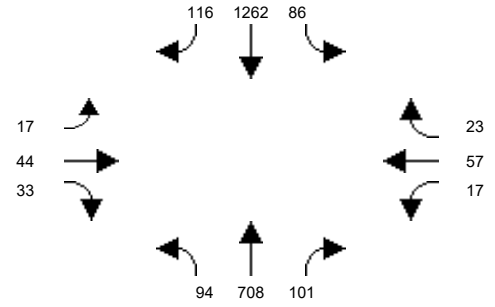
Intersection #2: Euclid St and McFadden Ave



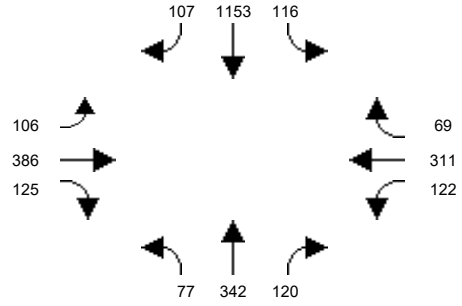
Intersection #3: Euclid St and Edinger Ave



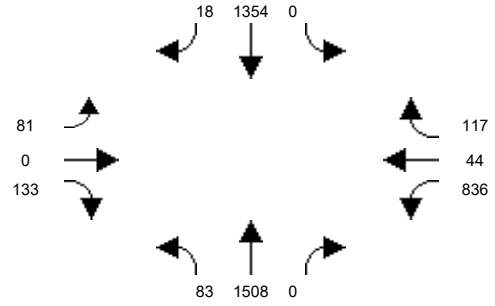
Intersection #4: Newhope St and Hazard Ave



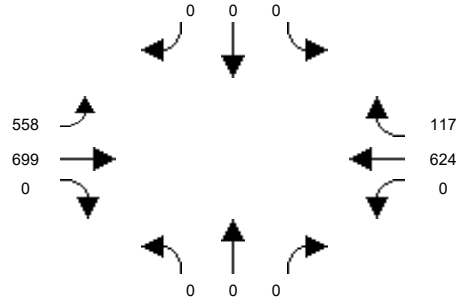
Intersection #5: Newhope St and McFadden Ave



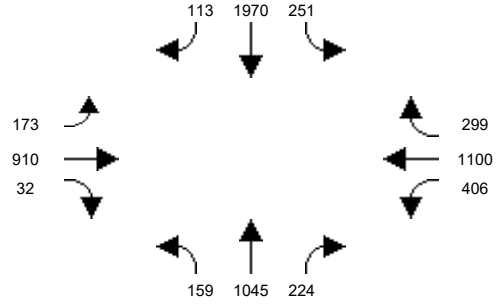
Intersection #6: Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr



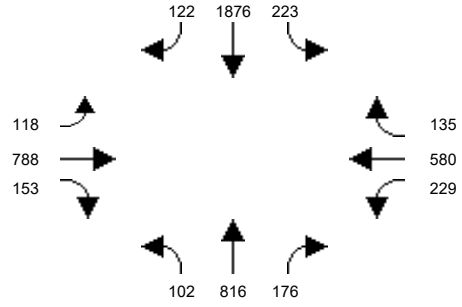
Intersection #7: Trask Avenue and SR-22 EB On-Ramp



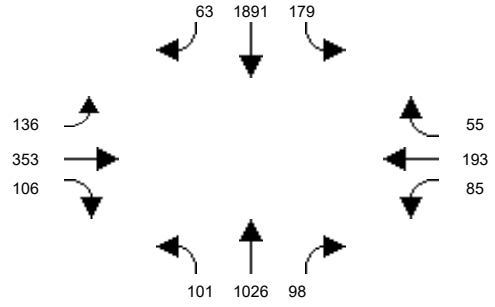
Intersection #8: Harbor Blvd and Westminster Ave



Intersection #9: Harbor Blvd and 1st St



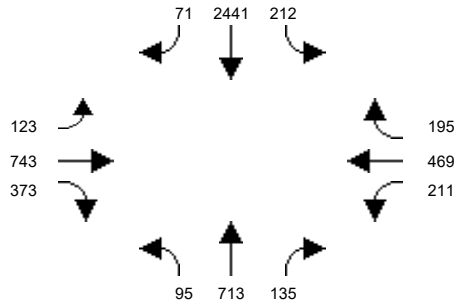
Intersection #10: Harbor Blvd and McFadden Ave



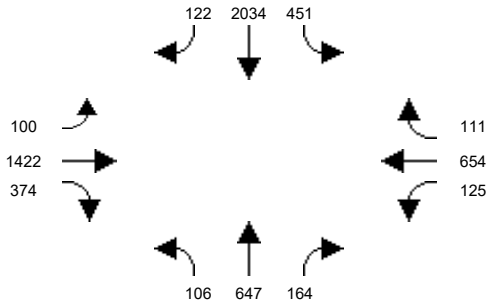
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP AM Peak Hour

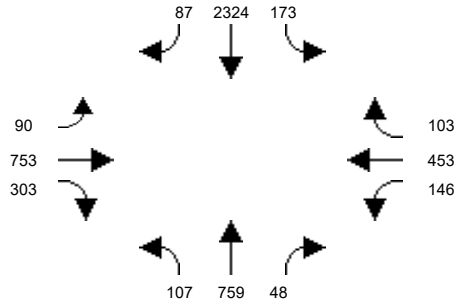
Intersection #11: Harbor Blvd and Edinger Ave



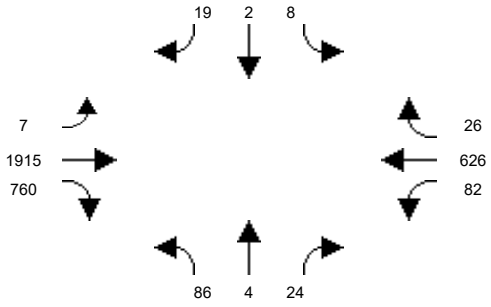
Intersection #12: Harbor Blvd and Warner Ave



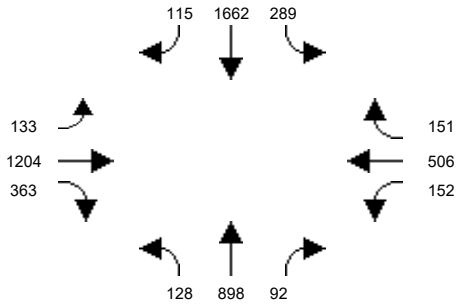
Intersection #13: Harbor Blvd and Segerstrom Ave



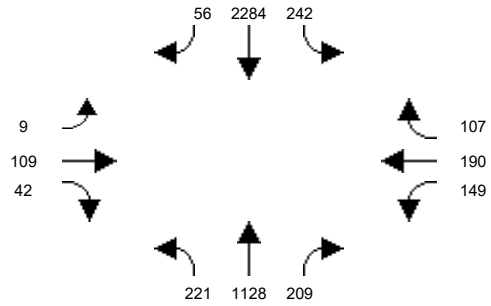
Intersection #14: MacArthur Blvd and Hyland Ave



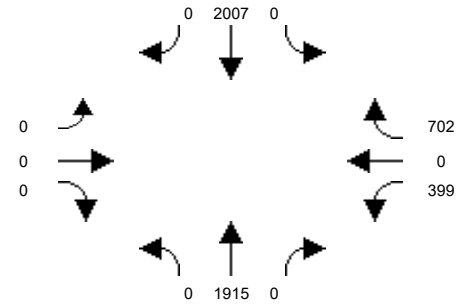
Intersection #15: MacArthur Blvd and Harbor Blvd



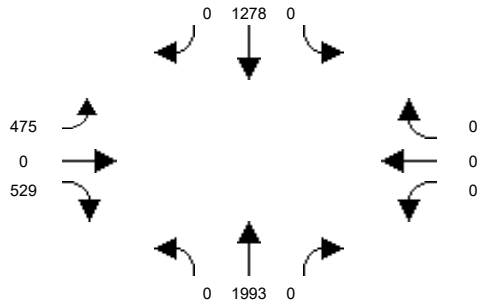
Intersection #16: Harbor Blvd and Sunflower Ave



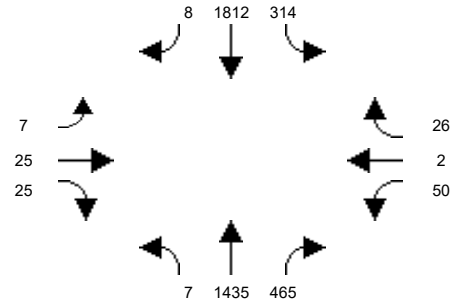
Intersection #17: Harbor Blvd and I-405 NB Off-Ramp



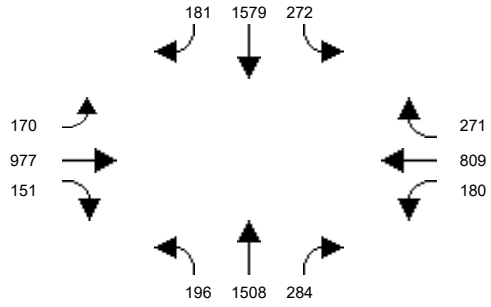
Intersection #18: Harbor Blvd and I-405 SB Off-Ramp



Intersection #19: Fairview St and Civic Center Dr



Intersection #20: Fairview St and 1st St



Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
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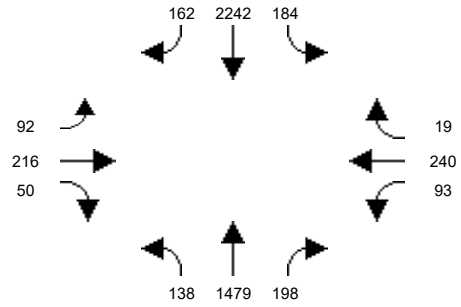
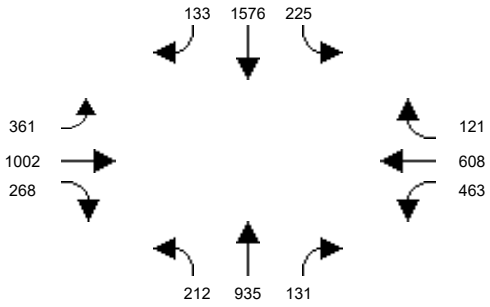
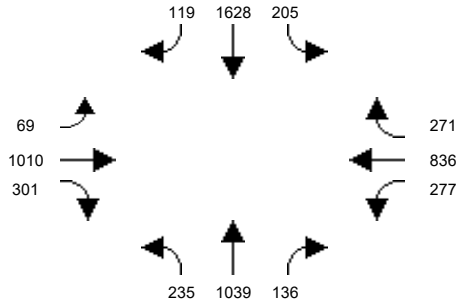
Intersection #21: Fairview St and McFadden Ave



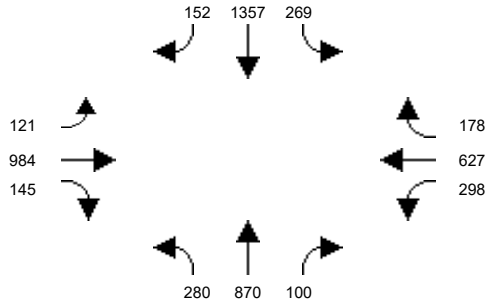
Intersection #22: Fairview St and Edinger Ave



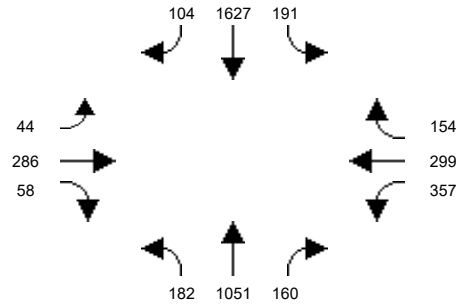
Intersection #23: Fairview St and Warner Ave



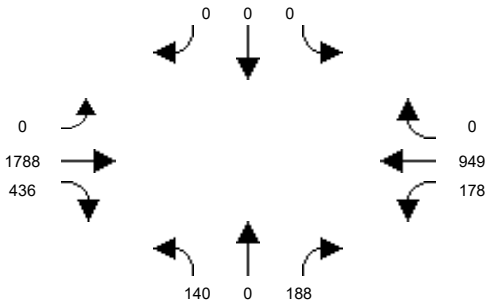
Intersection #24: Fairview St and MacArthur Blvd



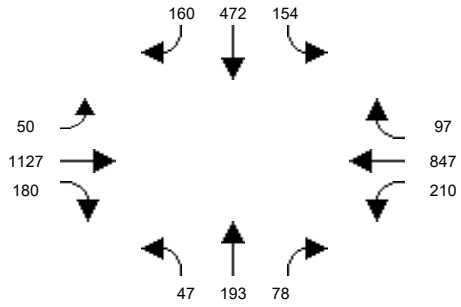
Intersection #25: Fairview Rd and Sunflower Ave



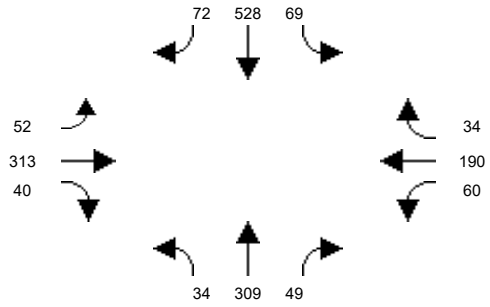
Intersection #26: Greenville St and Edinger Ave



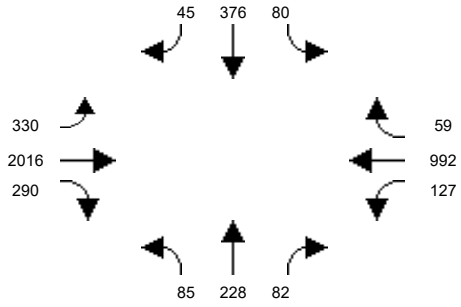
Intersection #27: Greenville St and Segerstrom Ave



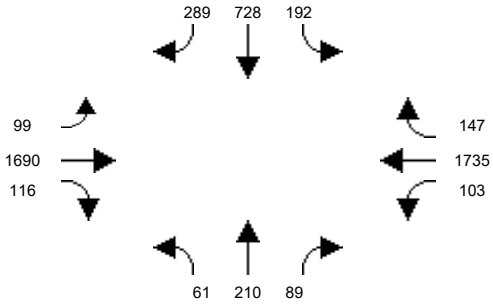
Intersection #28: Raitt St and McFadden Ave



Intersection #29: Raitt St and Edinger Ave



Intersection #30: Bear St and MacArthur Blvd



Santa Ana Circulation Element

Intersection Graphic Report
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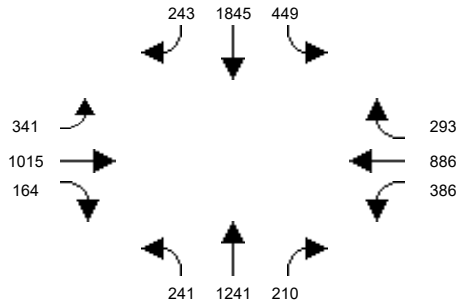
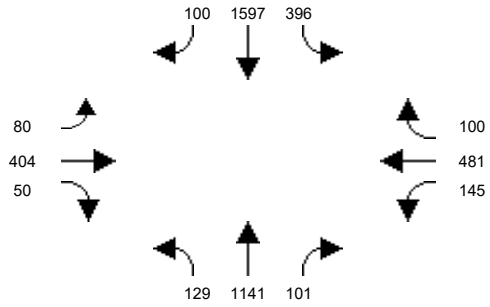
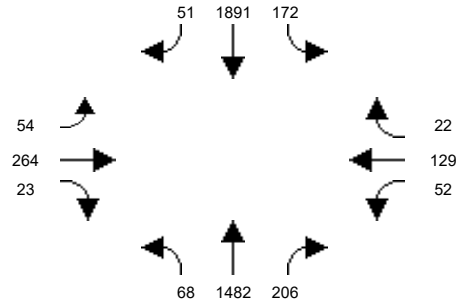
Intersection #31: Bristol St and 17th St



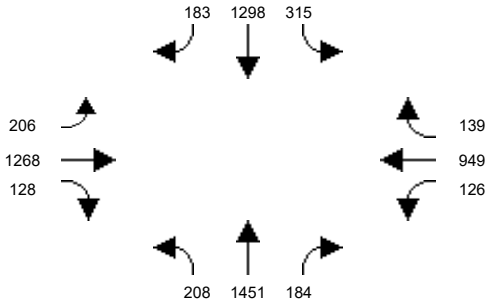
Intersection #32: Bristol St and Civic Center Dr



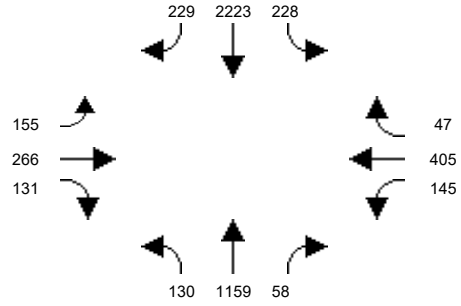
Intersection #33: Bristol St and Santa Ana Blvd



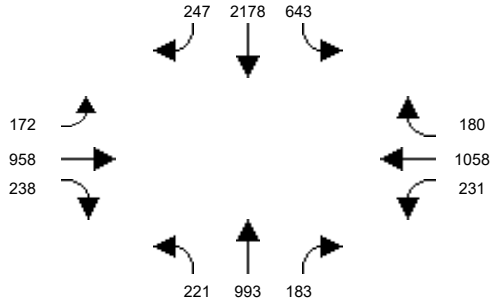
Intersection #34: Bristol St and 1st St



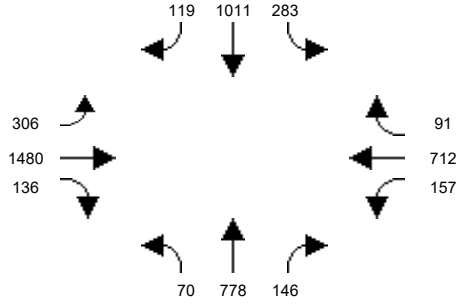
Intersection #35: Bristol St and McFadden Ave



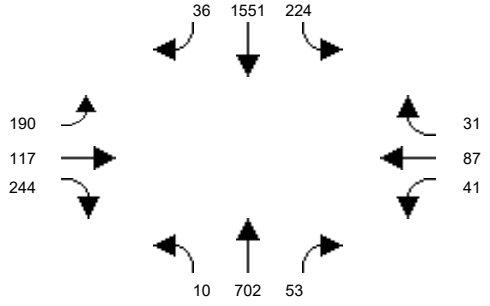
Intersection #36: Bristol St and Warner Ave



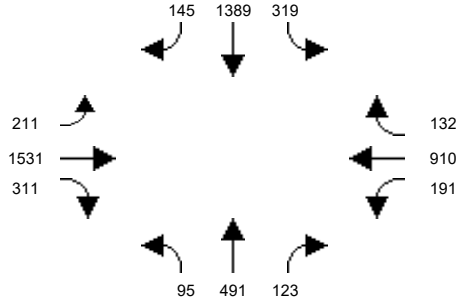
Intersection #37: Bristol St and Segerstrom Ave



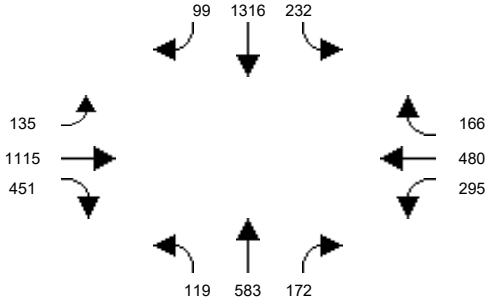
Intersection #38: Bristol St and Alton Ave



Intersection #39: Bristol St and MacArthur Blvd



Intersection #40: Bristol St and Sunflower Ave



Santa Ana Circulation Element

Intersection Graphic Report
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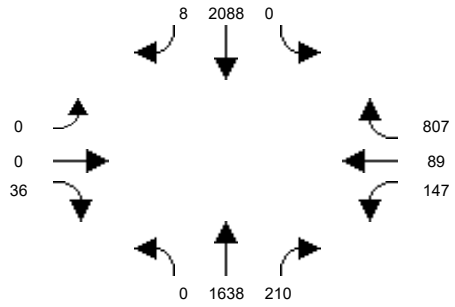
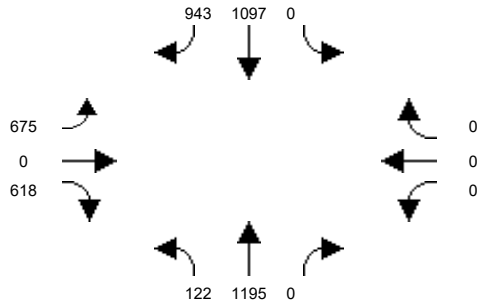
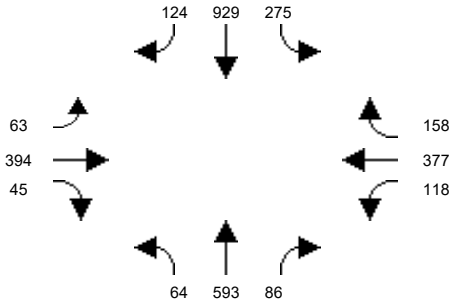
Intersection #41: Bristol St and I-405 NB Ramps



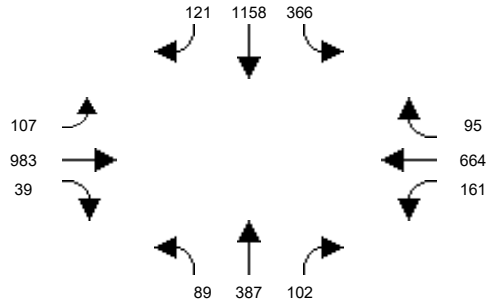
Intersection #42: Bristol St and I-405 SB Ramps



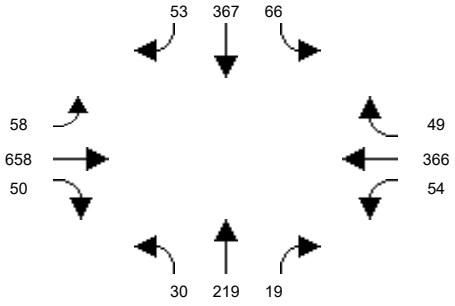
Intersection #43: Flower St and Santa Ana Blvd



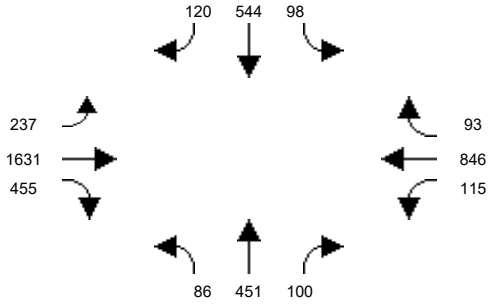
Intersection #44: Flower St and 1st St



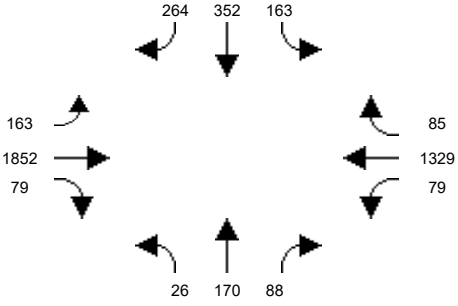
Intersection #45: Flower St and McFadden Ave



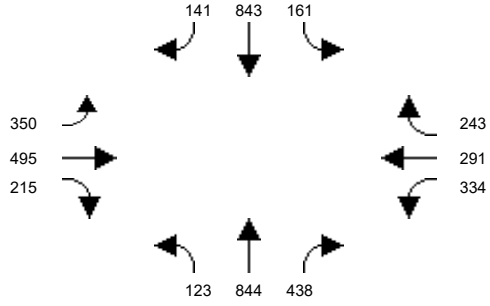
Intersection #46: Flower St and Segerstrom Ave



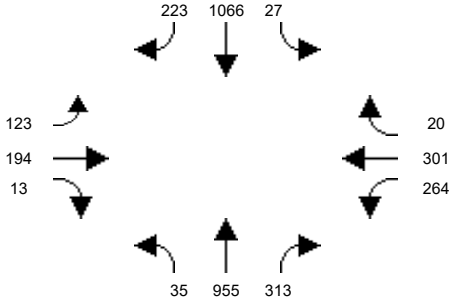
Intersection #47: Flower St and MacArthur Blvd



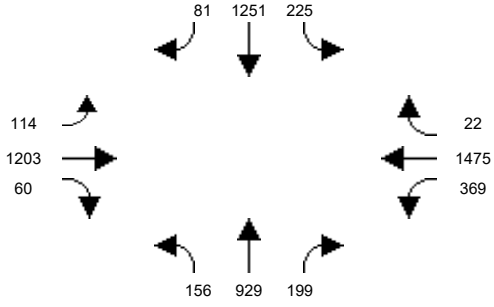
Intersection #48: Main St and La Veta Ave



Intersection #49: Main St and Mainplace Dr / Memory Ln



Intersection #50: Main St and 17th St



Santa Ana Circulation Element

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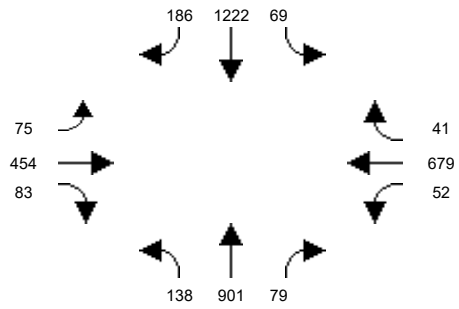
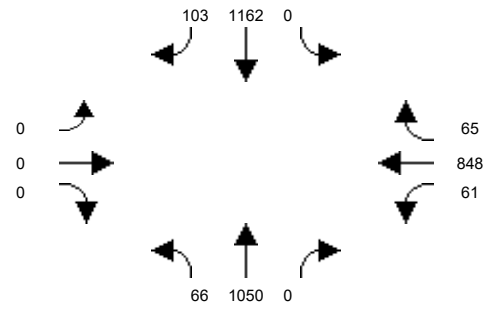
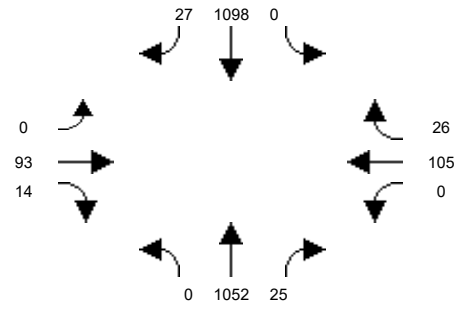
Intersection #51: Main St and Civic Center Dr



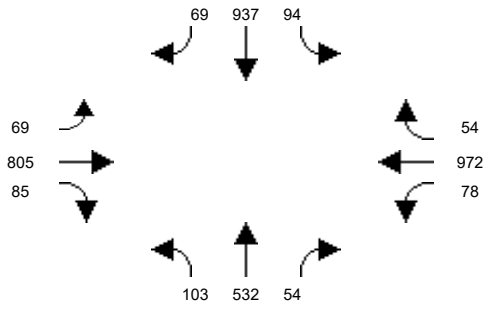
Intersection #52: Main St and Santa Ana Blvd



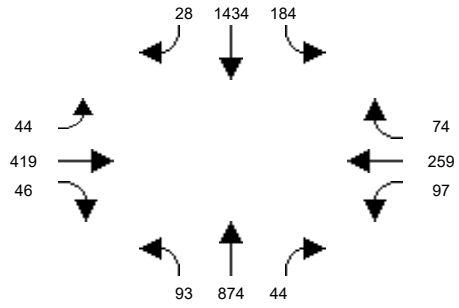
Intersection #53: Main St and 4th St



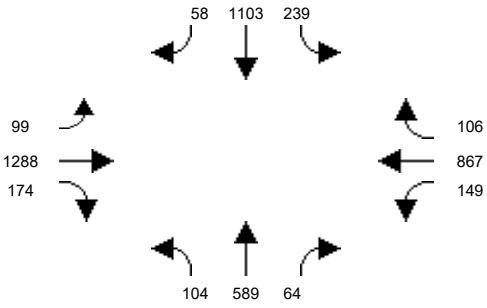
Intersection #54: Main St and 1st St



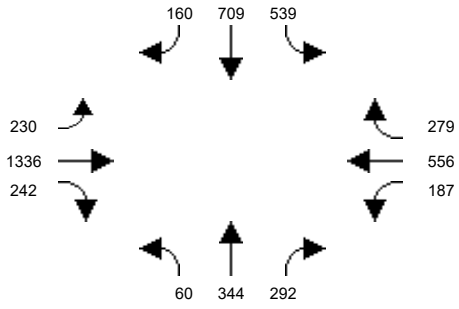
Intersection #55: Main St and McFadden Ave



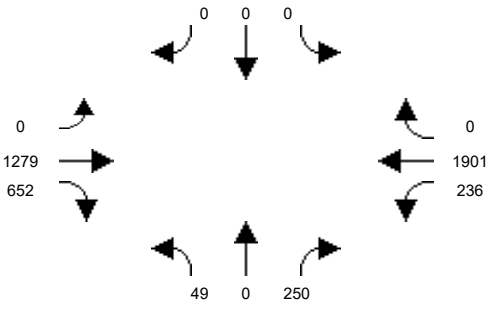
Intersection #56: Main St and Edinger Ave



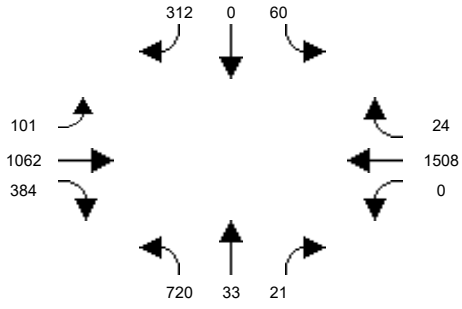
Intersection #57: Main St and MacArthur Blvd



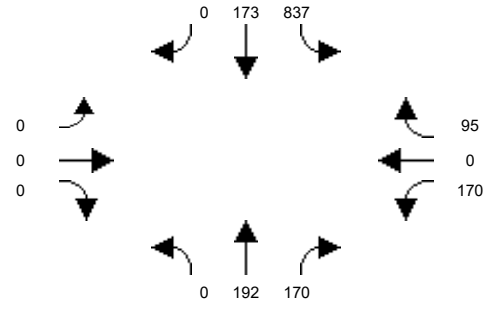
Intersection #58: Penn Wy and 17th St



Intersection #59: I-5 NB Off Ramps/17th Street



Intersection #60: Penn Wy and I-5 SB Ramps



Santa Ana Circulation Element

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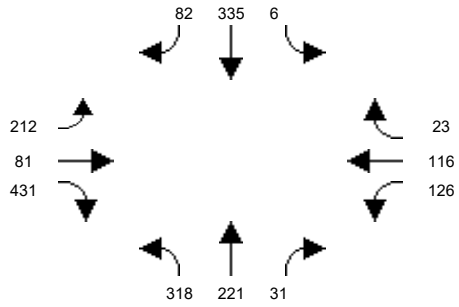
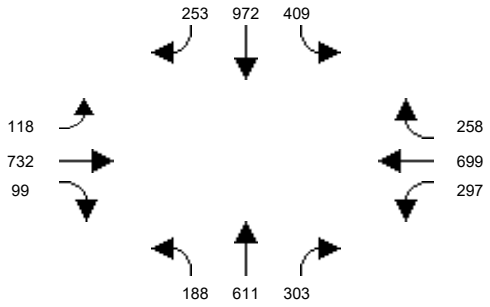
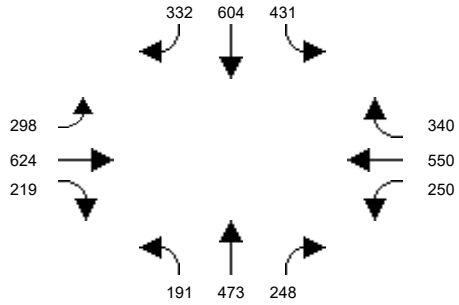
Intersection #61: Santiago St and Civic Center Dr



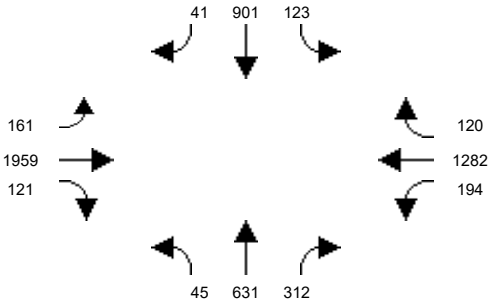
Intersection #62: Santiago St and Santa Ana Blvd



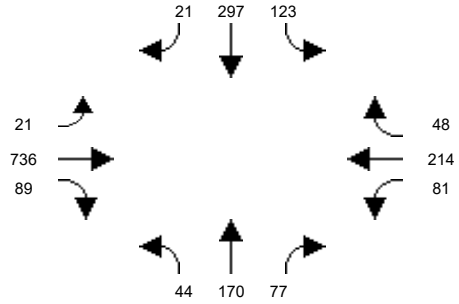
Intersection #63: Standard Ave and 4th St



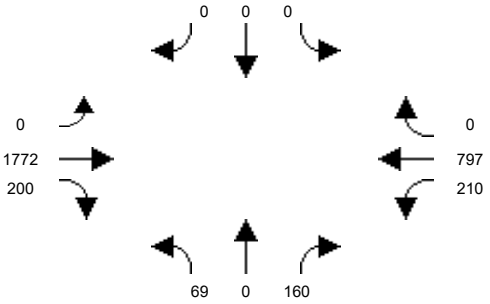
Intersection #64: Standard Ave and 1st St



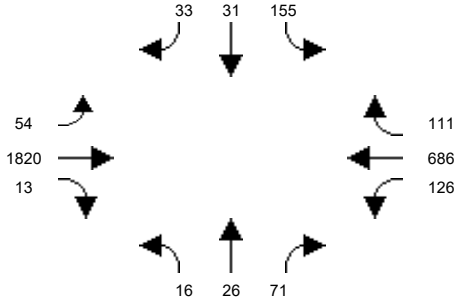
Intersection #65: Standard Ave and Mcfadden Ave



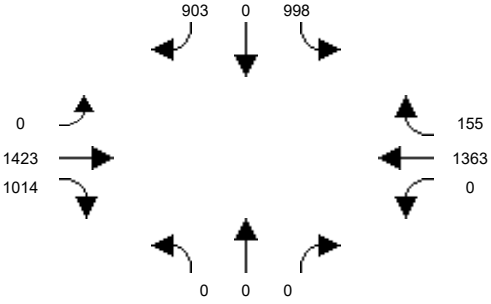
Intersection #66: Halladay St and Warner Ave



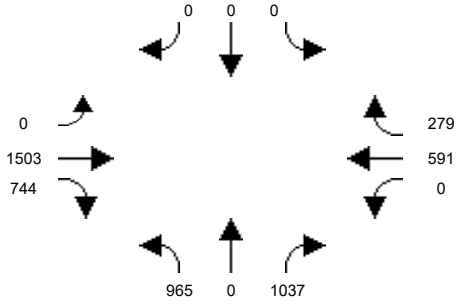
Intersection #67: Halladay St and Dyer Rd



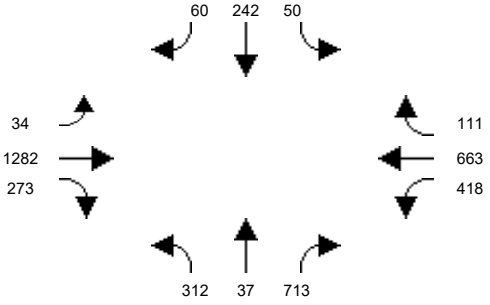
Intersection #68: SR-55 SB Ramps and MacArthur Blvd



Intersection #69: SR-55 NB Ramps and MacArthur Blvd



Intersection #70: SR-55 SB Ramps and Dyer Rd



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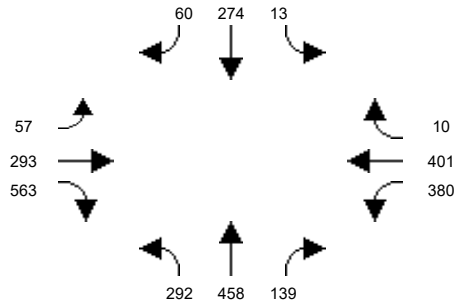
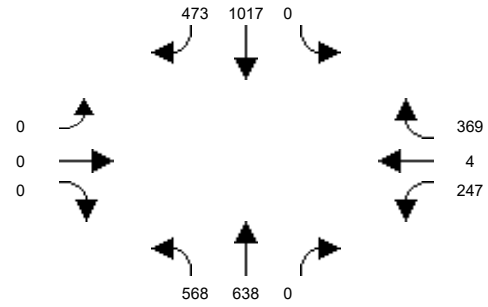
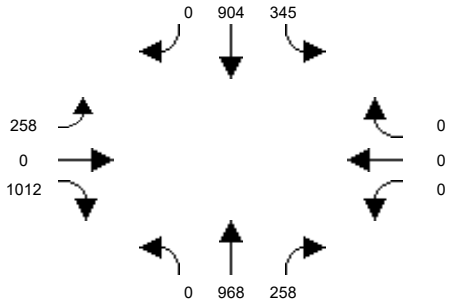
Intersection #71: Glassell St and La Veta Ave



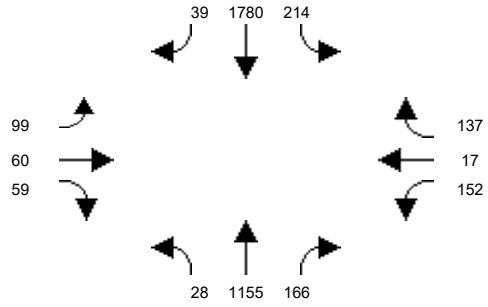
Intersection #72: Glassell St and SR-22 WB Ramps



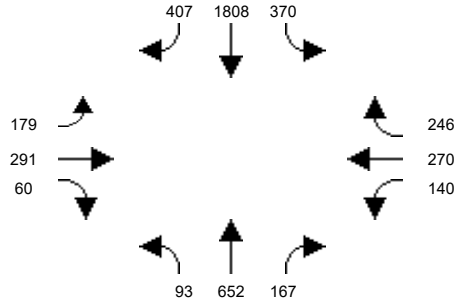
Intersection #73: Grand Ave / Glassell St and SR-22 EB Ramps



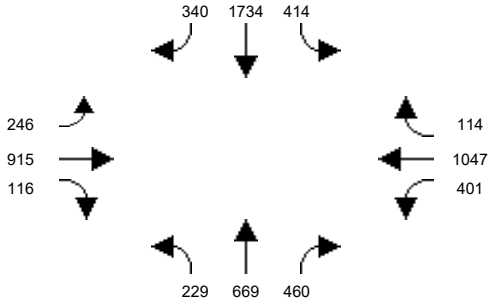
Intersection #74: Grand Ave and Fairhaven Ave



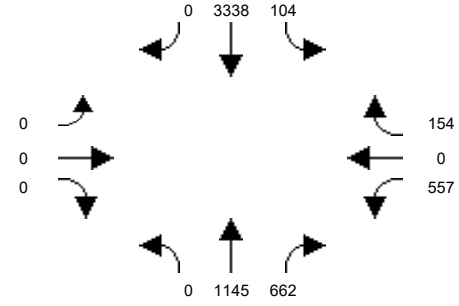
Intersection #75: Grand Ave and Santa Clara Ave



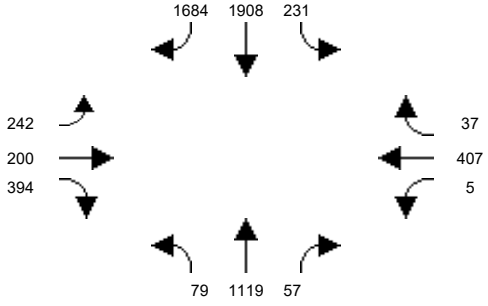
Intersection #76: Grand Ave and 17th St



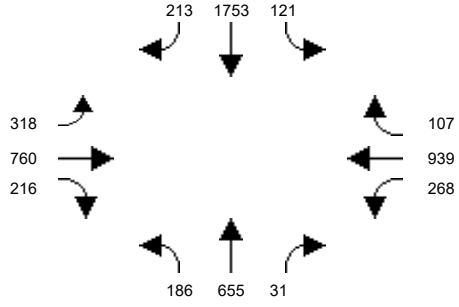
Intersection #77: Grand Ave and I-5 NB Ramps



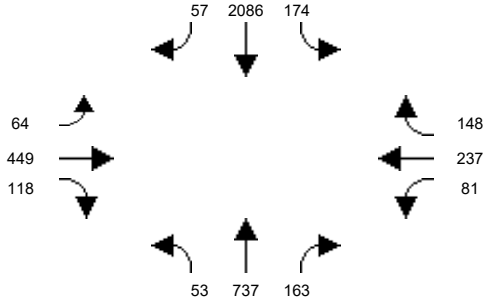
Intersection #78: Grand Ave and Santa Ana Blvd



Intersection #79: Grand Ave and 1st St



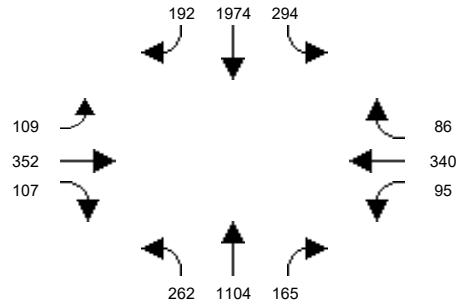
Intersection #80: Grand Ave and Chestnut Ave



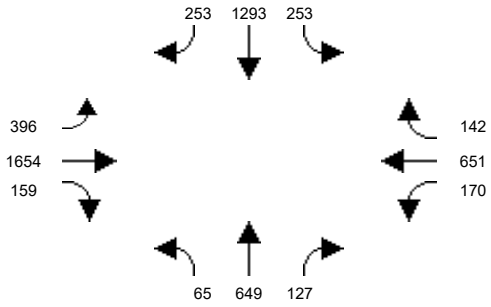
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP AM Peak Hour

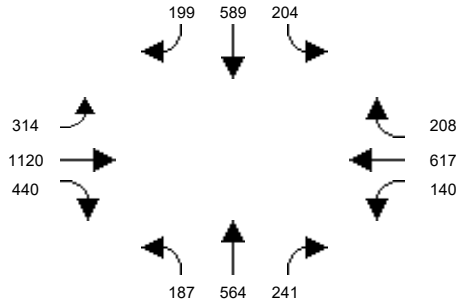
Intersection #81: Grand Ave and McFadden Ave



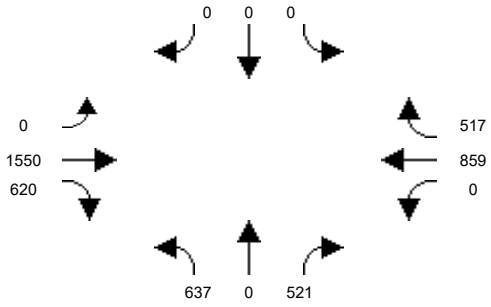
Intersection #82: Grand Ave and Edinger Ave



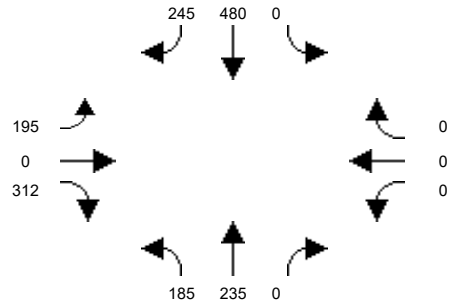
Intersection #83: Grand Ave and Warner Ave



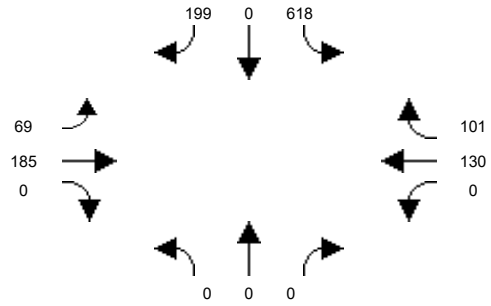
Intersection #84: SR-55 NB Ramps and Dyer Rd



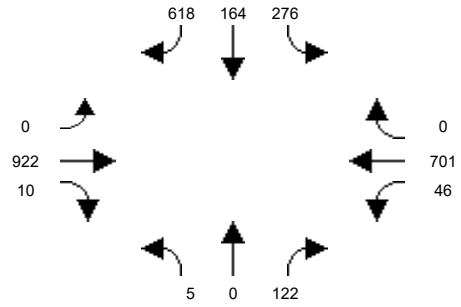
Intersection #85: Cambridge St and La Veta Ave



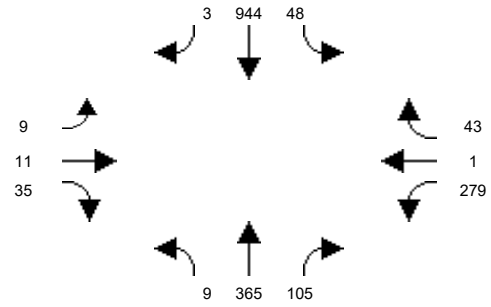
Intersection #86: Cambridge St and Fairhaven Ave



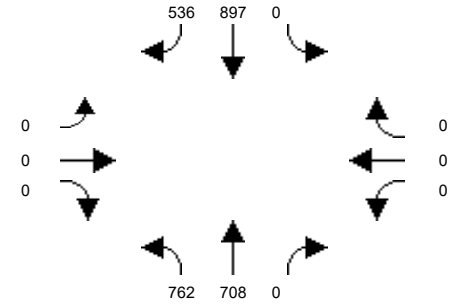
Intersection #87: Mabury St and 1st Street



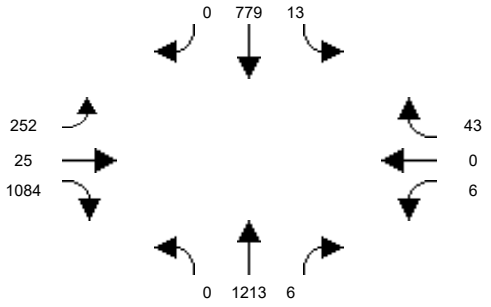
Intersection #88: Tustin St and La Veta Ave



Intersection #89: Tustin St and SR-22 WB On-Ramp



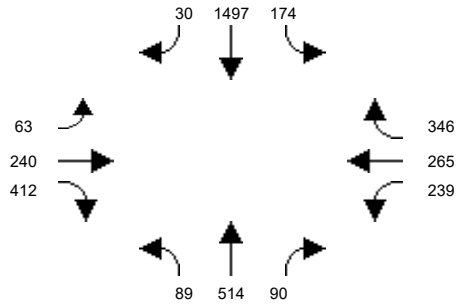
Intersection #90: Tustin St and SR-22 EB Off-Ramp / Seba Ave



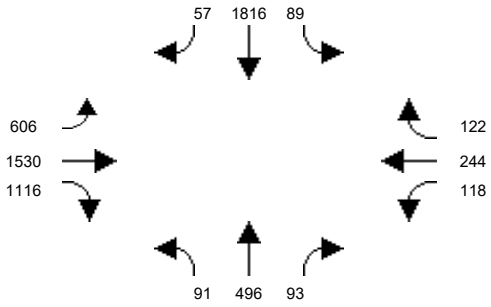
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP AM Peak Hour

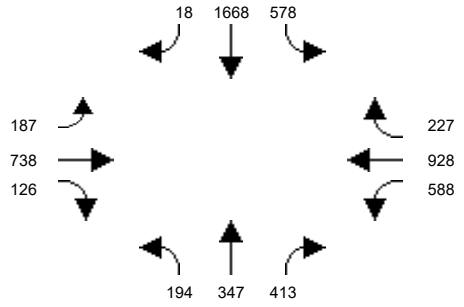
Intersection #91: Tustin Ave and Fairhaven Ave



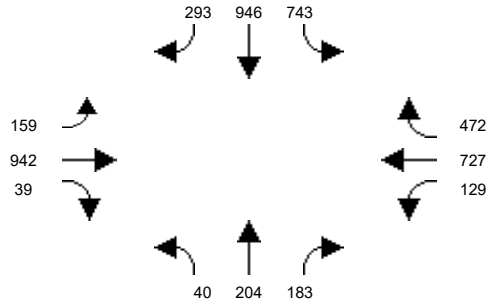
Intersection #92: Tustin Ave and Santa Clara Ave



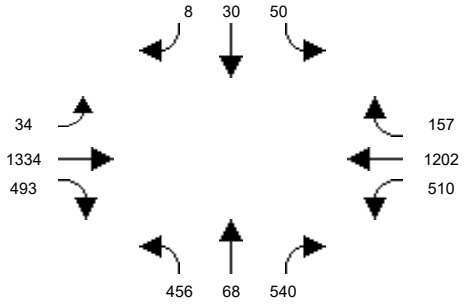
Intersection #93: Tustin Ave and 17th St



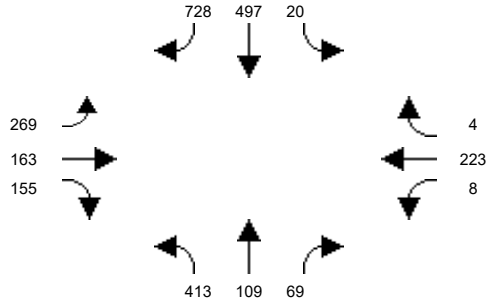
Intersection #94: Tustin Ave and 4th St



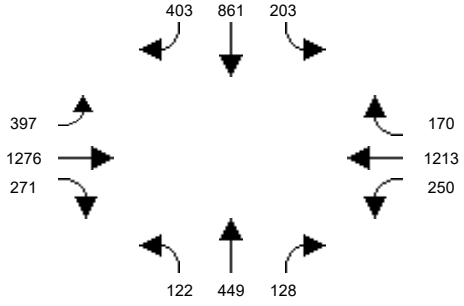
Intersection #95: SR-55 SB Ramps / Auto Mall Dr and Edinger Ave



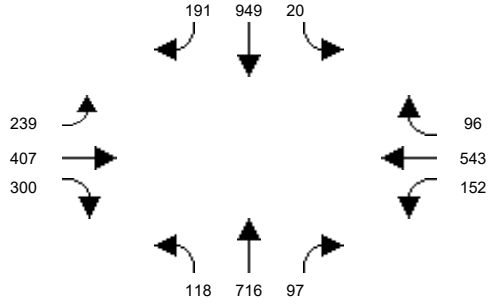
Intersection #96: SR-55 NB Ramps / Del Amo Ave and Newport Avenue



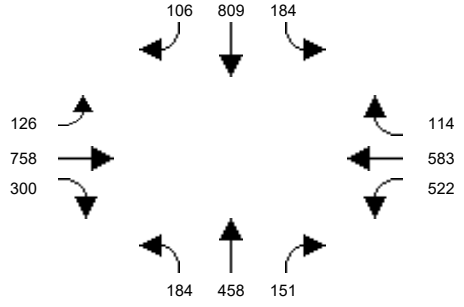
Intersection #97: Red Hill Ave and Edinger Ave



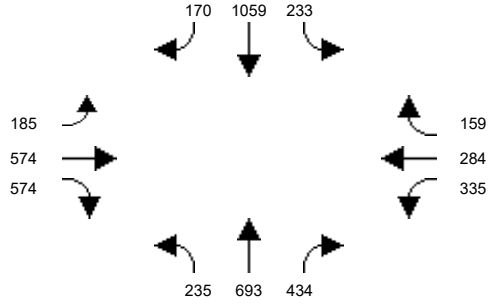
Intersection #98: Red Hill Ave and Warner Ave



Intersection #99: Red Hill Ave and Dyer Rd / barranca Pkwy



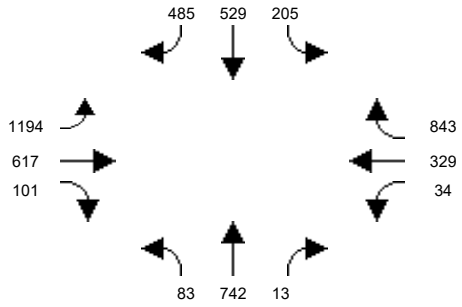
Intersection #100: Red Hill Ave and Alton Pkwy



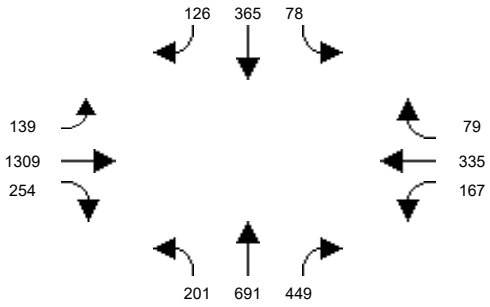
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP AM Peak Hour

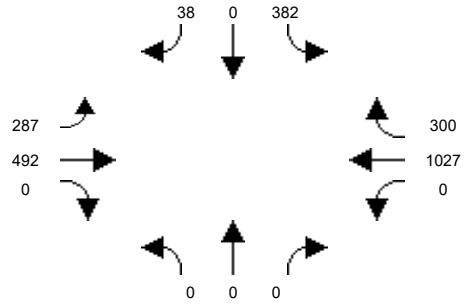
Intersection #101: Red Hill Ave and MacArthur Blvd



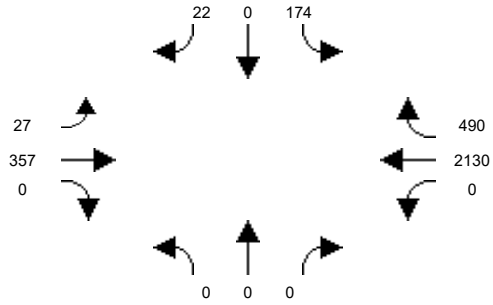
Intersection #102: Red Hill Ave and Main St



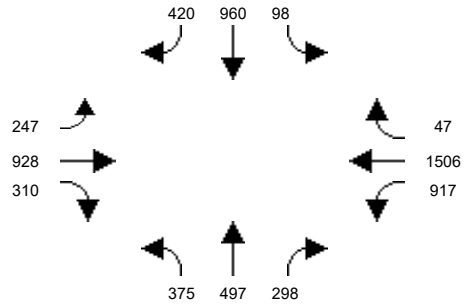
Intersection #103: I-5 SB Ramps and Santa Ana Blvd



Intersection #104: Tustin Ranch Rd and Warner Ave



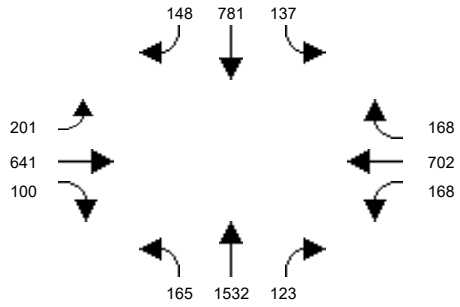
Intersection #105: Von Karman Ave and Barranca Pkwy



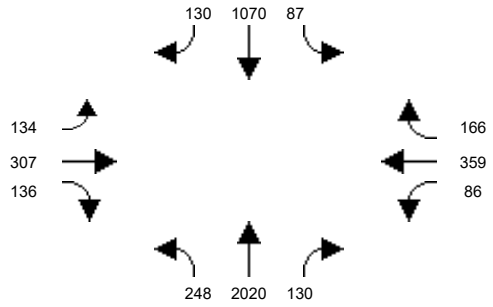
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

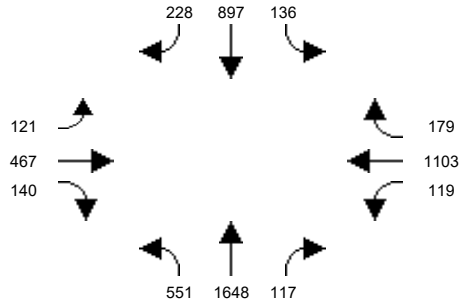
Intersection #1: Euclid St and 1st St



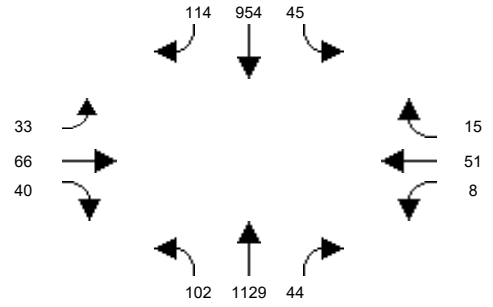
Intersection #2: Euclid St and McFadden Ave



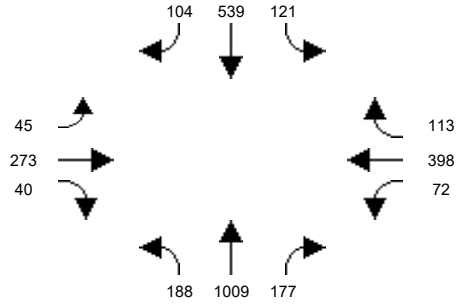
Intersection #3: Euclid St and Edinger Ave



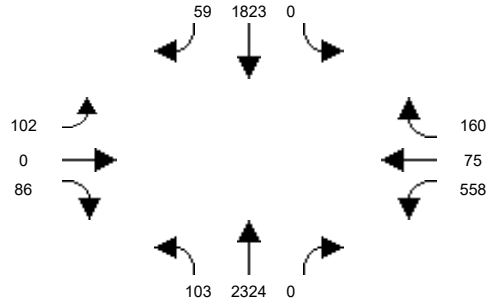
Intersection #4: Newhope St and Hazard Ave



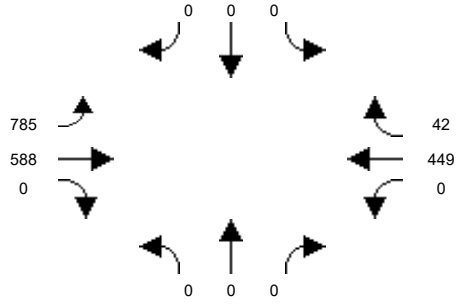
Intersection #5: Newhope St and McFadden Ave



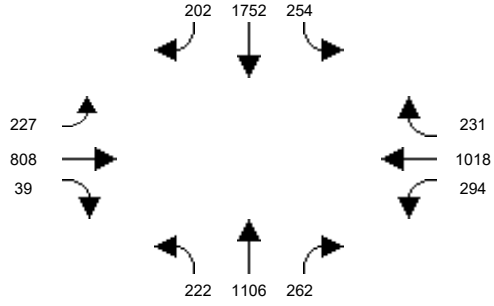
Intersection #6: Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr



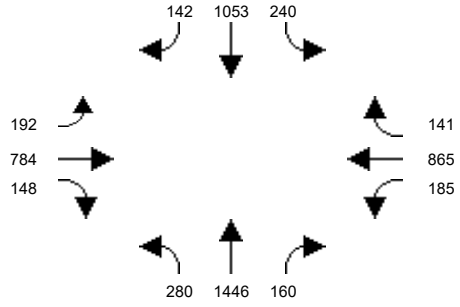
Intersection #7: Trask Avenue and SR-22 EB On-Ramp



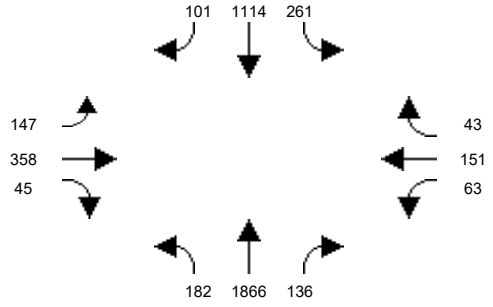
Intersection #8: Harbor Blvd and Westminster Ave



Intersection #9: Harbor Blvd and 1st St



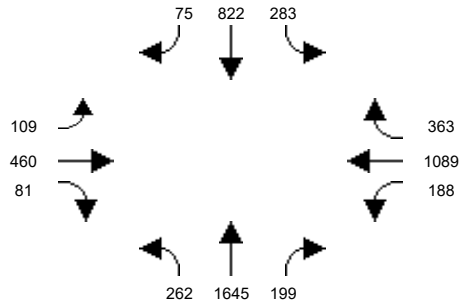
Intersection #10: Harbor Blvd and McFadden Ave



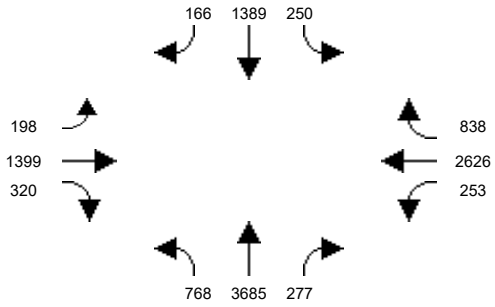
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

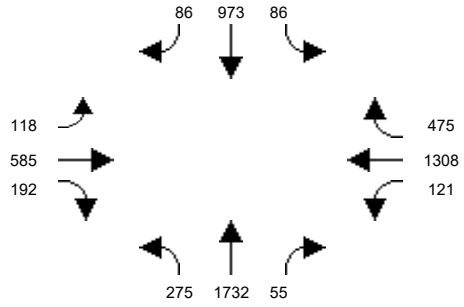
Intersection #11: Harbor Blvd and Edinger Ave



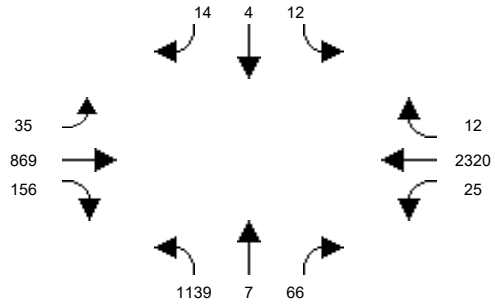
Intersection #12: Harbor Blvd and Warner Ave



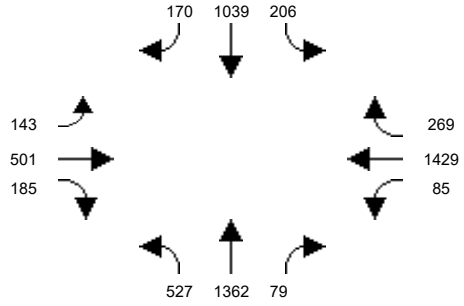
Intersection #13: Harbor Blvd and Segerstrom Ave



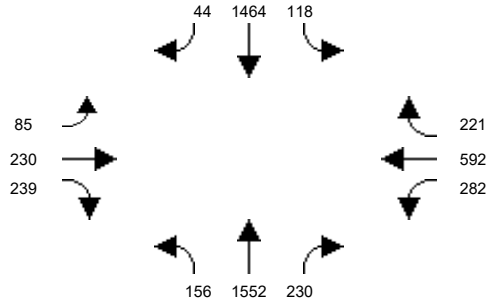
Intersection #14: MacArthur Blvd and Hyland Ave



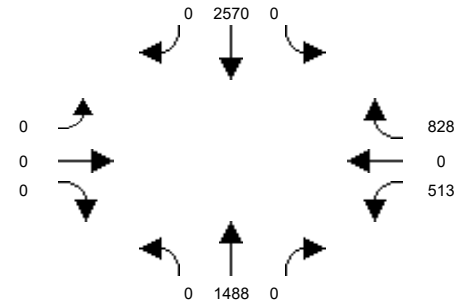
Intersection #15: MacArthur Blvd and Harbor Blvd



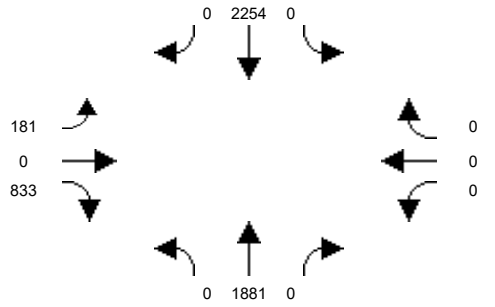
Intersection #16: Harbor Blvd and Sunflower Ave



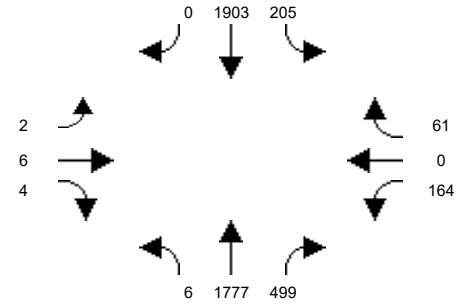
Intersection #17: Harbor Blvd and I-405 NB Off-Ramp



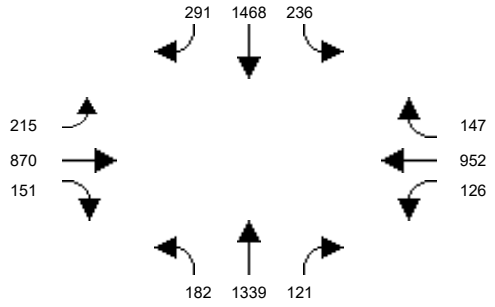
Intersection #18: Harbor Blvd and I-405 SB Off-Ramp



Intersection #19: Fairview St and Civic Center Dr



Intersection #20: Fairview St and 1st St



Santa Ana Circulation Element

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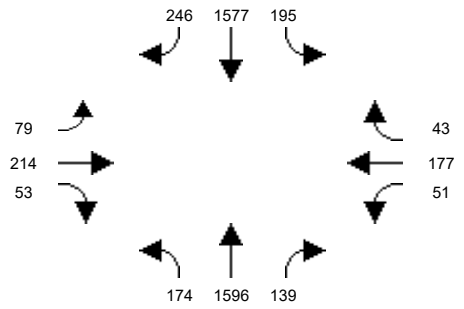
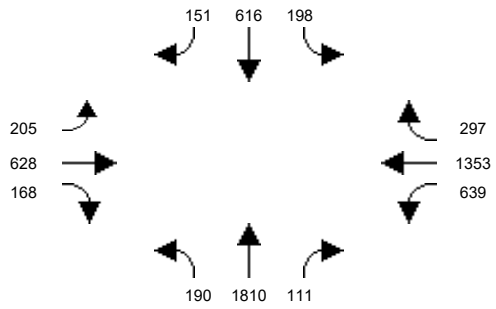
2045 WP PM Peak Hour

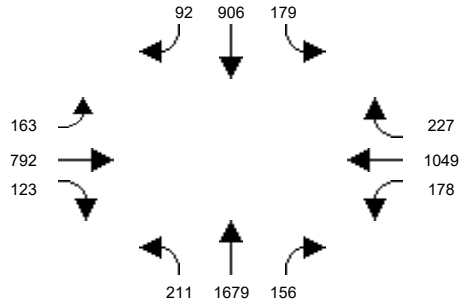
Intersection #21: Fairview St and McFadden Ave



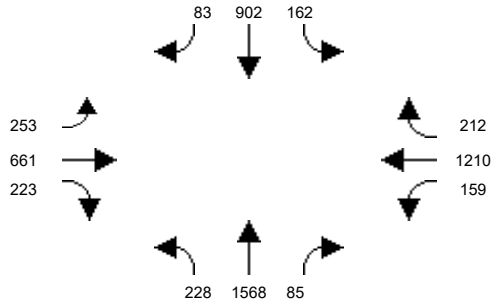
Intersection #22: Fairview St and Edinger Ave



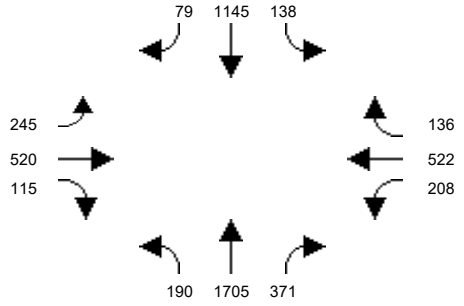
Intersection #23: Fairview St and Warner Ave



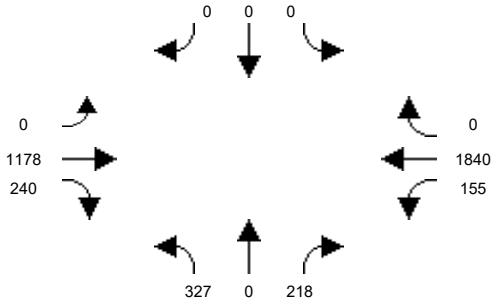
Intersection #24: Fairview St and MacArthur Blvd



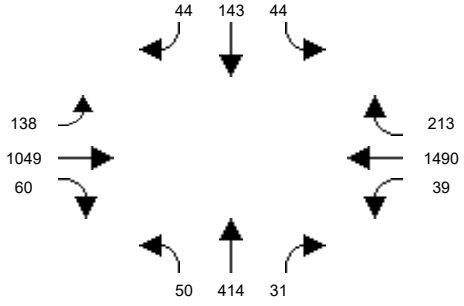
Intersection #25: Fairview Rd and Sunflower Ave



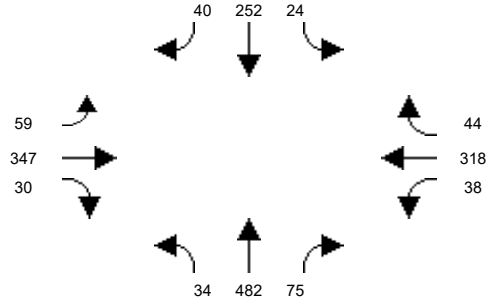
Intersection #26: Greenville St and Edinger Ave



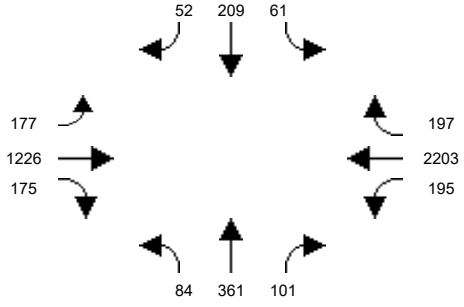
Intersection #27: Greenville St and Segerstrom Ave



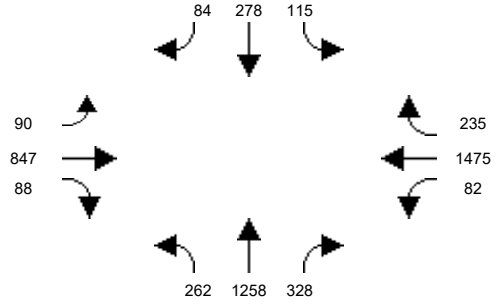
Intersection #28: Raitt St and McFadden Ave



Intersection #29: Raitt St and Edinger Ave



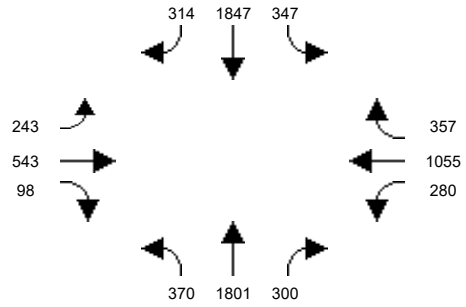
Intersection #30: Bear St and MacArthur Blvd



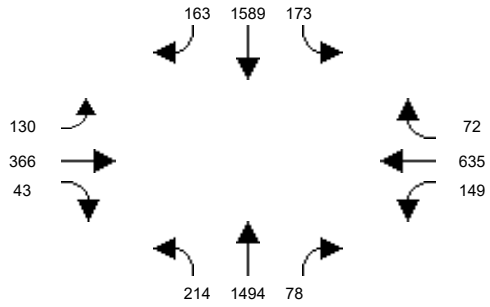
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

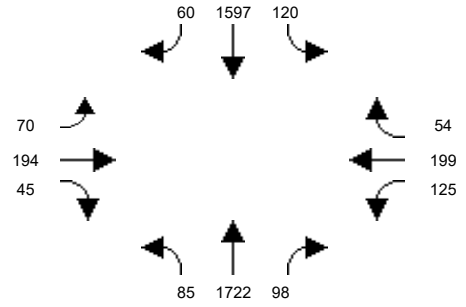
Intersection #31: Bristol St and 17th St



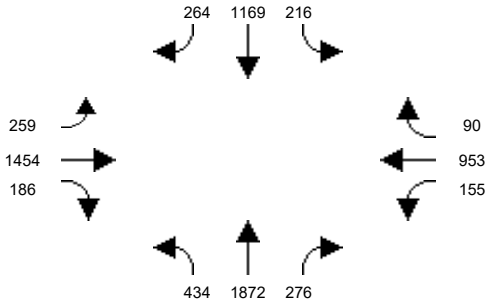
Intersection #32: Bristol St and Civic Center Dr



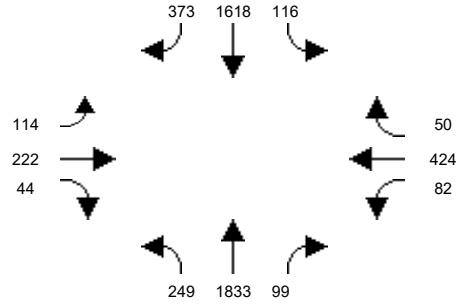
Intersection #33: Bristol St and Santa Ana Blvd



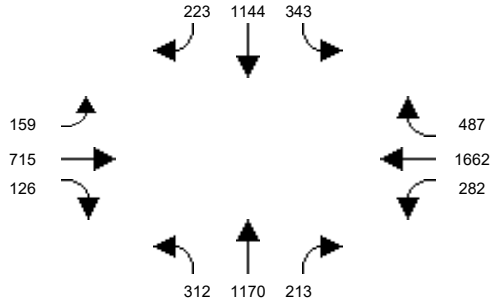
Intersection #34: Bristol St and 1st St



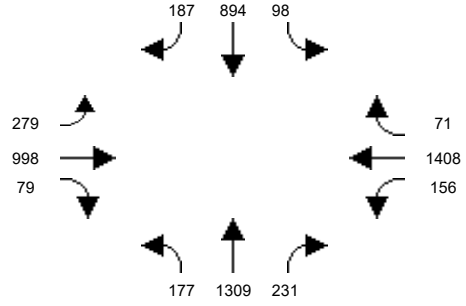
Intersection #35: Bristol St and McFadden Ave



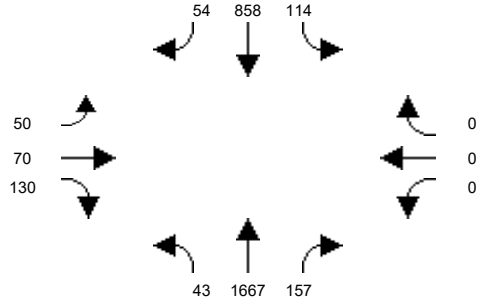
Intersection #36: Bristol St and Warner Ave



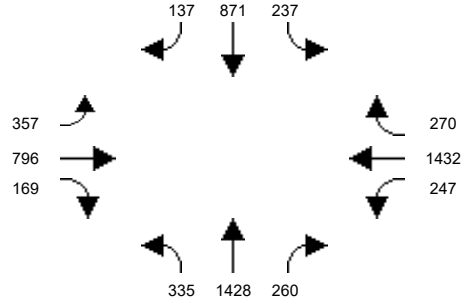
Intersection #37: Bristol St and Segerstrom Ave



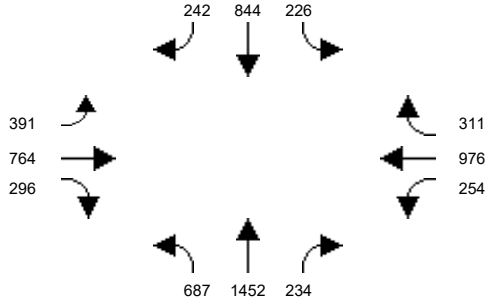
Intersection #38: Bristol St and Alton Ave



Intersection #39: Bristol St and MacArthur Blvd



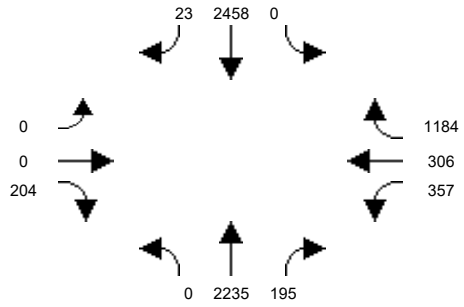
Intersection #40: Bristol St and Sunflower Ave



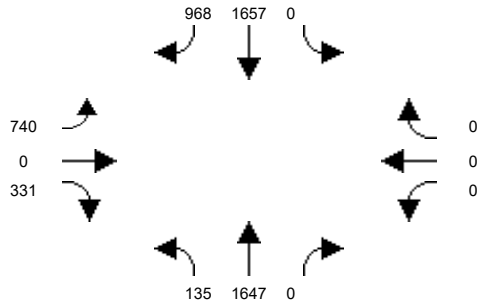
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

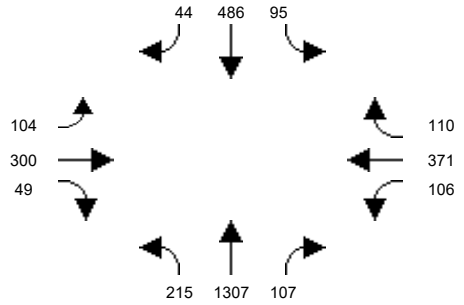
Intersection #41: Bristol St and I-405 NB Ramps



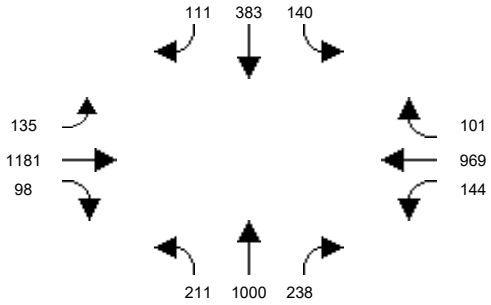
Intersection #42: Bristol St and I-405 SB Ramps



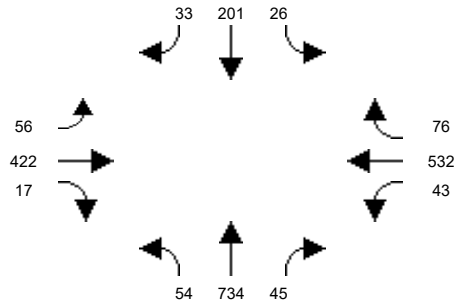
Intersection #43: Flower St and Santa Ana Blvd



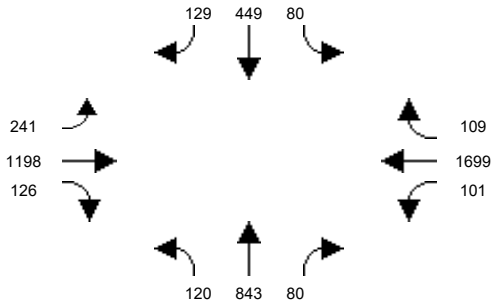
Intersection #44: Flower St and 1st St



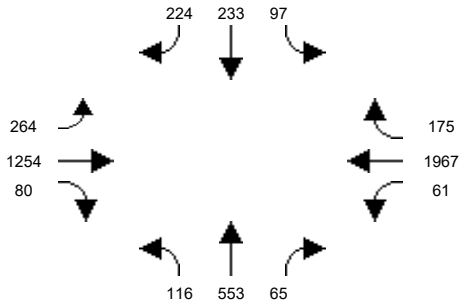
Intersection #45: Flower St and McFadden Ave



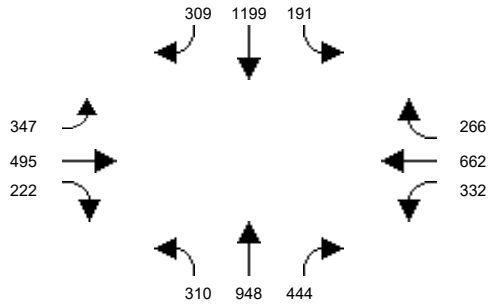
Intersection #46: Flower St and Segerstrom Ave



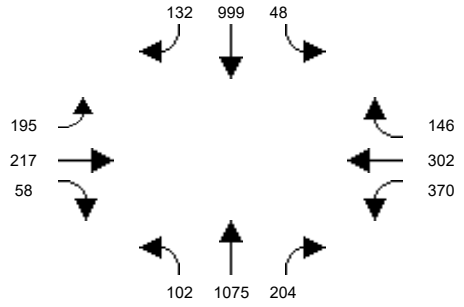
Intersection #47: Flower St and MacArthur Blvd



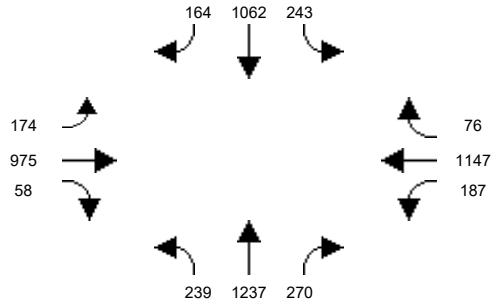
Intersection #48: Main St and La Veta Ave



Intersection #49: Main St and Mainplace Dr / Memory Ln



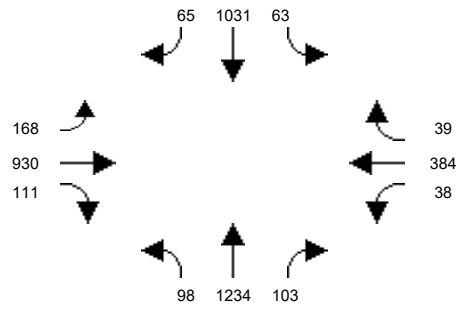
Intersection #50: Main St and 17th St



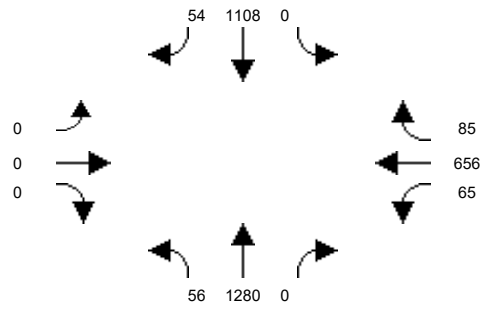
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

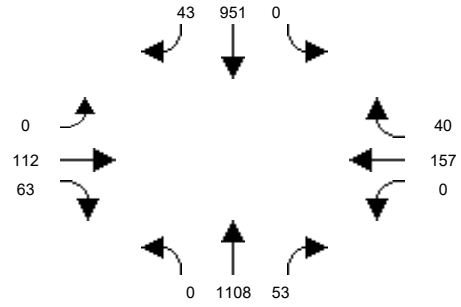
Intersection #51: Main St and Civic Center Dr



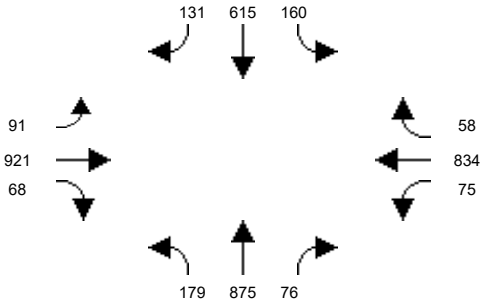
Intersection #52: Main St and Santa Ana Blvd



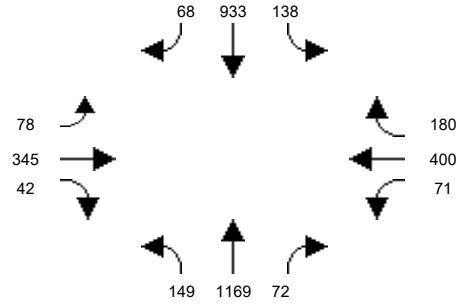
Intersection #53: Main St and 4th St



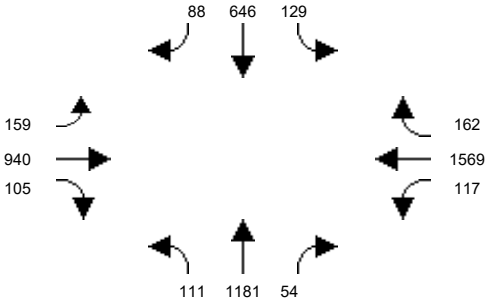
Intersection #54: Main St and 1st St



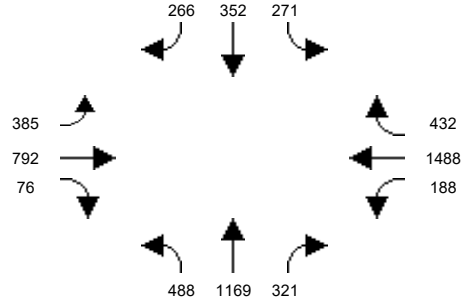
Intersection #55: Main St and McFadden Ave



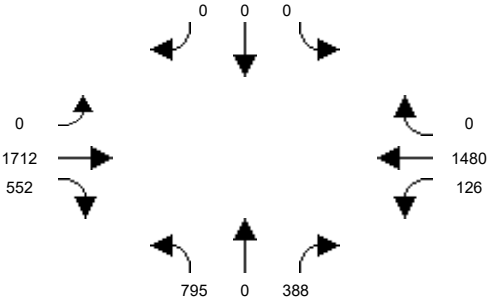
Intersection #56: Main St and Edinger Ave



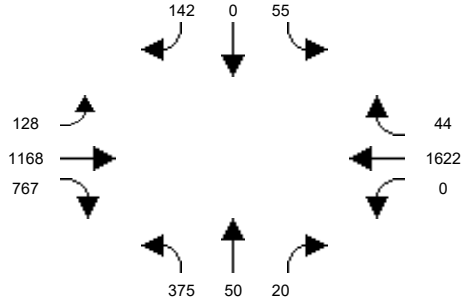
Intersection #57: Main St and MacArthur Blvd



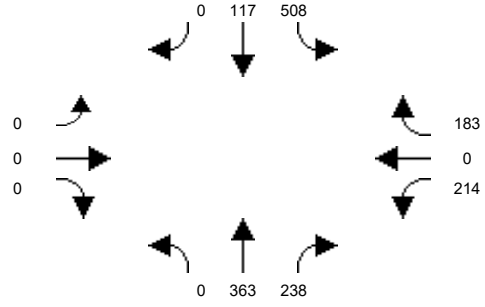
Intersection #58: Penn Wy and 17th St



Intersection #59: I-5 NB Off Ramps/17th Street



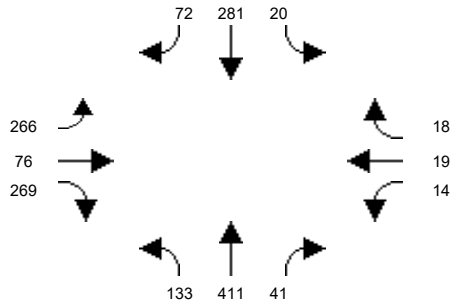
Intersection #60: Penn Wy and I-5 SB Ramps



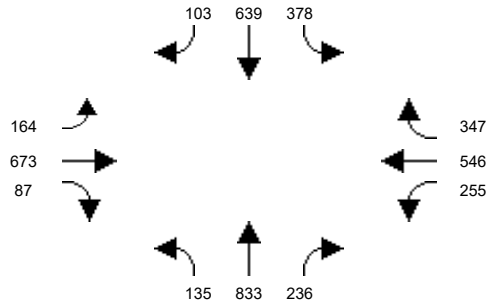
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

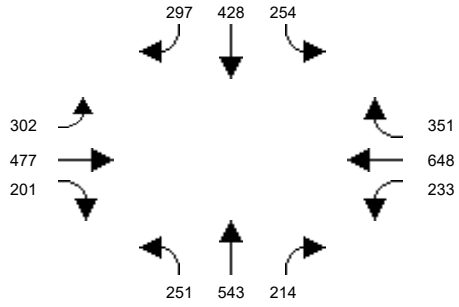
Intersection #61: Santiago St and Civic Center Dr



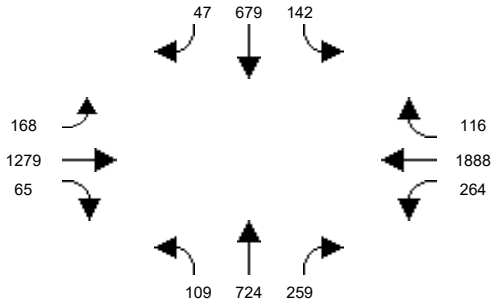
Intersection #62: Santiago St and Santa Ana Blvd



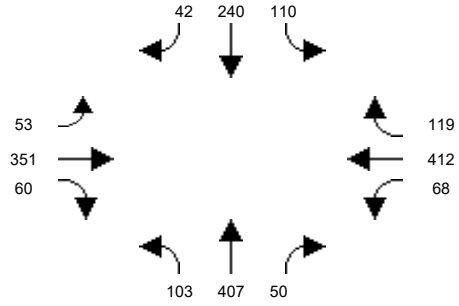
Intersection #63: Standard Ave and 4th St



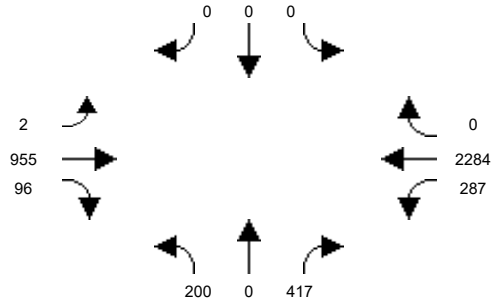
Intersection #64: Standard Ave and 1st St



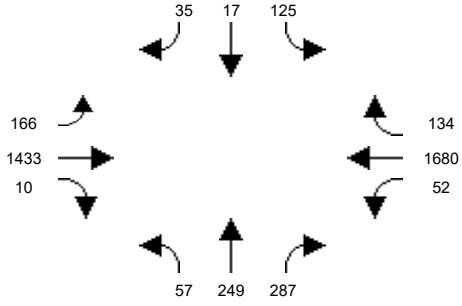
Intersection #65: Standard Ave and Mcfadden Ave



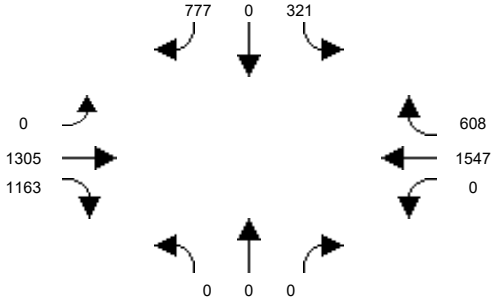
Intersection #66: Halladay St and Warner Ave



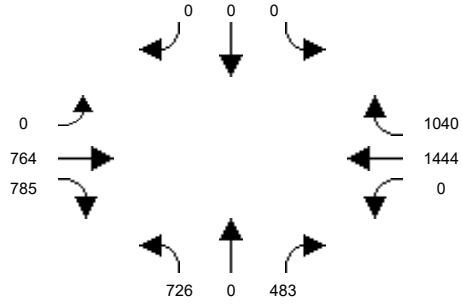
Intersection #67: Halladay St and Dyer Rd



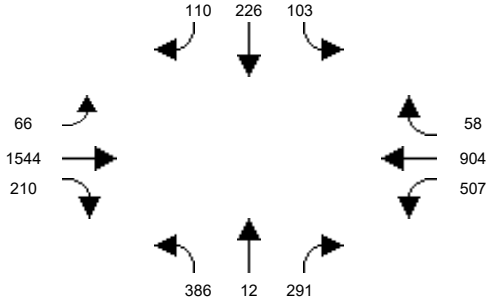
Intersection #68: SR-55 SB Ramps and MacArthur Blvd



Intersection #69: SR-55 NB Ramps and MacArthur Blvd



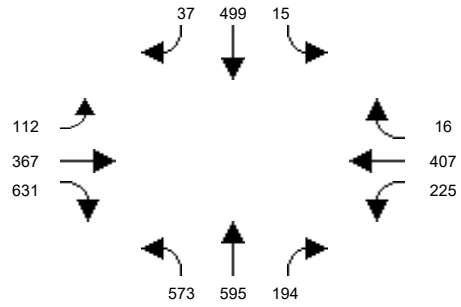
Intersection #70: SR-55 SB Ramps and Dyer Rd



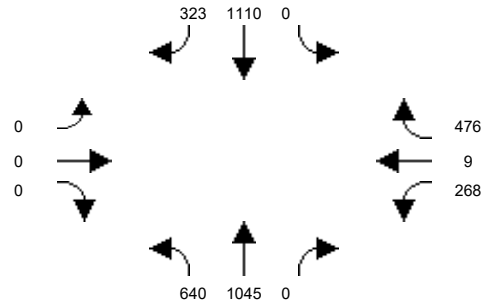
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

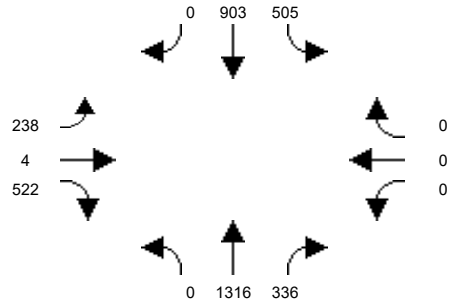
Intersection #71: Glassell St and La Veta Ave



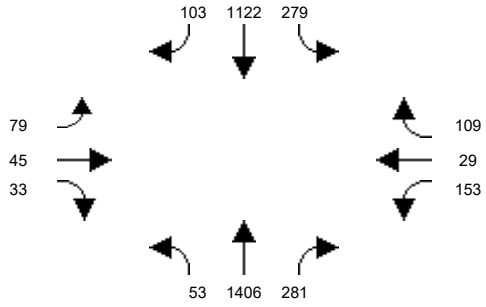
Intersection #72: Glassell St and SR-22 WB Ramps



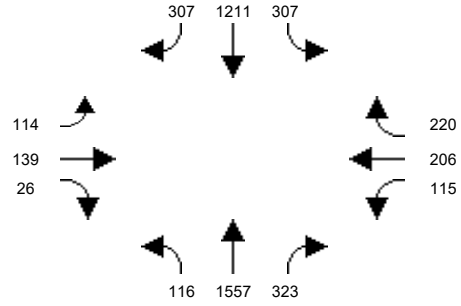
Intersection #73: Grand Ave / Glassell St and SR-22 EB Ramps



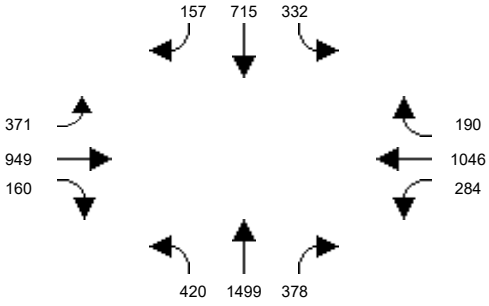
Intersection #74: Grand Ave and Fairhaven Ave



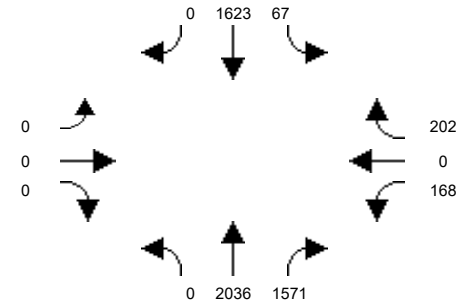
Intersection #75: Grand Ave and Santa Clara Ave



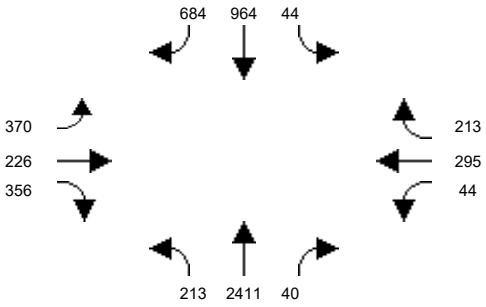
Intersection #76: Grand Ave and 17th St



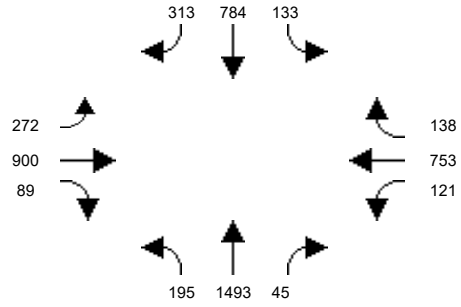
Intersection #77: Grand Ave and I-5 NB Ramps



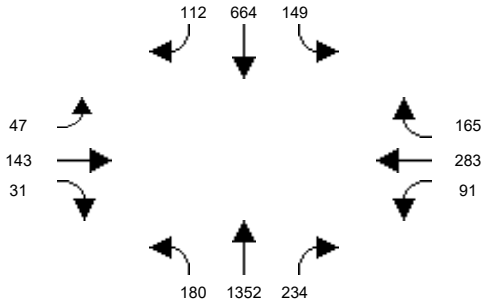
Intersection #78: Grand Ave and Santa Ana Blvd



Intersection #79: Grand Ave and 1st St



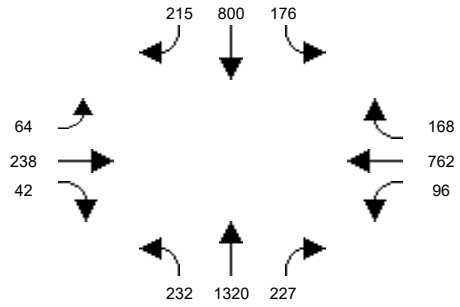
Intersection #80: Grand Ave and Chestnut Ave



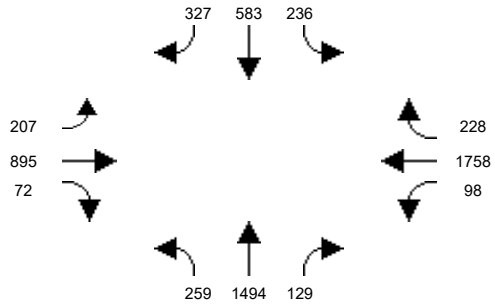
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

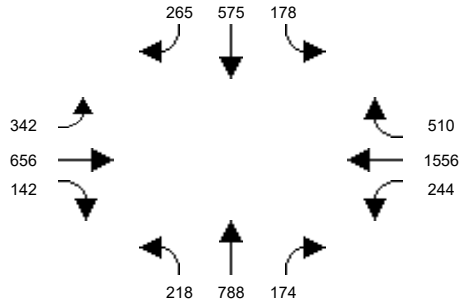
Intersection #81: Grand Ave and McFadden Ave



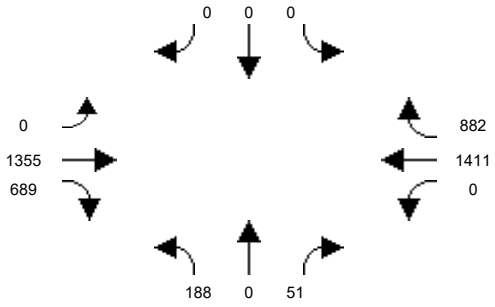
Intersection #82: Grand Ave and Edinger Ave



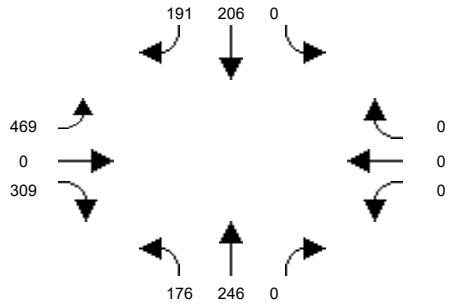
Intersection #83: Grand Ave and Warner Ave



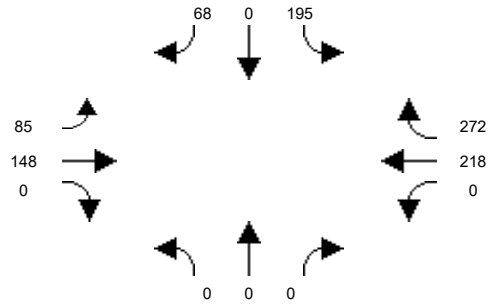
Intersection #84: SR-55 NB Ramps and Dyer Rd



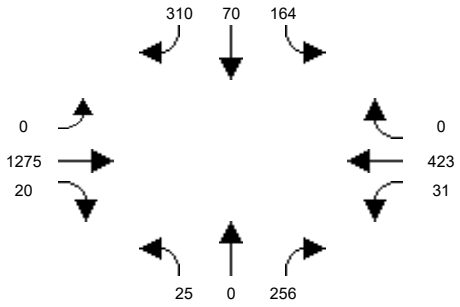
Intersection #85: Cambridge St and La Veta Ave



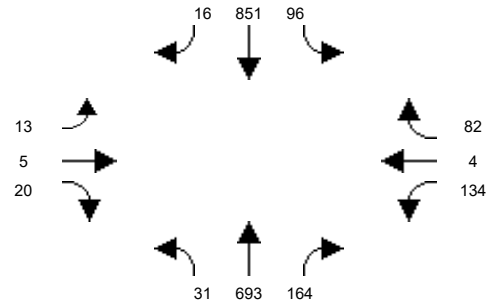
Intersection #86: Cambridge St and Fairhaven Ave



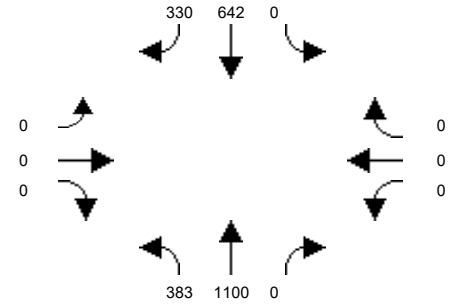
Intersection #87: Mabury St and 1st Street



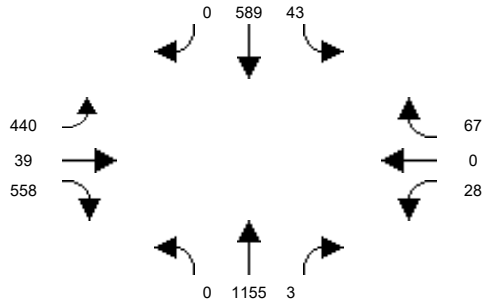
Intersection #88: Tustin St and La Veta Ave



Intersection #89: Tustin St and SR-22 WB On-Ramp



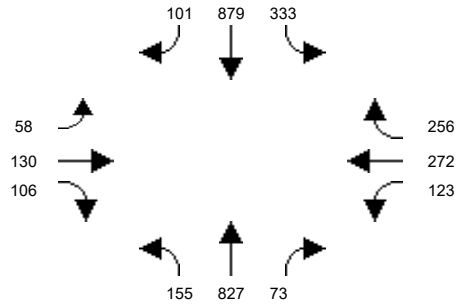
Intersection #90: Tustin St and SR-22 EB Off-Ramp / Seba Ave



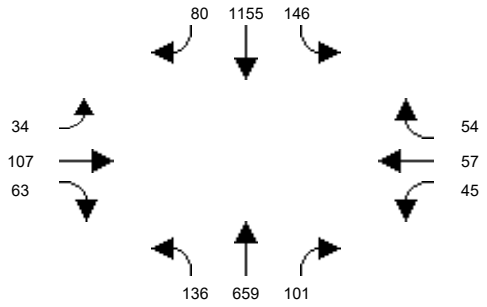
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

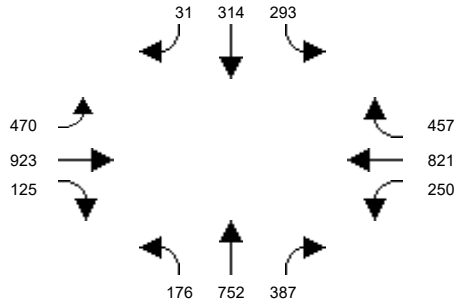
Intersection #91: Tustin Ave and Fairhaven Ave



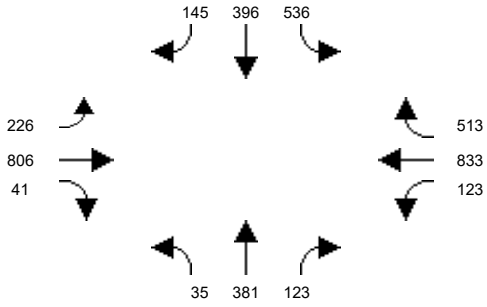
Intersection #92: Tustin Ave and Santa Clara Ave



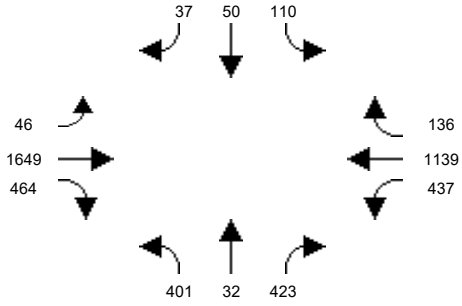
Intersection #93: Tustin Ave and 17th St



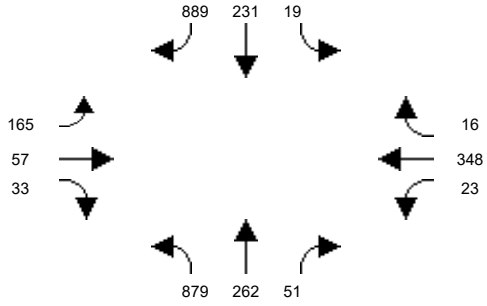
Intersection #94: Tustin Ave and 4th St



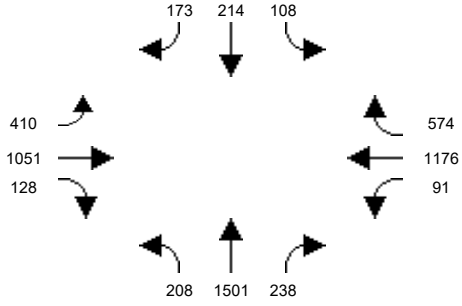
Intersection #95: SR-55 SB Ramps / Auto Mall Dr and Edinger Ave



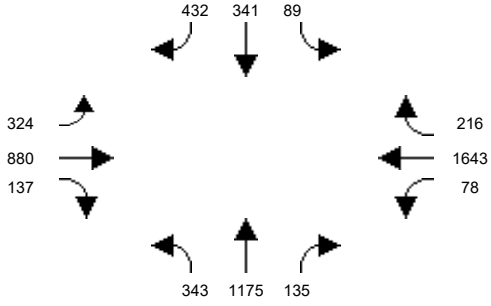
Intersection #96: SR-55 NB Ramps / Del Amo Ave and Newport Avenue



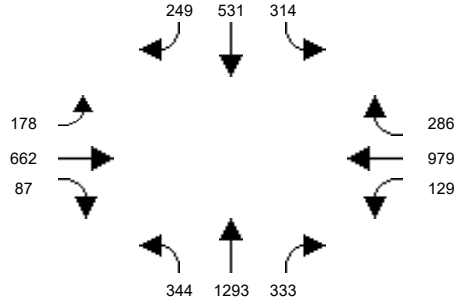
Intersection #97: Red Hill Ave and Edinger Ave



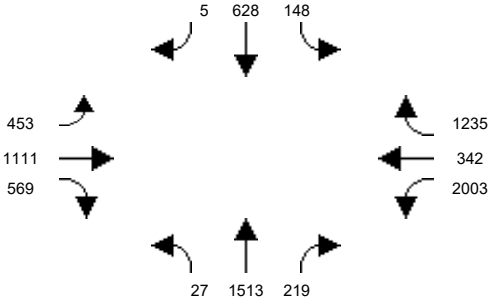
Intersection #98: Red Hill Ave and Warner Ave



Intersection #99: Red Hill Ave and Dyer Rd / barranca Pkwy



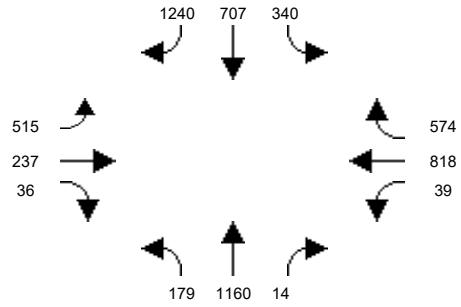
Intersection #100: Red Hill Ave and Alton Pkwy



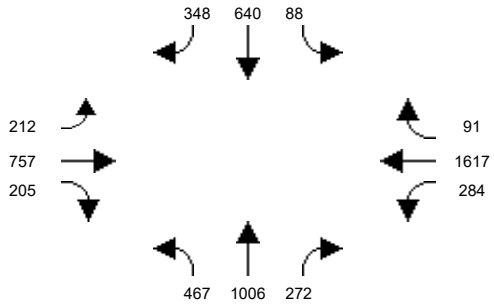
Santa Ana Circulation Element

Intersection Graphic Report
Entered Volume (Base Alternative)
2045 WP PM Peak Hour

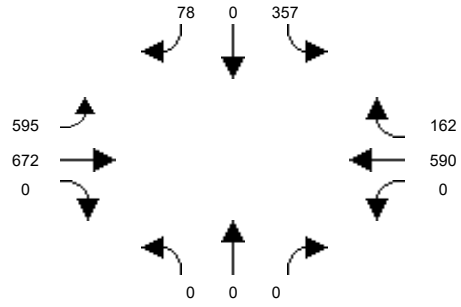
Intersection #101: Red Hill Ave and MacArthur Blvd



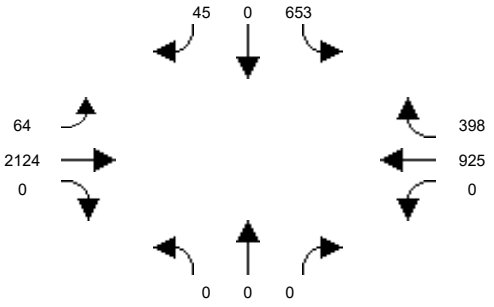
Intersection #102: Red Hill Ave and Main St



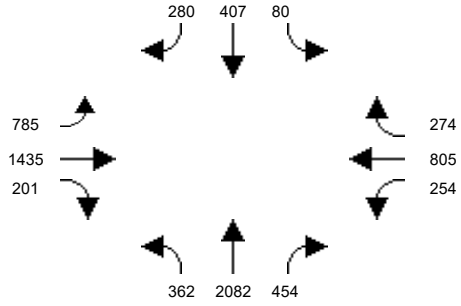
Intersection #103: I-5 SB Ramps and Santa Ana Blvd



Intersection #104: Tustin Ranch Rd and Warner Ave



Intersection #105: Von Karman Ave and Barranca Pkwy



Santa Ana Circulation Element

Scenario Report

Scenario:	2020 NP AM Peak Hour
Command:	Default Command
Volume:	2020 NP AM
Geometry:	NP
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Santa Ana Circulation Element

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
# 1 Euclid St and 1st St	D	xxxxx	0.849	D	xxxxx	0.849	+ 0.000 V/C
# 2 Euclid St and McFadden Ave	E	xxxxx	0.909	E	xxxxx	0.909	+ 0.000 V/C
# 3 Euclid St and Edinger Ave	D	xxxxx	0.861	D	xxxxx	0.861	+ 0.000 V/C
# 4 Newhope St and Hazard Ave	C	xxxxx	0.709	C	xxxxx	0.709	+ 0.000 V/C
# 5 Newhope St and McFadden Ave	D	xxxxx	0.828	D	xxxxx	0.828	+ 0.000 V/C
# 6 Harbor Blvd and SR-22 WB Off-R	C	27.4	0.695	C	27.4	0.695	+ 0.000 D/V
# 7 Trask Avenue and SR-22 EB On-R	B	11.5	0.457	B	11.5	0.457	+ 0.000 D/V
# 8 Harbor Blvd and Westminster Av	D	xxxxx	0.820	D	xxxxx	0.820	+ 0.000 V/C
# 9 Harbor Blvd and 1st St	D	xxxxx	0.807	D	xxxxx	0.807	+ 0.000 V/C
# 10 Harbor Blvd and McFadden Ave	C	xxxxx	0.791	C	xxxxx	0.791	+ 0.000 V/C
# 11 Harbor Blvd and Edinger Ave	C	xxxxx	0.766	C	xxxxx	0.766	+ 0.000 V/C
# 12 Harbor Blvd and Warner Ave	D	xxxxx	0.808	D	xxxxx	0.808	+ 0.000 V/C
# 13 Harbor Blvd and Segerstrom Ave	E	xxxxx	0.978	E	xxxxx	0.978	+ 0.000 V/C
# 14 MacArthur Blvd and Hyland Ave	B	xxxxx	0.608	B	xxxxx	0.608	+ 0.000 V/C
# 15 MacArthur Blvd and Harbor Blvd	C	xxxxx	0.754	C	xxxxx	0.754	+ 0.000 V/C
# 16 Harbor Blvd and Sunflower Ave	C	xxxxx	0.702	C	xxxxx	0.702	+ 0.000 V/C
# 17 Harbor Blvd and I-405 WB Off-R	B	19.7	0.695	B	19.7	0.695	+ 0.000 D/V
# 18 Harbor Blvd and I-405 EB Off-R	B	13.2	0.524	B	13.2	0.524	+ 0.000 D/V
# 19 Fairview St and Civic Center D	B	xxxxx	0.667	B	xxxxx	0.667	+ 0.000 V/C
# 20 Fairview St and 1st St	D	xxxxx	0.872	D	xxxxx	0.872	+ 0.000 V/C
# 21 Fairview St and McFadden Ave	C	xxxxx	0.786	C	xxxxx	0.786	+ 0.000 V/C
# 22 Fairview St and Edinger Ave	C	xxxxx	0.753	C	xxxxx	0.753	+ 0.000 V/C
# 23 Fairview St and Warner Ave	D	xxxxx	0.850	D	xxxxx	0.850	+ 0.000 V/C
# 24 Fairview St and MacArthur Blvd	C	xxxxx	0.704	C	xxxxx	0.704	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 25 Fairview Rd and Sunflower Ave	C	xxxxx	0.705	C	xxxxx	0.705	+ 0.000 V/C
# 26 Greenville St and Edinger Ave	A	xxxxx	0.563	A	xxxxx	0.563	+ 0.000 V/C
# 27 Greenville St and Segerstrom A	C	xxxxx	0.727	C	xxxxx	0.727	+ 0.000 V/C
# 28 Raitt St and McFadden Ave	C	xxxxx	0.715	C	xxxxx	0.715	+ 0.000 V/C
# 29 Raitt St and Edinger Ave	D	xxxxx	0.851	D	xxxxx	0.851	+ 0.000 V/C
# 30 Bear St and MacArthur Blvd	C	xxxxx	0.737	C	xxxxx	0.737	+ 0.000 V/C
# 31 Bristol St and 17th St	C	xxxxx	0.725	C	xxxxx	0.725	+ 0.000 V/C
# 32 Bristol St and Civic Center Dr	D	xxxxx	0.827	D	xxxxx	0.827	+ 0.000 V/C
# 33 Bristol St and Santa Ana Blvd	B	xxxxx	0.669	B	xxxxx	0.669	+ 0.000 V/C
# 34 Bristol St and 1st St	C	xxxxx	0.745	C	xxxxx	0.745	+ 0.000 V/C
# 35 Bristol St and McFadden Ave	C	xxxxx	0.749	C	xxxxx	0.749	+ 0.000 V/C
# 36 Bristol St and Warner Ave	C	xxxxx	0.767	C	xxxxx	0.767	+ 0.000 V/C
# 37 Bristol St and Segerstrom Ave	C	xxxxx	0.794	C	xxxxx	0.794	+ 0.000 V/C
# 38 Bristol St and Alton Ave	A	xxxxx	0.556	A	xxxxx	0.556	+ 0.000 V/C
# 39 Bristol St and MacArthur Blvd	C	xxxxx	0.738	C	xxxxx	0.738	+ 0.000 V/C
# 40 Bristol St and Sunflower Ave	B	xxxxx	0.635	B	xxxxx	0.635	+ 0.000 V/C
# 41 Bristol St and I-405 WB Ramps	B	19.1	0.500	B	19.1	0.500	+ 0.000 D/V
# 42 Bristol St and I-405 EB Ramps	C	22.3	0.607	C	22.3	0.607	+ 0.000 D/V
# 43 Flower St and Santa Ana Blvd	A	xxxxx	0.596	A	xxxxx	0.596	+ 0.000 V/C
# 44 Flower St and 1st St	C	xxxxx	0.795	C	xxxxx	0.795	+ 0.000 V/C
# 45 Flower St and McFadden Ave	D	xxxxx	0.819	D	xxxxx	0.819	+ 0.000 V/C
# 46 Flower St and Segerstrom Ave	C	xxxxx	0.769	C	xxxxx	0.769	+ 0.000 V/C
# 47 Flower St and MacArthur Blvd	B	xxxxx	0.698	B	xxxxx	0.698	+ 0.000 V/C
# 48 Main St and La Veta Ave	A	xxxxx	0.574	A	xxxxx	0.574	+ 0.000 V/C
# 49 Main St and Mainplace Dr / Mem	A	xxxxx	0.485	A	xxxxx	0.485	+ 0.000 V/C
# 50 Main St and 17th St	D	xxxxx	0.821	D	xxxxx	0.821	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 51 Main St and Civic Center Dr	C	xxxxx	0.755	C	xxxxx	0.755	+ 0.000 V/C
# 52 Main St and Santa Ana Blvd	B	xxxxx	0.667	B	xxxxx	0.667	+ 0.000 V/C
# 53 Main St and 4th St	A	xxxxx	0.490	A	xxxxx	0.490	+ 0.000 V/C
# 54 Main St and 1st St	C	xxxxx	0.758	C	xxxxx	0.758	+ 0.000 V/C
# 55 Main St and McFadden Ave	E	xxxxx	0.902	E	xxxxx	0.902	+ 0.000 V/C
# 56 Main St and Edinger Ave	D	xxxxx	0.826	D	xxxxx	0.826	+ 0.000 V/C
# 57 Main St and MacArthur Blvd	C	xxxxx	0.735	C	xxxxx	0.735	+ 0.000 V/C
# 58 Penn Wy and 17th St	B	11.2	0.602	B	11.2	0.602	+ 0.000 D/V
# 59 I-5 NB Off Ramps/17th Street	C	31.2	0.740	C	31.2	0.740	+ 0.000 D/V
# 60 Penn Wy and I-5 SB Ramps	B	19.0	0.436	B	19.0	0.436	+ 0.000 D/V
# 61 Santiago St and Civic Center D	C	16.9	0.723	C	16.9	0.723	+ 0.000 V/C
# 62 Santiago St and Santa Ana Blvd	A	xxxxx	0.553	A	xxxxx	0.553	+ 0.000 V/C
# 64 Standard Ave and 1st St	D	xxxxx	0.803	D	xxxxx	0.803	+ 0.000 V/C
# 65 Standard Ave and Mcfadden Ave	B	xxxxx	0.609	B	xxxxx	0.609	+ 0.000 V/C
# 66 Halladay St and Warner Ave	B	xxxxx	0.659	B	xxxxx	0.659	+ 0.000 V/C
# 67 Halladay St and Dyer Rd	A	xxxxx	0.567	A	xxxxx	0.567	+ 0.000 V/C
# 68 SR-55 SB Ramps and MacArthur B	B	19.8	0.615	B	19.8	0.615	+ 0.000 D/V
# 69 SR-55 NB Ramps and MacArthur B	B	19.2	0.742	B	19.2	0.742	+ 0.000 D/V
# 70 SR-55 SB Ramps and Dyer Rd	C	23.7	0.552	C	23.7	0.552	+ 0.000 D/V
# 71 Glassell St and La Veta Ave	B	xxxxx	0.603	B	xxxxx	0.603	+ 0.000 V/C
# 72 Glassell St and SR-22 WB Ramps	C	28.5	0.741	C	28.5	0.741	+ 0.000 D/V
# 73 Grand Ave / Glassell St and SR	C	27.0	0.760	C	27.0	0.760	+ 0.000 D/V
# 74 Grand Ave and Fairhaven Ave	B	xxxxx	0.680	B	xxxxx	0.680	+ 0.000 V/C
# 75 Grand Ave and Santa Clara Ave	D	xxxxx	0.885	D	xxxxx	0.885	+ 0.000 V/C
# 76 Grand Ave and 17th St	C	xxxxx	0.797	C	xxxxx	0.797	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 77 Grand Ave and I-5 NB Ramps	B	12.9	0.516	B	12.9	0.516	+ 0.000 D/V
# 78 Grand Ave and Santa Ana Blvd	C	23.8	0.662	C	23.8	0.662	+ 0.000 D/V
# 79 Grand Ave and 1st St	D	xxxxx	0.803	D	xxxxx	0.803	+ 0.000 V/C
# 80 Grand Ave and Chestnut Ave	C	xxxxx	0.705	C	xxxxx	0.705	+ 0.000 V/C
# 81 Grand Ave and McFadden Ave	D	xxxxx	0.829	D	xxxxx	0.829	+ 0.000 V/C
# 82 Grand Ave and Edinger Ave	C	xxxxx	0.763	C	xxxxx	0.763	+ 0.000 V/C
# 83 Grand Ave and Warner Ave	A	xxxxx	0.528	A	xxxxx	0.528	+ 0.000 V/C
# 84 SR-55 NB Ramps and Dyer Rd	B	16.3	0.530	B	16.3	0.530	+ 0.000 D/V
# 85 Cambridge St and La Veta Ave	C	17.3	0.799	C	17.3	0.799	+ 0.000 V/C
# 86 Cambridge St and Fairhaven Ave	A	xxxxx	0.559	A	xxxxx	0.559	+ 0.000 V/C
# 87 Mabury St and 1st Street	C	28.3	0.691	C	28.3	0.691	+ 0.000 D/V
# 88 Tustin St and La Veta Ave	A	xxxxx	0.521	A	xxxxx	0.521	+ 0.000 V/C
# 89 Tustin St and SR-22 WB On-Ramp	B	12.9	0.734	B	12.9	0.734	+ 0.000 D/V
# 90 Tustin St and SR-22 EB Off-Ram	C	24.2	0.731	C	24.2	0.731	+ 0.000 D/V
# 91 Tustin Ave and Fairhaven Ave	E	xxxxx	0.977	E	xxxxx	0.977	+ 0.000 V/C
# 92 Tustin Ave and Santa Clara Ave	D	xxxxx	0.866	D	xxxxx	0.866	+ 0.000 V/C
# 93 Tustin Ave and 17th St	C	xxxxx	0.748	C	xxxxx	0.748	+ 0.000 V/C
# 94 Tustin Ave and 4th St	C	xxxxx	0.701	C	xxxxx	0.701	+ 0.000 V/C
# 95 SR-55 SB Ramps / Auto Mall Dr	C	24.4	0.558	C	24.4	0.558	+ 0.000 D/V
# 96 SR-55 NB Ramps / Del Amo Ave a	C	24.0	0.463	C	24.0	0.463	+ 0.000 D/V
# 97 Red Hill Ave and Edinger Ave	A	xxxxx	0.569	A	xxxxx	0.569	+ 0.000 V/C
# 98 Red Hill Ave and Warner Ave	A	xxxxx	0.485	A	xxxxx	0.485	+ 0.000 V/C
# 99 Red Hill Ave and Dyer Rd / bar	A	xxxxx	0.575	A	xxxxx	0.575	+ 0.000 V/C
#100 Red Hill Ave and Alton Pkwy	A	xxxxx	0.524	A	xxxxx	0.524	+ 0.000 V/C
#101 Red Hill Ave and MacArthur Blv	B	xxxxx	0.664	B	xxxxx	0.664	+ 0.000 V/C
#102 Red Hill Ave and Main St	B	xxxxx	0.670	B	xxxxx	0.670	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#103 I-5 SB Ramps and Santa Ana Blv	B	17.4	0.514	B	17.4	0.514	+ 0.000 D/V
#104 Tustin Ranch Rd and Warner Ave	A	xxxxx	0.475	A	xxxxx	0.475	+ 0.000 V/C
#105 Von Karman Ave and Barranca Pk	C	xxxxx	0.762	C	xxxxx	0.762	+ 0.000 V/C

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Euclid St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.849
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	65	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			WideBypass			WideBypass		
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	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	124	1044	179	207	1844	104	218	811	153	184	586	188
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:	124	1044	179	207	1844	104	218	811	153	184	586	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1044	179	207	1844	104	218	811	153	184	586	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	1044	179	207	1844	104	218	811	153	184	586	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	1044	179	207	1844	104	218	811	153	184	586	188
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	2.56	0.44	1.00	2.84	0.16	1.00	2.52	0.48	1.00	2.27	0.73
Final Sat.:	1600	4297	703	1600	4744	256	1600	4238	762	1600	3834	1166
Capacity Analysis Module:												
Vol/Sat:	0.08	0.24	0.25	0.13	0.39	0.41	0.14	0.19	0.20	0.12	0.15	0.16
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Euclid St and McFadden 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			Prot+Permit			Prot+Permit		
Rights:	WideBypass			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:	145	1100	131	137	1906	158	227	463	287	166	368	140
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:	145	1100	131	137	1906	158	227	463	287	166	368	140
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	145	1100	131	137	1906	158	227	463	287	166	368	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	145	1100	131	137	1906	158	227	463	287	166	368	140
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	145	1100	131	137	1906	158	227	463	287	166	368	140
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	2.68	0.32	1.00	2.77	0.23	1.00	1.23	0.77	1.00	1.45	0.55
Final Sat.:	1600	4489	511	1600	4633	367	1600	2075	1225	1600	2418	882
Capacity Analysis Module:												
Vol/Sat:	0.09	0.25	0.26	0.09	0.41	0.43	0.14	0.22	0.23	0.10	0.15	0.16
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Euclid St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.861
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	69	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	2 1	0	2 0	2 1	0	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	134	845	72	127	1842	169	172	753	460	100	609	111
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:	134	845	72	127	1842	169	172	753	460	100	609	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:	134	845	72	127	1842	169	172	753	460	100	609	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	134	845	72	127	1842	169	172	753	460	100	609	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:	134	845	72	127	1842	169	172	753	460	100	609	111
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.76	0.24	2.00	2.75	0.25	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3200	4623	377	3200	4597	403	1600	3400	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.18	0.19	0.04	0.40	0.42	0.11	0.22	0.29	0.06	0.18	0.07
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Newhope St and Hazard Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.709
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:	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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	98	738	105	91	1341	123	78	199	147	51	170	68
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:	98	738	105	91	1341	123	78	199	147	51	170	68
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	738	105	91	1341	123	78	199	147	51	170	68
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	738	105	91	1341	123	78	199	147	51	170	68
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	738	105	91	1341	123	78	199	147	51	170	68
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	1.75	0.25	1.00	1.83	0.17	1.00	1.15	0.85	1.00	1.43	0.57
Final Sat.:	1600	2901	399	1600	3031	269	1600	1940	1360	1600	2386	914
Capacity Analysis Module:												
Vol/Sat:	0.06	0.25	0.26	0.06	0.44	0.46	0.05	0.10	0.11	0.03	0.07	0.07
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Newhope St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.828
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	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			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	110	491	173	119	1183	110	135	492	160	176	449	100
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:	110	491	173	119	1183	110	135	492	160	176	449	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	110	491	173	119	1183	110	135	492	160	176	449	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	110	491	173	119	1183	110	135	492	160	176	449	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	110	491	173	119	1183	110	135	492	160	176	449	100
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.48	0.52	1.00	1.83	0.17	1.00	1.51	0.49	1.00	1.64	0.36
Final Sat.:	1600	2466	834	1600	3028	272	1600	2515	785	1600	2717	583
Capacity Analysis Module:												
Vol/Sat:	0.07	0.20	0.21	0.07	0.39	0.40	0.08	0.20	0.20	0.11	0.17	0.17
Crit Moves:	****					****		****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.695
Loss Time (sec):	5	Average Delay (sec/veh):	27.4
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			Split Phase			Split Phase		
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	0	0 0	2 1	0	0 0	1! 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	70	1274	0	0	1354	18	74	0	121	836	44	117
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	1274	0	0	1354	18	74	0	121	836	44	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:	70	1274	0	0	1354	18	74	0	121	836	44	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	1274	0	0	1354	18	74	0	121	836	44	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:	70	1274	0	0	1354	18	74	0	121	836	44	117
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.90	1.00	0.90	0.96	0.96	0.85
Lanes:	1.00	3.00	0.00	0.00	2.96	0.04	0.38	0.00	0.62	1.90	0.10	1.00
Final Sat.:	1805	5187	0	0	5109	68	648	0	1059	3448	181	1615
Capacity Analysis Module:												
Vol/Sat:	0.04	0.25	0.00	0.00	0.27	0.27	0.11	0.00	0.11	0.24	0.24	0.07
Crit Moves:	****				****				****		****	
Green/Cycle:	0.06	0.44	0.00	0.00	0.38	0.38	0.16	0.00	0.16	0.35	0.35	0.35
Volume/Cap:	0.70	0.56	0.00	0.00	0.70	0.70	0.70	0.00	0.70	0.70	0.70	0.21
Delay/Veh:	65.4	21.3	0.0	0.0	27.2	27.2	46.8	0.0	46.8	29.7	29.7	23.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	65.4	21.3	0.0	0.0	27.2	27.2	46.8	0.0	46.8	29.7	29.7	23.0
LOS by Move:	E	C	A	A	C	C	D	A	D	C	C	C
HCM2k85thQ:	6	16	0	0	21	21	11	0	11	19	19	4

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Trask Avenue and SR-22 EB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.457
Loss Time (sec):	5	Average Delay (sec/veh):	11.5
Optimal Cycle:	23	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:	0 0	0 0	0	0 0	0 0	0	2 0	1 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	651	815	0	0	738	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:	0	0	0	0	0	0	651	815	0	0	738	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:	0	0	0	0	0	0	651	815	0	0	738	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	651	815	0	0	738	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:	0	0	0	0	0	0	651	815	0	0	738	138
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	0.00	1.68	0.32
Final Sat.:	0	0	0	0	0	0	3502	1900	0	0	2968	555
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.19	0.43	0.00	0.00	0.25	0.25
Crit Moves:							****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.95	0.00	0.00	0.54	0.54
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.46	0.45	0.00	0.00	0.46	0.46
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	21.9	0.4	0.0	0.0	14.0	14.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	21.9	0.4	0.0	0.0	14.0	14.0
LOS by Move:	A	A	A	A	A	A	C	A	A	A	B	B
HCM2k85thQ:	0	0	0	0	0	0	12	4	0	0	13	13

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Harbor Blvd and Westminster Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.820
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	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:	1 0	3 0	1	1 0	3 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	178	1173	251	212	1663	95	176	927	33	212	574	156
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:	178	1173	251	212	1663	95	176	927	33	212	574	156
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	178	1173	251	212	1663	95	176	927	33	212	574	156
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1173	251	212	1663	95	176	927	33	212	574	156
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	178	1173	251	212	1663	95	176	927	33	212	574	156
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.90	0.10	1.00	3.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	4835	165	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.23	0.16	0.13	0.33	0.06	0.11	0.19	0.20	0.13	0.11	0.10
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #9 Harbor Blvd and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.807
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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:	1 0	3 0	1	1 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	117	935	202	227	1914	124	140	932	181	245	621	145
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:	117	935	202	227	1914	124	140	932	181	245	621	145
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	117	935	202	227	1914	124	140	932	181	245	621	145
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	117	935	202	227	1914	124	140	932	181	245	621	145
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	117	935	202	227	1914	124	140	932	181	245	621	145
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	2.51	0.49	2.00	2.43	0.57
Final Sat.:	1600	5100	1600	1600	5100	1600	3200	4219	781	3200	4091	909
Capacity Analysis Module:												
Vol/Sat:	0.07	0.18	0.13	0.14	0.38	0.08	0.04	0.22	0.23	0.08	0.15	0.16
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #10 Harbor Blvd and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.791
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
Y+R:	4.0	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	2 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	104	1059	101	182	1919	64	167	435	130	190	430	123
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:	104	1059	101	182	1919	64	167	435	130	190	430	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	1059	101	182	1919	64	167	435	130	190	430	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	1059	101	182	1919	64	167	435	130	190	430	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	104	1059	101	182	1919	64	167	435	130	190	430	123
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	3.00	1.00	2.00	2.90	0.10	1.00	1.54	0.46	1.00	1.56	0.44
Final Sat.:	3200	5100	1600	3200	4845	155	1600	2564	736	1600	2588	712
Capacity Analysis Module:												
Vol/Sat:	0.03	0.21	0.06	0.06	0.40	0.41	0.10	0.17	0.18	0.12	0.17	0.17
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #11 Harbor Blvd and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.766
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 0	1	2 0	3 0	1	2 0	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	103	772	146	183	2105	61	107	644	323	221	491	204
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:	103	772	146	183	2105	61	107	644	323	221	491	204
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	772	146	183	2105	61	107	644	323	221	491	204
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	772	146	183	2105	61	107	644	323	221	491	204
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	772	146	183	2105	61	107	644	323	221	491	204
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	3400	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.09	0.06	0.41	0.04	0.03	0.19	0.20	0.07	0.10	0.13
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Harbor Blvd and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.808
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	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	2 1	0	2 0	3 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	115	701	178	457	2059	123	97	1385	364	151	792	134
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:	115	701	178	457	2059	123	97	1385	364	151	792	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	115	701	178	457	2059	123	97	1385	364	151	792	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	115	701	178	457	2059	123	97	1385	364	151	792	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	115	701	178	457	2059	123	97	1385	364	151	792	134
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.39	0.61	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4028	972	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.17	0.18	0.14	0.40	0.08	0.03	0.27	0.23	0.05	0.16	0.08
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Harbor Blvd and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.978
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	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			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:	2 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	111	791	50	171	2299	86	88	737	297	117	362	82
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	791	50	171	2299	86	88	737	297	117	362	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:	111	791	50	171	2299	86	88	737	297	117	362	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	791	50	171	2299	86	88	737	297	117	362	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:	111	791	50	171	2299	86	88	737	297	117	362	82
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.82	0.18	1.00	2.89	0.11	1.00	1.43	0.57	1.00	2.00	1.00
Final Sat.:	3200	4715	285	1600	4827	173	1600	2381	919	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.17	0.18	0.11	0.48	0.50	0.06	0.31	0.32	0.07	0.11	0.05
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #14 MacArthur Blvd and Hyland Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.608
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:	2 0	0 1	0	1 0	1 0	1	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	69	3	19	8	2	19	7	1953	775	64	490	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:	69	3	19	8	2	19	7	1953	775	64	490	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:	69	3	19	8	2	19	7	1953	775	64	490	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	3	19	8	2	19	7	1953	775	64	490	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:	69	3	19	8	2	19	7	1953	775	64	490	20
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	0.14	0.86	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	218	1382	1600	1700	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.01	0.01	0.01	0.00	0.01	0.00	0.38	0.48	0.04	0.10	0.01
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #15 MacArthur Blvd and Harbor Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.754
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	3 0	1	2 0	3 0	1	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	128	898	92	316	1820	126	126	1141	344	133	443	132
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	898	92	316	1820	126	126	1141	344	133	443	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	898	92	316	1820	126	126	1141	344	133	443	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	898	92	316	1820	126	126	1141	344	133	443	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	898	92	316	1820	126	126	1141	344	133	443	132
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.18	0.06	0.10	0.36	0.08	0.08	0.22	0.22	0.08	0.09	0.08
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Harbor Blvd and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.702
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	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			Split Phase			Split Phase		
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	1 0	1 1	0	1 1	0 1	0
Volume Module:												
Base Vol:	217	1107	205	246	2324	57	9	109	42	130	166	94
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:	217	1107	205	246	2324	57	9	109	42	130	166	94
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	217	1107	205	246	2324	57	9	109	42	130	166	94
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	1107	205	246	2324	57	9	109	42	130	166	94
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	217	1107	205	246	2324	57	9	109	42	130	166	94
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	1.44	0.56	1.00	1.28	0.72
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	2410	890	1603	2044	1152
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.13	0.08	0.46	0.04	0.01	0.05	0.05	0.08	0.08	0.08
Crit Moves:	****			****					****			****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Harbor Blvd and I-405 WB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.695
Loss Time (sec):	5	Average Delay (sec/veh):	19.7
Optimal Cycle:	38	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			Split Phase			Split Phase		
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 4	0 0	0	0 4	0 0	0	0 0	0 0	1	0 1!	0 1
Volume Module:												
Base Vol:	0	1567	0	0	2327	0	0	0	0	508	0	894
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	1567	0	0	2327	0	0	0	0	508	0	894
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1567	0	0	2327	0	0	0	0	508	0	894
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1567	0	0	2327	0	0	0	0	508	0	894
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1567	0	0	2327	0	0	0	0	508	0	894
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	4.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	1.36	0.00	1.64
Final Sat.:	0	6916	0	0	6916	0	0	0	0	2298	0	2762
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.22	0.00	0.32
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.48	0.00	0.00	0.48	0.00	0.00	0.00	0.00	0.47	0.00	0.47
Volume/Cap:	0.00	0.47	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.47	0.00	0.69
Delay/Veh:	0.0	17.3	0.0	0.0	20.7	0.0	0.0	0.0	0.0	18.4	0.0	22.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.3	0.0	0.0	20.7	0.0	0.0	0.0	0.0	18.4	0.0	22.2
LOS by Move:	A	B	A	A	C	A	A	A	A	B	A	C
HCM2k85thQ:	0	13	0	0	24	0	0	0	0	12	0	21

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harbor Blvd and I-405 EB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.524
Loss Time (sec):	5	Average Delay (sec/veh):	13.2
Optimal Cycle:	26	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			Split Phase			Split Phase		
Rights:	Ignore			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 3	0 1	0	0 4	0 0	1	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1729	0	0	1504	0	385	0	429	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:	0	1729	0	0	1504	0	385	0	429	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1729	0	0	1504	0	385	0	429	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1729	0	0	1504	0	385	0	429	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1729	0	0	1504	0	385	0	429	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.90	1.00	0.90	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.47	0.00	1.53	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	2518	0	2611	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.00	0.00	0.22	0.00	0.15	0.00	0.16	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.64	0.00	0.00	0.64	0.00	0.31	0.00	0.31	0.00	0.00	0.00
Volume/Cap:	0.00	0.52	0.00	0.00	0.34	0.00	0.49	0.00	0.52	0.00	0.00	0.00
Delay/Veh:	0.0	10.1	0.0	0.0	8.5	0.0	28.0	0.0	28.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	10.1	0.0	0.0	8.5	0.0	28.0	0.0	28.5	0.0	0.0	0.0
LOS by Move:	A	B	A	A	A	A	C	A	C	A	A	A
HCM2k85thQ:	0	16	0	0	9	0	10	0	11	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #19 Fairview St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.667
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			Split Phase			Split Phase		
Rights:	WideBypass			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	1 0	1 1	0	0 1
Volume Module:												
Base Vol:	6	1278	414	243	1402	6	6	23	23	300	9	155
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:	6	1278	414	243	1402	6	6	23	23	300	9	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:	6	1278	414	243	1402	6	6	23	23	300	9	155
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	1278	414	243	1402	6	6	23	23	300	9	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:	6	1278	414	243	1402	6	6	23	23	300	9	155
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.27	0.73	1.00	2.99	0.01	0.23	0.89	0.88	1.94	0.06	1.00
Final Sat.:	1600	3826	1174	1600	4980	20	369	1415	1415	3107	93	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.35	0.15	0.28	0.29	0.02	0.02	0.02	0.10	0.10	0.10
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Fairview St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.872
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	73	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			WideBypass			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	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	157	1206	227	241	1401	161	214	1233	191	163	732	245
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	1206	227	241	1401	161	214	1233	191	163	732	245
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1206	227	241	1401	161	214	1233	191	163	732	245
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	157	1206	227	241	1401	161	214	1233	191	163	732	245
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	157	1206	227	241	1401	161	214	1233	191	163	732	245
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	2.69	0.31	1.00	2.60	0.40	1.00	2.25	0.75
Final Sat.:	1600	5100	1600	1600	4505	495	1600	4356	644	1600	3796	1204
Capacity Analysis Module:												
Vol/Sat:	0.10	0.24	0.14	0.15	0.31	0.33	0.13	0.28	0.30	0.10	0.19	0.20
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Fairview St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.786
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
Y+R:	4.0	4.0	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	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	121	1294	173	142	1727	125	221	522	120	194	500	40
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:	121	1294	173	142	1727	125	221	522	120	194	500	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	121	1294	173	142	1727	125	221	522	120	194	500	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	121	1294	173	142	1727	125	221	522	120	194	500	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	121	1294	173	142	1727	125	221	522	120	194	500	40
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.63	0.37	1.00	1.85	0.15
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	2702	598	1600	3063	237
Capacity Analysis Module:												
Vol/Sat:	0.08	0.25	0.11	0.09	0.34	0.08	0.14	0.19	0.20	0.12	0.16	0.17
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Fairview St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.753
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	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	188	831	116	215	1503	127	237	657	176	421	553	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:	188	831	116	215	1503	127	237	657	176	421	553	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:	188	831	116	215	1503	127	237	657	176	421	553	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	831	116	215	1503	127	237	657	176	421	553	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:	188	831	116	215	1503	127	237	657	176	421	553	110
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.63	0.37	2.00	2.77	0.23	2.00	2.37	0.63	2.00	2.50	0.50
Final Sat.:	3200	4412	588	3200	4626	374	3200	3986	1014	3200	4204	796
Capacity Analysis Module:												
Vol/Sat:	0.06	0.19	0.20	0.07	0.32	0.34	0.07	0.16	0.17	0.13	0.13	0.14
Crit Moves:	****					****			****	****		

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #23 Fairview St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.850
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	65	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	2 1	0	2 0	2 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	215	952	125	205	1628	119	69	1010	301	307	926	300
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:	215	952	125	205	1628	119	69	1010	301	307	926	300
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	215	952	125	205	1628	119	69	1010	301	307	926	300
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	952	125	205	1628	119	69	1010	301	307	926	300
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	215	952	125	205	1628	119	69	1010	301	307	926	300
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	2.65	0.35	2.00	2.80	0.20	2.00	2.31	0.69	2.00	2.27	0.73
Final Sat.:	3200	4443	557	3200	4673	327	3200	3898	1102	3200	3825	1175
Capacity Analysis Module:												
Vol/Sat:	0.07	0.21	0.22	0.06	0.35	0.36	0.02	0.26	0.27	0.10	0.24	0.26
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Fairview St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
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:	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	3 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	248	771	89	307	1546	173	125	1019	150	235	494	140
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:	248	771	89	307	1546	173	125	1019	150	235	494	140
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	248	771	89	307	1546	173	125	1019	150	235	494	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	771	89	307	1546	173	125	1019	150	235	494	140
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	248	771	89	307	1546	173	125	1019	150	235	494	140
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.69	0.31	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4503	497	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.17	0.18	0.10	0.30	0.11	0.04	0.20	0.09	0.07	0.10	0.09
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #25 Fairview Rd and Sunflower 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			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	2 1	0	2 0	1 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	185	1071	163	204	1738	111	49	322	65	306	256	132
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:	185	1071	163	204	1738	111	49	322	65	306	256	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	185	1071	163	204	1738	111	49	322	65	306	256	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	185	1071	163	204	1738	111	49	322	65	306	256	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	185	1071	163	204	1738	111	49	322	65	306	256	132
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.82	0.18	2.00	1.66	0.34	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4712	288	3200	2763	537	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.10	0.06	0.37	0.39	0.02	0.12	0.12	0.10	0.08	0.08
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Greenville St and Edinger 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:	Split Phase			Split Phase			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	0	0 1	0 0	0	0 0	0 0	2	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	186	0	251	0	0	0	0	960	234	172	915	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:	186	0	251	0	0	0	0	960	234	172	915	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	0	251	0	0	0	0	960	234	172	915	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	186	0	251	0	0	0	0	960	234	172	915	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	0	251	0	0	0	0	960	234	172	915	0
Saturation Flow Module:												
Sat/Lane:	1600 1600		1600	1600 1600		1600	1600 1600		1600	1600 1600		1600
Adjustment:	1.00 1.06		1.00	1.00 1.06		1.00	1.00 1.05		1.00	1.00 1.06		1.00
Lanes:	1.00 0.00		1.00	0.00 0.00		0.00	0.00 2.41		0.59	1.00 2.00		0.00
Final Sat.:	1600	0	1600	0	0	0	0 4059		941	1600 3400		0
Capacity Analysis Module:												
Vol/Sat:	0.12 0.00		0.16	0.00 0.00		0.00	0.00 0.24		0.25	0.11 0.27		0.00
Crit Moves:			****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #27 Greenville St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.727
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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			WideBypass			WideBypass		
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	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	47	193	78	154	472	160	33	739	118	164	662	76
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:	47	193	78	154	472	160	33	739	118	164	662	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	193	78	154	472	160	33	739	118	164	662	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	193	78	154	472	160	33	739	118	164	662	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	193	78	154	472	160	33	739	118	164	662	76
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	1.42	0.58	1.00	1.00	1.00	1.00	1.72	0.28	1.00	1.79	0.21
Final Sat.:	1600	2379	921	1600	1700	1600	1600	2859	441	1600	2970	330
Capacity Analysis Module:												
Vol/Sat:	0.03	0.08	0.08	0.10	0.28	0.10	0.02	0.26	0.27	0.10	0.22	0.23
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #28 Raitt St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.715
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			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	62	570	90	100	762	104	116	704	90	172	542	97
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:	62	570	90	100	762	104	116	704	90	172	542	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	570	90	100	762	104	116	704	90	172	542	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	62	570	90	100	762	104	116	704	90	172	542	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	62	570	90	100	762	104	116	704	90	172	542	97
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.73	0.27	1.00	1.76	0.24	1.00	1.77	0.23	1.00	1.70	0.30
Final Sat.:	1600	2864	436	1600	2916	384	1600	2937	363	1600	2814	486
Capacity Analysis Module:												
Vol/Sat:	0.04	0.20	0.21	0.06	0.26	0.27	0.07	0.24	0.25	0.11	0.19	0.20
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #29 Raitt St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.851
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	65	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			WideBypass			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	188	501	181	152	716	85	165	1008	145	117	916	54
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:	188	501	181	152	716	85	165	1008	145	117	916	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	188	501	181	152	716	85	165	1008	145	117	916	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	501	181	152	716	85	165	1008	145	117	916	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	188	501	181	152	716	85	165	1008	145	117	916	54
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	1.47	0.53	1.00	1.79	0.21	1.00	1.75	0.25	1.00	1.89	0.11
Final Sat.:	1600	2451	849	1600	2960	340	1600	2898	402	1600	3122	178
Capacity Analysis Module:												
Vol/Sat:	0.12	0.20	0.21	0.10	0.24	0.25	0.10	0.35	0.36	0.07	0.29	0.30
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Bear St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.737
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
Y+R:	4.0	4.0	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	1 0	2 0	1	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	81	280	119	199	756	300	97	1663	114	70	1180	100
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:	81	280	119	199	756	300	97	1663	114	70	1180	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	280	119	199	756	300	97	1663	114	70	1180	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	81	280	119	199	756	300	97	1663	114	70	1180	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	81	280	119	199	756	300	97	1663	114	70	1180	100
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.81	0.19	1.00	2.77	0.23
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	4692	308	1600	4625	375
Capacity Analysis Module:												
Vol/Sat:	0.05	0.08	0.07	0.12	0.22	0.19	0.06	0.35	0.37	0.04	0.26	0.27
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Bristol St and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.725
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			Ovl		
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	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	192	988	167	335	1376	181	324	963	156	359	824	273
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	988	167	335	1376	181	324	963	156	359	824	273
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	988	167	335	1376	181	324	963	156	359	824	273
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	192	988	167	335	1376	181	324	963	156	359	824	273
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	192	988	167	335	1376	181	324	963	156	359	824	273
OvlAdjVol:												106
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.58	0.42	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4331	669	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.19	0.10	0.10	0.27	0.11	0.10	0.22	0.23	0.11	0.16	0.17
OvlAdjV/S:												0.07
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Bristol St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.827
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	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			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	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	123	1087	96	318	1284	80	149	755	93	121	401	83
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:	123	1087	96	318	1284	80	149	755	93	121	401	83
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	123	1087	96	318	1284	80	149	755	93	121	401	83
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	123	1087	96	318	1284	80	149	755	93	121	401	83
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	123	1087	96	318	1284	80	149	755	93	121	401	83
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.76	0.24	1.00	2.82	0.18	1.00	1.78	0.22	1.00	1.66	0.34
Final Sat.:	1600	4610	390	1600	4718	282	1600	2949	351	1600	2751	549
Capacity Analysis Module:												
Vol/Sat:	0.08	0.24	0.25	0.20	0.27	0.28	0.09	0.26	0.26	0.08	0.15	0.15
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Bristol St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.669
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			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	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	65	1419	197	137	1507	41	83	403	35	96	240	41
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:	65	1419	197	137	1507	41	83	403	35	96	240	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	1419	197	137	1507	41	83	403	35	96	240	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	1419	197	137	1507	41	83	403	35	96	240	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	1419	197	137	1507	41	83	403	35	96	240	41
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.04	1.00
Lanes:	1.00	2.63	0.37	1.00	2.92	0.08	1.00	1.84	0.16	1.00	1.71	0.29
Final Sat.:	1600	4415	585	1600	4873	127	1600	3044	256	1600	2833	467
Capacity Analysis Module:												
Vol/Sat:	0.04	0.32	0.34	0.09	0.31	0.32	0.05	0.13	0.14	0.06	0.08	0.09
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Bristol St and 1st St

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
Y+R:	4.0	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	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	183	1278	162	275	1133	160	206	1268	128	108	813	119
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:	183	1278	162	275	1133	160	206	1268	128	108	813	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1278	162	275	1133	160	206	1268	128	108	813	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	183	1278	162	275	1133	160	206	1268	128	108	813	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	183	1278	162	275	1133	160	206	1268	128	108	813	119
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.72	0.28	1.00	2.62	0.38
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	4560	440	1600	4387	613
Capacity Analysis Module:												
Vol/Sat:	0.06	0.25	0.10	0.09	0.22	0.10	0.13	0.28	0.29	0.07	0.19	0.19
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Bristol St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
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
Y+R:	4.0	4.0	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	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	118	1054	53	161	1571	162	275	472	232	155	432	50
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:	118	1054	53	161	1571	162	275	472	232	155	432	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1054	53	161	1571	162	275	472	232	155	432	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	118	1054	53	161	1571	162	275	472	232	155	432	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	118	1054	53	161	1571	162	275	472	232	155	432	50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.03	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.34	0.66	1.00	1.79	0.21
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	2245	1055	1600	2968	332
Capacity Analysis Module:												
Vol/Sat:	0.07	0.21	0.03	0.10	0.31	0.10	0.17	0.21	0.22	0.10	0.15	0.15
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Bristol St and 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	2 0	1	2 0	2 1	0	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	192	862	159	386	1307	148	206	1149	286	188	860	146
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	862	159	386	1307	148	206	1149	286	188	860	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:	192	862	159	386	1307	148	206	1149	286	188	860	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	192	862	159	386	1307	148	206	1149	286	188	860	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:	192	862	159	386	1307	148	206	1149	286	188	860	146
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.00	1.00	2.00	2.69	0.31	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	3400	1600	3200	4512	488	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.25	0.10	0.12	0.29	0.30	0.13	0.23	0.18	0.12	0.17	0.09
Crit Moves:		****		****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Bristol St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.794
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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:	WideBypass			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:	65	725	136	283	1011	119	189	913	84	122	554	71
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:	65	725	136	283	1011	119	189	913	84	122	554	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	65	725	136	283	1011	119	189	913	84	122	554	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	725	136	283	1011	119	189	913	84	122	554	71
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	65	725	136	283	1011	119	189	913	84	122	554	71
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.03	1.00	1.00	1.04	1.00
Lanes:	1.00	2.53	0.47	1.00	2.68	0.32	1.00	1.83	0.17	1.00	1.77	0.23
Final Sat.:	1600	4242	758	1600	4495	505	1600	3030	270	1600	2936	364
Capacity Analysis Module:												
Vol/Sat:	0.04	0.17	0.18	0.18	0.22	0.24	0.12	0.30	0.31	0.08	0.19	0.20
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Bristol St and Alton Ave

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			Permitted			Permitted		
Rights:	WideBypass			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	0 1	0
Volume Module:												
Base Vol:	9	628	47	227	1571	36	190	117	244	41	87	31
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:	9	628	47	227	1571	36	190	117	244	41	87	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	9	628	47	227	1571	36	190	117	244	41	87	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	9	628	47	227	1571	36	190	117	244	41	87	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	9	628	47	227	1571	36	190	117	244	41	87	31
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	3.00	1.00	1.00	1.00	1.00	1.00	0.74	0.26
Final Sat.:	1600	4666	334	1600	5100	1600	1600	1700	1600	1600	1180	420
Capacity Analysis Module:												
Vol/Sat:	0.01	0.13	0.14	0.14	0.31	0.02	0.12	0.07	0.15	0.03	0.07	0.07
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Bristol St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.738
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
Y+R:	4.0	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	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	92	478	120	326	1419	148	192	1394	283	191	910	132
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	478	120	326	1419	148	192	1394	283	191	910	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	478	120	326	1419	148	192	1394	283	191	910	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	92	478	120	326	1419	148	192	1394	283	191	910	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	92	478	120	326	1419	148	192	1394	283	191	910	132
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.72	0.28	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	4547	453	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.09	0.08	0.10	0.31	0.33	0.06	0.27	0.18	0.06	0.18	0.08
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Bristol St and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.635
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
Y+R:	4.0	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 1	2 0	3	0 1	2 0	2	1 1	2 0	3	0 1
Volume Module:												
Base Vol:	94	461	136	245	1388	104	114	942	381	246	400	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:	94	461	136	245	1388	104	114	942	381	246	400	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:	94	461	136	245	1388	104	114	942	381	246	400	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	461	136	245	1388	104	114	942	381	246	400	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:	94	461	136	245	1388	104	114	942	381	246	400	138
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.85	1.15	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4757	1843	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.09	0.09	0.08	0.27	0.07	0.04	0.20	0.21	0.08	0.08	0.09
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Bristol St and I-405 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.500
Loss Time (sec):	5	Average Delay (sec/veh):	19.1
Optimal Cycle:	25	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			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Ovl		
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 4	0 1	0	0 4	1 0	0	0 0	0 2	1	1 1	0 2
Volume Module:												
Base Vol:	0	1489	191	0	1967	8	0	0	34	121	73	665
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	1489	191	0	1967	8	0	0	34	121	73	665
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1489	0	0	1967	8	0	0	34	121	73	665
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1489	0	0	1967	8	0	0	34	121	73	665
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1489	0	0	1967	8	0	0	34	121	73	665
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	0.75	0.92	0.92	0.75
Lanes:	0.00	4.00	1.00	0.00	4.98	0.02	0.00	0.00	2.00	1.87	1.13	2.00
Final Sat.:	0	6916	1900	0	8601	35	0	0	2842	3276	1976	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.00	0.00	0.23	0.23	0.00	0.00	0.01	0.04	0.04	0.23
Crit Moves:	****				****				****			****
Green/Cycle:	0.00	0.46	0.00	0.00	0.46	0.46	0.00	0.00	0.02	0.47	0.47	0.47
Volume/Cap:	0.00	0.47	0.00	0.00	0.50	0.50	0.00	0.00	0.50	0.08	0.08	0.50
Delay/Veh:	0.0	18.8	0.0	0.0	19.2	19.2	0.0	0.0	53.9	14.7	14.7	18.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	18.8	0.0	0.0	19.2	19.2	0.0	0.0	53.9	14.7	14.7	18.7
LOS by Move:	A	B	A	A	B	B	A	A	D	B	B	B
HCM2k85thQ:	0	13	0	0	14	14	0	0	2	2	2	13

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Bristol St and I-405 EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.607
Loss Time (sec):	5	Average Delay (sec/veh):	22.3
Optimal Cycle:	31	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			Split Phase			Split Phase		
Rights:	Include			Ignore			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	4 0	0	0 0	2	1 1	3 0	0	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	113	1108	0	0	985	847	573	0	524	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:	113	1108	0	0	985	847	573	0	524	0	0	0
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:	113	1108	0	0	985	0	573	0	524	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	113	1108	0	0	985	0	573	0	524	0	0	0
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:	113	1108	0	0	985	0	573	0	524	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.92	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	4.00	0.00	0.00	3.00	1.00	3.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	6916	0	0	5187	1729	5253	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.00	0.00	0.19	0.00	0.11	0.00	0.32	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.10	0.42	0.00	0.00	0.31	0.00	0.53	0.00	0.53	0.00	0.00	0.00
Volume/Cap:	0.61	0.39	0.00	0.00	0.61	0.00	0.20	0.00	0.61	0.00	0.00	0.00
Delay/Veh:	48.6	20.4	0.0	0.0	29.8	0.0	12.2	0.0	17.3	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	48.6	20.4	0.0	0.0	29.8	0.0	12.2	0.0	17.3	0.0	0.0	0.0
LOS by Move:	D	C	A	A	C	A	B	A	B	A	A	A
HCM2k85thQ:	7	10	0	0	15	0	5	0	17	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #43 Flower St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.596
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			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 0	1	1 0	2 0	1	1 0	3 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	87	811	118	168	568	76	114	710	81	101	323	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:	87	811	118	168	568	76	114	710	81	101	323	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:	87	811	118	168	568	76	114	710	81	101	323	135
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	87	811	118	168	568	76	114	710	81	101	323	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:	87	811	118	168	568	76	114	710	81	101	323	135
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	5100	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.24	0.07	0.11	0.17	0.05	0.07	0.14	0.05	0.06	0.10	0.08
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #44 Flower St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.795
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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:	1 0	2 0	1	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	139	602	159	175	554	58	165	1514	60	209	861	123
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:	139	602	159	175	554	58	165	1514	60	209	861	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	139	602	159	175	554	58	165	1514	60	209	861	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	602	159	175	554	58	165	1514	60	209	861	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	602	159	175	554	58	165	1514	60	209	861	123
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	1.81	0.19	1.00	2.89	0.11	1.00	2.62	0.38
Final Sat.:	1600	3400	1600	1600	2997	303	1600	4817	183	1600	4400	600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.18	0.10	0.11	0.18	0.19	0.10	0.31	0.33	0.13	0.20	0.21
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #45 Flower St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.819
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	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:	Permitted			Permitted			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	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	60	438	38	66	367	53	51	581	44	64	432	58
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:	60	438	38	66	367	53	51	581	44	64	432	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	438	38	66	367	53	51	581	44	64	432	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	438	38	66	367	53	51	581	44	64	432	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	60	438	38	66	367	53	51	581	44	64	432	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.92	0.08	1.00	0.87	0.13	1.00	0.93	0.07	1.00	0.88	0.12
Final Sat.:	1600	1472	128	1600	1398	202	1600	1487	113	1600	1411	189
Capacity Analysis Module:												
Vol/Sat:	0.04	0.30	0.30	0.04	0.26	0.26	0.03	0.39	0.39	0.04	0.31	0.31
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #46 Flower St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.769
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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	63	331	73	98	544	120	155	1065	297	74	546	60
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:	63	331	73	98	544	120	155	1065	297	74	546	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	63	331	73	98	544	120	155	1065	297	74	546	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	63	331	73	98	544	120	155	1065	297	74	546	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	63	331	73	98	544	120	155	1065	297	74	546	60
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	1.64	0.36	1.00	1.64	0.36	1.00	1.56	0.44	1.00	1.80	0.20
Final Sat.:	1600	2722	578	1600	2722	578	1600	2602	698	1600	2983	317
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.13	0.06	0.20	0.21	0.10	0.41	0.43	0.05	0.18	0.19
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #47 Flower St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.698
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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	22	142	73	163	352	264	165	1879	80	54	909	58
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	142	73	163	352	264	165	1879	80	54	909	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	22	142	73	163	352	264	165	1879	80	54	909	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	22	142	73	163	352	264	165	1879	80	54	909	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	22	142	73	163	352	264	165	1879	80	54	909	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.32	0.68	1.00	1.14	0.86	1.00	2.88	0.12	1.00	2.82	0.18
Final Sat.:	1600	2213	1087	1600	1929	1371	1600	4804	196	1600	4712	288
Capacity Analysis Module:												
Vol/Sat:	0.01	0.06	0.07	0.10	0.18	0.19	0.10	0.39	0.41	0.03	0.19	0.20
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #48 Main St and La Veta Ave

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			Include			Include			Ovl		
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	2 1	0	2 0	2 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	84	579	300	198	1034	173	350	495	215	316	276	230
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:	84	579	300	198	1034	173	350	495	215	316	276	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	579	300	198	1034	173	350	495	215	316	276	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	579	300	198	1034	173	350	495	215	316	276	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	579	300	198	1034	173	350	495	215	316	276	230
OvlAdjVol:			142									131
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.57	0.43	2.00	2.09	0.91	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4312	688	3200	3546	1454	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.19	0.06	0.24	0.25	0.11	0.14	0.15	0.10	0.08	0.14
OvlAdjV/S:			0.09									0.08
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #49 Main St and Mainplace Dr / Memory Ln

Cycle (sec):	100	Critical Vol./Cap.(X):	0.485
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
Y+R:	4.0	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 2	1 0		2 0 2	0 1	
Volume Module:												
Base Vol:	28	764	250	32	1244	260	148	233	16	198	226	15
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	764	250	32	1244	260	148	233	16	198	226	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:	28	764	250	32	1244	260	148	233	16	198	226	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	764	250	32	1244	260	148	233	16	198	226	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:	28	764	250	32	1244	260	148	233	16	198	226	15
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.26	0.74	2.00	2.48	0.52	2.00	2.81	0.19	2.00	2.00	1.00
Final Sat.:	3200	3817	1183	3200	4170	830	3200	4692	308	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.20	0.21	0.01	0.30	0.31	0.05	0.05	0.05	0.06	0.07	0.01
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #50 Main St and 17th St

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
Y+R:	4.0	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 0	1	2 0	1 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	128	760	163	195	1086	70	116	1225	61	325	1300	19
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	760	163	195	1086	70	116	1225	61	325	1300	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	760	163	195	1086	70	116	1225	61	325	1300	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	760	163	195	1086	70	116	1225	61	325	1300	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	760	163	195	1086	70	116	1225	61	325	1300	19
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	2.00	1.00	2.00	1.88	0.12	2.00	2.86	0.14	2.00	2.96	0.04
Final Sat.:	3200	3400	1600	3200	3106	194	3200	4772	228	3200	4931	69
Capacity Analysis Module:												
Vol/Sat:	0.04	0.22	0.10	0.06	0.35	0.36	0.04	0.26	0.27	0.10	0.26	0.27
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #51 Main St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.755
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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	138	901	79	59	1042	159	90	545	99	43	566	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:	138	901	79	59	1042	159	90	545	99	43	566	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:	138	901	79	59	1042	159	90	545	99	43	566	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	901	79	59	1042	159	90	545	99	43	566	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:	138	901	79	59	1042	159	90	545	99	43	566	34
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	1.84	0.16	1.00	1.74	0.26	1.00	1.69	0.31	1.00	1.89	0.11
Final Sat.:	1600	3042	258	1600	2876	424	1600	2808	492	1600	3119	181
Capacity Analysis Module:												
Vol/Sat:	0.09	0.30	0.31	0.04	0.36	0.38	0.06	0.19	0.20	0.03	0.18	0.19
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #52 Main St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.667
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:	Permitted			Permitted			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	0 0		0 0 1	1 0		0 0 0	0 0		0 1 1	1 0	
Volume Module:												
Base Vol:	68	1083	0	0	1107	98	0	0	0	61	848	65
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:	68	1083	0	0	1107	98	0	0	0	61	848	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	1083	0	0	1107	98	0	0	0	61	848	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	1083	0	0	1107	98	0	0	0	61	848	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	1083	0	0	1107	98	0	0	0	61	848	65
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.02	1.00
Lanes:	1.00	2.00	0.00	0.00	1.84	0.16	0.00	0.00	0.00	0.19	2.61	0.20
Final Sat.:	1600	3400	0	0	3040	260	0	0	0	301	4279	320
Capacity Analysis Module:												
Vol/Sat:	0.04	0.32	0.00	0.00	0.36	0.38	0.00	0.00	0.00	0.04	0.20	0.20
Crit Moves:	****					****					****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #53 Main St and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.490
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:	Permitted			Permitted			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:	0 0	1 1	0	0 0	1 1	0	0 0	0 1	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	977	23	0	1098	27	0	93	14	0	114	28
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	977	23	0	1098	27	0	93	14	0	114	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:	0	977	23	0	1098	27	0	93	14	0	114	28
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	977	23	0	1098	27	0	93	14	0	114	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:	0	977	23	0	1098	27	0	93	14	0	114	28
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.95	0.05	0.00	1.95	0.05	0.00	0.87	0.13	0.00	0.80	0.20
Final Sat.:	0	3226	74	0	3223	77	0	1391	209	0	1285	315
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.31	0.00	0.34	0.35	0.00	0.07	0.07	0.00	0.09	0.09
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #54 Main St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.758
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:	1 0	1	1 0	1 0	2	0 1	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	116	596	60	88	882	65	119	1393	147	88	1097	61
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:	116	596	60	88	882	65	119	1393	147	88	1097	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:	116	596	60	88	882	65	119	1393	147	88	1097	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	596	60	88	882	65	119	1393	147	88	1097	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:	116	596	60	88	882	65	119	1393	147	88	1097	61
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	1.82	0.18	1.00	2.00	1.00	1.00	2.71	0.29	1.00	2.84	0.16
Final Sat.:	1600	3007	293	1600	3400	1600	1600	4542	458	1600	4747	253
Capacity Analysis Module:												
Vol/Sat:	0.07	0.20	0.20	0.06	0.26	0.04	0.07	0.31	0.32	0.06	0.23	0.24
Crit Moves:	****			****					****	****		

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #55 Main St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.902
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	88	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:	Prot+Permit			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:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	89	838	42	175	1364	27	42	396	43	140	373	107
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	838	42	175	1364	27	42	396	43	140	373	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	838	42	175	1364	27	42	396	43	140	373	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	838	42	175	1364	27	42	396	43	140	373	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	838	42	175	1364	27	42	396	43	140	373	107
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	1.90	0.10	1.00	1.96	0.04	1.00	0.90	0.10	1.00	1.00	1.00
Final Sat.:	1600	3147	153	1600	3238	62	1600	1443	157	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.27	0.28	0.11	0.42	0.43	0.03	0.27	0.27	0.09	0.22	0.07
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #56 Main St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.826
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	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:	1 0	1	1 0	1 0	1	1 0	1 0	2	0 1	1 0	2	1 0
Volume Module:												
Base Vol:	109	617	67	228	1052	55	75	971	131	122	709	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:	109	617	67	228	1052	55	75	971	131	122	709	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:	109	617	67	228	1052	55	75	971	131	122	709	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	617	67	228	1052	55	75	971	131	122	709	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:	109	617	67	228	1052	55	75	971	131	122	709	87
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.05	1.00
Lanes:	1.00	1.80	0.20	1.00	1.90	0.10	1.00	2.00	1.00	1.00	2.67	0.33
Final Sat.:	1600	2987	313	1600	3141	159	1600	3400	1600	1600	4475	525
Capacity Analysis Module:												
Vol/Sat:	0.07	0.21	0.21	0.14	0.33	0.35	0.05	0.29	0.08	0.08	0.16	0.17
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #57 Main St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.735
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			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	3 0	1
Volume Module:												
Base Vol:	54	311	264	645	848	192	240	1393	252	146	435	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:	54	311	264	645	848	192	240	1393	252	146	435	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:	54	311	264	645	848	192	240	1393	252	146	435	218
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	311	264	645	848	192	240	1393	252	146	435	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:	54	311	264	645	848	192	240	1393	252	146	435	218
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.06	0.17	0.20	0.17	0.12	0.08	0.27	0.16	0.05	0.09	0.14
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Penn Wy and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	5	Average Delay (sec/veh):	11.2
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:	Split Phase			Split Phase			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	0	0 2	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	43	0	217	0	0	0	0	1238	631	214	1722	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:	43	0	217	0	0	0	0	1238	631	214	1722	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:	43	0	217	0	0	0	0	1238	631	214	1722	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	0	217	0	0	0	0	1238	631	214	1722	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:	43	0	217	0	0	0	0	1238	631	214	1722	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.75	1.00	1.00	1.00	1.00	0.86	0.86	0.95	0.91	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	3.00	0.00
Final Sat.:	3502	0	2842	0	0	0	0	3282	1641	1805	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.08	0.00	0.00	0.00	0.00	0.38	0.38	0.12	0.33	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.13	0.00	0.13	0.00	0.00	0.00	0.00	0.63	0.63	0.20	0.82	0.00
Volume/Cap:	0.10	0.00	0.60	0.00	0.00	0.00	0.00	0.60	0.61	0.60	0.40	0.00
Delay/Veh:	38.7	0.0	44.1	0.0	0.0	0.0	0.0	11.5	11.7	39.5	2.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.7	0.0	44.1	0.0	0.0	0.0	0.0	11.5	11.7	39.5	2.4	0.0
LOS by Move:	D	A	D	A	A	A	A	B	B	D	A	A
HCM2k85thQ:	1	0	7	0	0	0	0	19	20	10	8	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 I-5 NB Off Ramps/17th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.740
Loss Time (sec):	5	Average Delay (sec/veh):	31.2
Optimal Cycle:	44	Level Of Service:	C

Street Name:	I-5 NB Off Ramps						17th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Ignore			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 1	0	0 1	1	0 0	0 1	1	0 3	0 1	0	0 2	1 0
Volume Module:												
Base Vol:	768	35	22	57	0	295	99	1040	376	0	1245	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:	768	35	22	57	0	295	99	1040	376	0	1245	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	768	35	22	57	0	295	99	1040	0	0	1245	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	768	35	22	57	0	295	99	1040	0	0	1245	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	768	35	22	57	0	295	99	1040	0	0	1245	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.91	1.00	1.00	0.91	0.91
Lanes:	1.91	0.09	1.00	1.00	0.00	1.00	1.00	3.00	1.00	0.00	2.95	0.05
Final Sat.:	3467	158	1615	1805	0	1615	1805	5187	1900	0	5095	82
Capacity Analysis Module:												
Vol/Sat:	0.22	0.22	0.01	0.03	0.00	0.18	0.05	0.20	0.00	0.00	0.24	0.24
Crit Moves:		****				****	****				****	
Green/Cycle:	0.30	0.30	0.30	0.25	0.00	0.25	0.07	0.40	0.00	0.00	0.33	0.33
Volume/Cap:	0.74	0.74	0.05	0.13	0.00	0.74	0.74	0.50	0.00	0.00	0.74	0.74
Delay/Veh:	34.3	34.3	24.9	29.4	0.0	42.0	64.9	22.4	0.0	0.0	31.5	31.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.3	34.3	24.9	29.4	0.0	42.0	64.9	22.4	0.0	0.0	31.5	31.5
LOS by Move:	C	C	C	C	A	D	E	C	A	A	C	C
HCM2k85thQ:	19	19	1	2	0	15	7	13	0	0	21	21

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 Penn Wy and I-5 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.436
Loss Time (sec):	5	Average Delay (sec/veh):	19.0
Optimal Cycle:	22	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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	2	0 1	2 0	2	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module:												
Base Vol:	0	158	140	799	165	0	0	0	0	179	0	100
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	140	799	165	0	0	0	0	179	0	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	140	799	165	0	0	0	0	179	0	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	158	140	799	165	0	0	0	0	179	0	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	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	140	799	165	0	0	0	0	179	0	100
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.92	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.75
Lanes:	0.00	2.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3610	1615	3502	3610	0	0	0	0	1805	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.04	0.09	0.23	0.05	0.00	0.00	0.00	0.00	0.10	0.00	0.04
Crit Moves:			****	****						****		
Green/Cycle:	0.00	0.20	0.20	0.52	0.72	0.00	0.00	0.00	0.00	0.23	0.00	0.75
Volume/Cap:	0.00	0.22	0.44	0.44	0.06	0.00	0.00	0.00	0.00	0.44	0.00	0.05
Delay/Veh:	0.0	33.7	36.1	14.9	4.0	0.0	0.0	0.0	0.0	33.9	0.0	3.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	33.7	36.1	14.9	4.0	0.0	0.0	0.0	0.0	33.9	0.0	3.2
LOS by Move:	A	C	D	B	A	A	A	A	A	C	A	A
HCM2k85thQ:	0	3	6	12	1	0	0	0	0	8	0	1

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #61 Santiago St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.723
Loss Time (sec):	5	Average Delay (sec/veh):	16.9
Optimal Cycle:	0	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:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	206	143	20	5	303	74	121	46	246	72	66	13
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:	206	143	20	5	303	74	121	46	246	72	66	13
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	206	143	20	5	303	74	121	46	246	72	66	13
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	206	143	20	5	303	74	121	46	246	72	66	13
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	206	143	20	5	303	74	121	46	246	72	66	13
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.88	0.12	1.00	0.80	0.20	0.72	0.28	1.00	0.48	0.44	0.08
Final Sat.:	468	443	62	471	419	102	337	128	540	208	190	37
Capacity Analysis Module:												
Vol/Sat:	0.44	0.32	0.32	0.01	0.72	0.72	0.36	0.36	0.46	0.35	0.35	0.35
Crit Moves:	****				****				****		****	
Delay/Veh:	15.5	12.6	12.6	10.2	24.0	24.0	14.0	14.0	13.9	14.2	14.2	14.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	15.5	12.6	12.6	10.2	24.0	24.0	14.0	14.0	13.9	14.2	14.2	14.2
LOS by Move:	C	B	B	B	C	C	B	B	B	B	B	B
ApproachDel:	14.2			23.8			13.9			14.2		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	14.2			23.8			13.9			14.2		
LOS by Appr:	B			C			B			B		
AllWayAvgQ:	0.7	0.4	0.4	0.0	2.1	2.1	0.5	0.5	0.7	0.4	0.4	0.4

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #62 Santiago St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.553
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:	Permitted			Permitted			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	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	24	71	56	311	161	133	48	474	14	108	807	271
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	71	56	311	161	133	48	474	14	108	807	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	71	56	311	161	133	48	474	14	108	807	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	24	71	56	311	161	133	48	474	14	108	807	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	24	71	56	311	161	133	48	474	14	108	807	271
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.06	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	1600	1700	1600	1600	1700	1600	1600	3208	92	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.04	0.04	0.19	0.09	0.08	0.03	0.15	0.15	0.07	0.24	0.17
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #64 Standard Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.803
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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:	Permitted			Permitted			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	0 1	0	0 0	1! 0	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	108	191	119	12	231	25	86	1317	214	64	1012	12
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:	108	191	119	12	231	25	86	1317	214	64	1012	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	191	119	12	231	25	86	1317	214	64	1012	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	108	191	119	12	231	25	86	1317	214	64	1012	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	108	191	119	12	231	25	86	1317	214	64	1012	12
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	0.62	0.38	0.04	0.87	0.09	1.00	1.72	0.28	1.00	1.98	0.02
Final Sat.:	1600	986	614	72	1379	149	1600	2853	447	1600	3263	38
Capacity Analysis Module:												
Vol/Sat:	0.07	0.19	0.19	0.01	0.17	0.17	0.05	0.46	0.48	0.04	0.31	0.32
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #65 Standard Ave and Mcfadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.609
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			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	74	284	128	220	531	37	17	589	71	138	366	82
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:	74	284	128	220	531	37	17	589	71	138	366	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:	74	284	128	220	531	37	17	589	71	138	366	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	284	128	220	531	37	17	589	71	138	366	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:	74	284	128	220	531	37	17	589	71	138	366	82
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.38	0.62	1.00	1.87	0.13	1.00	1.78	0.22	1.00	1.63	0.37
Final Sat.:	1600	2306	994	1600	3092	208	1600	2956	344	1600	2714	586
Capacity Analysis Module:												
Vol/Sat:	0.05	0.12	0.13	0.14	0.17	0.18	0.01	0.20	0.21	0.09	0.13	0.14
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #66 Halladay St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.659
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:	Permitted				Permitted				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 0	0	1	0	0 0	0	0	0	0 0	1	1	0	1	1	0 0
Volume Module:																
Base Vol:	43	0	100		0	0	0		0	1283	145		160	607	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:	43	0	100		0	0	0		0	1283	145		160	607	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:	43	0	100		0	0	0		0	1283	145		160	607	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	43	0	100		0	0	0		0	1283	145		160	607	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:	43	0	100		0	0	0		0	1283	145		160	607	0	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.06	1.00		1.00	1.06	1.00		1.00	1.03	1.00		1.00	1.04	1.00	
Lanes:	1.00	0.00	1.00		0.00	0.00	0.00		0.00	1.80	0.20		0.42	1.58	0.00	
Final Sat.:	1600	0	1600		0	0	0		0	2975	325		668	2632	0	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.00	0.06		0.00	0.00	0.00		0.00	0.43	0.45		0.10	0.23	0.00	
Crit Moves:			****								****		****			

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #67 Halladay St and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.567
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:	Split Phase			Split Phase			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	0	1 0	1 0	0	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	11	18	49	183	37	39	41	1375	10	115	626	101
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:	11	18	49	183	37	39	41	1375	10	115	626	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	18	49	183	37	39	41	1375	10	115	626	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	18	49	183	37	39	41	1375	10	115	626	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	18	49	183	37	39	41	1375	10	115	626	101
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	0.27	0.73	1.00	0.49	0.51	1.00	2.98	0.02	1.00	2.58	0.42
Final Sat.:	1600	430	1170	1600	779	821	1600	4965	35	1600	4333	667
Capacity Analysis Module:												
Vol/Sat:	0.01	0.04	0.04	0.11	0.05	0.05	0.03	0.28	0.29	0.07	0.14	0.15
Crit Moves:		****	****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #68 SR-55 SB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.615
Loss Time (sec):	5	Average Delay (sec/veh):	19.8
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
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	2	0	0	0	2	0	0	2	1	1	0	0	3	0	1
Volume Module:																		
Base Vol:	0	0	0	961	0	870	0	1441	1027	0	1275	145
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	0	0	961	0	870	0	1441	1027	0	1275	145
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	961	0	870	0	1441	0	0	1275	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	961	0	870	0	1441	0	0	1275	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	961	0	870	0	1441	0	0	1275	0
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	0.91	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1729	0	5187	1900
Capacity Analysis Module:																		
Vol/Sat:	0.00	0.00	0.00	0.27	0.00	0.31	0.00	0.28	0.00	0.00	0.25	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.50	0.00	0.50	0.00	0.45	0.00	0.00	0.45	0.00
Volume/Cap:	0.00	0.00	0.00	0.55	0.00	0.61	0.00	0.61	0.00	0.00	0.54	0.00
Delay/Veh:	0.0	0.0	0.0	17.7	0.0	19.0	0.0	21.3	0.0	0.0	20.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	17.7	0.0	19.0	0.0	21.3	0.0	0.0	20.2	0.0
LOS by Move:	A	A	A	B	A	B	A	C	A	A	C	A
HCM2k85thQ:	0	0	0	16	0	17	0	19	0	0	16	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #69 SR-55 NB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.742
Loss Time (sec):	5	Average Delay (sec/veh):	19.2
Optimal Cycle:	44	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ignore			Include			Ignore			Ignore		
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	0	0 1	0 0	0	0 0	0 0	2	0 2	0 0	3	0 1
Volume Module:												
Base Vol:	908	0	976	0	0	0	0	1609	796	0	517	244
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:	908	0	976	0	0	0	0	1609	796	0	517	244
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	908	0	0	0	0	0	0	1609	0	0	517	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	908	0	0	0	0	0	0	1609	0	0	517	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	908	0	0	0	0	0	0	1609	0	0	517	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.88	1.00	0.91	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	1.00
Final Sat.:	3502	0	1900	0	0	0	0	3610	3344	0	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.26	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.00	0.00	0.10	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.35	0.00	0.00	0.00	0.00	0.00	0.00	0.60	0.00	0.00	0.60	0.00
Volume/Cap:	0.74	0.00	0.00	0.00	0.00	0.00	0.00	0.74	0.00	0.00	0.17	0.00
Delay/Veh:	31.1	0.0	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0	8.9	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.1	0.0	0.0	0.0	0.0	0.0	0.0	15.8	0.0	0.0	8.9	0.0
LOS by Move:	C	A	A	A	A	A	A	B	A	A	A	A
HCM2k85thQ:	21	0	0	0	0	0	0	29	0	0	4	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 SR-55 SB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.552
Loss Time (sec):	5	Average Delay (sec/veh):	23.7
Optimal Cycle:	27	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			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 1	0 0	2	0 1	1 0	1	1 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	221	26	505	50	242	60	35	1338	285	408	647	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:	221	26	505	50	242	60	35	1338	285	408	647	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:	221	26	505	50	242	60	35	1338	285	408	647	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	221	26	505	50	242	60	35	1338	285	408	647	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:	221	26	505	50	242	60	35	1338	285	408	647	108
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.75	0.94	0.94	0.85	0.95	0.91	0.85	0.92	0.91	0.85
Lanes:	1.79	0.21	2.00	0.34	1.66	1.00	1.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3254	383	2842	613	2968	1615	1805	5187	1615	3502	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.07	0.07	0.18	0.08	0.08	0.04	0.02	0.26	0.18	0.12	0.12	0.07
Crit Moves:		****			****			****			****	
Green/Cycle:	0.12	0.12	0.33	0.15	0.15	0.15	0.09	0.47	0.47	0.21	0.59	0.59
Volume/Cap:	0.55	0.55	0.53	0.55	0.55	0.25	0.21	0.55	0.38	0.55	0.21	0.11
Delay/Veh:	42.7	42.7	27.5	40.8	40.8	38.3	42.7	19.4	17.5	36.1	9.7	9.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	42.7	27.5	40.8	40.8	38.3	42.7	19.4	17.5	36.1	9.7	9.2
LOS by Move:	D	D	C	D	D	D	D	B	B	D	A	A
HCM2k85thQ:	7	7	12	8	8	3	2	17	9	10	5	2

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #71 Glassell St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.603
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			Protected			Protected		
Rights:	Ovl			Include			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	1 0	1	1 0	1 1	0	1 0	1 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	263	412	125	17	358	79	38	195	375	236	249	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:	263	412	125	17	358	79	38	195	375	236	249	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:	263	412	125	17	358	79	38	195	375	236	249	6
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	263	412	125	17	358	79	38	195	375	236	249	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:	263	412	125	17	358	79	38	195	375	236	249	6
OvlAdjVol:			0						244			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.03	1.00
Lanes:	2.00	1.00	1.00	1.00	1.64	0.36	1.00	1.00	1.00	1.00	1.95	0.05
Final Sat.:	3200	1700	1600	1600	2722	578	1600	1700	1600	1600	3225	75
Capacity Analysis Module:												
Vol/Sat:	0.08	0.24	0.08	0.01	0.13	0.14	0.02	0.11	0.23	0.15	0.08	0.08
OvlAdjV/S:			0.00						0.15			
Crit Moves:		****			****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Glassell St and SR-22 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.741
Loss Time (sec):	5	Average Delay (sec/veh):	28.5
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			Permitted			Split Phase			Split Phase		
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 0	0	0 0	2 0	1	0 0	0 0	0	1 0	1! 0	1
Volume Module:												
Base Vol:	500	561	0	0	743	346	0	0	0	285	5	426
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:	500	561	0	0	743	346	0	0	0	285	5	426
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	500	561	0	0	743	346	0	0	0	285	5	426
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	500	561	0	0	743	346	0	0	0	285	5	426
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	500	561	0	0	743	346	0	0	0	285	5	426
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.86	0.86	0.86
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.40	0.01	1.59
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	2270	23	2588
Capacity Analysis Module:												
Vol/Sat:	0.28	0.16	0.00	0.00	0.21	0.21	0.00	0.00	0.00	0.13	0.22	0.16
Crit Moves:	****				****						****	
Green/Cycle:	0.37	0.65	0.00	0.00	0.28	0.28	0.00	0.00	0.00	0.30	0.30	0.30
Volume/Cap:	0.74	0.24	0.00	0.00	0.74	0.77	0.00	0.00	0.00	0.42	0.74	0.55
Delay/Veh:	31.5	7.3	0.0	0.0	35.9	41.3	0.0	0.0	0.0	28.3	34.7	29.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.5	7.3	0.0	0.0	35.9	41.3	0.0	0.0	0.0	28.3	34.7	29.9
LOS by Move:	C	A	A	A	D	D	A	A	A	C	C	C
HCM2k85thQ:	22	6	0	0	19	17	0	0	0	8	17	11

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Grand Ave / Glassell St and SR-22 EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.760
Loss Time (sec):	5	Average Delay (sec/veh):	27.0
Optimal Cycle:	47	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:	Permitted			Protected			Split Phase			Split Phase		
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 2	0 1	1	0 2	0 0	1	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	818	218	280	733	0	258	0	1012	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:	0	818	218	280	733	0	258	0	1012	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:	0	818	218	280	733	0	258	0	1012	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	818	218	280	733	0	258	0	1012	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:	0	818	218	280	733	0	258	0	1012	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.95	0.95	1.00	0.87	1.00	0.87	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.20	0.00	1.80	0.00	0.00	0.00
Final Sat.:	0	3610	1615	1805	3610	0	1992	0	2974	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.13	0.16	0.20	0.00	0.13	0.00	0.34	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.30	0.30	0.20	0.50	0.00	0.45	0.00	0.45	0.00	0.00	0.00
Volume/Cap:	0.00	0.76	0.45	0.76	0.40	0.00	0.29	0.00	0.76	0.00	0.00	0.00
Delay/Veh:	0.0	35.0	29.1	46.4	15.7	0.0	17.6	0.0	25.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	35.0	29.1	46.4	15.7	0.0	17.6	0.0	25.2	0.0	0.0	0.0
LOS by Move:	A	D	C	D	B	A	B	A	C	A	A	A
HCM2k85thQ:	0	20	9	15	11	0	7	0	23	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #74 Grand Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.680
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				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	0	1	1	0 1	1	0	1	0 1	0	1
Volume Module:																
Base Vol:	18	737	106		174	1444	32		99	60	59		254	28	229	
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:	18	737	106		174	1444	32		99	60	59		254	28	229	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	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	737	106		174	1444	32		99	60	59		254	28	229	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	18	737	106		174	1444	32		99	60	59		254	28	229	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	18	737	106		174	1444	32		99	60	59		254	28	229	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.06	1.00		1.00	1.06	1.00		1.00	1.06	1.00	
Lanes:	1.00	2.62	0.38		1.00	2.00	1.00		1.00	1.01	0.99		1.00	1.00	1.00	
Final Sat.:	1600	4396	604		1600	3400	1600		1600	1713	1587		1600	1700	1600	
Capacity Analysis Module:																
Vol/Sat:	0.01	0.17	0.18		0.11	0.42	0.02		0.06	0.04	0.04		0.16	0.02	0.14	
Crit Moves:	****					****				****				****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #75 Grand Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.885
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	79	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				Permitted				Permitted			
Rights:	Include				WideBypass				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 1	1	0	1	0	0 1	0	1	0	1	0 1
Volume Module:																
Base Vol:	66	463	119		290	1418	319		143	233	48		120	231	211	
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:	66	463	119		290	1418	319		143	233	48		120	231	211	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	66	463	119		290	1418	319		143	233	48		120	231	211	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	66	463	119		290	1418	319		143	233	48		120	231	211	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	66	463	119		290	1418	319		143	233	48		120	231	211	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.04	1.00		1.00	1.00	1.00		1.00	1.06	1.00	
Lanes:	1.00	2.39	0.61		1.00	1.63	0.37		1.00	0.83	0.17		1.00	1.00	1.00	
Final Sat.:	1600	4019	981		1600	2712	588		1600	1327	273		1600	1700	1600	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.12	0.12		0.18	0.52	0.54		0.09	0.18	0.18		0.08	0.14	0.13	
Crit Moves:	****						****			****			****			

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #76 Grand Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.797
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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:	1	0	2	1	0	1	0	2	0	1	2	0	2	1	0	
Volume Module:																
Base Vol:	163	476	327		286	1198	235		224	835	106		309	807	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:	163	476	327		286	1198	235		224	835	106		309	807	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:	163	476	327		286	1198	235		224	835	106		309	807	88	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	163	476	327		286	1198	235		224	835	106		309	807	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:	163	476	327		286	1198	235		224	835	106		309	807	88	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.06	1.00		1.00	1.06	1.00		1.00	1.05	1.00		1.00	1.05	1.00	
Lanes:	1.00	2.00	1.00		1.00	2.00	1.00		2.00	2.66	0.34		2.00	2.71	0.29	
Final Sat.:	1600	3400	1600		1600	3400	1600		3200	4459	541		3200	4528	472	
Capacity Analysis Module:																
Vol/Sat:	0.10	0.14	0.20		0.18	0.35	0.15		0.07	0.19	0.20		0.10	0.18	0.19	
Crit Moves:	****					****					****		****			

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Grand Ave and I-5 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
Loss Time (sec):	5	Average Delay (sec/veh):	12.9
Optimal Cycle:	26	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			Split Phase			Split Phase		
Rights:	Ignore			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 2	0 1	1	0 3	0 0	0	0 0	0 0	2	0 0	0 1
Volume Module:												
Base Vol:	0	831	480	58	1869	0	0	0	0	456	0	126
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	831	480	58	1869	0	0	0	0	456	0	126
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	831	0	58	1869	0	0	0	0	456	0	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	831	0	58	1869	0	0	0	0	456	0	126
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	831	0	58	1869	0	0	0	0	456	0	126
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.91	1.00	1.00	1.00	1.00	0.92	1.00	0.85
Lanes:	0.00	2.00	1.00	1.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3610	1900	1805	5187	0	0	0	0	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.23	0.00	0.03	0.36	0.00	0.00	0.00	0.00	0.13	0.00	0.08
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.61	0.00	0.09	0.70	0.00	0.00	0.00	0.00	0.25	0.00	0.25
Volume/Cap:	0.00	0.38	0.00	0.38	0.52	0.00	0.00	0.00	0.00	0.52	0.00	0.31
Delay/Veh:	0.0	9.9	0.0	44.7	7.3	0.0	0.0	0.0	0.0	32.7	0.0	30.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.9	0.0	44.7	7.3	0.0	0.0	0.0	0.0	32.7	0.0	30.8
LOS by Move:	A	A	A	D	A	A	A	A	A	C	A	C
HCM2k85thQ:	0	10	0	3	15	0	0	0	0	10	0	5

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 Grand Ave and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.662
Loss Time (sec):	5	Average Delay (sec/veh):	23.8
Optimal Cycle:	35	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			Split Phase			Split Phase		
Rights:	Include			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	2 1	0	1 0	2 0	2	2 0	1 0	2	0 1	0 1	0
Volume Module:												
Base Vol:	71	1003	51	141	1166	1029	263	217	428	5	373	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:	71	1003	51	141	1166	1029	263	217	428	5	373	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:	71	1003	51	141	1166	1029	263	217	428	5	373	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	1003	51	141	1166	1029	263	217	428	5	373	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:	71	1003	51	141	1166	1029	263	217	428	5	373	34
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.75	0.92	1.00	0.75	0.94	0.94	0.94
Lanes:	1.00	2.85	0.15	1.00	2.00	2.00	2.00	1.00	2.00	0.02	1.81	0.17
Final Sat.:	1805	4901	249	1805	3610	2842	3502	1900	2842	43	3226	294
Capacity Analysis Module:												
Vol/Sat:	0.04	0.20	0.20	0.08	0.32	0.36	0.08	0.11	0.15	0.12	0.12	0.12
Crit Moves:	****				****				****			****
Green/Cycle:	0.06	0.40	0.40	0.15	0.49	0.72	0.23	0.23	0.23	0.17	0.17	0.17
Volume/Cap:	0.66	0.52	0.52	0.52	0.66	0.51	0.33	0.50	0.66	0.66	0.66	0.66
Delay/Veh:	60.4	23.1	23.1	40.8	20.3	6.5	32.5	34.6	37.7	41.2	41.2	41.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	60.4	23.1	23.1	40.8	20.3	6.5	32.5	34.6	37.7	41.2	41.2	41.2
LOS by Move:	E	C	C	D	C	A	C	C	D	D	D	D
HCM2k85thQ:	5	14	14	7	22	13	6	10	12	11	11	11

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #79 Grand Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.803
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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 2	1	0	2	0 3	0	1	2	0 2	1	0	2	0 1	1	0
Volume Module:																
Base Vol:	213	751	35		99	1432	174		332	793	225		247	867	99	
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:	213	751	35		99	1432	174		332	793	225		247	867	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:	213	751	35		99	1432	174		332	793	225		247	867	99	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	213	751	35		99	1432	174		332	793	225		247	867	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:	213	751	35		99	1432	174		332	793	225		247	867	99	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.04	1.00		1.00	1.06	1.00		1.00	1.05	1.00		1.00	1.03	1.00	
Lanes:	2.00	2.87	0.13		2.00	3.00	1.00		2.00	2.34	0.66		2.00	1.80	0.20	
Final Sat.:	3200	4786	214		3200	5100	1600		3200	3939	1061		3200	2972	328	
Capacity Analysis Module:																
Vol/Sat:	0.07	0.16	0.16		0.03	0.28	0.11		0.10	0.20	0.21		0.08	0.29	0.30	
Crit Moves:	****					****			****						****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #80 Grand Ave and Chestnut 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			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	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	53	737	163	149	1788	49	60	419	110	118	347	216
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:	53	737	163	149	1788	49	60	419	110	118	347	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:	53	737	163	149	1788	49	60	419	110	118	347	216
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	737	163	149	1788	49	60	419	110	118	347	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:	53	737	163	149	1788	49	60	419	110	118	347	216
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.46	0.54	1.00	2.92	0.08	1.00	1.58	0.42	1.00	1.23	0.77
Final Sat.:	1600	4131	869	1600	4872	128	1600	2635	665	1600	2072	1228
Capacity Analysis Module:												
Vol/Sat:	0.03	0.18	0.19	0.09	0.37	0.38	0.04	0.16	0.17	0.07	0.17	0.18
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #81 Grand Ave and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.829
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	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:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	171	722	108	237	1590	155	186	601	182	117	420	106
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:	171	722	108	237	1590	155	186	601	182	117	420	106
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	171	722	108	237	1590	155	186	601	182	117	420	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	171	722	108	237	1590	155	186	601	182	117	420	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	171	722	108	237	1590	155	186	601	182	117	420	106
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.61	0.39	1.00	2.73	0.27	1.00	1.54	0.46	1.00	1.60	0.40
Final Sat.:	1600	4375	625	1600	4574	426	1600	2556	744	1600	2655	645
Capacity Analysis Module:												
Vol/Sat:	0.11	0.17	0.17	0.15	0.35	0.36	0.12	0.24	0.24	0.07	0.16	0.16
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #82 Grand Ave and 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			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	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	47	472	92	224	1146	224	319	1332	128	151	579	126
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:	47	472	92	224	1146	224	319	1332	128	151	579	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	472	92	224	1146	224	319	1332	128	151	579	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	472	92	224	1146	224	319	1332	128	151	579	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	472	92	224	1146	224	319	1332	128	151	579	126
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.51	0.49	1.00	2.51	0.49	1.00	2.74	0.26	1.00	2.46	0.54
Final Sat.:	1600	4217	783	1600	4215	785	1600	4579	421	1600	4142	858
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.12	0.14	0.27	0.29	0.20	0.29	0.30	0.09	0.14	0.15
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #83 Grand Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.528
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	48	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	2 0	3 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	169	510	218	199	574	194	256	914	359	88	388	131
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:	169	510	218	199	574	194	256	914	359	88	388	131
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	169	510	218	199	574	194	256	914	359	88	388	131
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	510	218	199	574	194	256	914	359	88	388	131
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	169	510	218	199	574	194	256	914	359	88	388	131
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.10	0.90	1.00	2.24	0.76	2.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	3563	1437	1600	3788	1213	3200	5100	1600	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.14	0.15	0.12	0.15	0.16	0.08	0.18	0.22	0.03	0.11	0.08
Crit Moves:		****	****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #84 SR-55 NB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.530
Loss Time (sec):	5	Average Delay (sec/veh):	16.3
Optimal Cycle:	26	Level Of Service:	B

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	T	T	R	L	T	T	R	L	T	T	R	L	T	T	R
Control:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				Ignore			
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!	0	1	0	0	0	0	0	0	3	0	1	0	0
Volume Module:																
Base Vol:	557	0	456		0	0	0		0	1533	613		0	719	433	
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:	557	0	456		0	0	0		0	1533	613		0	719	433	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
PHF Volume:	557	0	456		0	0	0		0	1533	0		0	719	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	557	0	456		0	0	0		0	1533	0		0	719	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
FinalVolume:	557	0	456		0	0	0		0	1533	0		0	719	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.91	1.00	0.91		1.00	1.00	1.00		1.00	0.91	1.00		1.00	0.91	0.91	
Lanes:	1.55	0.00	1.45		0.00	0.00	0.00		0.00	3.00	1.00		0.00	3.00	0.00	
Final Sat.:	2673	0	2501		0	0	0		0	5187	1900		0	5187	0	
Capacity Analysis Module:																
Vol/Sat:	0.21	0.00	0.18		0.00	0.00	0.00		0.00	0.30	0.00		0.00	0.14	0.00	
Crit Moves:	****									****			****			
Green/Cycle:	0.39	0.00	0.39		0.00	0.00	0.00		0.00	0.56	0.00		0.00	0.56	0.00	
Volume/Cap:	0.53	0.00	0.46		0.00	0.00	0.00		0.00	0.53	0.00		0.00	0.25	0.00	
Delay/Veh:	23.6	0.0	22.7		0.0	0.0	0.0		0.0	14.1	0.0		0.0	11.4	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	23.6	0.0	22.7		0.0	0.0	0.0		0.0	14.1	0.0		0.0	11.4	0.0	
LOS by Move:	C	A	C		A	A	A		A	B	A		A	B	A	
HCM2k85thQ:	13	0	11		0	0	0		0	16	0		0	6	0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #85 Cambridge St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.799
Loss Time (sec):	5	Average Delay (sec/veh):	17.3
Optimal Cycle:	0	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:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0 1	0	0	0	0 1	0	1	1	0 0	0	1	0	0 0	0	0
Volume Module:																
Base Vol:	160	204	0		0	480	245		117	0	187		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:	160	204	0		0	480	245		117	0	187		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:	160	204	0		0	480	245		117	0	187		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	160	204	0		0	480	245		117	0	187		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:	160	204	0		0	480	245		117	0	187		0	0	0	
Saturation Flow Module:																
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00		0.00	1.00	1.00		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	514	554	0		0	601	671		467	0	553		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.31	0.37	xxxx		xxxx	0.80	0.37		0.25	xxxx	0.34		xxxx	xxxx	xxxx	
Crit Moves:		****				****					****					
Delay/Veh:	12.5	12.5	0.0		0.0	27.6	10.8		12.4	0.0	11.8		0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	12.5	12.5	0.0		0.0	27.6	10.8		12.4	0.0	11.8		0.0	0.0	0.0	
LOS by Move:	B	B	*		*	D	B		B	*	B		*	*	*	
ApproachDel:		12.5				21.9				12.0				xxxxxx		
Delay Adj:		1.00				1.00				1.00				xxxxx		
ApprAdjDel:		12.5				21.9				12.0				xxxxxx		
LOS by Appr:		B				C				B				*		
AllWayAvgQ:	0.4	0.5	0.0		0.0	3.2	0.5		0.3	0.0	0.4		0.0	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #86 Cambridge St and Fairhaven 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:	Permitted			Permitted			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:	0 0	0 0	0	1 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	515	0	166	80	216	0	0	247	192
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	0	0	515	0	166	80	216	0	0	247	192
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	515	0	166	80	216	0	0	247	192
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	515	0	166	80	216	0	0	247	192
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	515	0	166	80	216	0	0	247	192
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.13	0.87
Final Sat.:	0	0	0	1600	0	1600	1600	3400	0	0	1900	1400
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.32	0.00	0.10	0.05	0.06	0.00	0.00	0.13	0.14
Crit Moves:				****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Mabury St and 1st Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.691
Loss Time (sec):	0	Average Delay (sec/veh):	28.3
Optimal Cycle:	74	Level Of Service:	C

Street Name:	Mabury						1st Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			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	0	0 1	1 0		1! 0 1	0 0		2 1 0	1 0		2 1 0
Volume Module:												
Base Vol:	10	0	244	238	141	533	0	1062	11	46	701	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:	10	0	244	238	141	533	0	1062	11	46	701	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:	10	0	244	238	141	533	0	1062	11	46	701	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	0	244	238	141	533	0	1062	11	46	701	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:	10	0	244	238	141	533	0	1062	11	46	701	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.90	0.90	0.90	1.00	0.91	0.91	0.95	0.91	0.91
Lanes:	1.00	0.00	1.00	1.22	0.27	1.51	0.00	2.97	0.03	1.00	3.00	0.00
Final Sat.:	1805	0	1615	2097	458	2576	0	5129	53	1805	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.15	0.11	0.31	0.21	0.00	0.21	0.21	0.03	0.14	0.00
Crit Moves:			****		****			****		****		
Green/Cycle:	0.22	0.00	0.22	0.45	0.45	0.45	0.00	0.30	0.30	0.04	0.34	0.00
Volume/Cap:	0.03	0.00	0.69	0.25	0.69	0.46	0.00	0.69	0.69	0.69	0.40	0.00
Delay/Veh:	30.7	0.0	41.8	17.4	23.8	19.6	0.0	32.3	32.3	74.4	25.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.7	0.0	41.8	17.4	23.8	19.6	0.0	32.3	32.3	74.4	25.6	0.0
LOS by Move:	C	A	D	B	C	B	A	C	C	E	C	A
HCM2k85thQ:	0	0	13	6	21	12	0	18	18	4	9	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #88 Tustin St and La Veta Ave

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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 1 0	0	1
Volume Module:												
Base Vol:	8	333	96	74	1452	4	9	11	35	447	2	69
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	333	96	74	1452	4	9	11	35	447	2	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	333	96	74	1452	4	9	11	35	447	2	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	8	333	96	74	1452	4	9	11	35	447	2	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	8	333	96	74	1452	4	9	11	35	447	2	69
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.33	0.67	1.00	2.99	0.01	1.00	1.00	1.00	1.99	0.01	1.00
Final Sat.:	1600	3926	1074	1600	4987	13	1600	1700	1600	3186	14	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.08	0.09	0.05	0.29	0.30	0.01	0.01	0.02	0.14	0.14	0.04
OvlAdjV/S:												0.00
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Tustin St and SR-22 WB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.734
Loss Time (sec):	5	Average Delay (sec/veh):	12.9
Optimal Cycle:	43	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			Permitted			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 0	0	0 0	2	1 0	0 0	0 0	0 0	0 0	0 0	0
Volume Module:												
Base Vol:	656	610	0	0	1395	833	0	0	0	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:	656	610	0	0	1395	833	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
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	656	610	0	0	1395	833	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	656	610	0	0	1395	833	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
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	656	610	0	0	1395	833	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	3502	3610	0	0	3264	1632	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.19	0.17	0.00	0.00	0.43	0.51	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	****					****						
Green/Cycle:	0.26	0.95	0.00	0.00	0.69	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.73	0.18	0.00	0.00	0.61	0.73	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	37.3	0.2	0.0	0.0	8.4	10.5	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.3	0.2	0.0	0.0	8.4	10.5	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	D	A	A	A	A	B	A	A	A	A	A	A
HCM2k85thQ:	17	1	0	0	19	27	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #90 Tustin St and SR-22 EB Off-Ramp / Seba Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.731
Loss Time (sec):	5	Average Delay (sec/veh):	24.2
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:	Permitted			Permitted			Split Phase			Split Phase		
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 2	1 0	1	0 3	0 0	1	0 1!	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	0	996	5	22	1349	0	244	24	1051	6	0	43
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	996	5	22	1349	0	244	24	1051	6	0	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	996	5	22	1349	0	244	24	1051	6	0	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	996	5	22	1349	0	244	24	1051	6	0	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	996	5	22	1349	0	244	24	1051	6	0	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.16	0.91	1.00	0.87	0.87	0.87	0.88	1.00	0.88
Lanes:	0.00	2.99	0.01	1.00	3.00	0.00	1.18	0.04	1.78	0.12	0.00	0.88
Final Sat.:	0	5156	26	304	5187	0	1958	59	2954	204	0	1460
Capacity Analysis Module:												
Vol/Sat:	0.00	0.19	0.19	0.07	0.26	0.00	0.12	0.41	0.36	0.03	0.00	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.36	0.36	0.36	0.36	0.00	0.55	0.55	0.55	0.04	0.00	0.04
Volume/Cap:	0.00	0.54	0.54	0.20	0.73	0.00	0.22	0.73	0.64	0.73	0.00	0.73
Delay/Veh:	0.0	26.1	26.1	23.3	29.6	0.0	11.4	18.3	16.1	80.9	0.0	80.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	26.1	26.1	23.3	29.6	0.0	11.4	18.3	16.1	80.9	0.0	80.9
LOS by Move:	A	C	C	C	C	A	B	B	B	F	A	F
HCM2k85thQ:	0	14	14	1	21	0	5	24	20	5	0	5

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #91 Tustin Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.977
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	178	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				Include				Include				Ovl			
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	1	0 1	1	0	1	0 1	0	1
Volume Module:																
Base Vol:	89	514	90		235	2026	40		68	258	444		306	338	442	
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	514	90		235	2026	40		68	258	444		306	338	442	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	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	514	90		235	2026	40		68	258	444		306	338	442	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	89	514	90		235	2026	40		68	258	444		306	338	442	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	89	514	90		235	2026	40		68	258	444		306	338	442	
OvlAdjVol:																325
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.04	1.00		1.00	1.06	1.00		1.00	1.06	1.00	
Lanes:	2.00	2.55	0.45		2.00	2.94	0.06		1.00	1.00	1.00		1.00	1.00	1.00	
Final Sat.:	3200	4285	715		3200	4907	93		1600	1700	1600		1600	1700	1600	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.12	0.13		0.07	0.41	0.43		0.04	0.15	0.28		0.19	0.20	0.28	
OvlAdjV/S:																0.20
Crit Moves:	****						****				****	****				

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #92 Tustin Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.866
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	71	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			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	2 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	73	397	74	127	2600	82	101	255	186	118	244	122
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:	73	397	74	127	2600	82	101	255	186	118	244	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:	73	397	74	127	2600	82	101	255	186	118	244	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	73	397	74	127	2600	82	101	255	186	118	244	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:	73	397	74	127	2600	82	101	255	186	118	244	122
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.53	0.47	2.00	2.91	0.09	1.00	1.16	0.84	1.00	1.33	0.67
Final Sat.:	1600	4246	754	3200	4853	147	1600	1950	1350	1600	2233	1067
Capacity Analysis Module:												
Vol/Sat:	0.05	0.09	0.10	0.04	0.54	0.56	0.06	0.13	0.14	0.07	0.11	0.11
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #93 Tustin Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.748
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:	Ovl			Include			Include			Ovl		
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 0	1	2 0	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	111	198	236	602	1737	19	187	738	126	488	770	188
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	198	236	602	1737	19	187	738	126	488	770	188
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	198	236	602	1737	19	187	738	126	488	770	188
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	198	236	602	1737	19	187	738	126	488	770	188
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	198	236	602	1737	19	187	738	126	488	770	188
OvlAdjVol:			0									0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.00	1.00	2.00	2.97	0.03	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	3400	1600	3200	4948	52	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.06	0.15	0.19	0.35	0.37	0.06	0.14	0.08	0.15	0.15	0.12
OvlAdjV/S:			0.00									0.00
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #94 Tustin Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.701
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	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:	1 0	2	1 0	2 0	2	0 1	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	48	245	219	664	845	262	114	676	28	103	579	376
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	245	219	664	845	262	114	676	28	103	579	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:	48	245	219	664	845	262	114	676	28	103	579	376
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	48	245	219	664	845	262	114	676	28	103	579	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:	48	245	219	664	845	262	114	676	28	103	579	376
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	2.88	0.12	1.00	2.00	1.00
Final Sat.:	1600	3400	1600	3200	3400	1600	1600	4809	191	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.14	0.21	0.25	0.16	0.07	0.14	0.15	0.06	0.17	0.24
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 SR-55 SB Ramps / Auto Mall Dr and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.558
Loss Time (sec):	5	Average Delay (sec/veh):	24.4
Optimal Cycle:	28	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:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				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	1 0	0	2	1	0 1	0	1	1	0 3	0	1	2	0 2	1	0
Volume Module:																
Base Vol:	421	63	498		50	30	8		28	1104	408		399	940	123	
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:	421	63	498		50	30	8		28	1104	408		399	940	123	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Volume:	421	63	498		50	30	8		28	1104	0		399	940	123	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	421	63	498		50	30	8		28	1104	0		399	940	123	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
FinalVolume:	421	63	498		50	30	8		28	1104	0		399	940	123	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.96	0.96	0.75		0.95	1.00	0.85		0.95	0.91	1.00		0.92	0.89	0.89	
Lanes:	1.74	0.26	2.00		1.00	1.00	1.00		1.00	3.00	1.00		2.00	2.65	0.35	
Final Sat.:	3167	474	2842		1805	1900	1615		1805	5187	1900		3502	4509	590	
Capacity Analysis Module:																
Vol/Sat:	0.13	0.13	0.18		0.03	0.02	0.00		0.02	0.21	0.00		0.11	0.21	0.21	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.31	0.31	0.31		0.05	0.05	0.05		0.04	0.38	0.00		0.20	0.55	0.55	
Volume/Cap:	0.42	0.42	0.56		0.56	0.32	0.10		0.38	0.56	0.00		0.56	0.38	0.38	
Delay/Veh:	27.4	27.4	29.3		54.0	47.8	45.9		50.1	24.6	0.0		36.7	13.1	13.1	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	27.4	27.4	29.3		54.0	47.8	45.9		50.1	24.6	0.0		36.7	13.1	13.1	
LOS by Move:	C	C	C		D	D	D		D	C	A		D	B	B	
HCM2k85thQ:	9	9	12		4	2	1		2	15	0		10	11	11	

Note: Queue reported is the number of cars per lane.
****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.463
Loss Time (sec):	5	Average Delay (sec/veh):	24.0
Optimal Cycle:	23	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				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	1	0 3	0	1	2	0 1	1	0	1	0 1	1	0
Volume Module:																
Base Vol:	227	60	38		14	344	504		253	153	146		8	223	4	
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:	227	60	38		14	344	504		253	153	146		8	223	4	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	227	60	38		14	344	504		253	153	146		8	223	4	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	227	60	38		14	344	504		253	153	146		8	223	4	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	227	60	38		14	344	504		253	153	146		8	223	4	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.86	0.86		0.95	0.91	0.85		0.92	0.88	0.88		0.95	0.95	0.95	
Lanes:	2.00	2.00	1.00		1.00	3.00	1.00		2.00	1.02	0.98		1.00	1.96	0.04	
Final Sat.:	3502	3257	1629		1805	5187	1615		3502	1712	1634		1805	3536	63	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.02	0.02		0.01	0.07	0.31		0.07	0.09	0.09		0.00	0.06	0.06	
Crit Moves:	****						****		****					****		
Green/Cycle:	0.14	0.49	0.49		0.16	0.52	0.67		0.16	0.28	0.28		0.01	0.14	0.14	
Volume/Cap:	0.46	0.04	0.05		0.05	0.13	0.46		0.46	0.32	0.32		0.32	0.46	0.46	
Delay/Veh:	40.2	13.1	13.1		35.3	12.5	8.0		39.0	28.8	28.8		56.2	40.5	40.5	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	40.2	13.1	13.1		35.3	12.5	8.0		39.0	28.8	28.8		56.2	40.5	40.5	
LOS by Move:	D	B	B		D	B	A		D	C	C		E	D	D	
HCM2k85thQ:	6	1	1		1	3	11		6	6	6		1	6	6	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #97 Red Hill Ave and Edinger 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			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 3	0 1	2	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	81	299	85	226	960	450	190	611	130	224	1085	152
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:	81	299	85	226	960	450	190	611	130	224	1085	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:	81	299	85	226	960	450	190	611	130	224	1085	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	81	299	85	226	960	450	190	611	130	224	1085	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:	81	299	85	226	960	450	190	611	130	224	1085	152
OvlAdjVol:						355			89			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.06	0.05	0.07	0.19	0.28	0.06	0.12	0.08	0.07	0.21	0.10
OvlAdjV/S:						0.22			0.06			
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #98 Red Hill Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.485
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			Ovl		
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	2 1	0	1 0	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	56	339	46	19	891	179	202	343	253	98	349	62
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:	56	339	46	19	891	179	202	343	253	98	349	62
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	339	46	19	891	179	202	343	253	98	349	62
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	339	46	19	891	179	202	343	253	98	349	62
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	56	339	46	19	891	179	202	343	253	98	349	62
OvlAdjVol:												53
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.52	0.48	2.00	2.50	0.50	1.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5935	765	3200	4197	803	1600	3400	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.06	0.06	0.01	0.21	0.22	0.13	0.10	0.16	0.03	0.07	0.04
OvlAdjV/S:												0.03
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #99 Red Hill Ave and Dyer Rd / barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
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:	2 0 4	0	1	2 0 4	0	1	2 0 3	1	0	2 0 4	0	1
Volume Module:												
Base Vol:	127	316	104	199	876	115	118	710	281	578	645	126
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:	127	316	104	199	876	115	118	710	281	578	645	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	316	104	199	876	115	118	710	281	578	645	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	316	104	199	876	115	118	710	281	578	645	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	127	316	104	199	876	115	118	710	281	578	645	126
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	6800	1600	3200	6800	1600	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.05	0.07	0.06	0.13	0.07	0.04	0.14	0.18	0.18	0.09	0.08
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #100 Red Hill Ave and Alton Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.524
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	3 0	1	1 0	3 0	1	1 0	2 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	174	512	321	251	1141	183	9	28	28	223	189	106
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:	174	512	321	251	1141	183	9	28	28	223	189	106
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	174	512	321	251	1141	183	9	28	28	223	189	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	512	321	251	1141	183	9	28	28	223	189	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	174	512	321	251	1141	183	9	28	28	223	189	106
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	3400	1600	3200	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.10	0.20	0.16	0.22	0.11	0.01	0.01	0.02	0.07	0.11	0.07
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Red Hill Ave and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.664
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			Ignore			Include			Ignore		
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 3	0 1		2 0 3	0 1		1 0 3	0 1	
Volume Module:												
Base Vol:	64	569	10	208	537	492	1248	645	106	23	223	571
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:	64	569	10	208	537	492	1248	645	106	23	223	571
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	64	569	10	208	537	0	1248	645	106	23	223	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	569	10	208	537	0	1248	645	106	23	223	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	64	569	10	208	537	0	1248	645	106	23	223	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.95	0.05	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4917	83	3200	5100	1600	3200	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.12	0.12	0.07	0.11	0.00	0.39	0.13	0.07	0.01	0.04	0.00
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Red Hill Ave and Main St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.670
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
Y+R:	4.0	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 0	1	2 0	2 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	162	556	361	67	313	108	139	1309	254	154	309	73
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	556	361	67	313	108	139	1309	254	154	309	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	556	361	67	313	108	139	1309	254	154	309	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	556	361	67	313	108	139	1309	254	154	309	73
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	162	556	361	67	313	108	139	1309	254	154	309	73
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.51	0.49	2.00	2.43	0.57
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	4220	780	3200	4083	917
Capacity Analysis Module:												
Vol/Sat:	0.05	0.16	0.23	0.02	0.09	0.07	0.04	0.31	0.33	0.05	0.08	0.08
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 I-5 SB Ramps and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.514
Loss Time (sec):	5	Average Delay (sec/veh):	17.4
Optimal Cycle:	25	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			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:	0	0	0	2	0	0	2	0	3	0	2	1
Volume Module:												
Base Vol:	0	0	0	367	0	36	323	554	0	1130	330	
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	0	0	367	0	36	323	554	0	1130	330	
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	367	0	36	323	554	0	1130	330	
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	367	0	36	323	554	0	1130	330	
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	367	0	36	323	554	0	1130	330	
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.88	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	2.32	0.68
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	3878	1133
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.02	0.09	0.11	0.00	0.00	0.29	0.29
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.20	0.00	0.38	0.18	0.75	0.00	0.00	0.57	0.57
Volume/Cap:	0.00	0.00	0.00	0.51	0.00	0.06	0.51	0.14	0.00	0.00	0.51	0.51
Delay/Veh:	0.0	0.0	0.0	36.0	0.0	19.5	37.8	3.6	0.0	0.0	13.4	13.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AdjDel/Veh:	0.0	0.0	0.0	36.0	0.0	19.5	37.8	3.6	0.0	0.0	13.4	13.4
LOS by Move:	A	A	A	D	A	B	D	A	A	A	B	B
HCM2k85thQ:	0	0	0	9	0	1	8	3	0	0	15	15

****

Note: Queue reported is the number of cars per lane.

****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Tustin Ranch Rd and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.475
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
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 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	265	0	33	18	238	0	0	1717	395
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	0	0	265	0	33	18	238	0	0	1717	395
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	265	0	33	18	238	0	0	1717	395
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	265	0	33	18	238	0	0	1717	395
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	265	0	33	18	238	0	0	1717	395
OvlAdjVol:												263
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3200	0	1600	3200	5100	0	0	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.02	0.01	0.05	0.00	0.00	0.34	0.25
OvlAdjV/S:												0.16
Crit Moves:				****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Von Karman Ave and Barranca Pkwy

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			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:	2 0 1	1 0		2 0 2			2 0 3	0 1		2 0 4	0 1	
Volume Module:												
Base Vol:	107	142	85	119	1164	509	130	488	163	769	1263	39
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:	107	142	85	119	1164	509	130	488	163	769	1263	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	142	85	119	1164	509	130	488	163	769	1263	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	142	85	119	1164	509	130	488	163	769	1263	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	142	85	119	1164	509	130	488	163	769	1263	39
OvlAdjVol:						379						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	1.25	0.75	2.00	2.00	2.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	2102	1198	3200	3400	3200	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.07	0.04	0.34	0.16	0.04	0.10	0.10	0.24	0.19	0.02
OvlAdjV/S:						0.12						
Crit Moves:	****			****			****			****		

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Santa Ana Circulation Element

Scenario Report

Scenario:	2020 NP PM Peak Hour
Command:	Default Command
Volume:	2020 NP PM
Geometry:	NP
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Santa Ana Circulation Element

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
# 1 Euclid St and 1st St	D	xxxxx	0.865	D	xxxxx	0.865	+ 0.000 V/C
# 2 Euclid St and McFadden Ave	D	xxxxx	0.833	D	xxxxx	0.833	+ 0.000 V/C
# 3 Euclid St and Edinger Ave	C	xxxxx	0.787	C	xxxxx	0.787	+ 0.000 V/C
# 4 Newhope St and Hazard Ave	B	xxxxx	0.642	B	xxxxx	0.642	+ 0.000 V/C
# 5 Newhope St and McFadden Ave	D	xxxxx	0.838	D	xxxxx	0.838	+ 0.000 V/C
# 6 Harbor Blvd and SR-22 WB Off-R	C	23.6	0.703	C	23.6	0.703	+ 0.000 D/V
# 7 Trask Avenue and SR-22 EB On-R	B	12.4	0.448	B	12.4	0.448	+ 0.000 D/V
# 8 Harbor Blvd and Westminster Av	C	xxxxx	0.792	C	xxxxx	0.792	+ 0.000 V/C
# 9 Harbor Blvd and 1st St	D	xxxxx	0.833	D	xxxxx	0.833	+ 0.000 V/C
# 10 Harbor Blvd and McFadden Ave	D	xxxxx	0.809	D	xxxxx	0.809	+ 0.000 V/C
# 11 Harbor Blvd and Edinger Ave	B	xxxxx	0.697	B	xxxxx	0.697	+ 0.000 V/C
# 12 Harbor Blvd and Warner Ave	F	xxxxx	1.581	F	xxxxx	1.581	+ 0.000 V/C
# 13 Harbor Blvd and Segerstrom Ave	D	xxxxx	0.897	D	xxxxx	0.897	+ 0.000 V/C
# 14 MacArthur Blvd and Hyland Ave	E	xxxxx	0.917	E	xxxxx	0.917	+ 0.000 V/C
# 15 MacArthur Blvd and Harbor Blvd	D	xxxxx	0.819	D	xxxxx	0.819	+ 0.000 V/C
# 16 Harbor Blvd and Sunflower Ave	C	xxxxx	0.780	C	xxxxx	0.780	+ 0.000 V/C
# 17 Harbor Blvd and I-405 WB Off-R	C	23.7	0.824	C	23.7	0.824	+ 0.000 D/V
# 18 Harbor Blvd and I-405 EB Off-R	B	19.4	0.998	B	19.4	0.998	+ 0.000 D/V
# 19 Fairview St and Civic Center D	B	xxxxx	0.662	B	xxxxx	0.662	+ 0.000 V/C
# 20 Fairview St and 1st St	D	xxxxx	0.883	D	xxxxx	0.883	+ 0.000 V/C
# 21 Fairview St and McFadden Ave	C	xxxxx	0.798	C	xxxxx	0.798	+ 0.000 V/C
# 22 Fairview St and Edinger Ave	D	xxxxx	0.811	D	xxxxx	0.811	+ 0.000 V/C
# 23 Fairview St and Warner Ave	D	xxxxx	0.845	D	xxxxx	0.845	+ 0.000 V/C
# 24 Fairview St and MacArthur Blvd	D	xxxxx	0.826	D	xxxxx	0.826	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 25 Fairview Rd and Sunflower Ave	C	xxxxx	0.708	C	xxxxx	0.708	+ 0.000 V/C
# 26 Greenville St and Edinger Ave	A	xxxxx	0.586	A	xxxxx	0.586	+ 0.000 V/C
# 27 Greenville St and Segerstrom A	B	xxxxx	0.686	B	xxxxx	0.686	+ 0.000 V/C
# 28 Raitt St and McFadden Ave	C	xxxxx	0.722	C	xxxxx	0.722	+ 0.000 V/C
# 29 Raitt St and Edinger Ave	D	xxxxx	0.864	D	xxxxx	0.864	+ 0.000 V/C
# 30 Bear St and MacArthur Blvd	D	xxxxx	0.868	D	xxxxx	0.868	+ 0.000 V/C
# 31 Bristol St and 17th St	B	xxxxx	0.692	B	xxxxx	0.692	+ 0.000 V/C
# 32 Bristol St and Civic Center Dr	D	xxxxx	0.832	D	xxxxx	0.832	+ 0.000 V/C
# 33 Bristol St and Santa Ana Blvd	B	xxxxx	0.657	B	xxxxx	0.657	+ 0.000 V/C
# 34 Bristol St and 1st St	C	xxxxx	0.779	C	xxxxx	0.779	+ 0.000 V/C
# 35 Bristol St and McFadden Ave	C	xxxxx	0.752	C	xxxxx	0.752	+ 0.000 V/C
# 36 Bristol St and Warner Ave	C	xxxxx	0.790	C	xxxxx	0.790	+ 0.000 V/C
# 37 Bristol St and Segerstrom Ave	E	xxxxx	0.909	E	xxxxx	0.909	+ 0.000 V/C
# 38 Bristol St and Alton Ave	B	xxxxx	0.686	B	xxxxx	0.686	+ 0.000 V/C
# 39 Bristol St and MacArthur Blvd	D	xxxxx	0.812	D	xxxxx	0.812	+ 0.000 V/C
# 40 Bristol St and Sunflower Ave	B	xxxxx	0.689	B	xxxxx	0.689	+ 0.000 V/C
# 41 Bristol St and I-405 WB Ramps	C	28.2	0.829	C	28.2	0.829	+ 0.000 D/V
# 42 Bristol St and I-405 EB Ramps	B	18.4	0.595	B	18.4	0.595	+ 0.000 D/V
# 43 Flower St and Santa Ana Blvd	A	xxxxx	0.571	A	xxxxx	0.571	+ 0.000 V/C
# 44 Flower St and 1st St	C	xxxxx	0.752	C	xxxxx	0.752	+ 0.000 V/C
# 45 Flower St and McFadden Ave	E	xxxxx	0.920	E	xxxxx	0.920	+ 0.000 V/C
# 46 Flower St and Segerstrom Ave	D	xxxxx	0.897	D	xxxxx	0.897	+ 0.000 V/C
# 47 Flower St and MacArthur Blvd	E	xxxxx	0.906	E	xxxxx	0.906	+ 0.000 V/C
# 48 Main St and La Veta Ave	B	xxxxx	0.628	B	xxxxx	0.628	+ 0.000 V/C
# 49 Main St and Mainplace Dr / Mem	A	xxxxx	0.471	A	xxxxx	0.471	+ 0.000 V/C
# 50 Main St and 17th St	C	xxxxx	0.732	C	xxxxx	0.732	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 51 Main St and Civic Center Dr	D	xxxxx	0.801	D	xxxxx	0.801	+ 0.000 V/C
# 52 Main St and Santa Ana Blvd	B	xxxxx	0.607	B	xxxxx	0.607	+ 0.000 V/C
# 53 Main St and 4th St	A	xxxxx	0.537	A	xxxxx	0.537	+ 0.000 V/C
# 54 Main St and 1st St	C	xxxxx	0.799	C	xxxxx	0.799	+ 0.000 V/C
# 55 Main St and McFadden Ave	D	xxxxx	0.845	D	xxxxx	0.845	+ 0.000 V/C
# 56 Main St and Edinger Ave	D	xxxxx	0.847	D	xxxxx	0.847	+ 0.000 V/C
# 57 Main St and MacArthur Blvd	C	xxxxx	0.777	C	xxxxx	0.777	+ 0.000 V/C
# 58 Penn Wy and 17th St	C	20.7	0.770	C	20.7	0.770	+ 0.000 D/V
# 59 I-5 NB Off Ramps/17th Street	B	19.5	0.589	B	19.5	0.589	+ 0.000 D/V
# 60 Penn Wy and I-5 SB Ramps	C	22.0	0.423	C	22.0	0.423	+ 0.000 D/V
# 61 Santiago St and Civic Center D	C	17.1	0.674	C	17.1	0.674	+ 0.000 V/C
# 62 Santiago St and Santa Ana Blvd	A	xxxxx	0.569	A	xxxxx	0.569	+ 0.000 V/C
# 64 Standard Ave and 1st St	D	xxxxx	0.842	D	xxxxx	0.842	+ 0.000 V/C
# 65 Standard Ave and Mcfadden Ave	B	xxxxx	0.682	B	xxxxx	0.682	+ 0.000 V/C
# 66 Halladay St and Warner Ave	B	xxxxx	0.677	B	xxxxx	0.677	+ 0.000 V/C
# 67 Halladay St and Dyer Rd	C	xxxxx	0.784	C	xxxxx	0.784	+ 0.000 V/C
# 68 SR-55 SB Ramps and MacArthur B	B	17.3	0.569	B	17.3	0.569	+ 0.000 D/V
# 69 SR-55 NB Ramps and MacArthur B	B	14.8	0.497	B	14.8	0.497	+ 0.000 D/V
# 70 SR-55 SB Ramps and Dyer Rd	C	25.7	0.669	C	25.7	0.669	+ 0.000 D/V
# 71 Glassell St and La Veta Ave	B	xxxxx	0.620	B	xxxxx	0.620	+ 0.000 V/C
# 72 Glassell St and SR-22 WB Ramps	C	24.8	0.766	C	24.8	0.766	+ 0.000 D/V
# 73 Grand Ave / Glassell St and SR	C	26.5	0.812	C	26.5	0.812	+ 0.000 D/V
# 74 Grand Ave and Fairhaven Ave	B	xxxxx	0.675	B	xxxxx	0.675	+ 0.000 V/C
# 75 Grand Ave and Santa Clara Ave	C	xxxxx	0.748	C	xxxxx	0.748	+ 0.000 V/C
# 76 Grand Ave and 17th St	D	xxxxx	0.828	D	xxxxx	0.828	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 77 Grand Ave and I-5 NB Ramps	A	10.0	0.518	A	10.0	0.518	+ 0.000 D/V
# 78 Grand Ave and Santa Ana Blvd	C	21.1	0.605	C	21.1	0.605	+ 0.000 D/V
# 79 Grand Ave and 1st St	C	xxxxx	0.793	C	xxxxx	0.793	+ 0.000 V/C
# 80 Grand Ave and Chestnut Ave	B	xxxxx	0.615	B	xxxxx	0.615	+ 0.000 V/C
# 81 Grand Ave and McFadden Ave	C	xxxxx	0.759	C	xxxxx	0.759	+ 0.000 V/C
# 82 Grand Ave and Edinger Ave	E	xxxxx	0.909	E	xxxxx	0.909	+ 0.000 V/C
# 83 Grand Ave and Warner Ave	C	xxxxx	0.704	C	xxxxx	0.704	+ 0.000 V/C
# 84 SR-55 NB Ramps and Dyer Rd	A	5.7	0.376	A	5.7	0.376	+ 0.000 D/V
# 85 Cambridge St and La Veta Ave	B	12.5	0.459	B	12.5	0.459	+ 0.000 V/C
# 86 Cambridge St and Fairhaven Ave	A	xxxxx	0.583	A	xxxxx	0.583	+ 0.000 V/C
# 87 Mabury St and 1st Street	C	26.1	0.703	C	26.1	0.703	+ 0.000 D/V
# 88 Tustin St and La Veta Ave	A	xxxxx	0.444	A	xxxxx	0.444	+ 0.000 V/C
# 89 Tustin St and SR-22 WB On-Ramp	B	12.1	0.446	B	12.1	0.446	+ 0.000 D/V
# 90 Tustin St and SR-22 EB Off-Ram	C	23.7	0.719	C	23.7	0.719	+ 0.000 D/V
# 91 Tustin Ave and Fairhaven Ave	B	xxxxx	0.614	B	xxxxx	0.614	+ 0.000 V/C
# 92 Tustin Ave and Santa Clara Ave	B	xxxxx	0.647	B	xxxxx	0.647	+ 0.000 V/C
# 93 Tustin Ave and 17th St	C	xxxxx	0.717	C	xxxxx	0.717	+ 0.000 V/C
# 94 Tustin Ave and 4th St	B	xxxxx	0.692	B	xxxxx	0.692	+ 0.000 V/C
# 95 SR-55 SB Ramps / Auto Mall Dr	C	25.1	0.583	C	25.1	0.583	+ 0.000 D/V
# 96 SR-55 NB Ramps / Del Amo Ave a	C	27.4	0.525	C	27.4	0.525	+ 0.000 D/V
# 97 Red Hill Ave and Edinger Ave	B	xxxxx	0.667	B	xxxxx	0.667	+ 0.000 V/C
# 98 Red Hill Ave and Warner Ave	A	xxxxx	0.588	A	xxxxx	0.588	+ 0.000 V/C
# 99 Red Hill Ave and Dyer Rd / bar	A	xxxxx	0.563	A	xxxxx	0.563	+ 0.000 V/C
#100 Red Hill Ave and Alton Pkwy	B	xxxxx	0.671	B	xxxxx	0.671	+ 0.000 V/C
#101 Red Hill Ave and MacArthur Blv	B	xxxxx	0.657	B	xxxxx	0.657	+ 0.000 V/C
#102 Red Hill Ave and Main St	C	xxxxx	0.774	C	xxxxx	0.774	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#103 I-5 SB Ramps and Santa Ana Blv	B	18.9	0.431	B	18.9	0.431	+ 0.000 D/V
#104 Tustin Ranch Rd and Warner Ave	B	xxxxx	0.606	B	xxxxx	0.606	+ 0.000 V/C
#105 Von Karman Ave and Barranca Pk	D	xxxxx	0.874	D	xxxxx	0.874	+ 0.000 V/C

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Euclid St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.865
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	70	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			WideBypass			WideBypass		
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	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	159	1477	119	185	1053	199	212	678	106	217	909	217
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:	159	1477	119	185	1053	199	212	678	106	217	909	217
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1477	119	185	1053	199	212	678	106	217	909	217
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	1477	119	185	1053	199	212	678	106	217	909	217
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	159	1477	119	185	1053	199	212	678	106	217	909	217
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.78	0.22	1.00	2.52	0.48	1.00	2.59	0.41	1.00	2.42	0.58
Final Sat.:	1600	4642	358	1600	4237	763	1600	4351	649	1600	4075	925
Capacity Analysis Module:												
Vol/Sat:	0.10	0.32	0.33	0.12	0.25	0.26	0.13	0.16	0.16	0.14	0.22	0.23
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Euclid St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.833
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	60	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			Prot+Permit			Prot+Permit		
Rights:	WideBypass			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:	175	1426	92	110	1354	164	183	419	185	127	532	246
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	1426	92	110	1354	164	183	419	185	127	532	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1426	92	110	1354	164	183	419	185	127	532	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	175	1426	92	110	1354	164	183	419	185	127	532	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	175	1426	92	110	1354	164	183	419	185	127	532	246
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.82	0.18	1.00	2.68	0.32	1.00	1.39	0.61	1.00	1.37	0.63
Final Sat.:	1600	4709	291	1600	4481	519	1600	2320	980	1600	2288	1012
Capacity Analysis Module:												
Vol/Sat:	0.11	0.30	0.32	0.07	0.30	0.32	0.11	0.18	0.19	0.08	0.23	0.24
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Euclid St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.787
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
Y+R:	4.0	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	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	526	1572	112	122	803	204	161	622	186	91	840	136
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:	526	1572	112	122	803	204	161	622	186	91	840	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	526	1572	112	122	803	204	161	622	186	91	840	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	526	1572	112	122	803	204	161	622	186	91	840	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	526	1572	112	122	803	204	161	622	186	91	840	136
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.80	0.20	2.00	2.39	0.61	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3200	4681	319	3200	4028	972	1600	3400	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.16	0.34	0.35	0.04	0.20	0.21	0.10	0.18	0.12	0.06	0.25	0.09
Crit Moves:		****	****				****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Newhope St and Hazard Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.642
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
Y+R:	4.0	4.0	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:	116	1281	50	49	1038	124	108	214	131	32	202	58
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:	116	1281	50	49	1038	124	108	214	131	32	202	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	116	1281	50	49	1038	124	108	214	131	32	202	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	1281	50	49	1038	124	108	214	131	32	202	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	1281	50	49	1038	124	108	214	131	32	202	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	1.92	0.08	1.00	1.79	0.21	1.00	1.24	0.76	1.00	1.55	0.45
Final Sat.:	1600	3180	120	1600	2959	341	1600	2085	1215	1600	2586	714
Capacity Analysis Module:												
Vol/Sat:	0.07	0.40	0.42	0.03	0.35	0.36	0.07	0.10	0.11	0.02	0.08	0.08
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Newhope St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.838
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	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			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	202	1084	190	164	733	142	81	496	72	107	589	168
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:	202	1084	190	164	733	142	81	496	72	107	589	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	202	1084	190	164	733	142	81	496	72	107	589	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	202	1084	190	164	733	142	81	496	72	107	589	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	202	1084	190	164	733	142	81	496	72	107	589	168
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.70	0.30	1.00	1.68	0.32	1.00	1.75	0.25	1.00	1.56	0.44
Final Sat.:	1600	2823	477	1600	2781	519	1600	2894	406	1600	2590	710
Capacity Analysis Module:												
Vol/Sat:	0.13	0.38	0.40	0.10	0.26	0.27	0.05	0.17	0.18	0.07	0.23	0.24
Crit Moves:			****	****			****					****

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Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.703
Loss Time (sec):	5	Average Delay (sec/veh):	23.6
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			Split Phase			Split Phase		
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	0	0 0	2 1	0	0 0	1! 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	88	1992	0	0	1519	49	93	0	78	593	80	170
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:	88	1992	0	0	1519	49	93	0	78	593	80	170
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1992	0	0	1519	49	93	0	78	593	80	170
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	1992	0	0	1519	49	93	0	78	593	80	170
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	1992	0	0	1519	49	93	0	78	593	80	170
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.96	0.96	0.85
Lanes:	1.00	3.00	0.00	0.00	2.91	0.09	0.54	0.00	0.46	1.76	0.24	1.00
Final Sat.:	1805	5187	0	0	5000	161	944	0	792	3208	433	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.38	0.00	0.00	0.30	0.30	0.10	0.00	0.10	0.18	0.18	0.11
Crit Moves:		****			****			****			****	
Green/Cycle:	0.08	0.55	0.00	0.00	0.47	0.47	0.14	0.00	0.14	0.26	0.26	0.26
Volume/Cap:	0.64	0.70	0.00	0.00	0.64	0.64	0.70	0.00	0.70	0.70	0.70	0.40
Delay/Veh:	55.1	17.5	0.0	0.0	20.7	20.7	49.9	0.0	49.9	35.7	35.7	31.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.1	17.5	0.0	0.0	20.7	20.7	49.9	0.0	49.9	35.7	35.7	31.0
LOS by Move:	E	B	A	A	C	C	D	A	D	D	D	C
HCM2k85thQ:	6	25	0	0	21	21	10	0	10	16	16	7

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Trask Avenue and SR-22 EB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.448
Loss Time (sec):	5	Average Delay (sec/veh):	12.4
Optimal Cycle:	23	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:	0 0	0 0	0	0 0	0 0	0	2 0	1 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	838	628	0	0	606	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:	0	0	0	0	0	0	838	628	0	0	606	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:	0	0	0	0	0	0	838	628	0	0	606	57
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	838	628	0	0	606	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:	0	0	0	0	0	0	838	628	0	0	606	57
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	0.94	0.94
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	0.00	1.83	0.17
Final Sat.:	0	0	0	0	0	0	3502	1900	0	0	3257	306
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.24	0.33	0.00	0.00	0.19	0.19
Crit Moves:							****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.53	0.95	0.00	0.00	0.42	0.42
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.45	0.35	0.00	0.00	0.45	0.45
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	14.4	0.3	0.0	0.0	21.2	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	14.4	0.3	0.0	0.0	21.2	21.2
LOS by Move:	A	A	A	A	A	A	B	A	A	A	C	C
HCM2k85thQ:	0	0	0	0	0	0	12	3	0	0	12	12

Note: Queue reported is the number of cars per lane.

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Harbor Blvd and Westminster Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.792
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
Y+R:	4.0	4.0	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	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	276	1374	325	207	1430	165	187	667	32	230	797	181
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:	276	1374	325	207	1430	165	187	667	32	230	797	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	276	1374	325	207	1430	165	187	667	32	230	797	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	276	1374	325	207	1430	165	187	667	32	230	797	181
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	276	1374	325	207	1430	165	187	667	32	230	797	181
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.86	0.14	1.00	3.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	4780	220	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.17	0.27	0.20	0.13	0.28	0.10	0.12	0.14	0.15	0.14	0.16	0.11
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #9 Harbor Blvd and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.833
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	60	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:	1 0	3 0	1	1 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	287	1480	164	278	1218	164	188	766	145	230	1073	175
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:	287	1480	164	278	1218	164	188	766	145	230	1073	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	287	1480	164	278	1218	164	188	766	145	230	1073	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	287	1480	164	278	1218	164	188	766	145	230	1073	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	287	1480	164	278	1218	164	188	766	145	230	1073	175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	2.52	0.48	2.00	2.58	0.42
Final Sat.:	1600	5100	1600	1600	5100	1600	3200	4236	764	3200	4327	673
Capacity Analysis Module:												
Vol/Sat:	0.18	0.29	0.10	0.17	0.24	0.10	0.06	0.18	0.19	0.07	0.25	0.26
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #10 Harbor Blvd and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.809
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	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 0	1	2 0	2 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	167	1716	125	298	1273	115	214	520	65	211	506	146
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:	167	1716	125	298	1273	115	214	520	65	211	506	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:	167	1716	125	298	1273	115	214	520	65	211	506	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	1716	125	298	1273	115	214	520	65	211	506	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:	167	1716	125	298	1273	115	214	520	65	211	506	146
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	3.00	1.00	2.00	2.75	0.25	1.00	1.78	0.22	1.00	1.55	0.45
Final Sat.:	3200	5100	1600	3200	4602	398	1600	2944	356	1600	2583	717
Capacity Analysis Module:												
Vol/Sat:	0.05	0.34	0.08	0.09	0.28	0.29	0.13	0.18	0.18	0.13	0.20	0.20
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #11 Harbor Blvd and 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			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	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	282	1773	214	283	822	75	134	564	100	140	813	271
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:	282	1773	214	283	822	75	134	564	100	140	813	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	282	1773	214	283	822	75	134	564	100	140	813	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	282	1773	214	283	822	75	134	564	100	140	813	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	282	1773	214	283	822	75	134	564	100	140	813	271
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.55	0.45	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4277	723	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.35	0.13	0.09	0.16	0.05	0.04	0.13	0.14	0.04	0.16	0.17
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Harbor Blvd and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.581
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	3 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	774	3713	279	274	1525	182	241	1707	390	260	2700	862
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:	774	3713	279	274	1525	182	241	1707	390	260	2700	862
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	774	3713	279	274	1525	182	241	1707	390	260	2700	862
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	774	3713	279	274	1525	182	241	1707	390	260	2700	862
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	774	3713	279	274	1525	182	241	1707	390	260	2700	862
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.79	0.21	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4665	335	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.24	0.80	0.83	0.09	0.30	0.11	0.08	0.33	0.24	0.08	0.53	0.54
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Harbor Blvd and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.897
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	85	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			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:	2 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	299	1881	60	91	1027	91	111	552	181	99	1074	390
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:	299	1881	60	91	1027	91	111	552	181	99	1074	390
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	299	1881	60	91	1027	91	111	552	181	99	1074	390
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	299	1881	60	91	1027	91	111	552	181	99	1074	390
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	299	1881	60	91	1027	91	111	552	181	99	1074	390
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.91	0.09	1.00	2.76	0.24	1.00	1.51	0.49	1.00	2.00	1.00
Final Sat.:	3200	4852	148	1600	4609	391	1600	2510	790	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.39	0.40	0.06	0.22	0.23	0.07	0.22	0.23	0.06	0.32	0.24
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #14 MacArthur Blvd and Hyland Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.917
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	98	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			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:	2 0	0 1	0	1 0	1 0	1	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	1201	7	70	12	4	14	36	891	160	25	2350	12
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:	1201	7	70	12	4	14	36	891	160	25	2350	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1201	7	70	12	4	14	36	891	160	25	2350	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1201	7	70	12	4	14	36	891	160	25	2350	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1201	7	70	12	4	14	36	891	160	25	2350	12
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	0.09	0.91	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	145	1455	1600	1700	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.38	0.05	0.05	0.01	0.00	0.01	0.02	0.17	0.10	0.02	0.46	0.01
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #15 MacArthur Blvd and Harbor Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.819
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	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 0	1	2 0	3 0	1	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	588	1519	88	213	1073	176	140	489	181	87	1467	276
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:	588	1519	88	213	1073	176	140	489	181	87	1467	276
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	588	1519	88	213	1073	176	140	489	181	87	1467	276
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	588	1519	88	213	1073	176	140	489	181	87	1467	276
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	588	1519	88	213	1073	176	140	489	181	87	1467	276
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.18	0.30	0.06	0.07	0.21	0.11	0.09	0.10	0.11	0.05	0.29	0.17
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Harbor Blvd and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.780
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			Split Phase			Split Phase		
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	1 0	1 1	0	1 1	0 1	0
Volume Module:												
Base Vol:	178	1771	263	112	1393	42	67	182	189	254	533	199
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:	178	1771	263	112	1393	42	67	182	189	254	533	199
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	178	1771	263	112	1393	42	67	182	189	254	533	199
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1771	263	112	1393	42	67	182	189	254	533	199
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	178	1771	263	112	1393	42	67	182	189	254	533	199
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	1.00	1.00	1.00	1.39	0.61
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	1700	1600	1600	2322	974
Capacity Analysis Module:												
Vol/Sat:	0.06	0.35	0.16	0.04	0.27	0.03	0.04	0.11	0.12	0.16	0.23	0.20
Crit Moves:		****			****				****		****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Harbor Blvd and I-405 WB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.824
Loss Time (sec):	5	Average Delay (sec/veh):	23.7
Optimal Cycle:	60	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			Split Phase			Split Phase		
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 3	1 0	0	0 4	0 0	0	0 0	0 0	1	0 1!	0 1
Volume Module:												
Base Vol:	0	1529	611	0	2475	0	0	0	0	701	0	1132
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	1529	611	0	2475	0	0	0	0	701	0	1132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1529	611	0	2475	0	0	0	0	701	0	1132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1529	611	0	2475	0	0	0	0	701	0	1132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1529	611	0	2475	0	0	0	0	701	0	1132
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.87	0.87	1.00	0.91	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	0.00	0.00	0.00	1.38	0.00	1.62
Final Sat.:	0	4964	1655	0	6916	0	0	0	0	2337	0	2735
Capacity Analysis Module:												
Vol/Sat:	0.00	0.31	0.37	0.00	0.36	0.00	0.00	0.00	0.00	0.30	0.00	0.41
Crit Moves:			****	****								****
Green/Cycle:	0.00	0.45	0.45	0.00	0.45	0.00	0.00	0.00	0.00	0.50	0.00	0.50
Volume/Cap:	0.00	0.69	0.82	0.00	0.80	0.00	0.00	0.00	0.00	0.60	0.00	0.82
Delay/Veh:	0.0	22.7	26.4	0.0	25.3	0.0	0.0	0.0	0.0	18.0	0.0	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	22.7	26.4	0.0	25.3	0.0	0.0	0.0	0.0	18.0	0.0	23.8
LOS by Move:	A	C	C	A	C	A	A	A	A	B	A	C
HCM2k85thQ:	0	22	29	0	29	0	0	0	0	17	0	30

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harbor Blvd and I-405 EB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.998
Loss Time (sec):	5	Average Delay (sec/veh):	19.4
Optimal Cycle:	180	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			Split Phase			Split Phase		
Rights:	Ignore			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 3	0 1	0	0 3	1 0	1	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1861	674	0	2147	1160	157	0	722	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:	0	1861	674	0	2147	1160	157	0	722	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1861	0	0	2147	1160	157	0	722	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1861	0	0	2147	1160	157	0	722	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1861	0	0	2147	1160	157	0	722	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.86	0.86	0.87	1.00	0.87	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	3.00	1.00	1.18	0.00	1.82	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	4912	1637	1946	0	3008	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.00	0.00	0.44	0.71	0.08	0.00	0.24	0.00	0.00	0.00
Crit Moves:	****					****			****			
Green/Cycle:	0.00	0.71	0.00	0.00	0.71	0.71	0.24	0.00	0.24	0.00	0.00	0.00
Volume/Cap:	0.00	0.51	0.00	0.00	0.62	1.00	0.34	0.00	1.00	0.00	0.00	0.00
Delay/Veh:	0.0	6.7	0.0	0.0	7.7	29.7	31.5	0.0	67.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	6.7	0.0	0.0	7.7	29.7	31.5	0.0	67.9	0.0	0.0	0.0
LOS by Move:	A	A	A	A	A	C	C	A	E	A	A	A
HCM2k85thQ:	0	15	0	0	19	65	6	0	26	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #19 Fairview St and Civic Center Dr

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			Split Phase			Split Phase		
Rights:	WideBypass			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	1 0	1 1	0	0 1
Volume Module:												
Base Vol:	5	1430	402	144	1338	0	2	5	4	438	0	162
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	1430	402	144	1338	0	2	5	4	438	0	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	5	1430	402	144	1338	0	2	5	4	438	0	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	1430	402	144	1338	0	2	5	4	438	0	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	5	1430	402	144	1338	0	2	5	4	438	0	162
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	2.34	0.66	1.00	3.00	0.00	0.36	0.91	0.73	2.00	0.00	1.00
Final Sat.:	1600	3947	1053	1600	5000	0	582	1455	1164	3200	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.38	0.09	0.27	0.00	0.00	0.00	0.00	0.14	0.00	0.10
Crit Moves:			****	****				****		****		

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Fairview St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.883
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			WideBypass			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	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	149	1094	99	203	1264	251	215	870	151	159	1204	186
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:	149	1094	99	203	1264	251	215	870	151	159	1204	186
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	149	1094	99	203	1264	251	215	870	151	159	1204	186
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	149	1094	99	203	1264	251	215	870	151	159	1204	186
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	149	1094	99	203	1264	251	215	870	151	159	1204	186
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	2.50	0.50	1.00	2.56	0.44	1.00	2.60	0.40
Final Sat.:	1600	5100	1600	1600	4205	795	1600	4290	710	1600	4358	642
Capacity Analysis Module:												
Vol/Sat:	0.09	0.21	0.06	0.13	0.30	0.32	0.13	0.20	0.21	0.10	0.28	0.29
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Fairview St and McFadden Ave

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:	1 0	3 0	1	1 0	3 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	159	1462	127	155	1257	196	244	659	163	158	545	134
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:	159	1462	127	155	1257	196	244	659	163	158	545	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1462	127	155	1257	196	244	659	163	158	545	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	1462	127	155	1257	196	244	659	163	158	545	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	159	1462	127	155	1257	196	244	659	163	158	545	134
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.60	0.40	1.00	1.61	0.39
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	2665	635	1600	2668	632
Capacity Analysis Module:												
Vol/Sat:	0.10	0.29	0.08	0.10	0.25	0.12	0.15	0.25	0.26	0.10	0.20	0.21
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Fairview St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.811
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	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	2 1	0	2 0	2 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	188	1793	110	198	616	151	230	703	188	373	789	173
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:	188	1793	110	198	616	151	230	703	188	373	789	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	188	1793	110	198	616	151	230	703	188	373	789	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	1793	110	198	616	151	230	703	188	373	789	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	188	1793	110	198	616	151	230	703	188	373	789	173
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.83	0.17	2.00	2.41	0.59	2.00	2.37	0.63	2.00	2.46	0.54
Final Sat.:	3200	4723	277	3200	4055	945	3200	3987	1013	3200	4137	863
Capacity Analysis Module:												
Vol/Sat:	0.06	0.38	0.40	0.06	0.15	0.16	0.07	0.18	0.19	0.12	0.19	0.20
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #23 Fairview St and 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	2 1	0	2 0	2 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	217	1728	161	188	951	96	197	955	148	188	1108	240
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:	217	1728	161	188	951	96	197	955	148	188	1108	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:	217	1728	161	188	951	96	197	955	148	188	1108	240
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	217	1728	161	188	951	96	197	955	148	188	1108	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:	217	1728	161	188	951	96	197	955	148	188	1108	240
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.74	0.26	2.00	2.72	0.28	2.00	2.60	0.40	2.00	2.47	0.53
Final Sat.:	3200	4591	409	3200	4560	440	3200	4356	644	3200	4145	855
Capacity Analysis Module:												
Vol/Sat:	0.07	0.38	0.39	0.06	0.21	0.22	0.06	0.22	0.23	0.06	0.27	0.28
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Fairview St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.826
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	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 2	1 0		2 0 3	0 1		2 0 3	0 1		2 0 3	0 1	
Volume Module:												
Base Vol:	243	1672	91	171	955	88	280	731	246	179	1365	239
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:	243	1672	91	171	955	88	280	731	246	179	1365	239
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	243	1672	91	171	955	88	280	731	246	179	1365	239
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	243	1672	91	171	955	88	280	731	246	179	1365	239
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	243	1672	91	171	955	88	280	731	246	179	1365	239
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.85	0.15	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4752	248	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.35	0.37	0.05	0.19	0.06	0.09	0.14	0.15	0.06	0.27	0.15
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #25 Fairview Rd and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.708
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:	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	2 1	0	2 0	1 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	201	1806	393	144	1196	83	203	430	95	265	664	173
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:	201	1806	393	144	1196	83	203	430	95	265	664	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	201	1806	393	144	1196	83	203	430	95	265	664	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	1806	393	144	1196	83	203	430	95	265	664	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	201	1806	393	144	1196	83	203	430	95	265	664	173
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.81	0.19	2.00	1.64	0.36	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4689	311	3200	2721	579	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.35	0.25	0.05	0.26	0.27	0.06	0.16	0.16	0.08	0.20	0.11
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Greenville St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.586
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:	Split Phase			Split Phase			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	0	0 1	0 0	0	0 0	0 0	2	1 0	1 0	2	0 0
Volume Module:												
Base Vol:	327	0	218	0	0	0	0	982	200	95	1128	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:	327	0	218	0	0	0	0	982	200	95	1128	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:	327	0	218	0	0	0	0	982	200	95	1128	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	327	0	218	0	0	0	0	982	200	95	1128	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:	327	0	218	0	0	0	0	982	200	95	1128	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.49	0.51	1.00	2.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4188	812	1600	3400	0
Capacity Analysis Module:												
Vol/Sat:	0.20	0.00	0.14	0.00	0.00	0.00	0.00	0.23	0.25	0.06	0.33	0.00
Crit Moves:	****						****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #27 Greenville St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.686
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:	Permitted			Permitted			Permitted			Permitted		
Rights:	Include			Include			WideBypass			WideBypass		
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	1	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	57	476	36	61	200	61	108	823	47	27	1037	148
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:	57	476	36	61	200	61	108	823	47	27	1037	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	476	36	61	200	61	108	823	47	27	1037	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	476	36	61	200	61	108	823	47	27	1037	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	57	476	36	61	200	61	108	823	47	27	1037	148
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.04	1.00
Lanes:	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.89	0.11	1.00	1.75	0.25
Final Sat.:	1600	3075	225	1600	1700	1600	1600	3127	173	1600	2900	400
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.16	0.04	0.12	0.04	0.07	0.26	0.27	0.02	0.36	0.37
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #28 Raitt St and McFadden 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			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	58	835	130	45	474	76	126	747	65	88	742	102
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	835	130	45	474	76	126	747	65	88	742	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:	58	835	130	45	474	76	126	747	65	88	742	102
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	58	835	130	45	474	76	126	747	65	88	742	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:	58	835	130	45	474	76	126	747	65	88	742	102
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.04	1.00
Lanes:	1.00	1.73	0.27	1.00	1.72	0.28	1.00	1.84	0.16	1.00	1.76	0.24
Final Sat.:	1600	2869	431	1600	2858	442	1600	3044	256	1600	2913	387
Capacity Analysis Module:												
Vol/Sat:	0.04	0.29	0.30	0.03	0.17	0.17	0.08	0.25	0.25	0.06	0.25	0.26
Crit Moves:			****	****			****					****

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #29 Raitt St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.864
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	70	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			WideBypass			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	190	816	229	111	384	96	139	961	137	86	972	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:	190	816	229	111	384	96	139	961	137	86	972	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:	190	816	229	111	384	96	139	961	137	86	972	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	816	229	111	384	96	139	961	137	86	972	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:	190	816	229	111	384	96	139	961	137	86	972	87
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	1.56	0.44	1.00	1.60	0.40	1.00	1.75	0.25	1.00	1.84	0.16
Final Sat.:	1600	2599	701	1600	2660	640	1600	2901	399	1600	3037	263
Capacity Analysis Module:												
Vol/Sat:	0.12	0.31	0.33	0.07	0.14	0.15	0.09	0.33	0.34	0.05	0.32	0.33
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Bear St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.868
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	71	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:	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	200	962	251	112	271	82	97	910	94	93	1673	266
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:	200	962	251	112	271	82	97	910	94	93	1673	266
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	200	962	251	112	271	82	97	910	94	93	1673	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	962	251	112	271	82	97	910	94	93	1673	266
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	200	962	251	112	271	82	97	910	94	93	1673	266
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.72	0.28	1.00	2.59	0.41
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	4551	449	1600	4342	658
Capacity Analysis Module:												
Vol/Sat:	0.13	0.28	0.16	0.07	0.08	0.05	0.06	0.20	0.21	0.06	0.39	0.40
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Bristol St and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.692
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:	Include			Include			Include			Ovl		
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	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	236	1148	191	243	1293	220	336	750	136	284	1069	362
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:	236	1148	191	243	1293	220	336	750	136	284	1069	362
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	236	1148	191	243	1293	220	336	750	136	284	1069	362
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	236	1148	191	243	1293	220	336	750	136	284	1069	362
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	236	1148	191	243	1293	220	336	750	136	284	1069	362
OvlAdjVol:												241
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.54	0.46	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4263	737	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.23	0.12	0.08	0.25	0.14	0.11	0.18	0.18	0.09	0.21	0.23
OvlAdjV/S:												0.15
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Bristol St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.832
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	60	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			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	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	200	1399	73	136	1250	128	190	534	63	169	723	82
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:	200	1399	73	136	1250	128	190	534	63	169	723	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:	200	1399	73	136	1250	128	190	534	63	169	723	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	1399	73	136	1250	128	190	534	63	169	723	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:	200	1399	73	136	1250	128	190	534	63	169	723	82
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	2.85	0.15	1.00	2.72	0.28	1.00	1.79	0.21	1.00	1.80	0.20
Final Sat.:	1600	4762	238	1600	4554	446	1600	2962	338	1600	2974	326
Capacity Analysis Module:												
Vol/Sat:	0.13	0.29	0.31	0.09	0.27	0.29	0.12	0.18	0.19	0.11	0.24	0.25
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Bristol St and Santa Ana Blvd

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	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	75	1524	87	105	1402	53	59	163	38	233	371	100
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:	75	1524	87	105	1402	53	59	163	38	233	371	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	75	1524	87	105	1402	53	59	163	38	233	371	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	75	1524	87	105	1402	53	59	163	38	233	371	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	75	1524	87	105	1402	53	59	163	38	233	371	100
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.84	0.16	1.00	2.89	0.11	1.00	1.62	0.38	1.00	1.58	0.42
Final Sat.:	1600	4741	259	1600	4825	175	1600	2695	605	1600	2621	679
Capacity Analysis Module:												
Vol/Sat:	0.05	0.32	0.34	0.07	0.29	0.30	0.04	0.06	0.06	0.15	0.14	0.15
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Bristol St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.779
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	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	286	1235	182	206	1115	252	189	1062	136	217	1330	126
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:	286	1235	182	206	1115	252	189	1062	136	217	1330	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	286	1235	182	206	1115	252	189	1062	136	217	1330	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	286	1235	182	206	1115	252	189	1062	136	217	1330	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	286	1235	182	206	1115	252	189	1062	136	217	1330	126
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.66	0.34	1.00	2.74	0.26
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	4455	545	1600	4585	415
Capacity Analysis Module:												
Vol/Sat:	0.09	0.24	0.11	0.06	0.22	0.16	0.12	0.24	0.25	0.14	0.29	0.30
Crit Moves:	****			****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Bristol St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.752
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			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	1 0	3 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	213	1566	85	84	1171	270	262	512	102	97	504	59
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:	213	1566	85	84	1171	270	262	512	102	97	504	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:	213	1566	85	84	1171	270	262	512	102	97	504	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	1566	85	84	1171	270	262	512	102	97	504	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:	213	1566	85	84	1171	270	262	512	102	97	504	59
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.67	0.33	1.00	1.79	0.21
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	2768	532	1600	2965	335
Capacity Analysis Module:												
Vol/Sat:	0.13	0.31	0.05	0.05	0.23	0.17	0.16	0.18	0.19	0.06	0.17	0.18
Crit Moves:	****				****		****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Bristol St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.790
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
Y+R:	4.0	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 0	1	2 0	2 1	0	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	309	1157	211	251	838	163	193	868	153	173	1021	299
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:	309	1157	211	251	838	163	193	868	153	173	1021	299
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	309	1157	211	251	838	163	193	868	153	173	1021	299
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	309	1157	211	251	838	163	193	868	153	173	1021	299
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	309	1157	211	251	838	163	193	868	153	173	1021	299
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.00	1.00	2.00	2.51	0.49	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	3400	1600	3200	4218	782	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.34	0.13	0.08	0.20	0.21	0.12	0.17	0.10	0.11	0.20	0.19
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Bristol St and Segerstrom 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:	WideBypass			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:	179	1322	233	92	843	176	200	716	57	119	1074	54
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:	179	1322	233	92	843	176	200	716	57	119	1074	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	1322	233	92	843	176	200	716	57	119	1074	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	1322	233	92	843	176	200	716	57	119	1074	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	179	1322	233	92	843	176	200	716	57	119	1074	54
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	2.55	0.45	1.00	2.48	0.52	1.00	1.85	0.15	1.00	1.90	0.10
Final Sat.:	1600	4281	719	1600	4171	829	1600	3064	236	1600	3147	153
Capacity Analysis Module:												
Vol/Sat:	0.11	0.31	0.32	0.06	0.20	0.21	0.13	0.23	0.24	0.07	0.34	0.35
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Bristol St and Alton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.686
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			Permitted			Permitted		
Rights:	WideBypass			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	0 1	0
Volume Module:												
Base Vol:	43	1681	158	119	896	56	75	105	195	91	150	29
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:	43	1681	158	119	896	56	75	105	195	91	150	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:	43	1681	158	119	896	56	75	105	195	91	150	29
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	1681	158	119	896	56	75	105	195	91	150	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:	43	1681	158	119	896	56	75	105	195	91	150	29
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.74	0.26	1.00	3.00	1.00	1.00	1.00	1.00	1.00	0.84	0.16
Final Sat.:	1600	4588	412	1600	5100	1600	1600	1700	1600	1600	1341	259
Capacity Analysis Module:												
Vol/Sat:	0.03	0.37	0.38	0.07	0.18	0.04	0.05	0.06	0.12	0.06	0.11	0.11
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Bristol St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.812
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	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 0	1	2 0	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	335	1428	260	223	821	129	357	796	169	265	1536	290
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:	335	1428	260	223	821	129	357	796	169	265	1536	290
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	335	1428	260	223	821	129	357	796	169	265	1536	290
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	335	1428	260	223	821	129	357	796	169	265	1536	290
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	335	1428	260	223	821	129	357	796	169	265	1536	290
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.59	0.41	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	4348	652	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.28	0.16	0.07	0.19	0.20	0.11	0.16	0.11	0.08	0.30	0.18
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Bristol St and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.689
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:	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	1	2 0	3 0	1	2 0	2 1	1	2 0	3 0	1
Volume Module:												
Base Vol:	645	1363	220	201	750	215	293	573	222	263	1012	322
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:	645	1363	220	201	750	215	293	573	222	263	1012	322
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	645	1363	220	201	750	215	293	573	222	263	1012	322
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	645	1363	220	201	750	215	293	573	222	263	1012	322
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	645	1363	220	201	750	215	293	573	222	263	1012	322
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.88	1.12	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4813	1787	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.20	0.27	0.14	0.06	0.15	0.13	0.09	0.12	0.12	0.08	0.20	0.20
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Bristol St and I-405 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.829
Loss Time (sec):	5	Average Delay (sec/veh):	28.2
Optimal Cycle:	61	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			Split Phase			Split Phase		
Rights:	Ignore			Include			Include			Ovl		
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 4	0 1	0	0 4	1 0	0	0 0	0 2	1	1 1	0 2
Volume Module:												
Base Vol:	0	2094	183	0	2148	20	0	0	194	357	306	1184
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	2094	183	0	2148	20	0	0	194	357	306	1184
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2094	0	0	2148	20	0	0	194	357	306	1184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2094	0	0	2148	20	0	0	194	357	306	1184
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	2094	0	0	2148	20	0	0	194	357	306	1184
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	0.91	1.00	1.00	0.75	0.93	0.93	0.75
Lanes:	0.00	4.00	1.00	0.00	4.95	0.05	0.00	0.00	2.00	1.62	1.38	2.00
Final Sat.:	0	6916	1900	0	8557	80	0	0	2842	2840	2434	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.00	0.00	0.25	0.25	0.00	0.00	0.07	0.13	0.13	0.42
Crit Moves:		****		****					****			****
Green/Cycle:	0.00	0.37	0.00	0.00	0.37	0.37	0.00	0.00	0.08	0.50	0.50	0.50
Volume/Cap:	0.00	0.83	0.00	0.00	0.69	0.69	0.00	0.00	0.83	0.25	0.25	0.83
Delay/Veh:	0.0	31.3	0.0	0.0	27.5	27.5	0.0	0.0	66.4	14.2	14.2	25.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.3	0.0	0.0	27.5	27.5	0.0	0.0	66.4	14.2	14.2	25.4
LOS by Move:	A	C	A	A	C	C	A	A	E	B	B	C
HCM2k85thQ:	0	27	0	0	20	20	0	0	9	6	6	29

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Bristol St and I-405 EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.595
Loss Time (sec):	5	Average Delay (sec/veh):	18.4
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			Split Phase			Split Phase		
Rights:	Include			Ignore			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	4 0	0	0 0	2 1	1	3 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	127	1555	0	0	1506	880	740	0	331	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:	127	1555	0	0	1506	880	740	0	331	0	0	0
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:	127	1555	0	0	1506	0	740	0	331	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	1555	0	0	1506	0	740	0	331	0	0	0
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:	127	1555	0	0	1506	0	740	0	331	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.92	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	4.00	0.00	0.00	3.00	1.00	3.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	6916	0	0	5187	1729	5253	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.00	0.00	0.29	0.00	0.14	0.00	0.20	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.12	0.61	0.00	0.00	0.49	0.00	0.34	0.00	0.34	0.00	0.00	0.00
Volume/Cap:	0.60	0.37	0.00	0.00	0.60	0.00	0.41	0.00	0.60	0.00	0.00	0.00
Delay/Veh:	46.3	10.1	0.0	0.0	18.9	0.0	25.2	0.0	28.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	46.3	10.1	0.0	0.0	18.9	0.0	25.2	0.0	28.8	0.0	0.0	0.0
LOS by Move:	D	B	A	A	B	A	C	A	C	A	A	A
HCM2k85thQ:	7	10	0	0	19	0	9	0	14	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #43 Flower St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.571
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:	Prot+Permit			Prot+Permit			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	0	1	1 0 2	0	1	1 0 3	0	1	1 0 2	0	1
Volume Module:												
Base Vol:	124	754	62	104	530	48	134	386	63	146	510	151
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:	124	754	62	104	530	48	134	386	63	146	510	151
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	754	62	104	530	48	134	386	63	146	510	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	124	754	62	104	530	48	134	386	63	146	510	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	124	754	62	104	530	48	134	386	63	146	510	151
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	5100	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.22	0.04	0.07	0.16	0.03	0.08	0.08	0.04	0.09	0.15	0.09
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #44 Flower St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.752
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:	1 0	2 0	1	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	132	625	149	170	466	135	139	1217	101	210	1415	147
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:	132	625	149	170	466	135	139	1217	101	210	1415	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:	132	625	149	170	466	135	139	1217	101	210	1415	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	132	625	149	170	466	135	139	1217	101	210	1415	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:	132	625	149	170	466	135	139	1217	101	210	1415	147
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	1.55	0.45	1.00	2.77	0.23	1.00	2.72	0.28
Final Sat.:	1600	3400	1600	1600	2581	719	1600	4632	368	1600	4548	452
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.09	0.11	0.18	0.19	0.09	0.26	0.27	0.13	0.31	0.33
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #45 Flower St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.920
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	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:	Permitted			Permitted			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	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	42	567	35	46	352	57	64	478	19	48	595	85
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:	42	567	35	46	352	57	64	478	19	48	595	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:	42	567	35	46	352	57	64	478	19	48	595	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	42	567	35	46	352	57	64	478	19	48	595	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:	42	567	35	46	352	57	64	478	19	48	595	85
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.94	0.06	1.00	0.86	0.14	1.00	0.96	0.04	1.00	0.88	0.12
Final Sat.:	1600	1507	93	1600	1377	223	1600	1539	61	1600	1400	200
Capacity Analysis Module:												
Vol/Sat:	0.03	0.38	0.38	0.03	0.26	0.26	0.04	0.31	0.31	0.03	0.43	0.43
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #46 Flower St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.897
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	85	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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	120	843	80	66	369	106	158	786	83	75	1258	81
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	843	80	66	369	106	158	786	83	75	1258	81
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	843	80	66	369	106	158	786	83	75	1258	81
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	843	80	66	369	106	158	786	83	75	1258	81
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	120	843	80	66	369	106	158	786	83	75	1258	81
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	1.83	0.17	1.00	1.55	0.45	1.00	1.81	0.19	1.00	1.88	0.12
Final Sat.:	1600	3023	277	1600	2586	714	1600	2994	306	1600	3106	194
Capacity Analysis Module:												
Vol/Sat:	0.08	0.28	0.29	0.04	0.14	0.15	0.10	0.26	0.27	0.05	0.40	0.42
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #47 Flower St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.906
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	133	634	74	85	205	197	209	994	63	62	1989	177
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:	133	634	74	85	205	197	209	994	63	62	1989	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:	133	634	74	85	205	197	209	994	63	62	1989	177
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	634	74	85	205	197	209	994	63	62	1989	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:	133	634	74	85	205	197	209	994	63	62	1989	177
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	1.79	0.21	1.00	1.02	0.98	1.00	2.82	0.18	1.00	2.75	0.25
Final Sat.:	1600	2966	334	1600	1732	1568	1600	4714	286	1600	4608	392
Capacity Analysis Module:												
Vol/Sat:	0.08	0.21	0.22	0.05	0.12	0.13	0.13	0.21	0.22	0.04	0.43	0.45
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #48 Main St and La Veta Ave

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			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
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	2 1	0	2 0	2 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	307	938	439	145	911	235	296	422	189	257	513	206
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:	307	938	439	145	911	235	296	422	189	257	513	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:	307	938	439	145	911	235	296	422	189	257	513	206
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	307	938	439	145	911	235	296	422	189	257	513	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:	307	938	439	145	911	235	296	422	189	257	513	206
OvlAdjVol:			310									134
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.38	0.62	2.00	2.07	0.93	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4016	984	3200	3515	1485	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.18	0.27	0.05	0.23	0.24	0.09	0.12	0.13	0.08	0.15	0.13
OvlAdjV/S:			0.19									0.08
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #49 Main St and Mainplace Dr / Memory Ln

Cycle (sec):	100	Critical Vol./Cap.(X):	0.471
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
Y+R:	4.0	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	2 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	90	945	179	51	1055	139	293	325	87	185	151	73
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	945	179	51	1055	139	293	325	87	185	151	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	945	179	51	1055	139	293	325	87	185	151	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	90	945	179	51	1055	139	293	325	87	185	151	73
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	90	945	179	51	1055	139	293	325	87	185	151	73
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	2.52	0.48	2.00	2.65	0.35	2.00	2.37	0.63	2.00	2.00	1.00
Final Sat.:	3200	4236	764	3200	4441	559	3200	3986	1014	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.22	0.23	0.02	0.24	0.25	0.09	0.08	0.09	0.06	0.04	0.05
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #50 Main St and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.732
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			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 0	1	2 0	1 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	197	1019	222	173	757	117	221	1237	73	178	1089	72
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:	197	1019	222	173	757	117	221	1237	73	178	1089	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	197	1019	222	173	757	117	221	1237	73	178	1089	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	1019	222	173	757	117	221	1237	73	178	1089	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	197	1019	222	173	757	117	221	1237	73	178	1089	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	2.00	1.00	2.00	1.73	0.27	2.00	2.83	0.17	2.00	2.81	0.19
Final Sat.:	3200	3400	1600	3200	2872	428	3200	4733	267	3200	4702	298
Capacity Analysis Module:												
Vol/Sat:	0.06	0.30	0.14	0.05	0.26	0.27	0.07	0.26	0.27	0.06	0.23	0.24
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #51 Main St and Civic Center Dr

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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	89	1126	94	61	995	63	159	881	105	38	384	39
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	1126	94	61	995	63	159	881	105	38	384	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1126	94	61	995	63	159	881	105	38	384	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	1126	94	61	995	63	159	881	105	38	384	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	1126	94	61	995	63	159	881	105	38	384	39
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	1.85	0.15	1.00	1.88	0.12	1.00	1.79	0.21	1.00	1.82	0.18
Final Sat.:	1600	3053	247	1600	3109	191	1600	2959	341	1600	3005	295
Capacity Analysis Module:												
Vol/Sat:	0.06	0.37	0.38	0.04	0.32	0.33	0.10	0.30	0.31	0.02	0.13	0.13
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #52 Main St and Santa Ana Blvd

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:	Permitted			Permitted			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	0 0		0 0 1	1 0		0 0 0	0 0		0 1 1	1 0	
Volume Module:												
Base Vol:	54 1229	0		0 1083	53		0	0		65	656	85
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 1229	0		0 1083	53		0	0		65	656	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:	54 1229	0		0 1083	53		0	0		65	656	85
Reduct Vol:	0 0	0		0 0	0		0	0		0	0	0
Reduced Vol:	54 1229	0		0 1083	53		0	0		65	656	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:	54 1229	0		0 1083	53		0	0		65	656	85
Saturation Flow Module:												
Sat/Lane:	1600 1600	1600		1600 1600	1600		1600 1600	1600		1600	1600	1600
Adjustment:	1.00 1.06	1.00		1.00 1.03	1.00		1.00 1.06	1.00		1.00	1.03	1.00
Lanes:	1.00 2.00	0.00		0.00 1.91	0.09		0.00 0.00	0.00		0.24	2.44	0.32
Final Sat.:	1600 3400	0		0 3151	149		0	0		387	4007	506
Capacity Analysis Module:												
Vol/Sat:	0.03 0.36	0.00		0.00 0.34	0.36		0.00 0.00	0.00		0.04	0.16	0.17
Crit Moves:	****				****							****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #53 Main St and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.537
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:	Permitted			Permitted			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:	0 0	1 1	0	0 0	1 1	0	0 0	0 1	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	1055	50	0	1037	47	0	98	55	0	181	46
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	1055	50	0	1037	47	0	98	55	0	181	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:	0	1055	50	0	1037	47	0	98	55	0	181	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1055	50	0	1037	47	0	98	55	0	181	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:	0	1055	50	0	1037	47	0	98	55	0	181	46
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.00	1.91	0.09	0.00	1.91	0.09	0.00	0.64	0.36	0.00	0.80	0.20
Final Sat.:	0	3155	145	0	3161	139	0	1025	575	0	1276	324
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.35	0.00	0.33	0.34	0.00	0.10	0.10	0.00	0.14	0.14
Crit Moves:		****	****				****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #54 Main St and 1st St

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:	1 0	1	1 0	1 0	2	0 1	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	169	826	72	175	671	143	120	1214	90	114	1275	89
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:	169	826	72	175	671	143	120	1214	90	114	1275	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	169	826	72	175	671	143	120	1214	90	114	1275	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	826	72	175	671	143	120	1214	90	114	1275	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	169	826	72	175	671	143	120	1214	90	114	1275	89
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.84	0.16	1.00	2.00	1.00	1.00	2.79	0.21	1.00	2.80	0.20
Final Sat.:	1600	3043	257	1600	3400	1600	1600	4669	331	1600	4687	313
Capacity Analysis Module:												
Vol/Sat:	0.11	0.27	0.28	0.11	0.20	0.09	0.08	0.26	0.27	0.07	0.27	0.28
Crit Moves:		****		****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #55 Main St and McFadden Ave

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:	Prot+Permit			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:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	146	1147	71	134	908	66	78	345	42	85	480	216
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:	146	1147	71	134	908	66	78	345	42	85	480	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:	146	1147	71	134	908	66	78	345	42	85	480	216
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	146	1147	71	134	908	66	78	345	42	85	480	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:	146	1147	71	134	908	66	78	345	42	85	480	216
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	1.88	0.12	1.00	1.86	0.14	1.00	0.89	0.11	1.00	1.00	1.00
Final Sat.:	1600	3113	187	1600	3083	217	1600	1426	174	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.37	0.38	0.08	0.29	0.30	0.05	0.24	0.24	0.05	0.28	0.14
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #56 Main St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.847
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
Y+R:	4.0	4.0	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	2	0 1	1 0	2	1 0
Volume Module:												
Base Vol:	99	1050	48	122	609	83	127	752	84	97	1296	134
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:	99	1050	48	122	609	83	127	752	84	97	1296	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	1050	48	122	609	83	127	752	84	97	1296	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	1050	48	122	609	83	127	752	84	97	1296	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	1050	48	122	609	83	127	752	84	97	1296	134
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.05	1.00
Lanes:	1.00	1.91	0.09	1.00	1.76	0.24	1.00	2.00	1.00	1.00	2.72	0.28
Final Sat.:	1600	3160	140	1600	2916	384	1600	3400	1600	1600	4550	450
Capacity Analysis Module:												
Vol/Sat:	0.06	0.33	0.34	0.08	0.21	0.22	0.08	0.22	0.05	0.06	0.28	0.30
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #57 Main St and MacArthur Blvd

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	3 0	1
Volume Module:												
Base Vol:	488	1169	321	283	368	278	298	613	59	198	1570	456
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:	488	1169	321	283	368	278	298	613	59	198	1570	456
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	488	1169	321	283	368	278	298	613	59	198	1570	456
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	488	1169	321	283	368	278	298	613	59	198	1570	456
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	488	1169	321	283	368	278	298	613	59	198	1570	456
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.15	0.23	0.20	0.09	0.07	0.17	0.09	0.12	0.04	0.06	0.31	0.28
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Penn Wy and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.770
Loss Time (sec):	5	Average Delay (sec/veh):	20.7
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:	Split Phase			Split Phase			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	0	0 2	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	848	0	414	0	0	0	0	1590	513	123	1440	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:	848	0	414	0	0	0	0	1590	513	123	1440	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:	848	0	414	0	0	0	0	1590	513	123	1440	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	848	0	414	0	0	0	0	1590	513	123	1440	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:	848	0	414	0	0	0	0	1590	513	123	1440	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.75	1.00	1.00	1.00	1.00	0.88	0.88	0.95	0.91	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.27	0.73	1.00	3.00	0.00
Final Sat.:	3502	0	2842	0	0	0	0	3777	1218	1805	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.24	0.00	0.15	0.00	0.00	0.00	0.00	0.42	0.42	0.07	0.28	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.31	0.00	0.31	0.00	0.00	0.00	0.00	0.55	0.55	0.09	0.64	0.00
Volume/Cap:	0.77	0.00	0.46	0.00	0.00	0.00	0.00	0.77	0.77	0.77	0.44	0.00
Delay/Veh:	34.4	0.0	27.9	0.0	0.0	0.0	0.0	19.1	19.1	64.7	9.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.4	0.0	27.9	0.0	0.0	0.0	0.0	19.1	19.1	64.7	9.3	0.0
LOS by Move:	C	A	C	A	A	A	A	B	B	E	A	A
HCM2k85thQ:	21	0	9	0	0	0	0	29	29	9	12	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 I-5 NB Off Ramps/17th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.589
Loss Time (sec):	5	Average Delay (sec/veh):	19.5
Optimal Cycle:	30	Level Of Service:	B

Street Name:	I-5 NB Off Ramps						17th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Ignore			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 1	0	0 1	1	0 0	0 1	1	0 3	0 1	0	0 2	1 0
Volume Module:												
Base Vol:	345	46	18	51	0	133	120	1099	722	0	1525	41
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:	345	46	18	51	0	133	120	1099	722	0	1525	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	345	46	18	51	0	133	120	1099	0	0	1525	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	345	46	18	51	0	133	120	1099	0	0	1525	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	345	46	18	51	0	133	120	1099	0	0	1525	41
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.95	1.00	0.85	0.95	0.91	1.00	1.00	0.91	0.91
Lanes:	1.76	0.24	1.00	1.00	0.00	1.00	1.00	3.00	1.00	0.00	2.92	0.08
Final Sat.:	3212	428	1615	1805	0	1615	1805	5187	1900	0	5031	135
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.01	0.03	0.00	0.08	0.07	0.21	0.00	0.00	0.30	0.30
Crit Moves:		****				****	****				****	
Green/Cycle:	0.18	0.18	0.18	0.14	0.00	0.14	0.11	0.63	0.00	0.00	0.51	0.51
Volume/Cap:	0.59	0.59	0.06	0.20	0.00	0.59	0.59	0.34	0.00	0.00	0.59	0.59
Delay/Veh:	38.8	38.8	33.9	38.5	0.0	44.3	46.6	8.9	0.0	0.0	17.2	17.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.8	38.8	33.9	38.5	0.0	44.3	46.6	8.9	0.0	0.0	17.2	17.2
LOS by Move:	D	D	C	D	A	D	D	A	A	A	B	B
HCM2k85thQ:	10	10	1	2	0	7	7	9	0	0	19	19

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 Penn Wy and I-5 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.423
Loss Time (sec):	5	Average Delay (sec/veh):	22.0
Optimal Cycle:	22	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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	2	0 1	2 0	2	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module:												
Base Vol:	0	363	238	550	127	0	0	0	0	175	0	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:	0	363	238	550	127	0	0	0	0	175	0	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:	0	363	238	550	127	0	0	0	0	175	0	150
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	363	238	550	127	0	0	0	0	175	0	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:	0	363	238	550	127	0	0	0	0	175	0	150
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.92	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.75
Lanes:	0.00	2.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3610	1615	3502	3610	0	0	0	0	1805	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.15	0.16	0.04	0.00	0.00	0.00	0.00	0.10	0.00	0.05
Crit Moves:			****	****						****		
Green/Cycle:	0.00	0.35	0.35	0.37	0.72	0.00	0.00	0.00	0.00	0.23	0.00	0.60
Volume/Cap:	0.00	0.29	0.42	0.42	0.05	0.00	0.00	0.00	0.00	0.42	0.00	0.09
Delay/Veh:	0.0	23.7	25.4	23.6	4.1	0.0	0.0	0.0	0.0	33.6	0.0	8.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	23.7	25.4	23.6	4.1	0.0	0.0	0.0	0.0	33.6	0.0	8.4
LOS by Move:	A	C	C	C	A	A	A	A	A	C	A	A
HCM2k85thQ:	0	7	9	10	1	0	0	0	0	8	0	2

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #61 Santiago St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.674
Loss Time (sec):	5	Average Delay (sec/veh):	17.1
Optimal Cycle:	0	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:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	97	299	30	13	187	48	266	76	269	14	19	18
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	299	30	13	187	48	266	76	269	14	19	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:	97	299	30	13	187	48	266	76	269	14	19	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	97	299	30	13	187	48	266	76	269	14	19	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:	97	299	30	13	187	48	266	76	269	14	19	18
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.91	0.09	1.00	0.80	0.20	0.78	0.22	1.00	0.27	0.38	0.35
Final Sat.:	481	478	48	458	401	103	395	113	597	122	166	157
Capacity Analysis Module:												
Vol/Sat:	0.20	0.63	0.63	0.03	0.47	0.47	0.67	0.67	0.45	0.11	0.11	0.11
Crit Moves:		****				****		****			****	
Delay/Veh:	11.7	19.4	19.4	10.4	15.1	15.1	22.2	22.2	13.1	11.2	11.2	11.2
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	11.7	19.4	19.4	10.4	15.1	15.1	22.2	22.2	13.1	11.2	11.2	11.2
LOS by Move:	B	C	C	B	C	C	C	C	B	B	B	B
ApproachDel:		17.6			14.8			18.2			11.2	
Delay Adj:		1.00			1.00			1.00			1.00	
ApprAdjDel:		17.6			14.8			18.2			11.2	
LOS by Appr:		C			B			C			B	
AllWayAvgQ:	0.2	1.5	1.5	0.0	0.8	0.8	1.8	1.8	0.7	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #62 Santiago St and Santa Ana Blvd

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:	Permitted			Permitted			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	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	36	133	84	297	120	61	71	649	20	73	492	187
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	133	84	297	120	61	71	649	20	73	492	187
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	133	84	297	120	61	71	649	20	73	492	187
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	36	133	84	297	120	61	71	649	20	73	492	187
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	36	133	84	297	120	61	71	649	20	73	492	187
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.06	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.94	0.06	1.00	2.00	1.00
Final Sat.:	1600	1700	1600	1600	1700	1600	1600	3204	96	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.08	0.05	0.19	0.07	0.04	0.04	0.20	0.21	0.05	0.14	0.12
Crit Moves:		****			****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #64 Standard Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.842
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	62	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:	Permitted			Permitted			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	0 1	0	0 0	1! 0	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	185	367	119	19	189	23	177	1218	129	91	1148	21
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:	185	367	119	19	189	23	177	1218	129	91	1148	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:	185	367	119	19	189	23	177	1218	129	91	1148	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	185	367	119	19	189	23	177	1218	129	91	1148	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:	185	367	119	19	189	23	177	1218	129	91	1148	21
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	0.76	0.24	0.08	0.82	0.10	1.00	1.81	0.19	1.00	1.96	0.04
Final Sat.:	1600	1208	392	132	1309	159	1600	2994	306	1600	3243	57
Capacity Analysis Module:												
Vol/Sat:	0.12	0.30	0.30	0.01	0.14	0.14	0.11	0.41	0.42	0.06	0.35	0.37
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #65 Standard Ave and Mcfadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.682
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
Y+R:	4.0	4.0	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:	169	667	82	137	300	52	53	351	60	117	712	206
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:	169	667	82	137	300	52	53	351	60	117	712	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:	169	667	82	137	300	52	53	351	60	117	712	206
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	667	82	137	300	52	53	351	60	117	712	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:	169	667	82	137	300	52	53	351	60	117	712	206
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.78	0.22	1.00	1.70	0.30	1.00	1.71	0.29	1.00	1.55	0.45
Final Sat.:	1600	2950	350	1600	2827	473	1600	2833	467	1600	2582	718
Capacity Analysis Module:												
Vol/Sat:	0.11	0.23	0.23	0.09	0.11	0.11	0.03	0.12	0.13	0.07	0.28	0.29
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #66 Halladay St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.677
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:	Permitted			Permitted			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	0	0 1	0 0	0	0 0	0 1	0	1 0	0 1	1	0 0
Volume Module:												
Base Vol:	169	0	352	0	0	0	2	926	93	141	1121	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:	169	0	352	0	0	0	2	926	93	141	1121	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:	169	0	352	0	0	0	2	926	93	141	1121	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	169	0	352	0	0	0	2	926	93	141	1121	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:	169	0	352	0	0	0	2	926	93	141	1121	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.01	1.81	0.18	0.22	1.78	0.00
Final Sat.:	1600	0	1600	0	0	0	6	2902	291	358	2942	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.00	0.22	0.00	0.00	0.00	0.00	0.32	0.32	0.09	0.38	0.00
Crit Moves:			****					****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #67 Halladay St and Dyer Rd

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:	Split Phase			Split Phase			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	41	180	208	114	15	32	150	1298	9	45	1451	116
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:	41	180	208	114	15	32	150	1298	9	45	1451	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	41	180	208	114	15	32	150	1298	9	45	1451	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	41	180	208	114	15	32	150	1298	9	45	1451	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	41	180	208	114	15	32	150	1298	9	45	1451	116
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	0.46	0.54	1.00	0.32	0.68	1.00	2.98	0.02	1.00	2.78	0.22
Final Sat.:	1600	742	858	1600	511	1089	1600	4967	33	1600	4645	355
Capacity Analysis Module:												
Vol/Sat:	0.03	0.24	0.24	0.07	0.03	0.03	0.09	0.26	0.27	0.03	0.31	0.33
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #68 SR-55 SB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.569
Loss Time (sec):	5	Average Delay (sec/veh):	17.3
Optimal Cycle:	28	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
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	2	0	0	0	2	0	0	2	1	1	0	0	3	0	1
Volume Module:																		
Base Vol:	0	0	0	288	0	697	0	1167	1040	0	1532	602
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	0	0	288	0	697	0	1167	1040	0	1532	602
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	288	0	697	0	1167	0	0	1532	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	288	0	697	0	1167	0	0	1532	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	288	0	697	0	1167	0	0	1532	0
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	0.91	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1729	0	5187	1900
Capacity Analysis Module:																		
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.25	0.00	0.22	0.00	0.00	0.30	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.43	0.00	0.43	0.00	0.52	0.00	0.00	0.52	0.00
Volume/Cap:	0.00	0.00	0.00	0.19	0.00	0.57	0.00	0.43	0.00	0.00	0.57	0.00
Delay/Veh:	0.0	0.0	0.0	17.7	0.0	22.1	0.0	15.0	0.0	0.0	16.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	17.7	0.0	22.1	0.0	15.0	0.0	0.0	16.7	0.0
LOS by Move:	A	A	A	B	A	C	A	B	A	A	B	A
HCM2k85thQ:	0	0	0	4	0	15	0	12	0	0	18	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #69 SR-55 NB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.497
Loss Time (sec):	5	Average Delay (sec/veh):	14.8
Optimal Cycle:	25	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ignore			Include			Ignore			Ignore		
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	0	0 1	0 0	0	0 0	0 0	2	0 2	0 0	3	0 1
Volume Module:												
Base Vol:	641	0	426	0	0	0	0	711	731	0	1501	1081
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:	641	0	426	0	0	0	0	711	731	0	1501	1081
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	641	0	0	0	0	0	0	711	0	0	1501	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	641	0	0	0	0	0	0	711	0	0	1501	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	641	0	0	0	0	0	0	711	0	0	1501	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.88	1.00	0.91	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	1.00
Final Sat.:	3502	0	1900	0	0	0	0	3610	3344	0	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.00	0.00	0.29	0.00
Crit Moves:	****						****				****	
Green/Cycle:	0.37	0.00	0.00	0.00	0.00	0.00	0.00	0.58	0.00	0.00	0.58	0.00
Volume/Cap:	0.50	0.00	0.00	0.00	0.00	0.00	0.00	0.34	0.00	0.00	0.50	0.00
Delay/Veh:	24.7	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	12.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.7	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.0	0.0	12.4	0.0
LOS by Move:	C	A	A	A	A	A	A	B	A	A	B	A
HCM2k85thQ:	12	0	0	0	0	0	0	9	0	0	15	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 SR-55 SB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.669
Loss Time (sec):	5	Average Delay (sec/veh):	25.7
Optimal Cycle:	36	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			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 1	0 0	2	0 1	1 0	1	1 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	319	10	240	103	226	110	65	1523	207	556	991	64
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:	319	10	240	103	226	110	65	1523	207	556	991	64
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	319	10	240	103	226	110	65	1523	207	556	991	64
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	319	10	240	103	226	110	65	1523	207	556	991	64
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	319	10	240	103	226	110	65	1523	207	556	991	64
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.75	0.94	0.94	0.85	0.95	0.91	0.85	0.92	0.91	0.85
Lanes:	1.94	0.06	2.00	0.63	1.37	1.00	1.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3515	110	2842	1113	2443	1615	1805	5187	1615	3502	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.09	0.09	0.08	0.09	0.09	0.07	0.04	0.29	0.13	0.16	0.19	0.04
Crit Moves:	****			****			****			****		
Green/Cycle:	0.14	0.14	0.37	0.14	0.14	0.14	0.11	0.44	0.44	0.24	0.57	0.57
Volume/Cap:	0.67	0.67	0.23	0.67	0.67	0.49	0.34	0.67	0.29	0.67	0.34	0.07
Delay/Veh:	44.6	44.6	21.6	44.5	44.5	41.6	42.4	23.1	18.3	36.7	11.6	9.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	44.6	44.6	21.6	44.5	44.5	41.6	42.4	23.1	18.3	36.7	11.6	9.7
LOS by Move:	D	D	C	D	D	D	D	C	B	D	B	A
HCM2k85thQ:	9	9	5	10	10	6	3	21	6	14	9	1

Note: Queue reported is the number of cars per lane.

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #71 Glassell St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.620
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				Include				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	1	0 1	1	0	1	1 0	1	0	1	0 1	1	0	1	1 0
Volume Module:																
Base Vol:	472	490	160		15	499	37		82	268	461		155	280	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:	472	490	160		15	499	37		82	268	461		155	280	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:	472	490	160		15	499	37		82	268	461		155	280	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	472	490	160		15	499	37		82	268	461		155	280	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:	472	490	160		15	499	37		82	268	461		155	280	11	
OvlAdjVol:			5								225					
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.06	1.00		1.00	1.03	1.00		1.00	1.06	1.00		1.00	1.03	1.00	
Lanes:	2.00	1.00	1.00		1.00	1.86	0.14		1.00	1.00	1.00		1.00	1.92	0.08	
Final Sat.:	3200	1700	1600		1600	3079	221		1600	1700	1600		1600	3179	121	
Capacity Analysis Module:																
Vol/Sat:	0.15	0.29	0.10		0.01	0.16	0.17		0.05	0.16	0.29		0.10	0.09	0.09	
OvlAdjV/S:			0.00								0.14					
Crit Moves:	****						****			****			****			

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Glassell St and SR-22 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.766
Loss Time (sec):	5	Average Delay (sec/veh):	24.8
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			Permitted			Split Phase			Split Phase		
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 0	0	0 0	2 0	1	0 0	0 0	0	1 0	1! 0	1
Volume Module:												
Base Vol:	557	910	0	0	878	255	0	0	0	201	7	357
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:	557	910	0	0	878	255	0	0	0	201	7	357
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	557	910	0	0	878	255	0	0	0	201	7	357
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	557	910	0	0	878	255	0	0	0	201	7	357
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	557	910	0	0	878	255	0	0	0	201	7	357
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.86	0.86	0.86
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.35	0.02	1.63
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	2201	40	2645
Capacity Analysis Module:												
Vol/Sat:	0.31	0.25	0.00	0.00	0.24	0.16	0.00	0.00	0.00	0.09	0.18	0.13
Crit Moves:	****				****						****	
Green/Cycle:	0.40	0.72	0.00	0.00	0.32	0.32	0.00	0.00	0.00	0.23	0.23	0.23
Volume/Cap:	0.77	0.35	0.00	0.00	0.77	0.50	0.00	0.00	0.00	0.40	0.77	0.59
Delay/Veh:	30.7	5.3	0.0	0.0	33.9	28.4	0.0	0.0	0.0	32.9	40.8	35.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.7	5.3	0.0	0.0	33.9	28.4	0.0	0.0	0.0	32.9	40.8	35.3
LOS by Move:	C	A	A	A	C	C	A	A	A	C	D	D
HCM2k85thQ:	24	9	0	0	21	10	0	0	0	6	15	10

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Grand Ave / Glassell St and SR-22 EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.812
Loss Time (sec):	5	Average Delay (sec/veh):	26.5
Optimal Cycle:	57	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:	Permitted			Protected			Split Phase			Split Phase		
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 2	0 1	1	0 2	0 0	1	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1202	307	381	681	0	229	4	503	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:	0	1202	307	381	681	0	229	4	503	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:	0	1202	307	381	681	0	229	4	503	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1202	307	381	681	0	229	4	503	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:	0	1202	307	381	681	0	229	4	503	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.95	0.95	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.31	0.01	1.68	0.00	0.00	0.00
Final Sat.:	0	3610	1615	1805	3610	0	2129	18	2731	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.19	0.21	0.19	0.00	0.11	0.23	0.18	0.00	0.00	0.00
Crit Moves:		****		****				****				
Green/Cycle:	0.00	0.41	0.41	0.26	0.67	0.00	0.28	0.28	0.28	0.00	0.00	0.00
Volume/Cap:	0.00	0.81	0.46	0.81	0.28	0.00	0.38	0.81	0.66	0.00	0.00	0.00
Delay/Veh:	0.0	29.6	22.0	45.1	6.8	0.0	29.2	39.2	33.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	29.6	22.0	45.1	6.8	0.0	29.2	39.2	33.2	0.0	0.0	0.0
LOS by Move:	A	C	C	D	A	A	C	D	C	A	A	A
HCM2k85thQ:	0	28	11	20	7	0	7	19	14	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #74 Grand Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.675
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			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	0 1		1 0 1	1 0		1 0 1	0 1	
Volume Module:												
Base Vol:	46 1214	243		222	894	82	79	45	33	255	48	181
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:	46 1214	243		222	894	82	79	45	33	255	48	181
User Adj:	1.00 1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00 1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46 1214	243		222	894	82	79	45	33	255	48	181
Reduct Vol:	0 0	0		0	0	0	0	0	0	0	0	0
Reduced Vol:	46 1214	243		222	894	82	79	45	33	255	48	181
PCE Adj:	1.00 1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00 1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46 1214	243		222	894	82	79	45	33	255	48	181
Saturation Flow Module:												
Sat/Lane:	1600 1600	1600		1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00 1.05	1.00		1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00 2.50	0.50		1.00	2.00	1.00	1.00	1.15	0.85	1.00	1.00	1.00
Final Sat.:	1600 4199	801		1600	3400	1600	1600	1946	1354	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.03 0.29	0.30		0.14	0.26	0.05	0.05	0.02	0.02	0.16	0.03	0.11
Crit Moves:		****		****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #75 Grand Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.748
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			Permitted			Permitted		
Rights:	Include			WideBypass			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	1 1	0	1 0	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	88	1185	246	220	868	220	159	194	36	136	244	260
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:	88	1185	246	220	868	220	159	194	36	136	244	260
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1185	246	220	868	220	159	194	36	136	244	260
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	88	1185	246	220	868	220	159	194	36	136	244	260
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	88	1185	246	220	868	220	159	194	36	136	244	260
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	2.48	0.52	1.00	1.60	0.40	1.00	0.84	0.16	1.00	1.00	1.00
Final Sat.:	1600	4175	825	1600	2653	647	1600	1350	250	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.28	0.30	0.14	0.33	0.34	0.10	0.14	0.14	0.09	0.14	0.16
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #76 Grand Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.828
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	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:	1 0	2 1	0	1 0	2 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	246	877	221	270	582	128	346	886	149	300	1107	201
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:	246	877	221	270	582	128	346	886	149	300	1107	201
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	246	877	221	270	582	128	346	886	149	300	1107	201
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	246	877	221	270	582	128	346	886	149	300	1107	201
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	246	877	221	270	582	128	346	886	149	300	1107	201
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.40	0.60	1.00	2.00	1.00	2.00	2.57	0.43	2.00	2.54	0.46
Final Sat.:	1600	4034	966	1600	3400	1600	3200	4309	691	3200	4262	738
Capacity Analysis Module:												
Vol/Sat:	0.15	0.22	0.23	0.17	0.17	0.08	0.11	0.21	0.22	0.09	0.26	0.27
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Grand Ave and I-5 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.518
Loss Time (sec):	5	Average Delay (sec/veh):	10.0
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			Split Phase			Split Phase		
Rights:	Ignore			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	2 0	1	1 0	3 0	0	0 0	0 0	0 0	2 0	0 0	1
Volume Module:												
Base Vol:	0	1297	1001	48	1164	0	0	0	0	143	0	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:	0	1297	1001	48	1164	0	0	0	0	143	0	172
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1297	0	48	1164	0	0	0	0	143	0	172
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1297	0	48	1164	0	0	0	0	143	0	172
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1297	0	48	1164	0	0	0	0	143	0	172
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.91	1.00	1.00	1.00	1.00	0.92	1.00	0.85
Lanes:	0.00	2.00	1.00	1.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3610	1900	1805	5187	0	0	0	0	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.00	0.03	0.22	0.00	0.00	0.00	0.00	0.04	0.00	0.11
Crit Moves:		****		****								****
Green/Cycle:	0.00	0.69	0.00	0.05	0.74	0.00	0.00	0.00	0.00	0.21	0.00	0.21
Volume/Cap:	0.00	0.52	0.00	0.52	0.30	0.00	0.00	0.00	0.00	0.20	0.00	0.52
Delay/Veh:	0.0	7.5	0.0	51.3	4.3	0.0	0.0	0.0	0.0	33.0	0.0	36.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	7.5	0.0	51.3	4.3	0.0	0.0	0.0	0.0	33.0	0.0	36.8
LOS by Move:	A	A	A	D	A	A	A	A	A	C	A	D
HCM2k85thQ:	0	15	0	4	7	0	0	0	0	3	0	8

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 Grand Ave and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.605
Loss Time (sec):	5	Average Delay (sec/veh):	21.1
Optimal Cycle:	31	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			Split Phase			Split Phase		
Rights:	Include			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	2 1	0	1 0	2 0	2	2 0	1 0	2	0 1	0 1	0
Volume Module:												
Base Vol:	167	1888	31	34	750	532	328	200	316	20	134	97
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:	167	1888	31	34	750	532	328	200	316	20	134	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1888	31	34	750	532	328	200	316	20	134	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	167	1888	31	34	750	532	328	200	316	20	134	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	167	1888	31	34	750	532	328	200	316	20	134	97
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.95	0.75	0.92	1.00	0.75	0.89	0.89	0.89
Lanes:	1.00	2.95	0.05	1.00	2.00	2.00	2.00	1.00	2.00	0.16	1.07	0.77
Final Sat.:	1805	5093	84	1805	3610	2842	3502	1900	2842	270	1808	1309
Capacity Analysis Module:												
Vol/Sat:	0.09	0.37	0.37	0.02	0.21	0.19	0.09	0.11	0.11	0.07	0.07	0.07
Crit Moves:		****		****					****	****		
Green/Cycle:	0.20	0.61	0.61	0.03	0.45	0.63	0.18	0.18	0.18	0.12	0.12	0.12
Volume/Cap:	0.47	0.61	0.61	0.61	0.47	0.30	0.51	0.57	0.61	0.61	0.61	0.61
Delay/Veh:	36.4	12.3	12.3	65.2	19.6	8.6	37.4	39.5	39.5	44.1	44.1	44.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	36.4	12.3	12.3	65.2	19.6	8.6	37.4	39.5	39.5	44.1	44.1	44.1
LOS by Move:	D	B	B	E	B	A	D	D	D	D	D	D
HCM2k85thQ:	8	20	20	3	13	7	8	10	9	8	8	8

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #79 Grand Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.793
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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	3 0	1	2 0	2 1	0	2 0	1 1	0
Volume Module:												
Base Vol:	165	1261	38	120	706	282	277	918	91	151	941	173
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:	165	1261	38	120	706	282	277	918	91	151	941	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	165	1261	38	120	706	282	277	918	91	151	941	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	165	1261	38	120	706	282	277	918	91	151	941	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	165	1261	38	120	706	282	277	918	91	151	941	173
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	2.00	2.91	0.09	2.00	3.00	1.00	2.00	2.73	0.27	2.00	1.69	0.31
Final Sat.:	3200	4860	140	3200	5100	1600	3200	4567	433	3200	2803	497
Capacity Analysis Module:												
Vol/Sat:	0.05	0.26	0.27	0.04	0.14	0.18	0.09	0.20	0.21	0.05	0.34	0.35
Crit Moves:		****		****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #80 Grand Ave and Chestnut Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.615
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			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	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	140	1050	182	149	664	112	93	285	62	107	333	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:	140	1050	182	149	664	112	93	285	62	107	333	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:	140	1050	182	149	664	112	93	285	62	107	333	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	1050	182	149	664	112	93	285	62	107	333	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:	140	1050	182	149	664	112	93	285	62	107	333	194
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.56	0.44	1.00	2.57	0.43	1.00	1.64	0.36	1.00	1.26	0.74
Final Sat.:	1600	4291	709	1600	4307	693	1600	2728	572	1600	2122	1178
Capacity Analysis Module:												
Vol/Sat:	0.09	0.24	0.26	0.09	0.15	0.16	0.06	0.10	0.11	0.07	0.16	0.16
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #81 Grand Ave and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.759
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
Y+R:	4.0	4.0	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:	202	1150	198	138	626	168	128	476	83	86	686	151
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:	202	1150	198	138	626	168	128	476	83	86	686	151
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	202	1150	198	138	626	168	128	476	83	86	686	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	202	1150	198	138	626	168	128	476	83	86	686	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	202	1150	198	138	626	168	128	476	83	86	686	151
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.56	0.44	1.00	2.37	0.63	1.00	1.70	0.30	1.00	1.64	0.36
Final Sat.:	1600	4295	705	1600	3984	1016	1600	2825	475	1600	2723	577
Capacity Analysis Module:												
Vol/Sat:	0.13	0.27	0.28	0.09	0.16	0.17	0.08	0.17	0.17	0.05	0.25	0.26
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #82 Grand Ave and 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			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	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	242	1397	121	165	408	229	201	868	70	74	1333	173
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:	242	1397	121	165	408	229	201	868	70	74	1333	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	242	1397	121	165	408	229	201	868	70	74	1333	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	242	1397	121	165	408	229	201	868	70	74	1333	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	242	1397	121	165	408	229	201	868	70	74	1333	173
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.76	0.24	1.00	2.00	1.00	1.00	2.78	0.22	1.00	2.66	0.34
Final Sat.:	1600	4617	383	1600	3400	1600	1600	4642	358	1600	4449	551
Capacity Analysis Module:												
Vol/Sat:	0.15	0.30	0.32	0.10	0.12	0.14	0.13	0.19	0.20	0.05	0.30	0.31
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #83 Grand Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	77	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:	1 0	2 1	0	1 0	2 1	0	2 0	3 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	242	873	193	146	471	217	342	656	142	151	964	316
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:	242	873	193	146	471	217	342	656	142	151	964	316
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	242	873	193	146	471	217	342	656	142	151	964	316
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	242	873	193	146	471	217	342	656	142	151	964	316
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	242	873	193	146	471	217	342	656	142	151	964	316
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.46	0.54	1.00	2.05	0.95	2.00	3.00	1.00	2.00	2.00	1.00
Final Sat.:	1600	4131	869	1600	3486	1514	3200	5100	1600	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.15	0.21	0.22	0.09	0.14	0.14	0.11	0.13	0.09	0.05	0.28	0.20
Crit Moves:		****	****				****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #84 SR-55 NB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.376
Loss Time (sec):	5	Average Delay (sec/veh):	5.7
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
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! 0	1	0	0	0	0	0	3	0	1
Volume Module:												
Base Vol:	188	0	51	0	0	0	0	1339	681	0	1545	965
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:	188	0	51	0	0	0	0	1339	681	0	1545	965
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	188	0	51	0	0	0	0	1339	0	0	1545	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	0	51	0	0	0	0	1339	0	0	1545	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	188	0	51	0	0	0	0	1339	0	0	1545	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.93	1.00	0.93	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	1.79	0.00	1.21	0.00	0.00	0.00	0.00	3.00	1.00	0.00	3.00	0.00
Final Sat.:	3161	0	2147	0	0	0	0	5187	1900	0	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.00	0.02	0.00	0.00	0.00	0.00	0.26	0.00	0.00	0.30	0.00
Crit Moves:	****						****				****	
Green/Cycle:	0.16	0.00	0.16	0.00	0.00	0.00	0.00	0.79	0.00	0.00	0.79	0.00
Volume/Cap:	0.38	0.00	0.15	0.00	0.00	0.00	0.00	0.33	0.00	0.00	0.38	0.00
Delay/Veh:	38.1	0.0	36.3	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.1	0.0	36.3	0.0	0.0	0.0	0.0	3.0	0.0	0.0	3.1	0.0
LOS by Move:	D	A	D	A	A	A	A	A	A	A	A	A
HCM2k85thQ:	5	0	2	0	0	0	0	7	0	0	8	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #85 Cambridge St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.459
Loss Time (sec):	5	Average Delay (sec/veh):	12.5
Optimal Cycle:	0	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:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0 1	0	0	0	0 1	0	1	1	0	0 0	1	0	0 0	0	0
Volume Module:																
Base Vol:	191	266	0		0	196	181		219	0	144		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:	191	266	0		0	196	181		219	0	144		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:	191	266	0		0	196	181		219	0	144		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	191	266	0		0	196	181		219	0	144		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:	191	266	0		0	196	181		219	0	144		0	0	0	
Saturation Flow Module:																
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00		0.00	1.00	1.00		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	535	579	0		0	563	631		500	0	595		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.36	0.46	xxxx		xxxx	0.35	0.29		0.44	xxxx	0.24		xxxx	xxxx	xxxx	
Crit Moves:		****				****			****							
Delay/Veh:	12.7	13.6	0.0		0.0	12.0	10.3		14.7	0.0	10.2		0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	12.7	13.6	0.0		0.0	12.0	10.3		14.7	0.0	10.2		0.0	0.0	0.0	
LOS by Move:	B	B	*		*	B	B		B	*	B		*	*	*	
ApproachDel:		13.3				11.2				12.9				xxxxxx		
Delay Adj:		1.00				1.00				1.00				xxxxx		
ApprAdjDel:		13.3				11.2				12.9				xxxxxx		
LOS by Appr:		B				B				B				*		
AllWayAvgQ:	0.5	0.8	0.0		0.0	0.5	0.4		0.7	0.0	0.3		0.0	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #86 Cambridge St and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.583
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:	Permitted			Permitted			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:	0	0	0	0	1	0	1	0	1	0	1	0
Volume Module:												
Base Vol:	0	0	0	170	82	252	127	250	377	224	233	457
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	0	0	170	82	252	127	250	377	224	233	457
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	170	82	252	127	250	377	224	233	457
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	170	82	252	127	250	377	224	233	457
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	170	82	252	127	250	377	224	233	457
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	0.67	0.33	1.00	1.00	1.00	1.00	0.49	0.51	1.00
Final Sat.:	0	0	0	1079	521	1600	1600	1700	1600	784	816	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.16	0.16	0.08	0.15	0.24	0.14	0.29	0.29
Crit Moves:					****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Mabury St and 1st Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.703
Loss Time (sec):	0	Average Delay (sec/veh):	26.1
Optimal Cycle:	77	Level Of Service:	C

Street Name:	Mabury						1st Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			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	0	0 1	1 0		1! 0 1	0 0		2 1 0	1 0		2 1 0
Volume Module:												
Base Vol:	25	0	256	207	88	390	0	1512	24	40	549	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:	25	0	256	207	88	390	0	1512	24	40	549	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:	25	0	256	207	88	390	0	1512	24	40	549	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	0	256	207	88	390	0	1512	24	40	549	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:	25	0	256	207	88	390	0	1512	24	40	549	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.90	0.90	0.90	1.00	0.91	0.91	0.95	0.91	0.91
Lanes:	1.00	0.00	1.00	1.27	0.23	1.50	0.00	2.95	0.05	1.00	3.00	0.00
Final Sat.:	1805	0	1615	2171	390	2576	0	5096	81	1805	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.16	0.10	0.23	0.15	0.00	0.30	0.30	0.02	0.11	0.00
Crit Moves:			****		****			****		****		
Green/Cycle:	0.23	0.00	0.23	0.32	0.32	0.32	0.00	0.42	0.42	0.03	0.45	0.00
Volume/Cap:	0.06	0.00	0.70	0.30	0.70	0.47	0.00	0.70	0.70	0.70	0.23	0.00
Delay/Veh:	30.5	0.0	41.7	25.6	32.1	27.4	0.0	24.8	24.8	80.7	16.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	30.5	0.0	41.7	25.6	32.1	27.4	0.0	24.8	24.8	80.7	16.7	0.0
LOS by Move:	C	A	D	C	C	C	A	C	C	F	B	A
HCM2k85thQ:	1	0	13	6	17	10	0	22	22	4	6	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #88 Tustin St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.444
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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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 1	0	0 1
Volume Module:												
Base Vol:	46	1033	245	90	801	15	13	5	20	183	5	112
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:	46	1033	245	90	801	15	13	5	20	183	5	112
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	46	1033	245	90	801	15	13	5	20	183	5	112
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	46	1033	245	90	801	15	13	5	20	183	5	112
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	46	1033	245	90	801	15	13	5	20	183	5	112
OvlAdjVol:												22
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.42	0.58	1.00	2.94	0.06	1.00	1.00	1.00	1.95	0.05	1.00
Final Sat.:	1600	4080	920	1600	4912	88	1600	1700	1600	3115	85	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.27	0.06	0.16	0.17	0.01	0.00	0.01	0.06	0.06	0.07
OvlAdjV/S:												0.01
Crit Moves:		****			****				****		****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Tustin St and SR-22 WB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.446
Loss Time (sec):	5	Average Delay (sec/veh):	12.1
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			Permitted			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 0	0	0 0	2	1 0	0 0	0 0	0 0	0 0	0 0	0 0
Volume Module:												
Base Vol:	532	1529	0	0	711	365	0	0	0	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:	532	1529	0	0	711	365	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
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	532	1529	0	0	711	365	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	532	1529	0	0	711	365	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
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	532	1529	0	0	711	365	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	3502	3610	0	0	3282	1641	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.15	0.42	0.00	0.00	0.22	0.22	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:		****										
Green/Cycle:	0.63	0.95	0.00	0.00	0.32	0.32	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.24	0.45	0.00	0.00	0.67	0.69	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	8.2	0.3	0.0	0.0	30.5	31.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	8.2	0.3	0.0	0.0	30.5	31.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	A	A	A	A	C	C	A	A	A	A	A	A
HCM2k85thQ:	6	4	0	0	17	18	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #90 Tustin St and SR-22 EB Off-Ramp / Seba Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.719
Loss Time (sec):	5	Average Delay (sec/veh):	23.7
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:	Permitted			Permitted			Split Phase			Split Phase		
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 2	1 0	1	0 3	0 0	1	0 1!	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	0	1547	4	52	707	0	458	41	581	28	0	67
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	1547	4	52	707	0	458	41	581	28	0	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1547	4	52	707	0	458	41	581	28	0	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1547	4	52	707	0	458	41	581	28	0	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1547	4	52	707	0	458	41	581	28	0	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.10	0.91	1.00	0.90	0.90	0.90	0.89	1.00	0.89
Lanes:	0.00	2.99	0.01	1.00	3.00	0.00	1.41	0.07	1.52	0.29	0.00	0.71
Final Sat.:	0	5174	13	182	5187	0	2408	125	2595	499	0	1195
Capacity Analysis Module:												
Vol/Sat:	0.00	0.30	0.30	0.29	0.14	0.00	0.19	0.33	0.22	0.06	0.00	0.06
Crit Moves:		****						****		****		
Green/Cycle:	0.00	0.42	0.42	0.42	0.42	0.00	0.46	0.46	0.46	0.08	0.00	0.08
Volume/Cap:	0.00	0.72	0.72	0.69	0.33	0.00	0.42	0.72	0.49	0.72	0.00	0.72
Delay/Veh:	0.0	25.5	25.5	46.8	19.8	0.0	18.4	23.7	19.2	62.4	0.0	62.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	25.5	25.5	46.8	19.8	0.0	18.4	23.7	19.2	62.4	0.0	62.4
LOS by Move:	A	C	C	D	B	A	B	C	B	E	A	E
HCM2k85thQ:	0	23	23	4	8	0	10	22	13	7	0	7

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #91 Tustin Ave and Fairhaven Ave

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:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
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	1 0	1	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	239	1275	113	327	862	99	80	180	147	94	208	196
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:	239	1275	113	327	862	99	80	180	147	94	208	196
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	239	1275	113	327	862	99	80	180	147	94	208	196
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	239	1275	113	327	862	99	80	180	147	94	208	196
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	239	1275	113	327	862	99	80	180	147	94	208	196
OvlAdjVol:												32
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.76	0.24	2.00	2.69	0.31	1.00	1.10	0.90	1.00	1.00	1.00
Final Sat.:	3200	4609	391	3200	4506	494	1600	1861	1439	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.28	0.29	0.10	0.19	0.20	0.05	0.10	0.10	0.06	0.12	0.12
OvlAdjV/S:												0.02
Crit Moves:			****	****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #92 Tustin Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.647
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	T	R	L	T	T	R	L	T	T	R	L	T	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	2	0	2	1	0	1	0	1	1	0	1	0	1	1	0
Volume Module:																
Base Vol:	163	789	121	183	1444	100	61	192	113	125	157	148				
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:	163	789	121	183	1444	100	61	192	113	125	157	148				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	1.00	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	789	121	183	1444	100	61	192	113	125	157	148				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
Reduced Vol:	163	789	121	183	1444	100	61	192	113	125	157	148				
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
FinalVolume:	163	789	121	183	1444	100	61	192	113	125	157	148				
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600				
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00				
Lanes:	1.00	2.60	0.40	2.00	2.81	0.19	1.00	1.26	0.74	1.00	1.03	0.97				
Final Sat.:	1600	4362	638	3200	4689	311	1600	2114	1186	1600	1747	1553				
Capacity Analysis Module:																
Vol/Sat:	0.10	0.18	0.19	0.06	0.31	0.32	0.04	0.09	0.10	0.08	0.09	0.10				
Crit Moves:	****					****			****	****						

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #93 Tustin Ave and 17th St

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			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
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 0	1	2 0	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	216	926	476	346	371	37	444	872	118	229	753	419
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:	216	926	476	346	371	37	444	872	118	229	753	419
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	216	926	476	346	371	37	444	872	118	229	753	419
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	216	926	476	346	371	37	444	872	118	229	753	419
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	216	926	476	346	371	37	444	872	118	229	753	419
OvlAdjVol:			362									246
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.00	1.00	2.00	2.73	0.27	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	3400	1600	3200	4565	435	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.27	0.30	0.11	0.08	0.08	0.14	0.17	0.07	0.07	0.15	0.26
OvlAdjV/S:			0.23									0.15
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #94 Tustin Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.692
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:	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	0 1		1 0 2	1 0		1 0 2	1 0	
Volume Module:												
Base Vol:	55	598	194	459	339	124	180	642	33	88	596	367
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:	55	598	194	459	339	124	180	642	33	88	596	367
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	55	598	194	459	339	124	180	642	33	88	596	367
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	55	598	194	459	339	124	180	642	33	88	596	367
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	55	598	194	459	339	124	180	642	33	88	596	367
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	2.27	0.73	2.00	2.00	1.00	1.00	2.85	0.15	1.00	2.00	1.00
Final Sat.:	1600	3824	1176	3200	3400	1600	1600	4765	235	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.16	0.14	0.10	0.08	0.11	0.13	0.14	0.06	0.18	0.23
Crit Moves:	****			****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 SR-55 SB Ramps / Auto Mall Dr and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.583
Loss Time (sec):	5	Average Delay (sec/veh):	25.1
Optimal Cycle:	29	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:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				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	1 0	0	2	1	0 1	0	1	1	0 3	0	1	2	0 2	1	0
Volume Module:																
Base Vol:	377	30	398		110	50	37		35	1258	354		385	1003	120	
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:	377	30	398		110	50	37		35	1258	354		385	1003	120	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Volume:	377	30	398		110	50	37		35	1258	0		385	1003	120	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	377	30	398		110	50	37		35	1258	0		385	1003	120	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
FinalVolume:	377	30	398		110	50	37		35	1258	0		385	1003	120	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.96	0.96	0.75		0.95	1.00	0.85		0.95	0.91	1.00		0.92	0.90	0.90	
Lanes:	1.85	0.15	2.00		1.00	1.00	1.00		1.00	3.00	1.00		2.00	2.68	0.32	
Final Sat.:	3365	268	2842		1805	1900	1615		1805	5187	1900		3502	4559	545	
Capacity Analysis Module:																
Vol/Sat:	0.11	0.11	0.14		0.06	0.03	0.02		0.02	0.24	0.00		0.11	0.22	0.22	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.24	0.24	0.24		0.10	0.10	0.10		0.05	0.42	0.00		0.19	0.56	0.56	
Volume/Cap:	0.47	0.47	0.58		0.58	0.25	0.22		0.40	0.58	0.00		0.58	0.40	0.40	
Delay/Veh:	32.9	32.9	34.8		47.3	41.8	41.7		49.0	22.9	0.0		38.3	12.7	12.7	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	32.9	32.9	34.8		47.3	41.8	41.7		49.0	22.9	0.0		38.3	12.7	12.7	
LOS by Move:	C	C	C		D	D	D		D	C	A		D	B	B	
HCM2k85thQ:	9	9	11		6	3	2		2	17	0		10	11	11	

Note: Queue reported is the number of cars per lane.
****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.525
Loss Time (sec):	5	Average Delay (sec/veh):	27.4
Optimal Cycle:	26	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				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	1	0	3	0 1	2	0	1	1 0	1	0	1	1 0
Volume Module:																
Base Vol:	583	174		34	8	97		373	104	36		21	23	348		16
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:	583	174		34	8	97		373	104	36		21	23	348		16
User Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
PHF Volume:	583	174		34	8	97		373	104	36		21	23	348		16
Reduct Vol:	0	0		0	0	0		0	0	0		0	0	0		0
Reduced Vol:	583	174		34	8	97		373	104	36		21	23	348		16
PCE Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
MLF Adj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
FinalVolume:	583	174		34	8	97		373	104	36		21	23	348		16
Saturation Flow Module:																
Sat/Lane:	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900		1900
Adjustment:	0.92	0.89		0.89	0.95	0.91		0.85	0.92	0.90		0.90	0.95	0.94		0.94
Lanes:	2.00	2.51		0.49	1.00	3.00		1.00	2.00	1.26		0.74	1.00	1.91		0.09
Final Sat.:	3502	4235		828	1805	5187		1615	3502	2155		1257	1805	3427		158
Capacity Analysis Module:																
Vol/Sat:	0.17	0.04		0.04	0.00	0.02		0.23	0.03	0.02		0.02	0.01	0.10		0.10
Crit Moves:	****							****	****					****		
Green/Cycle:	0.32	0.63		0.63	0.07	0.38		0.44	0.06	0.14		0.14	0.11	0.19		0.19
Volume/Cap:	0.53	0.07		0.07	0.07	0.05		0.53	0.53	0.12		0.12	0.12	0.53		0.53
Delay/Veh:	28.5	7.1		7.1	43.8	19.4		21.1	48.5	37.6		37.6	40.6	37.0		37.0
User DelAdj:	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00
AdjDel/Veh:	28.5	7.1		7.1	43.8	19.4		21.1	48.5	37.6		37.6	40.6	37.0		37.0
LOS by Move:	C	A		A	D	B		C	D	D		D	D	D		D
HCM2k85thQ:	12	1		1	0	1		13	4	1		1	1	9		9

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #97 Red Hill Ave and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.667
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			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 3	0 1	2	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	159	1146	182	145	289	234	327	838	102	62	803	392
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:	159	1146	182	145	289	234	327	838	102	62	803	392
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1146	182	145	289	234	327	838	102	62	803	392
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	1146	182	145	289	234	327	838	102	62	803	392
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	159	1146	182	145	289	234	327	838	102	62	803	392
OvlAdjVol:						70			22			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.22	0.11	0.05	0.06	0.15	0.10	0.16	0.06	0.02	0.16	0.25
OvlAdjV/S:						0.04			0.01			
Crit Moves:	****			****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #98 Red Hill Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.588
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			Ovl		
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 2	1 0	1	0 2	1 0	2	0 3	0 1
Volume Module:												
Base Vol:	382	1308	150	58	223	283	222	603	94	25	525	69
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:	382	1308	150	58	223	283	222	603	94	25	525	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	382	1308	150	58	223	283	222	603	94	25	525	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	382	1308	150	58	223	283	222	603	94	25	525	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	382	1308	150	58	223	283	222	603	94	25	525	69
OvlAdjVol:												40
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.59	0.41	2.00	2.00	1.00	1.00	2.60	0.40	2.00	3.00	1.00
Final Sat.:	3200	6042	658	3200	3400	1600	1600	4353	647	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.22	0.23	0.02	0.07	0.18	0.14	0.14	0.15	0.01	0.10	0.04
OvlAdjV/S:												0.03
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #99 Red Hill Ave and Dyer Rd / barranca Pkwy

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
Y+R:	4.0	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 4	0	1	2 0 4	0	1	2 0 3	1	0	2 0 4	0	1
Volume Module:												
Base Vol:	356	1339	345	185	313	147	203	753	99	127	966	282
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:	356	1339	345	185	313	147	203	753	99	127	966	282
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	356	1339	345	185	313	147	203	753	99	127	966	282
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	356	1339	345	185	313	147	203	753	99	127	966	282
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	356	1339	345	185	313	147	203	753	99	127	966	282
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	3.54	0.46	2.00	4.00	1.00
Final Sat.:	3200	6800	1600	3200	6800	1600	3200	5956	744	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.20	0.22	0.06	0.05	0.09	0.06	0.13	0.13	0.04	0.14	0.18
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #100 Red Hill Ave and Alton Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.671	
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
Y+R:	4.0	4.0	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	1 0	2 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	27	1499	217	124	528	4	132	324	166	433	74	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:	27	1499	217	124	528	4	132	324	166	433	74	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:	27	1499	217	124	528	4	132	324	166	433	74	267
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	1499	217	124	528	4	132	324	166	433	74	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:	27	1499	217	124	528	4	132	324	166	433	74	267
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	3400	1600	3200	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.29	0.14	0.08	0.10	0.00	0.08	0.10	0.10	0.14	0.04	0.17
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Red Hill Ave and MacArthur Blvd

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			Protected			Protected		
Rights:	Include			Ignore			Include			Ignore		
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 3	0 1		2 0 3	0 1		1 0 3	0 1	
Volume Module:												
Base Vol:	125	809	10	286	594	1042	597	275	42	39	818	574
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:	125	809	10	286	594	1042	597	275	42	39	818	574
User Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
PHF Volume:	125	809	10	286	594	0	597	275	42	39	818	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	809	10	286	594	0	597	275	42	39	818	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
FinalVolume:	125	809	10	286	594	0	597	275	42	39	818	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.96	0.04	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4941	59	3200	5100	1600	3200	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.16	0.17	0.09	0.12	0.00	0.19	0.05	0.03	0.02	0.16	0.00
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Red Hill Ave and Main St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	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	0 1	2	0 2	0 1	2	0 2	1 0	2	0 2	1 0
Volume Module:												
Base Vol:	416	897	242	74	538	292	198	705	191	279	1589	89
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:	416	897	242	74	538	292	198	705	191	279	1589	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	416	897	242	74	538	292	198	705	191	279	1589	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	416	897	242	74	538	292	198	705	191	279	1589	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	416	897	242	74	538	292	198	705	191	279	1589	89
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.36	0.64	2.00	2.84	0.16
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	3977	1023	3200	4745	255
Capacity Analysis Module:												
Vol/Sat:	0.13	0.26	0.15	0.02	0.16	0.18	0.06	0.18	0.19	0.09	0.33	0.35
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 I-5 SB Ramps and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.431
Loss Time (sec):	5	Average Delay (sec/veh):	18.9
Optimal Cycle:	22	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			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:	0	0	0	2	0	1	2	0	3	0	2	1
Volume Module:												
Base Vol:	0	0	0	278	0	61	561	634	0	668		183
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	0	0	278	0	61	561	634	0	668		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:	0	0	0	278	0	61	561	634	0	668		183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	278	0	61	561	634	0	668		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:	0	0	0	278	0	61	561	634	0	668		183
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.88	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	2.35	0.65
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	3941	1080
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.08	0.00	0.04	0.16	0.12	0.00	0.00	0.17	0.17
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.18	0.00	0.56	0.37	0.77	0.00	0.00	0.39	0.39
Volume/Cap:	0.00	0.00	0.00	0.43	0.00	0.07	0.43	0.16	0.00	0.00	0.43	0.43
Delay/Veh:	0.0	0.0	0.0	36.6	0.0	10.3	23.7	3.1	0.0	0.0	22.3	22.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AdjDel/Veh:	0.0	0.0	0.0	36.6	0.0	10.3	23.7	3.1	0.0	0.0	22.3	22.3
LOS by Move:	A	A	A	D	A	B	C	A	A	A	C	C
HCM2k85thQ:	0	0	0	7	0	1	10	3	0	0	11	11

****

Note: Queue reported is the number of cars per lane.

****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Tustin Ranch Rd and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.606
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
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 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	653	0	45	54	1795	0	0	548	236
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	0	0	653	0	45	54	1795	0	0	548	236
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	653	0	45	54	1795	0	0	548	236
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	653	0	45	54	1795	0	0	548	236
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	653	0	45	54	1795	0	0	548	236
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3200	0	1600	3200	5100	0	0	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.03	0.02	0.35	0.00	0.00	0.11	0.15
OvlAdjV/S:												0.00
Crit Moves:				****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Von Karman Ave and Barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.874
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	74	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			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 1	1 0		2 0 2			2 0 3	0 1		2 0 4	0 1	
Volume Module:												
Base Vol:	224	1290	281	67	343	236	560	1023	143	204	646	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:	224	1290	281	67	343	236	560	1023	143	204	646	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:	224	1290	281	67	343	236	560	1023	143	204	646	220
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	224	1290	281	67	343	236	560	1023	143	204	646	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:	224	1290	281	67	343	236	560	1023	143	204	646	220
OvlAdjVol:						0						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	1.64	0.36	2.00	2.00	2.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	2728	572	3200	3400	3200	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.47	0.49	0.02	0.10	0.07	0.17	0.20	0.09	0.06	0.10	0.14
OvlAdjV/S:						0.00						
Crit Moves:			****	****			****					****

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Santa Ana Circulation Element

Scenario Report

Scenario:	2045 NP AM Peak Hour
Command:	Default Command
Volume:	2045 NP AM
Geometry:	MPAH
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Santa Ana Circulation Element

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
# 1 Euclid St and 1st St	D	xxxxx	0.858	D	xxxxx	0.858	+ 0.000 V/C
# 2 Euclid St and McFadden Ave	E	xxxxx	0.975	E	xxxxx	0.975	+ 0.000 V/C
# 3 Euclid St and Edinger Ave	E	xxxxx	0.991	E	xxxxx	0.991	+ 0.000 V/C
# 4 Newhope St and Hazard Ave	C	xxxxx	0.777	C	xxxxx	0.777	+ 0.000 V/C
# 5 Newhope St and McFadden Ave	D	xxxxx	0.827	D	xxxxx	0.827	+ 0.000 V/C
# 6 Harbor Blvd and SR-22 WB Off-R	C	28.4	0.738	C	28.4	0.738	+ 0.000 D/V
# 7 Trask Avenue and SR-22 EB On-R	B	12.0	0.516	B	12.0	0.516	+ 0.000 D/V
# 8 Harbor Blvd and Westminster Av	E	xxxxx	0.985	E	xxxxx	0.985	+ 0.000 V/C
# 9 Harbor Blvd and 1st St	C	xxxxx	0.789	C	xxxxx	0.789	+ 0.000 V/C
# 10 Harbor Blvd and McFadden Ave	C	xxxxx	0.788	C	xxxxx	0.788	+ 0.000 V/C
# 11 Harbor Blvd and Edinger Ave	D	xxxxx	0.836	D	xxxxx	0.836	+ 0.000 V/C
# 12 Harbor Blvd and Warner Ave	C	xxxxx	0.789	C	xxxxx	0.789	+ 0.000 V/C
# 13 Harbor Blvd and Segerstrom Ave	E	xxxxx	0.965	E	xxxxx	0.965	+ 0.000 V/C
# 14 MacArthur Blvd and Hyland Ave	B	xxxxx	0.611	B	xxxxx	0.611	+ 0.000 V/C
# 15 MacArthur Blvd and Harbor Blvd	C	xxxxx	0.736	C	xxxxx	0.736	+ 0.000 V/C
# 16 Harbor Blvd and Sunflower Ave	C	xxxxx	0.704	C	xxxxx	0.704	+ 0.000 V/C
# 17 Harbor Blvd and I-405 NB Off-R	B	18.0	0.569	B	18.0	0.569	+ 0.000 D/V
# 18 Harbor Blvd and I-405 SB Off-R	B	15.0	0.612	B	15.0	0.612	+ 0.000 D/V
# 19 Fairview St and Civic Center D	C	xxxxx	0.741	C	xxxxx	0.741	+ 0.000 V/C
# 20 Fairview St and 1st St	D	xxxxx	0.859	D	xxxxx	0.859	+ 0.000 V/C
# 21 Fairview St and McFadden Ave	C	xxxxx	0.799	C	xxxxx	0.799	+ 0.000 V/C
# 22 Fairview St and Edinger Ave	D	xxxxx	0.861	D	xxxxx	0.861	+ 0.000 V/C
# 23 Fairview St and Warner Ave	D	xxxxx	0.816	D	xxxxx	0.816	+ 0.000 V/C
# 24 Fairview St and MacArthur Blvd	B	xxxxx	0.684	B	xxxxx	0.684	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 25 Fairview Rd and Sunflower Ave	B	xxxxx	0.697	B	xxxxx	0.697	+ 0.000 V/C
# 26 Greenville St and Edinger Ave	C	xxxxx	0.774	C	xxxxx	0.774	+ 0.000 V/C
# 27 Greenville St and Segerstrom A	D	xxxxx	0.843	D	xxxxx	0.843	+ 0.000 V/C
# 28 Raitt St and McFadden Ave	C	xxxxx	0.778	C	xxxxx	0.778	+ 0.000 V/C
# 29 Raitt St and Edinger Ave	E	xxxxx	0.990	E	xxxxx	0.990	+ 0.000 V/C
# 30 Bear St and MacArthur Blvd	C	xxxxx	0.707	C	xxxxx	0.707	+ 0.000 V/C
# 31 Bristol St and 17th St	D	xxxxx	0.869	D	xxxxx	0.869	+ 0.000 V/C
# 32 Bristol St and Civic Center Dr	E	xxxxx	0.942	E	xxxxx	0.942	+ 0.000 V/C
# 33 Bristol St and Santa Ana Blvd	D	xxxxx	0.806	D	xxxxx	0.806	+ 0.000 V/C
# 34 Bristol St and 1st St	C	xxxxx	0.767	C	xxxxx	0.767	+ 0.000 V/C
# 35 Bristol St and McFadden Ave	E	xxxxx	0.956	E	xxxxx	0.956	+ 0.000 V/C
# 36 Bristol St and Warner Ave	E	xxxxx	0.915	E	xxxxx	0.915	+ 0.000 V/C
# 37 Bristol St and Segerstrom Ave	D	xxxxx	0.811	D	xxxxx	0.811	+ 0.000 V/C
# 38 Bristol St and Alton Ave	A	xxxxx	0.545	A	xxxxx	0.545	+ 0.000 V/C
# 39 Bristol St and MacArthur Blvd	B	xxxxx	0.697	B	xxxxx	0.697	+ 0.000 V/C
# 40 Bristol St and Sunflower Ave	B	xxxxx	0.649	B	xxxxx	0.649	+ 0.000 V/C
# 41 Bristol St and I-405 NB Ramps	C	20.8	0.557	C	20.8	0.557	+ 0.000 D/V
# 42 Bristol St and I-405 SB Ramps	C	23.9	0.696	C	23.9	0.696	+ 0.000 D/V
# 43 Flower St and Santa Ana Blvd	D	xxxxx	0.806	D	xxxxx	0.806	+ 0.000 V/C
# 44 Flower St and 1st St	E	xxxxx	0.926	E	xxxxx	0.926	+ 0.000 V/C
# 45 Flower St and McFadden Ave	E	xxxxx	0.900	E	xxxxx	0.900	+ 0.000 V/C
# 46 Flower St and Segerstrom Ave	C	xxxxx	0.784	C	xxxxx	0.784	+ 0.000 V/C
# 47 Flower St and MacArthur Blvd	B	xxxxx	0.675	B	xxxxx	0.675	+ 0.000 V/C
# 48 Main St and La Veta Ave	A	xxxxx	0.586	A	xxxxx	0.586	+ 0.000 V/C
# 49 Main St and Mainplace Dr / Mem	A	xxxxx	0.512	A	xxxxx	0.512	+ 0.000 V/C
# 50 Main St and 17th St	D	xxxxx	0.884	D	xxxxx	0.884	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 51 Main St and Civic Center Dr	C	xxxxx	0.783	C	xxxxx	0.783	+ 0.000 V/C
# 52 Main St and Santa Ana Blvd	E	xxxxx	0.926	E	xxxxx	0.926	+ 0.000 V/C
# 53 Main St and 4th St	A	xxxxx	0.410	A	xxxxx	0.410	+ 0.000 V/C
# 54 Main St and 1st St	B	xxxxx	0.681	B	xxxxx	0.681	+ 0.000 V/C
# 55 Main St and McFadden Ave	D	xxxxx	0.894	D	xxxxx	0.894	+ 0.000 V/C
# 56 Main St and Edinger Ave	C	xxxxx	0.795	C	xxxxx	0.795	+ 0.000 V/C
# 57 Main St and MacArthur Blvd	B	xxxxx	0.680	B	xxxxx	0.680	+ 0.000 V/C
# 58 Penn Wy and 17th St	B	12.2	0.660	B	12.2	0.660	+ 0.000 D/V
# 59 I-5 NB Off Ramps/17th Street	C	30.0	0.710	C	30.0	0.710	+ 0.000 D/V
# 60 Penn Wy and I-5 SB Ramps	C	21.2	0.550	C	21.2	0.550	+ 0.000 D/V
# 61 Santiago St and Civic Center D	F	159.2	1.769	F	159.2	1.769	+ 0.000 V/C
# 62 Santiago St and Santa Ana Blvd	F	xxxxx	1.037	F	xxxxx	1.037	+ 0.000 V/C
# 63 Standard Ave and 4th St	E	xxxxx	0.939	E	xxxxx	0.939	+ 0.000 V/C
# 64 Standard Ave and 1st St	E	xxxxx	0.976	E	xxxxx	0.976	+ 0.000 V/C
# 65 Standard Ave and Mcfadden Ave	D	xxxxx	0.854	D	xxxxx	0.854	+ 0.000 V/C
# 66 Halladay St and Warner Ave	C	xxxxx	0.775	C	xxxxx	0.775	+ 0.000 V/C
# 67 Halladay St and Dyer Rd	C	xxxxx	0.774	C	xxxxx	0.774	+ 0.000 V/C
# 68 SR-55 SB Ramps and MacArthur B	B	19.9	0.608	B	19.9	0.608	+ 0.000 D/V
# 69 SR-55 NB Ramps and MacArthur B	B	19.3	0.712	B	19.3	0.712	+ 0.000 D/V
# 70 SR-55 SB Ramps and Dyer Rd	C	25.7	0.617	C	25.7	0.617	+ 0.000 D/V
# 71 Glassell St and La Veta Ave	D	xxxxx	0.800	D	xxxxx	0.800	+ 0.000 V/C
# 72 Glassell St and SR-22 WB Ramps	C	32.6	0.871	C	32.6	0.871	+ 0.000 D/V
# 73 Grand Ave / Glassell St and SR	C	30.6	0.860	C	30.6	0.860	+ 0.000 D/V
# 74 Grand Ave and Fairhaven Ave	B	xxxxx	0.669	B	xxxxx	0.669	+ 0.000 V/C
# 75 Grand Ave and Santa Clara Ave	E	xxxxx	0.932	E	xxxxx	0.932	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 76 Grand Ave and 17th St	E	xxxxx	0.907	E	xxxxx	0.907	+ 0.000 V/C
# 77 Grand Ave and I-5 NB Ramps	B	13.2	0.740	B	13.2	0.740	+ 0.000 D/V
# 78 Grand Ave and Santa Ana Blvd	C	26.0	0.832	C	26.0	0.832	+ 0.000 D/V
# 79 Grand Ave and 1st St	C	xxxxx	0.742	C	xxxxx	0.742	+ 0.000 V/C
# 80 Grand Ave and Chestnut Ave	C	xxxxx	0.704	C	xxxxx	0.704	+ 0.000 V/C
# 81 Grand Ave and McFadden Ave	D	xxxxx	0.892	D	xxxxx	0.892	+ 0.000 V/C
# 82 Grand Ave and Edinger Ave	D	xxxxx	0.838	D	xxxxx	0.838	+ 0.000 V/C
# 83 Grand Ave and Warner Ave	B	xxxxx	0.613	B	xxxxx	0.613	+ 0.000 V/C
# 84 SR-55 NB Ramps and Dyer Rd	B	17.1	0.569	B	17.1	0.569	+ 0.000 D/V
# 85 Cambridge St and La Veta Ave	D	31.6	0.971	D	31.6	0.971	+ 0.000 V/C
# 86 Cambridge St and Fairhaven Ave	A	xxxxx	0.563	A	xxxxx	0.563	+ 0.000 V/C
# 87 Mabury St and 1st Street	C	27.4	0.714	C	27.4	0.714	+ 0.000 D/V
# 88 Tustin St and La Veta Ave	A	xxxxx	0.446	A	xxxxx	0.446	+ 0.000 V/C
# 89 Tustin St and SR-22 WB On-Ramp	B	12.2	0.635	B	12.2	0.635	+ 0.000 D/V
# 90 Tustin St and SR-22 EB Off-Ram	C	25.0	0.723	C	25.0	0.723	+ 0.000 D/V
# 91 Tustin Ave and Fairhaven Ave	D	xxxxx	0.899	D	xxxxx	0.899	+ 0.000 V/C
# 92 Tustin Ave and Santa Clara Ave	F	xxxxx	1.823	F	xxxxx	1.823	+ 0.000 V/C
# 93 Tustin Ave and 17th St	D	xxxxx	0.820	D	xxxxx	0.820	+ 0.000 V/C
# 94 Tustin Ave and 4th St	D	xxxxx	0.830	D	xxxxx	0.830	+ 0.000 V/C
# 95 SR-55 SB Ramps / Auto Mall Dr	C	25.2	0.672	C	25.2	0.672	+ 0.000 D/V
# 96 SR-55 NB Ramps / Del Amo Ave a	C	25.4	0.673	C	25.4	0.673	+ 0.000 D/V
# 97 Red Hill Ave and Edinger Ave	B	xxxxx	0.610	B	xxxxx	0.610	+ 0.000 V/C
# 98 Red Hill Ave and Warner Ave	A	xxxxx	0.510	A	xxxxx	0.510	+ 0.000 V/C
# 99 Red Hill Ave and Dyer Rd / bar	A	xxxxx	0.548	A	xxxxx	0.548	+ 0.000 V/C
#100 Red Hill Ave and Alton Pkwy	D	xxxxx	0.855	D	xxxxx	0.855	+ 0.000 V/C
#101 Red Hill Ave and MacArthur Blv	F	xxxxx	1.205	F	xxxxx	1.205	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#102 Red Hill Ave and Main St	C	xxxxx	0.722	C	xxxxx	0.722	+ 0.000 V/C
#103 I-5 SB Ramps and Santa Ana Blv	B	17.4	0.559	B	17.4	0.559	+ 0.000 D/V
#104 Tustin Ranch Rd and Warner Ave	A	xxxxx	0.520	A	xxxxx	0.520	+ 0.000 V/C
#105 Von Karman Ave and Barranca Pk	E	xxxxx	0.929	E	xxxxx	0.929	+ 0.000 V/C

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Euclid St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.858
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	68	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			WideBypass			WideBypass		
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	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	103	870	149	200	1785	101	252	937	177	190	606	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:	103	870	149	200	1785	101	252	937	177	190	606	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:	103	870	149	200	1785	101	252	937	177	190	606	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	870	149	200	1785	101	252	937	177	190	606	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:	103	870	149	200	1785	101	252	937	177	190	606	194
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	2.56	0.44	1.00	2.84	0.16	1.00	2.52	0.48	1.00	2.27	0.73
Final Sat.:	1600	4298	702	1600	4743	257	1600	4237	763	1600	3836	1164
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.21	0.13	0.38	0.39	0.16	0.22	0.23	0.12	0.16	0.17
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Euclid St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.975
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	172	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			Prot+Permit			Prot+Permit		
Rights:	WideBypass			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:	162	1227	146	148	2062	171	255	521	323	151	335	127
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	1227	146	148	2062	171	255	521	323	151	335	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1227	146	148	2062	171	255	521	323	151	335	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	162	1227	146	148	2062	171	255	521	323	151	335	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	162	1227	146	148	2062	171	255	521	323	151	335	127
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	2.68	0.32	1.00	2.77	0.23	1.00	1.23	0.77	1.00	1.45	0.55
Final Sat.:	1600	4490	510	1600	4632	368	1600	2075	1225	1600	2420	880
Capacity Analysis Module:												
Vol/Sat:	0.10	0.27	0.29	0.09	0.45	0.47	0.16	0.25	0.26	0.09	0.14	0.14
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Euclid St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.991
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	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			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	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	127	801	68	168	2442	224	160	700	428	125	761	139
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:	127	801	68	168	2442	224	160	700	428	125	761	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:	127	801	68	168	2442	224	160	700	428	125	761	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	801	68	168	2442	224	160	700	428	125	761	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:	127	801	68	168	2442	224	160	700	428	125	761	139
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.77	0.23	2.00	2.75	0.25	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3200	4624	376	3200	4597	403	1600	3400	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.17	0.18	0.05	0.53	0.56	0.10	0.21	0.27	0.08	0.22	0.09
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Newhope St and Hazard Ave

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:	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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	78	590	84	88	1302	119	108	276	204	119	397	159
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	590	84	88	1302	119	108	276	204	119	397	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:	78	590	84	88	1302	119	108	276	204	119	397	159
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	78	590	84	88	1302	119	108	276	204	119	397	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:	78	590	84	88	1302	119	108	276	204	119	397	159
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	1.75	0.25	1.00	1.83	0.17	1.00	1.15	0.85	1.00	1.43	0.57
Final Sat.:	1600	2901	399	1600	3032	268	1600	1940	1360	1600	2385	915
Capacity Analysis Module:												
Vol/Sat:	0.05	0.20	0.21	0.06	0.43	0.44	0.07	0.14	0.15	0.07	0.17	0.17
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Newhope St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.827
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	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			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	77	342	120	122	1213	113	135	492	160	190	484	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:	77	342	120	122	1213	113	135	492	160	190	484	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:	77	342	120	122	1213	113	135	492	160	190	484	108
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	342	120	122	1213	113	135	492	160	190	484	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:	77	342	120	122	1213	113	135	492	160	190	484	108
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.48	0.52	1.00	1.83	0.17	1.00	1.51	0.49	1.00	1.64	0.36
Final Sat.:	1600	2469	831	1600	3027	273	1600	2515	785	1600	2716	584
Capacity Analysis Module:												
Vol/Sat:	0.05	0.14	0.14	0.08	0.40	0.41	0.08	0.20	0.20	0.12	0.18	0.19
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.738
Loss Time (sec):	5	Average Delay (sec/veh):	28.4
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			Split Phase			Split Phase		
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 0	0	0 2	1 0	0	0 1!	0 0	1	1 0	0 1
Volume Module:												
Base Vol:	84	1534	0	0	1465	19	81	0	133	836	44	117
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:	84	1534	0	0	1465	19	81	0	133	836	44	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:	84	1534	0	0	1465	19	81	0	133	836	44	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	1534	0	0	1465	19	81	0	133	836	44	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:	84	1534	0	0	1465	19	81	0	133	836	44	117
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.90	1.00	0.90	0.96	0.96	0.85
Lanes:	1.00	3.00	0.00	0.00	2.96	0.04	0.38	0.00	0.62	1.90	0.10	1.00
Final Sat.:	1805	5187	0	0	5110	66	646	0	1061	3448	181	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.00	0.00	0.29	0.29	0.13	0.00	0.13	0.24	0.24	0.07
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.45	0.00	0.00	0.39	0.39	0.17	0.00	0.17	0.33	0.33	0.33
Volume/Cap:	0.74	0.65	0.00	0.00	0.74	0.74	0.74	0.00	0.74	0.74	0.74	0.22
Delay/Veh:	68.3	22.0	0.0	0.0	27.7	27.7	49.0	0.0	49.0	32.2	32.2	24.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	68.3	22.0	0.0	0.0	27.7	27.7	49.0	0.0	49.0	32.2	32.2	24.5
LOS by Move:	E	C	A	A	C	C	D	A	D	C	C	C
HCM2k85thQ:	7	21	0	0	23	23	12	0	12	20	20	4

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Trask Avenue and SR-22 EB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
Loss Time (sec):	5	Average Delay (sec/veh):	12.0
Optimal Cycle:	26	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:	0 0	0 0	0	0 0	0 0	0	2 0	1 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	713	893	0	0	852	159
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	0	0	0	0	0	713	893	0	0	852	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:	0	0	0	0	0	0	713	893	0	0	852	159
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	713	893	0	0	852	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:	0	0	0	0	0	0	713	893	0	0	852	159
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	0.00	1.69	0.31
Final Sat.:	0	0	0	0	0	0	3502	1900	0	0	2969	554
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.20	0.47	0.00	0.00	0.29	0.29
Crit Moves:							****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.95	0.00	0.00	0.56	0.56
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.52	0.49	0.00	0.00	0.52	0.52
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	23.4	0.5	0.0	0.0	14.1	14.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	23.4	0.5	0.0	0.0	14.1	14.1
LOS by Move:	A	A	A	A	A	A	C	A	A	A	B	B
HCM2k85thQ:	0	0	0	0	0	0	13	5	0	0	16	16

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Harbor Blvd and Westminster Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.985
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	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:	WideBypass			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	1 0	3 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	178	1173	251	258	2021	115	192	1010	36	415	1124	306
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:	178	1173	251	258	2021	115	192	1010	36	415	1124	306
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	178	1173	251	258	2021	115	192	1010	36	415	1124	306
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	178	1173	251	258	2021	115	192	1010	36	415	1124	306
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	178	1173	251	258	2021	115	192	1010	36	415	1124	306
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.90	0.10	1.00	3.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	4835	165	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.23	0.16	0.16	0.40	0.07	0.12	0.21	0.22	0.26	0.22	0.19
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #9 Harbor Blvd and 1st St

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
Y+R:	4.0	4.0	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	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	95	756	163	236	1989	129	138	919	178	196	497	116
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:	95	756	163	236	1989	129	138	919	178	196	497	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	756	163	236	1989	129	138	919	178	196	497	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	756	163	236	1989	129	138	919	178	196	497	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	756	163	236	1989	129	138	919	178	196	497	116
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	2.51	0.49	2.00	2.43	0.57
Final Sat.:	1600	5100	1600	1600	5100	1600	3200	4221	779	3200	4092	908
Capacity Analysis Module:												
Vol/Sat:	0.06	0.15	0.10	0.15	0.39	0.08	0.04	0.22	0.23	0.06	0.12	0.13
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #10 Harbor Blvd and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.788
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
Y+R:	4.0	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	2 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	104	1059	101	190	2004	67	177	462	138	138	311	89
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:	104	1059	101	190	2004	67	177	462	138	138	311	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	1059	101	190	2004	67	177	462	138	138	311	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	1059	101	190	2004	67	177	462	138	138	311	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	104	1059	101	190	2004	67	177	462	138	138	311	89
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	3.00	1.00	2.00	2.90	0.10	1.00	1.54	0.46	1.00	1.56	0.44
Final Sat.:	3200	5100	1600	3200	4845	155	1600	2564	736	1600	2588	712
Capacity Analysis Module:												
Vol/Sat:	0.03	0.21	0.06	0.06	0.41	0.43	0.11	0.18	0.19	0.09	0.12	0.13
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #11 Harbor Blvd and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.836
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	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 0	1	2 0	3 0	1	2 0	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	103	772	146	204	2349	68	123	743	373	191	424	176
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:	103	772	146	204	2349	68	123	743	373	191	424	176
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	772	146	204	2349	68	123	743	373	191	424	176
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	772	146	204	2349	68	123	743	373	191	424	176
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	772	146	204	2349	68	123	743	373	191	424	176
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	3400	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.09	0.06	0.46	0.04	0.04	0.22	0.23	0.06	0.08	0.11
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Harbor Blvd and 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
Y+R:	4.0	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	3 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	109	665	169	429	1933	116	101	1440	379	138	723	122
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:	109	665	169	429	1933	116	101	1440	379	138	723	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:	109	665	169	429	1933	116	101	1440	379	138	723	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	665	169	429	1933	116	101	1440	379	138	723	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:	109	665	169	429	1933	116	101	1440	379	138	723	122
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.39	0.61	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4027	973	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.17	0.17	0.13	0.38	0.07	0.03	0.28	0.24	0.04	0.14	0.08
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Harbor Blvd and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.965
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	152	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			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:	2 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	107	759	48	169	2274	85	82	689	278	140	434	98
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:	107	759	48	169	2274	85	82	689	278	140	434	98
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	759	48	169	2274	85	82	689	278	140	434	98
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	759	48	169	2274	85	82	689	278	140	434	98
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	759	48	169	2274	85	82	689	278	140	434	98
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.82	0.18	1.00	2.89	0.11	1.00	1.43	0.57	1.00	2.00	1.00
Final Sat.:	3200	4714	286	1600	4827	173	1600	2380	920	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.17	0.11	0.47	0.49	0.05	0.29	0.30	0.09	0.13	0.06
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #14 MacArthur Blvd and Hyland Ave

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			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:	2 0	0 1	0	1 0	1 0	1	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	86	4	24	8	2	19	7	1934	767	68	517	21
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	4	24	8	2	19	7	1934	767	68	517	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:	86	4	24	8	2	19	7	1934	767	68	517	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	4	24	8	2	19	7	1934	767	68	517	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:	86	4	24	8	2	19	7	1934	767	68	517	21
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	0.14	0.86	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	229	1371	1600	1700	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.02	0.01	0.00	0.01	0.00	0.38	0.48	0.04	0.10	0.01
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #15 MacArthur Blvd and Harbor Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.736
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			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	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	131	920	94	295	1701	118	131	1183	357	128	427	127
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:	131	920	94	295	1701	118	131	1183	357	128	427	127
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	131	920	94	295	1701	118	131	1183	357	128	427	127
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	131	920	94	295	1701	118	131	1183	357	128	427	127
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	131	920	94	295	1701	118	131	1183	357	128	427	127
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.18	0.06	0.09	0.33	0.07	0.08	0.23	0.22	0.08	0.08	0.08
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Harbor Blvd and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
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:	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	1 0	1 1	0	1 1	0 1	0
Volume Module:												
Base Vol:	221	1128	209	233	2204	54	13	153	59	139	178	101
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:	221	1128	209	233	2204	54	13	153	59	139	178	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	221	1128	209	233	2204	54	13	153	59	139	178	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	221	1128	209	233	2204	54	13	153	59	139	178	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	221	1128	209	233	2204	54	13	153	59	139	178	101
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	1.44	0.56	1.00	1.28	0.72
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	2409	891	1601	2146	1153
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.13	0.07	0.43	0.03	0.01	0.06	0.07	0.09	0.08	0.09
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Harbor Blvd and I-405 NB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.569
Loss Time (sec):	5	Average Delay (sec/veh):	18.0
Optimal Cycle:	28	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			Split Phase			Split Phase		
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	4	0 0	0 0	4	0 0	0 0	0	0 0	1 0	1! 0	1
Volume Module:												
Base Vol:	0	1915	0	0	1978	0	0	0	0	399	0	702
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	1915	0	0	1978	0	0	0	0	399	0	702
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1915	0	0	1978	0	0	0	0	399	0	702
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1915	0	0	1978	0	0	0	0	399	0	702
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1915	0	0	1978	0	0	0	0	399	0	702
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	4.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	1.36	0.00	1.64
Final Sat.:	0	6916	0	0	6916	0	0	0	0	2298	0	2762
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.17	0.00	0.25
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.50	0.00	0.00	0.50	0.00	0.00	0.00	0.00	0.45	0.00	0.45
Volume/Cap:	0.00	0.55	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.39	0.00	0.57
Delay/Veh:	0.0	17.3	0.0	0.0	17.5	0.0	0.0	0.0	0.0	18.6	0.0	20.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.3	0.0	0.0	17.5	0.0	0.0	0.0	0.0	18.6	0.0	20.9
LOS by Move:	A	B	A	A	B	A	A	A	A	B	A	C
HCM2k85thQ:	0	17	0	0	18	0	0	0	0	9	0	15

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harbor Blvd and I-405 SB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.612
Loss Time (sec):	5	Average Delay (sec/veh):	15.0
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			Split Phase			Split Phase		
Rights:	Ignore			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 3	0 1	0	0 4	0 0	1	0	1! 0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1963	0	0	1253	0	475	0	529	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:	0	1963	0	0	1253	0	475	0	529	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1963	0	0	1253	0	475	0	529	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1963	0	0	1253	0	475	0	529	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1963	0	0	1253	0	475	0	529	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.90	1.00	0.90	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.47	0.00	1.53	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	2519	0	2610	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.38	0.00	0.00	0.18	0.00	0.19	0.00	0.20	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.62	0.00	0.00	0.62	0.00	0.33	0.00	0.33	0.00	0.00	0.00
Volume/Cap:	0.00	0.61	0.00	0.00	0.29	0.00	0.57	0.00	0.61	0.00	0.00	0.00
Delay/Veh:	0.0	12.0	0.0	0.0	8.9	0.0	28.0	0.0	28.7	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.0	0.0	0.0	8.9	0.0	28.0	0.0	28.7	0.0	0.0	0.0
LOS by Move:	A	B	A	A	A	A	C	A	C	A	A	A
HCM2k85thQ:	0	21	0	0	8	0	13	0	15	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #19 Fairview St and Civic Center Dr

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			Split Phase			Split Phase		
Rights:	WideBypass			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	1 0	1 1	0	0 1
Volume Module:												
Base Vol:	7	1569	508	332	1915	8	7	25	25	100	3	52
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:	7	1569	508	332	1915	8	7	25	25	100	3	52
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	1569	508	332	1915	8	7	25	25	100	3	52
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	1569	508	332	1915	8	7	25	25	100	3	52
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	1569	508	332	1915	8	7	25	25	100	3	52
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.27	0.73	1.00	2.99	0.01	0.24	0.88	0.88	1.94	0.06	1.00
Final Sat.:	1600	3826	1174	1600	4980	20	393	1404	1404	3107	93	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.41	0.43	0.21	0.38	0.40	0.02	0.02	0.02	0.03	0.03	0.03
Crit Moves:			****	****				****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Fairview St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.859
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	68	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:	1 0	3 0	1	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	200	1538	289	245	1426	164	200	1153	179	120	539	181
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:	200	1538	289	245	1426	164	200	1153	179	120	539	181
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	200	1538	289	245	1426	164	200	1153	179	120	539	181
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	1538	289	245	1426	164	200	1153	179	120	539	181
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	200	1538	289	245	1426	164	200	1153	179	120	539	181
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	2.69	0.31	1.00	2.60	0.40	1.00	2.25	0.75
Final Sat.:	1600	5100	1600	1600	4505	495	1600	4355	645	1600	3793	1207
Capacity Analysis Module:												
Vol/Sat:	0.13	0.30	0.18	0.15	0.32	0.33	0.13	0.26	0.28	0.08	0.14	0.15
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Fairview St and McFadden Ave

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:	1 0	3 0	1	1 0	3 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	141	1510	202	154	1878	136	221	522	120	147	380	30
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:	141	1510	202	154	1878	136	221	522	120	147	380	30
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	141	1510	202	154	1878	136	221	522	120	147	380	30
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	141	1510	202	154	1878	136	221	522	120	147	380	30
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	141	1510	202	154	1878	136	221	522	120	147	380	30
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.63	0.37	1.00	1.85	0.15
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	2702	598	1600	3066	234
Capacity Analysis Module:												
Vol/Sat:	0.09	0.30	0.13	0.10	0.37	0.09	0.14	0.19	0.20	0.09	0.12	0.13
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Fairview St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.861
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	69	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	2 1	0	2 0	2 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	200	883	123	223	1558	132	361	1002	268	421	553	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:	200	883	123	223	1558	132	361	1002	268	421	553	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:	200	883	123	223	1558	132	361	1002	268	421	553	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	883	123	223	1558	132	361	1002	268	421	553	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:	200	883	123	223	1558	132	361	1002	268	421	553	110
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.63	0.37	2.00	2.77	0.23	2.00	2.37	0.63	2.00	2.50	0.50
Final Sat.:	3200	4413	587	3200	4625	375	3200	3987	1013	3200	4204	796
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.21	0.07	0.34	0.35	0.11	0.25	0.26	0.13	0.13	0.14
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #23 Fairview St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.816
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	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	2 1	0	2 0	2 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	222	981	129	194	1543	113	68	991	295	267	807	261
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:	222	981	129	194	1543	113	68	991	295	267	807	261
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	222	981	129	194	1543	113	68	991	295	267	807	261
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	981	129	194	1543	113	68	991	295	267	807	261
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	222	981	129	194	1543	113	68	991	295	267	807	261
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	2.65	0.35	2.00	2.80	0.20	2.00	2.31	0.69	2.00	2.27	0.73
Final Sat.:	3200	4442	558	3200	4672	328	3200	3899	1101	3200	3827	1173
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.23	0.06	0.33	0.35	0.02	0.25	0.27	0.08	0.21	0.22
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Fairview St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.684
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:	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	3 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	261	811	94	290	1460	163	121	984	145	235	494	140
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	811	94	290	1460	163	121	984	145	235	494	140
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	811	94	290	1460	163	121	984	145	235	494	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	261	811	94	290	1460	163	121	984	145	235	494	140
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	261	811	94	290	1460	163	121	984	145	235	494	140
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.69	0.31	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4501	499	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.18	0.19	0.09	0.29	0.10	0.04	0.19	0.09	0.07	0.10	0.09
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #25 Fairview Rd and Sunflower 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			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	2 1	0	2 0	1 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	185	1071	163	191	1627	104	49	322	65	357	299	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:	185	1071	163	191	1627	104	49	322	65	357	299	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:	185	1071	163	191	1627	104	49	322	65	357	299	154
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	185	1071	163	191	1627	104	49	322	65	357	299	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:	185	1071	163	191	1627	104	49	322	65	357	299	154
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.82	0.18	2.00	1.66	0.34	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4712	288	3200	2763	537	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.10	0.06	0.35	0.36	0.02	0.12	0.12	0.11	0.09	0.10
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Greenville St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	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:	Split Phase			Split Phase			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	0	0 1	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	186	0	251	0	0	0	0	1821	444	153	813	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:	186	0	251	0	0	0	0	1821	444	153	813	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	0	251	0	0	0	0	1821	444	153	813	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	186	0	251	0	0	0	0	1821	444	153	813	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	0	251	0	0	0	0	1821	444	153	813	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.41	0.59	1.00	3.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4059	941	1600	5100	0
Capacity Analysis Module:												
Vol/Sat:	0.12	0.00	0.16	0.00	0.00	0.00	0.00	0.45	0.47	0.10	0.16	0.00
Crit Moves:			****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #27 Greenville St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.843
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:	Permitted			Permitted			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	47	193	78	154	472	160	46	1035	165	190	768	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:	47	193	78	154	472	160	46	1035	165	190	768	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:	47	193	78	154	472	160	46	1035	165	190	768	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	193	78	154	472	160	46	1035	165	190	768	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:	47	193	78	154	472	160	46	1035	165	190	768	88
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	0.71	0.29	1.00	0.75	0.25	1.00	2.59	0.41	1.00	2.69	0.31
Final Sat.:	1600	1139	461	1600	1195	405	1600	4340	660	1600	4507	493
Capacity Analysis Module:												
Vol/Sat:	0.03	0.17	0.17	0.10	0.39	0.40	0.03	0.24	0.25	0.12	0.17	0.18
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #28 Raitt St and McFadden Ave

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
Y+R:	4.0	4.0	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:	67	618	98	123	938	128	122	743	95	146	461	82
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:	67	618	98	123	938	128	122	743	95	146	461	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:	67	618	98	123	938	128	122	743	95	146	461	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	67	618	98	123	938	128	122	743	95	146	461	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:	67	618	98	123	938	128	122	743	95	146	461	82
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.73	0.27	1.00	1.76	0.24	1.00	1.77	0.23	1.00	1.70	0.30
Final Sat.:	1600	2862	438	1600	2916	384	1600	2937	363	1600	2817	483
Capacity Analysis Module:												
Vol/Sat:	0.04	0.22	0.22	0.08	0.32	0.33	0.08	0.25	0.26	0.09	0.16	0.17
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #29 Raitt St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.990
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	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			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	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	197	524	189	163	770	91	324	1980	285	122	954	56
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:	197	524	189	163	770	91	324	1980	285	122	954	56
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	197	524	189	163	770	91	324	1980	285	122	954	56
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	197	524	189	163	770	91	324	1980	285	122	954	56
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	197	524	189	163	770	91	324	1980	285	122	954	56
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	1.47	0.53	1.00	1.79	0.21	1.00	2.62	0.38	1.00	2.83	0.17
Final Sat.:	1600	2452	848	1600	2962	338	1600	4396	604	1600	4734	266
Capacity Analysis Module:												
Vol/Sat:	0.12	0.21	0.22	0.10	0.26	0.27	0.20	0.45	0.47	0.08	0.20	0.21
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Bear St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.707
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:	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 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	71	245	104	199	756	300	92	1581	108	62	1041	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:	71	245	104	199	756	300	92	1581	108	62	1041	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:	71	245	104	199	756	300	92	1581	108	62	1041	88
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	71	245	104	199	756	300	92	1581	108	62	1041	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:	71	245	104	199	756	300	92	1581	108	62	1041	88
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.81	0.19	1.00	2.77	0.23
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	4693	307	1600	4626	374
Capacity Analysis Module:												
Vol/Sat:	0.04	0.07	0.07	0.12	0.22	0.19	0.06	0.34	0.35	0.04	0.23	0.24
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Bristol St and 17th St

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			Ovl		
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	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	251	1292	218	487	2001	263	324	963	156	368	845	280
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	1292	218	487	2001	263	324	963	156	368	845	280
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1292	218	487	2001	263	324	963	156	368	845	280
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	251	1292	218	487	2001	263	324	963	156	368	845	280
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	251	1292	218	487	2001	263	324	963	156	368	845	280
OvlAdjVol:												36
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.58	0.42	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4331	669	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.25	0.14	0.15	0.39	0.16	0.10	0.22	0.23	0.12	0.17	0.17
OvlAdjV/S:												0.02
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Bristol St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.942
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	120	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			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	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	133	1178	104	403	1628	101	165	836	103	127	421	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:	133	1178	104	403	1628	101	165	836	103	127	421	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:	133	1178	104	403	1628	101	165	836	103	127	421	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	1178	104	403	1628	101	165	836	103	127	421	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:	133	1178	104	403	1628	101	165	836	103	127	421	87
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.76	0.24	1.00	2.82	0.18	1.00	1.78	0.22	1.00	1.66	0.34
Final Sat.:	1600	4611	389	1600	4720	280	1600	2949	351	1600	2752	548
Capacity Analysis Module:												
Vol/Sat:	0.08	0.26	0.27	0.25	0.34	0.36	0.10	0.28	0.29	0.08	0.15	0.16
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Bristol St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.806
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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			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	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	69	1502	209	153	1684	46	171	831	72	185	462	79
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	1502	209	153	1684	46	171	831	72	185	462	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1502	209	153	1684	46	171	831	72	185	462	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	69	1502	209	153	1684	46	171	831	72	185	462	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	69	1502	209	153	1684	46	171	831	72	185	462	79
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.63	0.37	1.00	2.92	0.08	1.00	2.76	0.24	1.00	2.56	0.44
Final Sat.:	1600	4414	586	1600	4872	128	1600	4617	383	1600	4299	701
Capacity Analysis Module:												
Vol/Sat:	0.04	0.34	0.36	0.10	0.35	0.36	0.11	0.18	0.19	0.12	0.11	0.11
Crit Moves:		****	****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Bristol St and 1st St

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 0	1	2 0	3 0	1	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	205	1430	181	315	1298	183	200	1231	124	90	678	99
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:	205	1430	181	315	1298	183	200	1231	124	90	678	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:	205	1430	181	315	1298	183	200	1231	124	90	678	99
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	205	1430	181	315	1298	183	200	1231	124	90	678	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:	205	1430	181	315	1298	183	200	1231	124	90	678	99
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.73	0.27	1.00	2.62	0.38
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	4561	439	1600	4388	612
Capacity Analysis Module:												
Vol/Sat:	0.06	0.28	0.11	0.10	0.25	0.11	0.13	0.27	0.28	0.06	0.15	0.16
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Bristol St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	139	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			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	1	0 3	0 1	1	0 1	1 0	1	0 1	1 0
Volume Module:												
Base Vol:	125	1117	56	204	1986	205	309	531	261	262	729	84
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:	125	1117	56	204	1986	205	309	531	261	262	729	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	125	1117	56	204	1986	205	309	531	261	262	729	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	1117	56	204	1986	205	309	531	261	262	729	84
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	125	1117	56	204	1986	205	309	531	261	262	729	84
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.03	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	1.34	0.66	1.00	1.79	0.21
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	2245	1055	1600	2969	331
Capacity Analysis Module:												
Vol/Sat:	0.08	0.22	0.04	0.13	0.39	0.13	0.19	0.24	0.25	0.16	0.25	0.25
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Bristol St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.915
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	96	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			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	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	221	993	183	600	2033	230	165	919	229	231	1058	180
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:	221	993	183	600	2033	230	165	919	229	231	1058	180
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	221	993	183	600	2033	230	165	919	229	231	1058	180
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	221	993	183	600	2033	230	165	919	229	231	1058	180
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	221	993	183	600	2033	230	165	919	229	231	1058	180
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.53	0.47	2.00	2.70	0.30	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4253	747	3200	4512	488	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.23	0.24	0.19	0.45	0.47	0.10	0.18	0.14	0.14	0.21	0.11
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Bristol St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.811
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	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:	WideBypass			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	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	70	778	146	283	1011	119	280	1354	125	134	607	78
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	778	146	283	1011	119	280	1354	125	134	607	78
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	778	146	283	1011	119	280	1354	125	134	607	78
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	778	146	283	1011	119	280	1354	125	134	607	78
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	778	146	283	1011	119	280	1354	125	134	607	78
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.53	0.47	1.00	2.68	0.32	1.00	2.75	0.25	1.00	2.66	0.34
Final Sat.:	1600	4242	758	1600	4495	505	1600	4594	406	1600	4453	547
Capacity Analysis Module:												
Vol/Sat:	0.04	0.18	0.19	0.18	0.22	0.24	0.17	0.29	0.31	0.08	0.14	0.14
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Bristol St and Alton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.545
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			Permitted			Permitted		
Rights:	WideBypass			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	0 1	0
Volume Module:												
Base Vol:	11	739	55	230	1591	36	164	101	211	41	87	31
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:	11	739	55	230	1591	36	164	101	211	41	87	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	11	739	55	230	1591	36	164	101	211	41	87	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	11	739	55	230	1591	36	164	101	211	41	87	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	11	739	55	230	1591	36	164	101	211	41	87	31
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	3.00	1.00	1.00	1.00	1.00	1.00	0.74	0.26
Final Sat.:	1600	4668	332	1600	5100	1600	1600	1700	1600	1600	1180	420
Capacity Analysis Module:												
Vol/Sat:	0.01	0.16	0.17	0.14	0.31	0.02	0.10	0.06	0.13	0.03	0.07	0.07
Crit Moves:	****				****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Bristol St and MacArthur Blvd

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			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	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	102	531	133	329	1434	150	166	1203	244	159	758	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:	102	531	133	329	1434	150	166	1203	244	159	758	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:	102	531	133	329	1434	150	166	1203	244	159	758	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	531	133	329	1434	150	166	1203	244	159	758	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:	102	531	133	329	1434	150	166	1203	244	159	758	110
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.72	0.28	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	4545	455	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.10	0.08	0.10	0.32	0.33	0.05	0.24	0.15	0.05	0.15	0.07
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Bristol St and Sunflower Ave

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:	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 1	2 0	3	0 1	2 0	2	1 1	2 0	3	0 1
Volume Module:												
Base Vol:	111	546	161	242	1370	103	112	926	375	295	480	166
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	546	161	242	1370	103	112	926	375	295	480	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	546	161	242	1370	103	112	926	375	295	480	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	546	161	242	1370	103	112	926	375	295	480	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	546	161	242	1370	103	112	926	375	295	480	166
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.85	1.15	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4755	1845	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.10	0.08	0.27	0.06	0.04	0.19	0.20	0.09	0.09	0.10
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Bristol St and I-405 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.557
Loss Time (sec):	5	Average Delay (sec/veh):	20.8
Optimal Cycle:	28	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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	4	0 1	0 0	4	1 0	0 0	0	0 2	1 1	1	0 2
Volume Module:												
Base Vol:	0	1638	210	0	1918	8	0	0	36	145	87	796
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	1638	210	0	1918	8	0	0	36	145	87	796
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1638	210	0	1918	8	0	0	36	145	87	796
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1638	210	0	1918	8	0	0	36	145	87	796
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1638	210	0	1918	8	0	0	36	145	87	796
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.85	1.00	0.91	0.91	1.00	1.00	0.75	0.92	0.92	0.75
Lanes:	0.00	4.00	1.00	0.00	4.98	0.02	0.00	0.00	2.00	1.88	1.12	2.00
Final Sat.:	0	6916	1615	0	8600	36	0	0	2842	3283	1970	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.13	0.00	0.22	0.22	0.00	0.00	0.01	0.04	0.04	0.28
Crit Moves:		****		****					****			****
Green/Cycle:	0.00	0.42	0.42	0.00	0.42	0.42	0.00	0.00	0.02	0.50	0.50	0.50
Volume/Cap:	0.00	0.56	0.31	0.00	0.52	0.52	0.00	0.00	0.56	0.09	0.09	0.56
Delay/Veh:	0.0	21.9	19.3	0.0	21.4	21.4	0.0	0.0	58.8	13.0	13.0	17.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	21.9	19.3	0.0	21.4	21.4	0.0	0.0	58.8	13.0	13.0	17.7
LOS by Move:	A	C	B	A	C	C	A	A	E	B	B	B
HCM2k85thQ:	0	16	7	0	15	15	0	0	2	2	2	15

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Bristol St and I-405 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.696
Loss Time (sec):	5	Average Delay (sec/veh):	23.9
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			Split Phase			Split Phase		
Rights:	Include			Ignore			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	4 0	0	0 0	2 1	1	3 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	125	1225	0	0	1030	886	696	0	636	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:	125	1225	0	0	1030	886	696	0	636	0	0	0
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:	125	1225	0	0	1030	0	696	0	636	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	125	1225	0	0	1030	0	696	0	636	0	0	0
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:	125	1225	0	0	1030	0	696	0	636	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.92	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	4.00	0.00	0.00	3.00	1.00	3.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	6916	0	0	5187	1729	5253	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.07	0.18	0.00	0.00	0.20	0.00	0.13	0.00	0.39	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.10	0.38	0.00	0.00	0.29	0.00	0.57	0.00	0.57	0.00	0.00	0.00
Volume/Cap:	0.70	0.46	0.00	0.00	0.70	0.00	0.23	0.00	0.70	0.00	0.00	0.00
Delay/Veh:	54.9	23.1	0.0	0.0	33.4	0.0	10.9	0.0	18.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.9	23.1	0.0	0.0	33.4	0.0	10.9	0.0	18.0	0.0	0.0	0.0
LOS by Move:	D	C	A	A	C	A	B	A	B	A	A	A
HCM2k85thQ:	8	12	0	0	17	0	6	0	22	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #43 Flower St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.806
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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:	Prot+Permit			Prot+Permit			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 0	1	1 0	2 0	1	1 0	3 0	1	1 0	2 1	0
Volume Module:												
Base Vol:	100	936	136	214	723	97	211	1315	150	143	458	191
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:	100	936	136	214	723	97	211	1315	150	143	458	191
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	936	136	214	723	97	211	1315	150	143	458	191
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	936	136	214	723	97	211	1315	150	143	458	191
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	100	936	136	214	723	97	211	1315	150	143	458	191
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	3.00	1.00	1.00	2.12	0.88
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	5100	1600	1600	3587	1413
Capacity Analysis Module:												
Vol/Sat:	0.06	0.28	0.09	0.13	0.21	0.06	0.13	0.26	0.09	0.09	0.13	0.14
Crit Moves:		****		****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #44 Flower St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.926
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	105	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			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 0	1	1 0	1 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	139	602	159	334	1058	111	148	1355	54	209	861	123
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:	139	602	159	334	1058	111	148	1355	54	209	861	123
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	139	602	159	334	1058	111	148	1355	54	209	861	123
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	139	602	159	334	1058	111	148	1355	54	209	861	123
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	139	602	159	334	1058	111	148	1355	54	209	861	123
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	1.81	0.19	1.00	2.89	0.11	1.00	2.62	0.38
Final Sat.:	1600	3400	1600	1600	2996	304	1600	4816	184	1600	4400	600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.18	0.10	0.21	0.35	0.37	0.09	0.28	0.29	0.13	0.20	0.21
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #45 Flower St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.900
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	87	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:	Permitted			Permitted			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:	0 1	0 1	0	0 1	0 1	0	0 1	0 1	0	0 1	0 1	0
Volume Module:												
Base Vol:	70	511	44	118	655	95	112	1278	97	113	764	103
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	511	44	118	655	95	112	1278	97	113	764	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	511	44	118	655	95	112	1278	97	113	764	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	511	44	118	655	95	112	1278	97	113	764	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	70	511	44	118	655	95	112	1278	97	113	764	103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	0.22	1.64	0.14	0.27	1.51	0.22	0.15	1.72	0.13	0.23	1.56	0.21
Final Sat.:	358	2616	225	435	2415	350	241	2750	209	369	2495	336
Capacity Analysis Module:												
Vol/Sat:	0.04	0.20	0.20	0.07	0.27	0.27	0.07	0.46	0.46	0.07	0.31	0.31
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #46 Flower St and Segerstrom Ave

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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	86	451	100	98	544	120	223	1531	427	104	764	84
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	451	100	98	544	120	223	1531	427	104	764	84
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	451	100	98	544	120	223	1531	427	104	764	84
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	451	100	98	544	120	223	1531	427	104	764	84
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	86	451	100	98	544	120	223	1531	427	104	764	84
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	1.64	0.36	1.00	1.64	0.36	1.00	2.35	0.65	1.00	2.70	0.30
Final Sat.:	1600	2719	581	1600	2722	578	1600	3953	1047	1600	4525	475
Capacity Analysis Module:												
Vol/Sat:	0.05	0.17	0.17	0.06	0.20	0.21	0.14	0.39	0.41	0.07	0.17	0.18
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #47 Flower St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.675
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:	Permitted				Permitted				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 1	1	0	1	0 1	1	0	1	0 2	1	0	1	0 2	1	0
Volume Module:																
Base Vol:	26	170	88		167	361	270		151	1716	73		62	1049	67	
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:	26	170	88		167	361	270		151	1716	73		62	1049	67	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	26	170	88		167	361	270		151	1716	73		62	1049	67	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	26	170	88		167	361	270		151	1716	73		62	1049	67	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	26	170	88		167	361	270		151	1716	73		62	1049	67	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.05	1.00		1.00	1.04	1.00		1.00	1.04	1.00	
Lanes:	1.00	1.32	0.68		1.00	1.14	0.86		1.00	2.88	0.12		1.00	2.82	0.18	
Final Sat.:	1600	2209	1091		1600	1931	1369		1600	4804	196		1600	4712	288	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.08	0.08		0.10	0.19	0.20		0.09	0.36	0.37		0.04	0.22	0.23	
Crit Moves:	****						****				****	****				

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #48 Main St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.586
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:	Ovl			Include			Include			Ovl		
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	2 1	0	2 0	2 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	105	724	375	198	1034	173	361	510	222	316	276	230
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:	105	724	375	198	1034	173	361	510	222	316	276	230
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	724	375	198	1034	173	361	510	222	316	276	230
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	105	724	375	198	1034	173	361	510	222	316	276	230
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	105	724	375	198	1034	173	361	510	222	316	276	230
OvlAdjVol:			217									131
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.57	0.43	2.00	2.09	0.91	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4312	688	3200	3544	1456	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.14	0.23	0.06	0.24	0.25	0.11	0.14	0.15	0.10	0.08	0.14
OvlAdjV/S:			0.14									0.08
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #49 Main St and Mainplace Dr / Memory Ln

Cycle (sec):	100	Critical Vol./Cap.(X):	0.512
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
Y+R:	4.0	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	2	1 0	2 0	2	0 1
Volume Module:												
Base Vol:	34	920	301	36	1386	290	185	291	20	132	151	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:	34	920	301	36	1386	290	185	291	20	132	151	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:	34	920	301	36	1386	290	185	291	20	132	151	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	920	301	36	1386	290	185	291	20	132	151	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:	34	920	301	36	1386	290	185	291	20	132	151	10
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.26	0.74	2.00	2.48	0.52	2.00	2.81	0.19	2.00	2.00	1.00
Final Sat.:	3200	3817	1183	3200	4169	831	3200	4691	309	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.24	0.25	0.01	0.33	0.35	0.06	0.06	0.06	0.04	0.04	0.01
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #50 Main St and 17th St

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			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 0	1	2 0	2 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	133	788	169	237	1322	85	127	1336	67	356	1425	21
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:	133	788	169	237	1322	85	127	1336	67	356	1425	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:	133	788	169	237	1322	85	127	1336	67	356	1425	21
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	788	169	237	1322	85	127	1336	67	356	1425	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:	133	788	169	237	1322	85	127	1336	67	356	1425	21
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.86	0.14	2.00	2.96	0.04
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	4771	229	3200	4930	70
Capacity Analysis Module:												
Vol/Sat:	0.04	0.23	0.11	0.07	0.39	0.05	0.04	0.28	0.29	0.11	0.29	0.30
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #51 Main St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.783
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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	142	925	81	55	970	148	120	727	132	43	566	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:	142	925	81	55	970	148	120	727	132	43	566	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:	142	925	81	55	970	148	120	727	132	43	566	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	925	81	55	970	148	120	727	132	43	566	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:	142	925	81	55	970	148	120	727	132	43	566	34
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	1.84	0.16	1.00	1.74	0.26	1.00	1.69	0.31	1.00	1.89	0.11
Final Sat.:	1600	3042	258	1600	2876	424	1600	2808	492	1600	3119	181
Capacity Analysis Module:												
Vol/Sat:	0.09	0.30	0.31	0.03	0.34	0.35	0.08	0.26	0.27	0.03	0.18	0.19
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #52 Main St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.926
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	105	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:	Permitted			Permitted			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 0	0	0 0	1 1	0	0 0	0 0	0	0 1	0 1	0
Volume Module:												
Base Vol:	66	1050	0	0	1135	100	0	0	0	90	1250	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:	66	1050	0	0	1135	100	0	0	0	90	1250	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:	66	1050	0	0	1135	100	0	0	0	90	1250	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	1050	0	0	1135	100	0	0	0	90	1250	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:	66	1050	0	0	1135	100	0	0	0	90	1250	96
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.84	0.16	0.00	0.00	0.00	0.13	1.74	0.13
Final Sat.:	1600	3400	0	0	3041	259	0	0	0	201	2786	214
Capacity Analysis Module:												
Vol/Sat:	0.04	0.31	0.00	0.00	0.37	0.39	0.00	0.00	0.00	0.06	0.45	0.45
Crit Moves:	****					****					****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #53 Main St and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.410
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:	Permitted			Permitted			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:	0 0	1	1 0	0 0	1	1 0	0 0	1	1 0	0 0	1	1 0
Volume Module:												
Base Vol:	0	939	22	0	961	24	0	70	11	0	140	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:	0	939	22	0	961	24	0	70	11	0	140	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:	0	939	22	0	961	24	0	70	11	0	140	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	939	22	0	961	24	0	70	11	0	140	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:	0	939	22	0	961	24	0	70	11	0	140	34
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	0.00	1.95	0.05	0.00	1.95	0.05	0.00	1.73	0.27	0.00	1.61	0.39
Final Sat.:	0	3227	73	0	3222	78	0	2865	435	0	2675	625
Capacity Analysis Module:												
Vol/Sat:	0.00	0.29	0.30	0.00	0.30	0.31	0.00	0.02	0.03	0.00	0.05	0.05
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #54 Main St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.681
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
Y+R:	4.0	4.0	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	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	103	532	54	77	772	57	106	1241	131	86	1072	60
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:	103	532	54	77	772	57	106	1241	131	86	1072	60
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	532	54	77	772	57	106	1241	131	86	1072	60
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	532	54	77	772	57	106	1241	131	86	1072	60
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	532	54	77	772	57	106	1241	131	86	1072	60
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	1.82	0.18	1.00	2.00	1.00	1.00	2.71	0.29	1.00	2.84	0.16
Final Sat.:	1600	3005	295	1600	3400	1600	1600	4542	458	1600	4746	254
Capacity Analysis Module:												
Vol/Sat:	0.06	0.18	0.18	0.05	0.23	0.04	0.07	0.27	0.29	0.05	0.23	0.24
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #55 Main St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.894
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	84	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:	Prot+Permit			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:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	93	874	44	162	1259	25	86	815	89	164	438	126
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:	93	874	44	162	1259	25	86	815	89	164	438	126
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	874	44	162	1259	25	86	815	89	164	438	126
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	874	44	162	1259	25	86	815	89	164	438	126
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	874	44	162	1259	25	86	815	89	164	438	126
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.04	1.00
Lanes:	1.00	1.90	0.10	1.00	1.96	0.04	1.00	1.80	0.20	1.00	1.55	0.45
Final Sat.:	1600	3147	153	1600	3238	62	1600	2985	315	1600	2585	715
Capacity Analysis Module:												
Vol/Sat:	0.06	0.28	0.29	0.10	0.39	0.40	0.05	0.27	0.28	0.10	0.17	0.18
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #56 Main St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.795
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	99	561	61	211	975	51	96	1248	168	108	630	77
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:	99	561	61	211	975	51	96	1248	168	108	630	77
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	99	561	61	211	975	51	96	1248	168	108	630	77
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	99	561	61	211	975	51	96	1248	168	108	630	77
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	99	561	61	211	975	51	96	1248	168	108	630	77
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	1.80	0.20	1.00	1.90	0.10	1.00	2.64	0.36	1.00	2.67	0.33
Final Sat.:	1600	2986	314	1600	3141	159	1600	4431	569	1600	4477	523
Capacity Analysis Module:												
Vol/Sat:	0.06	0.19	0.19	0.13	0.31	0.32	0.06	0.28	0.29	0.07	0.14	0.15
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #57 Main St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.680
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
Y+R:	4.0	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	3 0	1
Volume Module:												
Base Vol:	51	295	250	539	709	160	230	1336	242	138	411	206
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:	51	295	250	539	709	160	230	1336	242	138	411	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:	51	295	250	539	709	160	230	1336	242	138	411	206
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	51	295	250	539	709	160	230	1336	242	138	411	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:	51	295	250	539	709	160	230	1336	242	138	411	206
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.06	0.16	0.17	0.14	0.10	0.07	0.26	0.15	0.04	0.08	0.13
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Penn Wy and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.660
Loss Time (sec):	5	Average Delay (sec/veh):	12.2
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:	Split Phase			Split Phase			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	0	0 2	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	52	0	260	0	0	0	0	1341	684	214	1722	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:	52	0	260	0	0	0	0	1341	684	214	1722	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:	52	0	260	0	0	0	0	1341	684	214	1722	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	52	0	260	0	0	0	0	1341	684	214	1722	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:	52	0	260	0	0	0	0	1341	684	214	1722	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.75	1.00	1.00	1.00	1.00	0.86	0.86	0.95	0.91	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	3.00	0.00
Final Sat.:	3502	0	2842	0	0	0	0	3282	1641	1805	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.09	0.00	0.00	0.00	0.00	0.41	0.42	0.12	0.33	0.00
Crit Moves:			****						****	****		
Green/Cycle:	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.63	0.63	0.18	0.81	0.00
Volume/Cap:	0.11	0.00	0.66	0.00	0.00	0.00	0.00	0.65	0.66	0.66	0.41	0.00
Delay/Veh:	37.8	0.0	44.9	0.0	0.0	0.0	0.0	11.9	12.2	43.1	2.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.8	0.0	44.9	0.0	0.0	0.0	0.0	11.9	12.2	43.1	2.7	0.0
LOS by Move:	D	A	D	A	A	A	A	B	B	D	A	A
HCM2k85thQ:	1	0	9	0	0	0	0	22	22	11	9	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 I-5 NB Off Ramps/17th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.710
Loss Time (sec):	5	Average Delay (sec/veh):	30.0
Optimal Cycle:	40	Level Of Service:	C

Street Name:	I-5 NB Off Ramps						17th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Ignore			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 1	0	0 1	1	0 0	0 1	1	0 3	0 1	0	0 2	1 0
Volume Module:												
Base Vol:	720	33	21	54	0	279	89	932	337	0	1245	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:	720	33	21	54	0	279	89	932	337	0	1245	20
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	720	33	21	54	0	279	89	932	0	0	1245	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	720	33	21	54	0	279	89	932	0	0	1245	20
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	720	33	21	54	0	279	89	932	0	0	1245	20
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.91	1.00	1.00	0.91	0.91
Lanes:	1.91	0.09	1.00	1.00	0.00	1.00	1.00	3.00	1.00	0.00	2.95	0.05
Final Sat.:	3466	159	1615	1805	0	1615	1805	5187	1900	0	5095	82
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.01	0.03	0.00	0.17	0.05	0.18	0.00	0.00	0.24	0.24
Crit Moves:	****					****	****				****	
Green/Cycle:	0.29	0.29	0.29	0.24	0.00	0.24	0.07	0.41	0.00	0.00	0.34	0.34
Volume/Cap:	0.71	0.71	0.04	0.12	0.00	0.71	0.71	0.43	0.00	0.00	0.71	0.71
Delay/Veh:	33.8	33.8	25.4	29.6	0.0	40.5	62.7	21.1	0.0	0.0	29.8	29.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.8	33.8	25.4	29.6	0.0	40.5	62.7	21.1	0.0	0.0	29.8	29.8
LOS by Move:	C	C	C	C	A	D	E	C	A	A	C	C
HCM2k85thQ:	17	17	1	2	0	14	7	12	0	0	20	20

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 Penn Wy and I-5 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.550
Loss Time (sec):	5	Average Delay (sec/veh):	21.2
Optimal Cycle:	27	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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	2	0 1	2 0	2	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module:												
Base Vol:	0	260	230	951	196	0	0	0	0	196	0	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:	0	260	230	951	196	0	0	0	0	196	0	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:	0	260	230	951	196	0	0	0	0	196	0	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	260	230	951	196	0	0	0	0	196	0	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:	0	260	230	951	196	0	0	0	0	196	0	110
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.92	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.75
Lanes:	0.00	2.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3610	1615	3502	3610	0	0	0	0	1805	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.07	0.14	0.27	0.05	0.00	0.00	0.00	0.00	0.11	0.00	0.04
Crit Moves:			****	****						****		
Green/Cycle:	0.00	0.26	0.26	0.49	0.75	0.00	0.00	0.00	0.00	0.20	0.00	0.69
Volume/Cap:	0.00	0.28	0.55	0.55	0.07	0.00	0.00	0.00	0.00	0.55	0.00	0.06
Delay/Veh:	0.0	29.8	33.6	18.0	3.2	0.0	0.0	0.0	0.0	38.0	0.0	5.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	29.8	33.6	18.0	3.2	0.0	0.0	0.0	0.0	38.0	0.0	5.0
LOS by Move:	A	C	C	B	A	A	A	A	A	D	A	A
HCM2k85thQ:	0	5	10	16	1	0	0	0	0	9	0	1

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #61 Santiago St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	1.769
Loss Time (sec):	5	Average Delay (sec/veh):	159.2
Optimal Cycle:	0	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	0 1	0 0	1	0 0	1! 0	0
Volume Module:												
Base Vol:	487	338	47	10	590	144	182	69	369	108	99	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:	487	338	47	10	590	144	182	69	369	108	99	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:	487	338	47	10	590	144	182	69	369	108	99	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	487	338	47	10	590	144	182	69	369	108	99	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:	487	338	47	10	590	144	182	69	369	108	99	20
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.88	0.12	1.00	0.80	0.20	0.73	0.27	1.00	0.47	0.44	0.09
Final Sat.:	402	377	52	381	333	81	289	110	453	177	162	33
Capacity Analysis Module:												
Vol/Sat:	1.21	0.90	0.90	0.03	1.77	1.77	0.63	0.63	0.82	0.61	0.61	0.61
Crit Moves:	****				****				****	****		
Delay/Veh:	144.0	50.3	50.3	12.3	377	376.5	25.7	25.7	36.9	26.3	26.3	26.3
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	144.0	50.3	50.3	12.3	377	376.5	25.7	25.7	36.9	26.3	26.3	26.3
LOS by Move:	F	F	F	B	F	F	D	D	E	D	D	D
ApproachDel:	102.6			371.6			32.3			26.3		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	102.6			371.6			32.3			26.3		
LOS by Appr:	F			F			D			D		
AllWayAvgQ:	14.8	4.7	4.7	0.0	42.1	42.1	1.5	1.5	3.3	1.4	1.4	1.4

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #62 Santiago St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.037
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	188	611	303	409	972	253	118	732	99	297	699	258
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:	188	611	303	409	972	253	118	732	99	297	699	258
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	188	611	303	409	972	253	118	732	99	297	699	258
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	611	303	409	972	253	118	732	99	297	699	258
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	188	611	303	409	972	253	118	732	99	297	699	258
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	1.34	0.66	1.00	1.59	0.41	1.00	1.76	0.24	1.00	2.00	1.00
Final Sat.:	1600	2239	1061	1600	2639	661	1600	2919	381	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.27	0.29	0.26	0.37	0.38	0.07	0.25	0.26	0.19	0.21	0.16
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #63 Standard Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.939
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	117	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			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 0	1	1 0	2 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	191	473	248	431	604	332	298	624	219	250	550	340
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:	191	473	248	431	604	332	298	624	219	250	550	340
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	191	473	248	431	604	332	298	624	219	250	550	340
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	191	473	248	431	604	332	298	624	219	250	550	340
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	191	473	248	431	604	332	298	624	219	250	550	340
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	1.48	0.52	1.00	1.24	0.76
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	2469	831	1600	2078	1222
Capacity Analysis Module:												
Vol/Sat:	0.12	0.14	0.16	0.27	0.18	0.21	0.19	0.25	0.26	0.16	0.26	0.28
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #64 Standard Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.976
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	176	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:	Permitted				Permitted				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 1	1	0	1	0 1	1	0	1	0 2	1	0	1	0 2	1	0
Volume Module:																
Base Vol:	45	631	312		123	901	41		161	1959	121		194	1282	120	
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	631	312		123	901	41		161	1959	121		194	1282	120	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	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	631	312		123	901	41		161	1959	121		194	1282	120	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	45	631	312		123	901	41		161	1959	121		194	1282	120	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	45	631	312		123	901	41		161	1959	121		194	1282	120	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.03	1.00		1.00	1.04	1.00		1.00	1.05	1.00	
Lanes:	1.00	1.34	0.66		1.00	1.91	0.09		1.00	2.83	0.17		1.00	2.74	0.26	
Final Sat.:	1600	2241	1059		1600	3161	139		1600	4721	279		1600	4589	411	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.28	0.29		0.08	0.29	0.29		0.10	0.41	0.43		0.12	0.28	0.29	
Crit Moves:			****		****						****		****			

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #65 Standard Ave and Mcfadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.854
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	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:	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	94	360	162	226	547	38	34	1178	142	150	397	89
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:	94	360	162	226	547	38	34	1178	142	150	397	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	360	162	226	547	38	34	1178	142	150	397	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	360	162	226	547	38	34	1178	142	150	397	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	94	360	162	226	547	38	34	1178	142	150	397	89
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.38	0.62	1.00	1.87	0.13	1.00	1.78	0.22	1.00	1.63	0.37
Final Sat.:	1600	2307	993	1600	3092	208	1600	2956	344	1600	2714	586
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.16	0.14	0.18	0.18	0.02	0.40	0.41	0.09	0.15	0.15
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #66 Halladay St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.775
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	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:	Permitted			Permitted			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	0	0 1	0 0	0	0 0	0 0	0	2 1	0 0	1	2 0 0
Volume Module:												
Base Vol:	95	0	220	0	0	0	0	1833	207	260	986	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:	95	0	220	0	0	0	0	1833	207	260	986	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:	95	0	220	0	0	0	0	1833	207	260	986	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	0	220	0	0	0	0	1833	207	260	986	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:	95	0	220	0	0	0	0	1833	207	260	986	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.70	0.30	0.63	2.37	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4513	487	1002	3998	0
Capacity Analysis Module:												
Vol/Sat:	0.06	0.00	0.14	0.00	0.00	0.00	0.00	0.41	0.43	0.16	0.25	0.00
Crit Moves:			****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #67 Halladay St and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.774
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	47	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:	Split Phase			Split Phase			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	15	24	65	450	91	96	46	1537	11	104	566	91
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:	15	24	65	450	91	96	46	1537	11	104	566	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:	15	24	65	450	91	96	46	1537	11	104	566	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	15	24	65	450	91	96	46	1537	11	104	566	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:	15	24	65	450	91	96	46	1537	11	104	566	91
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	0.27	0.73	1.00	0.49	0.51	1.00	2.98	0.02	1.00	2.58	0.42
Final Sat.:	1600	431	1169	1600	779	821	1600	4966	34	1600	4335	665
Capacity Analysis Module:												
Vol/Sat:	0.01	0.06	0.06	0.28	0.12	0.12	0.03	0.31	0.32	0.07	0.13	0.14
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #68 SR-55 SB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.608
Loss Time (sec):	5	Average Delay (sec/veh):	19.9
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
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	2	0	0	0	2	0	0	2	1	1	0	0	3	0	1
Volume Module:																		
Base Vol:	0	0	0	998	0	903	0	1349	961	0	1187	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:	0	0	0	998	0	903	0	1349	961	0	1187	135
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	998	0	903	0	1349	0	0	1187	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	998	0	903	0	1349	0	0	1187	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	998	0	903	0	1349	0	0	1187	0
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	0.91	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1729	0	5187	1900
Capacity Analysis Module:																		
Vol/Sat:	0.00	0.00	0.00	0.29	0.00	0.32	0.00	0.26	0.00	0.00	0.23	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.52	0.00	0.52	0.00	0.43	0.00	0.00	0.43	0.00
Volume/Cap:	0.00	0.00	0.00	0.55	0.00	0.61	0.00	0.61	0.00	0.00	0.54	0.00
Delay/Veh:	0.0	0.0	0.0	16.3	0.0	17.5	0.0	22.6	0.0	0.0	21.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.3	0.0	17.5	0.0	22.6	0.0	0.0	21.5	0.0
LOS by Move:	A	A	A	B	A	B	A	C	A	A	C	A
HCM2k85thQ:	0	0	0	16	0	17	0	18	0	0	15	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #69 SR-55 NB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.712
Loss Time (sec):	5	Average Delay (sec/veh):	19.3
Optimal Cycle:	40	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ignore			Include			Ignore			Ignore		
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	0	0 1	0 0	0	0 0	0 0	2	0 2	0 0	3	0 1
Volume Module:												
Base Vol:	946	0	1017	0	0	0	0	1468	726	0	517	244
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:	946	0	1017	0	0	0	0	1468	726	0	517	244
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	946	0	0	0	0	0	0	1468	0	0	517	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	946	0	0	0	0	0	0	1468	0	0	517	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	946	0	0	0	0	0	0	1468	0	0	517	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.88	1.00	0.91	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	1.00
Final Sat.:	3502	0	1900	0	0	0	0	3610	3344	0	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.27	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.00	0.00	0.10	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.57	0.00
Volume/Cap:	0.71	0.00	0.00	0.00	0.00	0.00	0.00	0.71	0.00	0.00	0.17	0.00
Delay/Veh:	28.2	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	10.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.2	0.0	0.0	0.0	0.0	0.0	0.0	16.7	0.0	0.0	10.3	0.0
LOS by Move:	C	A	A	A	A	A	A	B	A	A	B	A
HCM2k85thQ:	21	0	0	0	0	0	0	26	0	0	4	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 SR-55 SB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.617
Loss Time (sec):	5	Average Delay (sec/veh):	25.7
Optimal Cycle:	31	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			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 1	0	0 2	0 1	1	0 1	1 0	3	0 1	2 0	3	0 1
Volume Module:												
Base Vol:	286	34	654	50	242	60	37	1422	303	348	552	92
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:	286	34	654	50	242	60	37	1422	303	348	552	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:	286	34	654	50	242	60	37	1422	303	348	552	92
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	286	34	654	50	242	60	37	1422	303	348	552	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:	286	34	654	50	242	60	37	1422	303	348	552	92
Saturation Flow Module:												
Sat/Lane:	1900 1900		1900	1900 1900		1900	1900 1900		1900	1900 1900		1900
Adjustment:	0.96 0.96		0.75	0.94 0.94		0.85	0.95 0.91		0.85	0.92 0.91		0.85
Lanes:	1.79 0.21		2.00	0.34 1.66		1.00	1.00 3.00		1.00	2.00 3.00		1.00
Final Sat.:	3250	386	2842	613 2968		1615	1805 5187		1615	3502 5187		1615
Capacity Analysis Module:												
Vol/Sat:	0.09 0.09		0.23	0.08 0.08		0.04	0.02 0.27		0.19	0.10 0.11		0.06
Crit Moves:			****		****			****			****	
Green/Cycle:	0.21 0.21		0.37	0.13 0.13		0.13	0.10 0.44		0.44	0.16 0.51		0.51
Volume/Cap:	0.42 0.42		0.62	0.62 0.62		0.28	0.21 0.62		0.42	0.62 0.21		0.11
Delay/Veh:	34.4 34.4		26.6	43.4 43.4		39.8	42.1 21.8		19.4	41.1 13.6		12.9
User DelAdj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
AdjDel/Veh:	34.4 34.4		26.6	43.4 43.4		39.8	42.1 21.8		19.4	41.1 13.6		12.9
LOS by Move:	C	C	C	D	D	D	D	C	B	D	B	B
HCM2k85thQ:	7	7	15	8	8	3	2	19	10	9	5	2

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #71 Glassell St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.800
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:	Ovl			Include			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 1	0 1		1 0 1	1 0		1 0 1	0 1		1 0 1	1 0	
Volume Module:												
Base Vol:	263	412	125	14	295	65	57	293	563	367	387	9
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:	263	412	125	14	295	65	57	293	563	367	387	9
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	263	412	125	14	295	65	57	293	563	367	387	9
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	263	412	125	14	295	65	57	293	563	367	387	9
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	263	412	125	14	295	65	57	293	563	367	387	9
OvlAdjVol:			0						431			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.03	1.00
Lanes:	2.00	1.00	1.00	1.00	1.64	0.36	1.00	1.00	1.00	1.00	1.95	0.05
Final Sat.:	3200	1700	1600	1600	2722	578	1600	1700	1600	1600	3227	73
Capacity Analysis Module:												
Vol/Sat:	0.08	0.24	0.08	0.01	0.11	0.11	0.04	0.17	0.35	0.23	0.12	0.12
OvlAdjV/S:			0.00						0.27			
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Glassell St and SR-22 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.871
Loss Time (sec):	5	Average Delay (sec/veh):	32.6
Optimal Cycle:	75	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			Permitted			Split Phase			Split Phase		
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 0	0	0 0	2 0	1	0 0	0 0	0	1 0	1! 0	1
Volume Module:												
Base Vol:	511	574	0	0	1017	473	0	0	0	323	6	483
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:	511	574	0	0	1017	473	0	0	0	323	6	483
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	511	574	0	0	1017	473	0	0	0	323	6	483
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	511	574	0	0	1017	473	0	0	0	323	6	483
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	511	574	0	0	1017	473	0	0	0	323	6	483
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.86	0.86	0.86
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.39	0.01	1.60
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	2270	24	2588
Capacity Analysis Module:												
Vol/Sat:	0.28	0.16	0.00	0.00	0.28	0.29	0.00	0.00	0.00	0.14	0.25	0.19
Crit Moves:	****					****					****	
Green/Cycle:	0.33	0.66	0.00	0.00	0.34	0.34	0.00	0.00	0.00	0.29	0.29	0.29
Volume/Cap:	0.87	0.24	0.00	0.00	0.84	0.87	0.00	0.00	0.00	0.49	0.87	0.65
Delay/Veh:	45.1	6.9	0.0	0.0	35.9	45.4	0.0	0.0	0.0	29.7	42.8	32.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	45.1	6.9	0.0	0.0	35.9	45.4	0.0	0.0	0.0	29.7	42.8	32.3
LOS by Move:	D	A	A	A	D	D	A	A	A	C	D	C
HCM2k85thQ:	26	6	0	0	26	25	0	0	0	10	22	14

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Grand Ave / Glassell St and SR-22 EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.860
Loss Time (sec):	5	Average Delay (sec/veh):	30.6
Optimal Cycle:	71	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:	Permitted			Protected			Split Phase			Split Phase		
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	2	0 1	1 0	2	0 0	1 0	1!	0 1	0 0	0	0 0 0
Volume Module:												
Base Vol:	0	918	245	373	977	0	270	0	1058	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:	0	918	245	373	977	0	270	0	1058	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:	0	918	245	373	977	0	270	0	1058	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	918	245	373	977	0	270	0	1058	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:	0	918	245	373	977	0	270	0	1058	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.95	0.95	1.00	0.87	1.00	0.87	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.20	0.00	1.80	0.00	0.00	0.00
Final Sat.:	0	3610	1615	1805	3610	0	1992	0	2974	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.25	0.15	0.21	0.27	0.00	0.14	0.00	0.36	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.30	0.30	0.24	0.54	0.00	0.41	0.00	0.41	0.00	0.00	0.00
Volume/Cap:	0.00	0.86	0.51	0.86	0.50	0.00	0.33	0.00	0.86	0.00	0.00	0.00
Delay/Veh:	0.0	40.4	30.2	52.1	15.0	0.0	19.9	0.0	31.8	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	40.4	30.2	52.1	15.0	0.0	19.9	0.0	31.8	0.0	0.0	0.0
LOS by Move:	A	D	C	D	B	A	B	A	C	A	A	A
HCM2k85thQ:	0	25	10	21	15	0	7	0	28	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #74 Grand Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.669
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			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	1 0	1 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	25	1007	145	239	1981	44	99	60	59	213	24	192
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:	25	1007	145	239	1981	44	99	60	59	213	24	192
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1007	145	239	1981	44	99	60	59	213	24	192
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	1007	145	239	1981	44	99	60	59	213	24	192
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	25	1007	145	239	1981	44	99	60	59	213	24	192
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.62	0.38	1.00	2.93	0.07	1.00	1.01	0.99	1.00	1.00	1.00
Final Sat.:	1600	4396	604	1600	4896	104	1600	1713	1587	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.23	0.24	0.15	0.40	0.42	0.06	0.04	0.04	0.13	0.01	0.12
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #75 Grand Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.932
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	110	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			Permitted			Permitted		
Rights:	Include			WideBypass			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	0 1	0	1 0	1 0	1
Volume Module:												
Base Vol:	81	566	145	413	2021	455	143	233	48	200	385	352
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:	81	566	145	413	2021	455	143	233	48	200	385	352
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	566	145	413	2021	455	143	233	48	200	385	352
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	81	566	145	413	2021	455	143	233	48	200	385	352
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	81	566	145	413	2021	455	143	233	48	200	385	352
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	2.39	0.61	1.00	2.45	0.55	1.00	0.83	0.17	1.00	1.00	1.00
Final Sat.:	1600	4021	979	1600	4118	882	1600	1327	273	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.14	0.15	0.26	0.49	0.52	0.09	0.18	0.18	0.13	0.23	0.22
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #76 Grand Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.907
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	91	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				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	2	0	1	0	2	0
Volume Module:																
Base Vol:	219	640	439		429	1797	353		198	739	94		342	894	98	
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:	219	640	439		429	1797	353		198	739	94		342	894	98	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	219	640	439		429	1797	353		198	739	94		342	894	98	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	219	640	439		429	1797	353		198	739	94		342	894	98	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	219	640	439		429	1797	353		198	739	94		342	894	98	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.06	1.00		1.00	1.05	1.00		1.00	1.05	1.00		1.00	1.05	1.00	
Lanes:	1.00	2.00	1.00		1.00	2.51	0.49		2.00	2.66	0.34		2.00	2.70	0.30	
Final Sat.:	1600	3400	1600		1600	4212	788		3200	4458	542		3200	4526	474	
Capacity Analysis Module:																
Vol/Sat:	0.14	0.19	0.27		0.27	0.43	0.45		0.06	0.17	0.17		0.11	0.20	0.21	
Crit Moves:	****						****			****				****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Grand Ave and I-5 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.740
Loss Time (sec):	5	Average Delay (sec/veh):	13.2
Optimal Cycle:	44	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			Split Phase			Split Phase		
Rights:	Ignore			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	2 0	1	1 0	3 0	0	0 0	0 0	0 0	2 0	0 0	1
Volume Module:												
Base Vol:	0	1056	610	90	2893	0	0	0	0	507	0	140
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	1056	610	90	2893	0	0	0	0	507	0	140
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1056	0	90	2893	0	0	0	0	507	0	140
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1056	0	90	2893	0	0	0	0	507	0	140
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1056	0	90	2893	0	0	0	0	507	0	140
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.91	1.00	1.00	1.00	1.00	0.92	1.00	0.85
Lanes:	0.00	2.00	1.00	1.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3610	1900	1805	5187	0	0	0	0	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.29	0.00	0.05	0.56	0.00	0.00	0.00	0.00	0.14	0.00	0.09
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.64	0.00	0.11	0.75	0.00	0.00	0.00	0.00	0.20	0.00	0.20
Volume/Cap:	0.00	0.45	0.00	0.45	0.74	0.00	0.00	0.00	0.00	0.74	0.00	0.44
Delay/Veh:	0.0	9.1	0.0	43.3	7.6	0.0	0.0	0.0	0.0	42.1	0.0	36.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.1	0.0	43.3	7.6	0.0	0.0	0.0	0.0	42.1	0.0	36.4
LOS by Move:	A	A	A	D	A	A	A	A	A	D	A	D
HCM2k85thQ:	0	13	0	5	28	0	0	0	0	14	0	7

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 Grand Ave and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.832
Loss Time (sec):	5	Average Delay (sec/veh):	26.0
Optimal Cycle:	62	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			Split Phase			Split Phase		
Rights:	Include			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	2	1 0	1 0	2	0 2	2 0	1	0 2	0 1	0	1 0
Volume Module:												
Base Vol:	49	694	35	202	1670	1473	268	221	436	6	475	43
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:	49	694	35	202	1670	1473	268	221	436	6	475	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	694	35	202	1670	1473	268	221	436	6	475	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	694	35	202	1670	1473	268	221	436	6	475	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	49	694	35	202	1670	1473	268	221	436	6	475	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.75	0.92	1.00	0.75	0.94	0.94	0.94
Lanes:	1.00	2.86	0.14	1.00	2.00	2.00	2.00	1.00	2.00	0.02	1.82	0.16
Final Sat.:	1805	4903	247	1805	3610	2842	3502	1900	2842	41	3230	292
Capacity Analysis Module:												
Vol/Sat:	0.03	0.14	0.14	0.11	0.46	0.52	0.08	0.12	0.15	0.15	0.15	0.15
Crit Moves:	****				****				****		****	
Green/Cycle:	0.03	0.33	0.33	0.26	0.56	0.74	0.18	0.18	0.18	0.18	0.18	0.18
Volume/Cap:	0.83	0.43	0.43	0.43	0.83	0.70	0.42	0.63	0.83	0.83	0.83	0.83
Delay/Veh:	109.2	26.4	26.4	31.5	21.4	8.1	36.5	41.3	50.1	48.9	48.9	48.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	109.2	26.4	26.4	31.5	21.4	8.1	36.5	41.3	50.1	48.9	48.9	48.9
LOS by Move:	F	C	C	C	C	A	D	D	D	D	D	D
HCM2k85thQ:	5	10	10	8	35	22	6	11	15	16	16	16

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #79 Grand Ave and 1st St

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			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	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	208	732	34	99	1432	174	436	1041	295	216	759	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:	208	732	34	99	1432	174	436	1041	295	216	759	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:	208	732	34	99	1432	174	436	1041	295	216	759	87
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	732	34	99	1432	174	436	1041	295	216	759	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:	208	732	34	99	1432	174	436	1041	295	216	759	87
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.87	0.13	2.00	3.00	1.00	2.00	2.34	0.66	2.00	2.69	0.31
Final Sat.:	3200	4787	213	3200	5100	1600	3200	3940	1060	3200	4506	494
Capacity Analysis Module:												
Vol/Sat:	0.07	0.15	0.16	0.03	0.28	0.11	0.14	0.26	0.28	0.07	0.17	0.18
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #80 Grand Ave and Chestnut Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
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			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	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	53	737	163	161	1937	53	34	239	63	130	384	239
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:	53	737	163	161	1937	53	34	239	63	130	384	239
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	737	163	161	1937	53	34	239	63	130	384	239
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	737	163	161	1937	53	34	239	63	130	384	239
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	737	163	161	1937	53	34	239	63	130	384	239
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.46	0.54	1.00	2.92	0.08	1.00	1.58	0.42	1.00	1.23	0.77
Final Sat.:	1600	4131	869	1600	4872	128	1600	2632	668	1600	2072	1228
Capacity Analysis Module:												
Vol/Sat:	0.03	0.18	0.19	0.10	0.40	0.41	0.02	0.09	0.09	0.08	0.19	0.19
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #81 Grand Ave and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.892
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	82	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:	1 0	2 1	0	1 0	2 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	181	764	114	249	1672	163	205	663	201	123	440	111
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:	181	764	114	249	1672	163	205	663	201	123	440	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:	181	764	114	249	1672	163	205	663	201	123	440	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	181	764	114	249	1672	163	205	663	201	123	440	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:	181	764	114	249	1672	163	205	663	201	123	440	111
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.61	0.39	1.00	2.73	0.27	1.00	1.53	0.47	1.00	1.60	0.40
Final Sat.:	1600	4377	623	1600	4574	426	1600	2556	744	1600	2655	645
Capacity Analysis Module:												
Vol/Sat:	0.11	0.17	0.18	0.16	0.37	0.38	0.13	0.26	0.27	0.08	0.17	0.17
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #82 Grand Ave and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.838
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	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:	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	47	472	92	243	1244	243	347	1447	139	189	724	158
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:	47	472	92	243	1244	243	347	1447	139	189	724	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	472	92	243	1244	243	347	1447	139	189	724	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	472	92	243	1244	243	347	1447	139	189	724	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	472	92	243	1244	243	347	1447	139	189	724	158
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.51	0.49	1.00	2.51	0.49	1.00	2.74	0.26	1.00	2.46	0.54
Final Sat.:	1600	4217	783	1600	4216	784	1600	4579	421	1600	4140	860
Capacity Analysis Module:												
Vol/Sat:	0.03	0.11	0.12	0.15	0.30	0.31	0.22	0.32	0.33	0.12	0.17	0.18
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #83 Grand Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.613
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	2 0	3 0	1	2 0	2 1	0
Volume Module:												
Base Vol:	142	429	184	183	528	178	333	1188	467	92	406	137
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:	142	429	184	183	528	178	333	1188	467	92	406	137
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	429	184	183	528	178	333	1188	467	92	406	137
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	142	429	184	183	528	178	333	1188	467	92	406	137
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	142	429	184	183	528	178	333	1188	467	92	406	137
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.10	0.90	1.00	2.24	0.76	2.00	3.00	1.00	2.00	2.24	0.76
Final Sat.:	1600	3559	1441	1600	3790	1210	3200	5100	1600	3200	3789	1211
Capacity Analysis Module:												
Vol/Sat:	0.09	0.12	0.13	0.11	0.14	0.15	0.10	0.23	0.29	0.03	0.11	0.11
Crit Moves:		****	****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #84 SR-55 NB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.569
Loss Time (sec):	5	Average Delay (sec/veh):	17.1
Optimal Cycle:	28	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:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				Ignore			
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! 0	1	0	0	0	0	0	0	3	0	1	0	0	2 1 0
Volume Module:																
Base Vol:	610	0	499		0	0	0		0	1618	647		0	599	361	
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:	610	0	499		0	0	0		0	1618	647		0	599	361	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
PHF Volume:	610	0	499		0	0	0		0	1618	0		0	599	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	610	0	499		0	0	0		0	1618	0		0	599	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
FinalVolume:	610	0	499		0	0	0		0	1618	0		0	599	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.91	1.00	0.91		1.00	1.00	1.00		1.00	0.91	1.00		1.00	0.91	0.91	
Lanes:	1.55	0.00	1.45		0.00	0.00	0.00		0.00	3.00	1.00		0.00	3.00	0.00	
Final Sat.:	2674	0	2501		0	0	0		0	5187	1900		0	5187	0	
Capacity Analysis Module:																
Vol/Sat:	0.23	0.00	0.20		0.00	0.00	0.00		0.00	0.31	0.00		0.00	0.12	0.00	
Crit Moves:	****									****				****		
Green/Cycle:	0.40	0.00	0.40		0.00	0.00	0.00		0.00	0.55	0.00		0.00	0.55	0.00	
Volume/Cap:	0.57	0.00	0.50		0.00	0.00	0.00		0.00	0.57	0.00		0.00	0.21	0.00	
Delay/Veh:	23.6	0.0	22.6		0.0	0.0	0.0		0.0	15.1	0.0		0.0	11.6	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	23.6	0.0	22.6		0.0	0.0	0.0		0.0	15.1	0.0		0.0	11.6	0.0	
LOS by Move:	C	A	C		A	A	A		A	B	A		A	B	A	
HCM2k85thQ:	15	0	12		0	0	0		0	18	0		0	5	0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #85 Cambridge St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.971
Loss Time (sec):	5	Average Delay (sec/veh):	31.6
Optimal Cycle:	0	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:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1 0	1 0	0		0 0	1 0	1		1 0	0 0	1		0 0	0 0	0	
Volume Module:																
Base Vol:	185	235	0		0	480	245		273	0	436		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:	185	235	0		0	480	245		273	0	436		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:	185	235	0		0	480	245		273	0	436		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	185	235	0		0	480	245		273	0	436		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:	185	235	0		0	480	245		273	0	436		0	0	0	
Saturation Flow Module:																
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00		0.00	1.00	1.00		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	434	463	0		0	494	537		458	0	539		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.43	0.51	xxxx		xxxx	0.97	0.46		0.60	xxxx	0.81		xxxx	xxxx	xxxx	
Crit Moves:		****				****					****					
Delay/Veh:	16.6	17.7	0.0		0.0	59.7	14.5		21.1	0.0	30.8		0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	16.6	17.7	0.0		0.0	59.7	14.5		21.1	0.0	30.8		0.0	0.0	0.0	
LOS by Move:	C	C	*		*	F	B		C	*	D		*	*	*	
ApproachDel:	17.2				44.4				27.1				xxxxxx			
Delay Adj:	1.00				1.00				1.00				xxxxx			
ApprAdjDel:	17.2				44.4				27.1				xxxxxx			
LOS by Appr:	C				E				D				*			
AllWayAvgQ:	0.7	0.9	0.0		0.0	6.8	0.8		1.4	0.0	3.2		0.0	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #86 Cambridge St and Fairhaven 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:	Permitted			Permitted			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:	0 0	0 0	0	1 0	0 0	1	1 0	2 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	567	0	183	80	216	0	0	195	152
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	0	0	567	0	183	80	216	0	0	195	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:	0	0	0	567	0	183	80	216	0	0	195	152
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	567	0	183	80	216	0	0	195	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:	0	0	0	567	0	183	80	216	0	0	195	152
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	2.00	0.00	0.00	1.12	0.88
Final Sat.:	0	0	0	1600	0	1600	1600	3400	0	0	1898	1402
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.35	0.00	0.11	0.05	0.06	0.00	0.00	0.10	0.11
Crit Moves:				****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Mabury St and 1st Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.714
Loss Time (sec):	5	Average Delay (sec/veh):	27.4
Optimal Cycle:	40	Level Of Service:	C

Street Name:	Mabury								1st Street			
Approach:	North Bound				South Bound				East Bound			
Movement:	L	T	R		L	T	R		L	T	R	
Control:	Split Phase				Split Phase				Protected			
Rights:	Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0	
Y+R:	4.0	4.0	4.0		4.0	4.0	4.0		4.0	4.0	4.0	
Lanes:	1	0	0	1	1	0	1!	0	1	0	0	2
Volume Module:												
Base Vol:	6	0	157		248	147	554		0	1230	13	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	6	0	157		248	147	554		0	1230	13	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	6	0	157		248	147	554		0	1230	13	
Reduct Vol:	0	0	0		0	0	0		0	0	0	
Reduced Vol:	6	0	157		248	147	554		0	1230	13	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	6	0	157		248	147	554		0	1230	13	
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.95	1.00	0.85		0.90	0.90	0.90		1.00	0.91	0.91	
Lanes:	1.00	0.00	1.00		1.23	0.27	1.50		0.00	2.97	0.03	
Final Sat.:	1805	0	1615		2097	459	2575		0	5128	54	
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.10		0.12	0.32	0.22		0.00	0.24	0.24	
Crit Moves:			****			****				****		
Green/Cycle:	0.14	0.00	0.14		0.45	0.45	0.45		0.00	0.34	0.34	
Volume/Cap:	0.02	0.00	0.71		0.26	0.71	0.48		0.00	0.71	0.71	
Delay/Veh:	37.5	0.0	51.9		17.3	24.2	19.6		0.0	30.4	30.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	37.5	0.0	51.9		17.3	24.2	19.6		0.0	30.4	30.4	
LOS by Move:	D	A	D		B	C	B		A	C	C	
HCM2k85thQ:	0	0	10		6	22	12		0	20	20	

Approach:	West Bound											
Movement:	L	T	R									
Control:	Protected											
Rights:	Include											
Min. Green:	0	0	0									
Y+R:	4.0	4.0	4.0									
Lanes:	1	0	2	1	0							
Volume Module:												
Base Vol:	38	579	0									
Growth Adj:	1.00	1.00	1.00									
Initial Bse:	38	579	0									
User Adj:	1.00	1.00	1.00									
PHF Adj:	1.00	1.00	1.00									
PHF Volume:	38	579	0									
Reduct Vol:	0	0	0									
Reduced Vol:	38	579	0									
PCE Adj:	1.00	1.00	1.00									
MLF Adj:	1.00	1.00	1.00									
FinalVolume:	38	579	0									
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900									
Adjustment:	0.95	0.91	0.91									
Lanes:	1.00	3.00	0.00									
Final Sat.:	1805	5187	0									
Capacity Analysis Module:												
Vol/Sat:	0.02	0.11	0.00									
Crit Moves:		****										
Green/Cycle:	0.03	0.37	0.00									
Volume/Cap:	0.71	0.31	0.00									
Delay/Veh:	84.9	22.8	0.0									
User DelAdj:	1.00	1.00	1.00									
AdjDel/Veh:	84.9	22.8	0.0									
LOS by Move:	F	C	A									
HCM2k85thQ:	4	7	0									

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #88 Tustin St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.446
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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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 1	0	0 1
Volume Module:												
Base Vol:	7	301	87	67	1307	4	9	11	35	307	1	47
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:	7	301	87	67	1307	4	9	11	35	307	1	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	7	301	87	67	1307	4	9	11	35	307	1	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	301	87	67	1307	4	9	11	35	307	1	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	7	301	87	67	1307	4	9	11	35	307	1	47
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.33	0.67	1.00	2.99	0.01	1.00	1.00	1.00	1.99	0.01	1.00
Final Sat.:	1600	3924	1076	1600	4985	15	1600	1700	1600	3190	10	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.08	0.08	0.04	0.26	0.27	0.01	0.01	0.02	0.10	0.10	0.03
OvlAdjV/S:												0.00
Crit Moves:	****					****			****		****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Tustin St and SR-22 WB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.635
Loss Time (sec):	5	Average Delay (sec/veh):	12.2
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			Permitted			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	0 0	0	0 2	1 0	0	0 0	0 0	0	0 0	0 0
Volume Module:												
Base Vol:	614	571	0	0	1171	699	0	0	0	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:	614	571	0	0	1171	699	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
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	614	571	0	0	1171	699	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	614	571	0	0	1171	699	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
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	614	571	0	0	1171	699	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	3502	3610	0	0	3264	1632	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.18	0.16	0.00	0.00	0.36	0.43	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	****					****						
Green/Cycle:	0.28	0.95	0.00	0.00	0.67	0.67	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.64	0.17	0.00	0.00	0.53	0.64	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	33.2	0.2	0.0	0.0	8.4	9.8	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	33.2	0.2	0.0	0.0	8.4	9.8	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	C	A	A	A	A	A	A	A	A	A	A	A
HCM2k85thQ:	14	1	0	0	15	21	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #90 Tustin St and SR-22 EB Off-Ramp / Seba Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.723
Loss Time (sec):	5	Average Delay (sec/veh):	25.0
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:	Permitted			Permitted			Split Phase			Split Phase		
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 2	1 0	1	0 3	0 0	1	0 1!	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	0	953	5	17	1049	0	275	27	1182	6	0	43
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	953	5	17	1049	0	275	27	1182	6	0	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	953	5	17	1049	0	275	27	1182	6	0	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	953	5	17	1049	0	275	27	1182	6	0	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	953	5	17	1049	0	275	27	1182	6	0	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.14	0.91	1.00	0.87	0.87	0.87	0.88	1.00	0.88
Lanes:	0.00	2.98	0.02	1.00	3.00	0.00	1.18	0.04	1.78	0.12	0.00	0.88
Final Sat.:	0	5155	27	272	5187	0	1961	59	2956	204	0	1460
Capacity Analysis Module:												
Vol/Sat:	0.00	0.18	0.18	0.06	0.20	0.00	0.14	0.46	0.40	0.03	0.00	0.03
Crit Moves:					****			****		****		
Green/Cycle:	0.00	0.28	0.28	0.28	0.28	0.00	0.63	0.63	0.63	0.04	0.00	0.04
Volume/Cap:	0.00	0.66	0.66	0.22	0.72	0.00	0.22	0.72	0.63	0.72	0.00	0.72
Delay/Veh:	0.0	33.0	33.0	29.2	34.4	0.0	8.0	13.9	12.0	79.1	0.0	79.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	33.0	33.0	29.2	34.4	0.0	8.0	13.9	12.0	79.1	0.0	79.1
LOS by Move:	A	C	C	C	C	A	A	B	B	E	A	E
HCM2k85thQ:	0	16	16	1	18	0	5	25	19	5	0	5

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #91 Tustin Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.899
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	86	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			Ovl		
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	1 0	1	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	74	428	75	218	1879	37	68	258	444	239	265	346
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:	74	428	75	218	1879	37	68	258	444	239	265	346
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	428	75	218	1879	37	68	258	444	239	265	346
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	74	428	75	218	1879	37	68	258	444	239	265	346
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	74	428	75	218	1879	37	68	258	444	239	265	346
OvlAdjVol:												237
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.55	0.45	2.00	2.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	3200	4284	716	3200	4907	93	1600	1700	1600	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.10	0.10	0.07	0.38	0.40	0.04	0.15	0.28	0.15	0.16	0.22
OvlAdjV/S:												0.15
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #92 Tustin Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.823
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	
Y+R:	4.0	4.0	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 1	1	0	1	0 1	1	0
Volume Module:																
Base Vol:	78	422	79		108	2208	70		808	2040	1488		236	488	244	
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	422	79		108	2208	70		808	2040	1488		236	488	244	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	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	422	79		108	2208	70		808	2040	1488		236	488	244	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	78	422	79		108	2208	70		808	2040	1488		236	488	244	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	78	422	79		108	2208	70		808	2040	1488		236	488	244	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.04	1.00		1.00	1.05	1.00		1.00	1.05	1.00	
Lanes:	1.00	2.53	0.47		2.00	2.91	0.09		1.00	1.16	0.84		1.00	1.33	0.67	
Final Sat.:	1600	4243	757		3200	4853	147		1600	1950	1350		1600	2233	1067	
Capacity Analysis Module:																
Vol/Sat:	0.05	0.10	0.10		0.03	0.46	0.47		0.51	1.05	1.10		0.15	0.22	0.23	
Crit Moves:	****						****				****	****				

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #93 Tustin Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.820
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	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:	Ovl			Include			Include			Ovl		
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 0	1	2 0	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	111	198	236	650	1876	21	182	717	122	638	1007	246
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	198	236	650	1876	21	182	717	122	638	1007	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	198	236	650	1876	21	182	717	122	638	1007	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	198	236	650	1876	21	182	717	122	638	1007	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	198	236	650	1876	21	182	717	122	638	1007	246
OvlAdjVol:			0									0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.00	1.00	2.00	2.97	0.03	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	3400	1600	3200	4947	53	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.06	0.15	0.20	0.38	0.40	0.06	0.14	0.08	0.20	0.20	0.15
OvlAdjV/S:			0.00									0.00
Crit Moves:	****					****		****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #94 Tustin Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.830
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	59	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:	1 0	2	1 0	2 0	2	0 1	1 0	2	1 1	1 0	2	1 0
Volume Module:												
Base Vol:	80	408	365	601	765	237	126	748	31	125	704	457
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	408	365	601	765	237	126	748	31	125	704	457
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	408	365	601	765	237	126	748	31	125	704	457
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	80	408	365	601	765	237	126	748	31	125	704	457
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	80	408	365	601	765	237	126	748	31	125	704	457
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3400	1600	3200	3400	1600	1600	5100	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.12	0.23	0.19	0.23	0.15	0.08	0.15	0.02	0.08	0.21	0.29
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 SR-55 SB Ramps / Auto Mall Dr and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.672
Loss Time (sec):	5	Average Delay (sec/veh):	25.2
Optimal Cycle:	36	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:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				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	1 0	0	2	1	0 1	0	1	1	0 3	0	1	2	0 2	1	0
Volume Module:																
Base Vol:	456	68	540		50	30	8		36	1426	527		510	1202	157	
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:	456	68	540		50	30	8		36	1426	527		510	1202	157	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Volume:	456	68	540		50	30	8		36	1426	0		510	1202	157	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	456	68	540		50	30	8		36	1426	0		510	1202	157	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
FinalVolume:	456	68	540		50	30	8		36	1426	0		510	1202	157	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.96	0.96	0.75		0.95	1.00	0.85		0.95	0.91	1.00		0.92	0.89	0.89	
Lanes:	1.74	0.26	2.00		1.00	1.00	1.00		1.00	3.00	1.00		2.00	2.65	0.35	
Final Sat.:	3168	472	2842		1805	1900	1615		1805	5187	1900		3502	4510	589	
Capacity Analysis Module:																
Vol/Sat:	0.14	0.14	0.19		0.03	0.02	0.00		0.02	0.27	0.00		0.15	0.27	0.27	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.28	0.28	0.28		0.04	0.04	0.04		0.04	0.41	0.00		0.22	0.58	0.58	
Volume/Cap:	0.51	0.51	0.67		0.67	0.38	0.12		0.46	0.67	0.00		0.67	0.46	0.46	
Delay/Veh:	30.5	30.5	34.0		68.7	49.8	47.0		50.8	24.9	0.0		38.3	12.0	12.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	30.5	30.5	34.0		68.7	49.8	47.0		50.8	24.9	0.0		38.3	12.0	12.0	
LOS by Move:	C	C	C		E	D	D		D	C	A		D	B	B	
HCM2k85thQ:	11	11	14		4	2	1		3	20	0		13	13	13	

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Note: Queue reported is the number of cars per lane.
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Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.673
Loss Time (sec):	5	Average Delay (sec/veh):	25.4
Optimal Cycle:	36	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			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	1 0 3		0 1	2 0 1		1 0	1 0 1		1 0
Volume Module:												
Base Vol:	392	104	66	21	512	750	269	163	155	8	223	4
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:	392	104	66	21	512	750	269	163	155	8	223	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	392	104	66	21	512	750	269	163	155	8	223	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	392	104	66	21	512	750	269	163	155	8	223	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	392	104	66	21	512	750	269	163	155	8	223	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.86	0.86	0.95	0.91	0.85	0.92	0.88	0.88	0.95	0.95	0.95
Lanes:	2.00	2.00	1.00	1.00	3.00	1.00	2.00	1.03	0.97	1.00	1.96	0.04
Final Sat.:	3502	3257	1629	1805	5187	1615	3502	1715	1631	1805	3536	63
Capacity Analysis Module:												
Vol/Sat:	0.11	0.03	0.04	0.01	0.10	0.46	0.08	0.10	0.10	0.00	0.06	0.06
Crit Moves:	****					****	****				****	
Green/Cycle:	0.17	0.58	0.58	0.17	0.58	0.69	0.11	0.20	0.20	0.01	0.09	0.09
Volume/Cap:	0.67	0.06	0.07	0.07	0.17	0.67	0.67	0.48	0.48	0.48	0.67	0.67
Delay/Veh:	42.2	9.3	9.4	35.3	10.0	10.6	47.0	36.0	36.0	69.3	49.1	49.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.2	9.3	9.4	35.3	10.0	10.6	47.0	36.0	36.0	69.3	49.1	49.1
LOS by Move:	D	A	A	D	B	B	D	D	D	E	D	D
HCM2k85thQ:	11	1	2	1	4	21	8	8	8	1	8	8

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #97 Red Hill Ave and Edinger 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:	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 3	0 1	2	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	101	374	106	195	828	388	397	1276	271	255	1234	173
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:	101	374	106	195	828	388	397	1276	271	255	1234	173
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	101	374	106	195	828	388	397	1276	271	255	1234	173
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	101	374	106	195	828	388	397	1276	271	255	1234	173
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	101	374	106	195	828	388	397	1276	271	255	1234	173
OvlAdjVol:						189			221			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.07	0.07	0.06	0.16	0.24	0.12	0.25	0.17	0.08	0.24	0.11
OvlAdjV/S:						0.12			0.14			
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #98 Red Hill Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.510
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	46	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			Ovl		
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 2	1 0	1	0 2	1 0	2	0 3	0 1
Volume Module:												
Base Vol:	68	414	56	20	935	188	273	464	342	120	427	76
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:	68	414	56	20	935	188	273	464	342	120	427	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	414	56	20	935	188	273	464	342	120	427	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	414	56	20	935	188	273	464	342	120	427	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	414	56	20	935	188	273	464	342	120	427	76
OvlAdjVol:												66
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.52	0.48	2.00	2.50	0.50	1.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5937	763	3200	4196	804	1600	3400	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.07	0.07	0.01	0.22	0.23	0.17	0.14	0.21	0.04	0.08	0.05
OvlAdjV/S:												0.04
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #99 Red Hill Ave and Dyer Rd / barranca Pkwy

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
Y+R:	4.0	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	4 0	1	2 0	4 0	1	2 0	3 1	0	2 0	4 0	1
Volume Module:												
Base Vol:	152	379	125	163	719	94	124	748	296	511	571	111
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:	152	379	125	163	719	94	124	748	296	511	571	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:	152	379	125	163	719	94	124	748	296	511	571	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	152	379	125	163	719	94	124	748	296	511	571	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:	152	379	125	163	719	94	124	748	296	511	571	111
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	6800	1600	3200	6800	1600	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.05	0.06	0.08	0.05	0.11	0.06	0.04	0.15	0.19	0.16	0.08	0.07
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #100 Red Hill Ave and Alton Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.855
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	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:	1 0	3 0	1	1 0	3 0	1	1 0	2 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	225	663	415	212	962	154	158	490	490	342	290	163
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:	225	663	415	212	962	154	158	490	490	342	290	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:	225	663	415	212	962	154	158	490	490	342	290	163
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	225	663	415	212	962	154	158	490	490	342	290	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:	225	663	415	212	962	154	158	490	490	342	290	163
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	3400	1600	3200	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.14	0.13	0.26	0.13	0.19	0.10	0.10	0.14	0.31	0.11	0.17	0.10
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Red Hill Ave and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.205
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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 3	0 1		2 0 3	0 1		1 0 3	0 1	
Volume Module:												
Base Vol:	83	742	13	186	481	441	1153	596	98	32	308	789
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:	83	742	13	186	481	441	1153	596	98	32	308	789
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	742	13	186	481	441	1153	596	98	32	308	789
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	742	13	186	481	441	1153	596	98	32	308	789
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	83	742	13	186	481	441	1153	596	98	32	308	789
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.95	0.05	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4917	83	3200	5100	1600	3200	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.16	0.06	0.09	0.28	0.36	0.12	0.06	0.02	0.06	0.49
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Red Hill Ave and Main St

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			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	0 1	2	0 2	0 1	2	0 2	1 0	2	0 2	1 0
Volume Module:												
Base Vol:	201	691	449	56	261	90	139	1309	254	154	309	73
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:	201	691	449	56	261	90	139	1309	254	154	309	73
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	201	691	449	56	261	90	139	1309	254	154	309	73
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	691	449	56	261	90	139	1309	254	154	309	73
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	201	691	449	56	261	90	139	1309	254	154	309	73
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.51	0.49	2.00	2.43	0.57
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	4220	780	3200	4083	917
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.28	0.02	0.08	0.06	0.04	0.31	0.33	0.05	0.08	0.08
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 I-5 SB Ramps and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.559
Loss Time (sec):	5	Average Delay (sec/veh):	17.4
Optimal Cycle:	28	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			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:	0	0	0	2	0	0	2	0	3	0	2	1
Volume Module:												
Base Vol:	0	0	0	382	0	38	332	569	0	0	1267	370
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	0	0	382	0	38	332	569	0	0	1267	370
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	382	0	38	332	569	0	0	1267	370
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	382	0	38	332	569	0	0	1267	370
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	382	0	38	332	569	0	0	1267	370
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.88	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	2.32	0.68
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	3878	1133
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.02	0.09	0.11	0.00	0.00	0.33	0.33
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.20	0.00	0.37	0.17	0.75	0.00	0.00	0.58	0.58
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	0.06	0.56	0.15	0.00	0.00	0.56	0.56
Delay/Veh:	0.0	0.0	0.0	37.4	0.0	20.7	39.3	3.4	0.0	0.0	13.0	13.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AdjDel/Veh:	0.0	0.0	0.0	37.4	0.0	20.7	39.3	3.4	0.0	0.0	13.0	13.0
LOS by Move:	A	A	A	D	A	C	D	A	A	A	B	B
HCM2k85thQ:	0	0	0	9	0	1	9	3	0	0	17	17

****

Note: Queue reported is the number of cars per lane.

****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Tustin Ranch Rd and Warner Ave

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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
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	0 0	2 0	0	0 1	2 0	3	0 0	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	141	0	18	27	357	0	0	2130	490
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	0	0	141	0	18	27	357	0	0	2130	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	0	0	141	0	18	27	357	0	0	2130	490
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	141	0	18	27	357	0	0	2130	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	0	0	141	0	18	27	357	0	0	2130	490
OvlAdjVol:												420
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3200	0	1600	3200	5100	0	0	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.04	0.00	0.01	0.01	0.07	0.00	0.00	0.42	0.31
OvlAdjV/S:												0.26
Crit Moves:				****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Von Karman Ave and Barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.929
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	108	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			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 1	1 0		2 0 2			2 0 3	0 1		2 0 4	0 1	
Volume Module:												
Base Vol:	401	533	319	104	1021	446	219	823	275	902	1482	46
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:	401	533	319	104	1021	446	219	823	275	902	1482	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:	401	533	319	104	1021	446	219	823	275	902	1482	46
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	401	533	319	104	1021	446	219	823	275	902	1482	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:	401	533	319	104	1021	446	219	823	275	902	1482	46
OvlAdjVol:						227						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	1.25	0.75	2.00	2.00	2.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	2102	1198	3200	3400	3200	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.13	0.25	0.27	0.03	0.30	0.14	0.07	0.16	0.17	0.28	0.22	0.03
OvlAdjV/S:						0.07						
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Scenario Report

Scenario:	2045 WP AM Peak Hour
Command:	Default Command
Volume:	2045 AM
Geometry:	SACE
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Santa Ana Circulation Element

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
# 1 Euclid St and 1st St	C	xxxxx	0.789	C	xxxxx	0.789	+ 0.000 V/C
# 2 Euclid St and McFadden Ave	E	xxxxx	0.906	E	xxxxx	0.906	+ 0.000 V/C
# 3 Euclid St and Edinger Ave	F	xxxxx	1.008	F	xxxxx	1.008	+ 0.000 V/C
# 4 Newhope St and Hazard Ave	A	xxxxx	0.600	A	xxxxx	0.600	+ 0.000 V/C
# 5 Newhope St and McFadden Ave	C	xxxxx	0.728	C	xxxxx	0.728	+ 0.000 V/C
# 6 Harbor Blvd and SR-22 WB Off-R	C	28.5	0.715	C	28.5	0.715	+ 0.000 D/V
# 7 Trask Avenue and SR-22 EB On-R	B	11.0	0.389	B	11.0	0.389	+ 0.000 D/V
# 8 Harbor Blvd and Westminster Av	E	xxxxx	0.936	E	xxxxx	0.936	+ 0.000 V/C
# 9 Harbor Blvd and 1st St	C	xxxxx	0.749	C	xxxxx	0.749	+ 0.000 V/C
# 10 Harbor Blvd and McFadden Ave	C	xxxxx	0.729	C	xxxxx	0.729	+ 0.000 V/C
# 11 Harbor Blvd and Edinger Ave	D	xxxxx	0.857	D	xxxxx	0.857	+ 0.000 V/C
# 12 Harbor Blvd and Warner Ave	C	xxxxx	0.800	C	xxxxx	0.800	+ 0.000 V/C
# 13 Harbor Blvd and Segerstrom Ave	F	xxxxx	1.007	F	xxxxx	1.007	+ 0.000 V/C
# 14 MacArthur Blvd and Hyland Ave	B	xxxxx	0.615	B	xxxxx	0.615	+ 0.000 V/C
# 15 MacArthur Blvd and Harbor Blvd	C	xxxxx	0.747	C	xxxxx	0.747	+ 0.000 V/C
# 16 Harbor Blvd and Sunflower Ave	C	xxxxx	0.705	C	xxxxx	0.705	+ 0.000 V/C
# 17 Harbor Blvd and I-405 NB Off-R	B	17.9	0.573	B	17.9	0.573	+ 0.000 D/V
# 18 Harbor Blvd and I-405 SB Off-R	B	15.0	0.618	B	15.0	0.618	+ 0.000 D/V
# 19 Fairview St and Civic Center D	B	xxxxx	0.676	B	xxxxx	0.676	+ 0.000 V/C
# 20 Fairview St and 1st St	D	xxxxx	0.887	D	xxxxx	0.887	+ 0.000 V/C
# 21 Fairview St and McFadden Ave	D	xxxxx	0.800	D	xxxxx	0.800	+ 0.000 V/C
# 22 Fairview St and Edinger Ave	D	xxxxx	0.882	D	xxxxx	0.882	+ 0.000 V/C
# 23 Fairview St and Warner Ave	D	xxxxx	0.847	D	xxxxx	0.847	+ 0.000 V/C
# 24 Fairview St and MacArthur Blvd	B	xxxxx	0.690	B	xxxxx	0.690	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 25 Fairview Rd and Sunflower Ave	B	xxxxx	0.687	B	xxxxx	0.687	+ 0.000 V/C
# 26 Greenville St and Edinger Ave	C	xxxxx	0.742	C	xxxxx	0.742	+ 0.000 V/C
# 27 Greenville St and Segerstrom A	D	xxxxx	0.878	D	xxxxx	0.878	+ 0.000 V/C
# 28 Raitt St and McFadden Ave	C	xxxxx	0.704	C	xxxxx	0.704	+ 0.000 V/C
# 29 Raitt St and Edinger Ave	E	xxxxx	0.926	E	xxxxx	0.926	+ 0.000 V/C
# 30 Bear St and MacArthur Blvd	C	xxxxx	0.756	C	xxxxx	0.756	+ 0.000 V/C
# 31 Bristol St and 17th St	D	xxxxx	0.853	D	xxxxx	0.853	+ 0.000 V/C
# 32 Bristol St and Civic Center Dr	E	xxxxx	0.931	E	xxxxx	0.931	+ 0.000 V/C
# 33 Bristol St and Santa Ana Blvd	C	xxxxx	0.721	C	xxxxx	0.721	+ 0.000 V/C
# 34 Bristol St and 1st St	E	xxxxx	0.902	E	xxxxx	0.902	+ 0.000 V/C
# 35 Bristol St and McFadden Ave	E	xxxxx	0.947	E	xxxxx	0.947	+ 0.000 V/C
# 36 Bristol St and Warner Ave	E	xxxxx	0.956	E	xxxxx	0.956	+ 0.000 V/C
# 37 Bristol St and Segerstrom Ave	D	xxxxx	0.854	D	xxxxx	0.854	+ 0.000 V/C
# 38 Bristol St and Alton Ave	A	xxxxx	0.553	A	xxxxx	0.553	+ 0.000 V/C
# 39 Bristol St and MacArthur Blvd	C	xxxxx	0.759	C	xxxxx	0.759	+ 0.000 V/C
# 40 Bristol St and Sunflower Ave	B	xxxxx	0.682	B	xxxxx	0.682	+ 0.000 V/C
# 41 Bristol St and I-405 NB Ramps	C	20.9	0.568	C	20.9	0.568	+ 0.000 D/V
# 42 Bristol St and I-405 SB Ramps	C	23.6	0.697	C	23.6	0.697	+ 0.000 D/V
# 43 Flower St and Santa Ana Blvd	A	xxxxx	0.586	A	xxxxx	0.586	+ 0.000 V/C
# 44 Flower St and 1st St	E	xxxxx	0.926	E	xxxxx	0.926	+ 0.000 V/C
# 45 Flower St and McFadden Ave	D	xxxxx	0.807	D	xxxxx	0.807	+ 0.000 V/C
# 46 Flower St and Segerstrom Ave	D	xxxxx	0.818	D	xxxxx	0.818	+ 0.000 V/C
# 47 Flower St and MacArthur Blvd	C	xxxxx	0.710	C	xxxxx	0.710	+ 0.000 V/C
# 48 Main St and La Veta Ave	A	xxxxx	0.536	A	xxxxx	0.536	+ 0.000 V/C
# 49 Main St and Mainplace Dr / Mem	A	xxxxx	0.456	A	xxxxx	0.456	+ 0.000 V/C
# 50 Main St and 17th St	D	xxxxx	0.845	D	xxxxx	0.845	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 51 Main St and Civic Center Dr	D	xxxxx	0.848	D	xxxxx	0.848	+ 0.000 V/C
# 52 Main St and Santa Ana Blvd	C	xxxxx	0.791	C	xxxxx	0.791	+ 0.000 V/C
# 53 Main St and 4th St	A	xxxxx	0.441	A	xxxxx	0.441	+ 0.000 V/C
# 54 Main St and 1st St	C	xxxxx	0.754	C	xxxxx	0.754	+ 0.000 V/C
# 55 Main St and McFadden Ave	E	xxxxx	0.916	E	xxxxx	0.916	+ 0.000 V/C
# 56 Main St and Edinger Ave	D	xxxxx	0.876	D	xxxxx	0.876	+ 0.000 V/C
# 57 Main St and MacArthur Blvd	C	xxxxx	0.721	C	xxxxx	0.721	+ 0.000 V/C
# 58 Penn Wy and 17th St	B	12.1	0.648	B	12.1	0.648	+ 0.000 D/V
# 59 I-5 NB Off Ramps/17th Street	C	31.4	0.792	C	31.4	0.792	+ 0.000 D/V
# 60 Penn Wy and I-5 SB Ramps	B	19.5	0.462	B	19.5	0.462	+ 0.000 D/V
# 61 Santiago St and Civic Center D	F	62.6	1.147	F	62.6	1.147	+ 0.000 V/C
# 62 Santiago St and Santa Ana Blvd	F	xxxxx	1.444	F	xxxxx	1.444	+ 0.000 V/C
# 63 Standard Ave and 4th St	F	xxxxx	1.340	F	xxxxx	1.340	+ 0.000 V/C
# 64 Standard Ave and 1st St	F	xxxxx	1.515	F	xxxxx	1.515	+ 0.000 V/C
# 65 Standard Ave and Mcfadden Ave	D	xxxxx	0.843	D	xxxxx	0.843	+ 0.000 V/C
# 66 Halladay St and Warner Ave	B	xxxxx	0.692	B	xxxxx	0.692	+ 0.000 V/C
# 67 Halladay St and Dyer Rd	B	xxxxx	0.668	B	xxxxx	0.668	+ 0.000 V/C
# 68 SR-55 SB Ramps and MacArthur B	C	20.2	0.623	C	20.2	0.623	+ 0.000 D/V
# 69 SR-55 NB Ramps and MacArthur B	B	19.5	0.728	B	19.5	0.728	+ 0.000 D/V
# 70 SR-55 SB Ramps and Dyer Rd	C	25.9	0.610	C	25.9	0.610	+ 0.000 D/V
# 71 Glassell St and La Veta Ave	D	xxxxx	0.826	D	xxxxx	0.826	+ 0.000 V/C
# 72 Glassell St and SR-22 WB Ramps	C	30.1	0.841	C	30.1	0.841	+ 0.000 D/V
# 73 Grand Ave / Glassell St and SR	C	29.6	0.842	C	29.6	0.842	+ 0.000 D/V
# 74 Grand Ave and Fairhaven Ave	B	xxxxx	0.617	B	xxxxx	0.617	+ 0.000 V/C
# 75 Grand Ave and Santa Clara Ave	D	xxxxx	0.876	D	xxxxx	0.876	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 76 Grand Ave and 17th St	E	xxxxx	0.956	E	xxxxx	0.956	+ 0.000 V/C
# 77 Grand Ave and I-5 NB Ramps	B	15.3	0.845	B	15.3	0.845	+ 0.000 D/V
# 78 Grand Ave and Santa Ana Blvd	C	26.3	0.881	C	26.3	0.881	+ 0.000 D/V
# 79 Grand Ave and 1st St	D	xxxxx	0.827	D	xxxxx	0.827	+ 0.000 V/C
# 80 Grand Ave and Chestnut Ave	E	xxxxx	0.935	E	xxxxx	0.935	+ 0.000 V/C
# 81 Grand Ave and McFadden Ave	F	xxxxx	1.011	F	xxxxx	1.011	+ 0.000 V/C
# 82 Grand Ave and Edinger Ave	D	xxxxx	0.897	D	xxxxx	0.897	+ 0.000 V/C
# 83 Grand Ave and Warner Ave	B	xxxxx	0.664	B	xxxxx	0.664	+ 0.000 V/C
# 84 SR-55 NB Ramps and Dyer Rd	B	17.3	0.565	B	17.3	0.565	+ 0.000 D/V
# 85 Cambridge St and La Veta Ave	C	23.4	0.900	C	23.4	0.900	+ 0.000 V/C
# 86 Cambridge St and Fairhaven Ave	B	xxxxx	0.624	B	xxxxx	0.624	+ 0.000 V/C
# 87 Mabury St and 1st Street	C	27.4	0.755	C	27.4	0.755	+ 0.000 D/V
# 88 Tustin St and La Veta Ave	A	xxxxx	0.362	A	xxxxx	0.362	+ 0.000 V/C
# 89 Tustin St and SR-22 WB On-Ramp	B	13.2	0.575	B	13.2	0.575	+ 0.000 D/V
# 90 Tustin St and SR-22 EB Off-Ram	C	23.8	0.718	C	23.8	0.718	+ 0.000 D/V
# 91 Tustin Ave and Fairhaven Ave	E	xxxxx	0.953	E	xxxxx	0.953	+ 0.000 V/C
# 92 Tustin Ave and Santa Clara Ave	F	xxxxx	2.225	F	xxxxx	2.225	+ 0.000 V/C
# 93 Tustin Ave and 17th St	C	xxxxx	0.790	C	xxxxx	0.790	+ 0.000 V/C
# 94 Tustin Ave and 4th St	C	xxxxx	0.791	C	xxxxx	0.791	+ 0.000 V/C
# 95 SR-55 SB Ramps / Auto Mall Dr	C	25.1	0.653	C	25.1	0.653	+ 0.000 D/V
# 96 SR-55 NB Ramps / Del Amo Ave a	C	25.6	0.665	C	25.6	0.665	+ 0.000 D/V
# 97 Red Hill Ave and Edinger Ave	B	xxxxx	0.619	B	xxxxx	0.619	+ 0.000 V/C
# 98 Red Hill Ave and Warner Ave	A	xxxxx	0.530	A	xxxxx	0.530	+ 0.000 V/C
# 99 Red Hill Ave and Dyer Rd / bar	A	xxxxx	0.577	A	xxxxx	0.577	+ 0.000 V/C
#100 Red Hill Ave and Alton Pkwy	E	xxxxx	0.930	E	xxxxx	0.930	+ 0.000 V/C
#101 Red Hill Ave and MacArthur Blv	F	xxxxx	1.279	F	xxxxx	1.279	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#102 Red Hill Ave and Main St	C	xxxxx	0.733	C	xxxxx	0.733	+ 0.000 V/C
#103 I-5 SB Ramps and Santa Ana Blv	B	17.8	0.480	B	17.8	0.480	+ 0.000 D/V
#104 Tustin Ranch Rd and Warner Ave	A	xxxxx	0.530	A	xxxxx	0.530	+ 0.000 V/C
#105 Von Karman Ave and Barranca Pk	E	xxxxx	0.930	E	xxxxx	0.930	+ 0.000 V/C

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Euclid St and 1st St

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			WideBypass			WideBypass		
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 2	1	0	1 0 2	1	0
Volume Module:												
Base Vol:	100	845	145	194	1725	97	194	721	136	190	606	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:	100	845	145	194	1725	97	194	721	136	190	606	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:	100	845	145	194	1725	97	194	721	136	190	606	194
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	100	845	145	194	1725	97	194	721	136	190	606	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:	100	845	145	194	1725	97	194	721	136	190	606	194
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	2.56	0.44	1.00	2.84	0.16	1.00	2.52	0.48	1.00	2.27	0.73
Final Sat.:	1600	4297	703	1600	4744	256	1600	4238	762	1600	3836	1164
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.21	0.12	0.36	0.38	0.12	0.17	0.18	0.12	0.16	0.17
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Euclid St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.906
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	90	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			Prot+Permit			Prot+Permit		
Rights:	WideBypass			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:	156	1185	141	146	2031	168	227	463	287	106	234	89
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:	156	1185	141	146	2031	168	227	463	287	106	234	89
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1185	141	146	2031	168	227	463	287	106	234	89
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	156	1185	141	146	2031	168	227	463	287	106	234	89
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	156	1185	141	146	2031	168	227	463	287	106	234	89
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	2.68	0.32	1.00	2.77	0.23	1.00	1.23	0.77	1.00	1.45	0.55
Final Sat.:	1600	4490	510	1600	4633	367	1600	2075	1225	1600	2418	882
Capacity Analysis Module:												
Vol/Sat:	0.10	0.26	0.28	0.09	0.44	0.46	0.14	0.22	0.23	0.07	0.10	0.10
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Euclid St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.008
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	127	801	68	180	2613	240	136	595	364	133	812	148
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:	127	801	68	180	2613	240	136	595	364	133	812	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	801	68	180	2613	240	136	595	364	133	812	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	801	68	180	2613	240	136	595	364	133	812	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	127	801	68	180	2613	240	136	595	364	133	812	148
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.77	0.23	2.00	2.75	0.25	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3200	4624	376	3200	4596	404	1600	3400	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.17	0.18	0.06	0.57	0.59	0.09	0.17	0.23	0.08	0.24	0.09
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Newhope St and Hazard Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.600
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	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	94	708	101	86	1262	116	17	44	33	17	57	23
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:	94	708	101	86	1262	116	17	44	33	17	57	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	708	101	86	1262	116	17	44	33	17	57	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	94	708	101	86	1262	116	17	44	33	17	57	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	94	708	101	86	1262	116	17	44	33	17	57	23
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.75	0.25	1.00	1.83	0.17	1.00	0.57	0.43	1.00	0.71	0.29
Final Sat.:	1600	2900	400	1600	3031	269	1600	914	686	1600	1140	460
Capacity Analysis Module:												
Vol/Sat:	0.06	0.24	0.25	0.05	0.42	0.43	0.01	0.05	0.05	0.01	0.05	0.05
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Newhope St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.728
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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	77	342	120	116	1153	107	106	386	125	122	311	69
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:	77	342	120	116	1153	107	106	386	125	122	311	69
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	77	342	120	116	1153	107	106	386	125	122	311	69
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	77	342	120	116	1153	107	106	386	125	122	311	69
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	77	342	120	116	1153	107	106	386	125	122	311	69
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.48	0.52	1.00	1.83	0.17	1.00	1.51	0.49	1.00	1.64	0.36
Final Sat.:	1600	2469	831	1600	3028	272	1600	2517	783	1600	2719	581
Capacity Analysis Module:												
Vol/Sat:	0.05	0.14	0.14	0.07	0.38	0.39	0.07	0.15	0.16	0.08	0.11	0.12
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.715
Loss Time (sec):	5	Average Delay (sec/veh):	28.5
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			Split Phase			Split Phase		
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	0	0 0	2	1 0	0 0	1! 0	0	1 1	0 0	1
Volume Module:												
Base Vol:	83	1508	0	0	1354	18	81	0	133	836	44	117
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:	83	1508	0	0	1354	18	81	0	133	836	44	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:	83	1508	0	0	1354	18	81	0	133	836	44	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	1508	0	0	1354	18	81	0	133	836	44	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:	83	1508	0	0	1354	18	81	0	133	836	44	117
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.90	1.00	0.90	0.96	0.96	0.85
Lanes:	1.00	3.00	0.00	0.00	2.96	0.04	0.38	0.00	0.62	1.90	0.10	1.00
Final Sat.:	1805	5187	0	0	5109	68	646	0	1061	3448	181	1615
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.00	0.00	0.27	0.27	0.13	0.00	0.13	0.24	0.24	0.07
Crit Moves:	****				****		****				****	
Green/Cycle:	0.06	0.44	0.00	0.00	0.37	0.37	0.18	0.00	0.18	0.34	0.34	0.34
Volume/Cap:	0.71	0.67	0.00	0.00	0.71	0.71	0.71	0.00	0.71	0.71	0.71	0.21
Delay/Veh:	64.8	23.3	0.0	0.0	28.2	28.2	46.8	0.0	46.8	30.8	30.8	23.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	64.8	23.3	0.0	0.0	28.2	28.2	46.8	0.0	46.8	30.8	30.8	23.7
LOS by Move:	E	C	A	A	C	C	D	A	D	C	C	C
HCM2k85thQ:	6	21	0	0	21	21	12	0	12	19	19	4

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Trask Avenue and SR-22 EB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.389
Loss Time (sec):	5	Average Delay (sec/veh):	11.0
Optimal Cycle:	21	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:	0 0	0 0	0	0 0	0 0	0	2 0	1 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	558	699	0	0	624	117
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	0	0	0	0	0	558	699	0	0	624	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:	0	0	0	0	0	0	558	699	0	0	624	117
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	558	699	0	0	624	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:	0	0	0	0	0	0	558	699	0	0	624	117
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	0.93	0.93
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	0.00	1.68	0.32
Final Sat.:	0	0	0	0	0	0	3502	1900	0	0	2967	556
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.16	0.37	0.00	0.00	0.21	0.21
Crit Moves:							****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.41	0.95	0.00	0.00	0.54	0.54
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.39	0.00	0.00	0.39	0.39
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	20.9	0.3	0.0	0.0	13.5	13.5
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	20.9	0.3	0.0	0.0	13.5	13.5
LOS by Move:	A	A	A	A	A	A	C	A	A	A	B	B
HCM2k85thQ:	0	0	0	0	0	0	10	3	0	0	11	11

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Harbor Blvd and Westminster Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.936
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	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:	WideBypass			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	1 0	3 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	159	1045	224	251	1970	113	173	910	32	406	1100	299
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:	159	1045	224	251	1970	113	173	910	32	406	1100	299
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1045	224	251	1970	113	173	910	32	406	1100	299
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	159	1045	224	251	1970	113	173	910	32	406	1100	299
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	159	1045	224	251	1970	113	173	910	32	406	1100	299
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.90	0.10	1.00	3.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	4837	163	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.20	0.14	0.16	0.39	0.07	0.11	0.19	0.20	0.25	0.22	0.19
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #9 Harbor Blvd and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.749
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
Y+R:	4.0	4.0	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	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	102	816	176	223	1876	122	118	788	153	229	580	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:	102	816	176	223	1876	122	118	788	153	229	580	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:	102	816	176	223	1876	122	118	788	153	229	580	135
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	816	176	223	1876	122	118	788	153	229	580	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:	102	816	176	223	1876	122	118	788	153	229	580	135
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	2.51	0.49	2.00	2.43	0.57
Final Sat.:	1600	5100	1600	1600	5100	1600	3200	4220	780	3200	4094	906
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.11	0.14	0.37	0.08	0.04	0.19	0.20	0.07	0.14	0.15
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #10 Harbor Blvd and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.729
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
Y+R:	4.0	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	2 1	0	1 0	1 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	101	1026	98	179	1891	63	136	353	106	85	193	55
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:	101	1026	98	179	1891	63	136	353	106	85	193	55
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	101	1026	98	179	1891	63	136	353	106	85	193	55
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	101	1026	98	179	1891	63	136	353	106	85	193	55
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	101	1026	98	179	1891	63	136	353	106	85	193	55
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.90	0.10	1.00	1.54	0.46	1.00	0.78	0.22
Final Sat.:	3200	5100	1600	3200	4845	155	1600	2561	739	1600	1245	355
Capacity Analysis Module:												
Vol/Sat:	0.03	0.20	0.06	0.06	0.39	0.41	0.09	0.14	0.14	0.05	0.16	0.15
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #11 Harbor Blvd and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.857
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	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 0	1	2 0	3 0	1	2 0	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	95	713	135	212	2441	71	123	743	373	211	469	195
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:	95	713	135	212	2441	71	123	743	373	211	469	195
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	713	135	212	2441	71	123	743	373	211	469	195
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	713	135	212	2441	71	123	743	373	211	469	195
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	713	135	212	2441	71	123	743	373	211	469	195
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	3400	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.14	0.08	0.07	0.48	0.04	0.04	0.22	0.23	0.07	0.09	0.12
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Harbor Blvd and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.800
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	2 1	0	2 0	3 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	106	647	164	451	2034	122	100	1422	374	125	654	111
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	647	164	451	2034	122	100	1422	374	125	654	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:	106	647	164	451	2034	122	100	1422	374	125	654	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	106	647	164	451	2034	122	100	1422	374	125	654	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:	106	647	164	451	2034	122	100	1422	374	125	654	111
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.39	0.61	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4029	971	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.17	0.14	0.40	0.08	0.03	0.28	0.23	0.04	0.13	0.07
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Harbor Blvd and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.007
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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:	2 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	2	0 1
Volume Module:												
Base Vol:	107	759	48	173	2324	87	90	753	303	146	453	103
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:	107	759	48	173	2324	87	90	753	303	146	453	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	759	48	173	2324	87	90	753	303	146	453	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	759	48	173	2324	87	90	753	303	146	453	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	759	48	173	2324	87	90	753	303	146	453	103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.82	0.18	1.00	2.89	0.11	1.00	1.43	0.57	1.00	2.00	1.00
Final Sat.:	3200	4714	286	1600	4827	173	1600	2382	918	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.17	0.11	0.48	0.50	0.06	0.32	0.33	0.09	0.13	0.06
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #14 MacArthur Blvd and Hyland Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.615
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			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:	2 0	0 1	0	1 0	1 0	1	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	86	4	24	8	2	19	7	1915	760	82	626	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:	86	4	24	8	2	19	7	1915	760	82	626	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:	86	4	24	8	2	19	7	1915	760	82	626	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	4	24	8	2	19	7	1915	760	82	626	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:	86	4	24	8	2	19	7	1915	760	82	626	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	0.14	0.86	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	229	1371	1600	1700	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.02	0.02	0.01	0.00	0.01	0.00	0.38	0.48	0.05	0.12	0.02
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #15 MacArthur Blvd and Harbor Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.747
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
Y+R:	4.0	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	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	128	898	92	289	1662	115	133	1204	363	152	506	151
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	898	92	289	1662	115	133	1204	363	152	506	151
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	898	92	289	1662	115	133	1204	363	152	506	151
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	128	898	92	289	1662	115	133	1204	363	152	506	151
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	128	898	92	289	1662	115	133	1204	363	152	506	151
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.18	0.06	0.09	0.33	0.07	0.08	0.24	0.23	0.10	0.10	0.09
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Harbor Blvd and Sunflower 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			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	1 0	1 1	0	1 1	0 1	0
Volume Module:												
Base Vol:	221	1128	209	242	2284	56	9	109	42	149	190	107
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:	221	1128	209	242	2284	56	9	109	42	149	190	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	221	1128	209	242	2284	56	9	109	42	149	190	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	221	1128	209	242	2284	56	9	109	42	149	190	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	221	1128	209	242	2284	56	9	109	42	149	190	107
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	1.44	0.56	1.00	1.28	0.72
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	2410	890	1604	2045	1151
Capacity Analysis Module:												
Vol/Sat:	0.07	0.22	0.13	0.08	0.45	0.04	0.01	0.05	0.05	0.09	0.09	0.09
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Harbor Blvd and I-405 NB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.573
Loss Time (sec):	5	Average Delay (sec/veh):	17.9
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			Split Phase			Split Phase		
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	4	0 0	0 0	4	0 0	0 0	0	0 0	1 0	1! 0	1
Volume Module:												
Base Vol:	0	1915	0	0	2007	0	0	0	0	399	0	702
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	1915	0	0	2007	0	0	0	0	399	0	702
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1915	0	0	2007	0	0	0	0	399	0	702
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1915	0	0	2007	0	0	0	0	399	0	702
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1915	0	0	2007	0	0	0	0	399	0	702
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	4.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	1.36	0.00	1.64
Final Sat.:	0	6916	0	0	6916	0	0	0	0	2298	0	2762
Capacity Analysis Module:												
Vol/Sat:	0.00	0.28	0.00	0.00	0.29	0.00	0.00	0.00	0.00	0.17	0.00	0.25
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.51	0.00	0.00	0.51	0.00	0.00	0.00	0.00	0.44	0.00	0.44
Volume/Cap:	0.00	0.55	0.00	0.00	0.57	0.00	0.00	0.00	0.00	0.39	0.00	0.57
Delay/Veh:	0.0	17.0	0.0	0.0	17.4	0.0	0.0	0.0	0.0	18.8	0.0	21.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.0	0.0	0.0	17.4	0.0	0.0	0.0	0.0	18.8	0.0	21.2
LOS by Move:	A	B	A	A	B	A	A	A	A	B	A	C
HCM2k85thQ:	0	17	0	0	18	0	0	0	0	9	0	15

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harbor Blvd and I-405 SB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.618
Loss Time (sec):	5	Average Delay (sec/veh):	15.0
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			Split Phase			Split Phase		
Rights:	Ignore			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 3	0 1	0	0 4	0 0	1	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1993	0	0	1278	0	475	0	529	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:	0	1993	0	0	1278	0	475	0	529	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1993	0	0	1278	0	475	0	529	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1993	0	0	1278	0	475	0	529	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1993	0	0	1278	0	475	0	529	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.90	1.00	0.90	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.47	0.00	1.53	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	2519	0	2610	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.38	0.00	0.00	0.18	0.00	0.19	0.00	0.20	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.62	0.00	0.00	0.62	0.00	0.33	0.00	0.33	0.00	0.00	0.00
Volume/Cap:	0.00	0.62	0.00	0.00	0.30	0.00	0.57	0.00	0.62	0.00	0.00	0.00
Delay/Veh:	0.0	12.0	0.0	0.0	8.8	0.0	28.3	0.0	29.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	12.0	0.0	0.0	8.8	0.0	28.3	0.0	29.0	0.0	0.0	0.0
LOS by Move:	A	B	A	A	A	A	C	A	C	A	A	A
HCM2k85thQ:	0	21	0	0	8	0	13	0	15	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #19 Fairview St and Civic Center Dr

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			Split Phase			Split Phase		
Rights:	WideBypass			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	1 0	1 1	0	0 1
Volume Module:												
Base Vol:	7	1435	465	314	1812	8	7	25	25	50	2	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:	7	1435	465	314	1812	8	7	25	25	50	2	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:	7	1435	465	314	1812	8	7	25	25	50	2	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	7	1435	465	314	1812	8	7	25	25	50	2	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:	7	1435	465	314	1812	8	7	25	25	50	2	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.27	0.73	1.00	2.99	0.01	0.24	0.88	0.88	1.92	0.08	1.00
Final Sat.:	1600	3825	1175	1600	4979	21	393	1404	1404	3077	123	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.38	0.40	0.20	0.36	0.38	0.02	0.02	0.02	0.02	0.02	0.02
Crit Moves:			****	****				****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Fairview St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.887
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	80	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:	1 0	3 0	1	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	196	1508	284	272	1579	181	170	977	151	180	809	271
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:	196	1508	284	272	1579	181	170	977	151	180	809	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	196	1508	284	272	1579	181	170	977	151	180	809	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	196	1508	284	272	1579	181	170	977	151	180	809	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	196	1508	284	272	1579	181	170	977	151	180	809	271
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	2.69	0.31	1.00	2.60	0.40	1.00	2.25	0.75
Final Sat.:	1600	5100	1600	1600	4506	494	1600	4357	643	1600	3796	1204
Capacity Analysis Module:												
Vol/Sat:	0.12	0.30	0.18	0.17	0.35	0.37	0.11	0.22	0.24	0.11	0.21	0.23
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Fairview St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.800
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
Y+R:	4.0	4.0	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	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	138	1479	198	184	2242	162	92	216	50	93	240	19
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	1479	198	184	2242	162	92	216	50	93	240	19
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1479	198	184	2242	162	92	216	50	93	240	19
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	1479	198	184	2242	162	92	216	50	93	240	19
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	138	1479	198	184	2242	162	92	216	50	93	240	19
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	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	1.00	0.81	0.19	1.00	0.93	0.07
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	1299	301	1600	1483	117
Capacity Analysis Module:												
Vol/Sat:	0.09	0.29	0.12	0.12	0.44	0.10	0.06	0.17	0.17	0.06	0.16	0.16
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Fairview St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.882
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	77	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	2 1	0	2 0	2 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	212	935	131	225	1576	133	361	1002	268	463	608	121
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:	212	935	131	225	1576	133	361	1002	268	463	608	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:	212	935	131	225	1576	133	361	1002	268	463	608	121
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	212	935	131	225	1576	133	361	1002	268	463	608	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:	212	935	131	225	1576	133	361	1002	268	463	608	121
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.63	0.37	2.00	2.77	0.23	2.00	2.37	0.63	2.00	2.50	0.50
Final Sat.:	3200	4410	590	3200	4626	374	3200	3987	1013	3200	4203	797
Capacity Analysis Module:												
Vol/Sat:	0.07	0.21	0.22	0.07	0.34	0.36	0.11	0.25	0.26	0.14	0.14	0.15
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #23 Fairview St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.847
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
Y+R:	4.0	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	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	235	1039	136	205	1628	119	69	1010	301	277	836	271
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:	235	1039	136	205	1628	119	69	1010	301	277	836	271
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	235	1039	136	205	1628	119	69	1010	301	277	836	271
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	235	1039	136	205	1628	119	69	1010	301	277	836	271
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	235	1039	136	205	1628	119	69	1010	301	277	836	271
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	2.65	0.35	2.00	2.80	0.20	2.00	2.31	0.69	2.00	2.27	0.73
Final Sat.:	3200	4444	556	3200	4673	327	3200	3898	1102	3200	3825	1175
Capacity Analysis Module:												
Vol/Sat:	0.07	0.23	0.24	0.06	0.35	0.36	0.02	0.26	0.27	0.09	0.22	0.23
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Fairview St and MacArthur Blvd

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:	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 3	0 1		2 0 3	0 1		2 0 3	0 1	
Volume Module:												
Base Vol:	280	870	100	269	1357	152	121	984	145	298	627	178
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:	280	870	100	269	1357	152	121	984	145	298	627	178
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	280	870	100	269	1357	152	121	984	145	298	627	178
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	280	870	100	269	1357	152	121	984	145	298	627	178
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	280	870	100	269	1357	152	121	984	145	298	627	178
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.69	0.31	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4505	495	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.19	0.20	0.08	0.27	0.10	0.04	0.19	0.09	0.09	0.12	0.11
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #25 Fairview Rd and Sunflower Ave

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:	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	2 1	0	2 0	1 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	182	1051	160	191	1627	104	44	286	58	357	299	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:	182	1051	160	191	1627	104	44	286	58	357	299	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:	182	1051	160	191	1627	104	44	286	58	357	299	154
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	1051	160	191	1627	104	44	286	58	357	299	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:	182	1051	160	191	1627	104	44	286	58	357	299	154
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.82	0.18	2.00	1.66	0.34	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4712	288	3200	2760	540	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.21	0.10	0.06	0.35	0.36	0.01	0.10	0.11	0.11	0.09	0.10
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Greenville St and 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:	Split Phase			Split Phase			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	0	0 1	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	140	0	188	0	0	0	0	1788	436	178	949	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:	140	0	188	0	0	0	0	1788	436	178	949	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:	140	0	188	0	0	0	0	1788	436	178	949	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	140	0	188	0	0	0	0	1788	436	178	949	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:	140	0	188	0	0	0	0	1788	436	178	949	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.41	0.59	1.00	3.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4059	941	1600	5100	0
Capacity Analysis Module:												
Vol/Sat:	0.09	0.00	0.12	0.00	0.00	0.00	0.00	0.44	0.46	0.11	0.19	0.00
Crit Moves:			****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #27 Greenville St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.878
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	76	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:	Permitted			Permitted			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	47	193	78	154	472	160	50	1127	180	210	847	97
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:	47	193	78	154	472	160	50	1127	180	210	847	97
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	193	78	154	472	160	50	1127	180	210	847	97
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	47	193	78	154	472	160	50	1127	180	210	847	97
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	47	193	78	154	472	160	50	1127	180	210	847	97
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	0.71	0.29	1.00	0.75	0.25	1.00	2.59	0.41	1.00	2.69	0.31
Final Sat.:	1600	1139	461	1600	1195	405	1600	4339	661	1600	4507	493
Capacity Analysis Module:												
Vol/Sat:	0.03	0.17	0.17	0.10	0.39	0.40	0.03	0.26	0.27	0.13	0.19	0.20
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #28 Raitt St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
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:	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	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	34	309	49	69	528	72	52	313	40	60	190	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:	34	309	49	69	528	72	52	313	40	60	190	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:	34	309	49	69	528	72	52	313	40	60	190	34
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	309	49	69	528	72	52	313	40	60	190	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:	34	309	49	69	528	72	52	313	40	60	190	34
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.86	0.14	1.00	0.88	0.12	1.00	0.89	0.11	1.00	0.85	0.15
Final Sat.:	1600	1381	219	1600	1408	192	1600	1419	181	1600	1357	243
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.22	0.04	0.38	0.38	0.03	0.22	0.22	0.04	0.14	0.14
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #29 Raitt St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.926
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	105	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			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	85	228	82	80	376	45	330	2016	290	127	992	59
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	228	82	80	376	45	330	2016	290	127	992	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:	85	228	82	80	376	45	330	2016	290	127	992	59
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	228	82	80	376	45	330	2016	290	127	992	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:	85	228	82	80	376	45	330	2016	290	127	992	59
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	0.74	0.26	1.00	0.89	0.11	1.00	2.62	0.38	1.00	2.83	0.17
Final Sat.:	1600	1177	423	1600	1429	171	1600	4396	604	1600	4731	269
Capacity Analysis Module:												
Vol/Sat:	0.05	0.19	0.19	0.05	0.26	0.26	0.21	0.46	0.48	0.08	0.21	0.22
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Bear St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.756
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:	1 0	2 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	61	210	89	192	728	289	99	1690	116	103	1735	147
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:	61	210	89	192	728	289	99	1690	116	103	1735	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:	61	210	89	192	728	289	99	1690	116	103	1735	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	61	210	89	192	728	289	99	1690	116	103	1735	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:	61	210	89	192	728	289	99	1690	116	103	1735	147
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.81	0.19	1.00	2.77	0.23
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	4692	308	1600	4625	375
Capacity Analysis Module:												
Vol/Sat:	0.04	0.06	0.06	0.12	0.21	0.18	0.06	0.36	0.38	0.06	0.38	0.39
Crit Moves:	****			****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Bristol St and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.853
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	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			Ovl		
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	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	241	1241	210	449	1845	243	341	1015	164	386	886	293
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:	241	1241	210	449	1845	243	341	1015	164	386	886	293
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	241	1241	210	449	1845	243	341	1015	164	386	886	293
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	241	1241	210	449	1845	243	341	1015	164	386	886	293
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	241	1241	210	449	1845	243	341	1015	164	386	886	293
OvlAdjVol:												69
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.58	0.42	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4332	668	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.24	0.13	0.14	0.36	0.15	0.11	0.23	0.25	0.12	0.17	0.18
OvlAdjV/S:												0.04
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Bristol St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.931
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	109	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			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	2	1 0	1 0	0	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	129	1141	101	396	1597	100	80	404	50	145	481	100
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	1141	101	396	1597	100	80	404	50	145	481	100
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1141	101	396	1597	100	80	404	50	145	481	100
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	129	1141	101	396	1597	100	80	404	50	145	481	100
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	129	1141	101	396	1597	100	80	404	50	145	481	100
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Lanes:	1.00	2.76	0.24	1.00	2.82	0.18	1.00	0.89	0.11	1.00	1.66	0.34
Final Sat.:	1600	4610	390	1600	4717	283	1600	1424	176	1600	2749	551
Capacity Analysis Module:												
Vol/Sat:	0.08	0.25	0.26	0.25	0.34	0.35	0.05	0.28	0.28	0.09	0.17	0.18
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Bristol St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.721
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	2	1 0	1 0	2	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	68	1482	206	172	1891	51	54	264	23	52	129	22
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:	68	1482	206	172	1891	51	54	264	23	52	129	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	68	1482	206	172	1891	51	54	264	23	52	129	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	68	1482	206	172	1891	51	54	264	23	52	129	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	68	1482	206	172	1891	51	54	264	23	52	129	22
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.63	0.37	1.00	2.92	0.08	1.00	0.92	0.08	1.00	0.85	0.15
Final Sat.:	1600	4414	586	1600	4874	126	1600	1472	128	1600	1367	233
Capacity Analysis Module:												
Vol/Sat:	0.04	0.34	0.35	0.11	0.39	0.40	0.03	0.18	0.18	0.03	0.09	0.09
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Bristol St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.902
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	88	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			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	1 0	2 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	208	1451	184	315	1298	183	206	1268	128	126	949	139
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:	208	1451	184	315	1298	183	206	1268	128	126	949	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:	208	1451	184	315	1298	183	206	1268	128	126	949	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	1451	184	315	1298	183	206	1268	128	126	949	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:	208	1451	184	315	1298	183	206	1268	128	126	949	139
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.72	0.28	1.00	1.74	0.26
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	4560	440	1600	2891	409
Capacity Analysis Module:												
Vol/Sat:	0.07	0.28	0.12	0.10	0.25	0.11	0.13	0.28	0.29	0.08	0.33	0.34
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Bristol St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.947
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	126	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			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	1 0	3 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	130	1159	58	228	2223	229	155	266	131	145	405	47
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:	130	1159	58	228	2223	229	155	266	131	145	405	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	130	1159	58	228	2223	229	155	266	131	145	405	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	130	1159	58	228	2223	229	155	266	131	145	405	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	130	1159	58	228	2223	229	155	266	131	145	405	47
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	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	1.00	0.67	0.33	1.00	0.90	0.10
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	1072	528	1600	1434	166
Capacity Analysis Module:												
Vol/Sat:	0.08	0.23	0.04	0.14	0.44	0.14	0.10	0.25	0.25	0.09	0.28	0.28
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Bristol St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	139	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			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	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	221	993	183	643	2178	247	172	958	238	231	1058	180
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:	221	993	183	643	2178	247	172	958	238	231	1058	180
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	221	993	183	643	2178	247	172	958	238	231	1058	180
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	221	993	183	643	2178	247	172	958	238	231	1058	180
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	221	993	183	643	2178	247	172	958	238	231	1058	180
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.53	0.47	2.00	2.69	0.31	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4253	747	3200	4511	489	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.23	0.24	0.20	0.48	0.51	0.11	0.19	0.15	0.14	0.21	0.11
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Bristol St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.854
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	66	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:	WideBypass			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	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	70	778	146	283	1011	119	306	1480	136	157	712	91
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	778	146	283	1011	119	306	1480	136	157	712	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:	70	778	146	283	1011	119	306	1480	136	157	712	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	778	146	283	1011	119	306	1480	136	157	712	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:	70	778	146	283	1011	119	306	1480	136	157	712	91
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.53	0.47	1.00	2.68	0.32	1.00	2.75	0.25	1.00	2.66	0.34
Final Sat.:	1600	4242	758	1600	4495	505	1600	4596	404	1600	4456	544
Capacity Analysis Module:												
Vol/Sat:	0.04	0.18	0.19	0.18	0.22	0.24	0.19	0.32	0.34	0.10	0.16	0.17
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Bristol St and Alton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.553
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			Permitted			Permitted		
Rights:	WideBypass			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	0 1	0
Volume Module:												
Base Vol:	10	702	53	224	1551	36	190	117	244	41	87	31
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:	10	702	53	224	1551	36	190	117	244	41	87	31
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	10	702	53	224	1551	36	190	117	244	41	87	31
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	10	702	53	224	1551	36	190	117	244	41	87	31
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	10	702	53	224	1551	36	190	117	244	41	87	31
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.79	0.21	1.00	3.00	1.00	1.00	1.00	1.00	1.00	0.74	0.26
Final Sat.:	1600	4663	337	1600	5100	1600	1600	1700	1600	1600	1180	420
Capacity Analysis Module:												
Vol/Sat:	0.01	0.15	0.16	0.14	0.30	0.02	0.12	0.07	0.15	0.03	0.07	0.07
Crit Moves:	****			****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Bristol St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.759
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
Y+R:	4.0	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	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	95	491	123	319	1389	145	211	1531	311	191	910	132
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:	95	491	123	319	1389	145	211	1531	311	191	910	132
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	491	123	319	1389	145	211	1531	311	191	910	132
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	95	491	123	319	1389	145	211	1531	311	191	910	132
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	95	491	123	319	1389	145	211	1531	311	191	910	132
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.72	0.28	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	4546	454	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.10	0.08	0.10	0.31	0.32	0.07	0.30	0.19	0.06	0.18	0.08
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Bristol St and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.682
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
Y+R:	4.0	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	1	2 0	3 0	1	2 0	2 1	1	2 0	3 0	1
Volume Module:												
Base Vol:	119	583	172	232	1316	99	135	1115	451	295	480	166
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:	119	583	172	232	1316	99	135	1115	451	295	480	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	119	583	172	232	1316	99	135	1115	451	295	480	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	119	583	172	232	1316	99	135	1115	451	295	480	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	119	583	172	232	1316	99	135	1115	451	295	480	166
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.85	1.15	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4757	1843	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.11	0.11	0.07	0.26	0.06	0.04	0.23	0.24	0.09	0.09	0.10
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Bristol St and I-405 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.568
Loss Time (sec):	5	Average Delay (sec/veh):	20.9
Optimal Cycle:	28	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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	4	0 1	0 0	4	1 0	0 0	0	0 2	1 1	1	0 2
Volume Module:												
Base Vol:	0	1638	210	0	2088	8	0	0	36	147	89	807
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	1638	210	0	2088	8	0	0	36	147	89	807
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1638	210	0	2088	8	0	0	36	147	89	807
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1638	210	0	2088	8	0	0	36	147	89	807
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1638	210	0	2088	8	0	0	36	147	89	807
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.85	1.00	0.91	0.91	1.00	1.00	0.75	0.92	0.92	0.75
Lanes:	0.00	4.00	1.00	0.00	4.98	0.02	0.00	0.00	2.00	1.87	1.13	2.00
Final Sat.:	0	6916	1615	0	8603	33	0	0	2842	3272	1981	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.13	0.00	0.24	0.24	0.00	0.00	0.01	0.04	0.04	0.28
Crit Moves:	****				****				****			****
Green/Cycle:	0.00	0.43	0.43	0.00	0.43	0.43	0.00	0.00	0.02	0.50	0.50	0.50
Volume/Cap:	0.00	0.55	0.30	0.00	0.57	0.57	0.00	0.00	0.57	0.09	0.09	0.57
Delay/Veh:	0.0	21.7	19.1	0.0	21.8	21.8	0.0	0.0	60.0	13.1	13.1	18.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	21.7	19.1	0.0	21.8	21.8	0.0	0.0	60.0	13.1	13.1	18.0
LOS by Move:	A	C	B	A	C	C	A	A	E	B	B	B
HCM2k85thQ:	0	16	7	0	17	17	0	0	2	2	2	15

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Bristol St and I-405 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.697
Loss Time (sec):	5	Average Delay (sec/veh):	23.6
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			Split Phase			Split Phase		
Rights:	Include			Ignore			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	4 0	0	0 0	2 1	1	3 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	122	1195	0	0	1097	943	675	0	618	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:	122	1195	0	0	1097	943	675	0	618	0	0	0
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:	122	1195	0	0	1097	0	675	0	618	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	1195	0	0	1097	0	675	0	618	0	0	0
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:	122	1195	0	0	1097	0	675	0	618	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.92	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	4.00	0.00	0.00	3.00	1.00	3.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	6916	0	0	5187	1729	5253	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.07	0.17	0.00	0.00	0.21	0.00	0.13	0.00	0.38	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.10	0.40	0.00	0.00	0.30	0.00	0.55	0.00	0.55	0.00	0.00	0.00
Volume/Cap:	0.70	0.43	0.00	0.00	0.70	0.00	0.23	0.00	0.70	0.00	0.00	0.00
Delay/Veh:	55.3	21.8	0.0	0.0	32.1	0.0	11.7	0.0	18.9	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	55.3	21.8	0.0	0.0	32.1	0.0	11.7	0.0	18.9	0.0	0.0	0.0
LOS by Move:	E	C	A	A	C	A	B	A	B	A	A	A
HCM2k85thQ:	8	11	0	0	18	0	6	0	22	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #43 Flower St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.586
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			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 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	64	593	86	275	929	124	63	394	45	118	377	158
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:	64	593	86	275	929	124	63	394	45	118	377	158
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	64	593	86	275	929	124	63	394	45	118	377	158
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	64	593	86	275	929	124	63	394	45	118	377	158
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	64	593	86	275	929	124	63	394	45	118	377	158
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	3400	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.17	0.05	0.17	0.27	0.08	0.04	0.12	0.03	0.07	0.11	0.10
Crit Moves:		****		****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #44 Flower St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.926
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	105	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			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 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	89	387	102	366	1158	121	107	983	39	161	664	95
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	387	102	366	1158	121	107	983	39	161	664	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	387	102	366	1158	121	107	983	39	161	664	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	387	102	366	1158	121	107	983	39	161	664	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	387	102	366	1158	121	107	983	39	161	664	95
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.04	1.00
Lanes:	1.00	1.00	1.00	1.00	1.81	0.19	1.00	1.92	0.08	1.00	1.75	0.25
Final Sat.:	1600	1700	1600	1600	2997	303	1600	3178	122	1600	2899	401
Capacity Analysis Module:												
Vol/Sat:	0.06	0.23	0.06	0.23	0.39	0.40	0.07	0.31	0.32	0.10	0.23	0.24
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #45 Flower St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.807
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	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:	Permitted			Permitted			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	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	30	219	19	66	367	53	58	658	50	54	366	49
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	219	19	66	367	53	58	658	50	54	366	49
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	219	19	66	367	53	58	658	50	54	366	49
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	30	219	19	66	367	53	58	658	50	54	366	49
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	30	219	19	66	367	53	58	658	50	54	366	49
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.92	0.08	1.00	0.87	0.13	1.00	0.93	0.07	1.00	0.88	0.12
Final Sat.:	1600	1472	128	1600	1398	202	1600	1487	113	1600	1411	189
Capacity Analysis Module:												
Vol/Sat:	0.02	0.15	0.15	0.04	0.26	0.26	0.04	0.44	0.44	0.03	0.26	0.26
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #46 Flower St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.818
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	56	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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	86	451	100	98	544	120	237	1631	455	115	846	93
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	451	100	98	544	120	237	1631	455	115	846	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:	86	451	100	98	544	120	237	1631	455	115	846	93
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	86	451	100	98	544	120	237	1631	455	115	846	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:	86	451	100	98	544	120	237	1631	455	115	846	93
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	1.64	0.36	1.00	1.64	0.36	1.00	2.35	0.65	1.00	2.70	0.30
Final Sat.:	1600	2719	581	1600	2722	578	1600	3953	1047	1600	4525	475
Capacity Analysis Module:												
Vol/Sat:	0.05	0.17	0.17	0.06	0.20	0.21	0.15	0.41	0.43	0.07	0.19	0.20
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #47 Flower St and MacArthur Blvd

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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	26	170	88	163	352	264	163	1852	79	79	1329	85
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:	26	170	88	163	352	264	163	1852	79	79	1329	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:	26	170	88	163	352	264	163	1852	79	79	1329	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	26	170	88	163	352	264	163	1852	79	79	1329	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:	26	170	88	163	352	264	163	1852	79	79	1329	85
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.32	0.68	1.00	1.14	0.86	1.00	2.88	0.12	1.00	2.82	0.18
Final Sat.:	1600	2209	1091	1600	1929	1371	1600	4804	196	1600	4711	289
Capacity Analysis Module:												
Vol/Sat:	0.02	0.08	0.08	0.10	0.18	0.19	0.10	0.39	0.40	0.05	0.28	0.29
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #48 Main St and La Veta Ave

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			Protected			Protected		
Rights:	Ovl			Include			Include			Ovl		
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	2 1	0	2 0	2 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	123	844	438	161	843	141	350	495	215	334	291	243
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:	123	844	438	161	843	141	350	495	215	334	291	243
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	123	844	438	161	843	141	350	495	215	334	291	243
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	123	844	438	161	843	141	350	495	215	334	291	243
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	123	844	438	161	843	141	350	495	215	334	291	243
OvlAdjVol:			271									163
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.57	0.43	2.00	2.09	0.91	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4312	688	3200	3546	1454	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.17	0.27	0.05	0.20	0.20	0.11	0.14	0.15	0.10	0.09	0.15
OvlAdjV/S:			0.17									0.10
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #49 Main St and Mainplace Dr / Memory Ln

Cycle (sec):	100	Critical Vol./Cap.(X):	0.456
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
Y+R:	4.0	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	2	1 0	2 0	2	0 1
Volume Module:												
Base Vol:	35	955	313	27	1066	223	123	194	13	264	301	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:	35	955	313	27	1066	223	123	194	13	264	301	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:	35	955	313	27	1066	223	123	194	13	264	301	20
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	955	313	27	1066	223	123	194	13	264	301	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:	35	955	313	27	1066	223	123	194	13	264	301	20
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.26	0.74	2.00	2.48	0.52	2.00	2.81	0.19	2.00	2.00	1.00
Final Sat.:	3200	3815	1185	3200	4170	830	3200	4699	301	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.01	0.25	0.26	0.01	0.26	0.27	0.04	0.04	0.04	0.08	0.09	0.01
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #50 Main St and 17th St

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	2 0	1	2 0	2 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	156	929	199	225	1251	81	114	1203	60	369	1475	22
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:	156	929	199	225	1251	81	114	1203	60	369	1475	22
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	929	199	225	1251	81	114	1203	60	369	1475	22
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	156	929	199	225	1251	81	114	1203	60	369	1475	22
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	156	929	199	225	1251	81	114	1203	60	369	1475	22
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.86	0.14	2.00	2.96	0.04
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	4772	228	3200	4929	71
Capacity Analysis Module:												
Vol/Sat:	0.05	0.27	0.12	0.07	0.37	0.05	0.04	0.25	0.26	0.12	0.30	0.31
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #51 Main St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.848
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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	138	901	79	69	1222	186	75	454	83	52	679	41
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	901	79	69	1222	186	75	454	83	52	679	41
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	901	79	69	1222	186	75	454	83	52	679	41
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	138	901	79	69	1222	186	75	454	83	52	679	41
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	138	901	79	69	1222	186	75	454	83	52	679	41
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.03	1.00
Lanes:	1.00	1.84	0.16	1.00	1.74	0.26	1.00	1.69	0.31	1.00	1.89	0.11
Final Sat.:	1600	3042	258	1600	2877	423	1600	2805	495	1600	3118	182
Capacity Analysis Module:												
Vol/Sat:	0.09	0.30	0.31	0.04	0.42	0.44	0.05	0.16	0.17	0.03	0.22	0.23
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #52 Main St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.791
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:	Permitted			Permitted			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 0	0	0 0	1 1	0	0 0	0 0	0	0 1	0 1	0
Volume Module:												
Base Vol:	66	1050	0	0	1162	103	0	0	0	61	848	65
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:	66	1050	0	0	1162	103	0	0	0	61	848	65
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	66	1050	0	0	1162	103	0	0	0	61	848	65
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	66	1050	0	0	1162	103	0	0	0	61	848	65
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	66	1050	0	0	1162	103	0	0	0	61	848	65
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.84	0.16	0.00	0.00	0.00	0.13	1.74	0.13
Final Sat.:	1600	3400	0	0	3039	261	0	0	0	200	2786	214
Capacity Analysis Module:												
Vol/Sat:	0.04	0.31	0.00	0.00	0.38	0.40	0.00	0.00	0.00	0.04	0.30	0.30
Crit Moves:	****					****					****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #53 Main St and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.441
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:	Permitted			Permitted			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:	0	0 1	1 0	0	0 1	1 0	0	0 1	1 0	0	0 1	1 0
Volume Module:												
Base Vol:	0	1052	25	0	1098	27	0	93	14	0	105	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:	0	1052	25	0	1098	27	0	93	14	0	105	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:	0	1052	25	0	1098	27	0	93	14	0	105	26
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1052	25	0	1098	27	0	93	14	0	105	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:	0	1052	25	0	1098	27	0	93	14	0	105	26
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	0.00	1.95	0.05	0.00	1.95	0.05	0.00	1.74	0.26	0.00	1.60	0.40
Final Sat.:	0	3226	74	0	3223	77	0	2881	419	0	2665	635
Capacity Analysis Module:												
Vol/Sat:	0.00	0.33	0.34	0.00	0.34	0.35	0.00	0.03	0.03	0.00	0.04	0.04
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #54 Main St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.754
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:	1 0	1	1 0	1 0	2	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	103	532	54	94	937	69	69	805	85	78	972	54
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:	103	532	54	94	937	69	69	805	85	78	972	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	532	54	94	937	69	69	805	85	78	972	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	532	54	94	937	69	69	805	85	78	972	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	532	54	94	937	69	69	805	85	78	972	54
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	1.82	0.18	1.00	2.00	1.00	1.00	1.81	0.19	1.00	1.89	0.11
Final Sat.:	1600	3005	295	1600	3400	1600	1600	2994	306	1600	3132	168
Capacity Analysis Module:												
Vol/Sat:	0.06	0.18	0.18	0.06	0.28	0.04	0.04	0.27	0.28	0.05	0.31	0.32
Crit Moves:	****				****		****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #55 Main St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.916
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	97	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:	Prot+Permit			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:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	93	874	44	184	1434	28	44	419	46	97	259	74
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:	93	874	44	184	1434	28	44	419	46	97	259	74
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	874	44	184	1434	28	44	419	46	97	259	74
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	874	44	184	1434	28	44	419	46	97	259	74
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	874	44	184	1434	28	44	419	46	97	259	74
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.90	0.10	1.00	1.96	0.04	1.00	0.90	0.10	1.00	0.78	0.22
Final Sat.:	1600	3147	153	1600	3239	61	1600	1442	158	1600	1244	356
Capacity Analysis Module:												
Vol/Sat:	0.06	0.28	0.29	0.12	0.44	0.46	0.03	0.29	0.29	0.06	0.21	0.21
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #56 Main St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.876
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	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:	1 0	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	104	589	64	239	1103	58	99	1288	174	149	867	106
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:	104	589	64	239	1103	58	99	1288	174	149	867	106
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	104	589	64	239	1103	58	99	1288	174	149	867	106
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	104	589	64	239	1103	58	99	1288	174	149	867	106
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	104	589	64	239	1103	58	99	1288	174	149	867	106
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	1.80	0.20	1.00	1.90	0.10	1.00	2.64	0.36	1.00	2.67	0.33
Final Sat.:	1600	2986	314	1600	3140	160	1600	4429	571	1600	4477	523
Capacity Analysis Module:												
Vol/Sat:	0.07	0.20	0.20	0.15	0.35	0.36	0.06	0.29	0.30	0.09	0.19	0.20
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #57 Main St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.721
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
Y+R:	4.0	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	3 0	1
Volume Module:												
Base Vol:	60	344	292	539	709	160	230	1336	242	187	556	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:	60	344	292	539	709	160	230	1336	242	187	556	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:	60	344	292	539	709	160	230	1336	242	187	556	279
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	60	344	292	539	709	160	230	1336	242	187	556	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:	60	344	292	539	709	160	230	1336	242	187	556	279
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.07	0.18	0.17	0.14	0.10	0.07	0.26	0.15	0.06	0.11	0.17
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Penn Wy and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.648
Loss Time (sec):	5	Average Delay (sec/veh):	12.1
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:	Split Phase			Split Phase			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	0	0 2	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	49	0	250	0	0	0	0	1279	652	236	1901	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:	49	0	250	0	0	0	0	1279	652	236	1901	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	0	250	0	0	0	0	1279	652	236	1901	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	49	0	250	0	0	0	0	1279	652	236	1901	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	0	250	0	0	0	0	1279	652	236	1901	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.75	1.00	1.00	1.00	1.00	0.86	0.86	0.95	0.91	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	3.00	0.00
Final Sat.:	3502	0	2842	0	0	0	0	3282	1641	1805	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.09	0.00	0.00	0.00	0.00	0.39	0.40	0.13	0.37	0.00
Crit Moves:			****						****	****		
Green/Cycle:	0.14	0.00	0.14	0.00	0.00	0.00	0.00	0.61	0.61	0.20	0.81	0.00
Volume/Cap:	0.10	0.00	0.65	0.00	0.00	0.00	0.00	0.64	0.65	0.65	0.45	0.00
Delay/Veh:	38.0	0.0	44.8	0.0	0.0	0.0	0.0	12.7	13.0	40.7	2.8	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	38.0	0.0	44.8	0.0	0.0	0.0	0.0	12.7	13.0	40.7	2.8	0.0
LOS by Move:	D	A	D	A	A	A	A	B	B	D	A	A
HCM2k85thQ:	1	0	8	0	0	0	0	21	22	12	10	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 I-5 NB Off Ramps/17th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.792
Loss Time (sec):	5	Average Delay (sec/veh):	31.4
Optimal Cycle:	53	Level Of Service:	C

Street Name:	I-5 NB Off Ramps						17th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Ignore			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 1	0 0	1	1	0 0	0 1	1	0	3 0 1	0	0	2 1 0
Volume Module:												
Base Vol:	720	33	21	60	0	312	101	1062	384	0	1508	24
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:	720	33	21	60	0	312	101	1062	384	0	1508	24
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	720	33	21	60	0	312	101	1062	0	0	1508	24
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	720	33	21	60	0	312	101	1062	0	0	1508	24
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	720	33	21	60	0	312	101	1062	0	0	1508	24
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.85	0.95	1.00	0.85	0.95	0.91	1.00	1.00	0.91	0.91
Lanes:	1.91	0.09	1.00	1.00	0.00	1.00	1.00	3.00	1.00	0.00	2.95	0.05
Final Sat.:	3466	159	1615	1805	0	1615	1805	5187	1900	0	5096	81
Capacity Analysis Module:												
Vol/Sat:	0.21	0.21	0.01	0.03	0.00	0.19	0.06	0.20	0.00	0.00	0.30	0.30
Crit Moves:	****					****	****				****	
Green/Cycle:	0.26	0.26	0.26	0.24	0.00	0.24	0.07	0.44	0.00	0.00	0.37	0.37
Volume/Cap:	0.79	0.79	0.05	0.14	0.00	0.79	0.79	0.46	0.00	0.00	0.79	0.79
Delay/Veh:	39.0	39.0	27.6	29.7	0.0	45.9	73.6	19.6	0.0	0.0	30.2	30.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.0	39.0	27.6	29.7	0.0	45.9	73.6	19.6	0.0	0.0	30.2	30.2
LOS by Move:	D	D	C	C	A	D	E	B	A	A	C	C
HCM2k85thQ:	19	19	1	2	0	17	8	13	0	0	25	25

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 Penn Wy and I-5 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.462
Loss Time (sec):	5	Average Delay (sec/veh):	19.5
Optimal Cycle:	23	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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	2	0 1	2 0	2	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module:												
Base Vol:	0	192	170	837	173	0	0	0	0	170	0	95
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	192	170	837	173	0	0	0	0	170	0	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	192	170	837	173	0	0	0	0	170	0	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	192	170	837	173	0	0	0	0	170	0	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	192	170	837	173	0	0	0	0	170	0	95
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.92	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.75
Lanes:	0.00	2.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3610	1615	3502	3610	0	0	0	0	1805	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.05	0.11	0.24	0.05	0.00	0.00	0.00	0.00	0.09	0.00	0.03
Crit Moves:			****	****						****		
Green/Cycle:	0.00	0.23	0.23	0.52	0.75	0.00	0.00	0.00	0.00	0.20	0.00	0.72
Volume/Cap:	0.00	0.23	0.46	0.46	0.06	0.00	0.00	0.00	0.00	0.46	0.00	0.05
Delay/Veh:	0.0	31.6	34.2	15.5	3.4	0.0	0.0	0.0	0.0	35.9	0.0	4.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.6	34.2	15.5	3.4	0.0	0.0	0.0	0.0	35.9	0.0	4.0
LOS by Move:	A	C	C	B	A	A	A	A	A	D	A	A
HCM2k85thQ:	0	4	8	13	1	0	0	0	0	8	0	1

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #61 Santiago St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	1.147
Loss Time (sec):	5	Average Delay (sec/veh):	62.6
Optimal Cycle:	0	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0
Volume Module:												
Base Vol:	318	221	31	6	335	82	212	81	431	126	116	23
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:	318	221	31	6	335	82	212	81	431	126	116	23
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	318	221	31	6	335	82	212	81	431	126	116	23
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	318	221	31	6	335	82	212	81	431	126	116	23
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	318	221	31	6	335	82	212	81	431	126	116	23
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.88	0.12	1.00	0.80	0.20	1.00	0.16	0.84	0.47	0.44	0.09
Final Sat.:	387	362	51	383	333	81	393	71	376	177	163	32
Capacity Analysis Module:												
Vol/Sat:	0.82	0.61	0.61	0.02	1.01	1.01	0.54	1.15	1.15	0.71	0.71	0.71
Crit Moves:	****				****			****				****
Delay/Veh:	42.6	24.0	24.0	12.2	75.9	75.9	22.0	116	116.2	32.7	32.7	32.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.6	24.0	24.0	12.2	75.9	75.9	22.0	116	116.2	32.7	32.7	32.7
LOS by Move:	E	C	C	B	F	F	C	F	F	D	D	D
ApproachDel:	34.4			75.0			88.6			32.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	34.4			75.0			88.6			32.7		
LOS by Appr:	D			F			F			D		
AllWayAvgQ:	3.3	1.4	1.4	0.0	7.4	7.4	1.1	13.1	13.1	2.1	2.1	2.1

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #62 Santiago St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.444
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Permitted				Permitted				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 1	0	1	1	0 1	0	1	1	0	0 1	0	1	0 2	0	1
Volume Module:																
Base Vol:	188	611	303		409	972	253		118	732	99		297	699	258	
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:	188	611	303		409	972	253		118	732	99		297	699	258	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	188	611	303		409	972	253		118	732	99		297	699	258	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	188	611	303		409	972	253		118	732	99		297	699	258	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	188	611	303		409	972	253		118	732	99		297	699	258	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.06	1.00		1.00	1.06	1.00		1.00	1.00	1.00		1.00	1.06	1.00	
Lanes:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	0.88	0.12		1.00	2.00	1.00	
Final Sat.:	1600	1700	1600		1600	1700	1600		1600	1409	191		1600	3400	1600	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.36	0.19		0.26	0.57	0.16		0.07	0.52	0.52		0.19	0.21	0.16	
Crit Moves:	****				****				****				****			

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #63 Standard Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.340
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	191	473	248	431	604	332	298	624	219	250	550	340
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:	191	473	248	431	604	332	298	624	219	250	550	340
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	191	473	248	431	604	332	298	624	219	250	550	340
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	191	473	248	431	604	332	298	624	219	250	550	340
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	191	473	248	431	604	332	298	624	219	250	550	340
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.74	0.26	1.00	0.62	0.38
Final Sat.:	1600	1700	1600	1600	1700	1600	1600	1184	416	1600	989	611
Capacity Analysis Module:												
Vol/Sat:	0.12	0.28	0.16	0.27	0.36	0.21	0.19	0.53	0.53	0.16	0.56	0.56
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #64 Standard Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.515
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			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	0 1	0	0 0	1! 0	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	45	631	312	123	901	41	161	1959	121	194	1282	120
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	631	312	123	901	41	161	1959	121	194	1282	120
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	631	312	123	901	41	161	1959	121	194	1282	120
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	45	631	312	123	901	41	161	1959	121	194	1282	120
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	45	631	312	123	901	41	161	1959	121	194	1282	120
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	0.67	0.33	0.11	0.85	0.04	1.00	1.88	0.12	1.00	1.83	0.17
Final Sat.:	1600	1071	529	185	1354	62	1600	3114	186	1600	3026	274
Capacity Analysis Module:												
Vol/Sat:	0.03	0.59	0.59	0.08	0.67	0.67	0.10	0.63	0.65	0.12	0.42	0.44
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #65 Standard Ave and Mcfadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.843
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:	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	44	170	77	123	297	21	21	736	89	81	214	48
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	170	77	123	297	21	21	736	89	81	214	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:	44	170	77	123	297	21	21	736	89	81	214	48
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	44	170	77	123	297	21	21	736	89	81	214	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:	44	170	77	123	297	21	21	736	89	81	214	48
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.69	0.31	1.00	0.93	0.07	1.00	0.89	0.11	1.00	0.82	0.18
Final Sat.:	1600	1101	499	1600	1494	106	1600	1427	173	1600	1307	293
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.15	0.08	0.20	0.20	0.01	0.52	0.52	0.05	0.16	0.16
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #66 Halladay St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.692
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:	Permitted				Permitted				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 0	0	1	0	0 0	0	0	0	0 0	2	1	0	0 1	2	0 0
Volume Module:																
Base Vol:	69	0	160		0	0	0		0	1772	200		210	797	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:	69	0	160		0	0	0		0	1772	200		210	797	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:	69	0	160		0	0	0		0	1772	200		210	797	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	69	0	160		0	0	0		0	1772	200		210	797	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:	69	0	160		0	0	0		0	1772	200		210	797	0	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.06	1.00		1.00	1.06	1.00		1.00	1.05	1.00		1.00	1.05	1.00	
Lanes:	1.00	0.00	1.00		0.00	0.00	0.00		0.00	2.70	0.30		0.63	2.37	0.00	
Final Sat.:	1600	0	1600		0	0	0		0	4513	487		1001	3999	0	
Capacity Analysis Module:																
Vol/Sat:	0.04	0.00	0.10		0.00	0.00	0.00		0.00	0.39	0.41		0.13	0.20	0.00	
Crit Moves:			****								****		****			

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #67 Halladay St and Dyer Rd

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:	Split Phase			Split Phase			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	0	1 0	1 0	0	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	16	26	71	155	31	33	54	1820	13	126	686	111
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:	16	26	71	155	31	33	54	1820	13	126	686	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:	16	26	71	155	31	33	54	1820	13	126	686	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	26	71	155	31	33	54	1820	13	126	686	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:	16	26	71	155	31	33	54	1820	13	126	686	111
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	0.27	0.73	1.00	0.48	0.52	1.00	2.98	0.02	1.00	2.58	0.42
Final Sat.:	1600	429	1171	1600	775	825	1600	4966	34	1600	4331	669
Capacity Analysis Module:												
Vol/Sat:	0.01	0.06	0.06	0.10	0.04	0.04	0.03	0.37	0.38	0.08	0.16	0.17
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #68 SR-55 SB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.623
Loss Time (sec):	5	Average Delay (sec/veh):	20.2
Optimal Cycle:	32	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
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	2	0	0	0	2	0	0	2	1	1	0	0	3	0	1
Volume Module:																		
Base Vol:	0	0	0	998	0	903	0	1423	1014	0	1363	155
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	0	0	998	0	903	0	1423	1014	0	1363	155
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	998	0	903	0	1423	0	0	1363	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	998	0	903	0	1423	0	0	1363	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	998	0	903	0	1423	0	0	1363	0
Saturation Flow Module:																		
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	0.91	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1729	0	5187	1900
Capacity Analysis Module:																		
Vol/Sat:	0.00	0.00	0.00	0.29	0.00	0.32	0.00	0.27	0.00	0.00	0.26	0.00
Crit Moves:						****		****		****		
Green/Cycle:	0.00	0.00	0.00	0.51	0.00	0.51	0.00	0.44	0.00	0.00	0.44	0.00
Volume/Cap:	0.00	0.00	0.00	0.56	0.00	0.62	0.00	0.62	0.00	0.00	0.60	0.00
Delay/Veh:	0.0	0.0	0.0	17.2	0.0	18.5	0.0	22.1	0.0	0.0	21.7	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	17.2	0.0	18.5	0.0	22.1	0.0	0.0	21.7	0.0
LOS by Move:	A	A	A	B	A	B	A	C	A	A	C	A
HCM2k85thQ:	0	0	0	17	0	18	0	19	0	0	18	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #69 SR-55 NB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.728
Loss Time (sec):	5	Average Delay (sec/veh):	19.5
Optimal Cycle:	42	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ignore			Include			Ignore			Ignore		
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	0	0 1	0 0	0	0 0	0 0	2	0 2	0 0	3	0 1
Volume Module:												
Base Vol:	965	0	1037	0	0	0	0	1503	744	0	591	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:	965	0	1037	0	0	0	0	1503	744	0	591	279
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	965	0	0	0	0	0	0	1503	0	0	591	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	965	0	0	0	0	0	0	1503	0	0	591	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	965	0	0	0	0	0	0	1503	0	0	591	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.88	1.00	0.91	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	1.00
Final Sat.:	3502	0	1900	0	0	0	0	3610	3344	0	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.28	0.00	0.00	0.00	0.00	0.00	0.00	0.42	0.00	0.00	0.11	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.38	0.00	0.00	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.57	0.00
Volume/Cap:	0.73	0.00	0.00	0.00	0.00	0.00	0.00	0.73	0.00	0.00	0.20	0.00
Delay/Veh:	28.7	0.0	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0	10.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	28.7	0.0	0.0	0.0	0.0	0.0	0.0	17.1	0.0	0.0	10.4	0.0
LOS by Move:	C	A	A	A	A	A	A	B	A	A	B	A
HCM2k85thQ:	21	0	0	0	0	0	0	27	0	0	5	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 SR-55 SB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.610
Loss Time (sec):	5	Average Delay (sec/veh):	25.9
Optimal Cycle:	31	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			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 1	0 0	2	0 1	1 0	1	1 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	312	37	713	50	242	60	34	1282	273	418	663	111
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:	312	37	713	50	242	60	34	1282	273	418	663	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:	312	37	713	50	242	60	34	1282	273	418	663	111
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	37	713	50	242	60	34	1282	273	418	663	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:	312	37	713	50	242	60	34	1282	273	418	663	111
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.75	0.94	0.94	0.85	0.95	0.91	0.85	0.92	0.91	0.85
Lanes:	1.79	0.21	2.00	0.34	1.66	1.00	1.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3251	386	2842	613	2968	1615	1805	5187	1615	3502	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.10	0.10	0.25	0.08	0.08	0.04	0.02	0.25	0.17	0.12	0.13	0.07
Crit Moves:			****		****			****		****		
Green/Cycle:	0.22	0.22	0.41	0.13	0.13	0.13	0.08	0.41	0.41	0.20	0.52	0.52
Volume/Cap:	0.45	0.45	0.61	0.61	0.61	0.28	0.24	0.61	0.42	0.61	0.24	0.13
Delay/Veh:	34.4	34.4	24.1	43.2	43.2	39.7	44.3	24.0	21.7	38.3	13.1	12.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	34.4	34.4	24.1	43.2	43.2	39.7	44.3	24.0	21.7	38.3	13.1	12.3
LOS by Move:	C	C	C	D	D	D	D	C	C	D	B	B
HCM2k85thQ:	8	8	16	8	8	3	2	18	9	11	6	3

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #71 Glassell St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.826
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	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:	Ovl			Include			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	1 0	1	1 0	1 1	0	1 0	1 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	292	458	139	13	274	60	57	293	563	380	401	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:	292	458	139	13	274	60	57	293	563	380	401	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:	292	458	139	13	274	60	57	293	563	380	401	10
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	292	458	139	13	274	60	57	293	563	380	401	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:	292	458	139	13	274	60	57	293	563	380	401	10
OvlAdjVol:			0						417			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.03	1.00
Lanes:	2.00	1.00	1.00	1.00	1.64	0.36	1.00	1.00	1.00	1.00	1.95	0.05
Final Sat.:	3200	1700	1600	1600	2725	575	1600	1700	1600	1600	3222	78
Capacity Analysis Module:												
Vol/Sat:	0.09	0.27	0.09	0.01	0.10	0.10	0.04	0.17	0.35	0.24	0.12	0.13
OvlAdjV/S:			0.00						0.26			
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Glassell St and SR-22 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.841
Loss Time (sec):	5	Average Delay (sec/veh):	30.1
Optimal Cycle:	65	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			Permitted			Split Phase			Split Phase		
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 0	0	0 0	2 0	1	0 0	0 0	0	1 0	1! 0	1
Volume Module:												
Base Vol:	568	638	0	0	1017	473	0	0	0	247	4	369
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:	568	638	0	0	1017	473	0	0	0	247	4	369
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	568	638	0	0	1017	473	0	0	0	247	4	369
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	568	638	0	0	1017	473	0	0	0	247	4	369
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	568	638	0	0	1017	473	0	0	0	247	4	369
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.86	0.86	0.86
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.40	0.01	1.59
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	2271	21	2589
Capacity Analysis Module:												
Vol/Sat:	0.31	0.18	0.00	0.00	0.28	0.29	0.00	0.00	0.00	0.11	0.19	0.14
Crit Moves:	****					****					****	
Green/Cycle:	0.37	0.72	0.00	0.00	0.35	0.35	0.00	0.00	0.00	0.23	0.23	0.23
Volume/Cap:	0.84	0.24	0.00	0.00	0.81	0.84	0.00	0.00	0.00	0.48	0.84	0.63
Delay/Veh:	37.9	4.7	0.0	0.0	33.6	41.0	0.0	0.0	0.0	33.7	45.5	36.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.9	4.7	0.0	0.0	33.6	41.0	0.0	0.0	0.0	33.7	45.5	36.0
LOS by Move:	D	A	A	A	C	D	A	A	A	C	D	D
HCM2k85thQ:	27	5	0	0	25	24	0	0	0	8	18	11

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Grand Ave / Glassell St and SR-22 EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.842
Loss Time (sec):	5	Average Delay (sec/veh):	29.6
Optimal Cycle:	65	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:	Permitted			Protected			Split Phase			Split Phase		
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 2	0	1	1 0 2	0	0	1 0 1!	0	1	0 0 0	0	0
Volume Module:												
Base Vol:	0	968	258	345	904	0	258	0	1012	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:	0	968	258	345	904	0	258	0	1012	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:	0	968	258	345	904	0	258	0	1012	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	968	258	345	904	0	258	0	1012	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:	0	968	258	345	904	0	258	0	1012	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.95	0.95	1.00	0.87	1.00	0.87	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.20	0.00	1.80	0.00	0.00	0.00
Final Sat.:	0	3610	1615	1805	3610	0	1992	0	2974	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.27	0.16	0.19	0.25	0.00	0.13	0.00	0.34	0.00	0.00	0.00
Crit Moves:		****		****					****			
Green/Cycle:	0.00	0.32	0.32	0.23	0.55	0.00	0.40	0.00	0.40	0.00	0.00	0.00
Volume/Cap:	0.00	0.84	0.50	0.84	0.46	0.00	0.32	0.00	0.84	0.00	0.00	0.00
Delay/Veh:	0.0	37.5	28.4	51.4	13.9	0.0	20.4	0.0	31.3	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	37.5	28.4	51.4	13.9	0.0	20.4	0.0	31.3	0.0	0.0	0.0
LOS by Move:	A	D	C	D	B	A	C	A	C	A	A	A
HCM2k85thQ:	0	25	10	19	13	0	7	0	27	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #74 Grand Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.617
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			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	1 0	1 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	28	1155	166	214	1780	39	99	60	59	152	17	137
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	1155	166	214	1780	39	99	60	59	152	17	137
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	28	1155	166	214	1780	39	99	60	59	152	17	137
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	28	1155	166	214	1780	39	99	60	59	152	17	137
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	28	1155	166	214	1780	39	99	60	59	152	17	137
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.62	0.38	1.00	2.94	0.06	1.00	1.01	0.99	1.00	0.11	0.89
Final Sat.:	1600	4397	603	1600	4897	103	1600	1713	1587	1600	177	1423
Capacity Analysis Module:												
Vol/Sat:	0.02	0.26	0.28	0.13	0.36	0.38	0.06	0.04	0.04	0.10	0.10	0.10
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #75 Grand Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.876
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	75	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			Permitted			Permitted		
Rights:	Include			WideBypass			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	0	1 0	1 0	1	0 1
Volume Module:												
Base Vol:	93	652	167	370	1808	407	179	291	60	140	270	246
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:	93	652	167	370	1808	407	179	291	60	140	270	246
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	652	167	370	1808	407	179	291	60	140	270	246
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	93	652	167	370	1808	407	179	291	60	140	270	246
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	93	652	167	370	1808	407	179	291	60	140	270	246
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	2.39	0.61	1.00	2.45	0.55	1.00	0.83	0.17	1.00	1.00	1.00
Final Sat.:	1600	4021	979	1600	4118	882	1600	1326	274	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.16	0.17	0.23	0.44	0.46	0.11	0.22	0.22	0.09	0.16	0.15
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #76 Grand Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.956
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	138	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			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	2 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	229	669	460	414	1734	340	246	915	116	401	1047	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:	229	669	460	414	1734	340	246	915	116	401	1047	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:	229	669	460	414	1734	340	246	915	116	401	1047	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	669	460	414	1734	340	246	915	116	401	1047	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:	229	669	460	414	1734	340	246	915	116	401	1047	114
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	2.51	0.49	2.00	2.66	0.34	2.00	2.71	0.29
Final Sat.:	1600	3400	1600	1600	4213	787	3200	4460	540	3200	4529	471
Capacity Analysis Module:												
Vol/Sat:	0.14	0.20	0.29	0.26	0.41	0.43	0.08	0.21	0.21	0.13	0.23	0.24
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Grand Ave and I-5 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.845
Loss Time (sec):	5	Average Delay (sec/veh):	15.3
Optimal Cycle:	66	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			Split Phase			Split Phase		
Rights:	Ignore			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	2 0	1	1 0	3 0	0	0 0	0 0	0 0	2 0	0 0	1
Volume Module:												
Base Vol:	0	1145	662	104	3338	0	0	0	0	557	0	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:	0	1145	662	104	3338	0	0	0	0	557	0	154
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1145	0	104	3338	0	0	0	0	557	0	154
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1145	0	104	3338	0	0	0	0	557	0	154
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1145	0	104	3338	0	0	0	0	557	0	154
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.91	1.00	1.00	1.00	1.00	0.92	1.00	0.85
Lanes:	0.00	2.00	1.00	1.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3610	1900	1805	5187	0	0	0	0	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.00	0.06	0.64	0.00	0.00	0.00	0.00	0.16	0.00	0.10
Crit Moves:	****				****					****		
Green/Cycle:	0.00	0.64	0.00	0.12	0.76	0.00	0.00	0.00	0.00	0.19	0.00	0.19
Volume/Cap:	0.00	0.49	0.00	0.49	0.84	0.00	0.00	0.00	0.00	0.84	0.00	0.51
Delay/Veh:	0.0	9.4	0.0	43.2	9.8	0.0	0.0	0.0	0.0	49.0	0.0	37.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.4	0.0	43.2	9.8	0.0	0.0	0.0	0.0	49.0	0.0	37.8
LOS by Move:	A	A	A	D	A	A	A	A	A	D	A	D
HCM2k85thQ:	0	15	0	6	39	0	0	0	0	17	0	7

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 Grand Ave and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.881
Loss Time (sec):	5	Average Delay (sec/veh):	26.3
Optimal Cycle:	80	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			Split Phase			Split Phase		
Rights:	Include			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 2	1	0	1 0	2	0 2	2 0	1	0 2	0 1	0	1 0
Volume Module:												
Base Vol:	79	1119	57	231	1908	1684	242	200	394	5	407	37
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	1119	57	231	1908	1684	242	200	394	5	407	37
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1119	57	231	1908	1684	242	200	394	5	407	37
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	79	1119	57	231	1908	1684	242	200	394	5	407	37
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	79	1119	57	231	1908	1684	242	200	394	5	407	37
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.90	0.90	0.95	0.95	0.75	0.92	1.00	0.75	0.94	0.94	0.94
Lanes:	1.00	2.85	0.15	1.00	2.00	2.00	2.00	1.00	2.00	0.02	1.82	0.16
Final Sat.:	1805	4901	250	1805	3610	2842	3502	1900	2842	40	3230	294
Capacity Analysis Module:												
Vol/Sat:	0.04	0.23	0.23	0.13	0.53	0.59	0.07	0.11	0.14	0.13	0.13	0.13
Crit Moves:	****				****				****	****		
Green/Cycle:	0.05	0.42	0.42	0.23	0.60	0.76	0.16	0.16	0.16	0.14	0.14	0.14
Volume/Cap:	0.88	0.55	0.55	0.55	0.88	0.78	0.44	0.67	0.88	0.88	0.88	0.88
Delay/Veh:	105.1	22.4	22.4	35.2	21.6	9.2	38.7	45.4	59.3	58.3	58.3	58.3
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	105.1	22.4	22.4	35.2	21.6	9.2	38.7	45.4	59.3	58.3	58.3	58.3
LOS by Move:	F	C	C	D	C	A	D	D	E	E	E	E
HCM2k85thQ:	7	15	15	10	41	28	6	11	15	15	15	15

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #79 Grand Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.827
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	58	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	2 1	0	2 0	3 0	1	2 0	2 0	1	2 0	2 0	1
Volume Module:												
Base Vol:	186	655	31	121	1753	213	318	760	216	268	939	107
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:	186	655	31	121	1753	213	318	760	216	268	939	107
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	655	31	121	1753	213	318	760	216	268	939	107
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	186	655	31	121	1753	213	318	760	216	268	939	107
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	186	655	31	121	1753	213	318	760	216	268	939	107
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.86	0.14	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3200	4783	217	3200	5100	1600	3200	3400	1600	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.14	0.14	0.04	0.34	0.13	0.10	0.22	0.14	0.08	0.28	0.07
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #80 Grand Ave and Chestnut 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			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	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	53	737	163	174	2086	57	64	449	118	81	237	148
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:	53	737	163	174	2086	57	64	449	118	81	237	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	737	163	174	2086	57	64	449	118	81	237	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	737	163	174	2086	57	64	449	118	81	237	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	737	163	174	2086	57	64	449	118	81	237	148
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.46	0.54	1.00	2.92	0.08	1.00	0.79	0.21	1.00	0.62	0.38
Final Sat.:	1600	4131	869	1600	4872	128	1600	1267	333	1600	985	615
Capacity Analysis Module:												
Vol/Sat:	0.03	0.18	0.19	0.11	0.43	0.45	0.04	0.35	0.35	0.05	0.24	0.24
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #81 Grand Ave and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.011
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	0 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	262	1104	165	294	1974	192	109	352	107	95	340	86
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:	262	1104	165	294	1974	192	109	352	107	95	340	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	262	1104	165	294	1974	192	109	352	107	95	340	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	1104	165	294	1974	192	109	352	107	95	340	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	262	1104	165	294	1974	192	109	352	107	95	340	86
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Lanes:	1.00	2.61	0.39	1.00	2.73	0.27	1.00	0.77	0.23	1.00	1.60	0.40
Final Sat.:	1600	4376	624	1600	4575	425	1600	1227	373	1600	2654	646
Capacity Analysis Module:												
Vol/Sat:	0.16	0.25	0.26	0.18	0.43	0.45	0.07	0.29	0.29	0.06	0.13	0.13
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #82 Grand Ave and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.897
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	85	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:	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	65	649	127	253	1293	253	396	1654	159	170	651	142
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:	65	649	127	253	1293	253	396	1654	159	170	651	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:	65	649	127	253	1293	253	396	1654	159	170	651	142
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	65	649	127	253	1293	253	396	1654	159	170	651	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:	65	649	127	253	1293	253	396	1654	159	170	651	142
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.51	0.49	1.00	2.51	0.49	1.00	2.74	0.26	1.00	2.46	0.54
Final Sat.:	1600	4214	786	1600	4214	786	1600	4579	421	1600	4140	860
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.16	0.16	0.31	0.32	0.25	0.36	0.38	0.11	0.16	0.17
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #83 Grand Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.664
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
Y+R:	4.0	4.0	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	2 0	3 0	1	2 0	2 1	0
Volume Module:												
Base Vol:	187	564	241	204	589	199	314	1120	440	140	617	208
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:	187	564	241	204	589	199	314	1120	440	140	617	208
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	187	564	241	204	589	199	314	1120	440	140	617	208
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	187	564	241	204	589	199	314	1120	440	140	617	208
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	187	564	241	204	589	199	314	1120	440	140	617	208
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.10	0.90	1.00	2.24	0.76	2.00	3.00	1.00	2.00	2.24	0.76
Final Sat.:	1600	3563	1437	1600	3788	1212	3200	5100	1600	3200	3790	1210
Capacity Analysis Module:												
Vol/Sat:	0.12	0.16	0.17	0.13	0.16	0.16	0.10	0.22	0.28	0.04	0.16	0.17
Crit Moves:		****	****						****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #84 SR-55 NB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.565
Loss Time (sec):	5	Average Delay (sec/veh):	17.3
Optimal Cycle:	28	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
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! 0	1	0	0	0	0	0	3	0	1
Volume Module:												
Base Vol:	637	0	521	0	0	0	0	1550	620	0	859	517
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:	637	0	521	0	0	0	0	1550	620	0	859	517
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	637	0	521	0	0	0	0	1550	0	0	859	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	637	0	521	0	0	0	0	1550	0	0	859	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	637	0	521	0	0	0	0	1550	0	0	859	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.91	1.00	0.91	1.00	1.00	1.00	1.00	0.91	1.00	1.00	0.91	0.91
Lanes:	1.55	0.00	1.45	0.00	0.00	0.00	0.00	3.00	1.00	0.00	3.00	0.00
Final Sat.:	2674	0	2501	0	0	0	0	5187	1900	0	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.24	0.00	0.21	0.00	0.00	0.00	0.00	0.30	0.00	0.00	0.17	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.42	0.00	0.42	0.00	0.00	0.00	0.00	0.53	0.00	0.00	0.53	0.00
Volume/Cap:	0.57	0.00	0.49	0.00	0.00	0.00	0.00	0.57	0.00	0.00	0.31	0.00
Delay/Veh:	22.3	0.0	21.3	0.0	0.0	0.0	0.0	16.1	0.0	0.0	13.4	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.3	0.0	21.3	0.0	0.0	0.0	0.0	16.1	0.0	0.0	13.4	0.0
LOS by Move:	C	A	C	A	A	A	A	B	A	A	B	A
HCM2k85thQ:	15	0	13	0	0	0	0	18	0	0	8	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #85 Cambridge St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.900
Loss Time (sec):	5	Average Delay (sec/veh):	23.4
Optimal Cycle:	0	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:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1 0	1 0	0		0 0	1 0	1		1 0	0 0	1		0 0	0 0	0	
Volume Module:																
Base Vol:	185	235	0		0	480	245		195	0	312		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:	185	235	0		0	480	245		195	0	312		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:	185	235	0		0	480	245		195	0	312		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	185	235	0		0	480	245		195	0	312		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:	185	235	0		0	480	245		195	0	312		0	0	0	
Saturation Flow Module:																
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00		0.00	1.00	1.00		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	465	498	0		0	534	586		459	0	541		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.40	0.47	xxxx		xxxx	0.90	0.42		0.43	xxxx	0.58		xxxx	xxxx	xxxx	
Crit Moves:		****				****					****					
Delay/Veh:	15.0	15.6	0.0		0.0	42.9	12.8		15.7	0.0	17.1		0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	15.0	15.6	0.0		0.0	42.9	12.8		15.7	0.0	17.1		0.0	0.0	0.0	
LOS by Move:	B	C	*		*	E	B		C	*	C		*	*	*	
ApproachDel:		15.3				32.8				16.6				xxxxxx		
Delay Adj:		1.00				1.00				1.00				xxxxx		
ApprAdjDel:		15.3				32.8				16.6				xxxxxx		
LOS by Appr:		C				D				C				*		
AllWayAvgQ:	0.6	0.8	0.0		0.0	5.0	0.7		0.7	0.0	1.2		0.0	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #86 Cambridge St and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.624
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:	Permitted			Permitted			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:	0 0	0 0	0	1 0	0 0	1	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	618	0	199	69	185	0	0	130	101
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	0	0	618	0	199	69	185	0	0	130	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	618	0	199	69	185	0	0	130	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	618	0	199	69	185	0	0	130	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	618	0	199	69	185	0	0	130	101
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.56	0.44
Final Sat.:	0	0	0	1600	0	1600	1600	1700	0	0	900	700
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.39	0.00	0.12	0.04	0.11	0.00	0.00	0.14	0.14
Crit Moves:				****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Mabury St and 1st Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.755
Loss Time (sec):	5	Average Delay (sec/veh):	27.4
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Mabury						1st Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			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	0	0 1	1 0		1! 0 1	0 0		1 1 0	1 0		1 1 0
Volume Module:												
Base Vol:	5	0	122	276	164	618	0	922	10	46	701	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:	5	0	122	276	164	618	0	922	10	46	701	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:	5	0	122	276	164	618	0	922	10	46	701	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	5	0	122	276	164	618	0	922	10	46	701	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:	5	0	122	276	164	618	0	922	10	46	701	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.90	0.90	0.90	1.00	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	0.00	1.00	1.23	0.27	1.50	0.00	1.98	0.02	1.00	2.00	0.00
Final Sat.:	1805	0	1615	2097	459	2575	0	3564	39	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.08	0.13	0.36	0.24	0.00	0.26	0.26	0.03	0.19	0.00
Crit Moves:			****		****			****		****		
Green/Cycle:	0.10	0.00	0.10	0.47	0.47	0.47	0.00	0.34	0.34	0.03	0.38	0.00
Volume/Cap:	0.03	0.00	0.75	0.28	0.75	0.51	0.00	0.75	0.75	0.75	0.52	0.00
Delay/Veh:	40.7	0.0	61.9	16.0	24.0	18.5	0.0	31.8	31.8	88.8	24.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	40.7	0.0	61.9	16.0	24.0	18.5	0.0	31.8	31.8	88.8	24.5	0.0
LOS by Move:	D	A	E	B	C	B	A	C	C	F	C	A
HCM2k85thQ:	0	0	8	7	25	14	0	22	22	5	14	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #88 Tustin St and La Veta Ave

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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 1 0	0	1
Volume Module:												
Base Vol:	9 365	105		48 944	3		9 11	35		279	1	43
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:	9 365	105		48 944	3		9 11	35		279	1	43
User Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
PHF Volume:	9 365	105		48 944	3		9 11	35		279	1	43
Reduct Vol:	0 0	0		0 0	0		0 0	0		0	0	0
Reduced Vol:	9 365	105		48 944	3		9 11	35		279	1	43
PCE Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
MLF Adj:	1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00		1.00 1.00	1.00	
FinalVolume:	9 365	105		48 944	3		9 11	35		279	1	43
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600 1600	1600		1600 1600	1600		1600 1600	1600		1600 1600	1600	
Adjustment:	1.00 1.05	1.00		1.00 1.04	1.00		1.00 1.06	1.00		1.00 1.00	1.00	
Lanes:	1.00 2.33	0.67		1.00 2.99	0.01		1.00 1.00	1.00		1.99 0.01	1.00	
Final Sat.:	1600 3928	1072		1600 4985	15		1600 1700	1600		3189	11	1600
Capacity Analysis Module:												
Vol/Sat:	0.01 0.09	0.10		0.03 0.19	0.20		0.01 0.01	0.02		0.09 0.09	0.03	
OvlAdjV/S:												0.00
Crit Moves:	****				****			****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Tustin St and SR-22 WB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.575
Loss Time (sec):	5	Average Delay (sec/veh):	13.2
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			Permitted			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 0	0	0 0	2	1 0	0 0	0 0	0 0	0 0	0 0	0
Volume Module:												
Base Vol:	762	708	0	0	897	536	0	0	0	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:	762	708	0	0	897	536	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
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	762	708	0	0	897	536	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	762	708	0	0	897	536	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
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	762	708	0	0	897	536	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	3502	3610	0	0	3264	1632	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.22	0.20	0.00	0.00	0.27	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	****					****						
Green/Cycle:	0.38	0.95	0.00	0.00	0.57	0.57	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.57	0.21	0.00	0.00	0.48	0.57	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	25.3	0.2	0.0	0.0	12.8	14.0	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	25.3	0.2	0.0	0.0	12.8	14.0	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	C	A	A	A	B	B	A	A	A	A	A	A
HCM2k85thQ:	15	1	0	0	14	18	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #90 Tustin St and SR-22 EB Off-Ramp / Seba Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.718
Loss Time (sec):	5	Average Delay (sec/veh):	23.8
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:	Permitted			Permitted			Split Phase			Split Phase		
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 2	1 0	1	0 3	0 0	1	0 1!	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	0	1213	6	13	779	0	252	25	1084	6	0	43
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	1213	6	13	779	0	252	25	1084	6	0	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1213	6	13	779	0	252	25	1084	6	0	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1213	6	13	779	0	252	25	1084	6	0	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1213	6	13	779	0	252	25	1084	6	0	43
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.12	0.91	1.00	0.87	0.87	0.87	0.88	1.00	0.88
Lanes:	0.00	2.99	0.01	1.00	3.00	0.00	1.18	0.04	1.78	0.12	0.00	0.88
Final Sat.:	0	5156	26	232	5187	0	1960	60	2956	204	0	1460
Capacity Analysis Module:												
Vol/Sat:	0.00	0.24	0.24	0.06	0.15	0.00	0.13	0.42	0.37	0.03	0.00	0.03
Crit Moves:		****						****		****		
Green/Cycle:	0.00	0.33	0.33	0.33	0.33	0.00	0.58	0.58	0.58	0.04	0.00	0.04
Volume/Cap:	0.00	0.72	0.72	0.17	0.46	0.00	0.22	0.72	0.63	0.72	0.00	0.72
Delay/Veh:	0.0	31.1	31.1	25.0	26.8	0.0	10.1	16.4	14.4	78.0	0.0	78.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.1	31.1	25.0	26.8	0.0	10.1	16.4	14.4	78.0	0.0	78.0
LOS by Move:	A	C	C	C	C	A	B	B	B	E	A	E
HCM2k85thQ:	0	20	20	1	11	0	5	24	19	5	0	5

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #91 Tustin Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.953
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	134	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				Include				Include				Ovl			
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	1	0 0	1	0	1	0 0	1	0
Volume Module:																
Base Vol:	89	514	90		174	1497	30		63	240	412		239	265	346	
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	514	90		174	1497	30		63	240	412		239	265	346	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	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	514	90		174	1497	30		63	240	412		239	265	346	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	89	514	90		174	1497	30		63	240	412		239	265	346	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	89	514	90		174	1497	30		63	240	412		239	265	346	
OvlAdjVol:															297	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.04	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	2.00	2.55	0.45		2.00	2.94	0.06		1.00	0.37	0.63		1.00	0.43	0.57	
Final Sat.:	3200	4285	715		3200	4906	94		1600	589	1011		1600	694	906	
Capacity Analysis Module:																
Vol/Sat:	0.03	0.12	0.13		0.05	0.31	0.32		0.04	0.41	0.41		0.15	0.38	0.38	
OvlAdjV/S:															0.33	
Crit Moves:	****						****			****			****			

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #92 Tustin Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	2.225
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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
Y+R:	4.0	4.0	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	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	91	496	93	89	1816	57	606	1530	1116	118	244	122
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:	91	496	93	89	1816	57	606	1530	1116	118	244	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:	91	496	93	89	1816	57	606	1530	1116	118	244	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	496	93	89	1816	57	606	1530	1116	118	244	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:	91	496	93	89	1816	57	606	1530	1116	118	244	122
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.53	0.47	2.00	2.91	0.09	1.00	0.58	0.42	1.00	0.67	0.33
Final Sat.:	1600	4242	758	3200	4854	146	1600	925	675	1600	1067	533
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.03	0.37	0.39	0.38	1.65	1.65	0.07	0.23	0.23
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #93 Tustin Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.790
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:	Ovl			Include			Include			Ovl		
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 0	1	2 0	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	194	347	413	578	1668	18	187	738	126	588	928	227
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:	194	347	413	578	1668	18	187	738	126	588	928	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:	194	347	413	578	1668	18	187	738	126	588	928	227
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	194	347	413	578	1668	18	187	738	126	588	928	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:	194	347	413	578	1668	18	187	738	126	588	928	227
OvlAdjVol:			119									0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.00	1.00	2.00	2.97	0.03	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	3400	1600	3200	4949	51	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.10	0.26	0.18	0.34	0.35	0.06	0.14	0.08	0.18	0.18	0.14
OvlAdjV/S:			0.07									0.00
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #94 Tustin Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.791
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
Y+R:	4.0	4.0	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	0 1	1 0	2	1 1	1 0	2	1 0
Volume Module:												
Base Vol:	40	204	183	743	946	293	159	942	39	129	727	472
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:	40	204	183	743	946	293	159	942	39	129	727	472
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	40	204	183	743	946	293	159	942	39	129	727	472
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	40	204	183	743	946	293	159	942	39	129	727	472
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	40	204	183	743	946	293	159	942	39	129	727	472
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	2.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3400	1600	3200	3400	1600	1600	5100	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.06	0.11	0.23	0.28	0.18	0.10	0.18	0.02	0.08	0.21	0.30
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 SR-55 SB Ramps / Auto Mall Dr and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.653
Loss Time (sec):	5	Average Delay (sec/veh):	25.1
Optimal Cycle:	34	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:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				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	1 0	0	2	1	0 1	0	1	1	0 3	0	1	2	0 2	1	0
Volume Module:																
Base Vol:	456	68	540		50	30	8		34	1334	493		510	1202	157	
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:	456	68	540		50	30	8		34	1334	493		510	1202	157	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
PHF Volume:	456	68	540		50	30	8		34	1334	0		510	1202	157	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	456	68	540		50	30	8		34	1334	0		510	1202	157	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	1.00	
FinalVolume:	456	68	540		50	30	8		34	1334	0		510	1202	157	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.96	0.96	0.75		0.95	1.00	0.85		0.95	0.91	1.00		0.92	0.89	0.89	
Lanes:	1.74	0.26	2.00		1.00	1.00	1.00		1.00	3.00	1.00		2.00	2.65	0.35	
Final Sat.:	3168	472	2842		1805	1900	1615		1805	5187	1900		3502	4510	589	
Capacity Analysis Module:																
Vol/Sat:	0.14	0.14	0.19		0.03	0.02	0.00		0.02	0.26	0.00		0.15	0.27	0.27	
Crit Moves:			****		****					****			****			
Green/Cycle:	0.29	0.29	0.29		0.04	0.04	0.04		0.04	0.39	0.00		0.22	0.58	0.58	
Volume/Cap:	0.49	0.49	0.65		0.65	0.37	0.12		0.46	0.65	0.00		0.65	0.46	0.46	
Delay/Veh:	29.7	29.7	32.9		65.6	49.5	46.8		51.5	25.5	0.0		37.3	12.4	12.4	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	29.7	29.7	32.9		65.6	49.5	46.8		51.5	25.5	0.0		37.3	12.4	12.4	
LOS by Move:	C	C	C		E	D	D		D	C	A		D	B	B	
HCM2k85thQ:	11	11	14		4	2	1		3	19	0		13	13	13	

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Note: Queue reported is the number of cars per lane.
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Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.665
Loss Time (sec):	5	Average Delay (sec/veh):	25.6
Optimal Cycle:	35	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				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	1	0 3	0	1	2	0 1	1	0	1	0 1	1	0
Volume Module:																
Base Vol:	413	109	69		20	497	728		269	163	155		8	223	4	
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:	413	109	69		20	497	728		269	163	155		8	223	4	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	413	109	69		20	497	728		269	163	155		8	223	4	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	413	109	69		20	497	728		269	163	155		8	223	4	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	413	109	69		20	497	728		269	163	155		8	223	4	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.92	0.86	0.86		0.95	0.91	0.85		0.92	0.88	0.88		0.95	0.95	0.95	
Lanes:	2.00	2.00	1.00		1.00	3.00	1.00		2.00	1.03	0.97		1.00	1.96	0.04	
Final Sat.:	3502	3257	1629		1805	5187	1615		3502	1715	1631		1805	3536	63	
Capacity Analysis Module:																
Vol/Sat:	0.12	0.03	0.04		0.01	0.10	0.45		0.08	0.10	0.10		0.00	0.06	0.06	
Crit Moves:	****						****		****					****		
Green/Cycle:	0.18	0.59	0.59		0.15	0.56	0.68		0.12	0.20	0.20		0.01	0.09	0.09	
Volume/Cap:	0.67	0.06	0.07		0.07	0.17	0.67		0.67	0.47	0.47		0.47	0.67	0.67	
Delay/Veh:	41.1	8.9	8.9		36.4	10.6	11.0		46.5	35.8	35.8		68.7	48.6	48.6	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	41.1	8.9	8.9		36.4	10.6	11.0		46.5	35.8	35.8		68.7	48.6	48.6	
LOS by Move:	D	A	A		D	B	B		D	D	D		E	D	D	
HCM2k85thQ:	11	1	2		1	4	21		8	8	8		1	8	8	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #97 Red Hill Ave and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.619
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			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 3	0 1	2	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	122	449	128	203	861	403	397	1276	271	250	1213	170
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:	122	449	128	203	861	403	397	1276	271	250	1213	170
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	122	449	128	203	861	403	397	1276	271	250	1213	170
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	122	449	128	203	861	403	397	1276	271	250	1213	170
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	122	449	128	203	861	403	397	1276	271	250	1213	170
OvlAdjVol:						205			210			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.09	0.08	0.06	0.17	0.25	0.12	0.25	0.17	0.08	0.24	0.11
OvlAdjV/S:						0.13			0.13			
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #98 Red Hill Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.530
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	49	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			Ovl		
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	2 1	0	1 0	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	118	716	97	20	949	191	239	407	300	152	543	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:	118	716	97	20	949	191	239	407	300	152	543	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:	118	716	97	20	949	191	239	407	300	152	543	96
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	118	716	97	20	949	191	239	407	300	152	543	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:	118	716	97	20	949	191	239	407	300	152	543	96
OvlAdjVol:												86
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.52	0.48	2.00	2.50	0.50	1.00	2.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5936	764	3200	4196	804	1600	3400	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.04	0.12	0.13	0.01	0.23	0.24	0.15	0.12	0.19	0.05	0.11	0.06
OvlAdjV/S:												0.05
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #99 Red Hill Ave and Dyer Rd / barranca Pkwy

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			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	4 0	1	2 0	4 0	1	2 0	3 1	0	2 0	4 0	1
Volume Module:												
Base Vol:	184	458	151	184	809	106	126	758	300	522	583	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:	184	458	151	184	809	106	126	758	300	522	583	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:	184	458	151	184	809	106	126	758	300	522	583	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	184	458	151	184	809	106	126	758	300	522	583	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:	184	458	151	184	809	106	126	758	300	522	583	114
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	6800	1600	3200	6800	1600	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.07	0.09	0.06	0.12	0.07	0.04	0.15	0.19	0.16	0.09	0.07
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #100 Red Hill Ave and Alton Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.930
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	109	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			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	1 0	3 0	1	1 0	2 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	235	693	434	233	1059	170	185	574	574	335	284	159
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:	235	693	434	233	1059	170	185	574	574	335	284	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:	235	693	434	233	1059	170	185	574	574	335	284	159
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	235	693	434	233	1059	170	185	574	574	335	284	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:	235	693	434	233	1059	170	185	574	574	335	284	159
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	3400	1600	3200	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.15	0.14	0.27	0.15	0.21	0.11	0.12	0.17	0.36	0.10	0.17	0.10
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Red Hill Ave and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.279
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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 3	0 1		2 0 3	0 1		1 0 3	0 1	
Volume Module:												
Base Vol:	83	742	13	205	529	485	1194	617	101	34	329	843
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:	83	742	13	205	529	485	1194	617	101	34	329	843
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	742	13	205	529	485	1194	617	101	34	329	843
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	742	13	205	529	485	1194	617	101	34	329	843
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	83	742	13	205	529	485	1194	617	101	34	329	843
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.95	0.05	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4917	83	3200	5100	1600	3200	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.16	0.06	0.10	0.30	0.37	0.12	0.06	0.02	0.06	0.53
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Red Hill Ave and Main St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.733
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			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	0 1	2	0 2	0 1	2	0 2	1 0	2	0 2	1 0
Volume Module:												
Base Vol:	201	691	449	78	365	126	139	1309	254	167	335	79
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:	201	691	449	78	365	126	139	1309	254	167	335	79
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	201	691	449	78	365	126	139	1309	254	167	335	79
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	201	691	449	78	365	126	139	1309	254	167	335	79
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	201	691	449	78	365	126	139	1309	254	167	335	79
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.51	0.49	2.00	2.43	0.57
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	4220	780	3200	4084	916
Capacity Analysis Module:												
Vol/Sat:	0.06	0.20	0.28	0.02	0.11	0.08	0.04	0.31	0.33	0.05	0.08	0.09
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 I-5 SB Ramps and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.480
Loss Time (sec):	5	Average Delay (sec/veh):	17.8
Optimal Cycle:	24	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			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:	0	0	0	2	0	0	2	0	3	0	2	1
Volume Module:												
Base Vol:	0	0	0	382	0	38	287	492	0	0	1027	300
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	0	0	382	0	38	287	492	0	0	1027	300
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	382	0	38	287	492	0	0	1027	300
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	382	0	38	287	492	0	0	1027	300
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	382	0	38	287	492	0	0	1027	300
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.88	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	2.32	0.68
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	3878	1133
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.11	0.00	0.02	0.08	0.09	0.00	0.00	0.26	0.26
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.23	0.00	0.40	0.17	0.72	0.00	0.00	0.55	0.55
Volume/Cap:	0.00	0.00	0.00	0.48	0.00	0.06	0.48	0.13	0.00	0.00	0.48	0.48
Delay/Veh:	0.0	0.0	0.0	34.0	0.0	18.6	38.1	4.3	0.0	0.0	13.8	13.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AdjDel/Veh:	0.0	0.0	0.0	34.0	0.0	18.6	38.1	4.3	0.0	0.0	13.8	13.8
LOS by Move:	A	A	A	C	A	B	D	A	A	A	B	B
HCM2k85thQ:	0	0	0	9	0	1	7	3	0	0	14	14

****

Note: Queue reported is the number of cars per lane.

****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Tustin Ranch Rd and Warner 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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
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 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	174	0	22	27	357	0	0	2130	490
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	0	0	174	0	22	27	357	0	0	2130	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	0	0	174	0	22	27	357	0	0	2130	490
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	174	0	22	27	357	0	0	2130	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	0	0	174	0	22	27	357	0	0	2130	490
OvlAdjVol:												403
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3200	0	1600	3200	5100	0	0	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.05	0.00	0.01	0.01	0.07	0.00	0.00	0.42	0.31
OvlAdjV/S:												0.25
Crit Moves:				****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Von Karman Ave and Barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.930
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	108	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			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 1	1 0		2 0 2			2 0 3	0 1		2 0 4	0 1	
Volume Module:												
Base Vol:	375	497	298	98	960	420	247	928	310	917	1506	47
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:	375	497	298	98	960	420	247	928	310	917	1506	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	375	497	298	98	960	420	247	928	310	917	1506	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	375	497	298	98	960	420	247	928	310	917	1506	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	375	497	298	98	960	420	247	928	310	917	1506	47
OvlAdjVol:						173						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	1.25	0.75	2.00	2.00	2.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	2101	1199	3200	3400	3200	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.24	0.25	0.03	0.28	0.13	0.08	0.18	0.19	0.29	0.22	0.03
OvlAdjV/S:						0.05						
Crit Moves:	****			****					****	****		

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Santa Ana Circulation Element

Scenario Report

Scenario:	2045 WP PM Peak Hour
Command:	Default Command
Volume:	2045 PM
Geometry:	SACE
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Santa Ana Circulation Element

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
# 1 Euclid St and 1st St	C	xxxxx	0.787	C	xxxxx	0.787	+ 0.000 V/C
# 2 Euclid St and McFadden Ave	C	xxxxx	0.793	C	xxxxx	0.793	+ 0.000 V/C
# 3 Euclid St and Edinger Ave	D	xxxxx	0.860	D	xxxxx	0.860	+ 0.000 V/C
# 4 Newhope St and Hazard Ave	A	xxxxx	0.516	A	xxxxx	0.516	+ 0.000 V/C
# 5 Newhope St and McFadden Ave	B	xxxxx	0.684	B	xxxxx	0.684	+ 0.000 V/C
# 6 Harbor Blvd and SR-22 WB Off-R	C	23.8	0.769	C	23.8	0.769	+ 0.000 D/V
# 7 Trask Avenue and SR-22 EB On-R	B	11.0	0.381	B	11.0	0.381	+ 0.000 D/V
# 8 Harbor Blvd and Westminster Av	D	xxxxx	0.842	D	xxxxx	0.842	+ 0.000 V/C
# 9 Harbor Blvd and 1st St	C	xxxxx	0.753	C	xxxxx	0.753	+ 0.000 V/C
# 10 Harbor Blvd and McFadden Ave	C	xxxxx	0.711	C	xxxxx	0.711	+ 0.000 V/C
# 11 Harbor Blvd and Edinger Ave	C	xxxxx	0.722	C	xxxxx	0.722	+ 0.000 V/C
# 12 Harbor Blvd and Warner Ave	F	xxxxx	1.539	F	xxxxx	1.539	+ 0.000 V/C
# 13 Harbor Blvd and Segerstrom Ave	E	xxxxx	0.934	E	xxxxx	0.934	+ 0.000 V/C
# 14 MacArthur Blvd and Hyland Ave	D	xxxxx	0.891	D	xxxxx	0.891	+ 0.000 V/C
# 15 MacArthur Blvd and Harbor Blvd	C	xxxxx	0.788	C	xxxxx	0.788	+ 0.000 V/C
# 16 Harbor Blvd and Sunflower Ave	C	xxxxx	0.711	C	xxxxx	0.711	+ 0.000 V/C
# 17 Harbor Blvd and I-405 NB Off-R	B	18.8	0.710	B	18.8	0.710	+ 0.000 D/V
# 18 Harbor Blvd and I-405 SB Off-R	B	18.1	0.673	B	18.1	0.673	+ 0.000 D/V
# 19 Fairview St and Civic Center D	C	xxxxx	0.707	C	xxxxx	0.707	+ 0.000 V/C
# 20 Fairview St and 1st St	D	xxxxx	0.894	D	xxxxx	0.894	+ 0.000 V/C
# 21 Fairview St and McFadden Ave	B	xxxxx	0.684	B	xxxxx	0.684	+ 0.000 V/C
# 22 Fairview St and Edinger Ave	E	xxxxx	0.920	E	xxxxx	0.920	+ 0.000 V/C
# 23 Fairview St and Warner Ave	D	xxxxx	0.805	D	xxxxx	0.805	+ 0.000 V/C
# 24 Fairview St and MacArthur Blvd	C	xxxxx	0.761	C	xxxxx	0.761	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Del/ Veh	V/ C	Future LOS	Del/ Veh	V/ C	Change in
# 25 Fairview Rd and Sunflower Ave	B	xxxxx	0.691	B	xxxxx	0.691	+ 0.000 V/C
# 26 Greenville St and Edinger Ave	B	xxxxx	0.647	B	xxxxx	0.647	+ 0.000 V/C
# 27 Greenville St and Segerstrom A	C	xxxxx	0.797	C	xxxxx	0.797	+ 0.000 V/C
# 28 Raitt St and McFadden Ave	B	xxxxx	0.676	B	xxxxx	0.676	+ 0.000 V/C
# 29 Raitt St and Edinger Ave	E	xxxxx	0.988	E	xxxxx	0.988	+ 0.000 V/C
# 30 Bear St and MacArthur Blvd	E	xxxxx	0.904	E	xxxxx	0.904	+ 0.000 V/C
# 31 Bristol St and 17th St	D	xxxxx	0.811	D	xxxxx	0.811	+ 0.000 V/C
# 32 Bristol St and Civic Center Dr	D	xxxxx	0.898	D	xxxxx	0.898	+ 0.000 V/C
# 33 Bristol St and Santa Ana Blvd	C	xxxxx	0.732	C	xxxxx	0.732	+ 0.000 V/C
# 34 Bristol St and 1st St	E	xxxxx	0.972	E	xxxxx	0.972	+ 0.000 V/C
# 35 Bristol St and McFadden Ave	D	xxxxx	0.890	D	xxxxx	0.890	+ 0.000 V/C
# 36 Bristol St and Warner Ave	D	xxxxx	0.871	D	xxxxx	0.871	+ 0.000 V/C
# 37 Bristol St and Segerstrom Ave	E	xxxxx	0.915	E	xxxxx	0.915	+ 0.000 V/C
# 38 Bristol St and Alton Ave	A	xxxxx	0.583	A	xxxxx	0.583	+ 0.000 V/C
# 39 Bristol St and MacArthur Blvd	C	xxxxx	0.796	C	xxxxx	0.796	+ 0.000 V/C
# 40 Bristol St and Sunflower Ave	C	xxxxx	0.744	C	xxxxx	0.744	+ 0.000 V/C
# 41 Bristol St and I-405 NB Ramps	C	29.0	0.854	C	29.0	0.854	+ 0.000 D/V
# 42 Bristol St and I-405 SB Ramps	B	18.2	0.631	B	18.2	0.631	+ 0.000 D/V
# 43 Flower St and Santa Ana Blvd	B	xxxxx	0.668	B	xxxxx	0.668	+ 0.000 V/C
# 44 Flower St and 1st St	F	xxxxx	1.215	F	xxxxx	1.215	+ 0.000 V/C
# 45 Flower St and McFadden Ave	E	xxxxx	0.968	E	xxxxx	0.968	+ 0.000 V/C
# 46 Flower St and Segerstrom Ave	E	xxxxx	0.916	E	xxxxx	0.916	+ 0.000 V/C
# 47 Flower St and MacArthur Blvd	E	xxxxx	0.908	E	xxxxx	0.908	+ 0.000 V/C
# 48 Main St and La Veta Ave	C	xxxxx	0.764	C	xxxxx	0.764	+ 0.000 V/C
# 49 Main St and Mainplace Dr / Mem	A	xxxxx	0.504	A	xxxxx	0.504	+ 0.000 V/C
# 50 Main St and 17th St	C	xxxxx	0.799	C	xxxxx	0.799	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 51 Main St and Civic Center Dr	D	xxxxx	0.856	D	xxxxx	0.856	+ 0.000 V/C
# 52 Main St and Santa Ana Blvd	C	xxxxx	0.700	C	xxxxx	0.700	+ 0.000 V/C
# 53 Main St and 4th St	A	xxxxx	0.472	A	xxxxx	0.472	+ 0.000 V/C
# 54 Main St and 1st St	D	xxxxx	0.803	D	xxxxx	0.803	+ 0.000 V/C
# 55 Main St and McFadden Ave	E	xxxxx	0.935	E	xxxxx	0.935	+ 0.000 V/C
# 56 Main St and Edinger Ave	E	xxxxx	0.977	E	xxxxx	0.977	+ 0.000 V/C
# 57 Main St and MacArthur Blvd	C	xxxxx	0.781	C	xxxxx	0.781	+ 0.000 V/C
# 58 Penn Wy and 17th St	C	20.3	0.790	C	20.3	0.790	+ 0.000 D/V
# 59 I-5 NB Off Ramps/17th Street	C	20.3	0.630	C	20.3	0.630	+ 0.000 D/V
# 60 Penn Wy and I-5 SB Ramps	C	22.8	0.433	C	22.8	0.433	+ 0.000 D/V
# 61 Santiago St and Civic Center D	D	27.6	0.896	D	27.6	0.896	+ 0.000 V/C
# 62 Santiago St and Santa Ana Blvd	F	xxxxx	1.411	F	xxxxx	1.411	+ 0.000 V/C
# 63 Standard Ave and 4th St	F	xxxxx	1.341	F	xxxxx	1.341	+ 0.000 V/C
# 64 Standard Ave and 1st St	F	xxxxx	1.484	F	xxxxx	1.484	+ 0.000 V/C
# 65 Standard Ave and Mcfadden Ave	C	xxxxx	0.769	C	xxxxx	0.769	+ 0.000 V/C
# 66 Halladay St and Warner Ave	D	xxxxx	0.822	D	xxxxx	0.822	+ 0.000 V/C
# 67 Halladay St and Dyer Rd	E	xxxxx	0.945	E	xxxxx	0.945	+ 0.000 V/C
# 68 SR-55 SB Ramps and MacArthur B	B	18.4	0.602	B	18.4	0.602	+ 0.000 D/V
# 69 SR-55 NB Ramps and MacArthur B	B	16.2	0.511	B	16.2	0.511	+ 0.000 D/V
# 70 SR-55 SB Ramps and Dyer Rd	C	26.5	0.679	C	26.5	0.679	+ 0.000 D/V
# 71 Glassell St and La Veta Ave	C	xxxxx	0.766	C	xxxxx	0.766	+ 0.000 V/C
# 72 Glassell St and SR-22 WB Ramps	C	33.4	0.943	C	33.4	0.943	+ 0.000 D/V
# 73 Grand Ave / Glassell St and SR	C	31.8	0.927	C	31.8	0.927	+ 0.000 D/V
# 74 Grand Ave and Fairhaven Ave	C	xxxxx	0.711	C	xxxxx	0.711	+ 0.000 V/C
# 75 Grand Ave and Santa Clara Ave	D	xxxxx	0.842	D	xxxxx	0.842	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 76 Grand Ave and 17th St	F	xxxxx	1.022	F	xxxxx	1.022	+ 0.000 V/C
# 77 Grand Ave and I-5 NB Ramps	B	11.3	0.764	B	11.3	0.764	+ 0.000 D/V
# 78 Grand Ave and Santa Ana Blvd	C	28.5	0.827	C	28.5	0.827	+ 0.000 D/V
# 79 Grand Ave and 1st St	C	xxxxx	0.718	C	xxxxx	0.718	+ 0.000 V/C
# 80 Grand Ave and Chestnut Ave	C	xxxxx	0.783	C	xxxxx	0.783	+ 0.000 V/C
# 81 Grand Ave and McFadden Ave	D	xxxxx	0.813	D	xxxxx	0.813	+ 0.000 V/C
# 82 Grand Ave and Edinger Ave	F	xxxxx	1.079	F	xxxxx	1.079	+ 0.000 V/C
# 83 Grand Ave and Warner Ave	D	xxxxx	0.899	D	xxxxx	0.899	+ 0.000 V/C
# 84 SR-55 NB Ramps and Dyer Rd	A	6.0	0.349	A	6.0	0.349	+ 0.000 D/V
# 85 Cambridge St and La Veta Ave	D	26.1	0.938	D	26.1	0.938	+ 0.000 V/C
# 86 Cambridge St and Fairhaven Ave	A	xxxxx	0.531	A	xxxxx	0.531	+ 0.000 V/C
# 87 Mabury St and 1st Street	C	27.2	0.752	C	27.2	0.752	+ 0.000 D/V
# 88 Tustin St and La Veta Ave	A	xxxxx	0.344	A	xxxxx	0.344	+ 0.000 V/C
# 89 Tustin St and SR-22 WB On-Ramp	A	7.7	0.321	A	7.7	0.321	+ 0.000 D/V
# 90 Tustin St and SR-22 EB Off-Ram	C	23.3	0.625	C	23.3	0.625	+ 0.000 D/V
# 91 Tustin Ave and Fairhaven Ave	C	xxxxx	0.708	C	xxxxx	0.708	+ 0.000 V/C
# 92 Tustin Ave and Santa Clara Ave	A	xxxxx	0.527	A	xxxxx	0.527	+ 0.000 V/C
# 93 Tustin Ave and 17th St	C	xxxxx	0.704	C	xxxxx	0.704	+ 0.000 V/C
# 94 Tustin Ave and 4th St	C	xxxxx	0.784	C	xxxxx	0.784	+ 0.000 V/C
# 95 SR-55 SB Ramps / Auto Mall Dr	C	25.4	0.687	C	25.4	0.687	+ 0.000 D/V
# 96 SR-55 NB Ramps / Del Amo Ave a	D	46.2	0.951	D	46.2	0.951	+ 0.000 D/V
# 97 Red Hill Ave and Edinger Ave	D	xxxxx	0.865	D	xxxxx	0.865	+ 0.000 V/C
# 98 Red Hill Ave and Warner Ave	E	xxxxx	0.902	E	xxxxx	0.902	+ 0.000 V/C
# 99 Red Hill Ave and Dyer Rd / bar	A	xxxxx	0.591	A	xxxxx	0.591	+ 0.000 V/C
#100 Red Hill Ave and Alton Pkwy	F	xxxxx	1.494	F	xxxxx	1.494	+ 0.000 V/C
#101 Red Hill Ave and MacArthur Blv	F	xxxxx	1.401	F	xxxxx	1.401	+ 0.000 V/C

Santa Ana Circulation Element

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
#102 Red Hill Ave and Main St	D	xxxxx	0.836	D	xxxxx	0.836	+ 0.000 V/C
#103 I-5 SB Ramps and Santa Ana Blv	B	19.9	0.444	B	19.9	0.444	+ 0.000 D/V
#104 Tustin Ranch Rd and Warner Ave	B	xxxxx	0.671	B	xxxxx	0.671	+ 0.000 V/C
#105 Von Karman Ave and Barranca Pk	F	xxxxx	1.284	F	xxxxx	1.284	+ 0.000 V/C

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #1 Euclid St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.787
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			WideBypass			WideBypass		
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	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	165	1532	123	137	781	148	201	641	100	168	702	168
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:	165	1532	123	137	781	148	201	641	100	168	702	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	165	1532	123	137	781	148	201	641	100	168	702	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	165	1532	123	137	781	148	201	641	100	168	702	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	165	1532	123	137	781	148	201	641	100	168	702	168
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.78	0.22	1.00	2.52	0.48	1.00	2.60	0.40	1.00	2.42	0.58
Final Sat.:	1600	4643	357	1600	4235	765	1600	4352	648	1600	4073	927
Capacity Analysis Module:												
Vol/Sat:	0.10	0.33	0.34	0.09	0.18	0.19	0.13	0.15	0.15	0.11	0.17	0.18
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #2 Euclid St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.793
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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:	WideBypass			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:	248	2020	130	87	1070	130	134	307	136	86	359	166
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:	248	2020	130	87	1070	130	134	307	136	86	359	166
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	248	2020	130	87	1070	130	134	307	136	86	359	166
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	248	2020	130	87	1070	130	134	307	136	86	359	166
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	248	2020	130	87	1070	130	134	307	136	86	359	166
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.82	0.18	1.00	2.68	0.32	1.00	1.39	0.61	1.00	1.37	0.63
Final Sat.:	1600	4710	290	1600	4480	520	1600	2318	982	1600	2288	1012
Capacity Analysis Module:												
Vol/Sat:	0.16	0.43	0.45	0.05	0.24	0.25	0.08	0.13	0.14	0.05	0.16	0.16
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Euclid St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.860
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	69	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	2 1	0	2 0	2 1	0	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	551	1648	117	136	897	228	121	467	140	119	1103	179
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:	551	1648	117	136	897	228	121	467	140	119	1103	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	551	1648	117	136	897	228	121	467	140	119	1103	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	551	1648	117	136	897	228	121	467	140	119	1103	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	551	1648	117	136	897	228	121	467	140	119	1103	179
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.80	0.20	2.00	2.39	0.61	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	3200	4682	318	3200	4027	973	1600	3400	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.17	0.35	0.37	0.04	0.22	0.23	0.08	0.14	0.09	0.07	0.32	0.11
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #4 Newhope St and Hazard Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.516
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			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	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	102	1129	44	45	954	114	33	66	40	8	51	15
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	1129	44	45	954	114	33	66	40	8	51	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:	102	1129	44	45	954	114	33	66	40	8	51	15
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	1129	44	45	954	114	33	66	40	8	51	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:	102	1129	44	45	954	114	33	66	40	8	51	15
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.92	0.08	1.00	1.79	0.21	1.00	0.62	0.38	1.00	0.77	0.23
Final Sat.:	1600	3180	120	1600	2958	342	1600	996	604	1600	1236	364
Capacity Analysis Module:												
Vol/Sat:	0.06	0.36	0.37	0.03	0.32	0.33	0.02	0.07	0.07	0.01	0.04	0.04
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #5 Newhope St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.684
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			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	1	1 0	1 0	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	188	1009	177	121	539	104	45	273	40	72	398	113
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:	188	1009	177	121	539	104	45	273	40	72	398	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:	188	1009	177	121	539	104	45	273	40	72	398	113
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	1009	177	121	539	104	45	273	40	72	398	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:	188	1009	177	121	539	104	45	273	40	72	398	113
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	1.70	0.30	1.00	1.68	0.32	1.00	1.74	0.26	1.00	1.56	0.44
Final Sat.:	1600	2822	478	1600	2782	518	1600	2891	409	1600	2592	708
Capacity Analysis Module:												
Vol/Sat:	0.12	0.36	0.37	0.08	0.19	0.20	0.03	0.09	0.10	0.05	0.15	0.16
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #6 Harbor Blvd and SR-22 WB Off-Ramp / Banner Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.769
Loss Time (sec):	5	Average Delay (sec/veh):	23.8
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			Split Phase			Split Phase		
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 0	0	0 2	1 0	0	0 1!	0 0	1	1 0	0 1
Volume Module:												
Base Vol:	103	2324	0	0	1823	59	102	0	86	558	75	160
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:	103	2324	0	0	1823	59	102	0	86	558	75	160
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	2324	0	0	1823	59	102	0	86	558	75	160
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	2324	0	0	1823	59	102	0	86	558	75	160
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	2324	0	0	1823	59	102	0	86	558	75	160
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.91	1.00	0.91	0.96	0.96	0.85
Lanes:	1.00	3.00	0.00	0.00	2.91	0.09	0.54	0.00	0.46	1.76	0.24	1.00
Final Sat.:	1805	5187	0	0	4999	162	942	0	794	3209	431	1615
Capacity Analysis Module:												
Vol/Sat:	0.06	0.45	0.00	0.00	0.36	0.36	0.11	0.00	0.11	0.17	0.17	0.10
Crit Moves:		****		****			****				****	
Green/Cycle:	0.08	0.58	0.00	0.00	0.50	0.50	0.14	0.00	0.14	0.23	0.23	0.23
Volume/Cap:	0.72	0.77	0.00	0.00	0.72	0.72	0.77	0.00	0.77	0.77	0.77	0.44
Delay/Veh:	61.7	17.0	0.0	0.0	20.4	20.4	55.1	0.0	55.1	40.7	40.7	34.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	61.7	17.0	0.0	0.0	20.4	20.4	55.1	0.0	55.1	40.7	40.7	34.1
LOS by Move:	E	B	A	A	C	C	E	A	E	D	D	C
HCM2k85thQ:	7	30	0	0	26	26	11	0	11	17	17	7

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #7 Trask Avenue and SR-22 EB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.381
Loss Time (sec):	5	Average Delay (sec/veh):	11.0
Optimal Cycle:	20	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:	0 0	0 0	0	0 0	0 0	0	2 0	1 0	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	0	0	0	0	0	785	588	0	0	449	42
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	0	0	0	0	0	785	588	0	0	449	42
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	0	0	0	785	588	0	0	449	42
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	0	0	0	785	588	0	0	449	42
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	0	0	0	785	588	0	0	449	42
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	0.92	1.00	1.00	1.00	0.94	0.94
Lanes:	0.00	0.00	0.00	0.00	0.00	0.00	2.00	1.00	0.00	0.00	1.83	0.17
Final Sat.:	0	0	0	0	0	0	3502	1900	0	0	3258	305
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.00	0.00	0.00	0.22	0.31	0.00	0.00	0.14	0.14
Crit Moves:							****				****	
Green/Cycle:	0.00	0.00	0.00	0.00	0.00	0.00	0.59	0.95	0.00	0.00	0.36	0.36
Volume/Cap:	0.00	0.00	0.00	0.00	0.00	0.00	0.38	0.33	0.00	0.00	0.38	0.38
Delay/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.3	0.0	0.0	23.8	23.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	0.0	0.0	0.0	11.0	0.3	0.0	0.0	23.8	23.8
LOS by Move:	A	A	A	A	A	A	B	A	A	A	C	C
HCM2k85thQ:	0	0	0	0	0	0	10	3	0	0	9	9

Note: Queue reported is the number of cars per lane.

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #8 Harbor Blvd and Westminster Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.842
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	145	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:	WideBypass			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	1 0	3 0	1	1 0	2 1	0	1 0	3 0	1
Volume Module:												
Base Vol:	222	1106	262	254	1752	202	227	808	39	294	1018	231
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:	222	1106	262	254	1752	202	227	808	39	294	1018	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:	222	1106	262	254	1752	202	227	808	39	294	1018	231
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	222	1106	262	254	1752	202	227	808	39	294	1018	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:	222	1106	262	254	1752	202	227	808	39	294	1018	231
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.86	0.14	1.00	3.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	4779	221	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.14	0.22	0.16	0.16	0.34	0.13	0.14	0.17	0.18	0.18	0.20	0.14
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #9 Harbor Blvd and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.753
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:	1 0	3 0	1	1 0	3 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	280	1446	160	240	1053	142	192	784	148	185	865	141
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:	280	1446	160	240	1053	142	192	784	148	185	865	141
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	280	1446	160	240	1053	142	192	784	148	185	865	141
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	280	1446	160	240	1053	142	192	784	148	185	865	141
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	280	1446	160	240	1053	142	192	784	148	185	865	141
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	2.00	2.52	0.48	2.00	2.58	0.42
Final Sat.:	1600	5100	1600	1600	5100	1600	3200	4238	762	3200	4327	673
Capacity Analysis Module:												
Vol/Sat:	0.17	0.28	0.10	0.15	0.21	0.09	0.06	0.19	0.19	0.06	0.20	0.21
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #10 Harbor Blvd and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.711
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:	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	2 1	0	1 0	1 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	182	1866	136	261	1114	101	147	358	45	63	151	43
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:	182	1866	136	261	1114	101	147	358	45	63	151	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	182	1866	136	261	1114	101	147	358	45	63	151	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	1866	136	261	1114	101	147	358	45	63	151	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	182	1866	136	261	1114	101	147	358	45	63	151	43
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00
Lanes:	2.00	3.00	1.00	2.00	2.75	0.25	1.00	1.78	0.22	1.00	0.78	0.22
Final Sat.:	3200	5100	1600	3200	4601	399	1600	2943	357	1600	1245	355
Capacity Analysis Module:												
Vol/Sat:	0.06	0.37	0.09	0.08	0.24	0.25	0.09	0.12	0.13	0.04	0.12	0.12
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #11 Harbor Blvd and 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			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	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	262	1645	199	283	822	75	109	460	81	188	1089	363
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:	262	1645	199	283	822	75	109	460	81	188	1089	363
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	262	1645	199	283	822	75	109	460	81	188	1089	363
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	1645	199	283	822	75	109	460	81	188	1089	363
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	262	1645	199	283	822	75	109	460	81	188	1089	363
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.55	0.45	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4281	719	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.32	0.12	0.09	0.16	0.05	0.03	0.11	0.11	0.06	0.21	0.23
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #12 Harbor Blvd and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.539
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	3 0	1	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	768	3685	277	250	1389	166	198	1399	320	253	2626	838
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:	768	3685	277	250	1389	166	198	1399	320	253	2626	838
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	768	3685	277	250	1389	166	198	1399	320	253	2626	838
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	768	3685	277	250	1389	166	198	1399	320	253	2626	838
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	768	3685	277	250	1389	166	198	1399	320	253	2626	838
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.79	0.21	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4664	336	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.24	0.79	0.83	0.08	0.27	0.10	0.06	0.27	0.20	0.08	0.51	0.52
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Harbor Blvd and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.934
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			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:	2 0	2 1	0	1 0	2 1	0	1 0	1 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	275	1732	55	86	973	86	118	585	192	121	1308	475
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	1732	55	86	973	86	118	585	192	121	1308	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:	275	1732	55	86	973	86	118	585	192	121	1308	475
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	275	1732	55	86	973	86	118	585	192	121	1308	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:	275	1732	55	86	973	86	118	585	192	121	1308	475
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.91	0.09	1.00	2.76	0.24	1.00	1.51	0.49	1.00	2.00	1.00
Final Sat.:	3200	4852	148	1600	4610	390	1600	2509	791	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.36	0.37	0.05	0.21	0.22	0.07	0.23	0.24	0.08	0.38	0.30
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #14 MacArthur Blvd and Hyland Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.891
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	82	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			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:	2 0	0 1	0	1 0	1 0	1	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	1139	7	66	12	4	14	35	869	156	25	2320	12
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:	1139	7	66	12	4	14	35	869	156	25	2320	12
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	1139	7	66	12	4	14	35	869	156	25	2320	12
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	1139	7	66	12	4	14	35	869	156	25	2320	12
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	1139	7	66	12	4	14	35	869	156	25	2320	12
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	0.10	0.90	1.00	1.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	153	1447	1600	1700	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.36	0.05	0.05	0.01	0.00	0.01	0.02	0.17	0.10	0.02	0.45	0.01
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #15 MacArthur Blvd and Harbor Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.788
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
Y+R:	4.0	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	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	527	1362	79	206	1039	170	143	501	185	85	1429	269
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:	527	1362	79	206	1039	170	143	501	185	85	1429	269
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	527	1362	79	206	1039	170	143	501	185	85	1429	269
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	527	1362	79	206	1039	170	143	501	185	85	1429	269
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	527	1362	79	206	1039	170	143	501	185	85	1429	269
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.16	0.27	0.05	0.06	0.20	0.11	0.09	0.10	0.12	0.05	0.28	0.17
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #16 Harbor Blvd and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.711
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:	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	1 0	1 1	0	1 1	0 1	0
Volume Module:												
Base Vol:	156	1552	230	118	1464	44	85	230	239	282	592	221
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:	156	1552	230	118	1464	44	85	230	239	282	592	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:	156	1552	230	118	1464	44	85	230	239	282	592	221
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	156	1552	230	118	1464	44	85	230	239	282	592	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:	156	1552	230	118	1464	44	85	230	239	282	592	221
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	1.00	1.00	1.00	1.39	0.61
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	1700	1600	1600	2322	974
Capacity Analysis Module:												
Vol/Sat:	0.05	0.30	0.14	0.04	0.29	0.03	0.05	0.14	0.15	0.18	0.25	0.23
Crit Moves:	****			****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #17 Harbor Blvd and I-405 NB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.710
Loss Time (sec):	5	Average Delay (sec/veh):	18.8
Optimal Cycle:	40	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			Split Phase			Split Phase		
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	4	0 0	0 0	4	0 0	0 0	0	0 0	1 0	1!	0 1
Volume Module:												
Base Vol:	0	1488	0	0	2570	0	0	0	0	513	0	828
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	1488	0	0	2570	0	0	0	0	513	0	828
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1488	0	0	2570	0	0	0	0	513	0	828
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1488	0	0	2570	0	0	0	0	513	0	828
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1488	0	0	2570	0	0	0	0	513	0	828
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	1.00	1.00	1.00	0.89	1.00	0.89
Lanes:	0.00	4.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	1.38	0.00	1.62
Final Sat.:	0	6916	0	0	6916	0	0	0	0	2337	0	2734
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.00	0.00	0.37	0.00	0.00	0.00	0.00	0.22	0.00	0.30
Crit Moves:	****				****							****
Green/Cycle:	0.00	0.52	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.43	0.00	0.43
Volume/Cap:	0.00	0.41	0.00	0.00	0.71	0.00	0.00	0.00	0.00	0.51	0.00	0.71
Delay/Veh:	0.0	14.5	0.0	0.0	18.7	0.0	0.0	0.0	0.0	21.2	0.0	24.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	14.5	0.0	0.0	18.7	0.0	0.0	0.0	0.0	21.2	0.0	24.9
LOS by Move:	A	B	A	A	B	A	A	A	A	C	A	C
HCM2k85thQ:	0	12	0	0	25	0	0	0	0	13	0	21

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #18 Harbor Blvd and I-405 SB Off-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.673
Loss Time (sec):	5	Average Delay (sec/veh):	18.1
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			Split Phase			Split Phase		
Rights:	Ignore			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 3	0 1	0	0 4	0 0	1	0 1!	0 1	0	0 0	0 0
Volume Module:												
Base Vol:	0	1881	0	0	2254	0	181	0	833	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:	0	1881	0	0	2254	0	181	0	833	0	0	0
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	1881	0	0	2254	0	181	0	833	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1881	0	0	2254	0	181	0	833	0	0	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1881	0	0	2254	0	181	0	833	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	1.00	1.00	0.91	1.00	0.87	1.00	0.87	1.00	1.00	1.00
Lanes:	0.00	3.00	1.00	0.00	4.00	0.00	1.18	0.00	1.82	0.00	0.00	0.00
Final Sat.:	0	5187	1900	0	6916	0	1946	0	3008	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.00	0.00	0.33	0.00	0.09	0.00	0.28	0.00	0.00	0.00
Crit Moves:		****			****				****			
Green/Cycle:	0.00	0.54	0.00	0.00	0.54	0.00	0.41	0.00	0.41	0.00	0.00	0.00
Volume/Cap:	0.00	0.67	0.00	0.00	0.61	0.00	0.23	0.00	0.67	0.00	0.00	0.00
Delay/Veh:	0.0	17.4	0.0	0.0	16.1	0.0	19.1	0.0	25.2	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	17.4	0.0	0.0	16.1	0.0	19.1	0.0	25.2	0.0	0.0	0.0
LOS by Move:	A	B	A	A	B	A	B	A	C	A	A	A
HCM2k85thQ:	0	23	0	0	20	0	5	0	18	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #19 Fairview St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.707
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			Split Phase			Split Phase		
Rights:	WideBypass			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	1 0	1 1	0	0 1
Volume Module:												
Base Vol:	6	1777	499	205	1903	0	2	6	4	164	0	61
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:	6	1777	499	205	1903	0	2	6	4	164	0	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:	6	1777	499	205	1903	0	2	6	4	164	0	61
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	6	1777	499	205	1903	0	2	6	4	164	0	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:	6	1777	499	205	1903	0	2	6	4	164	0	61
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	2.34	0.66	1.00	3.00	0.00	0.33	1.00	0.67	2.00	0.00	1.00
Final Sat.:	1600	3948	1052	1600	5000	0	533	1600	1067	3200	0	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.45	0.47	0.13	0.38	0.00	0.00	0.00	0.00	0.05	0.00	0.04
Crit Moves:			****	****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #20 Fairview St and 1st St

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
Y+R:	4.0	4.0	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	2 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	182	1339	121	236	1468	291	215	870	151	126	952	147
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:	182	1339	121	236	1468	291	215	870	151	126	952	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:	182	1339	121	236	1468	291	215	870	151	126	952	147
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	182	1339	121	236	1468	291	215	870	151	126	952	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:	182	1339	121	236	1468	291	215	870	151	126	952	147
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	2.50	0.50	1.00	2.56	0.44	1.00	2.60	0.40
Final Sat.:	1600	5100	1600	1600	4206	794	1600	4290	710	1600	4358	642
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.08	0.15	0.35	0.37	0.13	0.20	0.21	0.08	0.22	0.23
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #21 Fairview St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.684
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
Y+R:	4.0	4.0	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	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	174	1596	139	195	1577	246	79	214	53	51	177	43
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:	174	1596	139	195	1577	246	79	214	53	51	177	43
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	174	1596	139	195	1577	246	79	214	53	51	177	43
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	174	1596	139	195	1577	246	79	214	53	51	177	43
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	174	1596	139	195	1577	246	79	214	53	51	177	43
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	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	1.00	0.80	0.20	1.00	0.80	0.20
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	1282	318	1600	1287	313
Capacity Analysis Module:												
Vol/Sat:	0.11	0.31	0.09	0.12	0.31	0.15	0.05	0.17	0.17	0.03	0.14	0.14
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #22 Fairview St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.920
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	100	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			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	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	190	1810	111	198	616	151	205	628	168	639	1353	297
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:	190	1810	111	198	616	151	205	628	168	639	1353	297
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1810	111	198	616	151	205	628	168	639	1353	297
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	1810	111	198	616	151	205	628	168	639	1353	297
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	190	1810	111	198	616	151	205	628	168	639	1353	297
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.83	0.17	2.00	2.41	0.59	2.00	2.37	0.63	2.00	2.46	0.54
Final Sat.:	3200	4723	277	3200	4055	945	3200	3987	1013	3200	4136	864
Capacity Analysis Module:												
Vol/Sat:	0.06	0.38	0.40	0.06	0.15	0.16	0.06	0.16	0.17	0.20	0.33	0.34
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #23 Fairview St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.805
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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	2 1	0	2 0	2 1	0	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	211	1679	156	179	906	92	163	792	123	178	1049	227
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:	211	1679	156	179	906	92	163	792	123	178	1049	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:	211	1679	156	179	906	92	163	792	123	178	1049	227
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	1679	156	179	906	92	163	792	123	178	1049	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:	211	1679	156	179	906	92	163	792	123	178	1049	227
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	2.00	2.74	0.26	2.00	2.72	0.28	2.00	2.60	0.40	2.00	2.47	0.53
Final Sat.:	3200	4592	408	3200	4558	442	3200	4355	645	3200	4146	854
Capacity Analysis Module:												
Vol/Sat:	0.07	0.37	0.38	0.06	0.20	0.21	0.05	0.18	0.19	0.06	0.25	0.27
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #24 Fairview St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.761
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
Y+R:	4.0	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 3	0 1		2 0 3	0 1		2 0 3	0 1	
Volume Module:												
Base Vol:	228	1568	85	162	902	83	253	661	223	159	1210	212
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:	228	1568	85	162	902	83	253	661	223	159	1210	212
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	228	1568	85	162	902	83	253	661	223	159	1210	212
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	228	1568	85	162	902	83	253	661	223	159	1210	212
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	228	1568	85	162	902	83	253	661	223	159	1210	212
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.85	0.15	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	4753	247	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.33	0.34	0.05	0.18	0.05	0.08	0.13	0.14	0.05	0.24	0.13
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #25 Fairview Rd and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.691
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:	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	2 1	0	2 0	1 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	190	1705	371	138	1145	79	245	520	115	208	522	136
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:	190	1705	371	138	1145	79	245	520	115	208	522	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1705	371	138	1145	79	245	520	115	208	522	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	190	1705	371	138	1145	79	245	520	115	208	522	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	190	1705	371	138	1145	79	245	520	115	208	522	136
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.81	0.19	2.00	1.64	0.36	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4690	310	3200	2720	580	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.33	0.23	0.04	0.24	0.26	0.08	0.19	0.20	0.07	0.15	0.09
Crit Moves:		****			****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #26 Greenville St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.647
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:	Split Phase			Split Phase			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	0	0 1	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	327	0	218	0	0	0	0	1178	240	155	1840	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:	327	0	218	0	0	0	0	1178	240	155	1840	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:	327	0	218	0	0	0	0	1178	240	155	1840	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	327	0	218	0	0	0	0	1178	240	155	1840	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:	327	0	218	0	0	0	0	1178	240	155	1840	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.49	0.51	1.00	3.00	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4188	812	1600	5100	0
Capacity Analysis Module:												
Vol/Sat:	0.20	0.00	0.14	0.00	0.00	0.00	0.00	0.28	0.30	0.10	0.36	0.00
Crit Moves:	****								****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #27 Greenville St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.797
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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:	Permitted			Permitted			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	50	414	31	44	143	44	138	1049	60	39	1490	213
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:	50	414	31	44	143	44	138	1049	60	39	1490	213
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	50	414	31	44	143	44	138	1049	60	39	1490	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	50	414	31	44	143	44	138	1049	60	39	1490	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	50	414	31	44	143	44	138	1049	60	39	1490	213
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	0.93	0.07	1.00	0.76	0.24	1.00	2.84	0.16	1.00	2.62	0.38
Final Sat.:	1600	1489	111	1600	1224	376	1600	4740	260	1600	4400	600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.28	0.28	0.03	0.12	0.12	0.09	0.22	0.23	0.02	0.34	0.35
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #28 Raitt St and McFadden 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
Y+R:	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lanes:	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	34	482	75	24	252	40	59	347	30	38	318	44
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:	34	482	75	24	252	40	59	347	30	38	318	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	34	482	75	24	252	40	59	347	30	38	318	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	34	482	75	24	252	40	59	347	30	38	318	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	34	482	75	24	252	40	59	347	30	38	318	44
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.87	0.13	1.00	0.86	0.14	1.00	0.92	0.08	1.00	0.88	0.12
Final Sat.:	1600	1385	215	1600	1381	219	1600	1473	127	1600	1406	194
Capacity Analysis Module:												
Vol/Sat:	0.02	0.35	0.35	0.02	0.18	0.18	0.04	0.24	0.24	0.02	0.23	0.23
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #29 Raitt St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.988
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	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			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	84	361	101	61	209	52	177	1226	175	195	2203	197
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:	84	361	101	61	209	52	177	1226	175	195	2203	197
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	361	101	61	209	52	177	1226	175	195	2203	197
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	84	361	101	61	209	52	177	1226	175	195	2203	197
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	84	361	101	61	209	52	177	1226	175	195	2203	197
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	0.78	0.22	1.00	0.80	0.20	1.00	2.63	0.37	1.00	2.75	0.25
Final Sat.:	1600	1250	350	1600	1281	319	1600	4400	600	1600	4606	394
Capacity Analysis Module:												
Vol/Sat:	0.05	0.29	0.29	0.04	0.16	0.16	0.11	0.28	0.29	0.12	0.48	0.50
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #30 Bear St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.904
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	89	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			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 0	1	1 0	2 0	1	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	262	1258	328	115	278	84	90	847	88	82	1475	235
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:	262	1258	328	115	278	84	90	847	88	82	1475	235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	262	1258	328	115	278	84	90	847	88	82	1475	235
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	1258	328	115	278	84	90	847	88	82	1475	235
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	262	1258	328	115	278	84	90	847	88	82	1475	235
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.72	0.28	1.00	2.59	0.41
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	4548	452	1600	4340	660
Capacity Analysis Module:												
Vol/Sat:	0.16	0.37	0.21	0.07	0.08	0.05	0.06	0.19	0.19	0.05	0.34	0.36
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #31 Bristol St and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.811
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	54	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			Ovl		
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	2 1	0	2 0	3 0	1
Volume Module:												
Base Vol:	370	1801	300	347	1847	314	243	543	98	280	1055	357
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:	370	1801	300	347	1847	314	243	543	98	280	1055	357
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	370	1801	300	347	1847	314	243	543	98	280	1055	357
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	370	1801	300	347	1847	314	243	543	98	280	1055	357
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	370	1801	300	347	1847	314	243	543	98	280	1055	357
OvlAdjVol:												183
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.54	0.46	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4266	734	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.35	0.19	0.11	0.36	0.20	0.08	0.13	0.13	0.09	0.21	0.22
OvlAdjV/S:												0.11
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #32 Bristol St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.898
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	85	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			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	2	1 0	1 0	0	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	214	1494	78	173	1589	163	130	366	43	149	635	72
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:	214	1494	78	173	1589	163	130	366	43	149	635	72
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	214	1494	78	173	1589	163	130	366	43	149	635	72
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	214	1494	78	173	1589	163	130	366	43	149	635	72
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	214	1494	78	173	1589	163	130	366	43	149	635	72
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.03	1.00
Lanes:	1.00	2.85	0.15	1.00	2.72	0.28	1.00	0.89	0.11	1.00	1.80	0.20
Final Sat.:	1600	4762	238	1600	4553	447	1600	1432	168	1600	2974	326
Capacity Analysis Module:												
Vol/Sat:	0.13	0.31	0.33	0.11	0.35	0.37	0.08	0.26	0.26	0.09	0.21	0.22
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #33 Bristol St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.732
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			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	2	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	85	1722	98	120	1597	60	70	194	45	125	199	54
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	1722	98	120	1597	60	70	194	45	125	199	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1722	98	120	1597	60	70	194	45	125	199	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	85	1722	98	120	1597	60	70	194	45	125	199	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	85	1722	98	120	1597	60	70	194	45	125	199	54
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.84	0.16	1.00	2.89	0.11	1.00	0.81	0.19	1.00	0.79	0.21
Final Sat.:	1600	4742	258	1600	4826	174	1600	1299	301	1600	1258	342
Capacity Analysis Module:												
Vol/Sat:	0.05	0.36	0.38	0.08	0.33	0.35	0.04	0.15	0.15	0.08	0.16	0.16
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Bristol St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.972
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	167	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			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	1 0	2 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	434	1872	276	216	1169	264	259	1454	186	155	953	90
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:	434	1872	276	216	1169	264	259	1454	186	155	953	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:	434	1872	276	216	1169	264	259	1454	186	155	953	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	434	1872	276	216	1169	264	259	1454	186	155	953	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:	434	1872	276	216	1169	264	259	1454	186	155	953	90
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.03	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	2.66	0.34	1.00	1.83	0.17
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	4456	544	1600	3024	276
Capacity Analysis Module:												
Vol/Sat:	0.14	0.37	0.17	0.07	0.23	0.17	0.16	0.33	0.34	0.10	0.32	0.33
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #35 Bristol St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.890
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	81	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			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	1 0	3 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	249	1833	99	116	1618	373	114	222	44	82	424	50
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:	249	1833	99	116	1618	373	114	222	44	82	424	50
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	249	1833	99	116	1618	373	114	222	44	82	424	50
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	249	1833	99	116	1618	373	114	222	44	82	424	50
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	249	1833	99	116	1618	373	114	222	44	82	424	50
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	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	1.00	0.83	0.17	1.00	0.89	0.11
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	1335	265	1600	1431	169
Capacity Analysis Module:												
Vol/Sat:	0.16	0.36	0.06	0.07	0.32	0.23	0.07	0.17	0.17	0.05	0.30	0.30
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #36 Bristol St and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.871
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
Y+R:	4.0	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	1 0	3 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	312	1170	213	343	1144	223	159	715	126	282	1662	487
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:	312	1170	213	343	1144	223	159	715	126	282	1662	487
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	312	1170	213	343	1144	223	159	715	126	282	1662	487
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	312	1170	213	343	1144	223	159	715	126	282	1662	487
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	312	1170	213	343	1144	223	159	715	126	282	1662	487
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.54	0.46	2.00	2.51	0.49	1.00	3.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4261	739	3200	4217	783	1600	5100	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.27	0.29	0.11	0.27	0.28	0.10	0.14	0.08	0.18	0.33	0.30
Crit Moves:		****	****				****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Bristol St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.915
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	96	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:	WideBypass			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	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	177	1309	231	98	894	187	279	998	79	156	1408	71
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:	177	1309	231	98	894	187	279	998	79	156	1408	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1309	231	98	894	187	279	998	79	156	1408	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	177	1309	231	98	894	187	279	998	79	156	1408	71
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	177	1309	231	98	894	187	279	998	79	156	1408	71
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.55	0.45	1.00	2.48	0.52	1.00	2.78	0.22	1.00	2.86	0.14
Final Sat.:	1600	4280	720	1600	4170	830	1600	4648	352	1600	4770	230
Capacity Analysis Module:												
Vol/Sat:	0.11	0.31	0.32	0.06	0.21	0.23	0.17	0.21	0.22	0.10	0.30	0.31
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #38 Bristol St and Alton Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.583
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			Permitted			Permitted		
Rights:	WideBypass			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	0 1	0
Volume Module:												
Base Vol:	43	1667	157	114	858	54	50	70	130	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:	43	1667	157	114	858	54	50	70	130	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:	43	1667	157	114	858	54	50	70	130	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	43	1667	157	114	858	54	50	70	130	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:	43	1667	157	114	858	54	50	70	130	0	0	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.74	0.26	1.00	3.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Final Sat.:	1600	4587	413	1600	5100	1600	1600	1700	1600	1600	1600	0
Capacity Analysis Module:												
Vol/Sat:	0.03	0.36	0.38	0.07	0.17	0.03	0.03	0.04	0.08	0.00	0.00	0.00
Crit Moves:			****	****					****			

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #39 Bristol St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.796
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	51	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	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	335	1428	260	237	871	137	357	796	169	247	1432	270
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:	335	1428	260	237	871	137	357	796	169	247	1432	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:	335	1428	260	237	871	137	357	796	169	247	1432	270
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	335	1428	260	237	871	137	357	796	169	247	1432	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:	335	1428	260	237	871	137	357	796	169	247	1432	270
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.59	0.41	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	4348	652	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.28	0.16	0.07	0.20	0.21	0.11	0.16	0.11	0.08	0.28	0.17
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #40 Bristol St and Sunflower Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.744
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
Y+R:	4.0	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	1	2 0	3 0	1	2 0	2 1	1	2 0	3 0	1
Volume Module:												
Base Vol:	687	1452	234	226	844	242	391	764	296	254	976	311
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:	687	1452	234	226	844	242	391	764	296	254	976	311
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	687	1452	234	226	844	242	391	764	296	254	976	311
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	687	1452	234	226	844	242	391	764	296	254	976	311
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	687	1452	234	226	844	242	391	764	296	254	976	311
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	2.88	1.12	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	4813	1787	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.21	0.28	0.15	0.07	0.17	0.15	0.12	0.16	0.17	0.08	0.19	0.19
Crit Moves:	****				****		****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #41 Bristol St and I-405 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.854
Loss Time (sec):	5	Average Delay (sec/veh):	29.0
Optimal Cycle:	69	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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 4	0 1	0	0 4	1 0	0	0 0	0 2	1	1 1	0 2
Volume Module:												
Base Vol:	0	2235	195	0	2458	23	0	0	204	357	306	1184
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	2235	195	0	2458	23	0	0	204	357	306	1184
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	2235	195	0	2458	23	0	0	204	357	306	1184
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2235	195	0	2458	23	0	0	204	357	306	1184
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	2235	195	0	2458	23	0	0	204	357	306	1184
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.85	1.00	0.91	0.91	1.00	1.00	0.75	0.93	0.93	0.75
Lanes:	0.00	4.00	1.00	0.00	4.95	0.05	0.00	0.00	2.00	1.62	1.38	2.00
Final Sat.:	0	6916	1615	0	8556	80	0	0	2842	2840	2434	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.32	0.12	0.00	0.29	0.29	0.00	0.00	0.07	0.13	0.13	0.42
Crit Moves:		****			****				****			****
Green/Cycle:	0.00	0.38	0.38	0.00	0.38	0.38	0.00	0.00	0.08	0.49	0.49	0.49
Volume/Cap:	0.00	0.85	0.32	0.00	0.76	0.76	0.00	0.00	0.85	0.26	0.26	0.85
Delay/Veh:	0.0	31.5	22.3	0.0	28.2	28.2	0.0	0.0	69.8	15.1	15.1	27.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	31.5	22.3	0.0	28.2	28.2	0.0	0.0	69.8	15.1	15.1	27.9
LOS by Move:	A	C	C	A	C	C	A	A	E	B	B	C
HCM2k85thQ:	0	29	7	0	24	24	0	0	9	6	6	30

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #42 Bristol St and I-405 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.631
Loss Time (sec):	5	Average Delay (sec/veh):	18.2
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			Split Phase			Split Phase		
Rights:	Include			Ignore			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	4 0	0	0 0	2 1	1	3 0	0 0	1	0 0	0 0	0
Volume Module:												
Base Vol:	135	1647	0	0	1657	968	740	0	331	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:	135	1647	0	0	1657	968	740	0	331	0	0	0
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:	135	1647	0	0	1657	0	740	0	331	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	1647	0	0	1657	0	740	0	331	0	0	0
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:	135	1647	0	0	1657	0	740	0	331	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	1.00	1.00	0.91	0.91	0.92	1.00	0.85	1.00	1.00	1.00
Lanes:	1.00	4.00	0.00	0.00	3.00	1.00	3.00	0.00	1.00	0.00	0.00	0.00
Final Sat.:	1805	6916	0	0	5187	1729	5253	0	1615	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.07	0.24	0.00	0.00	0.32	0.00	0.14	0.00	0.20	0.00	0.00	0.00
Crit Moves:	****				****				****			
Green/Cycle:	0.12	0.63	0.00	0.00	0.51	0.00	0.32	0.00	0.32	0.00	0.00	0.00
Volume/Cap:	0.63	0.38	0.00	0.00	0.63	0.00	0.43	0.00	0.63	0.00	0.00	0.00
Delay/Veh:	47.9	9.3	0.0	0.0	18.4	0.0	26.7	0.0	31.1	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	47.9	9.3	0.0	0.0	18.4	0.0	26.7	0.0	31.1	0.0	0.0	0.0
LOS by Move:	D	A	A	A	B	A	C	A	C	A	A	A
HCM2k85thQ:	8	10	0	0	21	0	10	0	14	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #43 Flower St and Santa Ana Blvd

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:	Prot+Permit			Prot+Permit			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 0	1	1 0	2 0	1	1 0	2 0	1	1 0	2 0	1
Volume Module:												
Base Vol:	215	1307	107	95	486	44	104	300	49	106	371	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:	215	1307	107	95	486	44	104	300	49	106	371	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:	215	1307	107	95	486	44	104	300	49	106	371	110
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	215	1307	107	95	486	44	104	300	49	106	371	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:	215	1307	107	95	486	44	104	300	49	106	371	110
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3400	1600	1600	3400	1600	1600	3400	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.13	0.38	0.07	0.06	0.14	0.03	0.07	0.09	0.03	0.07	0.11	0.07
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #44 Flower St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.215
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	1 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	211	1000	238	140	383	111	135	1181	98	144	969	101
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:	211	1000	238	140	383	111	135	1181	98	144	969	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	211	1000	238	140	383	111	135	1181	98	144	969	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	1000	238	140	383	111	135	1181	98	144	969	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	211	1000	238	140	383	111	135	1181	98	144	969	101
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	1.00	1.00	1.00	1.55	0.45	1.00	1.85	0.15	1.00	1.81	0.19
Final Sat.:	1600	1700	1600	1600	2581	719	1600	3055	245	1600	2998	302
Capacity Analysis Module:												
Vol/Sat:	0.13	0.59	0.15	0.09	0.15	0.15	0.08	0.39	0.40	0.09	0.32	0.33
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #45 Flower St and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.968
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	159	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:	Permitted			Permitted			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	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	54	734	45	26	201	33	56	422	17	43	532	76
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	734	45	26	201	33	56	422	17	43	532	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	734	45	26	201	33	56	422	17	43	532	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	54	734	45	26	201	33	56	422	17	43	532	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	54	734	45	26	201	33	56	422	17	43	532	76
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.94	0.06	1.00	0.86	0.14	1.00	0.96	0.04	1.00	0.88	0.12
Final Sat.:	1600	1508	92	1600	1374	226	1600	1538	62	1600	1400	200
Capacity Analysis Module:												
Vol/Sat:	0.03	0.49	0.49	0.02	0.15	0.15	0.04	0.27	0.27	0.03	0.38	0.38
Crit Moves:		****			****			****			****	

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #46 Flower St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.916
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	97	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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	120	843	80	80	449	129	241	1198	126	101	1699	109
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	843	80	80	449	129	241	1198	126	101	1699	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	843	80	80	449	129	241	1198	126	101	1699	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	120	843	80	80	449	129	241	1198	126	101	1699	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	120	843	80	80	449	129	241	1198	126	101	1699	109
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	1.00	1.83	0.17	1.00	1.55	0.45	1.00	2.71	0.29	1.00	2.82	0.18
Final Sat.:	1600	3023	277	1600	2586	714	1600	4543	457	1600	4711	289
Capacity Analysis Module:												
Vol/Sat:	0.08	0.28	0.29	0.05	0.17	0.18	0.15	0.26	0.28	0.06	0.36	0.38
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #47 Flower St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.908
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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	116	553	65	97	233	224	264	1254	80	61	1967	175
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:	116	553	65	97	233	224	264	1254	80	61	1967	175
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	116	553	65	97	233	224	264	1254	80	61	1967	175
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	116	553	65	97	233	224	264	1254	80	61	1967	175
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	116	553	65	97	233	224	264	1254	80	61	1967	175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	1.79	0.21	1.00	1.02	0.98	1.00	2.82	0.18	1.00	2.75	0.25
Final Sat.:	1600	2963	337	1600	1732	1568	1600	4712	288	1600	4608	392
Capacity Analysis Module:												
Vol/Sat:	0.07	0.19	0.19	0.06	0.13	0.14	0.17	0.27	0.28	0.04	0.43	0.45
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #48 Main St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.764
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:	Ovl			Include			Include			Ovl		
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	2 1	0	2 0	2 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	310	948	444	191	1199	309	347	495	222	332	662	266
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:	310	948	444	191	1199	309	347	495	222	332	662	266
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	310	948	444	191	1199	309	347	495	222	332	662	266
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	310	948	444	191	1199	309	347	495	222	332	662	266
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	310	948	444	191	1199	309	347	495	222	332	662	266
OvlAdjVol:			278									171
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	2.39	0.61	2.00	2.07	0.93	2.00	2.00	1.00
Final Sat.:	3200	5100	1600	3200	4016	984	3200	3514	1486	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.10	0.19	0.28	0.06	0.30	0.31	0.11	0.14	0.15	0.10	0.19	0.17
OvlAdjV/S:			0.17									0.11
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #49 Main St and Mainplace Dr / Memory Ln

Cycle (sec):	100	Critical Vol./Cap.(X):	0.504
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
Y+R:	4.0	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	2 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	102	1075	204	48	999	132	195	217	58	370	302	146
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	1075	204	48	999	132	195	217	58	370	302	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:	102	1075	204	48	999	132	195	217	58	370	302	146
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	102	1075	204	48	999	132	195	217	58	370	302	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:	102	1075	204	48	999	132	195	217	58	370	302	146
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	2.52	0.48	2.00	2.65	0.35	2.00	2.37	0.63	2.00	2.00	1.00
Final Sat.:	3200	4234	766	3200	4440	560	3200	3988	1012	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.25	0.27	0.02	0.23	0.24	0.06	0.05	0.06	0.12	0.09	0.09
Crit Moves:			****	****					****	****		

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #50 Main St and 17th St

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	2 0	1	2 0	2 0	1	2 0	2 1	0	2 0	2 1	0
Volume Module:												
Base Vol:	239	1237	270	243	1062	164	174	975	58	187	1147	76
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:	239	1237	270	243	1062	164	174	975	58	187	1147	76
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	239	1237	270	243	1062	164	174	975	58	187	1147	76
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	239	1237	270	243	1062	164	174	975	58	187	1147	76
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	239	1237	270	243	1062	164	174	975	58	187	1147	76
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.83	0.17	2.00	2.81	0.19
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	4730	270	3200	4702	298
Capacity Analysis Module:												
Vol/Sat:	0.07	0.36	0.17	0.08	0.31	0.10	0.05	0.21	0.22	0.06	0.24	0.25
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #51 Main St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.856
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	67	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:	Permitted			Permitted			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	1	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	98	1234	103	63	1031	65	168	930	111	38	384	39
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:	98	1234	103	63	1031	65	168	930	111	38	384	39
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1234	103	63	1031	65	168	930	111	38	384	39
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	98	1234	103	63	1031	65	168	930	111	38	384	39
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	98	1234	103	63	1031	65	168	930	111	38	384	39
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	1.85	0.15	1.00	1.88	0.12	1.00	1.79	0.21	1.00	1.82	0.18
Final Sat.:	1600	3053	247	1600	3110	190	1600	2959	341	1600	3005	295
Capacity Analysis Module:												
Vol/Sat:	0.06	0.40	0.42	0.04	0.33	0.34	0.11	0.31	0.33	0.02	0.13	0.13
Crit Moves:			****	****					****	****		

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #52 Main St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.700
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	37	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:	Permitted			Permitted			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 0	0	0 0	1 1	0	0 0	0 0	0	0 1	0 1	0
Volume Module:												
Base Vol:	56	1280	0	0	1108	54	0	0	0	65	656	85
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:	56	1280	0	0	1108	54	0	0	0	65	656	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:	56	1280	0	0	1108	54	0	0	0	65	656	85
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	56	1280	0	0	1108	54	0	0	0	65	656	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:	56	1280	0	0	1108	54	0	0	0	65	656	85
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.00	0.00	0.00	1.91	0.09	0.00	0.00	0.00	0.16	1.63	0.21
Final Sat.:	1600	3400	0	0	3151	149	0	0	0	258	2604	337
Capacity Analysis Module:												
Vol/Sat:	0.04	0.38	0.00	0.00	0.35	0.36	0.00	0.00	0.00	0.04	0.25	0.25
Crit Moves:	****					****					****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #53 Main St and 4th St

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:	Permitted			Permitted			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:	0 0	1 1	0	0 0	1 1	0	0 0	1 1	0	0 0	1 1	0
Volume Module:												
Base Vol:	0	1108	53	0	951	43	0	112	63	0	157	40
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	1108	53	0	951	43	0	112	63	0	157	40
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1108	53	0	951	43	0	112	63	0	157	40
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1108	53	0	951	43	0	112	63	0	157	40
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1108	53	0	951	43	0	112	63	0	157	40
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	0.00	1.91	0.09	0.00	1.91	0.09	0.00	1.28	0.72	0.00	1.59	0.41
Final Sat.:	0	3154	146	0	3162	138	0	2148	1152	0	2650	650
Capacity Analysis Module:												
Vol/Sat:	0.00	0.35	0.36	0.00	0.30	0.31	0.00	0.05	0.05	0.00	0.06	0.06
Crit Moves:		****	****				****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #54 Main St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.803
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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:	1 0	1	1 0	1 0	2	0 1	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	179	875	76	160	615	131	91	921	68	75	834	58
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:	179	875	76	160	615	131	91	921	68	75	834	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	875	76	160	615	131	91	921	68	75	834	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	875	76	160	615	131	91	921	68	75	834	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	179	875	76	160	615	131	91	921	68	75	834	58
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	1.84	0.16	1.00	2.00	1.00	1.00	1.86	0.14	1.00	1.87	0.13
Final Sat.:	1600	3044	256	1600	3400	1600	1600	3080	220	1600	3092	208
Capacity Analysis Module:												
Vol/Sat:	0.11	0.29	0.30	0.10	0.18	0.08	0.06	0.30	0.31	0.05	0.27	0.28
Crit Moves:			****	****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #55 Main St and McFadden 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:	Prot+Permit			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:	1 0	1	1 0	1 0	1	1 0	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	149	1169	72	138	933	68	78	345	42	71	400	180
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:	149	1169	72	138	933	68	78	345	42	71	400	180
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	149	1169	72	138	933	68	78	345	42	71	400	180
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	149	1169	72	138	933	68	78	345	42	71	400	180
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	149	1169	72	138	933	68	78	345	42	71	400	180
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.88	0.12	1.00	1.86	0.14	1.00	0.89	0.11	1.00	0.69	0.31
Final Sat.:	1600	3114	186	1600	3083	217	1600	1426	174	1600	1103	497
Capacity Analysis Module:												
Vol/Sat:	0.09	0.38	0.39	0.09	0.30	0.31	0.05	0.24	0.24	0.04	0.36	0.36
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #56 Main St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.977
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	177	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			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	1	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	111	1181	54	129	646	88	159	940	105	117	1569	162
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	1181	54	129	646	88	159	940	105	117	1569	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1181	54	129	646	88	159	940	105	117	1569	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	111	1181	54	129	646	88	159	940	105	117	1569	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	111	1181	54	129	646	88	159	940	105	117	1569	162
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.03	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	1.91	0.09	1.00	1.76	0.24	1.00	2.70	0.30	1.00	2.72	0.28
Final Sat.:	1600	3160	140	1600	2916	384	1600	4518	482	1600	4551	449
Capacity Analysis Module:												
Vol/Sat:	0.07	0.37	0.39	0.08	0.22	0.23	0.10	0.21	0.22	0.07	0.34	0.36
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #57 Main St and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.781
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	3 0	1
Volume Module:												
Base Vol:	488	1169	321	271	352	266	385	792	76	188	1488	432
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:	488	1169	321	271	352	266	385	792	76	188	1488	432
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	488	1169	321	271	352	266	385	792	76	188	1488	432
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	488	1169	321	271	352	266	385	792	76	188	1488	432
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	488	1169	321	271	352	266	385	792	76	188	1488	432
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.15	0.23	0.20	0.08	0.07	0.17	0.12	0.16	0.05	0.06	0.29	0.27
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #58 Penn Wy and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.790
Loss Time (sec):	5	Average Delay (sec/veh):	20.3
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:	Split Phase			Split Phase			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	0	0 2	0 0	0	0 0	0 0	2	1 0	1 0	3	0 0
Volume Module:												
Base Vol:	795	0	388	0	0	0	0	1712	552	126	1480	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:	795	0	388	0	0	0	0	1712	552	126	1480	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:	795	0	388	0	0	0	0	1712	552	126	1480	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	795	0	388	0	0	0	0	1712	552	126	1480	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:	795	0	388	0	0	0	0	1712	552	126	1480	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	0.75	1.00	1.00	1.00	1.00	0.88	0.88	0.95	0.91	1.00
Lanes:	2.00	0.00	2.00	0.00	0.00	0.00	0.00	2.27	0.73	1.00	3.00	0.00
Final Sat.:	3502	0	2842	0	0	0	0	3777	1218	1805	5187	0
Capacity Analysis Module:												
Vol/Sat:	0.23	0.00	0.14	0.00	0.00	0.00	0.00	0.45	0.45	0.07	0.29	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.29	0.00	0.29	0.00	0.00	0.00	0.00	0.57	0.57	0.09	0.66	0.00
Volume/Cap:	0.79	0.00	0.47	0.00	0.00	0.00	0.00	0.79	0.79	0.79	0.43	0.00
Delay/Veh:	37.1	0.0	29.8	0.0	0.0	0.0	0.0	18.1	18.1	67.4	8.1	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.1	0.0	29.8	0.0	0.0	0.0	0.0	18.1	18.1	67.4	8.1	0.0
LOS by Move:	D	A	C	A	A	A	A	B	B	E	A	A
HCM2k85thQ:	20	0	9	0	0	0	0	31	31	9	12	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #59 I-5 NB Off Ramps/17th Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.630
Loss Time (sec):	5	Average Delay (sec/veh):	20.3
Optimal Cycle:	32	Level Of Service:	C

Street Name:	I-5 NB Off Ramps						17th Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			Protected			Permitted		
Rights:	Include			Include			Ignore			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 1	0	0 1	1	0 0	0 1	1	0 3	0 1	0	0 2	1 0
Volume Module:												
Base Vol:	375	50	20	55	0	142	128	1168	767	0	1622	44
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:	375	50	20	55	0	142	128	1168	767	0	1622	44
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	375	50	20	55	0	142	128	1168	0	0	1622	44
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	375	50	20	55	0	142	128	1168	0	0	1622	44
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	375	50	20	55	0	142	128	1168	0	0	1622	44
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.85	0.95	1.00	0.85	0.95	0.91	1.00	1.00	0.91	0.91
Lanes:	1.76	0.24	1.00	1.00	0.00	1.00	1.00	3.00	1.00	0.00	2.92	0.08
Final Sat.:	3212	428	1615	1805	0	1615	1805	5187	1900	0	5030	136
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.01	0.03	0.00	0.09	0.07	0.23	0.00	0.00	0.32	0.32
Crit Moves:		****				****	****				****	
Green/Cycle:	0.19	0.19	0.19	0.14	0.00	0.14	0.11	0.62	0.00	0.00	0.51	0.51
Volume/Cap:	0.63	0.63	0.07	0.22	0.00	0.63	0.63	0.36	0.00	0.00	0.63	0.63
Delay/Veh:	39.5	39.5	33.7	38.6	0.0	46.2	48.6	9.1	0.0	0.0	18.1	18.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	39.5	39.5	33.7	38.6	0.0	46.2	48.6	9.1	0.0	0.0	18.1	18.1
LOS by Move:	D	D	C	D	A	D	D	A	A	A	B	B
HCM2k85thQ:	11	11	1	3	0	8	8	10	0	0	21	21

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #60 Penn Wy and I-5 SB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.433
Loss Time (sec):	5	Average Delay (sec/veh):	22.8
Optimal Cycle:	22	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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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	2	0 1	2 0	2	0 0	0 0	0	0 0	1 0	0	0 2
Volume Module:												
Base Vol:	0	363	238	508	117	0	0	0	0	214	0	183
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	363	238	508	117	0	0	0	0	214	0	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:	0	363	238	508	117	0	0	0	0	214	0	183
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	363	238	508	117	0	0	0	0	214	0	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:	0	363	238	508	117	0	0	0	0	214	0	183
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.92	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.75
Lanes:	0.00	2.00	1.00	2.00	2.00	0.00	0.00	0.00	0.00	1.00	0.00	2.00
Final Sat.:	0	3610	1615	3502	3610	0	0	0	0	1805	0	2842
Capacity Analysis Module:												
Vol/Sat:	0.00	0.10	0.15	0.15	0.03	0.00	0.00	0.00	0.00	0.12	0.00	0.06
Crit Moves:			****	****						****		
Green/Cycle:	0.00	0.34	0.34	0.34	0.68	0.00	0.00	0.00	0.00	0.27	0.00	0.61
Volume/Cap:	0.00	0.30	0.43	0.43	0.05	0.00	0.00	0.00	0.00	0.43	0.00	0.11
Delay/Veh:	0.0	24.3	26.0	26.1	5.4	0.0	0.0	0.0	0.0	30.5	0.0	8.2
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	24.3	26.0	26.1	5.4	0.0	0.0	0.0	0.0	30.5	0.0	8.2
LOS by Move:	A	C	C	C	A	A	A	A	A	C	A	A
HCM2k85thQ:	0	7	9	10	1	0	0	0	0	9	0	2

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #61 Santiago St and Civic Center Dr

Cycle (sec):	100	Critical Vol./Cap.(X):	0.896
Loss Time (sec):	5	Average Delay (sec/veh):	27.6
Optimal Cycle:	0	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:	Stop Sign			Stop Sign			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Min. Green:	0	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0 1	0	1 0	0 1	0	1 0	0 1	0	0 0	1! 0	0
Volume Module:												
Base Vol:	133	411	41	20	281	72	266	76	269	14	19	18
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:	133	411	41	20	281	72	266	76	269	14	19	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:	133	411	41	20	281	72	266	76	269	14	19	18
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	133	411	41	20	281	72	266	76	269	14	19	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:	133	411	41	20	281	72	266	76	269	14	19	18
Saturation Flow Module:												
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.91	0.09	1.00	0.80	0.20	1.00	0.22	0.78	0.27	0.38	0.35
Final Sat.:	462	459	46	437	385	99	452	115	406	107	145	138
Capacity Analysis Module:												
Vol/Sat:	0.29	0.90	0.90	0.05	0.73	0.73	0.59	0.66	0.66	0.13	0.13	0.13
Crit Moves:			****		****				****		****	
Delay/Veh:	13.4	44.0	44.0	11.0	26.6	26.6	20.7	21.2	21.2	12.7	12.7	12.7
Delay Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	13.4	44.0	44.0	11.0	26.6	26.6	20.7	21.2	21.2	12.7	12.7	12.7
LOS by Move:	B	E	E	B	D	D	C	C	C	B	B	B
ApproachDel:	37.0			25.8			21.0			12.7		
Delay Adj:	1.00			1.00			1.00			1.00		
ApprAdjDel:	37.0			25.8			21.0			12.7		
LOS by Appr:	E			D			C			B		
AllWayAvgQ:	0.4	4.8	4.8	0.0	2.2	2.2	1.3	1.7	1.7	0.1	0.1	0.1

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #62 Santiago St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.411
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			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	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	135	833	236	378	639	103	164	673	87	255	546	347
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:	135	833	236	378	639	103	164	673	87	255	546	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:	135	833	236	378	639	103	164	673	87	255	546	347
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	833	236	378	639	103	164	673	87	255	546	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:	135	833	236	378	639	103	164	673	87	255	546	347
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.89	0.11	1.00	2.00	1.00
Final Sat.:	1600	1700	1600	1600	1700	1600	1600	1417	183	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.49	0.15	0.24	0.38	0.06	0.10	0.47	0.48	0.16	0.16	0.22
Crit Moves:		****		****					****	****		

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Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #63 Standard Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.341
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	1 0	1	1 0	1 0	1	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	251	543	214	254	428	297	302	477	201	233	648	351
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	543	214	254	428	297	302	477	201	233	648	351
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	543	214	254	428	297	302	477	201	233	648	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	251	543	214	254	428	297	302	477	201	233	648	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	251	543	214	254	428	297	302	477	201	233	648	351
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.70	0.30	1.00	0.65	0.35
Final Sat.:	1600	1700	1600	1600	1700	1600	1600	1126	474	1600	1038	562
Capacity Analysis Module:												
Vol/Sat:	0.16	0.32	0.13	0.16	0.25	0.19	0.19	0.42	0.42	0.15	0.62	0.62
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #64 Standard Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.484
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Permitted			Permitted			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	0 1	0	0 0	1! 0	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	109	724	259	142	679	47	168	1279	65	264	1888	116
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:	109	724	259	142	679	47	168	1279	65	264	1888	116
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	724	259	142	679	47	168	1279	65	264	1888	116
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	109	724	259	142	679	47	168	1279	65	264	1888	116
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	109	724	259	142	679	47	168	1279	65	264	1888	116
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	0.74	0.26	0.16	0.79	0.05	1.00	1.90	0.10	1.00	1.88	0.12
Final Sat.:	1600	1178	422	262	1252	87	1600	3145	155	1600	3115	185
Capacity Analysis Module:												
Vol/Sat:	0.07	0.61	0.61	0.09	0.54	0.54	0.11	0.41	0.42	0.17	0.61	0.63
Crit Moves:	****			****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #65 Standard Ave and Mcfadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.769
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:	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	103	407	50	110	240	42	53	351	60	68	412	119
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:	103	407	50	110	240	42	53	351	60	68	412	119
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	407	50	110	240	42	53	351	60	68	412	119
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	103	407	50	110	240	42	53	351	60	68	412	119
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	103	407	50	110	240	42	53	351	60	68	412	119
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	0.89	0.11	1.00	0.85	0.15	1.00	0.85	0.15	1.00	0.78	0.22
Final Sat.:	1600	1425	175	1600	1362	238	1600	1366	234	1600	1241	359
Capacity Analysis Module:												
Vol/Sat:	0.06	0.29	0.29	0.07	0.18	0.18	0.03	0.26	0.26	0.04	0.33	0.33
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #66 Halladay St and Warner Ave

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:	Permitted			Permitted			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	0	0 1	0 0	0	0 0	0 0	2	1 0	0 1	2	0 0
Volume Module:												
Base Vol:	200	0	417	0	0	0	0	955	96	287	2284	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:	200	0	417	0	0	0	0	955	96	287	2284	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:	200	0	417	0	0	0	0	955	96	287	2284	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	200	0	417	0	0	0	0	955	96	287	2284	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:	200	0	417	0	0	0	0	955	96	287	2284	0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.73	0.27	0.33	2.67	0.00
Final Sat.:	1600	0	1600	0	0	0	0	4562	438	536	4464	0
Capacity Analysis Module:												
Vol/Sat:	0.13	0.00	0.26	0.00	0.00	0.00	0.00	0.21	0.22	0.18	0.51	0.00
Crit Moves:			****				****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #67 Halladay St and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.945
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	124	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:	Split Phase			Split Phase			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	0 1	0	1 0	0 1	0	1 0	2 1	0	1 0	2 1	0
Volume Module:												
Base Vol:	57	249	287	125	17	35	166	1433	10	52	1680	134
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:	57	249	287	125	17	35	166	1433	10	52	1680	134
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	249	287	125	17	35	166	1433	10	52	1680	134
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	57	249	287	125	17	35	166	1433	10	52	1680	134
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	57	249	287	125	17	35	166	1433	10	52	1680	134
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	0.46	0.54	1.00	0.33	0.67	1.00	2.98	0.02	1.00	2.78	0.22
Final Sat.:	1600	743	857	1600	523	1077	1600	4967	33	1600	4645	355
Capacity Analysis Module:												
Vol/Sat:	0.04	0.34	0.33	0.08	0.03	0.03	0.10	0.29	0.30	0.03	0.36	0.38
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #68 SR-55 SB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.602
Loss Time (sec):	5	Average Delay (sec/veh):	18.4
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			Ignore		
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	0 0	2 0	0	0 2	0 0	2	1 1	0 0	3	0 1
Volume Module:												
Base Vol:	0	0	0	321	0	777	0	1305	1163	0	1547	608
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	0	0	321	0	777	0	1305	1163	0	1547	608
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	0	0	0	321	0	777	0	1305	0	0	1547	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	321	0	777	0	1305	0	0	1547	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	0	0	0	321	0	777	0	1305	0	0	1547	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.75	1.00	0.91	0.91	1.00	0.91	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	2.00	0.00	3.00	1.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3502	0	2842	0	5187	1729	0	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.09	0.00	0.27	0.00	0.25	0.00	0.00	0.30	0.00
Crit Moves:						****	****				****	
Green/Cycle:	0.00	0.00	0.00	0.45	0.00	0.45	0.00	0.50	0.00	0.00	0.50	0.00
Volume/Cap:	0.00	0.00	0.00	0.20	0.00	0.60	0.00	0.51	0.00	0.00	0.60	0.00
Delay/Veh:	0.0	0.0	0.0	16.5	0.0	21.3	0.0	17.2	0.0	0.0	18.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	0.0	0.0	16.5	0.0	21.3	0.0	17.2	0.0	0.0	18.5	0.0
LOS by Move:	A	A	A	B	A	C	A	B	A	A	B	A
HCM2k85thQ:	0	0	0	5	0	16	0	15	0	0	19	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #69 SR-55 NB Ramps and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.511
Loss Time (sec):	5	Average Delay (sec/veh):	16.2
Optimal Cycle:	25	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ignore			Include			Ignore			Ignore		
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	0	0 1	0 0	0	0 0	0 0	2	0 2	0 0	3	0 1
Volume Module:												
Base Vol:	726	0	483	0	0	0	0	764	785	0	1444	1040
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:	726	0	483	0	0	0	0	764	785	0	1444	1040
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
PHF Volume:	726	0	0	0	0	0	0	764	0	0	1444	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	726	0	0	0	0	0	0	764	0	0	1444	0
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00
FinalVolume:	726	0	0	0	0	0	0	764	0	0	1444	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.88	1.00	0.91	1.00
Lanes:	2.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	2.00	0.00	3.00	1.00
Final Sat.:	3502	0	1900	0	0	0	0	3610	3344	0	5187	1900
Capacity Analysis Module:												
Vol/Sat:	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.21	0.00	0.00	0.28	0.00
Crit Moves:	****						****				****	
Green/Cycle:	0.41	0.00	0.00	0.00	0.00	0.00	0.00	0.54	0.00	0.00	0.54	0.00
Volume/Cap:	0.51	0.00	0.00	0.00	0.00	0.00	0.00	0.39	0.00	0.00	0.51	0.00
Delay/Veh:	22.6	0.0	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	14.5	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	22.6	0.0	0.0	0.0	0.0	0.0	0.0	13.3	0.0	0.0	14.5	0.0
LOS by Move:	C	A	A	A	A	A	A	B	A	A	B	A
HCM2k85thQ:	13	0	0	0	0	0	0	11	0	0	16	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #70 SR-55 SB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.679
Loss Time (sec):	5	Average Delay (sec/veh):	26.5
Optimal Cycle:	37	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Ovl			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 1	0 0	2	0 1	1 0	1	1 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	386	12	291	103	226	110	66	1544	210	507	904	58
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:	386	12	291	103	226	110	66	1544	210	507	904	58
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	386	12	291	103	226	110	66	1544	210	507	904	58
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	386	12	291	103	226	110	66	1544	210	507	904	58
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	386	12	291	103	226	110	66	1544	210	507	904	58
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	0.75	0.94	0.94	0.85	0.95	0.91	0.85	0.92	0.91	0.85
Lanes:	1.94	0.06	2.00	0.63	1.37	1.00	1.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3516	109	2842	1113	2443	1615	1805	5187	1615	3502	5187	1615
Capacity Analysis Module:												
Vol/Sat:	0.11	0.11	0.10	0.09	0.09	0.07	0.04	0.30	0.13	0.14	0.17	0.04
Crit Moves:		****			****			****			****	
Green/Cycle:	0.16	0.16	0.38	0.14	0.14	0.14	0.11	0.44	0.44	0.21	0.54	0.54
Volume/Cap:	0.68	0.68	0.27	0.68	0.68	0.50	0.32	0.68	0.30	0.68	0.32	0.07
Delay/Veh:	42.7	42.7	21.9	45.0	45.0	41.8	41.8	23.3	18.4	38.7	12.9	11.1
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	42.7	42.7	21.9	45.0	45.0	41.8	41.8	23.3	18.4	38.7	12.9	11.1
LOS by Move:	D	D	C	D	D	D	D	C	B	D	B	B
HCM2k85thQ:	11	11	6	10	10	6	3	22	7	13	9	1

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #71 Glassell St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.766
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:	Ovl			Include			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	1 0	1	1 0	1 1	0	1 0	1 0	1	1 0	1 1	0
Volume Module:												
Base Vol:	573	595	194	15	499	37	112	367	631	225	407	16
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:	573	595	194	15	499	37	112	367	631	225	407	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	573	595	194	15	499	37	112	367	631	225	407	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	573	595	194	15	499	37	112	367	631	225	407	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	573	595	194	15	499	37	112	367	631	225	407	16
OvlAdjVol:			0						344			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.06	1.00	1.00	1.03	1.00
Lanes:	2.00	1.00	1.00	1.00	1.86	0.14	1.00	1.00	1.00	1.00	1.92	0.08
Final Sat.:	3200	1700	1600	1600	3079	221	1600	1700	1600	1600	3179	121
Capacity Analysis Module:												
Vol/Sat:	0.18	0.35	0.12	0.01	0.16	0.17	0.07	0.22	0.39	0.14	0.13	0.13
OvlAdjV/S:			0.00						0.22			
Crit Moves:	****			****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #72 Glassell St and SR-22 WB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.943
Loss Time (sec):	5	Average Delay (sec/veh):	33.4
Optimal Cycle:	125	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			Permitted			Split Phase			Split Phase		
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 0	0	0 0	2 0	1	0 0	0 0	0	1 0	1! 0	1
Volume Module:												
Base Vol:	640	1045	0	0	1110	323	0	0	0	268	9	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:	640	1045	0	0	1110	323	0	0	0	268	9	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:	640	1045	0	0	1110	323	0	0	0	268	9	476
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	640	1045	0	0	1110	323	0	0	0	268	9	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:	640	1045	0	0	1110	323	0	0	0	268	9	476
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.95	1.00	1.00	0.95	0.85	1.00	1.00	1.00	0.86	0.86	0.86
Lanes:	1.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	1.35	0.02	1.63
Final Sat.:	1805	3610	0	0	3610	1615	0	0	0	2201	38	2646
Capacity Analysis Module:												
Vol/Sat:	0.35	0.29	0.00	0.00	0.31	0.20	0.00	0.00	0.00	0.12	0.23	0.18
Crit Moves:	****				****						****	
Green/Cycle:	0.38	0.70	0.00	0.00	0.33	0.33	0.00	0.00	0.00	0.25	0.25	0.25
Volume/Cap:	0.94	0.41	0.00	0.00	0.94	0.61	0.00	0.00	0.00	0.49	0.94	0.73
Delay/Veh:	51.9	6.4	0.0	0.0	47.5	30.5	0.0	0.0	0.0	32.4	56.2	37.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	51.9	6.4	0.0	0.0	47.5	30.5	0.0	0.0	0.0	32.4	56.2	37.0
LOS by Move:	D	A	A	A	D	C	A	A	A	C	E	D
HCM2k85thQ:	34	11	0	0	32	14	0	0	0	9	24	15

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #73 Grand Ave / Glassell St and SR-22 EB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.927
Loss Time (sec):	5	Average Delay (sec/veh):	31.8
Optimal Cycle:	109	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:	Permitted			Protected			Split Phase			Split Phase		
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	2	0 1	1 0	2	0 0	1 0	1!	0 1	0 0	0	0 0
Volume Module:												
Base Vol:	0	1316	336	505	903	0	238	4	522	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:	0	1316	336	505	903	0	238	4	522	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:	0	1316	336	505	903	0	238	4	522	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1316	336	505	903	0	238	4	522	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:	0	1316	336	505	903	0	238	4	522	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	0.85	0.95	0.95	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Lanes:	0.00	2.00	1.00	1.00	2.00	0.00	1.31	0.01	1.68	0.00	0.00	0.00
Final Sat.:	0	3610	1615	1805	3610	0	2130	17	2731	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.00	0.36	0.21	0.28	0.25	0.00	0.11	0.24	0.19	0.00	0.00	0.00
Crit Moves:		****		****				****				
Green/Cycle:	0.00	0.39	0.39	0.30	0.70	0.00	0.25	0.25	0.25	0.00	0.00	0.00
Volume/Cap:	0.00	0.93	0.53	0.93	0.36	0.00	0.44	0.93	0.75	0.00	0.00	0.00
Delay/Veh:	0.0	39.7	24.1	55.9	6.3	0.0	31.4	52.7	37.5	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	39.7	24.1	55.9	6.3	0.0	31.4	52.7	37.5	0.0	0.0	0.0
LOS by Move:	A	D	C	E	A	A	C	D	D	A	A	A
HCM2k85thQ:	0	36	13	28	9	0	8	23	16	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #74 Grand Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.711
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			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	1 0	1 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	53	1406	281	279	1122	103	79	45	33	153	29	109
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:	53	1406	281	279	1122	103	79	45	33	153	29	109
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	53	1406	281	279	1122	103	79	45	33	153	29	109
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	53	1406	281	279	1122	103	79	45	33	153	29	109
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	53	1406	281	279	1122	103	79	45	33	153	29	109
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00
Lanes:	1.00	2.50	0.50	1.00	2.75	0.25	1.00	1.15	0.85	1.00	0.21	0.79
Final Sat.:	1600	4200	800	1600	4596	404	1600	1946	1354	1600	336	1264
Capacity Analysis Module:												
Vol/Sat:	0.03	0.33	0.35	0.17	0.24	0.26	0.05	0.02	0.02	0.10	0.09	0.09
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #75 Grand Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.842
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			Permitted			Permitted		
Rights:	Include			WideBypass			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 0	1	0	1 0 1	0	1
Volume Module:												
Base Vol:	116 1557		323	307 1211		307	114 139		26	115 206		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:	116 1557		323	307 1211		307	114 139		26	115 206		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:	116 1557		323	307 1211		307	114 139		26	115 206		220
Reduct Vol:	0 0		0	0 0		0	0 0		0	0 0		0
Reduced Vol:	116 1557		323	307 1211		307	114 139		26	115 206		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:	116 1557		323	307 1211		307	114 139		26	115 206		220
Saturation Flow Module:												
Sat/Lane:	1600 1600		1600	1600 1600		1600	1600 1600		1600	1600 1600		1600
Adjustment:	1.00 1.05		1.00	1.00 1.05		1.00	1.00 1.00		1.00	1.00 1.06		1.00
Lanes:	1.00 2.48		0.52	1.00 2.39		0.61	1.00 0.84		0.16	1.00 1.00		1.00
Final Sat.:	1600 4175		825	1600 4029		971	1600 1348		252	1600 1700		1600
Capacity Analysis Module:												
Vol/Sat:	0.07 0.37		0.39	0.19 0.30		0.32	0.07 0.10		0.10	0.07 0.12		0.14
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #76 Grand Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.022
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	2 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	420	1499	378	332	715	157	371	949	160	284	1046	190
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:	420	1499	378	332	715	157	371	949	160	284	1046	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	420	1499	378	332	715	157	371	949	160	284	1046	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	420	1499	378	332	715	157	371	949	160	284	1046	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	420	1499	378	332	715	157	371	949	160	284	1046	190
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.40	0.60	1.00	2.46	0.54	2.00	2.57	0.43	2.00	2.54	0.46
Final Sat.:	1600	4033	967	1600	4136	864	3200	4307	693	3200	4262	738
Capacity Analysis Module:												
Vol/Sat:	0.26	0.37	0.39	0.21	0.17	0.18	0.12	0.22	0.23	0.09	0.25	0.26
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #77 Grand Ave and I-5 NB Ramps

Cycle (sec):	100	Critical Vol./Cap.(X):	0.764
Loss Time (sec):	5	Average Delay (sec/veh):	11.3
Optimal Cycle:	47	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			Split Phase			Split Phase		
Rights:	Ignore			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	2	0 1	1 0	3	0 0	0 0	0	0 0	2 0	0	0 1
Volume Module:												
Base Vol:	0	2036	1571	67	1623	0	0	0	0	168	0	202
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	2036	1571	67	1623	0	0	0	0	168	0	202
User Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	0	2036	0	67	1623	0	0	0	0	168	0	202
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	2036	0	67	1623	0	0	0	0	168	0	202
PCE Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	2036	0	67	1623	0	0	0	0	168	0	202
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.95	1.00	0.95	0.91	1.00	1.00	1.00	1.00	0.92	1.00	0.85
Lanes:	0.00	2.00	1.00	1.00	3.00	0.00	0.00	0.00	0.00	2.00	0.00	1.00
Final Sat.:	0	3610	1900	1805	5187	0	0	0	0	3502	0	1615
Capacity Analysis Module:												
Vol/Sat:	0.00	0.56	0.00	0.04	0.31	0.00	0.00	0.00	0.00	0.05	0.00	0.13
Crit Moves:		****		****								****
Green/Cycle:	0.00	0.74	0.00	0.05	0.79	0.00	0.00	0.00	0.00	0.16	0.00	0.16
Volume/Cap:	0.00	0.76	0.00	0.76	0.40	0.00	0.00	0.00	0.00	0.29	0.00	0.76
Delay/Veh:	0.0	9.2	0.0	79.2	3.4	0.0	0.0	0.0	0.0	37.0	0.0	52.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	9.2	0.0	79.2	3.4	0.0	0.0	0.0	0.0	37.0	0.0	52.4
LOS by Move:	A	A	A	E	A	A	A	A	A	D	A	D
HCM2k85thQ:	0	30	0	6	9	0	0	0	0	4	0	12

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #78 Grand Ave and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.827
Loss Time (sec):	5	Average Delay (sec/veh):	28.5
Optimal Cycle:	61	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			Split Phase			Split Phase		
Rights:	Include			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	2 1	0	1 0	2 0	2	2 0	1 0	2	0 1	0 1	0
Volume Module:												
Base Vol:	213	2411	40	44	964	684	370	226	356	44	295	213
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:	213	2411	40	44	964	684	370	226	356	44	295	213
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	213	2411	40	44	964	684	370	226	356	44	295	213
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	213	2411	40	44	964	684	370	226	356	44	295	213
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	213	2411	40	44	964	684	370	226	356	44	295	213
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	0.91	0.91	0.95	0.95	0.75	0.92	1.00	0.75	0.89	0.89	0.89
Lanes:	1.00	2.95	0.05	1.00	2.00	2.00	2.00	1.00	2.00	0.16	1.07	0.77
Final Sat.:	1805	5092	84	1805	3610	2842	3502	1900	2842	270	1810	1307
Capacity Analysis Module:												
Vol/Sat:	0.12	0.47	0.47	0.02	0.27	0.24	0.11	0.12	0.13	0.16	0.16	0.16
Crit Moves:		****		****					****		****	
Green/Cycle:	0.18	0.57	0.57	0.03	0.42	0.57	0.15	0.15	0.15	0.20	0.20	0.20
Volume/Cap:	0.64	0.83	0.83	0.83	0.64	0.42	0.70	0.79	0.83	0.83	0.83	0.83
Delay/Veh:	41.9	19.4	19.4	112.6	24.1	12.4	44.4	54.2	53.7	47.0	47.0	47.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	41.9	19.4	19.4	112.6	24.1	12.4	44.4	54.2	53.7	47.0	47.0	47.0
LOS by Move:	D	B	B	F	C	B	D	D	D	D	D	D
HCM2k85thQ:	11	35	35	5	19	11	11	13	13	17	17	17

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #79 Grand Ave and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.718
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			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 3	0 1		2 0 2	0 1		2 0 2	0 1	
Volume Module:												
Base Vol:	195	1493	45	133	784	313	272	900	89	121	753	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:	195	1493	45	133	784	313	272	900	89	121	753	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:	195	1493	45	133	784	313	272	900	89	121	753	138
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	195	1493	45	133	784	313	272	900	89	121	753	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:	195	1493	45	133	784	313	272	900	89	121	753	138
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.91	0.09	2.00	3.00	1.00	2.00	2.00	1.00	2.00	2.00	1.00
Final Sat.:	3200	4860	140	3200	5100	1600	3200	3400	1600	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.31	0.32	0.04	0.15	0.20	0.09	0.26	0.06	0.04	0.22	0.09
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #80 Grand Ave and Chestnut Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.783
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			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	1 0	0 1	0	1 0	0 1	0
Volume Module:												
Base Vol:	180	1352	234	149	664	112	47	143	31	91	283	165
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:	180	1352	234	149	664	112	47	143	31	91	283	165
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1352	234	149	664	112	47	143	31	91	283	165
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	180	1352	234	149	664	112	47	143	31	91	283	165
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	180	1352	234	149	664	112	47	143	31	91	283	165
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	1.00	2.56	0.44	1.00	2.57	0.43	1.00	0.82	0.18	1.00	0.63	0.37
Final Sat.:	1600	4292	708	1600	4307	693	1600	1315	285	1600	1011	589
Capacity Analysis Module:												
Vol/Sat:	0.11	0.32	0.33	0.09	0.15	0.16	0.03	0.11	0.11	0.06	0.28	0.28
Crit Moves:		****	****				****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #81 Grand Ave and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.813
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	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:	1 0	2 1	0	1 0	2 1	0	1 0	0 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	232	1320	227	176	800	215	64	238	42	96	762	168
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:	232	1320	227	176	800	215	64	238	42	96	762	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	232	1320	227	176	800	215	64	238	42	96	762	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	232	1320	227	176	800	215	64	238	42	96	762	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	232	1320	227	176	800	215	64	238	42	96	762	168
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.04	1.00
Lanes:	1.00	2.56	0.44	1.00	2.36	0.64	1.00	0.85	0.15	1.00	1.64	0.36
Final Sat.:	1600	4296	704	1600	3983	1017	1600	1360	240	1600	2722	578
Capacity Analysis Module:												
Vol/Sat:	0.15	0.31	0.32	0.11	0.20	0.21	0.04	0.17	0.17	0.06	0.28	0.29
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #82 Grand Ave and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.079
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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 2	1	0	1	0 2	1	0
Volume Module:																
Base Vol:	259	1494	129		236	583	327		207	895	72		98	1758	228	
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:	259	1494	129		236	583	327		207	895	72		98	1758	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:	259	1494	129		236	583	327		207	895	72		98	1758	228	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	259	1494	129		236	583	327		207	895	72		98	1758	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:	259	1494	129		236	583	327		207	895	72		98	1758	228	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.06	1.00		1.00	1.05	1.00		1.00	1.05	1.00	
Lanes:	1.00	2.76	0.24		1.00	2.00	1.00		1.00	2.78	0.22		1.00	2.66	0.34	
Final Sat.:	1600	4618	382		1600	3400	1600		1600	4643	357		1600	4449	551	
Capacity Analysis Module:																
Vol/Sat:	0.16	0.32	0.34		0.15	0.17	0.20		0.13	0.19	0.20		0.06	0.40	0.41	
Crit Moves:		****	****						****						****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #83 Grand Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.899
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	86	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:	1 0	2 1	0	1 0	2 1	0	2 0	3 0	1	2 0	2 1	0
Volume Module:												
Base Vol:	218	788	174	178	575	265	342	656	142	244	1556	510
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:	218	788	174	178	575	265	342	656	142	244	1556	510
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	218	788	174	178	575	265	342	656	142	244	1556	510
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	218	788	174	178	575	265	342	656	142	244	1556	510
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	218	788	174	178	575	265	342	656	142	244	1556	510
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.46	0.54	1.00	2.05	0.95	2.00	3.00	1.00	2.00	2.26	0.74
Final Sat.:	1600	4132	868	1600	3486	1514	3200	5100	1600	3200	3815	1185
Capacity Analysis Module:												
Vol/Sat:	0.14	0.19	0.20	0.11	0.16	0.18	0.11	0.13	0.09	0.08	0.41	0.43
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #84 SR-55 NB Ramps and Dyer Rd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.349
Loss Time (sec):	5	Average Delay (sec/veh):	6.0
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:	Split Phase				Split Phase				Protected				Protected			
Rights:	Include				Include				Ignore				Ignore			
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!	0	1	0	0	0	0	0	3	0	1	0	0	2	1	0
Volume Module:																
Base Vol:	188	0	51		0	0	0		0	1355	689		0	1411	882	
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:	188	0	51		0	0	0		0	1355	689		0	1411	882	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
PHF Volume:	188	0	51		0	0	0		0	1355	0		0	1411	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	188	0	51		0	0	0		0	1355	0		0	1411	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	0.00		1.00	1.00	0.00	
FinalVolume:	188	0	51		0	0	0		0	1355	0		0	1411	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.93	1.00	0.93		1.00	1.00	1.00		1.00	0.91	1.00		1.00	0.91	0.91	
Lanes:	1.79	0.00	1.21		0.00	0.00	0.00		0.00	3.00	1.00		0.00	3.00	0.00	
Final Sat.:	3161	0	2147		0	0	0		0	5187	1900		0	5187	0	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.00	0.02		0.00	0.00	0.00		0.00	0.26	0.00		0.00	0.27	0.00	
Crit Moves:	****								****					****		
Green/Cycle:	0.17	0.00	0.17		0.00	0.00	0.00		0.00	0.78	0.00		0.00	0.78	0.00	
Volume/Cap:	0.35	0.00	0.14		0.00	0.00	0.00		0.00	0.34	0.00		0.00	0.35	0.00	
Delay/Veh:	36.9	0.0	35.3		0.0	0.0	0.0		0.0	3.3	0.0		0.0	3.4	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	36.9	0.0	35.3		0.0	0.0	0.0		0.0	3.3	0.0		0.0	3.4	0.0	
LOS by Move:	D	A	D		A	A	A		A	A	A		A	A	A	
HCM2k85thQ:	5	0	2		0	0	0		0	7	0		0	8	0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM 4-Way Stop Method (Base Volume Alternative)

Intersection #85 Cambridge St and La Veta Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.938
Loss Time (sec):	5	Average Delay (sec/veh):	26.1
Optimal Cycle:	0	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:	Stop Sign				Stop Sign				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Min. Green:	0	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0	1	0	0	0	0	1	0	1	0	0	0	1	0	0
Volume Module:																
Base Vol:	176	246	0		0	206	191		469	0	309		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:	176	246	0		0	206	191		469	0	309		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:	176	246	0		0	206	191		469	0	309		0	0	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	176	246	0		0	206	191		469	0	309		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:	176	246	0		0	206	191		469	0	309		0	0	0	
Saturation Flow Module:																
Adjustment:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	1.00	0.00		0.00	1.00	1.00		1.00	0.00	1.00		0.00	0.00	0.00	
Final Sat.:	454	486	0		0	479	528		500	0	592		0	0	0	
Capacity Analysis Module:																
Vol/Sat:	0.39	0.51	xxxx		xxxx	0.43	0.36		0.94	xxxx	0.52		xxxx	xxxx	xxxx	
Crit Moves:		****				****			****							
Delay/Veh:	15.1	16.9	0.0		0.0	15.3	12.9		52.4	0.0	14.9		0.0	0.0	0.0	
Delay Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	15.1	16.9	0.0		0.0	15.3	12.9		52.4	0.0	14.9		0.0	0.0	0.0	
LOS by Move:	C	C	*		*	C	B		F	*	B		*	*	*	
ApproachDel:		16.2				14.1				37.5				xxxxxx		
Delay Adj:		1.00				1.00				1.00				xxxxx		
ApprAdjDel:		16.2				14.1				37.5				xxxxxx		
LOS by Appr:		C				B				E				*		
AllWayAvgQ:	0.6	0.9	0.0		0.0	0.7	0.5		5.9	0.0	1.0		0.0	0.0	0.0	

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #86 Cambridge St and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.531
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:	Permitted			Permitted			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:	0 0	0 0	0	1 0	0 0	1	1 0	1 0	0	0 0	0 1	0
Volume Module:												
Base Vol:	0	0	0	195	0	68	85	148	0	0	218	272
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	0	0	195	0	68	85	148	0	0	218	272
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	195	0	68	85	148	0	0	218	272
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	195	0	68	85	148	0	0	218	272
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	195	0	68	85	148	0	0	218	272
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	0.00	0.00	0.44	0.56
Final Sat.:	0	0	0	1600	0	1600	1600	1700	0	0	712	888
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.12	0.00	0.04	0.05	0.09	0.00	0.00	0.31	0.31
Crit Moves:				****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #87 Mabury St and 1st Street

Cycle (sec):	100	Critical Vol./Cap.(X):	0.752
Loss Time (sec):	5	Average Delay (sec/veh):	27.2
Optimal Cycle:	46	Level Of Service:	C

Street Name:	Mabury						1st Street					
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Split Phase			Split Phase			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	0	0 1	1 0	1! 0	1	0 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	25	0	256	164	70	310	0	1275	20	31	423	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:	25	0	256	164	70	310	0	1275	20	31	423	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:	25	0	256	164	70	310	0	1275	20	31	423	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	25	0	256	164	70	310	0	1275	20	31	423	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:	25	0	256	164	70	310	0	1275	20	31	423	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.95	1.00	0.85	0.90	0.90	0.90	1.00	0.95	0.95	0.95	0.95	0.95
Lanes:	1.00	0.00	1.00	1.27	0.23	1.50	0.00	1.97	0.03	1.00	2.00	0.00
Final Sat.:	1805	0	1615	2170	390	2577	0	3547	56	1805	3610	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.16	0.08	0.18	0.12	0.00	0.36	0.36	0.02	0.12	0.00
Crit Moves:			****		****			****		****		
Green/Cycle:	0.21	0.00	0.21	0.24	0.24	0.24	0.00	0.48	0.48	0.02	0.50	0.00
Volume/Cap:	0.07	0.00	0.75	0.32	0.75	0.50	0.00	0.75	0.75	0.75	0.23	0.00
Delay/Veh:	31.7	0.0	46.1	31.5	39.8	33.4	0.0	23.2	23.2	103.1	14.2	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.7	0.0	46.1	31.5	39.8	33.4	0.0	23.2	23.2	103.1	14.2	0.0
LOS by Move:	C	A	D	C	D	C	A	C	C	F	B	A
HCM2k85thQ:	1	0	14	5	16	9	0	27	27	4	6	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #88 Tustin St and La Veta Ave

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			Split Phase			Split Phase		
Rights:	Include			Include			Include			Ovl		
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 1	0 0	1
Volume Module:												
Base Vol:	31	693	164	96	851	16	13	5	20	134	4	82
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:	31	693	164	96	851	16	13	5	20	134	4	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:	31	693	164	96	851	16	13	5	20	134	4	82
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	31	693	164	96	851	16	13	5	20	134	4	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:	31	693	164	96	851	16	13	5	20	134	4	82
OvlAdjVol:												0
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.00	1.00
Lanes:	1.00	2.43	0.57	1.00	2.94	0.06	1.00	1.00	1.00	1.94	0.06	1.00
Final Sat.:	1600	4081	919	1600	4911	89	1600	1700	1600	3107	93	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.17	0.18	0.06	0.17	0.18	0.01	0.00	0.01	0.04	0.04	0.05
OvlAdjV/S:												0.00
Crit Moves:		****	****					****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #89 Tustin St and SR-22 WB On-Ramp

Cycle (sec):	100	Critical Vol./Cap.(X):	0.321
Loss Time (sec):	5	Average Delay (sec/veh):	7.7
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			Permitted			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	0 0	0	0 2	1 0	0	0 0	0 0	0	0 0	0 0
Volume Module:												
Base Vol:	383	1100	0	0	642	330	0	0	0	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:	383	1100	0	0	642	330	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
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	383	1100	0	0	642	330	0	0	0	0	0	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	383	1100	0	0	642	330	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
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	383	1100	0	0	642	330	0	0	0	0	0	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.95	1.00	1.00	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.00	0.00	0.00	2.00	1.00	0.00	0.00	0.00	0.00	0.00	0.00
Final Sat.:	3502	3610	0	0	3282	1641	0	0	0	0	0	0
Capacity Analysis Module:												
Vol/Sat:	0.11	0.30	0.00	0.00	0.20	0.20	0.00	0.00	0.00	0.00	0.00	0.00
Crit Moves:	****				****							
Green/Cycle:	0.34	0.95	0.00	0.00	0.61	0.61	0.00	0.00	0.00	0.00	0.00	0.00
Volume/Cap:	0.32	0.32	0.00	0.00	0.32	0.33	0.00	0.00	0.00	0.00	0.00	0.00
Delay/Veh:	24.6	0.2	0.0	0.0	9.6	9.6	0.0	0.0	0.0	0.0	0.0	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	24.6	0.2	0.0	0.0	9.6	9.6	0.0	0.0	0.0	0.0	0.0	0.0
LOS by Move:	C	A	A	A	A	A	A	A	A	A	A	A
HCM2k85thQ:	7	3	0	0	8	8	0	0	0	0	0	0

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #90 Tustin St and SR-22 EB Off-Ramp / Seba Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.625
Loss Time (sec):	5	Average Delay (sec/veh):	23.3
Optimal Cycle:	32	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:	Permitted			Permitted			Split Phase			Split Phase		
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 2	1 0	1	0 3	0 0	1	0 1!	0 1	0	0 1!	0 0
Volume Module:												
Base Vol:	0	1155	3	43	589	0	440	39	558	28	0	67
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	1155	3	43	589	0	440	39	558	28	0	67
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1155	3	43	589	0	440	39	558	28	0	67
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	1155	3	43	589	0	440	39	558	28	0	67
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	1155	3	43	589	0	440	39	558	28	0	67
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	0.91	0.91	0.11	0.91	1.00	0.90	0.90	0.90	0.89	1.00	0.89
Lanes:	0.00	2.99	0.01	1.00	3.00	0.00	1.41	0.07	1.52	0.29	0.00	0.71
Final Sat.:	0	5174	13	217	5187	0	2408	124	2596	499	0	1195
Capacity Analysis Module:												
Vol/Sat:	0.00	0.22	0.22	0.20	0.11	0.00	0.18	0.31	0.21	0.06	0.00	0.06
Crit Moves:		****						****		****		
Green/Cycle:	0.00	0.36	0.36	0.36	0.36	0.00	0.50	0.50	0.50	0.09	0.00	0.09
Volume/Cap:	0.00	0.63	0.63	0.56	0.32	0.00	0.36	0.63	0.43	0.63	0.00	0.63
Delay/Veh:	0.0	27.3	27.3	34.4	23.4	0.0	15.2	18.8	15.8	51.8	0.0	51.8
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	0.0	27.3	27.3	34.4	23.4	0.0	15.2	18.8	15.8	51.8	0.0	51.8
LOS by Move:	A	C	C	C	C	A	B	B	B	D	A	D
HCM2k85thQ:	0	17	17	3	7	0	9	19	11	6	0	6

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #91 Tustin Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.708
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:	Include			Include			Include			Ovl		
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	1 0	0	1 0	1 0	0	1 0
Volume Module:												
Base Vol:	155	827	73	333	879	101	58	130	106	123	272	256
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:	155	827	73	333	879	101	58	130	106	123	272	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:	155	827	73	333	879	101	58	130	106	123	272	256
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	155	827	73	333	879	101	58	130	106	123	272	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:	155	827	73	333	879	101	58	130	106	123	272	256
OvlAdjVol:												175
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lanes:	2.00	2.76	0.24	2.00	2.69	0.31	1.00	0.55	0.45	1.00	0.52	0.48
Final Sat.:	3200	4611	389	3200	4505	495	1600	881	719	1600	824	776
Capacity Analysis Module:												
Vol/Sat:	0.05	0.18	0.19	0.10	0.20	0.20	0.04	0.15	0.15	0.08	0.33	0.33
OvlAdjV/S:												0.23
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #92 Tustin Ave and Santa Clara Ave

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				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	2	0 2	1	0	1	0 0	1	0	1	0 0	1	0
Volume Module:																
Base Vol:	136	659	101		146	1155	80		34	107	63		45	57	54	
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:	136	659	101		146	1155	80		34	107	63		45	57	54	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	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	659	101		146	1155	80		34	107	63		45	57	54	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	136	659	101		146	1155	80		34	107	63		45	57	54	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	136	659	101		146	1155	80		34	107	63		45	57	54	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.05	1.00		1.00	1.04	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Lanes:	1.00	2.60	0.40		2.00	2.81	0.19		1.00	0.63	0.37		1.00	0.51	0.49	
Final Sat.:	1600	4362	638		3200	4689	311		1600	1007	593		1600	822	778	
Capacity Analysis Module:																
Vol/Sat:	0.09	0.15	0.16		0.05	0.25	0.26		0.02	0.11	0.11		0.03	0.07	0.07	
Crit Moves:	****						****			****				****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #93 Tustin Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.704
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			Include			Include			Ovl		
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 0	1	2 0	2 1	0	2 0	3 0	1	2 0	3 0	1
Volume Module:												
Base Vol:	176	752	387	293	314	31	470	923	125	250	821	457
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:	176	752	387	293	314	31	470	923	125	250	821	457
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	176	752	387	293	314	31	470	923	125	250	821	457
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	176	752	387	293	314	31	470	923	125	250	821	457
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	176	752	387	293	314	31	470	923	125	250	821	457
OvlAdjVol:			262									311
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.00	1.00	2.00	2.73	0.27	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	3400	1600	3200	4569	431	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.22	0.24	0.09	0.07	0.07	0.15	0.18	0.08	0.08	0.16	0.29
OvlAdjV/S:			0.16									0.19
Crit Moves:	****			****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #94 Tustin Ave and 4th St

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
Y+R:	4.0	4.0	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	0 1	1 0	2	1 1	1 0	2	1 0
Volume Module:												
Base Vol:	35	381	123	536	396	145	226	806	41	123	833	513
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:	35	381	123	536	396	145	226	806	41	123	833	513
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	35	381	123	536	396	145	226	806	41	123	833	513
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	35	381	123	536	396	145	226	806	41	123	833	513
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	35	381	123	536	396	145	226	806	41	123	833	513
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	2.27	0.73	2.00	2.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00
Final Sat.:	1600	3829	1171	3200	3400	1600	1600	5100	1600	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.10	0.11	0.17	0.12	0.09	0.14	0.16	0.03	0.08	0.25	0.32
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #95 SR-55 SB Ramps / Auto Mall Dr and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.687
Loss Time (sec):	5	Average Delay (sec/veh):	25.4
Optimal Cycle:	37	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Ignore			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 1	0	0 2	1	0 1	0 1	1	0 3	0 1	2	0 2	1 0
Volume Module:												
Base Vol:	401	32	423	110	50	37	46	1649	464	437	1139	136
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:	401	32	423	110	50	37	46	1649	464	437	1139	136
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	401	32	423	110	50	37	46	1649	0	437	1139	136
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	401	32	423	110	50	37	46	1649	0	437	1139	136
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	401	32	423	110	50	37	46	1649	0	437	1139	136
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.96	0.96	0.75	0.95	1.00	0.85	0.95	0.91	1.00	0.92	0.90	0.90
Lanes:	1.85	0.15	2.00	1.00	1.00	1.00	1.00	3.00	1.00	2.00	2.68	0.32
Final Sat.:	3364	268	2842	1805	1900	1615	1805	5187	1900	3502	4560	544
Capacity Analysis Module:												
Vol/Sat:	0.12	0.12	0.15	0.06	0.03	0.02	0.03	0.32	0.00	0.12	0.25	0.25
Crit Moves:			****	****				****		****		
Green/Cycle:	0.22	0.22	0.22	0.09	0.09	0.09	0.06	0.46	0.00	0.18	0.58	0.58
Volume/Cap:	0.55	0.55	0.69	0.69	0.30	0.26	0.43	0.69	0.00	0.69	0.43	0.43
Delay/Veh:	35.7	35.7	39.3	56.0	43.6	43.5	48.1	22.0	0.0	41.4	11.6	11.6
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	35.7	35.7	39.3	56.0	43.6	43.5	48.1	22.0	0.0	41.4	11.6	11.6
LOS by Move:	D	D	D	E	D	D	D	C	A	D	B	B
HCM2k85thQ:	10	10	12	7	3	2	3	23	0	12	12	12

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Note: Queue reported is the number of cars per lane.
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Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.951
Loss Time (sec):	5	Average Delay (sec/veh):	46.2
Optimal Cycle:	134	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			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		1 0 3	0 1		2 0 1	1 0		1 0 1	1 0	
Volume Module:												
Base Vol:	879	262	51	19	231	889	165	57	33	23	348	16
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:	879	262	51	19	231	889	165	57	33	23	348	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	879	262	51	19	231	889	165	57	33	23	348	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	879	262	51	19	231	889	165	57	33	23	348	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	879	262	51	19	231	889	165	57	33	23	348	16
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	0.91	0.85	0.92	0.90	0.90	0.95	0.94	0.94
Lanes:	2.00	2.51	0.49	1.00	3.00	1.00	2.00	1.27	0.73	1.00	1.91	0.09
Final Sat.:	3502	4238	825	1805	5187	1615	3502	2161	1251	1805	3427	158
Capacity Analysis Module:												
Vol/Sat:	0.25	0.06	0.06	0.01	0.04	0.55	0.05	0.03	0.03	0.01	0.10	0.10
Crit Moves:	****					****	****				****	
Green/Cycle:	0.26	0.68	0.68	0.12	0.53	0.58	0.05	0.11	0.11	0.05	0.11	0.11
Volume/Cap:	0.95	0.09	0.09	0.09	0.08	0.95	0.95	0.25	0.25	0.25	0.95	0.95
Delay/Veh:	54.9	5.5	5.5	39.7	11.6	38.3	101.1	41.5	41.5	47.0	77.7	77.7
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	54.9	5.5	5.5	39.7	11.6	38.3	101.1	41.5	41.5	47.0	77.7	77.7
LOS by Move:	D	A	A	D	B	D	F	D	D	D	E	E
HCM2k85thQ:	27	2	2	1	2	44	8	2	2	1	15	15

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #97 Red Hill Ave and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.865
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	70	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 3	0 1	2	0 3	0 1	2	0 3	0 1
Volume Module:												
Base Vol:	208	1501	238	108	214	173	410	1051	128	91	1176	574
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:	208	1501	238	108	214	173	410	1051	128	91	1176	574
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	208	1501	238	108	214	173	410	1051	128	91	1176	574
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	1501	238	108	214	173	410	1051	128	91	1176	574
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	208	1501	238	108	214	173	410	1051	128	91	1176	574
OvlAdjVol:						0			24			
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00	2.00	3.00	1.00
Final Sat.:	3200	5100	1600	3200	5100	1600	3200	5100	1600	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.07	0.29	0.15	0.03	0.04	0.11	0.13	0.21	0.08	0.03	0.23	0.36
OvlAdjV/S:						0.00			0.02			
Crit Moves:	****			****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #98 Red Hill Ave and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.902
Loss Time (sec):	0	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	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			Include			Include			Ovl		
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 2	1 0	1	0 2	1 0	2	0 3	0 1
Volume Module:												
Base Vol:	343	1175	135	89	341	432	324	880	137	78	1643	216
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:	343	1175	135	89	341	432	324	880	137	78	1643	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:	343	1175	135	89	341	432	324	880	137	78	1643	216
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	343	1175	135	89	341	432	324	880	137	78	1643	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:	343	1175	135	89	341	432	324	880	137	78	1643	216
OvlAdjVol:												172
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	3.59	0.41	2.00	2.00	1.00	1.00	2.60	0.40	2.00	3.00	1.00
Final Sat.:	3200	6040	660	3200	3400	1600	1600	4353	647	3200	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.19	0.20	0.03	0.10	0.27	0.20	0.20	0.21	0.02	0.32	0.14
OvlAdjV/S:												0.11
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #99 Red Hill Ave and Dyer Rd / barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.591
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:	2 0 4	0	1	2 0 4	0	1	2 0 3	1	0	2 0 4	0	1
Volume Module:												
Base Vol:	344	1293	333	314	531	249	178	662	87	129	979	286
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:	344	1293	333	314	531	249	178	662	87	129	979	286
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	344	1293	333	314	531	249	178	662	87	129	979	286
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	344	1293	333	314	531	249	178	662	87	129	979	286
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	344	1293	333	314	531	249	178	662	87	129	979	286
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	2.00	4.00	1.00	2.00	4.00	1.00	2.00	3.54	0.46	2.00	4.00	1.00
Final Sat.:	3200	6800	1600	3200	6800	1600	3200	5957	743	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.19	0.21	0.10	0.08	0.16	0.06	0.11	0.12	0.04	0.14	0.18
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #100 Red Hill Ave and Alton Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	1.494
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	3 0	1	1 0	3 0	1	1 0	2 0	1	2 0	1 0	1
Volume Module:												
Base Vol:	27	1513	219	148	628	5	453	1111	569	2003	342	1235
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:	27	1513	219	148	628	5	453	1111	569	2003	342	1235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	27	1513	219	148	628	5	453	1111	569	2003	342	1235
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	1513	219	148	628	5	453	1111	569	2003	342	1235
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	1513	219	148	628	5	453	1111	569	2003	342	1235
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	3.00	1.00	1.00	3.00	1.00	1.00	2.00	1.00	2.00	1.00	1.00
Final Sat.:	1600	5100	1600	1600	5100	1600	1600	3400	1600	3200	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.02	0.30	0.14	0.09	0.12	0.00	0.28	0.33	0.36	0.63	0.20	0.77
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Red Hill Ave and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.401	
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx	
Optimal Cycle:	180	Level Of Service:	F	

Approach:	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 3	0	1	2	0 3	0	1	1	0 3	0	1
Volume Module:																
Base Vol:	179	1160	14		340	707	1240		515	237	36		39	818	574	
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:	179	1160	14		340	707	1240		515	237	36		39	818	574	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Volume:	179	1160	14		340	707	1240		515	237	36		39	818	574	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	179	1160	14		340	707	1240		515	237	36		39	818	574	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	179	1160	14		340	707	1240		515	237	36		39	818	574	
Saturation Flow Module:																
Sat/Lane:	1600	1600	1600		1600	1600	1600		1600	1600	1600		1600	1600	1600	
Adjustment:	1.00	1.04	1.00		1.00	1.06	1.00		1.00	1.06	1.00		1.00	1.06	1.00	
Lanes:	2.00	2.96	0.04		2.00	3.00	1.00		2.00	3.00	1.00		1.00	3.00	1.00	
Final Sat.:	3200	4943	57		3200	5100	1600		3200	5100	1600		1600	5100	1600	
Capacity Analysis Module:																
Vol/Sat:	0.06	0.23	0.24		0.11	0.14	0.78		0.16	0.05	0.02		0.02	0.16	0.36	
Crit Moves:	****						****		****						****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #102 Red Hill Ave and Main St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.836
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	61	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 2	0 1	2	0 2	0 1	2	0 2	1 0	2	0 2	1 0
Volume Module:												
Base Vol:	467	1006	272	88	640	348	212	757	205	284	1617	91
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:	467	1006	272	88	640	348	212	757	205	284	1617	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:	467	1006	272	88	640	348	212	757	205	284	1617	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	467	1006	272	88	640	348	212	757	205	284	1617	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:	467	1006	272	88	640	348	212	757	205	284	1617	91
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00
Lanes:	2.00	2.00	1.00	2.00	2.00	1.00	2.00	2.36	0.64	2.00	2.84	0.16
Final Sat.:	3200	3400	1600	3200	3400	1600	3200	3977	1023	3200	4744	256
Capacity Analysis Module:												
Vol/Sat:	0.15	0.30	0.17	0.03	0.19	0.22	0.07	0.19	0.20	0.09	0.34	0.36
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #103 I-5 SB Ramps and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	0.444
Loss Time (sec):	5	Average Delay (sec/veh):	19.9
Optimal Cycle:	22	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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			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:	0	0	0	2	0	0	2	0	3	0	2	1
Volume Module:												
Base Vol:	0	0	0	357	0	78	595	672	0	0	590	162
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	0	0	357	0	78	595	672	0	0	590	162
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	357	0	78	595	672	0	0	590	162
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	357	0	78	595	672	0	0	590	162
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	357	0	78	595	672	0	0	590	162
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	1.00	1.00	1.00	0.92	1.00	0.85	0.92	0.91	1.00	1.00	0.88	0.88
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	2.35	0.65
Final Sat.:	0	0	0	3502	0	1615	3502	5187	0	0	3939	1082
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.10	0.00	0.05	0.17	0.13	0.00	0.00	0.15	0.15
Crit Moves:				****			****				****	
Green/Cycle:	0.00	0.00	0.00	0.23	0.00	0.61	0.38	0.72	0.00	0.00	0.34	0.34
Volume/Cap:	0.00	0.00	0.00	0.44	0.00	0.08	0.44	0.18	0.00	0.00	0.44	0.44
Delay/Veh:	0.0	0.0	0.0	33.4	0.0	7.9	23.2	4.5	0.0	0.0	26.0	26.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

AdjDel/Veh:	0.0	0.0	0.0	33.4	0.0	7.9	23.2	4.5	0.0	0.0	26.0	26.0
LOS by Move:	A	A	A	C	A	A	C	A	A	A	C	C
HCM2k85thQ:	0	0	0	8	0	2	11	4	0	0	10	10

****

Note: Queue reported is the number of cars per lane.

****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #104 Tustin Ranch Rd and Warner Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.671
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:	Split Phase			Split Phase			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
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 0	0	2 0	0 0	1	2 0	3 0	0	0 0	3 0	1
Volume Module:												
Base Vol:	0	0	0	653	0	45	64	2124	0	0	925	398
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	0	0	653	0	45	64	2124	0	0	925	398
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	0	0	653	0	45	64	2124	0	0	925	398
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	0	0	0	653	0	45	64	2124	0	0	925	398
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	0	0	0	653	0	45	64	2124	0	0	925	398
OvlAdjVol:												71
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	0.00	0.00	0.00	2.00	0.00	1.00	2.00	3.00	0.00	0.00	3.00	1.00
Final Sat.:	0	0	0	3200	0	1600	3200	5100	0	0	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.00	0.00	0.00	0.20	0.00	0.03	0.02	0.42	0.00	0.00	0.18	0.25
OvlAdjV/S:												0.04
Crit Moves:				****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Von Karman Ave and Barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	1.284	
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx	
Optimal Cycle:	180	Level Of Service:	F	

Approach:	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			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 1	1 0		2 0 2			2 0 3	0 1		2 0 4	0 1	
Volume Module:												
Base Vol:	362	2082	454	80	407	280	785	1435	201	254	805	274
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:	362	2082	454	80	407	280	785	1435	201	254	805	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	362	2082	454	80	407	280	785	1435	201	254	805	274
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	362	2082	454	80	407	280	785	1435	201	254	805	274
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	362	2082	454	80	407	280	785	1435	201	254	805	274
OvlAdjVol:						0						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	1.64	0.36	2.00	2.00	2.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	2727	573	3200	3400	3200	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.11	0.76	0.79	0.03	0.12	0.09	0.25	0.28	0.13	0.08	0.12	0.17
OvlAdjV/S:						0.00						
Crit Moves:		****	****				****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Euclid St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.969
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	161	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			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	1 0	1 1	1	1 0	2 1	0
Volume Module:												
Base Vol:	127	801	68	180	2613	240	136	595	364	133	812	148
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:	127	801	68	180	2613	240	136	595	364	133	812	148
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	801	68	180	2613	240	136	595	364	133	812	148
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	127	801	68	180	2613	240	136	595	364	133	812	148
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	127	801	68	180	2613	240	136	595	364	133	812	148
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.03	1.00	1.00	1.05	1.00
Lanes:	2.00	2.77	0.23	2.00	2.75	0.25	1.00	1.86	1.14	1.00	2.54	0.46
Final Sat.:	3200	4624	376	3200	4596	404	1600	3078	1822	1600	4260	740
Capacity Analysis Module:												
Vol/Sat:	0.04	0.17	0.18	0.06	0.57	0.59	0.09	0.19	0.20	0.08	0.19	0.20
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #3 Euclid St and Edinger Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.803
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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	2 1	0	2 0	2 1	0	1 0	1 1	1	1 0	2 1	0
Volume Module:												
Base Vol:	551	1648	117	136	897	228	121	467	140	119	1103	179
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:	551	1648	117	136	897	228	121	467	140	119	1103	179
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	551	1648	117	136	897	228	121	467	140	119	1103	179
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	551	1648	117	136	897	228	121	467	140	119	1103	179
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	551	1648	117	136	897	228	121	467	140	119	1103	179
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.05	1.00
Lanes:	2.00	2.80	0.20	2.00	2.39	0.61	1.00	2.00	1.00	1.00	2.58	0.42
Final Sat.:	3200	4682	318	3200	4027	973	1600	3400	1600	1600	4330	670
Capacity Analysis Module:												
Vol/Sat:	0.17	0.35	0.37	0.04	0.22	0.23	0.08	0.14	0.09	0.07	0.25	0.27
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Harbor Blvd and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.961
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	147	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			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	1 0	2	1 0	1 0	1	1 0	2 0	2	0 1
Volume Module:												
Base Vol:	107	759	48	173	2324	87	90	753	303	146	453	103
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:	107	759	48	173	2324	87	90	753	303	146	453	103
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	107	759	48	173	2324	87	90	753	303	146	453	103
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	107	759	48	173	2324	87	90	753	303	146	453	103
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	107	759	48	173	2324	87	90	753	303	146	453	103
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.82	0.18	1.00	2.89	0.11	1.00	1.43	0.57	2.00	2.00	1.00
Final Sat.:	3200	4714	286	1600	4827	173	1600	2382	918	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.16	0.17	0.11	0.48	0.50	0.06	0.32	0.33	0.05	0.13	0.06
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #13 Harbor Blvd and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.934
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			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	1 0	2 1	0	1 0	1 1	0	2 0	2 0	1
Volume Module:												
Base Vol:	275	1732	55	86	973	86	118	585	192	121	1308	475
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	1732	55	86	973	86	118	585	192	121	1308	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:	275	1732	55	86	973	86	118	585	192	121	1308	475
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	275	1732	55	86	973	86	118	585	192	121	1308	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:	275	1732	55	86	973	86	118	585	192	121	1308	475
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00
Lanes:	2.00	2.91	0.09	1.00	2.76	0.24	1.00	1.51	0.49	2.00	2.00	1.00
Final Sat.:	3200	4852	148	1600	4610	390	1600	2509	791	3200	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.09	0.36	0.37	0.05	0.21	0.22	0.07	0.23	0.24	0.04	0.38	0.30
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Bristol St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.788
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
Y+R:	4.0	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	1 0	2 1	1	1 0	2 1	0
Volume Module:												
Base Vol:	208	1451	184	315	1298	183	206	1268	128	126	949	139
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:	208	1451	184	315	1298	183	206	1268	128	126	949	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:	208	1451	184	315	1298	183	206	1268	128	126	949	139
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	208	1451	184	315	1298	183	206	1268	128	126	949	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:	208	1451	184	315	1298	183	206	1268	128	126	949	139
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00	1.00	2.62	0.38
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	5100	1600	1600	4387	613
Capacity Analysis Module:												
Vol/Sat:	0.07	0.28	0.12	0.10	0.25	0.11	0.13	0.25	0.08	0.08	0.22	0.23
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #34 Bristol St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.867
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	71	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 0	1	2 0	3 0	1	1 0	2 1	1	1 0	2 1	0
Volume Module:												
Base Vol:	434	1872	276	216	1169	264	259	1454	186	155	953	90
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:	434	1872	276	216	1169	264	259	1454	186	155	953	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:	434	1872	276	216	1169	264	259	1454	186	155	953	90
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	434	1872	276	216	1169	264	259	1454	186	155	953	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:	434	1872	276	216	1169	264	259	1454	186	155	953	90
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00
Lanes:	2.00	3.00	1.00	2.00	3.00	1.00	1.00	3.00	1.00	1.00	2.74	0.26
Final Sat.:	3200	5100	1600	3200	5100	1600	1600	5100	1600	1600	4586	414
Capacity Analysis Module:												
Vol/Sat:	0.14	0.37	0.17	0.07	0.23	0.17	0.16	0.29	0.12	0.10	0.21	0.22
Crit Moves:		****			****			****			****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Bristol St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.814
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	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:	WideBypass			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 1	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	70	778	146	283	1011	119	306	1480	136	157	712	91
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	778	146	283	1011	119	306	1480	136	157	712	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:	70	778	146	283	1011	119	306	1480	136	157	712	91
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	70	778	146	283	1011	119	306	1480	136	157	712	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:	70	778	146	283	1011	119	306	1480	136	157	712	91
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	2.68	0.32	1.00	2.75	0.25	1.00	2.66	0.34
Final Sat.:	1600	5100	1600	1600	4495	505	1600	4596	404	1600	4456	544
Capacity Analysis Module:												
Vol/Sat:	0.04	0.15	0.09	0.18	0.22	0.24	0.19	0.32	0.34	0.10	0.16	0.17
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #37 Bristol St and Segerstrom Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.868
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:	WideBypass			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 1	1 0	2	1 0	1 0	2	1 0	1 0	2	1 0
Volume Module:												
Base Vol:	177	1309	231	98	894	187	279	998	79	156	1408	71
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:	177	1309	231	98	894	187	279	998	79	156	1408	71
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	1309	231	98	894	187	279	998	79	156	1408	71
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	177	1309	231	98	894	187	279	998	79	156	1408	71
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	177	1309	231	98	894	187	279	998	79	156	1408	71
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	3.00	1.00	1.00	2.48	0.52	1.00	2.78	0.22	1.00	2.86	0.14
Final Sat.:	1600	5100	1600	1600	4170	830	1600	4648	352	1600	4770	230
Capacity Analysis Module:												
Vol/Sat:	0.11	0.26	0.14	0.06	0.21	0.23	0.17	0.21	0.22	0.10	0.30	0.31
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #44 Flower St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.925
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	104	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			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 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	89	387	102	366	1158	121	107	983	39	161	664	95
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	387	102	366	1158	121	107	983	39	161	664	95
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	89	387	102	366	1158	121	107	983	39	161	664	95
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	387	102	366	1158	121	107	983	39	161	664	95
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	387	102	366	1158	121	107	983	39	161	664	95
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	387	102	366	1158	121	107	983	39	161	664	95
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.03	1.00	1.00	1.03	1.00	1.00	1.04	1.00
Lanes:	1.00	2.00	1.00	1.00	1.81	0.19	1.00	1.92	0.08	1.00	1.75	0.25
Final Sat.:	1600	3400	1600	1600	2997	303	1600	3178	122	1600	2899	401
Capacity Analysis Module:												
Vol/Sat:	0.06	0.11	0.06	0.23	0.39	0.40	0.07	0.31	0.32	0.10	0.23	0.24
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #44 Flower St and 1st St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.921
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	101	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			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 0	1	1 0	1 1	0	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	211	1000	238	140	383	111	135	1181	98	144	969	101
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:	211	1000	238	140	383	111	135	1181	98	144	969	101
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	211	1000	238	140	383	111	135	1181	98	144	969	101
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	211	1000	238	140	383	111	135	1181	98	144	969	101
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	211	1000	238	140	383	111	135	1181	98	144	969	101
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	211	1000	238	140	383	111	135	1181	98	144	969	101
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.03	1.00	1.00	1.03	1.00
Lanes:	1.00	2.00	1.00	1.00	1.55	0.45	1.00	1.85	0.15	1.00	1.81	0.19
Final Sat.:	1600	3400	1600	1600	2581	719	1600	3055	245	1600	2998	302
Capacity Analysis Module:												
Vol/Sat:	0.13	0.29	0.15	0.09	0.15	0.15	0.08	0.39	0.40	0.09	0.32	0.33
Crit Moves:		****		****					****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #62 Santiago St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.241
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
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 0	1	1 0	1 0	1	0 1	0 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	188	611	303	409	972	253	118	732	99	297	699	258
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:	188	611	303	409	972	253	118	732	99	297	699	258
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	188	611	303	409	972	253	118	732	99	297	699	258
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	188	611	303	409	972	253	118	732	99	297	699	258
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	188	611	303	409	972	253	118	732	99	297	699	258
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	0.25	1.54	0.21	1.00	2.00	1.00
Final Sat.:	1600	1700	1600	1600	1700	1600	398	2468	334	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.36	0.19	0.26	0.57	0.16	0.30	0.30	0.30	0.19	0.21	0.16
Crit Moves:	****			****			****			****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #62 Santiago St and Santa Ana Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.282
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Split Phase			Split Phase		
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 0	1	1 0	1 0	1	0 1	0 1	0	1 0	2 0	1
Volume Module:												
Base Vol:	135	833	236	378	639	103	164	673	87	255	546	347
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:	135	833	236	378	639	103	164	673	87	255	546	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:	135	833	236	378	639	103	164	673	87	255	546	347
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	135	833	236	378	639	103	164	673	87	255	546	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:	135	833	236	378	639	103	164	673	87	255	546	347
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.00	1.00	1.00	1.06	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	0.35	1.46	0.19	1.00	2.00	1.00
Final Sat.:	1600	1700	1600	1600	1700	1600	568	2331	301	1600	3400	1600
Capacity Analysis Module:												
Vol/Sat:	0.08	0.49	0.15	0.24	0.38	0.06	0.29	0.29	0.29	0.16	0.16	0.22
Crit Moves:		****		****					****			****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #63 Standard Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.062
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	191	473	248	431	604	332	298	624	219	250	550	340
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:	191	473	248	431	604	332	298	624	219	250	550	340
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	191	473	248	431	604	332	298	624	219	250	550	340
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	191	473	248	431	604	332	298	624	219	250	550	340
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	191	473	248	431	604	332	298	624	219	250	550	340
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	191	473	248	431	604	332	298	624	219	250	550	340
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.48	0.52	1.00	1.24	0.76
Final Sat.:	1600	1700	1600	1600	1700	1600	1600	2469	831	1600	2078	1222
Capacity Analysis Module:												
Vol/Sat:	0.12	0.28	0.16	0.27	0.36	0.21	0.19	0.25	0.26	0.16	0.26	0.28
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Future Volume Alternative)

Intersection #63 Standard Ave and 4th St

Cycle (sec):	100	Critical Vol./Cap.(X):	1.029
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	1 0	1	1 0	1 0	1	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	251	543	214	254	428	297	302	477	201	233	648	351
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	543	214	254	428	297	302	477	201	233	648	351
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	0	0	0	0	0	0	0	0	0	0	0	0
Initial Fut:	251	543	214	254	428	297	302	477	201	233	648	351
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	543	214	254	428	297	302	477	201	233	648	351
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	251	543	214	254	428	297	302	477	201	233	648	351
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	251	543	214	254	428	297	302	477	201	233	648	351
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.04	1.00	1.00	1.05	1.00
Lanes:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.41	0.59	1.00	1.30	0.70
Final Sat.:	1600	1700	1600	1600	1700	1600	1600	2351	949	1600	2176	1124
Capacity Analysis Module:												
Vol/Sat:	0.16	0.32	0.13	0.16	0.25	0.19	0.19	0.20	0.21	0.15	0.30	0.31
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #76 Grand Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.816
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	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:	Permitted			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 1	1 0	2	1 0	2 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	229	669	460	414	1734	340	246	915	116	401	1047	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:	229	669	460	414	1734	340	246	915	116	401	1047	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:	229	669	460	414	1734	340	246	915	116	401	1047	114
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	229	669	460	414	1734	340	246	915	116	401	1047	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:	229	669	460	414	1734	340	246	915	116	401	1047	114
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.37	1.63	1.00	2.51	0.49	2.00	2.66	0.34	2.00	2.71	0.29
Final Sat.:	1600	3992	2608	1600	4213	787	3200	4460	540	3200	4529	471
Capacity Analysis Module:												
Vol/Sat:	0.14	0.17	0.18	0.26	0.41	0.43	0.08	0.21	0.21	0.13	0.23	0.24
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #76 Grand Ave and 17th St

Cycle (sec):	100	Critical Vol./Cap.(X):	0.925
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	104	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:	Permitted			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 1	1 0	2	1 0	2 0	2	1 0	2 0	2	1 0
Volume Module:												
Base Vol:	420	1499	378	332	715	157	371	949	160	284	1046	190
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:	420	1499	378	332	715	157	371	949	160	284	1046	190
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	420	1499	378	332	715	157	371	949	160	284	1046	190
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	420	1499	378	332	715	157	371	949	160	284	1046	190
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	420	1499	378	332	715	157	371	949	160	284	1046	190
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	3.00	1.00	1.00	2.46	0.54	2.00	2.57	0.43	2.00	2.54	0.46
Final Sat.:	1600	5100	1600	1600	4136	864	3200	4307	693	3200	4262	738
Capacity Analysis Module:												
Vol/Sat:	0.26	0.29	0.24	0.21	0.17	0.18	0.12	0.22	0.23	0.09	0.25	0.26
Crit Moves:		****			****			****				****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #81 Grand Ave and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.861
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	69	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:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	262	1104	165	294	1974	192	109	352	107	95	340	86
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:	262	1104	165	294	1974	192	109	352	107	95	340	86
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	262	1104	165	294	1974	192	109	352	107	95	340	86
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	262	1104	165	294	1974	192	109	352	107	95	340	86
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	262	1104	165	294	1974	192	109	352	107	95	340	86
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.61	0.39	1.00	2.73	0.27	1.00	1.53	0.47	1.00	1.60	0.40
Final Sat.:	1600	4376	624	1600	4575	425	1600	2554	746	1600	2654	646
Capacity Analysis Module:												
Vol/Sat:	0.16	0.25	0.26	0.18	0.43	0.45	0.07	0.14	0.14	0.06	0.13	0.13
Crit Moves:	****					****	****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #81 Grand Ave and McFadden Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.813
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	55	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:	1 0	2	1 0	1 0	2	1 0	1 0	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	232	1320	227	176	800	215	64	238	42	96	762	168
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:	232	1320	227	176	800	215	64	238	42	96	762	168
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	232	1320	227	176	800	215	64	238	42	96	762	168
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	232	1320	227	176	800	215	64	238	42	96	762	168
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	232	1320	227	176	800	215	64	238	42	96	762	168
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.04	1.00
Lanes:	1.00	2.56	0.44	1.00	2.36	0.64	1.00	1.70	0.30	1.00	1.64	0.36
Final Sat.:	1600	4296	704	1600	3983	1017	1600	2820	480	1600	2722	578
Capacity Analysis Module:												
Vol/Sat:	0.15	0.31	0.32	0.11	0.20	0.21	0.04	0.08	0.09	0.06	0.28	0.29
Crit Moves:			****	****			****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #91 Tustin Ave and Fairhaven Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.803
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	53	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			Ovl		
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	1 0 1		1 0	1 0 1		1 0
Volume Module:												
Base Vol:	89	514	90	174	1497	30	63	240	412	239	265	346
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	514	90	174	1497	30	63	240	412	239	265	346
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	514	90	174	1497	30	63	240	412	239	265	346
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	89	514	90	174	1497	30	63	240	412	239	265	346
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	89	514	90	174	1497	30	63	240	412	239	265	346
OvlAdjVol:												259
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.55	0.45	2.00	2.94	0.06	1.00	1.00	1.00	1.00	1.00	1.00
Final Sat.:	3200	4285	715	3200	4906	94	1600	1700	1600	1600	1700	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.12	0.13	0.05	0.31	0.32	0.04	0.14	0.26	0.15	0.16	0.22
OvlAdjV/S:												0.16
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #91 Tustin Ave and Fairhaven Ave

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:	Protected			Protected			Protected			Protected		
Rights:	Include			Include			Include			Ovl		
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	1 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	155	827	73	333	879	101	58	130	106	123	272	256
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:	155	827	73	333	879	101	58	130	106	123	272	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:	155	827	73	333	879	101	58	130	106	123	272	256
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	155	827	73	333	879	101	58	130	106	123	272	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:	155	827	73	333	879	101	58	130	106	123	272	256
OvlAdjVol:												95
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.76	0.24	2.00	2.69	0.31	1.00	1.10	0.90	1.00	1.03	0.97
Final Sat.:	3200	4611	389	3200	4505	495	1600	1863	1437	1600	1748	1552
Capacity Analysis Module:												
Vol/Sat:	0.05	0.18	0.19	0.10	0.20	0.20	0.04	0.07	0.07	0.08	0.16	0.17
OvlAdjV/S:												0.06
Crit Moves:			****	****			****				****	

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #92 Tustin Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	1.398
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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
Y+R:	4.0	4.0	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	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	91	496	93	89	1816	57	606	1530	1116	118	244	122
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:	91	496	93	89	1816	57	606	1530	1116	118	244	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:	91	496	93	89	1816	57	606	1530	1116	118	244	122
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	91	496	93	89	1816	57	606	1530	1116	118	244	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:	91	496	93	89	1816	57	606	1530	1116	118	244	122
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.05	1.00
Lanes:	1.00	2.53	0.47	2.00	2.91	0.09	1.00	1.16	0.84	1.00	1.33	0.67
Final Sat.:	1600	4242	758	3200	4854	146	1600	1950	1350	1600	2233	1067
Capacity Analysis Module:												
Vol/Sat:	0.06	0.12	0.12	0.03	0.37	0.39	0.38	0.78	0.83	0.07	0.11	0.11
Crit Moves:	****					****			****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #92 Tustin Ave and Santa Clara Ave

Cycle (sec):	100	Critical Vol./Cap.(X):	0.471
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
Y+R:	4.0	4.0	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	1	1 0	1 0	1	1 0
Volume Module:												
Base Vol:	136	659	101	146	1155	80	34	107	63	45	57	54
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:	136	659	101	146	1155	80	34	107	63	45	57	54
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	659	101	146	1155	80	34	107	63	45	57	54
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	136	659	101	146	1155	80	34	107	63	45	57	54
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	136	659	101	146	1155	80	34	107	63	45	57	54
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.04	1.00	1.00	1.05	1.00	1.00	1.06	1.00
Lanes:	1.00	2.60	0.40	2.00	2.81	0.19	1.00	1.26	0.74	1.00	1.03	0.97
Final Sat.:	1600	4362	638	3200	4689	311	1600	2114	1186	1600	1743	1557
Capacity Analysis Module:												
Vol/Sat:	0.09	0.15	0.16	0.05	0.25	0.26	0.02	0.05	0.05	0.03	0.03	0.03
Crit Moves:	****					****		****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.460
Loss Time (sec):	5	Average Delay (sec/veh):	24.4
Optimal Cycle:	23	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			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	1 0	3 0	2	2 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	413	109	69	20	497	728	269	163	155	8	223	4
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:	413	109	69	20	497	728	269	163	155	8	223	4
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	413	109	69	20	497	728	269	163	155	8	223	4
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	413	109	69	20	497	728	269	163	155	8	223	4
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	413	109	69	20	497	728	269	163	155	8	223	4
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.86	0.86	0.95	0.91	0.75	0.92	0.88	0.88	0.95	0.95	0.95
Lanes:	2.00	2.00	1.00	1.00	3.00	2.00	2.00	1.03	0.97	1.00	1.96	0.04
Final Sat.:	3502	3257	1629	1805	5187	2842	3502	1715	1631	1805	3536	63
Capacity Analysis Module:												
Vol/Sat:	0.12	0.03	0.04	0.01	0.10	0.26	0.08	0.10	0.10	0.00	0.06	0.06
Crit Moves:	****					****	****				****	
Green/Cycle:	0.26	0.51	0.51	0.13	0.39	0.56	0.17	0.29	0.29	0.01	0.14	0.14
Volume/Cap:	0.46	0.07	0.08	0.08	0.25	0.46	0.46	0.33	0.33	0.33	0.46	0.46
Delay/Veh:	31.7	12.3	12.4	38.1	20.7	13.4	38.2	28.0	28.0	56.5	40.4	40.4
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	31.7	12.3	12.4	38.1	20.7	13.4	38.2	28.0	28.0	56.5	40.4	40.4
LOS by Move:	C	B	B	D	C	B	D	C	C	E	D	D
HCM2k85thQ:	9	1	2	1	6	12	7	6	6	1	6	6

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2 0 2	1 0		1 0 3	0 2		2 0 1	1 0		1 0 1	1 0	
Lane Group:	L	RT	RT	L	T	R	L	RT	RT	L	RT	RT
#LnsInGrps:	2	3	3	1	3	2	2	2	2	1	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		0			0			0			0	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.94	0.94	xxxx	xxxx	0.85	xxxx	0.93	0.93	xxxx	1.00	1.00
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.95	0.94	0.94	0.95	1.00	0.85	0.95	0.93	0.93	0.95	1.00	1.00
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	0.97	0.91	0.91	1.00	0.91	0.88	0.97	0.95	0.95	1.00	0.95	0.95
Fnl Sat Adj:	0.92	0.86	0.86	0.95	0.91	0.75	0.92	0.88	0.88	0.95	0.95	0.95
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

****

Santa Ana Circulation Element

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.26	0.51	0.51	0.13	0.39	0.56	0.17	0.29	0.29	0.01	0.14	0.14
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	5.0	0.8	1.1	0.5	3.4	6.8	3.5	3.6	3.6	0.2	3.1	3.1
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	0.8	0.1	0.1	0.1	0.3	0.8	0.8	0.5	0.5	0.4	0.8	0.8
HCM2KQueue:	5.8	0.9	1.2	0.6	3.7	7.7	4.3	4.1	4.1	0.6	3.9	3.9
70th%Factor:	1.19	1.20	1.20	1.20	1.19	1.18	1.19	1.19	1.19	1.20	1.19	1.19
HCM2k70thQ:	6.9	1.1	1.4	0.7	4.5	9.1	5.1	4.9	4.9	0.8	4.6	4.6
85th%Factor:	1.55	1.59	1.59	1.59	1.56	1.53	1.56	1.56	1.56	1.59	1.56	1.56
HCM2k85thQ:	9.0	1.4	1.8	0.9	5.8	11.8	6.7	6.4	6.4	1.0	6.1	6.1
90th%Factor:	1.70	1.78	1.78	1.79	1.73	1.67	1.72	1.73	1.73	1.79	1.73	1.73
HCM2k90thQ:	9.9	1.6	2.1	1.0	6.5	12.9	7.4	7.1	7.1	1.1	6.7	6.7
95th%Factor:	1.93	2.07	2.06	2.08	1.99	1.89	1.97	1.98	1.98	2.08	1.98	1.98
HCM2k95thQ:	11.3	1.9	2.4	1.2	7.4	14.5	8.5	8.2	8.2	1.3	7.7	7.7
98th%Factor:	2.34	2.63	2.61	2.66	2.45	2.25	2.42	2.43	2.43	2.65	2.44	2.44
HCM2k98thQ:	13.6	2.4	3.0	1.5	9.2	17.3	10.4	10.0	10.0	1.7	9.5	9.5

Santa Ana Circulation Element

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:	30 MPH			30 MPH			30 MPH			30 MPH		
NumOfStops:	87.1	13.8	8.8	4.4	83.9	108.5	60.7	31.9	30.4	2.0	51.3	0.9

Name: year 1995 composite fleet
Fuel Consumption: 77.649 pounds
12.579 gallons
Carbon Dioxide: 242.266 pounds
Carbon Monoxide: 18.976 pounds
Hydrocarbons: 3.456 pounds
Nitrogen Oxides: 0.687 pounds

Name: year 2000 composite fleet
Fuel Consumption: 77.649 pounds
12.579 gallons
Carbon Dioxide: 242.266 pounds
Carbon Monoxide: 18.976 pounds
Hydrocarbons: 3.456 pounds
Nitrogen Oxides: 0.687 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Santa Ana Circulation Element

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

Cycle (sec):	100	Critical Vol./Cap.(X):	0.700
Loss Time (sec):	5	Average Delay (sec/veh):	28.5
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			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	1 0	3 0	2	2 0	1 1	0	1 0	1 1	0
Volume Module:												
Base Vol:	879	262	51	19	231	889	165	57	33	23	348	16
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:	879	262	51	19	231	889	165	57	33	23	348	16
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	879	262	51	19	231	889	165	57	33	23	348	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	879	262	51	19	231	889	165	57	33	23	348	16
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	879	262	51	19	231	889	165	57	33	23	348	16
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.92	0.89	0.89	0.95	0.91	0.75	0.92	0.90	0.90	0.95	0.94	0.94
Lanes:	2.00	2.51	0.49	1.00	3.00	2.00	2.00	1.27	0.73	1.00	1.91	0.09
Final Sat.:	3502	4238	825	1805	5187	2842	3502	2161	1251	1805	3427	158
Capacity Analysis Module:												
Vol/Sat:	0.25	0.06	0.06	0.01	0.04	0.31	0.05	0.03	0.03	0.01	0.10	0.10
Crit Moves:	****					****	****				****	
Green/Cycle:	0.36	0.63	0.63	0.11	0.38	0.45	0.07	0.14	0.14	0.07	0.14	0.14
Volume/Cap:	0.70	0.10	0.10	0.10	0.12	0.70	0.70	0.18	0.18	0.18	0.70	0.70
Delay/Veh:	29.3	7.3	7.3	40.5	20.2	24.1	54.7	37.9	37.9	44.6	44.9	44.9
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	29.3	7.3	7.3	40.5	20.2	24.1	54.7	37.9	37.9	44.6	44.9	44.9
LOS by Move:	C	A	A	D	C	C	D	D	D	D	D	D
HCM2k85thQ:	19	2	2	1	3	20	6	2	2	1	11	11

Note: Queue reported is the number of cars per lane.

Santa Ana Circulation Element

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

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Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	2 0 2	1 0		1 0 3	0 2		2 0 1	1 0		1 0 1	1 0	
Lane Group:	L	RT	RT	L	T	R	L	RT	RT	L	RT	RT
#LnsInGrps:	2	3	3	1	3	2	2	2	2	1	2	2
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		0			0			0			0	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		0			0			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hev Veh Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Grade Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Bus Stp Adj:	xxxx	1.00	1.00	xxxx	xxxx	1.00	xxxx	1.00	1.00	xxxx	1.00	1.00
Area Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
RT Adj:	xxxx	0.98	0.98	xxxx	xxxx	0.85	xxxx	0.95	0.95	xxxx	0.99	0.99
LT Adj:	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.95	0.98	0.98	0.95	1.00	0.85	0.95	0.95	0.95	0.95	0.99	0.99
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	0.97	0.91	0.91	1.00	0.91	0.88	0.97	0.95	0.95	1.00	0.95	0.95
Fnl Sat Adj:	0.92	0.89	0.89	0.95	0.91	0.75	0.92	0.90	0.90	0.95	0.94	0.94
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > >											
DelAdjFctr:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00

****

Santa Ana Circulation Element

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.36	0.63	0.63	0.11	0.38	0.45	0.07	0.14	0.14	0.07	0.14	0.14
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	10.8	1.3	1.3	0.5	1.5	11.3	2.3	1.2	1.2	0.6	5.1	5.1
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q2:	2.1	0.1	0.1	0.1	0.1	2.2	1.7	0.2	0.2	0.2	2.0	2.0
HCM2KQueue:	12.9	1.4	1.4	0.6	1.7	13.5	4.0	1.4	1.4	0.8	7.0	7.0
70th%Factor:	1.17	1.20	1.20	1.20	1.20	1.17	1.19	1.20	1.20	1.20	1.18	1.18
HCM2k70thQ:	15.2	1.6	1.6	0.7	2.0	15.8	4.8	1.7	1.7	1.0	8.3	8.3
85th%Factor:	1.49	1.59	1.59	1.59	1.58	1.49	1.56	1.59	1.59	1.59	1.54	1.54
HCM2k85thQ:	19.3	2.2	2.2	0.9	2.6	20.1	6.3	2.2	2.2	1.3	10.8	10.8
90th%Factor:	1.61	1.77	1.77	1.79	1.77	1.60	1.73	1.77	1.77	1.78	1.68	1.68
HCM2k90thQ:	20.8	2.4	2.4	1.0	2.9	21.6	6.9	2.5	2.5	1.5	11.8	11.8
95th%Factor:	1.79	2.06	2.06	2.08	2.05	1.78	1.98	2.06	2.06	2.07	1.91	1.91
HCM2k95thQ:	23.2	2.8	2.8	1.2	3.4	24.0	7.9	2.8	2.8	1.7	13.4	13.4
98th%Factor:	2.07	2.60	2.60	2.66	2.58	2.06	2.43	2.60	2.60	2.64	2.28	2.28
HCM2k98thQ:	26.8	3.5	3.5	1.6	4.3	27.7	9.8	3.6	3.6	2.2	16.0	16.0

Santa Ana Circulation Element

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

****

Intersection #96 SR-55 NB Ramps / Del Amo Ave and Newport Avenue

****

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:	30 MPH			30 MPH			30 MPH			30 MPH		
NumOfStops:	188.2	25.8	5.0	4.3	37.5	179.0	40.4	12.5	7.3	5.4	82.8	3.8

Name: year 1995 composite fleet
Fuel Consumption: 95.783 pounds
15.517 gallons
Carbon Dioxide: 298.844 pounds
Carbon Monoxide: 23.735 pounds
Hydrocarbons: 4.419 pounds
Nitrogen Oxides: 0.831 pounds

Name: year 2000 composite fleet
Fuel Consumption: 95.783 pounds
15.517 gallons
Carbon Dioxide: 298.844 pounds
Carbon Monoxide: 23.735 pounds
Hydrocarbons: 4.419 pounds
Nitrogen Oxides: 0.831 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #100 Red Hill Ave and Alton Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.684
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:	Include			Include			Ignore			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	4 0	1	1 0	3 0	1	2 0	2 1	1	2 0	1 1	1
Volume Module:												
Base Vol:	235	693	434	233	1059	170	185	574	574	335	284	159
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:	235	693	434	233	1059	170	185	574	574	335	284	159
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	235	693	434	233	1059	170	185	574	0	335	284	159
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	235	693	434	233	1059	170	185	574	0	335	284	159
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	235	693	434	233	1059	170	185	574	0	335	284	159
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.03	1.00
Lanes:	1.00	4.00	1.00	1.00	3.00	1.00	2.00	3.00	1.00	2.00	1.92	1.08
Final Sat.:	1600	6800	1600	1600	5100	1600	3200	5100	1600	3200	3177	1723
Capacity Analysis Module:												
Vol/Sat:	0.15	0.10	0.27	0.15	0.21	0.11	0.06	0.11	0.00	0.10	0.09	0.09
Crit Moves:			****	****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #100 Red Hill Ave and Alton Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	1.209
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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			Ignore			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	4 0	1	1 0	3 0	1	2 0	2 1	1	2 0	1 1	1
Volume Module:												
Base Vol:	27	1513	219	148	628	5	453	1111	569	2003	342	1235
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:	27	1513	219	148	628	5	453	1111	569	2003	342	1235
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
PHF Volume:	27	1513	219	148	628	5	453	1111	0	2003	342	1235
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	1513	219	148	628	5	453	1111	0	2003	342	1235
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
FinalVolume:	27	1513	219	148	628	5	453	1111	0	2003	342	1235
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	1.00	4.00	1.00	1.00	3.00	1.00	2.00	3.00	1.00	2.00	1.00	2.00
Final Sat.:	1600	6800	1600	1600	5100	1600	3200	5100	1600	3200	1700	3200
Capacity Analysis Module:												
Vol/Sat:	0.02	0.22	0.14	0.09	0.12	0.00	0.14	0.22	0.00	0.63	0.20	0.39
Crit Moves:		****		****				****		****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Red Hill Ave and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.155
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	3 0	1	3 0	2 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	83	742	13	205	529	485	1194	617	101	34	329	843
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:	83	742	13	205	529	485	1194	617	101	34	329	843
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	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	742	13	205	529	485	1194	617	101	34	329	843
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	83	742	13	205	529	485	1194	617	101	34	329	843
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	83	742	13	205	529	485	1194	617	101	34	329	843
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.95	0.05	2.00	3.00	1.00	3.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4917	83	3200	5100	1600	4800	3400	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.03	0.15	0.16	0.06	0.10	0.30	0.25	0.18	0.06	0.02	0.06	0.53
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #101 Red Hill Ave and MacArthur Blvd

Cycle (sec):	100	Critical Vol./Cap.(X):	1.347
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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	3 0	1	3 0	2 0	1	1 0	3 0	1
Volume Module:												
Base Vol:	179	1160	14	340	707	1240	515	237	36	39	818	574
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:	179	1160	14	340	707	1240	515	237	36	39	818	574
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	179	1160	14	340	707	1240	515	237	36	39	818	574
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	179	1160	14	340	707	1240	515	237	36	39	818	574
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	179	1160	14	340	707	1240	515	237	36	39	818	574
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	2.96	0.04	2.00	3.00	1.00	3.00	2.00	1.00	1.00	3.00	1.00
Final Sat.:	3200	4943	57	3200	5100	1600	4800	3400	1600	1600	5100	1600
Capacity Analysis Module:												
Vol/Sat:	0.06	0.23	0.24	0.11	0.14	0.78	0.11	0.07	0.02	0.02	0.16	0.36
Crit Moves:	****					****	****					****

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Von Karman Ave and Barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	0.930
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	108	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			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 1	1 0		2 0 2	0 2		2 0 3	0 1		2 0 3	1 1	
Volume Module:												
Base Vol:	375	497	298	98	960	420	247	928	310	917	1506	47
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:	375	497	298	98	960	420	247	928	310	917	1506	47
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	375	497	298	98	960	420	247	928	310	917	1506	47
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	375	497	298	98	960	420	247	928	310	917	1506	47
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	375	497	298	98	960	420	247	928	310	917	1506	47
OvlAdjVol:						173						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.05	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.06	1.00
Lanes:	2.00	1.25	0.75	2.00	2.00	2.00	2.00	3.00	1.00	2.00	4.00	1.00
Final Sat.:	3200	2101	1199	3200	3400	3200	3200	5100	1600	3200	6800	1600
Capacity Analysis Module:												
Vol/Sat:	0.12	0.24	0.25	0.03	0.28	0.13	0.08	0.18	0.19	0.29	0.22	0.03
OvlAdjV/S:						0.05						
Crit Moves:	****				****				****	****		

Santa Ana Circulation Element

Level Of Service Computation Report
ICU 1(Loss as Cycle Length %) Method (Base Volume Alternative)

Intersection #105 Von Karman Ave and Barranca Pkwy

Cycle (sec):	100	Critical Vol./Cap.(X):	1.241
Loss Time (sec):	5	Average Delay (sec/veh):	xxxxxx
Optimal Cycle:	180	Level Of Service:	F

Approach:	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			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 1	1 0		2 0 2	0 2		2 0 3	0 1		2 0 3	1 1	
Volume Module:												
Base Vol:	362	2082	454	80	407	280	785	1435	201	254	805	274
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:	362	2082	454	80	407	280	785	1435	201	254	805	274
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Volume:	362	2082	454	80	407	280	785	1435	201	254	805	274
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	362	2082	454	80	407	280	785	1435	201	254	805	274
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	362	2082	454	80	407	280	785	1435	201	254	805	274
OvlAdjVol:						0						
Saturation Flow Module:												
Sat/Lane:	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600	1600
Adjustment:	1.00	1.04	1.00	1.00	1.06	1.00	1.00	1.06	1.00	1.00	1.05	1.00
Lanes:	2.00	1.64	0.36	2.00	2.00	2.00	2.00	3.00	1.00	2.00	3.73	1.27
Final Sat.:	3200	2727	573	3200	3400	3200	3200	5100	1600	3200	6268	2032
Capacity Analysis Module:												
Vol/Sat:	0.11	0.76	0.79	0.03	0.12	0.09	0.25	0.28	0.13	0.08	0.13	0.13
OvlAdjV/S:						0.00						
Crit Moves:		****	****				****				****	

Base Year 2016										
SCENARIO	I-I	I-X	X-I	Total VMT	TOT_POP	Total Employees	VMT/Capita	TOT_POP	Total Employees - Reduced	VMT / Capita
Citywide	698,590	5,295,496	5,291,968	11,286,054	364,042	176,354	20.9	364,042	139,672	22.4
Countywide	47,482,030	24,809,328	24,994,227	97,285,585	3,179,626	1,710,147	19.9	3,179,626	593,421	25.8

Existing Year 2020										
SCENARIO	I-I	I-X	X-I	Total VMT	TOT_POP	Total Employees	VMT/Capita	TOT_POP	Total Employees - Reduced	VMT / Capita
Citywide	697,779	5,356,504	5,352,841	11,407,124	367,064	177,854	20.9	367,064	140,860	22.5
Countywide	48,242,429	25,463,887	25,637,825	99,344,141	3,228,591	1,747,428	20.0	3,228,591	606,358	25.9

Future Year 2045 Baseline										
SCENARIO	I-I	I-X	X-I	Total VMT	TOT_POP	Total Employees	VMT/Capita	TOT_POP	Total Employees - Reduced	VMT / Capita
Citywide	692,704	5,737,798	5,733,292	12,163,794	385,955	187,226	21.2	385,955	148,283	22.8
Countywide	52,994,916	29,554,879	29,660,308	112,210,103	3,534,620	1,980,433	20.3	3,534,620	687,210	26.6

Future Year 2045 WP - 80% Buildout										
SCENARIO	I-I	I-X	X-I	Total VMT	TOT_POP	Total Employees	VMT/Capita	TOT_POP	Total Employees - Reduced	VMT / Capita
Citywide	637,655	5,432,337	5,448,967	11,518,959	432,421	169,438	19.1	432,421	134,195	20.3
Countywide	52,931,787	29,642,498	29,748,229	112,322,514	3,581,086	1,962,645	20.3	3,581,086	681,038	26.4

*In order to mitigate double-counting, a reduction factor was applied to the employee population to account for the amount of employees who are also residents of the City. Per SCAG Local Profile Report (2019), 20.8% of commuters live in the City. Thus, a reduction of 20.8% was applied to the employee population. (https://www.scag.ca.gov/Documents/SantaAna.pdf)

*In order to mitigate double-counting, a reduction factor was applied to the employee population to account for the amount of employees who are also residents of the County. Per SCAG Local Profile Report (2019), 65.3% of commuters live in the County. Thus, a reduction of 65.3% was applied to the employee population. (https://www.scag.ca.gov/Documents/OrangeCountyLP.pdf)

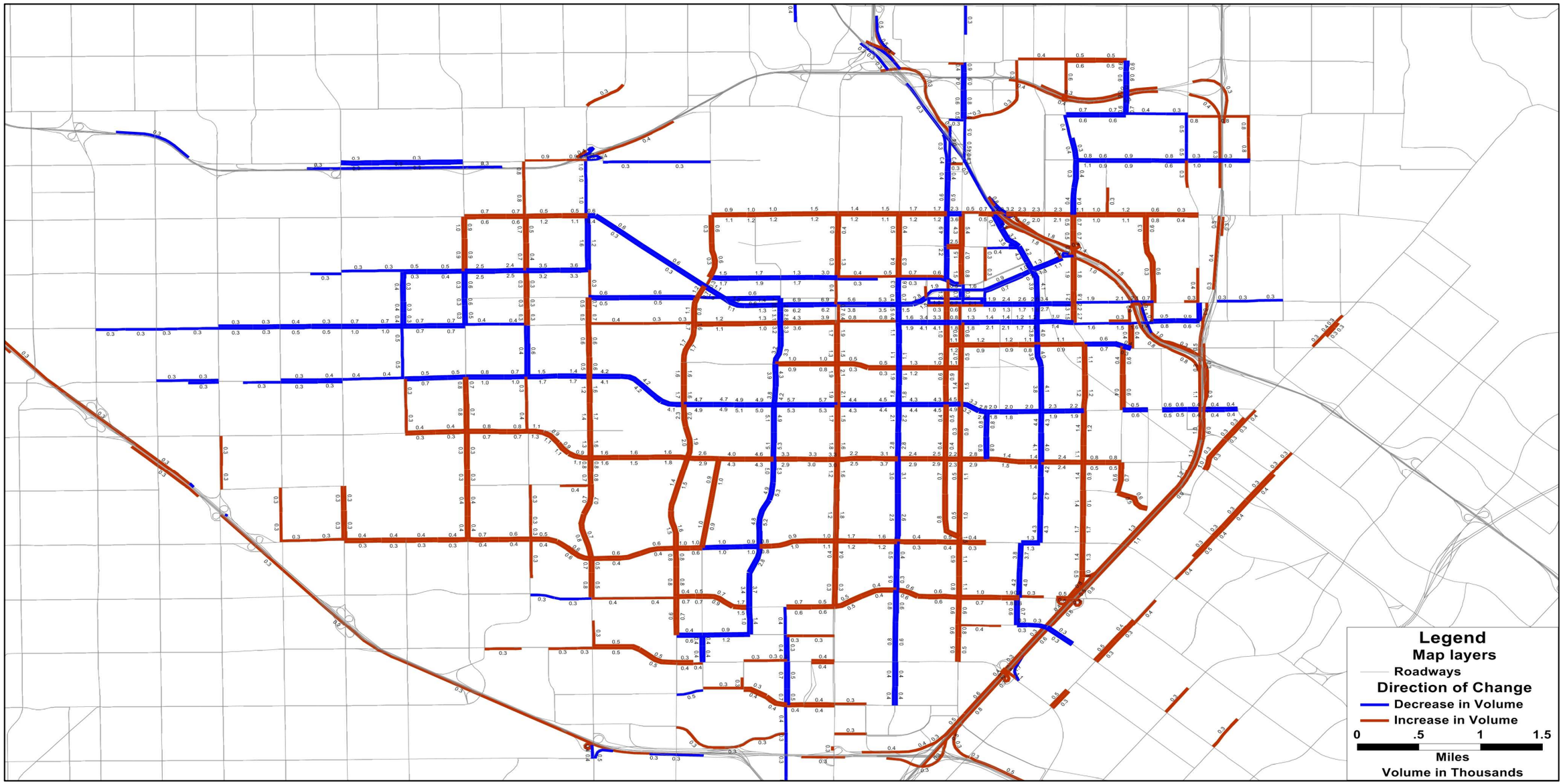
ID	INTERSECTION	PEAK HOUR	2045 No Project		2045 With Project - Baseline Network		2045 With Project		DELTA (WP-Base.)
			V/C or Delay	LOS	V/C or Delay	LOS	V/C or Delay	LOS	
1	Euclid Street and Bolsa Avenue	AM	0.86	D	0.82	D	0.79	C	-0.03
		PM	0.86	D	0.81	D	0.79	C	-0.02
2	Euclid Street and McFadden Avenue	AM	0.98	E	0.94	E	0.91	E	-0.03
		PM	0.90	D	0.83	D	0.79	C	-0.04
3	Euclid Street and Edinger Avenue	AM	0.99	E	0.96	E	1.01	F	0.05
		PM	0.89	D	0.82	D	0.86	D	0.04
4	Newhope Street and Hazard Avenue	AM	0.78	C	0.75	C	0.60	A	-0.15
		PM	0.72	C	0.67	B	0.52	A	-0.15
5	Newhope Street and McFadden Avenue	AM	0.83	D	0.79	C	0.73	C	-0.06
		PM	0.78	C	0.72	C	0.68	B	-0.04
6	Harbor Boulevard and SR-22 WB Off-Ramp / Banner Drive	AM	28.4	C	28.5	C	28.5	C	0.0
		PM	24.2	C	23.7	C	23.8	C	0.1
7	Trask Avenue and SR-22 EB On-Ramp	AM	12.0	B	11.2	B	11.0	B	-0.2
		PM	13.6	B	10.7	B	11.0	B	0.3
8	Harbor Boulevard and Westminster Avenue	AM	0.99	E	0.95	E	0.94	E	-0.01
		PM	0.88	D	0.84	D	0.84	D	0.00
9	Harbor Boulevard and 1st Street	AM	0.79	C	0.76	C	0.75	C	-0.01
		PM	0.78	C	0.74	C	0.75	C	0.01
10	Harbor Boulevard and McFadden Avenue	AM	0.79	C	0.74	C	0.73	C	-0.01
		PM	0.81	D	0.78	C	0.71	C	-0.07
11	Harbor Boulevard and Edinger Avenue	AM	0.84	D	0.79	C	0.86	D	0.07
		PM	0.73	C	0.67	B	0.72	C	0.05
12	Harbor Boulevard and Warner Avenue	AM	0.79	C	0.76	C	0.80	C	0.04
		PM	1.54	F	1.47	F	1.54	F	0.07
13	Harbor Boulevard and Segerstrom Avenue	AM	0.97	E	1.00	E	1.01	F	0.01
		PM	0.92	E	0.92	E	0.93	E	0.01
14	Hyland Avenue / OCTA Bus Base and MacArthur Boulevard	AM	0.61	B	0.60	A	0.62	B	0.02
		PM	0.92	E	0.89	D	0.89	D	0.00
15	Harbor Boulevard and MacArthur Boulevard	AM	0.74	C	0.74	C	0.75	C	0.01
		PM	0.78	C	0.78	C	0.79	C	0.01
16	Harbor Boulevard and Sunflower Avenue	AM	0.70	B	0.72	C	0.71	C	-0.01
		PM	0.72	C	0.71	C	0.71	C	0.00
17	Harbor Boulevard and I-405 NB Off-Ramp	AM	18.0	B	17.8	B	17.9	B	0.1
		PM	18.3	B	18.7	B	18.8	B	0.1
18	Harbor Boulevard and I-405 SB Off-Ramp	AM	15.0	B	14.9	B	15.0	B	0.1
		PM	17.9	B	18.1	B	18.1	B	0.0
19	Fairview Street and Civic Center Drive	AM	0.74	C	0.72	C	0.68	B	-0.04
		PM	0.76	C	0.73	C	0.71	C	-0.02
20	Fairview Street and 1st Street	AM	0.86	D	0.83	D	0.89	D	0.06
		PM	0.90	D	0.85	D	0.89	D	0.04
21	Fairview Street and McFadden Avenue	AM	0.80	C	0.80	C	0.80	C	0.00
		PM	0.78	C	0.75	C	0.68	B	-0.07
22	Fairview Street and Edinger Avenue	AM	0.86	D	0.81	D	0.88	D	0.07
		PM	0.92	E	0.84	D	0.92	E	0.08
23	Fairview Street and Warner Avenue	AM	0.82	D	0.79	C	0.85	D	0.06
		PM	0.80	C	0.75	C	0.81	D	0.06
24	Fairview Street and MacArthur Boulevard	AM	0.68	B	0.68	B	0.69	B	0.01
		PM	0.77	C	0.77	C	0.76	C	-0.01
25	Fairview Road and Sunflower Avenue	AM	0.70	B	0.68	B	0.69	B	0.01
		PM	0.72	C	0.70	B	0.69	B	-0.01
26	Greenville Street and Edinger Avenue	AM	0.77	C	0.67	B	0.74	C	0.07
		PM	0.60	A	0.51	A	0.65	B	0.14
27	Greenville Street and Segerstrom Avenue	AM	0.84	D	0.84	D	0.88	D	0.04
		PM	0.78	C	0.74	C	0.80	C	0.06
28	Raitt Street and McFadden Avenue	AM	0.78	C	0.75	C	0.70	B	-0.05
		PM	0.76	C	0.75	C	0.68	B	-0.07
29	Raitt Street and Edinger Avenue	AM	0.99	E	0.90	D	0.93	E	0.03
		PM	0.99	E	0.90	D	0.99	E	0.09
30	Bear Street and MacArthur Boulevard	AM	0.71	C	0.76	C	0.76	C	0.00
		PM	0.85	D	0.91	E	0.90	D	-0.01
31	Bristol Street and 17th Street	AM	0.87	D	0.81	D	0.85	D	0.04
		PM	0.82	D	0.79	C	0.81	D	0.02
32	Bristol Street and Civic Center Drive	AM	0.94	E	0.87	D	0.93	E	0.06
		PM	0.91	E	0.85	D	0.90	D	0.05
33	Bristol Street and Santa Ana Boulevard	AM	0.81	D	0.75	C	0.72	C	-0.03
		PM	0.85	D	0.81	D	0.73	C	-0.08
34	Bristol Street and 1st Street	AM	0.77	C	0.73	C	0.90	D	0.17
		PM	0.83	D	0.82	D	0.97	E	0.15
35	Bristol Street and McFadden Avenue	AM	0.96	E	0.95	E	0.95	E	0.00
		PM	1.03	F	0.98	E	0.89	D	-0.09
36	Bristol Street and Warner Avenue	AM	0.92	E	0.90	D	0.96	E	0.06
		PM	0.85	D	0.81	D	0.87	D	0.06
37	Bristol Street and Segerstrom Avenue	AM	0.81	D	0.83	D	0.85	D	0.02
		PM	0.87	D	0.90	D	0.92	E	0.02
38	Bristol Street and Alton Avenue	AM	0.55	A	0.55	A	0.55	A	0.00
		PM	0.63	B	0.59	A	0.58	A	-0.01
39	Bristol Street and MacArthur Boulevard	AM	0.70	B	0.76	C	0.76	C	0.00
		PM	0.77	C	0.80	C	0.80	C	0.00
40	Bristol Street and Sunflower Avenue	AM	0.65	B	0.68	B	0.68	B	0.00
		PM	0.69	B	0.74	C	0.74	C	0.00
41	Bristol Street and I-405 NB Ramps	AM	20.8	C	20.8	C	20.9	C	0.1
		PM	28.5	C	28.6	C	29.0	C	0.4
42	Bristol Street and I-405 SB Ramps	AM	23.9	C	23.6	C	23.6	C	0.0
		PM	18.3	B	18.3	B	18.2	B	-0.1
43	Flower Street and Santa Ana Boulevard	AM	0.81	D	0.75	C	0.59	A	-0.16
		PM	0.86	D	0.90	D	0.67	B	-0.23
44	Flower Street and 1st Street	AM	0.93	E	0.97	E	0.93	E	-0.04
		PM	0.88	D	0.96	E	1.22	F	0.26
45	Flower Street and McFadden Avenue	AM	0.90	D	0.91	E	0.81	D	-0.10
		PM	1.04	F	1.05	F	0.97	E	-0.08
46	Flower Street and Segerstrom Avenue	AM	0.78	C	0.79	C	0.82	D	0.03
		PM	0.87	D	0.90	D	0.92	E	0.02

47	Flower Street and MacArthur Boulevard	AM	0.68	B	0.72	C	0.71	C	-0.01
		PM	0.90	D	0.92	E	0.91	E	-0.01
48	Main Street and La Veta Avenue	AM	0.59	A	0.55	A	0.54	A	-0.01
		PM	0.70	B	0.77	C	0.76	C	-0.01
49	Main Street and Mainplace Drive / Memory Lane	AM	0.51	A	0.47	A	0.46	A	-0.01
		PM	0.56	A	0.47	A	0.50	A	0.03
50	Main Street and 17th Street	AM	0.88	D	0.85	D	0.85	D	0.00
		PM	0.76	C	0.75	C	0.80	C	0.05
51	Main Street and Civic Center Drive	AM	0.78	C	0.73	C	0.85	D	0.12
		PM	0.97	E	0.90	D	0.86	D	-0.04
52	Main Street and Santa Ana Boulevard	AM	0.93	E	0.86	D	0.79	C	-0.07
		PM	0.79	C	0.71	C	0.70	B	-0.01
53	Main Street and 4th Street	AM	0.41	A	0.42	A	0.44	A	0.02
		PM	0.45	A	0.46	A	0.47	A	0.01
54	Main Street and 1st Street	AM	0.68	B	0.67	B	0.75	C	0.08
		PM	0.74	C	0.74	C	0.80	C	0.06
55	Main Street and McFadden Avenue	AM	0.89	D	0.90	D	0.92	E	0.02
		PM	0.93	E	0.92	E	0.94	E	0.02
56	Main Street and Edinger Avenue	AM	0.80	C	0.79	C	0.88	D	0.09
		PM	0.87	D	0.85	D	0.98	E	0.13
57	Main Street and MacArthur Boulevard	AM	0.68	B	0.72	C	0.72	C	0.00
		PM	0.75	C	0.78	C	0.78	C	0.00
58	Penn Way and 17th Street	AM	12.2	B	12.3	B	12.1	B	-0.2
		PM	25.5	C	26.3	C	20.3	C	-6.0
59	Santiago Street / I-5 NB Ramps and 17th Street	AM	30.0	C	27.2	C	31.4	C	4.2
		PM	19.0	B	19.9	B	20.3	C	0.4
60	Penn Way and I-5 SB Ramps	AM	21.2	C	21.2	C	19.5	B	-1.7
		PM	23.0	C	23.3	C	22.8	C	-0.5
61	Santiago Street and Civic Center Drive	AM	159.2	F	189.2	F	62.6	F	-126.6
		PM	110.0	F	147.8	F	27.6	D	-120.2
62	Santiago Street and Santa Ana Boulevard	AM	1.04	F	1.08	F	1.44	F	0.36
		PM	1.02	F	1.04	F	1.41	F	0.37
63	Standard Avenue and 4th Street	AM	0.94	E	0.85	D	1.34	F	0.49
		PM	0.89	D	0.92	E	1.34	F	0.42
64	Standard Avenue and 1st Street	AM	0.98	E	0.93	E	1.52	F	0.59
		PM	0.97	E	1.00	E	1.48	F	0.48
65	Standard Avenue and McFadden Avenue	AM	0.85	D	0.83	D	0.84	D	0.01
		PM	0.83	D	0.80	C	0.77	C	-0.03
66	Halladay Street and Warner Avenue	AM	0.78	C	0.79	C	0.69	B	-0.10
		PM	0.97	E	0.98	E	0.82	D	-0.16
67	Halladay Street and Dyer Road	AM	0.77	C	0.75	C	0.67	B	-0.08
		PM	1.06	F	1.07	F	0.95	E	-0.12
68	SR-55 SB Ramps and MacArthur Boulevard	AM	19.9	B	20.5	C	20.2	C	-0.3
		PM	17.8	B	18.4	B	18.4	B	0.0
69	SR-55 NB Ramps and MacArthur Boulevard	AM	19.3	B	19.3	B	19.5	B	0.2
		PM	14.6	B	16.4	B	16.2	B	-0.2
70	SR-55 SB Ramps and Dyer Road	AM	25.7	C	25.4	C	25.9	C	0.5
		PM	26.5	C	26.3	C	26.5	C	0.2
71	Glassell Street and La Veta Avenue	AM	0.80	C	0.78	C	0.83	D	0.05
		PM	0.74	C	0.74	C	0.77	C	0.03
72	Glassell Street and SR-22 WB Ramps	AM	32.6	C	29.1	C	30.1	C	1.0
		PM	30.5	C	31.9	C	33.4	C	1.5
73	Glassell Street / Grand Avenue and SR-22 EB Ramps	AM	30.6	C	29.6	C	29.6	C	0.0
		PM	31.6	C	31.0	C	31.8	C	0.8
74	Grand Avenue and Fairhaven Avenue	AM	0.67	B	0.63	B	0.62	B	-0.01
		PM	0.76	C	0.71	C	0.71	C	0.00
75	Grand Avenue and Santa Clara Avenue	AM	0.93	E	0.90	D	0.88	D	-0.02
		PM	0.93	E	0.89	D	0.84	D	-0.05
76	Grand Avenue and 17th Street	AM	0.91	E	0.92	E	0.96	E	0.04
		PM	0.98	E	0.99	E	1.02	F	0.03
77	Grand Avenue and I-5 NB Ramps	AM	13.2	B	13.4	B	15.3	B	1.9
		PM	10.1	B	11.0	B	11.3	B	0.3
78	Grand Avenue and Santa Ana Boulevard	AM	26.0	C	25.2	C	26.3	C	1.1
		PM	25.3	C	27.1	C	28.5	C	1.4
79	Grand Avenue and 1st Street	AM	0.74	C	0.76	C	0.83	D	0.07
		PM	0.73	C	0.73	C	0.72	C	-0.01
80	Grand Avenue and Chestnut Avenue	AM	0.70	B	0.69	B	0.94	E	0.25
		PM	0.69	B	0.63	B	0.78	C	0.15
81	Grand Avenue and McFadden Avenue	AM	0.89	D	0.92	E	1.01	F	0.09
		PM	0.82	D	0.82	D	0.81	D	-0.01
82	Grand Avenue and Edinger Avenue	AM	0.84	D	0.83	D	0.90	D	0.07
		PM	1.00	E	0.98	E	1.08	F	0.10
83	Grand Avenue and Warner Avenue	AM	0.61	B	0.66	B	0.66	B	0.00
		PM	0.83	D	0.87	D	0.90	D	0.03
84	SR-55 NB Ramps and Dyer Road	AM	17.1	B	17.3	B	17.3	B	0.0
		PM	5.7	A	5.9	A	6.0	A	0.1
85	Cambridge Street and La Veta Avenue	AM	31.6	D	21.3	C	23.4	C	2.1
		PM	19.7	C	21.6	C	26.1	D	4.5
86	Cambridge Street and Fairhaven Avenue	AM	0.56	A	0.61	B	0.62	B	0.01
		PM	0.45	A	0.45	A	0.53	A	0.08
87	Mabury Street and 1st Street	AM	27.4	C	25.4	C	27.4	C	2.0
		PM	27.1	C	26.9	C	27.2	C	0.3
88	Tustin Street and La Veta Avenue	AM	0.45	A	0.36	A	0.36	A	0.00
		PM	0.38	A	0.35	A	0.34	A	-0.01
89	Tustin Street and SR-22 WB On-Ramp	AM	12.2	B	13.1	B	13.2	B	0.1
		PM	11.1	B	7.7	A	7.7	A	0.0
90	Tustin Street and SR-22 EB Off-Ramp / Seba Avenue	AM	25.0	C	23.8	C	23.8	C	0.0
		PM	23.1	C	23.3	C	23.3	C	0.0
91	Tustin Street and Fairhaven Avenue	AM	0.90	D	0.80	C	0.95	E	0.15
		PM	0.57	A	0.52	A	0.71	C	0.19
92	Tustin Avenue and Santa Clara Avenue	AM	1.82	F	1.71	F	2.23	F	0.52
		PM	0.67	B	0.57	A	0.53	A	-0.04
93	Tustin Avenue and 17th Street	AM	0.82	D	0.78	C	0.79	C	0.01
		PM	0.73	C	0.70	B	0.70	B	0.00

94	Tustin Avenue and 4th Street	AM	0.83	D	0.88	D	0.79	C	-0.09
		PM	0.71	C	0.77	C	0.78	C	0.01
95	SR-55 SB Ramps / Auto Mall Drive and Edinger Avenue	AM	25.2	C	25.1	C	25.1	C	0.0
		PM	25.5	C	25.4	C	25.4	C	0.0
96	SR-55 NB Ramps / Del Amo Avenue and Newport Avenue	AM	25.4	C	25.6	C	25.6	C	0.0
		PM	39.1	D	43.5	D	46.2	D	2.7
97	Red Hill Avenue and Edinger Avenue	AM	0.61	B	0.61	B	0.62	B	0.01
		PM	0.85	D	0.86	D	0.87	D	0.01
98	Red Hill Avenue and Warner Avenue	AM	0.51	A	0.53	A	0.53	A	0.00
		PM	0.83	D	0.89	D	0.90	D	0.01
99	Red Hill Avenue and Barranca Parkway	AM	0.55	A	0.58	A	0.58	A	0.00
		PM	0.54	A	0.59	A	0.59	A	0.00
100	Red Hill Avenue and Alton Parkway	AM	0.86	D	0.93	E	0.93	E	0.00
		PM	1.18	F	1.49	F	1.49	F	0
101	Red Hill Avenue and MacArthur Boulevard	AM	1.21	F	1.27	F	1.28	F	0.01
		PM	1.33	F	1.38	F	1.4	F	0.02
102	Red Hill Avenue and Main Street	AM	0.72	C	0.73	C	0.73	C	0.00
		PM	0.81	D	0.84	D	0.84	D	0.00
103	I-5 SB Ramps and Santa Ana Boulevard	AM	17.4	B	17.7	B	17.8	B	0.1
		PM	18.4	B	19.3	B	19.9	B	0.6
104	Tustin Ranch Road and Warner Avenue	AM	0.52	A	0.52	A	0.53	A	0.01
		PM	0.65	B	0.66	B	0.67	B	0.01
105	Von Karman Avenue and Barranca Parkway	AM	0.93	E	0.92	E	0.93	E	0.01
		PM	1.23	F	1.28	F	1.28	F	0.00

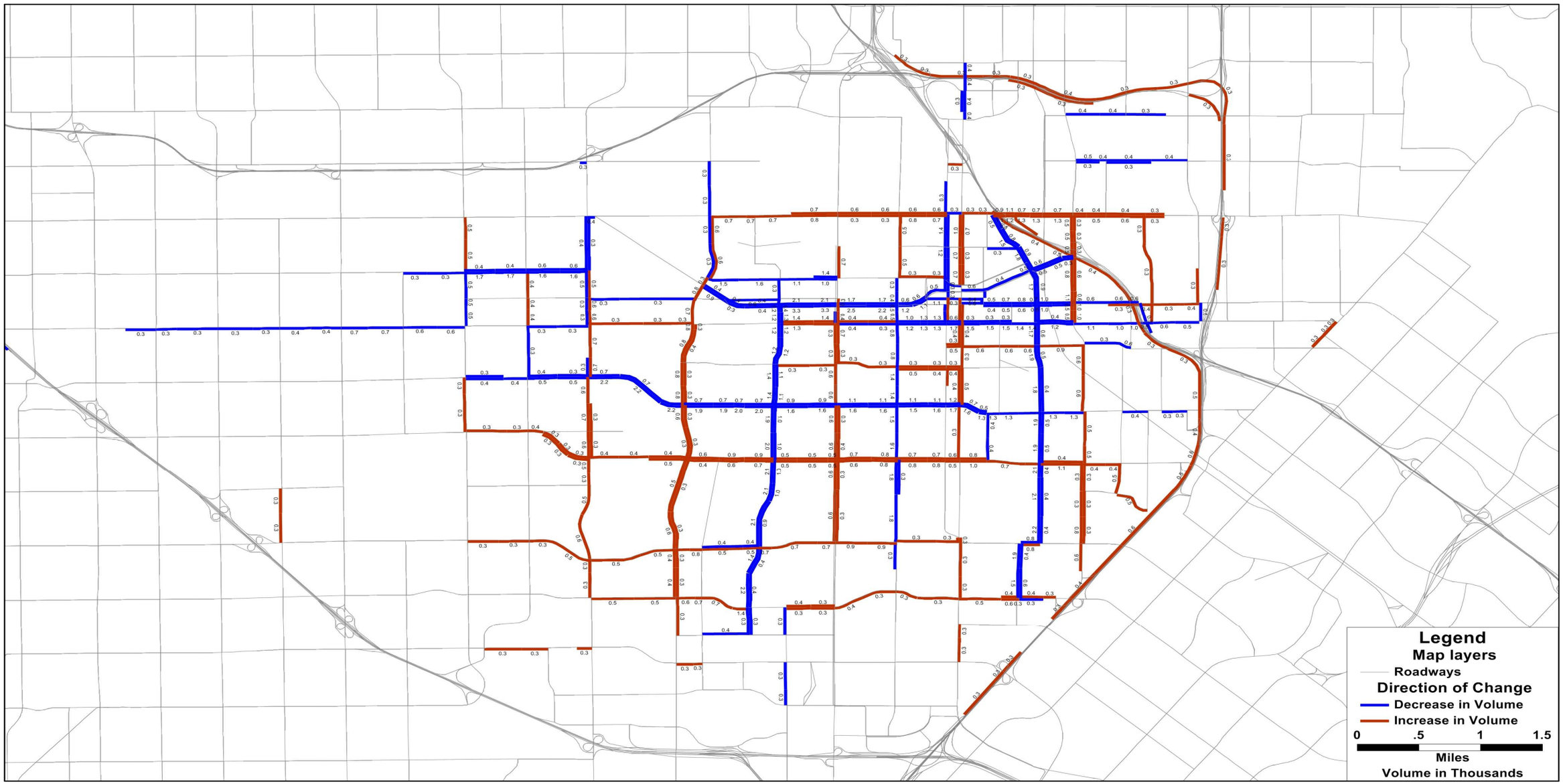
OCTAM 5.0 – Daily Traffic Volume Comparison Between 2045 80% Buildout and 2045 80% Buildout with Baseline Network

Volume in Thousands



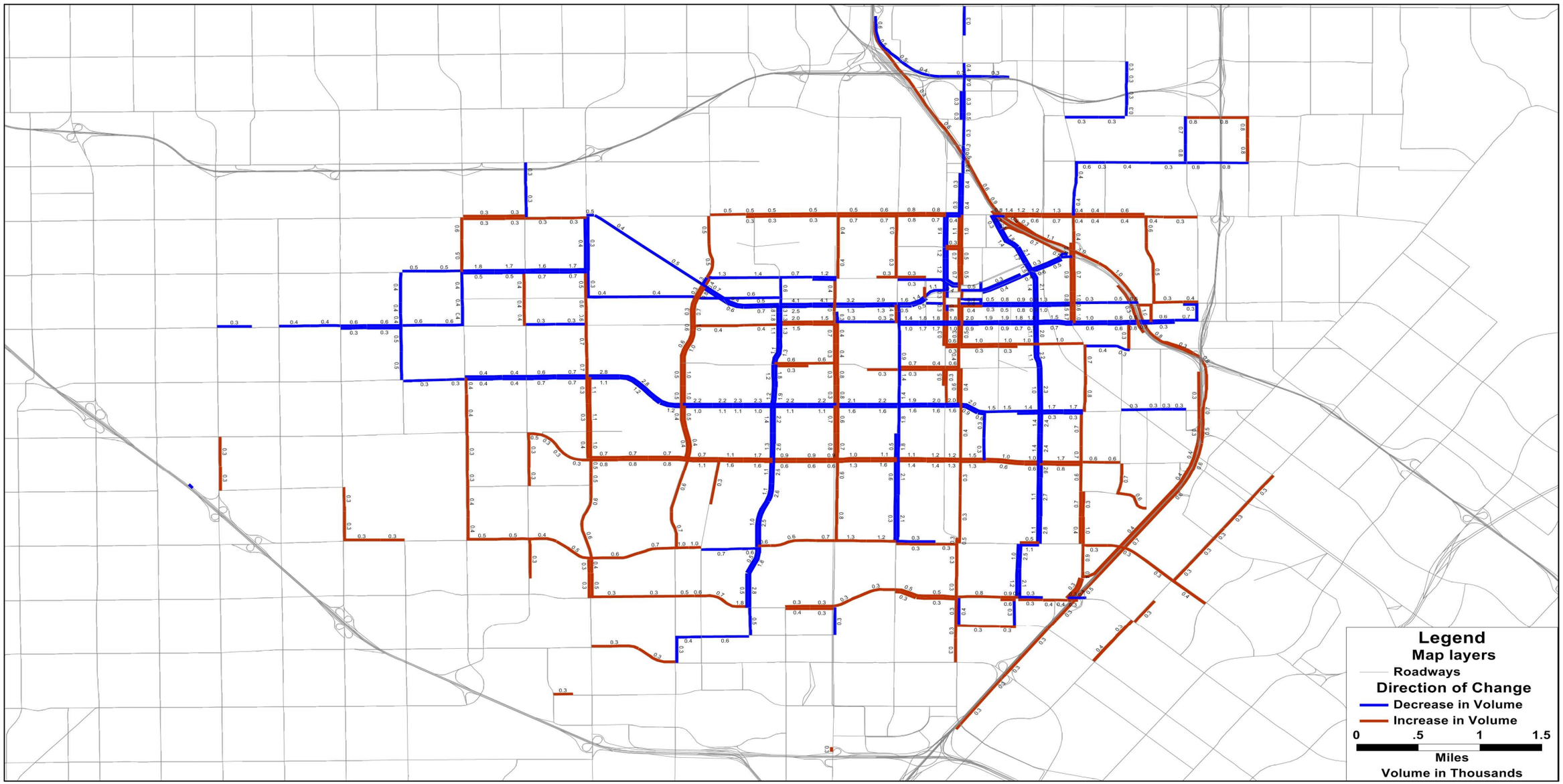
OCTAM 5.0 – AM Peak Traffic Volume Comparison Between 2045 80% Buildout and 2045 80% Buildout with Baseline Network

Volume in Thousands



OCTAM 5.0 – PM Peak Traffic Volume Comparison Between 2045 80% Buildout and 2045 80% Buildout with Baseline Network

Volume in Thousands



Appendix L Tribal Consultation Correspondences

Appendices

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CITY OF SANTA ANA

PLANNING AND BUILDING AGENCY

20 Civic Center Plaza ● P.O. Box 1988
Santa Ana, California 92702
www.santa-ana.org

April 6, 2020

Brandy Salas
Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723

via e-mail: admin@gabrielenoindians.org

Subject: General Plan Update Consultation Request

Dear Ms. Salas:

Thank you for your interest in consulting with the City regarding the General Plan Update pursuant to AB52/SB18. We are looking forward to working with you and providing you additional information regarding our General Plan. Unfortunately, with the current CoVID-19 crisis an in-person meeting will not be possible in the short-term.

Staff is available to consult and assist in coordinating a conference call or scheduling a virtual meeting (GoToMeeting, Zoom, etc.) if you would prefer. Please respond with your preference and available meeting times. We look forward to meeting with you.

Please feel free to contact me by phone or email with any questions at (714) 647-5899 or vcarvajal@santa-ana.org

Sincerely,

Verny Carvajal

Verny Carvajal, AICP
Principal Planner

C: Vince Fregoso, AICP, Planning Manager, City of Santa Ana Planning Division

From: Dina El Chammas
To: Dina El Chammas
Subject: FW: Santa Ana General Plan - tribal consultation Gabrieleno
Date: Thursday, June 11, 2020 3:41:39 PM
Attachments: image007.png
image008.png
image011.jpg

From: Gabrieleno Administration [mailto:admin@gabrielenoindians.org]
Sent: Tuesday, April 07, 2020 11:20 AM
To: Carvajal, Verny <VCarvajal@santa-ana.org>
Subject: Re: Santa Ana General Plan

Hello Verny

Thank you for your email. We would like to set up a consultation regarding the above project. Please note due to the COVID-19 our Tribe is only requesting phone consultations at this time. The next time we have available will be on June 4th at 1pm. Please get back to us to see if this time works for you.

Thank you

Sincerely,

Brandy Salas
Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org

On Mon, Apr 6, 2020 at 5:18 PM Carvajal, Verny <VCarvajal@santa-ana.org> wrote:

> Good afternoon, Ms. Salas.
>
> Thank you for your interest in consulting with the City regarding the General Plan Update pursuant to AB52/SB18. Please find attached letter related to your request to meet. We look forward to hearing from you.
>
> Thank you,
>
> Verny Carvajal

Verny Carvajal, AICP | Principal Planner
Planning and Building Agency | 20 Civic Center Plaza | Santa Ana, CA 92701
714-647-5899 | VCarvajal@santa-ana.org | santa-ana.org/pb

From: Gabrieleno Administration [mailto:admin@gabrielenoindians.org]
Sent: Friday, March 20, 2020 4:31 PM
To: Carvajal, Verny <VCarvajal@santa-ana.org>
Subject: Santa Ana General Plan

Good afternoon Verny,

Please see attachment below. Due to today's circumstances regarding the COVID-19 please contact us via email.

Thank you

Sincerely,

Brandy Salas
Admin Specialist
Gabrieleno Band of Mission Indians - Kizh Nation
PO Box 393
Covina, CA 91723
Office: 844-390-0787
website: www.gabrielenoindians.org

From: Joyce Perry
To: Dina El Chammas
Subject: Re: Native American Consultation Pursuant to AB 52 and SB 18 - Santa Ana General Plan Update
Date: Tuesday, March 24, 2020 2:19:14 PM
Attachments: image002.jpg

Good afternoon Ms. El Chammas,

On behalf of the Juaneno Band of Mission Indians, Acjachemen Nation- Belardes we would like to request to consult on any projects taking place withing the Santa Ana general plan are. This is a shared territory with the Gabrelenos and it is important that the city is inclusive and not exclusive.

Additionally, please not that I am the cultural resources director for Matias Belardes's tribe. Please accept this response on behalf of us both, and please direct all future cultural resources related correspondence for the Juaneno Band of Mission Indians, Acjachemen Nation-Belardes to this address.

Húu'uni 'óomaqati yáamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

On Thu, Mar 12, 2020 at 12:52 PM Dina El Chammas <delchammas@placeworks.com> wrote:

> Dear Mr. Matias Belardes,
>
> The City of Santa Ana is in the process of preparing a comprehensive update to its existing General Plan and is requesting to consult with you in order to identify tribal cultural resources that may be impacted by the updated General Plan. On March 10th we sent a formal notice to the following address:
>
> Matias Belardes, Chairperson
>
> 32161 Avenida Los Amigos
>
> San Juan Capistrano, CA, 92675
>
> However, FedEx was unable to deliver the package citing that there was no eligible recipient available to sign for the package. Please find attached the notice that was sent.

You may respond in writing within 30 days if you would like to consult on this project pursuant to AB 52. For consultation under SB 18, a request must be made within 90 days of the date of this notice. The City's contact details are included in the attached notice.

DINA EL CHAMMAS GASS, PE

Senior Engineer, Environmental Services

3 MacArthur Place, Suite 1100 | Santa Ana, California 92707

714.966.9220 | delchammas@placeworks.com | placeworks.com

CITY OF SANTA ANA

PLANNING AND BUILDING AGENCY

20 Civic Center Plaza ● P.O. Box 1988
Santa Ana, California 92702
www.santa-ana.org

April 6, 2020

Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

via email: kaamalam@gmail.com

Subject: General Plan Update Consultation Request

Dear Ms. Stanfield Perry:

Thank you for your interest in consulting with the City regarding the General Plan Update pursuant to AB52/SB18. We are looking forward to working with you and providing you additional information regarding our General Plan. Unfortunately, with the current CoVID-19 crisis an in-person meeting will not be possible in the short-term.

Staff is available to consult and assist in coordinating a conference call or scheduling a virtual meeting (GoToMeeting, Zoom, etc.) if you would prefer. Please respond with your preference and available meeting times. We look forward to meeting with you.

Please feel free to contact me by phone or email with any questions at (714) 647-5899 or vcarvajal@santa-ana.org

Sincerely,

Verny Carvajal

Verny Carvajal, AICP
Principal Planner

C: Vince Fregoso, AICP, City of Santa Ana Planning Division

From: Dina El Chammas
To: Dina El Chammas
Subject: FW: Santa Ana General Plan NOP response
Date: Thursday, June 11, 2020 3:37:29 PM
Attachments: image001.png
image002.png

From: Joyce Perry [mailto:kaamalam@gmail.com]
Sent: Friday, April 10, 2020 11:51 AM
To: Carvajal, Verny <VCarvajal@santa-ana.org>
Subject: Re: Santa Ana General Plan NOP response

Good afternoon,

Thank you for your response. aAt this time, we don't feel that there is a need to meet to discuss the plan however we would lie to consult as the project moves forward. We are particularly interested in seeing the draft EIR and the potential effects on tribal cultural resources in the ares. Once the DEIR is created and we have a chance to review we will share any concerns we have with the Santa Ana General Plan. Thank you.

Húu'uni 'óomaqati yáamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director

On Mon, Apr 6, 2020 at 5:14 PM Carvajal, Verny <VCarvajal@santa-ana.org> wrote:

> Good afternoon, Ms. Perry.
>
> Thank you for your interest in consulting with the City regarding the General Plan Update pursuant to AB52/SB18. Please find attached letter related to your request to meet. We look forward to hearing from you.
>
> Thank you,
>
> Verny Carvajal
>
> Verny Carvajal, AICP | Principal Planner
> Planning and Building Agency | 20 Civic Center Plaza | Santa Ana, CA 92701
> 714-647-5899 | VCarvajal@santa-ana.org | santa-ana.org/pb

From: Joyce Perry [mailto:kaamalam@gmail.com]
Sent: Thursday, March 19, 2020 1:51 PM
To: Carvajal, Verny <VCarvajal@santa-ana.org>
Subject: Santa Ana General Plan NOP response

Dear Verny Carvajal,

I am writing on behalf of the Juaneno Band of Mission Indians, Acjachemen Nation-Belardes in response to your Notice of Preparation and Scoping Meeting dated February 26, 2020. This email is to express our wishes to continue to be consulted on this project as it moves forward.

Húu'uni 'óomaqati yáamaqati.
Teach peace
Joyce Stanfield Perry
Payomkawichum Kaamalam - President
Juaneño Band of Mission Indians, Acjachemen Nation
Tribal Manager, Cultural Resource Director