

**Correia Middle School Sports Complex Project
Draft EIR**

Appendix H

Draft Transportation Impact Study

Prepared by LOS Engineering, Inc.

November 28, 2014

**Correia Middle School Sports Complex
San Diego Unified School District**

November 28, 2014

Draft Transportation Impact Study

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Executive Summary

Correia Middle School Sports Complex

Draft Transportation Impact Study

This Transportation Impact Study (TIS) is being prepared at the request of BRG Consulting, Inc. and the San Diego Unified School District (District) and will ultimately be incorporated into the California Environmental Quality Act (CEQA) document prepared for the project. The District is considered the CEQA lead agency for the project.

This report analyses the potential traffic impacts of a proposed Sports Complex at Correia Middle School. Correia Middle School is located at 4302 Valeta Street, San Diego, California. The project is planned to be completed in early to mid-2018.

Project trip generation is typically calculated using trip rates from the City of San Diego or Institute of Transportation Engineers Trip Generation Manuals; however, the aforementioned manuals do not include an all-encompassing trip rate for the various and different uses anticipated at the Sports Complex. Therefore, a trip rate was calculated from information provided by the District and the more conservative trip generation between the three sources was used in this analysis.

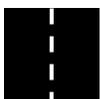
This traffic analysis is based on traffic generation for weekday (Wednesday) events and weekend day (Saturday) events. The weekday period of analysis is during the evening commuter peak period of the highest hour between 4 PM and 6 PM. The weekend day (Saturday) analysis is based on the highest peak hour of background traffic on the surrounding roadways between 12 PM and 2 PM. According to the District, the highest reasonable and anticipated use for the sports complex are soccer practice and games with the concurrent use of two fields during a weekday and up to three concurrent uses of the fields during the weekend.

The project study area was based on the City of San Diego *Traffic Impact Study Manual*. Two cumulative projects along with an annual growth factor of 0.5% were applied to represent near-term year 2018 conditions. Based on the study area and cumulative projects, the following scenarios were analyzed: Existing, Existing with Project, Near-term, Near-term with Project, Horizon Year (2035), and Horizon Year (2035) with Project Conditions. For each scenario, the findings include:

- 1) Under existing conditions, all of the studied roadway facilities were calculated to operate at LOS C or better.
- 2) Under existing with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no significant direct project impacts.
- 3) Under near-term without project conditions, all of the studied roadway facilities were calculated to operate at LOS C or better.
- 4) Under near-term with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no significant direct project impacts.

- 5) Under horizon year (2035) without project conditions, all of the studied facilities were calculated to operate at LOS C or better.
- 6) Under horizon year (2035) with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no cumulatively considerable impacts.

No traffic impacts were calculated; therefore, mitigation measures are not required.



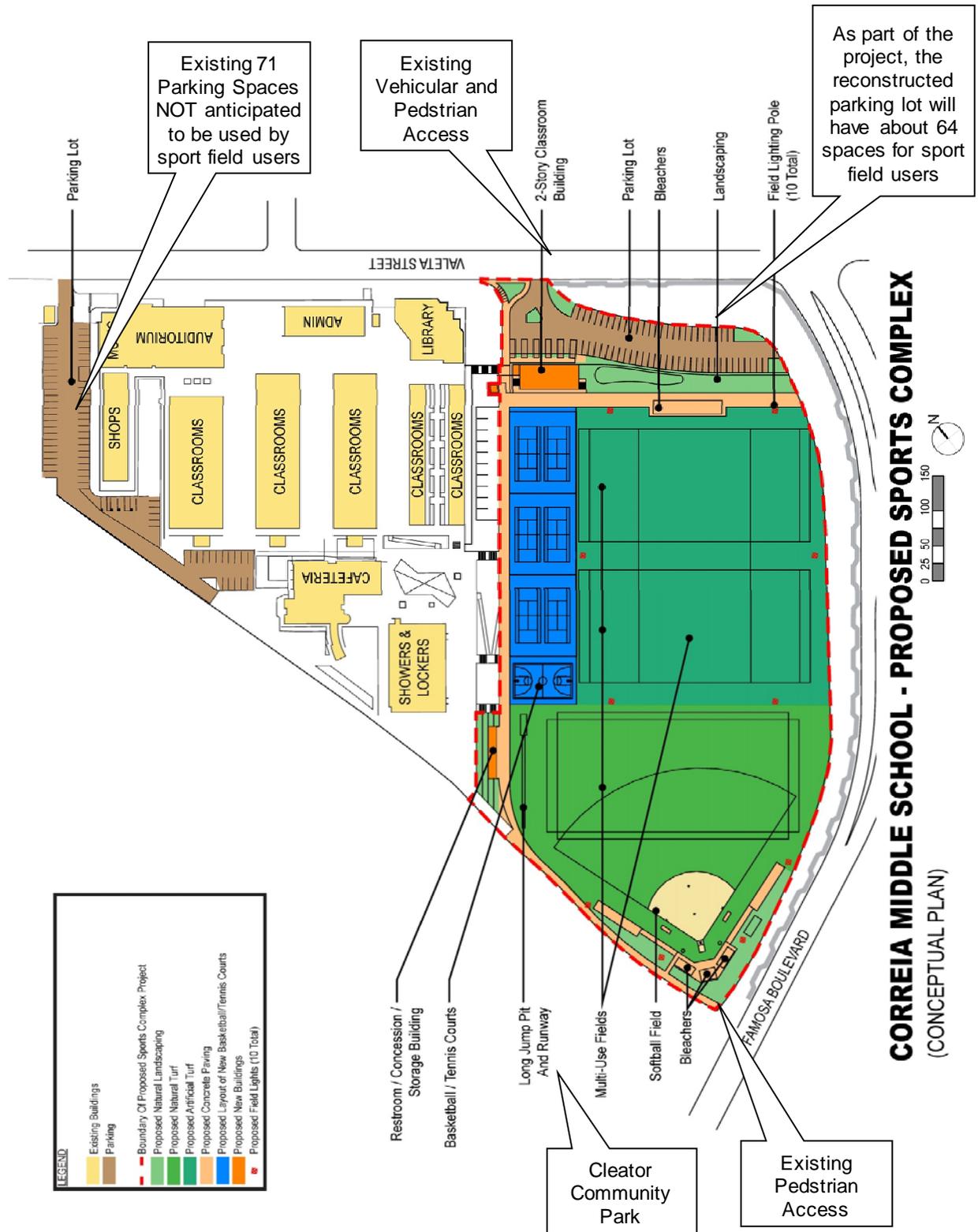
1.0 Introduction

This report analyses the potential traffic impacts of a proposed Sports Complex at the Correia Middle School. The Correia Middle School is located at 4302 Valeta Street, San Diego, California. The project is planned to be completed in early to mid-2018. The location of the project is shown in **Figure 1**. A site plan is shown in **Figure 2**.

The purpose of this study is to analyze how the proposed project traffic will affect the surrounding roadways around the Correia Middle School campus during a lighted evening event at the athletic facilities. Additionally, this report describes the existing roadway network in the vicinity of the project site and includes a review of the existing and proposed activities for weekday PM peak hour, a Saturday mid-day peak hour, and daily (weekday and Saturday) traffic conditions when the project is completed. The report includes the following chapters:

- 1.0 Introduction
- 2.0 Study Methodology
- 3.0 Existing Conditions
- 4.0 Project Description
- 5.0 Existing with Project Conditions
- 6.0 Near-Term without Project Conditions
- 7.0 Near-Term with Project Conditions
- 8.0 Horizon Year 2035 without Project Conditions
- 9.0 Horizon Year 2035 with Project Conditions
- 10.0 Summary of Potential Impacts
- 11.0 Conclusion and Recommendations
- 12.0 References and List of Prepares

Figure 2: Site Plan



Source: BRG Consulting, Inc.

2.0 Study Methodology

The parameters by which this transportation impact analysis was prepared included the determination of what transportation facilities are to be analyzed, the scenarios to be analyzed and the methods required for analysis. The criteria for each of these parameters are included herein.

2.1.1 Study Area Criteria

The project study area is generally determined by the City of San Diego *Traffic Impact Study Manual*. For this project, the following intersections were included in this study (count data included in **Appendix A**):

- 1) Famosa Blvd at Nimitz Blvd SB Ramp (signalized)
- 2) Famosa Blvd at Nimitz Blvd NB Ramp (un-signalized)
- 3) Famosa Blvd at Valeta St (un-signalized)

And, the following street segments were analyzed as part of this study:

- 1) Famosa Blvd from Nimitz Blvd to Valeta St
- 2) Valeta St from Camulos St to Famosa Blvd

2.1.2 Scenario Criteria

The number of scenarios to be analyzed is typically six. For this project, the following study scenarios were included:

- 1) Existing Conditions
- 2) Existing with Project Conditions
- 3) Near-term without Project Conditions
- 4) Near-term with Project Conditions
- 5) Horizon Year (2035) without Project Conditions
- 6) Horizon Year (2035) with Project Conditions

2.1.3 Traffic Analysis Criteria

The traffic analyses prepared for this study were based on the *2000 Highway Capacity Manual* (HCM) operations analysis using Level of Service (LOS) evaluation criteria. The operating conditions of the study intersections and street segments were measured using the HCM LOS designations, which ranges from A through F. LOS A represents the best operating condition and LOS F denotes the worst operating condition. For this traffic study, the intersections and street segments were analyzed using the City of San Diego criteria (traffic study checklist included in **Appendix B**). The LOS criteria for each roadway component are described below.

2.1.3.1 Intersections

The study intersections were analyzed based on the **operational analysis** outlined in the 2000 HCM. This process defines LOS in terms of **average control delay** per vehicle, which is measured in seconds. LOS at the intersections were calculated using the computer software program Synchro

8.0 (Trafficware Corporation). The HCM LOS for the range of delay by seconds for un-signalized and signalized intersections is described in **Table 1**.

TABLE 1: UN-SIGNALIZED AND SIGNALIZED INTERSECTION LEVEL OF SERVICE (HCM 2000)

| Level of Service | Un-Signalized Average Control Delay (seconds/vehicle) | Signalized Average Control Delay (seconds/vehicle) |
|------------------|--|---|
| A | 0-10 | 0-10 |
| B | > 10-15 | > 10-20 |
| C | > 15-25 | > 20-35 |
| D | > 25-35 | > 35-55 |
| E | > 35-50 | > 55-80 |
| F | > 50 | > 80 |

Source: Highway Capacity Manual 2000.

2.1.3.2 Street Segments

The street segments were analyzed based on the functional classification of the roadway using the City of San Diego *Average Daily Vehicle Trips* capacity lookup table. The roadway segment capacity and LOS standards used to analyze street segments are summarized in **Table 2**.

TABLE 2: STREET SEGMENT DAILY CAPACITY AND LOS (CITY OF SAN DIEGO)

| Circulation Element Road Classification | LOS A | LOS B | LOS C | LOS D | LOS E |
|---|----------|----------|----------|----------|----------|
| Expressway – 6 Lanes | <30,000 | <42,000 | <60,000 | <70,000 | <80,000 |
| Prime Arterial – 6 Lanes | <25,000 | <35,000 | <50,000 | <55,000 | <60,000 |
| Major Arterial – 6 Lanes | <20,000 | <28,000 | <40,000 | <45,000 | <50,000 |
| Major Arterial – 4 Lanes | <15,000 | <21,000 | <30,000 | <35,000 | <40,000 |
| Collector – 4 Lanes | <10,000 | <14,000 | <20,000 | <25,000 | <30,000 |
| Collector (no Center Ln) – 4 Lanes | <5,000 | <7,000 | | <13,000 | <15,000 |
| Collector (with TWLTL) – 2 Lanes | | | <10,000 | | |
| Collector – 2 Lanes (no fronting property) | <4,000 | <5,500 | <7,500 | <9,000 | <10,000 |
| Collector – 2 Lanes (commercial-industrial fronting) | <2,500 | <3,500 | <5,000 | <6,500 | <8,000 |
| Collector – 2 Lanes (multi-family) | <2,500 | <3,500 | <5,000 | <6,500 | <8,000 |
| Sub-Collector – 2 Lanes (multi-family) | | | <2,200 | | |

Source: City of San Diego *Traffic Impact Study Manual* July 1998, page 8. TWLTL: Two Way Left Turn Lane

2.1.4 Traffic Significance Criteria

A project is considered to have caused a significant impact if the new project traffic degrades a facility from acceptable LOS to unacceptable LOS or decreases the operations on the surrounding roadways by the City of San Diego defined thresholds as shown in **Table 3**.

TABLE 3: CITY OF SAN DIEGO TRAFFIC IMPACT SIGNIFICANCE THRESHOLDS

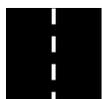
| Level of Service with Project | Allowable Increase Due to Project Impacts ¹ | | |
|-------------------------------|--|-------------|---------------|
| | Roadway Segments | | Intersections |
| | V/C | Speed (mph) | Delay (sec.) |
| E ² | 0.02 | 1.0 | 2.0 |
| F ² | 0.01 | 0.5 | 1.0 |

Source: City of San Diego. Notes: ¹ If a proposed project's traffic impacts exceed the values shown in the table, then the impacts are deemed "significant." If the project traffic causes an acceptable LOS (i.e. A-C) to degrade to LOS E or F, then the impact is deemed "significant". The project applicant shall identify "feasible mitigations" to achieve LOS D or better. ² The acceptable Level of Service (LOS) standard for roadways and intersections in San Diego is LOS D. However, for undeveloped locations, the goal is to achieve a LOS C. Delay measured in seconds. V/C = Volume to Capacity Ratio (capacity at LOS E should be used). Speed = Arterial speed measured in miles per hour for CMP

If a significant impact is calculated due to the addition of project traffic, then feasible mitigation is required to reduce the facility to the pre-project conditions or better. If the mitigation does not reduce the impact to LOS D, the impact is considered significant and unmitigated.

2.1.5 Congestion Management Program Criteria

The San Diego Association of Governments (SANDAG) Congestion Management Program (CMP) is intended to determine if a large project (greater than 2,400 ADT or more than 200 peak hour trips) will adversely impact the CMP transportation system. The project is calculated to generate more than 200 peak hour trips on a Saturday. Therefore, CMP system roadways near the project site were reviewed to determine if an arterial analysis would be required. The CMP system roadway lists Nimitz Boulevard; however, Nimitz Boulevard is not part of the study area because the project adds less than 50 peak hour trips to this roadway. Therefore, an arterial analysis of CMP arterials is not required. The list of CMP system roadways is included in **Appendix C**.



3.0 Existing Conditions

This section describes the study area street system, PM peak hour intersection volumes, daily roadway volumes, and existing LOS.

3.1.1 Existing Street System

In the vicinity of the project, the following roadways were analyzed as part of this study:

Famosa Boulevard is a 2 lane roadway classified as a *Street Subject to Future Study* from Nimitz Boulevard to Valeta Street in the Peninsula Community Plan (adopted by City Council on May 31, 2011, excerpts included in **Appendix D**). Famosa Boulevard from Nimitz Boulevard to Valeta Street is generally constructed with one travel lane in each direction and on-street parking is generally provided on both sides of the roadway. The capacity for this analysis was based on a 2 lane roadway with no fronting property (LOS E at 10,000 ADT). The posted speed limit along this section is generally 35 Miles Per Hour (MPH).

Valeta Street is classified as a *2-Lane Collector* from Famosa Boulevard to Camulos Street in the Peninsula Community Plan. Valeta Street from Famosa Boulevard to Camulos Street is generally constructed with one travel lane in each direction and on-street parking is generally provided on both sides of the roadway. The posted speed limit along this section is generally 25 MPH.

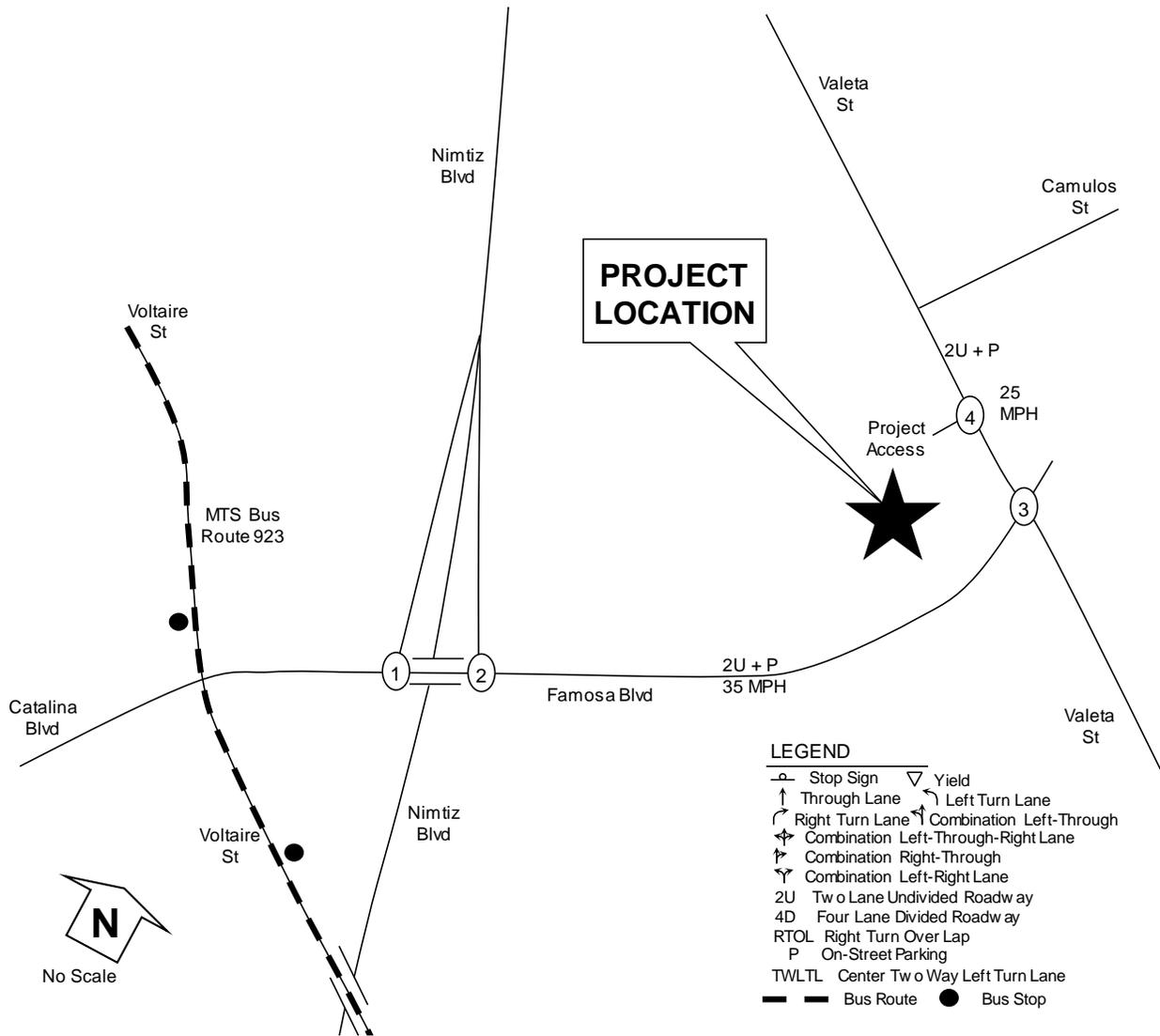
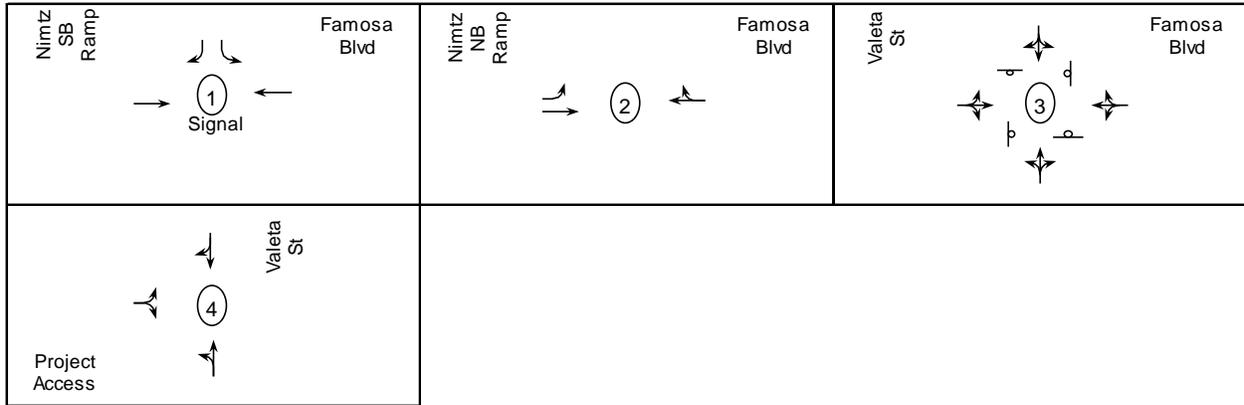
3.1.2 Existing Public Transit and Other Transportation Modes

Metropolitan Transit System Bus Route 923 serves Voltaire Street near the project site as shown in Figure 3. Bus Route 923 has weekday and Saturday service with times and frequency outlined in the bus schedule included in **Appendix E**.

According to the City of San Diego *Bicycle Master Plan Update*, June 2011, there is an existing Class II bike lane on Nimitz Boulevard near the project. Excerpts from the City of San Diego *Bicycle Master Plan Update* are included in **Appendix F**.

The existing roadway conditions and transit details are shown in **Figure 3**.

Figure 3: Existing Roadway Conditions



3.1.3 Existing Traffic Volumes and LOS Analyses

Existing counts were taken when Correia Middle School was in session. Seven days of daily traffic counts were collected on Famosa Boulevard and Valeta Street to determine the highest weekday and weekend day. Wednesday had the highest combined weekday volume and Saturday had the highest combined weekend volume, thus these two days were selected for the analysis (calculations included in Appendix A). Counts were collected between 4 PM to 6 PM on a Wednesday and between 12 PM and 2 PM on a Saturday for the following intersections with the count dates noted in parentheses:

- 1) Famosa Blvd at Nimitz Blvd SB Ramp (Saturday 3/15/14 and Wednesday 3/19/14)
- 2) Famosa Blvd at Nimitz Blvd NB Ramp (Saturday 3/15/14 and Wednesday 3/19/14)
- 3) Famosa Blvd at Valeta St (Saturday 3/15/14 and Wednesday 3/19/14)

As described above, seven days of Average Daily Traffic (ADT) volumes were collected for the following segments with count dates noted in parentheses:

- 1) Famosa Blvd from Nimitz Blvd to Valeta St (Thursday 3/6/14 thru Wednesday 3/12/14)
- 2) Valeta St from Camulos St to Famosa Blvd (Thursday 3/6/14 thru Wednesday 3/12/14)

The existing weekday PM, Saturday afternoon peak, and daily weekday and Saturday volumes are shown in **Figure 4**. The LOS calculated for the study roadway elements are shown in **Tables 4 and 5**. LOS calculations are included in **Appendix G**.

TABLE 4: EXISTING INTERSECTION LEVEL OF SERVICE

| Intersection and (Analysis) ¹ | Movement | Peak Hour | Existing | |
|---|----------------|--------------|--------------------|------------------|
| | | | Delay ² | LOS ³ |
| 1) Nimitz SB Ramp at Famosa Blvd (S) | All | SAT PM | 13.6 17.0 | B B |
| 2) Nimitz NB Ramp at Famosa Blvd (U) | EB L EB L | SAT PM | 9.7 10.5 | A B |
| 3) Valeta St at Famosa Blvd (U) | All All | SAT PM | 9.1 11.8 | A B |
| 4) Valeta St at Project Access (U) | EB LR EB LR | SAT PM | 0.0 0.0 | A A |

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

TABLE 5: EXISTING SEGMENT ADT VOLUMES AND LEVEL OF SERVICE

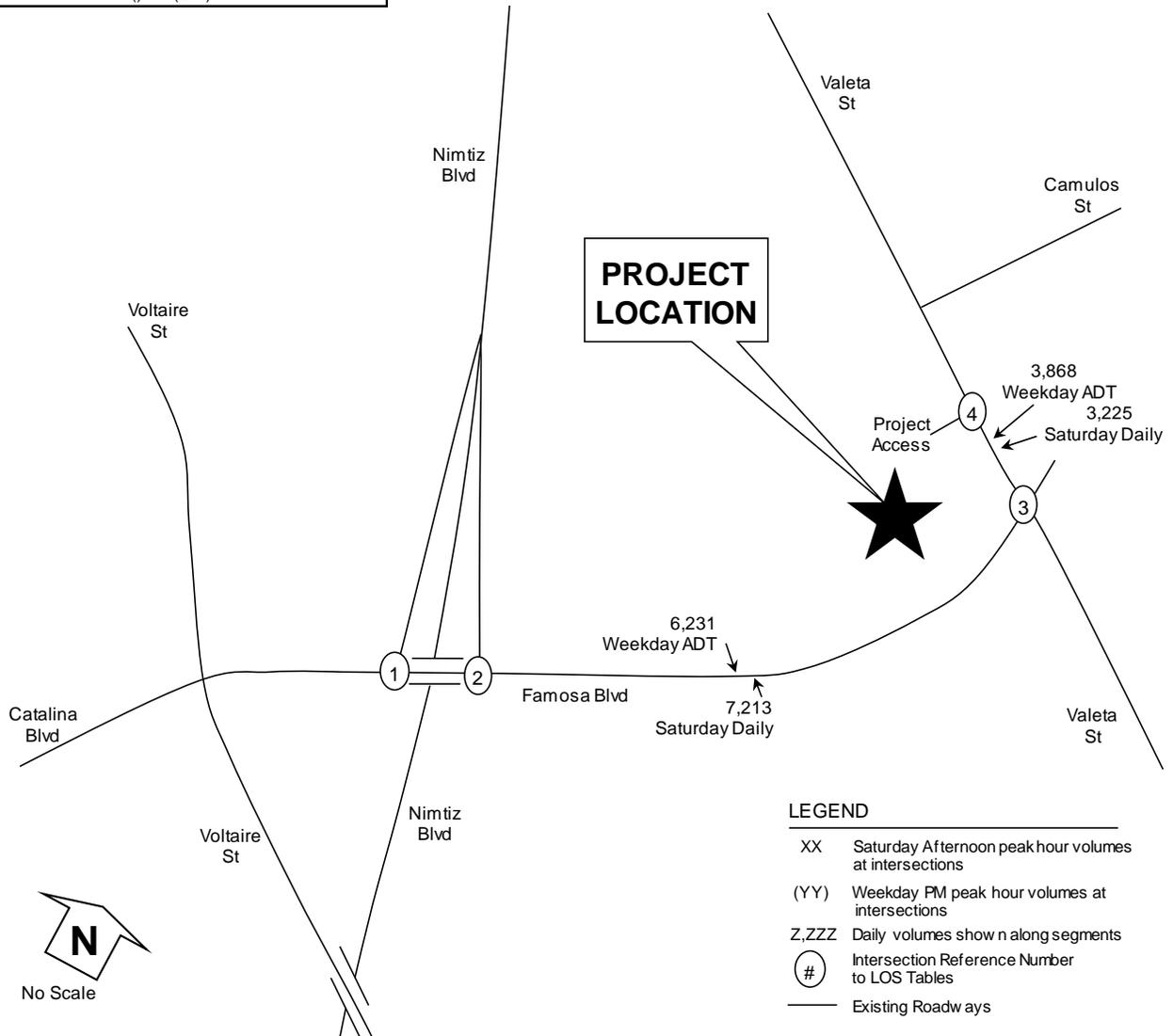
| Segment | Classification | Existing | | | | | |
|-------------------------------|--------------------------------|------------------|---------------|-------------------|--------|------|---|
| | | Daily Volume | # of lanes | LOS E Capacity | V/C | LOS | |
| Weekday (Wednesday) | | | | | | | |
| <u>Famosa Boulevard</u> | From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 6,231 | 2 | 10,000 | 0.62 | C |
| <u>Valeta Street</u> | From Famosa Blvd to Camulos St | 2 Lane Collector | 3,868 | 2 | 8,000 | 0.48 | C |
| Weekend Day (Saturday) | | | | | | | |
| <u>Famosa Boulevard</u> | From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 7,213 | 2 | 10,000 | 0.72 | C |
| <u>Valeta Street</u> | From Famosa Blvd to Camulos St | 2 Lane Collector | 3,225 | 2 | 8,000 | 0.40 | B |

Notes: Classification: TBD per community plan (existing conditions). Daily volumes is an average for weekday and daily for Sat. LOS: Level of Service. V/C: Volume to Capacity ratio.

Under existing conditions, all of the studied roadway facilities were calculated to operate at LOS C or better.

Figure 4: Existing Volumes

| | | |
|--|--|--|
| <p>Nimitz SB Ramp</p> <p>401 (411)</p> <p>58 (67)</p> <p>Famosa Blvd</p> <p>630 (842) → (1) ← 234 (259)</p> | <p>Nimitz NB Ramp</p> <p>406 (518)</p> <p>268 (386) → (2)</p> <p>Famosa Blvd</p> <p>66 (31)</p> <p>242 (264)</p> | <p>Valeta St</p> <p>95 (148)</p> <p>35 (64)</p> <p>1 (2)</p> <p>Famosa Blvd</p> <p>81 (157)</p> <p>3 (0)</p> <p>140 (134)</p> <p>136 (146)</p> <p>41 (136)</p> <p>1 (3)</p> <p>0 (0)</p> <p>3 (2)</p> <p>3 (2)</p> |
| <p>0 (0)</p> <p>0 (0)</p> <p>Project Access</p> <p>0 (0)</p> <p>131 (214)</p> <p>122 (293)</p> <p>Valeta St</p> <p>(4)</p> | | |



4.0 Project Description

The proposed project is the construction and operation of a new Sports Complex on the Correia Middle School campus. The complex would include an improved softball field (including additional bleachers and a concession stand with restroom facilities), track and field facilities (including a discus cage and long jump pit), four multi-purpose fields (the softball field will be natural turf and the other overlay fields will be artificial turf with irrigation type cooling), new classroom and restroom buildings, and installation of ten field lighting poles and fixtures. During school hours, the Sports Complex would only be available for use by Correia students. After school hours, the complex would be open to use by Correia students and Point Loma High School students, and would also be rented to public and private sports teams/clubs for community use on evenings and weekends. The site is currently zoned as a school in the Community Plan and will continue to function as a school with this project.

The physical layout of the proposed Sports Complex includes multi-use fields, a new softball field, new hard courts, long jump pit and discus cage, new buildings, field lighting, and new landscaping. The following describes the specific development components proposed within the new complex:

1. Multi-use Fields

- The artificial turf portion of the sports complex will be provided with markings for two parallel playfields with their long dimensions in the northwest/southeast orientation and a superimposed playfield with its long dimension oriented in the southwest/northeast direction. The parallel fields will be marked for lacrosse (330' long x 180' wide), soccer (300' long x 180' wide) and field hockey (300' long x 180' wide) and the perpendicular field will be marked for football (360' long x 160' wide). All fields meet the size requirements of the National Federation of State School Association's standards for competitive play areas;
- The equipment for the multi-use fields will include: removable football goal posts; removable soccer goals; removable lacrosse goals; removable field hockey goals; and, associated corner markers for each sport, as appropriate; and, One set of portable five (5) row aluminum bleachers (300 seats) will be placed along the northeastern end of the multi-use field.

2. Softball Field (replace the existing baseball field)

- The natural turf portion of the sports complex will include a softball field with: 60' base paths; a 250' outfield fence line; and 25' wide foul areas. The softball field will be positioned so that the turf area beyond the skinned infield can be used to accommodate field sport play, including football (360' x 160') or an oversized soccer field (360' x 200');
- The softball field will be provided with: an illuminated scoreboard; roofed dugouts and fence-enclosed bullpens; and new aluminum bleachers (not to exceed the seating capacity of the existing baseball field currently occupying the site [approximately 200 seats]).

3. Hard Court Area

- Six tennis courts with fence enclosure; and,
- One basketball court.

4. Field Lighting

- Based on preliminary design, ten light poles are proposed to provide field lighting at multiple locations within the field. Pole heights will range from 70 and 80 feet in height (2 @ 70' and 8 @ 80'). Each pole will support an array of 5-12 1,500W light fixtures (total of 92 fixtures). In addition, each fixture will be fitted with an external visor to reduce glare and a reflective insert to focus light onto the playing field.

5. Additional Features

- Long jump pit and runway, including a rubberized runway and a sand landing pit;
- Approximately 6,200 square foot two-story classroom/team room building and related parking lot improvements (this building will replace two existing portable classroom buildings and one portable restroom located in the same area);
- Approximately 1,000 square foot concession/restroom/equipment storage building located for convenient access to and from the play fields and spectator areas;
- A handicap accessible concrete walkway extending from the sports complex entrance to the softball field, the multi-use play areas and the hard court area as well as the two new buildings; and,
- A new 480 volt electrical service to provide the power required for the field lighting and the new structures.

Currently, athletic events at Correia Middle School are possible only during daylight hours and the school is unable to rent its facilities out to the community in the evenings. These existing events include school physical education programs and softball games. With implementation of the proposed project, the new permanent field lighting would allow for sporting events, such as team practices and community league sports team events to be held at night after school hours. In addition, the Sports Complex would be available for weekend rentals by non-school related sports leagues (i.e., soccer, youth sports, etc).

As such the proposed Sports Complex is anticipated to accommodate expanded uses of the facility. These uses can include school related practices and competitions (games); special events such as graduation and pep rallies; community uses (club sports) and events (carnivals); and other various uses. The expanded use of the Sports Complex is expected to occur due to increased demand (resulting from an expanding athletic program and because the new field may be preferred over other older fields) and because the lights will accommodate usage after sunset.

Approving and scheduling uses of the Sports Complex is under the authority of the school Principal. The schedule has the potential to change every year as athletic programs expand and change, and as different community needs and events are identified. Therefore, it is difficult to forecast what the likely usage of the proposed Sports Complex will be. There is generally no restriction on the Principal's ability to schedule the Complex. The Sports Complex is proposed to be used any day of the week and any week of the year; and with the lights, are proposed to be used at any hour (although a mandatory cutoff for the lights will be established for 10 PM). The typical uses associated with a Sports Complex are provided in **Table 6**. The majority of these

uses currently occur at the school but they are considered likely to occur with the implementation of the proposed Sports Complex. To provide a conservative assessment of potential impacts resulting from the use of the proposed Sports Complex, this document considers the potential effects of usage of the fields on any day of the week. It was also assumed that the lights could be used any day up to 10 PM. However, as shown on Table 6, even with a robust athletic program and some accommodation of other general uses, it is unlikely that intensive events, such as a highly attended event, will occur on a frequent basis.

TABLE 6: TYPICAL SPORTS COMPLEX USAGE

| Use/Activity | Season | Number per Season* | Attendance | Typical Days | Typical Latest Time | Lights Likely to be Used |
|---------------------------------------|------------|--------------------|------------|--------------|---------------------|--------------------------|
| School District Uses | | | | | | |
| Softball Practice –Fresh | Nov-May | Weekly | Low | Mon-Sat | 8 pm | Y |
| Softball Games–Fresh | | 40 | Low | Mon-Sat | 8 pm | Y |
| Softball Playoff Games – Var/JV | | Occasional | Med | Mon-Sat | 8pm | Y |
| Correia Sports Teams | Nov-May | Weekly | Low | Mon-Sat | 8 pm | Y |
| Graduation** | June | 1 | High | Any | 6 pm | N |
| Other School Events | Any | >5 | Med | Any | 10pm | Y |
| Community Uses | | | | | | |
| Youth Pop Warner Practice | Aug-Nov | 70 | Low | Mon-Sun | 10pm | Y |
| Youth Pop Warner Game | Aug-Nov | 5 | Low-Med | Sat | 10pm | Y |
| Youth Club Sports | Year round | Weekly | Low-Med | Any | 10pm | Y |
| Adult Club Sports | Year round | Weekly | Low-Med | Any | 10pm | Y |
| Athletic Tournament Events | Year round | Occasional | Med High | Sat-Sun | 10pm | Y |
| Concurrent Sporting Events (Weekdays) | Year round | Weekly | Med | Mon-Fri | 10pm | Y |
| Concurrent Sporting Events (Weekends) | Year round | Weekly | Med High | Sat-Sun | 10pm | Y |
| Community Events | Year round | Occasional | Low-Med | Any | 10pm | Y |

* All numbers are approximate

**Graduation is an existing event at the school, there will be no change in this event.

Attendance: Low=<50; Med=50-100; Medium High=100-300; High: 300-1500+ attendees

Source: SDUSD and BRG Consulting, Inc., 2014.

4.1 Project Trip Generation

Project trip generation is typically calculated using trip rates from the City of San Diego *Trip Generation Manual*, May 2003 or the Institute of Transportation Engineers (ITE) *Trip Generation Manual 9th Edition*, 2012; however, the aforementioned manuals do not include an all-encompassing trip rate for the various and different uses anticipated at the Sports Complex. Therefore, a trip rate was calculated from information provided by the District and the more conservative trip generation between the three sources was used in this analysis.

This traffic analysis is based on trip generation for weekday (Wednesday) events and weekend day (Saturday) events. A peak hour analysis covers a scenario where one event has ended and patrons are leaving while new patrons are arriving for the next event. A daily analysis includes the combination of traffic from the events that occurred throughout the day. The weekday period of analysis is during the evening commuter peak period of the highest hour between 4 PM and 6 PM. The weekend day (Saturday) analysis is based on the highest peak hour of background traffic on the surrounding roadways between 12 PM and 2 PM.

The trip generation also incorporated a vehicle occupancy collected from existing sports field users in the City of San Diego from a survey conducted on Sunday March 23, 2014 generally between the hours of 9 AM and 1:30 PM. An average vehicle occupancy rate of 2.9 people per vehicle was documented for youth and family users at a City of San Diego park that had softball, soccer, and tennis events. An average vehicle occupancy rate of 1.5 people per vehicle was documented from a multi-use field that had soccer events with adult players. Data and calculations included in **Appendix H**.

According to the District, the highest reasonable and anticipated use for the sports complex are soccer practice and games with the concurrent use of two fields during a weekday and up to three concurrent uses of the fields during the weekend. Therefore, the higher anticipated trip generation is based on concurrent soccer uses.

4.1.1 Weekday Trip Generation

Weekday trip generation was calculated based on City of San Diego trip rates, ITE trips rates, and data provided by the District.

The City of San Diego manual does not have a specific rate for soccer fields; however, the manual does list developed park and sport facility. Both the developed park and sport facility are at 50 ADT per acre; however, the sport facility does not list peak hour rates while the developed park does include peak hour rates. Therefore, a developed park trip rate was used. The calculated trip generation based on the City of San Diego weekday trip rates (included in **Appendix I**) is summarized in **Table 7**.

TABLE 7: CITY OF SAN DIEGO PROJECT TRIP GENERATION (WEEKDAY)

| Proposed Land Use | Rate | Size & Units | ADT | % | Split | AM | | | PM | | |
|-------------------|----------|--------------|-----|----|---------|----|-----|----|---------|----|-----|
| | | | | | | IN | OUT | % | Split | IN | OUT |
| Developed Park | 50 /Acre | 7.30 Acres | 365 | 4% | 0.5 0.5 | 7 | 7 | 8% | 0.5 0.5 | 15 | 15 |

Source: City of San Diego *Trip Generation Manual*, May 2003. ADT-Average Daily Traffic; Split-percent inbound and outbound.

From the ITE manual, a Soccer Complex (ITE reference number 488) trip rate was used because the project has three soccer fields and the facility is anticipated to be used by school soccer teams and outside leagues. The calculated weekday trip generation based on ITE trip rates (included in **Attachment J**) is summarized in **Table 8**.

TABLE 8: ITE PROJECT TRIP GENERATION (WEEKDAY)

| Proposed Land Use | Rate | Size & Units | ADT | Rate | Split | AM | | | PM | | |
|--------------------------|--------------|--------------|-----|------|-----------|----|-----|-------|-----------|----|-----|
| | | | | | | IN | OUT | Rate | Split | IN | OUT |
| ITE Soccer Complex (488) | 71.33 /Field | 3 Fields | 214 | 1.12 | 0.57 0.43 | 2 | 1 | 17.70 | 0.67 0.33 | 36 | 18 |

Source: ITE 9th Edition *Trip Generation*, 2012. SF - Square Feet; ADT-Average Daily Traffic; Split-percent inbound and outbound

The District indicated that the highest anticipated and most reasonable weekday use could be two fields used for practice by two different soccer teams. After the school session ends for Correia Middle School, the soccer fields are anticipated to be used for practice by school teams while the evening is anticipated to be used by adult teams. According to the District, practice events are the most reasonable use of the sports complex during a weekday. Different vehicle occupancies were

applied for the youth games vs. adult games based on the aforementioned vehicle occupancy rates described in Section 4.1. Based on the aforementioned information, the most reasonably anticipated use and trip generation of the sports complex are multiple back to back practices with two fields being used concurrently as shown in **Table 9**.

TABLE 9: DISTRICT BASED TRIP GENERATION (WEEKDAY)

| Sports Complex Use | Time (Approximate) | Number of Attendees (1) | Vehicle Occupancy | Total Vehicles | Inbound Trips (2) | Outbound Trips (2) | ADT (3) |
|--|--------------------|-------------------------|-------------------|----------------|-------------------|--------------------|------------|
| 2 Concurrent Youth Soccer Practices | 2:11pm - 3:59pm | 100 | 2.9 | 34 | 34 | 34 | 68 |
| 2 Concurrent Youth Soccer Practices | 4:00pm - 5:59pm | 100 | 2.9 | 34 | 34 | 34 | 68 |
| 2 Concurrent Adult Soccer Practices | 6:00pm - 7:59pm | 100 | 1.5 | 67 | 67 | 67 | 134 |
| 2 Concurrent Adult Soccer Practices | 8:00pm - 9:59pm | 100 | 1.5 | 67 | 67 | 67 | 134 |
| Potential Weekday Daily Traffic | | | | | | | 404 |

Notes: (1) Players and Observers. (2) Trips already incorporate vehicle occupancy. (3) Average Daily Trips (inbound + outbound).

As shown in the above tables, each data source provided a slightly different traffic generation for the sports complex. Taking a conservative approach, the highest weekday trip generation from each source was used for the project. Additionally, data from the AM peak hour was not used because the sports field can only be used after school ends at approximately 2:11 PM. During a weekday, the sports complex is anticipated to generate 404 ADT with 70 PM peak hour trips (36 inbound and 34 outbound). The ADT and PM outbound volumes are based on District information while the PM inbound volume is based on an ITE rate.

4.1.2 Weekend Day (Saturday) Trip Generation

A weekend day (Saturday) trip generation was calculated using ITE trip rates and data provided by the District. The City of San Diego does not have a weekend rate for a park; therefore, a Saturday trip generation was based on ITE rates and District information.

The ITE manual has a weekend rate for a Soccer Complex. The ITE Saturday daily rate is 117.43 per field while the Saturday peak hour rate is 30.34 per field. The calculated weekend trip generation based on ITE Saturday trip rates (included in Appendix J) is summarized in **Table 10**.

TABLE 10: ITE PROJECT TRIP GENERATION (SATURDAY)

| Proposed Land Use | Rate | Size & Units | Saturday | | | | Saturday Peak Hour | |
|--------------------------|---------------|--------------|----------|-------|-----------|----|--------------------|--|
| | | | ADT | Rate | Split | IN | OUT | |
| ITE Soccer Complex (488) | 117.43 /Field | 3 Fields | 352 | 30.34 | 0.48 0.52 | 44 | 47 | |

Source: ITE 9th Edition *Trip Generation*, 2012. SF - Square Feet; ADT-Average Daily Traffic; Split-percent inbound and outbound

The District indicated that the highest anticipated and most reasonable Saturday use could be three concurrent soccer games using three fields between 8 AM and 10 PM. According to the District, the daytime uses (from 8 AM to about 6 PM) are anticipated to be soccer games (as opposed to practice) by school or youth teams while the evening uses (6 PM to 10 PM) are anticipated to be soccer games by adult teams or leagues. Different vehicle occupancies were applied for the youth games vs. adult games based on the aforementioned vehicle occupancy rates described in Section 4.1. Based on the aforementioned information, the most reasonably anticipated use and trip generation of the sports complex are multiple back to back games with three fields being used concurrently as shown in **Table 11**.

TABLE 11: DISTRICT BASED PROJECT TRIP GENERATION (SATURDAY)

| Sports Complex Use | Time (Approximate) | Number of Attendees (1) | Vehicle Occupancy | Total Vehicles | Inbound Trips (2) | Outbound Trips (2) | ADT (3) |
|---|--------------------|-------------------------|-------------------|----------------|-------------------|--------------------|--------------|
| 3 Concurrent Youth Soccer Games | 8:00am - 9:59am | 300 | 2.9 | 103 | 103 | 103 | 206 |
| 3 Concurrent Youth Soccer Games | 10:00am - 11:59pm | 300 | 2.9 | 103 | 103 | 103 | 206 |
| 3 Concurrent Youth Soccer Games | 12:00pm - 1:59pm | 300 | 2.9 | 103 | 103 | 103 | 206 |
| 3 Concurrent Youth Soccer Games | 2:00pm - 3:59pm | 300 | 2.9 | 103 | 103 | 103 | 206 |
| 3 Concurrent Youth Soccer Games | 4:00pm - 5:59pm | 300 | 2.9 | 103 | 103 | 103 | 206 |
| 3 Concurrent Adult Soccer Games | 6:00pm - 7:59pm | 150 | 1.5 | 100 | 100 | 100 | 200 |
| 3 Concurrent Adult Soccer Games | 8:00pm - 9:59pm | 150 | 1.5 | 100 | 100 | 100 | 200 |
| Potential Saturday Daily Traffic | | | | | | | 1,430 |

Notes: (1) Players and Observers. (2) Vehicle occupancy incorporated in the number of trips. (3) Average Daily Trips (inbound + outbound).

As shown in the above tables, each data source provided a slightly different traffic generation for the sports complex. Taking a conservative approach, the highest trip generation was used between the two Saturday trip generation sources. During a Saturday, the sports complex is anticipated to have 1,430 ADT with 206 afternoon peak hour trips (103 inbound and 103 outbound), based on information provided by the District. Please note that this trip generation may be very conservative because it is about 4 times higher than the ITE daily rate and is based on concurrent uses of three soccer fields over 14 hours on a Saturday.

4.1.3 Project Access and Parking

Existing access to the sports complex is from gates to the north from the on-site parking area and to the south from a pedestrian gate on Famosa Boulevard. Neither additional pedestrian gates nor driveways are proposed as part of this project as the District indicated that the existing points of access adequately serve the site.

The existing site has 89 on-site parking spaces for use by the sports field users that will be reduced to about 64 spaces with the project. There are 71 additional parking spaces on the north side of the school that are not planned to be used by the sport field users. According to the City of San Diego *Consultant's Guide to Park Design & Development*, November 2011, the parking ratio for neighborhood parks is five (5) parking spaces per acre of non-programmed parkland and an additional thirty (30) spaces per backstop if a softball field is included (excerpts included in **Appendix K**). For 7.3 acres, the City's requirement is 37 spaces ($7.3 \times 5 = 36.5$) plus 30 due to the backstop for a total of 67 spaces; therefore, the project is short by 3 on-site parking spaces based on City requirements. If needed, the shortage of 3 spaces can be made up by using some of the existing 71 on-site parking spaces on the north side of the school or from on-street parking along the project frontage.

Due to the location of the pedestrian gate on Famosa Blvd, San Diego Unified School District staff members have observed parking for the site occurring on Famosa Blvd along the project frontage and also at the Cleator Community Park located to the southwest of the site. Should the parking demand for the site exceed the on-site supply, it is anticipated that the overflow parking will continue to use Famosa Boulevard and Cleator Community Park based on the historic observations by District staff. This observation is consistent with the City's *Consultant's Guide to Park Design & Development* manual that also states on page 10 under 2.7.1 "Parking may be provided by on-site parking facilities or on adjacent streets."

4.2 Project Distribution and Assignment

The overall project distribution (i.e. the direction from which the project traffic arrives and departs the site) is based on the surrounding residential areas and access points to Nimitz Boulevard. The distribution is shown in **Figure 5** with the assignment of trips included in **Figure 6**

Figure 5: Project Distribution

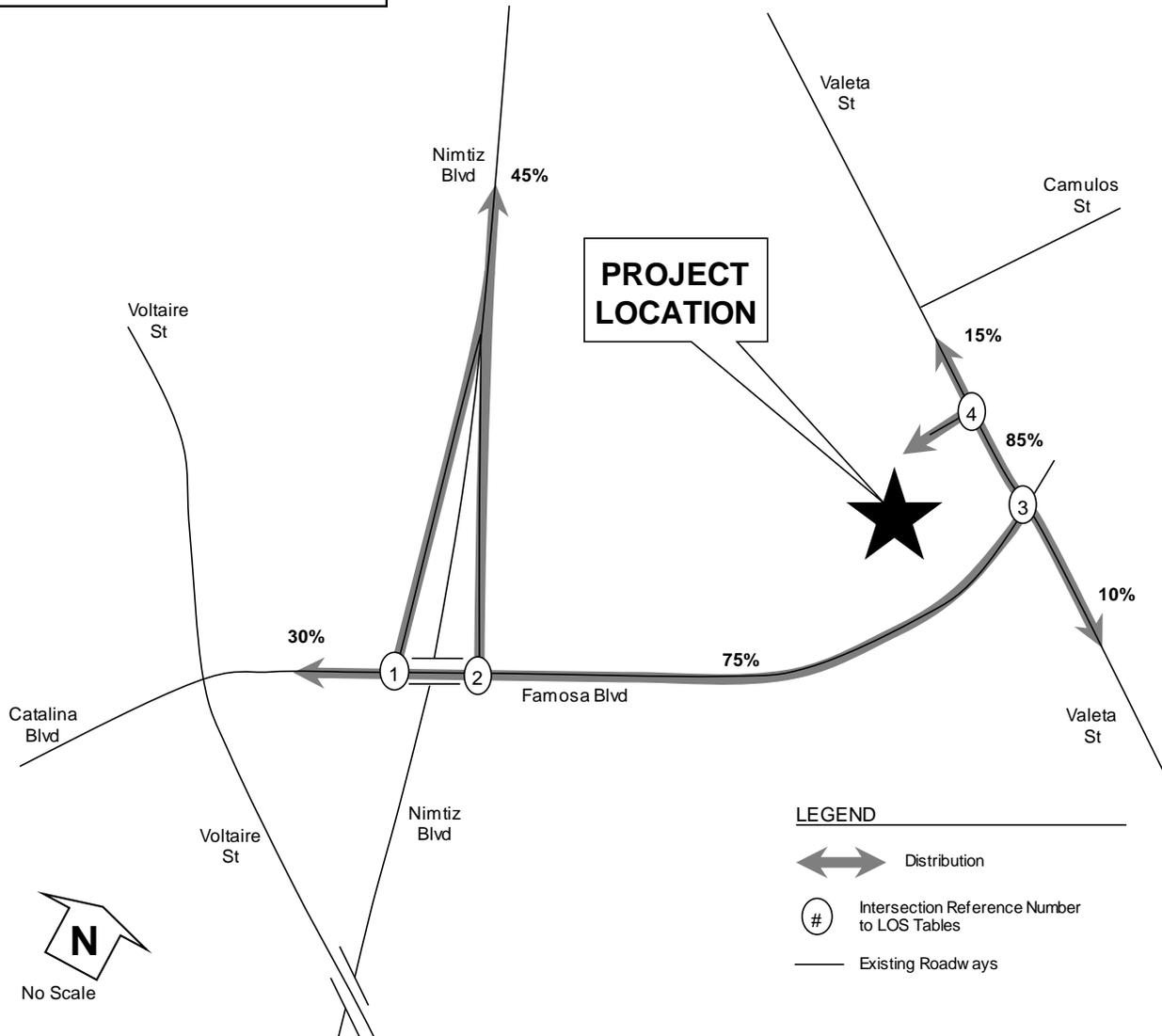
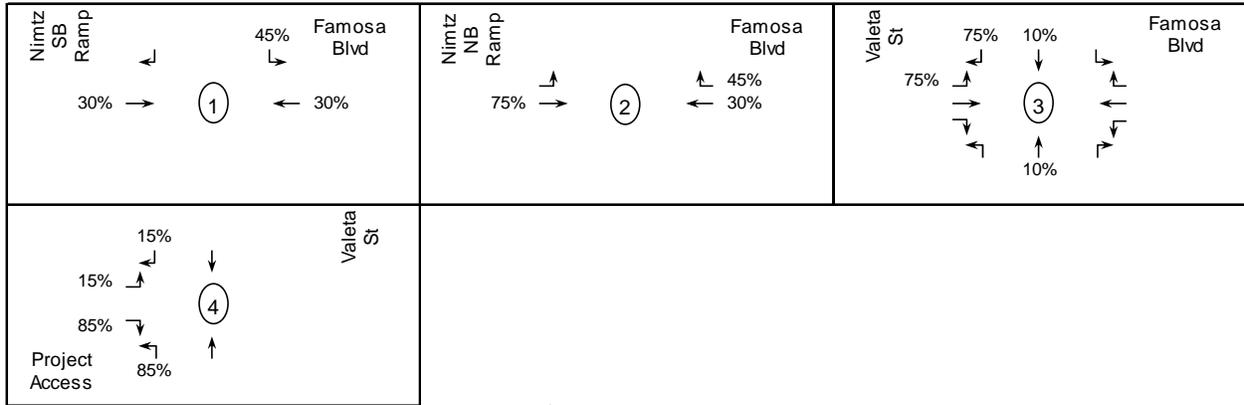
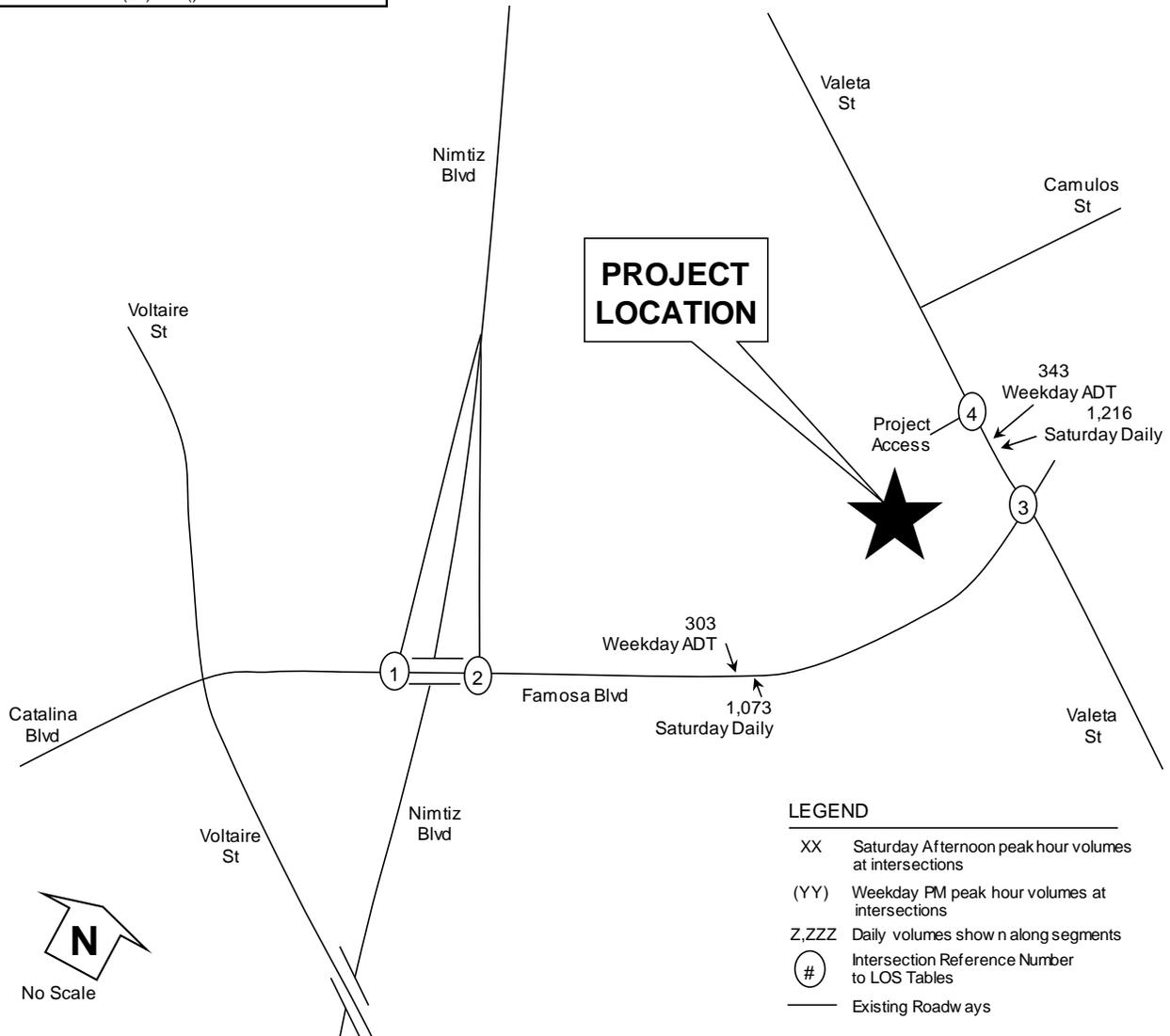


Figure 6: Project Assignment

| | | |
|--|--|---|
| <p>Nimitz SB Ramp 0 (0) ←</p> <p>31 (10) →</p> <p>47 (16) ↓</p> <p>Famosa Blvd</p> <p>31 (10) ←</p> <p>①</p> | <p>Nimitz NB Ramp 0 (0) →</p> <p>78 (26) →</p> <p>47 (16) ↑</p> <p>Famosa Blvd</p> <p>31 (10) ←</p> <p>②</p> | <p>Valeta St 78 (26) ↓</p> <p>0 (0) →</p> <p>0 (0) ↓</p> <p>10 (3) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>③</p> <p>0 (0) ↑</p> <p>10 (3) ↑</p> <p>0 (0) ↓</p> <p>Famosa Blvd</p> <p>0 (0) →</p> <p>0 (0) →</p> <p>0 (0) →</p> |
| <p>15 (5) ↓</p> <p>88 (29) ↓</p> <p>Project Access 88 (29) ↓</p> <p>0 (0) ↓</p> <p>0 (0) ↓</p> <p>④</p> <p>Valeta St</p> | | |



5.0 Existing with Project Conditions

This scenario accounts for the addition of non-homecoming project traffic onto existing conditions for PM and ADT conditions. The intersection volumes and daily traffic volumes are shown in **Figure 7**. The LOS calculated for the study roadway elements are shown in **Tables 12 and 13**. LOS calculations are included in **Appendix L**.

TABLE 12: EXISTING WITH PROJECT INTERSECTION LEVEL OF SERVICE

| Intersection and (Analysis) ¹ | Movement | Peak Hour | Existing | | Existing + Project | | | |
|--|----------|-----------|--------------------|------------------|--------------------|------------------|--------------------|------------------|
| | | | Delay ² | LOS ³ | Delay ² | LOS ³ | Delta ⁴ | Sig ⁵ |
| 1) Nimitz SB Ramp at Famosa Blvd (S) | All | SAT | 13.6 | B | 14.0 | B | 0.4 | No |
| 2) Nimitz NB Ramp at Famosa Blvd (U) | EB L | SAT | 9.7 | A | 10.3 | B | 0.6 | No |
| 3) Valeta St at Famosa Blvd (U) | EB L | PM | 10.5 | B | 10.8 | B | 0.3 | No |
| 4) Valeta St at Project Access (U) | All | SAT | 9.1 | A | 10.8 | B | 1.7 | No |
| | All | PM | 11.8 | B | 12.6 | B | 0.8 | No |
| | EB LR | SAT | 0.0 | A | 10.9 | B | 10.9 | No |
| | EB LR | PM | 0.0 | A | 10.9 | B | 10.9 | No |

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

4) Delta is the increase in delay. 5) Significant Impact? (yes or no).

TABLE 13: EXISTING WITH PROJECT SEGMENT ADT VOLUMES AND LEVEL OF SERVICE

| Segment | Classification (as built) | Existing | | | | Project Daily Volume | Existing + Project | | | | | |
|--------------------------------|---------------------------|--------------|----------------|-------|-----|----------------------|--------------------|----------------|-------|-----|---------------|----------------|
| | | Daily Volume | LOS E Capacity | V/C | LOS | | Daily Volume | LOS E Capacity | V/C | LOS | Change in V/C | Direct Impact? |
| Weekday (Wednesday) | | | | | | | | | | | | |
| <u>Famosa Boulevard</u> | | | | | | | | | | | | |
| From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 6,231 | 10,000 | 0.623 | C | 303 | 6,534 | 10,000 | 0.653 | C | 0.030 | No |
| <u>Valeta Street</u> | | | | | | | | | | | | |
| From Famosa Blvd to Camulos St | 2 Lane Collector | 3,868 | 8,000 | 0.484 | C | 343 | 4,211 | 8,000 | 0.526 | C | 0.043 | No |
| Weekend Day (Saturday) | | | | | | | | | | | | |
| <u>Famosa Boulevard</u> | | | | | | | | | | | | |
| From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 7,213 | 10,000 | 0.721 | C | 1,073 | 8,286 | 10,000 | 0.829 | D | 0.107 | No |
| <u>Valeta Street</u> | | | | | | | | | | | | |
| From Famosa Blvd to Camulos St | 2 Lane Collector | 3,225 | 8,000 | 0.403 | B | 1,216 | 4,441 | 8,000 | 0.555 | C | 0.152 | No |

Notes: Classification: TBD per community plan (existing conditions). Daily volumes is an average for weekday and daily for Sat.

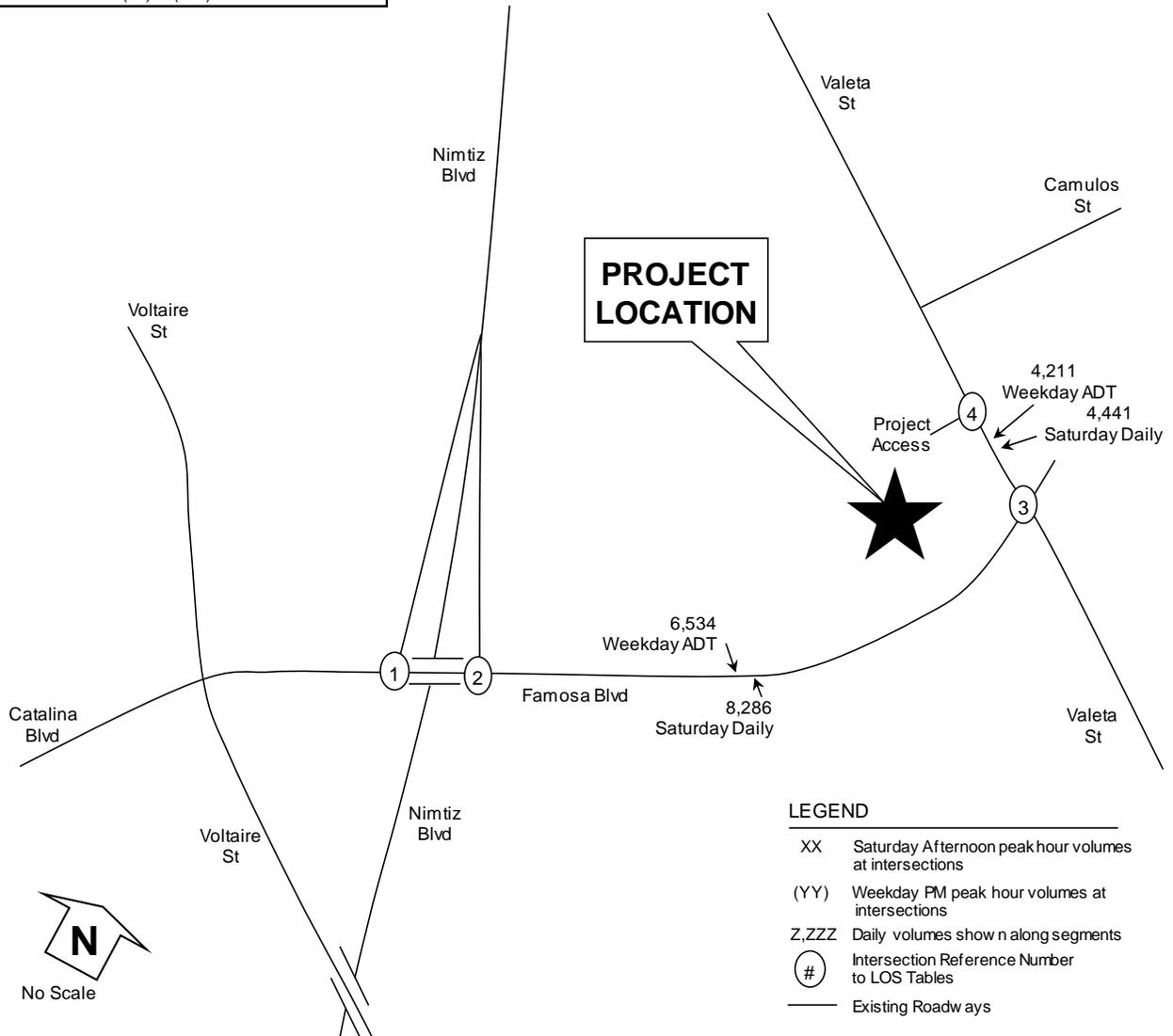
LOS: Level of Service. V/C: Volume to Capacity ratio.

Under existing with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no significant direct project impacts.

Figure 7: Existing with Project Volumes

| | | | | | | | | | |
|--|-------------------------|--------------------|--|--|-----|---|------------------|----------------|--|
| Nimitz SB Ramp 401 (411) 661 (852) → | 105 (83) ← 265 (269) | Famosa Blvd (1) | Nimitz NB Ramp 406 (518) 346 (412) → | Famosa Blvd 113 (47) ← 273 (274) | (2) | Valeta St 173 (174) 159 (183) 3 () 140 (134) | 45 (67) → (3) | 1 (2) ← (3) | Famosa Blvd 0 () 3 (2) 3 (2) |
|--|-------------------------|--------------------|--|--|-----|---|------------------|----------------|--|

| | | |
|--|-----------------------------------|------------------|
| 15 (5) 88 (29) Project Access 88 (29) | 131 (214) ↓ (4) ↑ 122 (293) | Valeta St (4) |
|--|-----------------------------------|------------------|



6.0 Near-Term without Project Conditions

The near-term without project conditions describe the anticipated roadway operations with the addition of cumulative project traffic on top of existing volumes. Two cumulative projects were identified in the vicinity of the project that include the Point Loma athletic field upgrades at the Point Loma High School and a 7-11 Convenience Store planned on the northwest corner of Rosecrans Street at Hugo Street. Cumulative project information is included in **Appendix M**. In addition to the cumulative projects noted above, an annual growth factor of 0.5% was applied to existing volumes (2% total increase) to represent near-term year 2018 conditions. Near-term traffic volumes (existing + 2% ambient background growth + cumulative project traffic) without the project are shown in **Figure 8**. The LOS calculated for the study roadway elements are shown in **Tables 14 and 15**. LOS calculations are included in **Appendix N**.

TABLE 14: NEAR-TERM WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE

| Intersection and (Analysis) ¹ | Movement | Peak Hour | Near-Term | |
|--|----------|-----------|--------------------|------------------|
| | | | Delay ² | LOS ³ |
| 1) Nimitz SB Ramp at Famosa Blvd (S) | All | SAT | 13.9 | B |
| | All | PM | 17.7 | B |
| 2) Nimitz NB Ramp at Famosa Blvd (U) | EB L | SAT | 9.8 | A |
| | EB L | PM | 10.7 | B |
| 3) Valeta St at Famosa Blvd (U) | All | SAT | 9.2 | A |
| | All | PM | 12.0 | B |
| 4) Valeta St at Project Access (U) | EB LR | SAT | 0.0 | A |
| | EB LR | PM | 0.0 | A |

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds. EB L: Eastbound Left. EB LR: Eastbound Left Right.

TABLE 15: NEAR-TERM WITHOUT PROJECT SEGMENT ADT VOLUMES AND LEVEL OF SERVICE

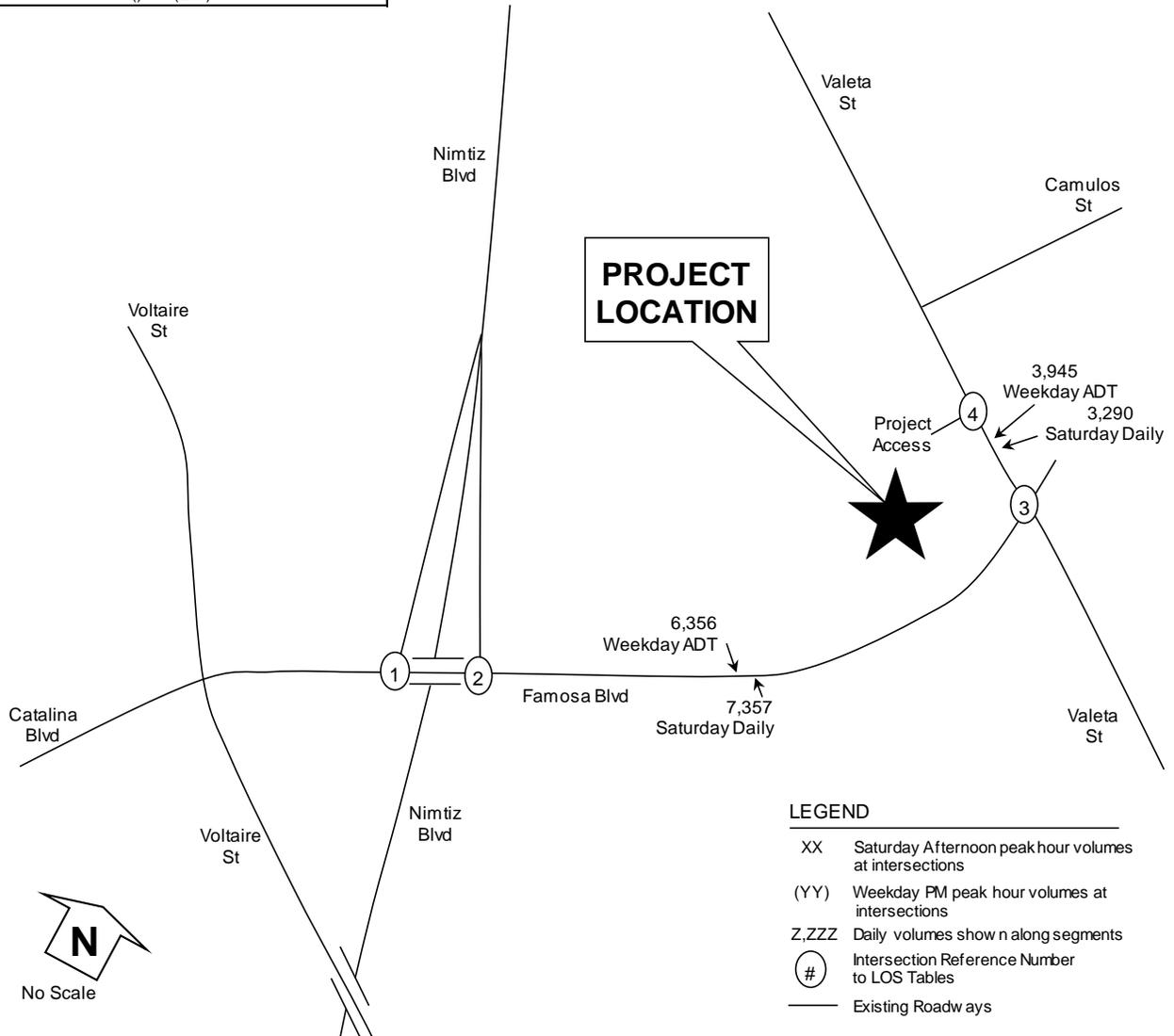
| Segment | Classification | Near-Term | | | | | |
|-------------------------------|--------------------------------|------------------|------------|----------------|--------|------|---|
| | | Daily Volume | # of lanes | LOS E Capacity | V/C | LOS | |
| Weekday (Wednesday) | | | | | | | |
| <u>Famosa Boulevard</u> | From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 6,356 | 2 | 10,000 | 0.64 | C |
| <u>Valeta Street</u> | From Famosa Blvd to Camulos St | 2 Lane Collector | 3,945 | 2 | 8,000 | 0.49 | C |
| Weekend Day (Saturday) | | | | | | | |
| <u>Famosa Boulevard</u> | From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 7,357 | 2 | 10,000 | 0.74 | C |
| <u>Valeta Street</u> | From Famosa Blvd to Camulos St | 2 Lane Collector | 3,290 | 2 | 8,000 | 0.41 | B |

Notes: Classification: TBD per community plan (existing conditions) . Daily volumes is an average for weekday and daily for Sat. LOS: Level of Service. V/C: Volume to Capacity ratio.

Under near-term without project conditions, all of the studied roadway facilities were calculated to operate at LOS C or better.

Figure 8: Near-Term without Project Volumes

| | | |
|---|--|---|
| <p>Nimtiz SB Ramp</p> <p>409 (419)</p> <p>59 (68)</p> <p>Famosa Blvd</p> <p>643 (859) → (1) ← 239 (264)</p> | <p>Nimtiz NB Ramp</p> <p>414 (528)</p> <p>273 (394) → (2)</p> <p>Famosa Blvd</p> <p>67 (32)</p> <p>247 (269)</p> | <p>Valeta St</p> <p>97 (151)</p> <p>36 (65)</p> <p>1 (2)</p> <p>Famosa Blvd</p> <p>83 (160) → (3) ← 0 (0)</p> <p>3 (0) → 3 (2)</p> <p>143 (137) ↓ 3 (2)</p> <p>139 (149)</p> <p>42 (139)</p> <p>1 (3)</p> |
| <p>0 (0)</p> <p>0 (0)</p> <p>Project Access</p> <p>0 (0)</p> <p>0 (0)</p> | <p>134 (218)</p> <p>(4)</p> <p>124 (299)</p> <p>Valeta St</p> | |



7.0 Near-Term with Project Conditions

The near-term with project conditions describe the anticipated roadway operations during opening day of the project. Near-term with project traffic volumes are shown in **Figure 9**. The LOS calculated for the study roadway elements are shown in **Tables 16 and 17**. LOS calculations are included in **Appendix O**.

TABLE 16: NEAR-TERM WITH PROJECT INTERSECTION LEVEL OF SERVICE

| Intersection and (Analysis) ¹ | Movement | Peak Hour | Near-Term | | Near-Term + Project | | | |
|---|----------|--------------|--------------------|------------------|---------------------|------------------|--------------------|------------------|
| | | | Delay ² | LOS ³ | Delay ² | LOS ³ | Delta ⁴ | Sig ⁵ |
| 1) Nimitz SB Ramp at Famosa Blvd (S) | All | SAT | 13.9 | B | 14.3 | B | 0.4 | No |
| | All | PM | 17.7 | B | 17.9 | B | 0.2 | No |
| 2) Nimitz NB Ramp at Famosa Blvd (U) | EB L | SAT | 9.8 | A | 10.4 | B | 0.6 | No |
| | EB L | PM | 10.7 | B | 10.9 | B | 0.2 | No |
| 3) Valeta St at Famosa Blvd (U) | All | SAT | 9.2 | A | 10.9 | B | 1.7 | No |
| | All | PM | 12.0 | B | 12.9 | B | 0.9 | No |
| 4) Valeta St at Project Access (U) | EB LR | SAT | 0.0 | A | 10.9 | B | 10.9 | No |
| | EB LR | PM | 0.0 | A | 11.0 | B | 11.0 | No |

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

4) Delta is the increase in delay. 5) Significant Impact? (yes or no).

TABLE 17: NEAR-TERM WITH PROJECT SEGMENT ADT VOLUMES AND LEVEL OF SERVICE

| Segment | Classification (as built) | Near-Term | | | | Project Daily Volume | Near-Term + Project | | | | | |
|--------------------------------|------------------------------|-----------------|-------------------|-------|-----|----------------------------|---------------------|-------------------|-------|-----|------------------|-------------------|
| | | Daily Volume | LOS E Capacity | V/C | LOS | | Daily Volume | LOS E Capacity | V/C | LOS | Change in V/C | Direct Impact? |
| Weekday (Wednesday) | | | | | | | | | | | | |
| <u>Famosa Boulevard</u> | | | | | | | | | | | | |
| From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 6,356 | 10,000 | 0.636 | C | 303 | 6,659 | 10,000 | 0.666 | C | 0.030 | No |
| <u>Valeta Street</u> | | | | | | | | | | | | |
| From Famosa Blvd to Camulos St | 2 Lane Collector | 3,945 | 8,000 | 0.493 | C | 343 | 4,288 | 8,000 | 0.536 | C | 0.043 | No |
| Weekend Day (Saturday) | | | | | | | | | | | | |
| <u>Famosa Boulevard</u> | | | | | | | | | | | | |
| From Nimitz Blvd to Valeta St | TBD (2 Lanes) | 7,357 | 10,000 | 0.736 | C | 1,073 | 8,430 | 10,000 | 0.843 | D | 0.107 | No |
| <u>Valeta Street</u> | | | | | | | | | | | | |
| From Famosa Blvd to Camulos St | 2 Lane Collector | 3,290 | 8,000 | 0.411 | B | 1,216 | 4,506 | 8,000 | 0.563 | C | 0.152 | No |

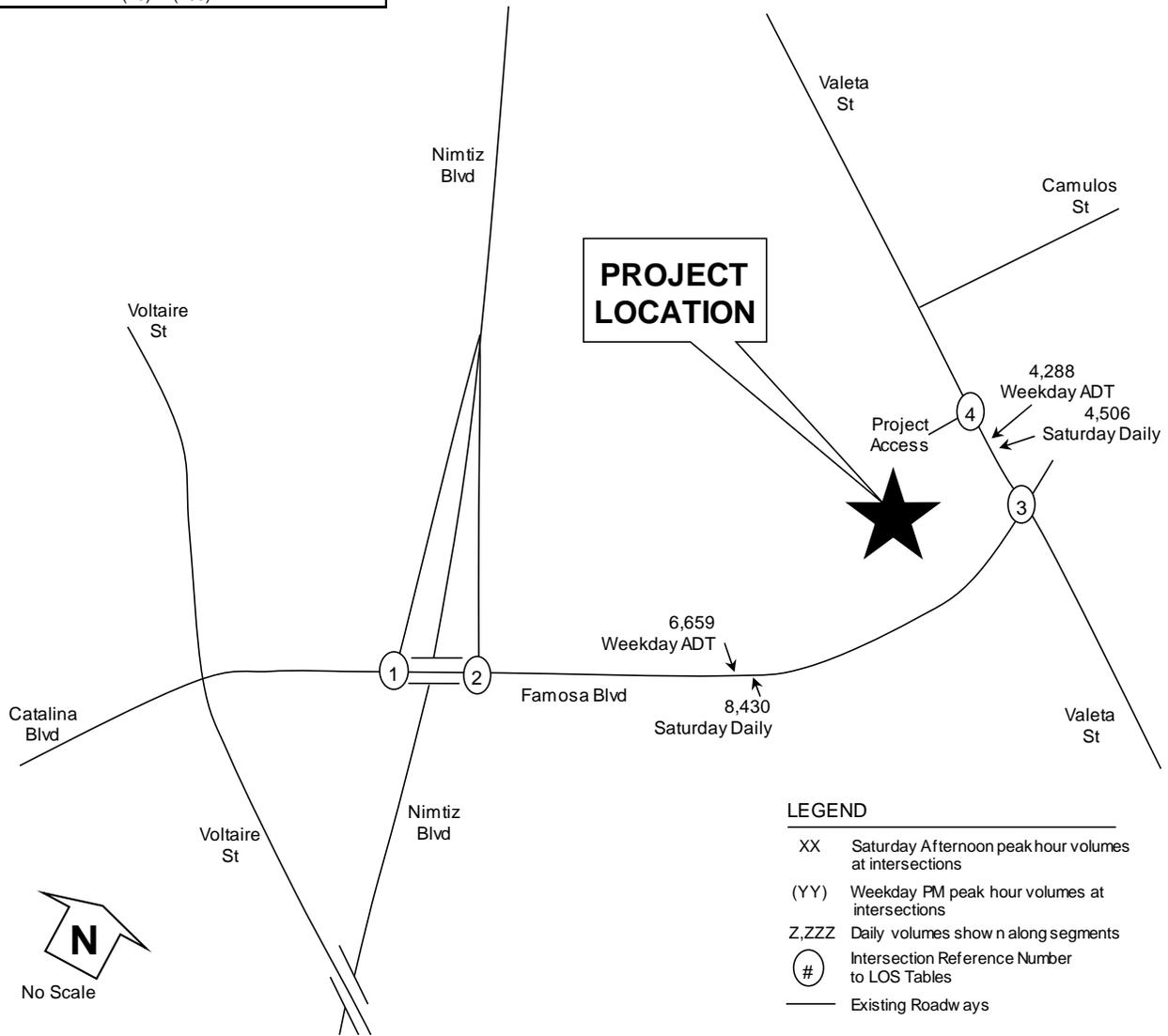
Notes: Classification: TBD per community plan (existing conditions) . Daily volumes is an average for weekday and daily for Sat.

LOS: Level of Service. V/C: Volume to Capacity ratio.

Under near-term with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no significant direct impacts.

Figure 9: Near-Term with Project Volumes

| | | |
|---|---|---|
| <p>Nimitz SB Ramp 409 (419) 674 (869) →</p> <p>106 (84) ← 270 (274)</p> <p>Famosa Blvd</p> <p>1</p> | <p>Nimitz NB Ramp 414 (528) 351 (420) →</p> <p>114 (48) ← 278 (279)</p> <p>Famosa Blvd</p> <p>2</p> | <p>Valeta St 175 (177) 161 (186) 3 () 143 (137)</p> <p>46 (68) ↓ 52 (142) ↑ 139 (149)</p> <p>1 (2) ← 3 (2) ↓ 1 (3)</p> <p>Famosa Blvd</p> <p>3</p> |
| <p>15 (5) 88 (29) Project Access 88 (29)</p> <p>134 (218) ↓ 124 (299) ↑</p> <p>Valeta St</p> <p>4</p> | | |



8.0 Horizon Year (2035) without Project Conditions

The Horizon Year (2035) volumes without the project were based on SANDAG Series 12 traffic model volumes. The SANDAG year 2035 traffic model has the currently non-completed extension of Famosa Boulevard as being completed from Valeta Street to West Point Loma Boulevard. The SANDAG traffic model also has Famosa Boulevard coded as a 4 Lane Major roadway from Nimitz Boulevard to W. Point Loma Boulevard (details included in **Appendix P**). This change has significantly increased the amount of traffic on Famosa Boulevard, which is accommodated through an increase in the number of lanes and capacity on Famosa Boulevard. The roadway segment and intersection configuration used in the Horizon Year analyses are shown in **Figure 10** to reflect the SANDAG year 2035 traffic model conditions. The turn move calculations and SANDAG turn move data are included in **Appendix Q**.

The horizon year (2035) volumes without project traffic are shown in **Figure 11**. The LOS calculated for the study roadway elements are shown in **Tables 18 and 19**. LOS calculations are included in **Appendix R**.

TABLE 18: HORIZON YEAR (2035) WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE

| Intersection and (Analysis) ¹ | Movement | Peak Hour | Horizon Year | |
|---|----------|--------------|--------------------|------------------|
| | | | Delay ² | LOS ³ |
| 1) Nimitz SB Ramp at Famosa Blvd (S) | All | SAT | 16.2 | B |
| | All | PM | 25.1 | C |
| 2) Nimitz NB Ramp at Famosa Blvd (U) | EB L | SAT | 16.3 | C |
| | EB L | PM | 25.0 | C |
| 3) Valeta St at Famosa Blvd (S) | All | SAT | 19.4 | B |
| | All | PM | 24.2 | C |
| 4) Valeta St at Project Access (U) | EB LR | SAT | 0.0 | A |
| | EB LR | PM | 0.0 | A |

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.
EB L: Eastbound Left. EB LR: Eastbound Left Right.

TABLE 19: HORIZON YEAR (2035) WITHOUT PROJECT SEGMENT ADT VOLUMES AND LEVEL OF SERVICE

| Segment | Classification used in SANDAG Traffic Model | Horizon Year | | | |
|--------------------------------|---|-----------------|-------------------|-------|-----|
| | | Daily Volume | LOS E Capacity | V/C | LOS |
| Weekday (Wednesday) | | | | | |
| <u>Famosa Boulevard</u> | | | | | |
| From Nimitz Blvd to Valeta St | 4 Ln Major | 11,200 | 40,000 | 0.280 | A |
| <u>Valeta Street</u> | | | | | |
| From Famosa Blvd to Camulos St | 2 Ln Roadway | 4,300 | 8,000 | 0.538 | C |
| Weekend Day (Saturday) | | | | | |
| <u>Famosa Boulevard</u> | | | | | |
| From Nimitz Blvd to Valeta St | 4 Ln Major | 13,000 | 40,000 | 0.325 | A |
| <u>Valeta Street</u> | | | | | |
| From Famosa Blvd to Camulos St | 2 Ln Roadway | 3,600 | 8,000 | 0.450 | C |

Notes: Classification as coded in SANDAG traffic model. Daily volumes is an average for weekday and daily for Sat.
LOS: Level of Service. V/C: Volume to Capacity ratio.

Under horizon year (2035) without project conditions, all of the studied facilities were calculated to operate at LOS C or better.

Figure 10: Horizon Year (2035) SANDAG Based Roadway Conditions

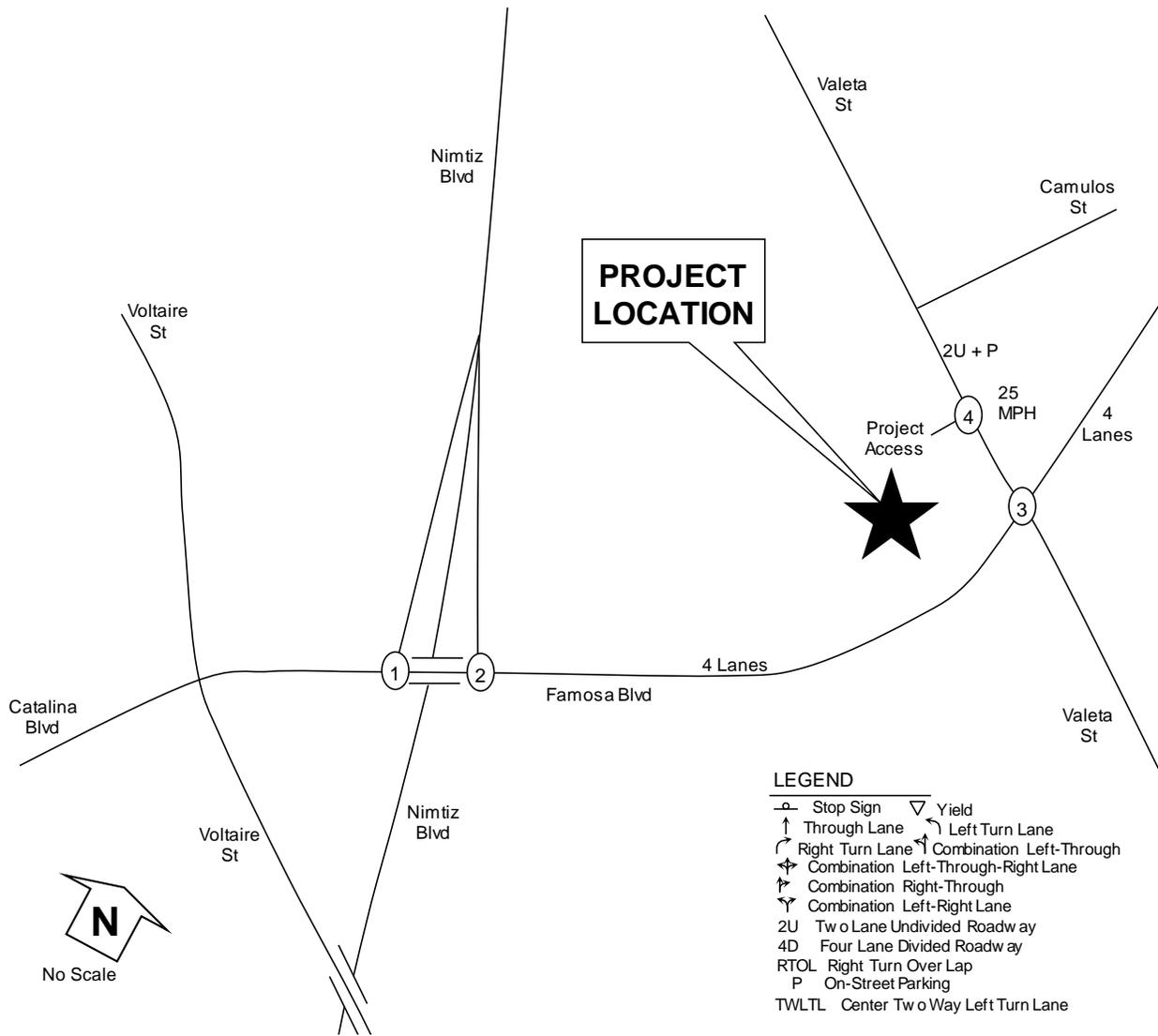
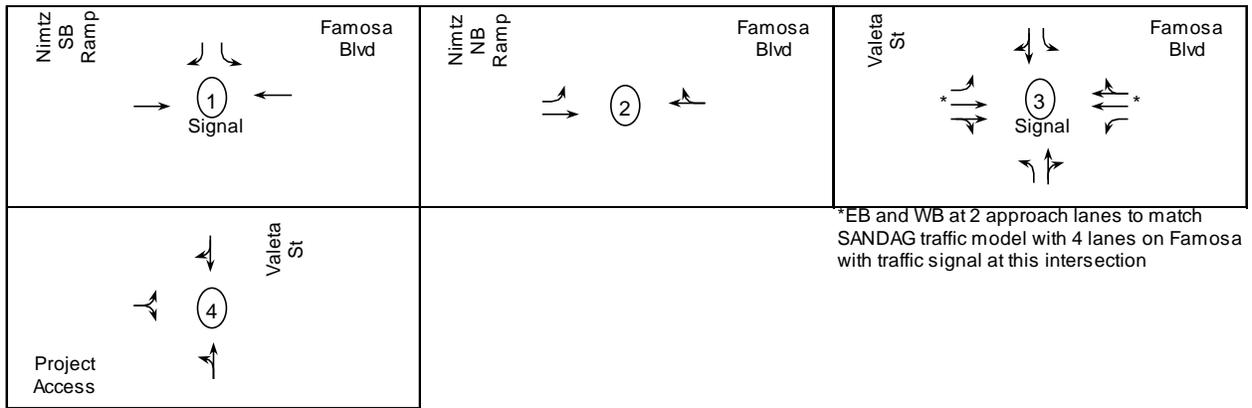
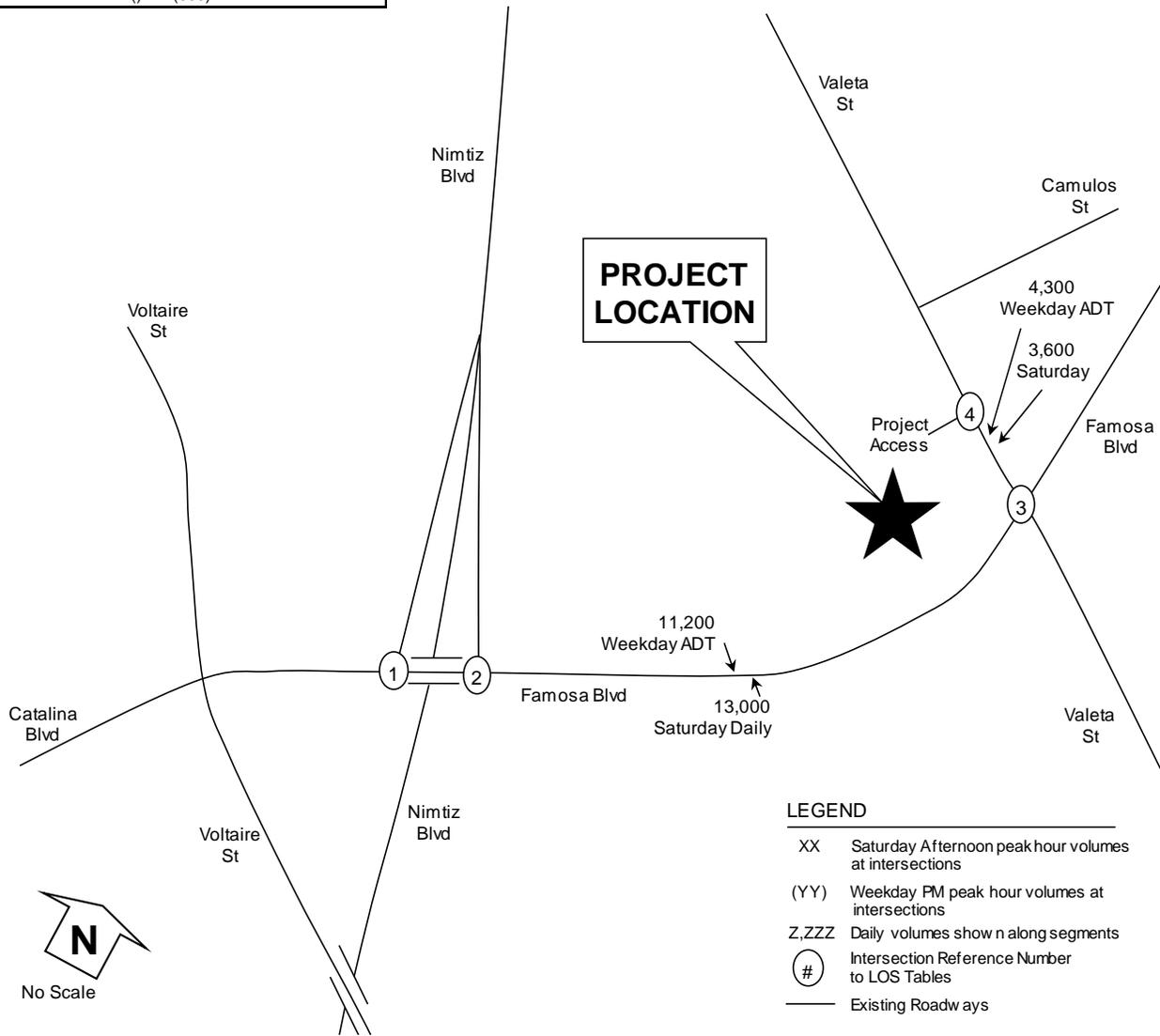


Figure 11: Horizon Year (2035) without Project Volumes

| | | |
|--|---|---|
| <p>Nimitz SB Ramp 470 (480) 840 (1120) →</p> <p>120 (90) ← 340 (370)</p> <p>Famosa Blvd</p> <p>①</p> | <p>Nimitz NB Ramp 590 (750) 390 (560) →</p> <p>Famosa Blvd</p> <p>← 120 (60) 440 (480)</p> <p>②</p> | <p>Valeta St 110 (160) 200 (60) 160 (150)</p> <p>50 (80) 150 (160)</p> <p>10 (10) 50 (150) 10 (10)</p> <p>Famosa Blvd</p> <p>← 10 (10) 200 (290) 10 (10)</p> <p>③</p> |
| <p>0 (0) 0 (0) Project Access</p> <p>170 (250) 160 (330)</p> <p>Valeta St</p> <p>④</p> | | |



9.0 Horizon Year (2035) with Project Conditions

Horizon Year (2035) with project conditions were analyzed by adding project traffic onto horizon year volumes. The horizon year with project volumes are shown in **Figure 12**. The LOS calculated for the study roadway elements are shown in **Tables 20 and 21**. LOS calculations are included in **Appendix S**.

TABLE 20: HORIZON YEAR (2035) WITH PROJECT INTERSECTION LEVEL OF SERVICE

| Intersection and (Analysis) ¹ | Movement | Peak Hour | Horizon Year | | Horizon Year + Project | | | |
|---|----------|--------------|--------------------|------------------|------------------------|------------------|--------------------|--------------------------|
| | | | Delay ² | LOS ³ | Delay ² | LOS ³ | Delta ⁴ | Cumulative? ⁵ |
| 1) Nimitz SB Ramp at Famosa Blvd (S) | All | SAT | 16.2 | B | 17.4 | B | 1.2 | No |
| | All | PM | 25.1 | C | 25.9 | C | 0.8 | No |
| 2) Nimitz NB Ramp at Famosa Blvd (U) | EB L | SAT | 16.3 | C | 19.1 | C | 2.8 | No |
| | EB L | PM | 25.0 | C | 27.4 | D | 2.4 | No |
| 3) Valeta St at Famosa Blvd (S) | All | SAT | 19.4 | B | 22.3 | C | 2.9 | No |
| | All | PM | 24.2 | C | 25.7 | C | 1.5 | No |
| 4) Valeta St at Project Access (U) | EB LR | SAT | 0.0 | A | 11.4 | B | 11.4 | No |
| | EB LR | PM | 0.0 | A | 11.3 | B | 11.3 | No |

Notes: 1) Intersection Analysis - (S) Signalized, (U) Unsignalized. 2) Delay - HCM Average Control Delay in seconds.

4) Delta is the increase in delay. 5) Cumulative Impact? (yes or no).

TABLE 21: HORIZON YEAR (2035) WITH PROJECT SEGMENT ADT VOLUMES AND LOS

| Segment | Classification used in SANDAG Traffic Model | Horizon Year | | | | Project Daily Volumes | Horizon Year + Project | | | | | |
|--------------------------------|---|-----------------|-------------------|-------|-----|-----------------------------|------------------------|-------------------|-------|-----|------------------|-----------------------|
| | | Daily Volume | LOS E Capacity | V/C | LOS | | Daily Volume | LOS E Capacity | V/C | LOS | Change in V/C | Cumulative Impact? |
| Weekday (Wednesday) | | | | | | | | | | | | |
| <u>Famosa Boulevard</u> | | | | | | | | | | | | |
| From Nimitz Blvd to Valeta St | 4 Ln Major | 11,200 | 40,000 | 0.280 | A | 303 | 11,503 | 40,000 | 0.288 | A | 0.008 | No |
| <u>Valeta Street</u> | | | | | | | | | | | | |
| From Famosa Blvd to Camulos St | 2 Ln Roadway | 4,300 | 8,000 | 0.538 | C | 343 | 4,643 | 8,000 | 0.580 | C | 0.043 | No |
| Weekend Day (Saturday) | | | | | | | | | | | | |
| <u>Famosa Boulevard</u> | | | | | | | | | | | | |
| From Nimitz Blvd to Valeta St | 4 Ln Major | 13,000 | 40,000 | 0.325 | A | 1073 | 14,073 | 40,000 | 0.352 | A | 0.027 | No |
| <u>Valeta Street</u> | | | | | | | | | | | | |
| From Famosa Blvd to Camulos St | 2 Ln Roadway | 3,600 | 8,000 | 0.450 | C | 1216 | 4,816 | 8,000 | 0.602 | C | 0.152 | No |

Notes: Classification as coded in SANDAG traffic model. Daily volumes is an average for weekday and daily for Sat.

LOS: Level of Service. V/C: Volume to Capacity ratio. Cumulative Impact? (yes or no)

Under horizon year (2035) with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no cumulatively considerable impacts.

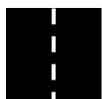
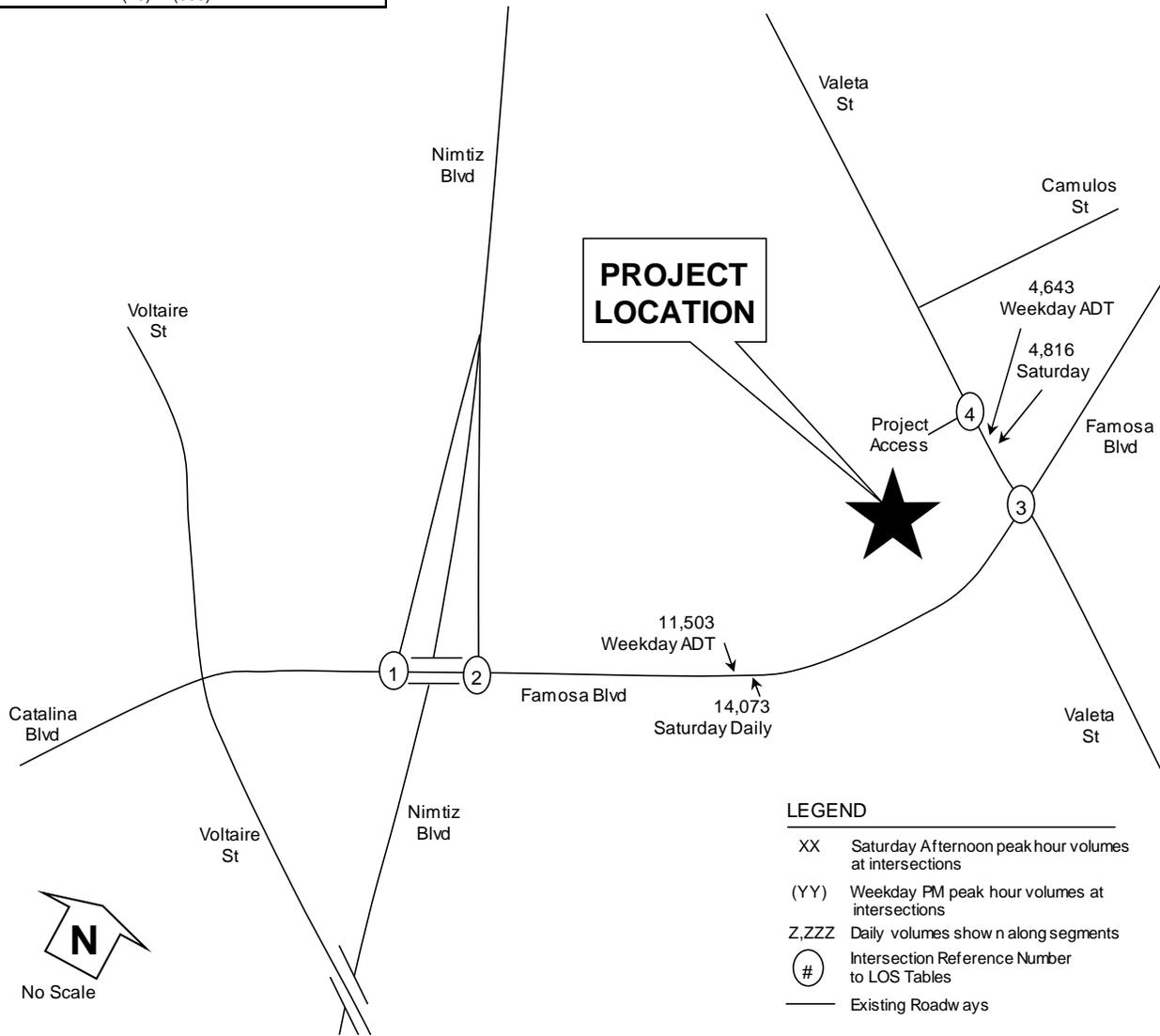


Figure 12: Horizon Year (2035) with Project Volumes

| | | |
|---|--|--|
| <p>Nimitz SB Ramp 470 (480) 871 (1130) →</p> <p>← 167 (106) Famosa Blvd ← 371 (380)</p> <p>①</p> | <p>Nimitz NB Ramp 590 (750) 468 (586) →</p> <p>← 167 (76) Famosa Blvd ← 471 (490)</p> <p>②</p> | <p>Valeta St 188 (186) 178 (196) 200 (60) 160 (150)</p> <p>60 (83) ↓</p> <p>10 (10) ↓</p> <p>Famosa Blvd ← 10 (10) ← 200 (290) ← 10 (10)</p> <p>③</p> <p>150 (160) ↑ 60 (153) ↑</p> <p>10 (10) ↑</p> |
| <p>15 (5) 88 (29) Project Access 88 (29)</p> <p>170 (250) ↓</p> <p>④</p> <p>↑ 160 (330) Valeta St</p> | | |



10.0 Summary of Potential Impacts

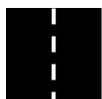
No traffic impacts were calculated; therefore, mitigation measures are not required. A summary table showing no impacts is included below as **Table 22**.

TABLE 22: DIRECT AND CUMULATIVE IMPACT SUMMARY

| Roadway Facility | Existing Plus Project Potential Impacts | Mitigation To be constructed at project completion |
|-------------------------|--|---|
| Intersections | None | Not Applicable |
| Segments | None | Not Applicable |

| Roadway Facility | Near Term + Project Potential Impacts | Mitigation To be constructed at project completion |
|-------------------------|--|---|
| Intersections | None | Not Applicable |
| Segments | None | Not Applicable |

| Roadway Facility | Horizon Year (2035) Plus Project Potential Cumulative Impacts | Mitigation & Participation Project is responsible for fair share contribution |
|-------------------------|--|--|
| Intersections | None | Not Applicable |
| Segments | None | Not Applicable |



11.0 Conclusion and Recommendations

This Transportation Impact Study (TIS) is being prepared at the request of BRG Consulting, Inc. and the San Diego Unified School District (District) and will ultimately be incorporated into the California Environmental Quality Act (CEQA) document prepared for the project. The District is considered the CEQA lead agency for the project.

This report analyses the potential traffic impacts of a proposed Sports Complex at Correia Middle School. Correia Middle School is located at 4302 Valeta Street, San Diego, California. The project is planned to be completed in early to mid-2018.

Project trip generation is typically calculated using trip rates from the City of San Diego or Institute of Transportation Engineers Trip Generation Manuals; however, the aforementioned manuals do not include an all-encompassing trip rate for the various and different uses anticipated at the Sports Complex. Therefore, a trip rate was calculated from information provided by the District and the more conservative trip generation between the three sources was used in this analysis.

This traffic analysis is based on traffic generation for weekday (Wednesday) events and weekend day (Saturday) events. A peak hour analysis covers a scenario where one event has ended and patrons are leaving while new patrons are arriving for the next event. A daily analysis includes the combination of traffic from the events that occurred throughout the day. The weekday period of analysis is during the evening commuter peak period of the highest hour between 4 PM and 6 PM. The weekend day (Saturday) analysis is based on the highest peak hour of background traffic on the surrounding roadways between 12 PM and 2 PM. According to the District, the highest reasonable and anticipated use for the sports complex are soccer practice and games with the concurrent use of two fields during a weekday and up to three concurrent uses of the fields during the weekend. Therefore, the higher anticipated trip generation is based on concurrent soccer uses.

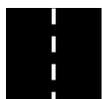
The project study area was based on the City of San Diego *Traffic Impact Study Manual*. Two cumulative projects along with an annual growth factor of 0.5% per year were applied to represent near-term year 2018 conditions. Based on the study area and cumulative projects, the following scenarios were analyzed: Existing, Existing with Project, Near-term, Near-term with Project, Horizon Year (2035), and Horizon Year (2035) with Project Conditions. For each scenario, the findings include:

- 1) Under existing conditions, all of the studied roadway facilities were calculated to operate at LOS C or better.
- 2) Under existing with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no significant direct project impacts.
- 3) Under near-term without project conditions, all of the studied roadway facilities were calculated to operate at LOS C or better.
- 4) Under near-term with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no significant direct project impacts.

- 5) Under horizon year (2035) without project conditions, all of the studied facilities were calculated to operate at LOS C or better.
- 6) Under horizon year (2035) with project conditions, all of the studied facilities were calculated to operate at LOS D or better with no cumulatively considerable impacts.

No traffic impacts were calculated; therefore, mitigation measures are not required.

###



12.0 References and List of Preparers

12.1 References

City of San Diego *Traffic Impact Study Manual*, July 1998.

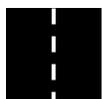
San Diego Traffic Engineers' Council (SANTEC). March 2, 2002. *SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region*.

Trafficware Corporation, 2006. Synchro Version 8.0 computer software.

Transportation Research Board National Research Council Washington, D.C. 2000. *Highway Capacity Manual 2000*. CD ROM.

12.2 List of Preparers

Justin Rasas, P.E. (RCE 60690), LOS Engineering, Inc. Author



Appendix A

Count Data

Daily Traffic Volumes

| | | Famosa | Valeta | Combined ADTs | |
|-----------------|-----------|---------------|---------------|--------------------------|------------------------|
| THU | 3/6/2014 | 6,048 | 3,764 | 9,812 | |
| FRI | 3/7/2014 | 6,334 | 3,794 | 10,128 | |
| SAT | 3/8/2014 | 7,213 | 3,225 | 10,438 | Max Weekend Day |
| SUN | 3/9/2014 | 4,578 | 1,929 | 6,507 | |
| MON | 3/10/2014 | 6,047 | 3,757 | 9,804 | |
| TUE | 3/11/2014 | 6,349 | 3,763 | 10,112 | |
| WED | 3/12/2014 | 6,375 | 4,261 | 10,636 | Max Weekday |
| Average Weekday | | 6,231 | 3,868 | | |

FAMOSA E-O NIMITZ

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | |
|-----------|----|----|----|-----|-----------|-----|-----|-----|-----|----|-----|-----|
| 00:00 | | | 2 | 0 | 12:00 | | | 50 | 47 | | | |
| 00:15 | | | 3 | 1 | 12:15 | | | 42 | 52 | | | |
| 00:30 | | | 1 | 0 | 12:30 | | | 40 | 60 | | | |
| 00:45 | | | 0 | 6 | 0 | 1 | 7 | 29 | 161 | 59 | 218 | 379 |
| 01:00 | | | 1 | 1 | 13:00 | | | 60 | 41 | | | |
| 01:15 | | | 1 | 0 | 13:15 | | | 56 | 52 | | | |
| 01:30 | | | 0 | 1 | 13:30 | | | 47 | 44 | | | |
| 01:45 | | | 2 | 4 | 2 | 4 | 8 | 33 | 196 | 59 | 196 | 392 |
| 02:00 | | | 1 | 2 | 14:00 | | | 49 | 30 | | | |
| 02:15 | | | 3 | 1 | 14:15 | | | 104 | 38 | | | |
| 02:30 | | | 1 | 0 | 14:30 | | | 55 | 109 | | | |
| 02:45 | | | 1 | 6 | 1 | 4 | 10 | 48 | 256 | 66 | 243 | 499 |
| 03:00 | | | 1 | 2 | 15:00 | | | 47 | 49 | | | |
| 03:15 | | | 0 | 0 | 15:15 | | | 51 | 44 | | | |
| 03:30 | | | 1 | 0 | 15:30 | | | 70 | 50 | | | |
| 03:45 | | | 0 | 2 | 1 | 3 | 5 | 69 | 237 | 42 | 185 | 422 |
| 04:00 | | | 0 | 1 | 16:00 | | | 76 | 39 | | | |
| 04:15 | | | 0 | 2 | 16:15 | | | 92 | 62 | | | |
| 04:30 | | | 1 | 3 | 16:30 | | | 105 | 67 | | | |
| 04:45 | | | 0 | 1 | 4 | 10 | 11 | 91 | 364 | 77 | 245 | 609 |
| 05:00 | | | 2 | 6 | 17:00 | | | 81 | 60 | | | |
| 05:15 | | | 1 | 5 | 17:15 | | | 68 | 69 | | | |
| 05:30 | | | 3 | 7 | 17:30 | | | 83 | 75 | | | |
| 05:45 | | | 4 | 10 | 9 | 27 | 37 | 72 | 304 | 68 | 272 | 576 |
| 06:00 | | | 7 | 12 | 18:00 | | | 66 | 94 | | | |
| 06:15 | | | 9 | 14 | 18:15 | | | 54 | 74 | | | |
| 06:30 | | | 10 | 21 | 18:30 | | | 62 | 57 | | | |
| 06:45 | | | 13 | 39 | 26 | 73 | 112 | 58 | 240 | 49 | 274 | 514 |
| 07:00 | | | 21 | 34 | 19:00 | | | 40 | 37 | | | |
| 07:15 | | | 51 | 51 | 19:15 | | | 41 | 37 | | | |
| 07:30 | | | 62 | 108 | 19:30 | | | 37 | 31 | | | |
| 07:45 | | | 33 | 167 | 78 | 271 | 438 | 22 | 140 | 21 | 126 | 266 |
| 08:00 | | | 41 | 62 | 20:00 | | | 25 | 25 | | | |
| 08:15 | | | 40 | 55 | 20:15 | | | 22 | 25 | | | |
| 08:30 | | | 30 | 40 | 20:30 | | | 30 | 19 | | | |
| 08:45 | | | 35 | 146 | 35 | 192 | 338 | 25 | 102 | 27 | 96 | 198 |
| 09:00 | | | 35 | 41 | 21:00 | | | 17 | 29 | | | |
| 09:15 | | | 39 | 27 | 21:15 | | | 25 | 19 | | | |
| 09:30 | | | 30 | 38 | 21:30 | | | 17 | 21 | | | |
| 09:45 | | | 33 | 137 | 33 | 139 | 276 | 25 | 84 | 18 | 87 | 171 |
| 10:00 | | | 27 | 40 | 22:00 | | | 16 | 25 | | | |
| 10:15 | | | 28 | 42 | 22:15 | | | 10 | 14 | | | |
| 10:30 | | | 21 | 28 | 22:30 | | | 25 | 12 | | | |
| 10:45 | | | 35 | 111 | 33 | 143 | 254 | 12 | 63 | 11 | 62 | 125 |
| 11:00 | | | 41 | 38 | 23:00 | | | 9 | 10 | | | |
| 11:15 | | | 44 | 37 | 23:15 | | | 11 | 10 | | | |
| 11:30 | | | 37 | 40 | 23:30 | | | 3 | 7 | | | |
| 11:45 | | | 42 | 164 | 59 | 174 | 338 | 8 | 31 | 5 | 32 | 63 |

Total Vol. 793 1041 **1834** 2178 2036 **4214**

| | | Daily Totals | | | | |
|--|--|--------------|----|------|------|-------------|
| | | NB | SB | EB | WB | Combined |
| | | | | 2971 | 3077 | 6048 |

| Split % | AM | | | PM | | |
|------------------|-------|-------|--------------|-------|-------|--------------|
| | 43.2% | 56.8% | 30.3% | 51.7% | 48.3% | 69.7% |
| Peak Hour | 07:15 | 07:30 | 07:15 | 16:15 | 17:30 | 16:15 |
| Volume | 187 | 303 | 486 | 369 | 311 | 635 |
| P.H.F. | 0.75 | 0.70 | 0.71 | 0.88 | 0.83 | 0.92 |

FAMOSA E-O NIMITZ

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | |
|-----------|----|----|----|-----|-----------|-----|-----|----|-----|----|-----|-----|
| 00:00 | | | 5 | 7 | 12:00 | | | 42 | 60 | | | |
| 00:15 | | | 12 | 5 | 12:15 | | | 38 | 44 | | | |
| 00:30 | | | 4 | 4 | 12:30 | | | 38 | 46 | | | |
| 00:45 | | | 5 | 26 | 2 | 18 | 44 | 31 | 149 | 41 | 191 | 340 |
| 01:00 | | | 8 | 2 | 13:00 | | | 36 | 51 | | | |
| 01:15 | | | 5 | 4 | 13:15 | | | 46 | 55 | | | |
| 01:30 | | | 3 | 0 | 13:30 | | | 50 | 45 | | | |
| 01:45 | | | 4 | 20 | 1 | 7 | 27 | 51 | 183 | 49 | 200 | 383 |
| 02:00 | | | 7 | 1 | 14:00 | | | 49 | 56 | | | |
| 02:15 | | | 8 | 2 | 14:15 | | | 83 | 38 | | | |
| 02:30 | | | 3 | 3 | 14:30 | | | 62 | 105 | | | |
| 02:45 | | | 2 | 20 | 2 | 8 | 28 | 61 | 255 | 55 | 254 | 509 |
| 03:00 | | | 3 | 5 | 15:00 | | | 58 | 57 | | | |
| 03:15 | | | 3 | 1 | 15:15 | | | 47 | 43 | | | |
| 03:30 | | | 3 | 1 | 15:30 | | | 54 | 44 | | | |
| 03:45 | | | 2 | 11 | 3 | 10 | 21 | 60 | 219 | 54 | 198 | 417 |
| 04:00 | | | 0 | 2 | 16:00 | | | 71 | 56 | | | |
| 04:15 | | | 1 | 1 | 16:15 | | | 87 | 67 | | | |
| 04:30 | | | 1 | 3 | 16:30 | | | 76 | 71 | | | |
| 04:45 | | | 0 | 2 | 3 | 9 | 11 | 71 | 305 | 73 | 267 | 572 |
| 05:00 | | | 4 | 4 | 17:00 | | | 57 | 60 | | | |
| 05:15 | | | 0 | 0 | 17:15 | | | 59 | 58 | | | |
| 05:30 | | | 5 | 3 | 17:30 | | | 68 | 71 | | | |
| 05:45 | | | 7 | 16 | 12 | 19 | 35 | 53 | 237 | 66 | 255 | 492 |
| 06:00 | | | 7 | 8 | 18:00 | | | 51 | 51 | | | |
| 06:15 | | | 9 | 18 | 18:15 | | | 52 | 82 | | | |
| 06:30 | | | 14 | 24 | 18:30 | | | 70 | 53 | | | |
| 06:45 | | | 19 | 49 | 33 | 83 | 132 | 65 | 238 | 69 | 255 | 493 |
| 07:00 | | | 42 | 37 | 19:00 | | | 54 | 41 | | | |
| 07:15 | | | 73 | 99 | 19:15 | | | 34 | 36 | | | |
| 07:30 | | | 66 | 110 | 19:30 | | | 32 | 35 | | | |
| 07:45 | | | 46 | 227 | 51 | 297 | 524 | 43 | 163 | 42 | 154 | 317 |
| 08:00 | | | 46 | 55 | 20:00 | | | 33 | 34 | | | |
| 08:15 | | | 34 | 53 | 20:15 | | | 26 | 42 | | | |
| 08:30 | | | 32 | 51 | 20:30 | | | 30 | 33 | | | |
| 08:45 | | | 40 | 152 | 62 | 221 | 373 | 22 | 111 | 41 | 150 | 261 |
| 09:00 | | | 41 | 41 | 21:00 | | | 30 | 28 | | | |
| 09:15 | | | 49 | 37 | 21:15 | | | 19 | 19 | | | |
| 09:30 | | | 40 | 38 | 21:30 | | | 19 | 15 | | | |
| 09:45 | | | 43 | 173 | 52 | 168 | 341 | 23 | 91 | 18 | 80 | 171 |
| 10:00 | | | 43 | 35 | 22:00 | | | 20 | 14 | | | |
| 10:15 | | | 43 | 51 | 22:15 | | | 14 | 13 | | | |
| 10:30 | | | 32 | 38 | 22:30 | | | 19 | 12 | | | |
| 10:45 | | | 31 | 149 | 45 | 169 | 318 | 13 | 66 | 13 | 52 | 118 |
| 11:00 | | | 44 | 39 | 23:00 | | | 12 | 7 | | | |
| 11:15 | | | 31 | 32 | 23:15 | | | 11 | 11 | | | |
| 11:30 | | | 32 | 40 | 23:30 | | | 15 | 13 | | | |
| 11:45 | | | 42 | 149 | 53 | 164 | 313 | 18 | 56 | 7 | 38 | 94 |

| | | | | | | | | | | |
|-------------------|--|--|-----|------|-------------|--|--|------|------|-------------|
| Total Vol. | | | 994 | 1173 | 2167 | | | 2073 | 2094 | 4167 |
|-------------------|--|--|-----|------|-------------|--|--|------|------|-------------|

| | | Daily Totals | | | | |
|--|--|--------------|----|------|------|-------------|
| | | NB | SB | EB | WB | Combined |
| | | | | 3067 | 3267 | 6334 |

| | | AM | | | PM | | |
|------------------|--|-------|-------|--------------|-------|-------|--------------|
| Split % | | 45.9% | 54.1% | 34.2% | 49.7% | 50.3% | 65.8% |
| Peak Hour | | 07:15 | 07:15 | 07:15 | 16:00 | 16:15 | 16:00 |
| Volume | | 231 | 315 | 546 | 305 | 271 | 572 |
| P.H.F. | | 0.79 | 0.72 | 0.78 | 0.88 | 0.93 | 0.93 |

FAMOSA E-O NIMITZ

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | |
|-----------|----|----|-----|-----|-----------|-----|-----|-----|-----|----|-----|-----|
| 00:00 | | | 11 | 7 | 12:00 | | | 99 | 80 | | | |
| 00:15 | | | 9 | 7 | 12:15 | | | 98 | 74 | | | |
| 00:30 | | | 7 | 4 | 12:30 | | | 96 | 79 | | | |
| 00:45 | | | 6 | 33 | 6 | 24 | 57 | 102 | 395 | 72 | 305 | 700 |
| 01:00 | | | 6 | 6 | 13:00 | | | 87 | 69 | | | |
| 01:15 | | | 7 | 4 | 13:15 | | | 105 | 130 | | | |
| 01:30 | | | 5 | 2 | 13:30 | | | 105 | 92 | | | |
| 01:45 | | | 4 | 22 | 4 | 16 | 38 | 79 | 376 | 54 | 345 | 721 |
| 02:00 | | | 4 | 3 | 14:00 | | | 78 | 56 | | | |
| 02:15 | | | 6 | 3 | 14:15 | | | 54 | 67 | | | |
| 02:30 | | | 3 | 3 | 14:30 | | | 70 | 56 | | | |
| 02:45 | | | 5 | 18 | 0 | 9 | 27 | 77 | 279 | 70 | 249 | 528 |
| 03:00 | | | 2 | 1 | 15:00 | | | 79 | 75 | | | |
| 03:15 | | | 2 | 0 | 15:15 | | | 89 | 79 | | | |
| 03:30 | | | 3 | 5 | 15:30 | | | 77 | 73 | | | |
| 03:45 | | | 2 | 9 | 0 | 6 | 15 | 56 | 301 | 66 | 293 | 594 |
| 04:00 | | | 4 | 2 | 16:00 | | | 75 | 67 | | | |
| 04:15 | | | 2 | 3 | 16:15 | | | 54 | 59 | | | |
| 04:30 | | | 0 | 2 | 16:30 | | | 50 | 71 | | | |
| 04:45 | | | 3 | 9 | 1 | 8 | 17 | 55 | 234 | 56 | 253 | 487 |
| 05:00 | | | 4 | 3 | 17:00 | | | 61 | 62 | | | |
| 05:15 | | | 1 | 5 | 17:15 | | | 40 | 72 | | | |
| 05:30 | | | 1 | 3 | 17:30 | | | 52 | 53 | | | |
| 05:45 | | | 3 | 9 | 4 | 15 | 24 | 51 | 204 | 74 | 261 | 465 |
| 06:00 | | | 3 | 2 | 18:00 | | | 59 | 64 | | | |
| 06:15 | | | 3 | 7 | 18:15 | | | 46 | 52 | | | |
| 06:30 | | | 6 | 10 | 18:30 | | | 67 | 43 | | | |
| 06:45 | | | 10 | 22 | 5 | 24 | 46 | 47 | 219 | 30 | 189 | 408 |
| 07:00 | | | 15 | 10 | 19:00 | | | 33 | 28 | | | |
| 07:15 | | | 10 | 12 | 19:15 | | | 27 | 34 | | | |
| 07:30 | | | 21 | 15 | 19:30 | | | 22 | 22 | | | |
| 07:45 | | | 30 | 76 | 24 | 61 | 137 | 28 | 110 | 34 | 118 | 228 |
| 08:00 | | | 37 | 31 | 20:00 | | | 24 | 31 | | | |
| 08:15 | | | 48 | 29 | 20:15 | | | 20 | 18 | | | |
| 08:30 | | | 79 | 36 | 20:30 | | | 27 | 13 | | | |
| 08:45 | | | 76 | 240 | 52 | 148 | 388 | 27 | 98 | 19 | 81 | 179 |
| 09:00 | | | 98 | 75 | 21:00 | | | 22 | 17 | | | |
| 09:15 | | | 71 | 61 | 21:15 | | | 18 | 14 | | | |
| 09:30 | | | 45 | 54 | 21:30 | | | 19 | 23 | | | |
| 09:45 | | | 57 | 271 | 107 | 297 | 568 | 21 | 80 | 18 | 72 | 152 |
| 10:00 | | | 131 | 60 | 22:00 | | | 20 | 14 | | | |
| 10:15 | | | 96 | 68 | 22:15 | | | 21 | 17 | | | |
| 10:30 | | | 61 | 55 | 22:30 | | | 18 | 9 | | | |
| 10:45 | | | 55 | 343 | 48 | 231 | 574 | 23 | 82 | 13 | 53 | 135 |
| 11:00 | | | 88 | 48 | 23:00 | | | 22 | 16 | | | |
| 11:15 | | | 83 | 95 | 23:15 | | | 16 | 14 | | | |
| 11:30 | | | 65 | 68 | 23:30 | | | 11 | 11 | | | |
| 11:45 | | | 93 | 329 | 81 | 292 | 621 | 8 | 57 | 6 | 47 | 104 |

Total Vol. 1381 1131 2512 2435 2266 4701

| | Daily Totals | | | | |
|--|--------------|----|------|------|----------|
| | NB | SB | EB | WB | Combined |
| | | | 3816 | 3397 | 7213 |

| Split % | AM | | | PM | | |
|------------------|-------|-------|-------|-------|-------|-------|
| | 55.0% | 45.0% | 34.8% | 51.8% | 48.2% | 65.2% |
| Peak Hour | 11:45 | 11:15 | 11:45 | 12:45 | 12:45 | 12:45 |
| Volume | 386 | 324 | 700 | 399 | 363 | 762 |
| P.H.F. | 0.97 | 0.85 | 0.98 | 0.95 | 0.70 | 0.81 |

FAMOSA E-O NIMITZ

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | | |
|-----------|----|----|----|-----|-----------|-----|-----|-------|-----|-----|-----|-----|-----|
| 00:00 | | | 11 | 5 | 12:00 | | | 58 | 46 | | | | |
| 00:15 | | | 11 | 8 | 12:15 | | | 45 | 67 | | | | |
| 00:30 | | | 12 | 6 | 12:30 | | | 46 | 64 | | | | |
| 00:45 | | | 5 | 39 | 7 | 26 | 65 | 12:45 | 53 | 202 | 43 | 220 | 422 |
| 01:00 | | | 9 | 4 | 13:00 | | | 43 | 47 | | | | |
| 01:15 | | | 7 | 9 | 13:15 | | | 64 | 55 | | | | |
| 01:30 | | | 6 | 2 | 13:30 | | | 50 | 37 | | | | |
| 01:45 | | | 5 | 27 | 4 | 19 | 46 | 13:45 | 41 | 198 | 51 | 190 | 388 |
| 02:00 | | | | | 14:00 | | | 47 | 53 | | | | |
| 02:15 | | | | | 14:15 | | | 41 | 39 | | | | |
| 02:30 | | | | | 14:30 | | | 50 | 39 | | | | |
| 02:45 | | | | | 14:45 | | | 62 | 200 | 44 | 175 | 375 | |
| 03:00 | | | 6 | 2 | 15:00 | | | 51 | 40 | | | | |
| 03:15 | | | 2 | 2 | 15:15 | | | 59 | 49 | | | | |
| 03:30 | | | 1 | 0 | 15:30 | | | 56 | 53 | | | | |
| 03:45 | | | 2 | 11 | 3 | 7 | 18 | 15:45 | 53 | 219 | 38 | 180 | 399 |
| 04:00 | | | 1 | 4 | 16:00 | | | 41 | 51 | | | | |
| 04:15 | | | 2 | 4 | 16:15 | | | 53 | 36 | | | | |
| 04:30 | | | 0 | 4 | 16:30 | | | 46 | 54 | | | | |
| 04:45 | | | 2 | 5 | 4 | 16 | 21 | 16:45 | 39 | 179 | 39 | 180 | 359 |
| 05:00 | | | 1 | 3 | 17:00 | | | 57 | 49 | | | | |
| 05:15 | | | 1 | 3 | 17:15 | | | 37 | 51 | | | | |
| 05:30 | | | 2 | 5 | 17:30 | | | 36 | 36 | | | | |
| 05:45 | | | 6 | 10 | 8 | 19 | 29 | 17:45 | 45 | 175 | 22 | 158 | 333 |
| 06:00 | | | 5 | 6 | 18:00 | | | 38 | 35 | | | | |
| 06:15 | | | 4 | 7 | 18:15 | | | 46 | 25 | | | | |
| 06:30 | | | 10 | 16 | 18:30 | | | 33 | 32 | | | | |
| 06:45 | | | 5 | 24 | 12 | 41 | 65 | 18:45 | 47 | 164 | 35 | 127 | 291 |
| 07:00 | | | 4 | 17 | 19:00 | | | 49 | 28 | | | | |
| 07:15 | | | 16 | 14 | 19:15 | | | 29 | 19 | | | | |
| 07:30 | | | 15 | 21 | 19:30 | | | 23 | 20 | | | | |
| 07:45 | | | 18 | 53 | 8 | 60 | 113 | 19:45 | 23 | 124 | 31 | 98 | 222 |
| 08:00 | | | 22 | 33 | 20:00 | | | 20 | 16 | | | | |
| 08:15 | | | 24 | 26 | 20:15 | | | 22 | 12 | | | | |
| 08:30 | | | 21 | 21 | 20:30 | | | 18 | 5 | | | | |
| 08:45 | | | 18 | 85 | 27 | 107 | 192 | 20:45 | 13 | 73 | 16 | 49 | 122 |
| 09:00 | | | 23 | 33 | 21:00 | | | 16 | 10 | | | | |
| 09:15 | | | 41 | 35 | 21:15 | | | 12 | 16 | | | | |
| 09:30 | | | 33 | 28 | 21:30 | | | 13 | 9 | | | | |
| 09:45 | | | 28 | 125 | 45 | 141 | 266 | 21:45 | 6 | 47 | 9 | 44 | 91 |
| 10:00 | | | 37 | 32 | 22:00 | | | 13 | 8 | | | | |
| 10:15 | | | 45 | 38 | 22:15 | | | 7 | 8 | | | | |
| 10:30 | | | 44 | 33 | 22:30 | | | 7 | 2 | | | | |
| 10:45 | | | 44 | 170 | 44 | 147 | 317 | 22:45 | 7 | 34 | 2 | 20 | 54 |
| 11:00 | | | 50 | 44 | 23:00 | | | 4 | 2 | | | | |
| 11:15 | | | 41 | 40 | 23:15 | | | 4 | 2 | | | | |
| 11:30 | | | 51 | 41 | 23:30 | | | 4 | 1 | | | | |
| 11:45 | | | 58 | 200 | 44 | 169 | 369 | 23:45 | 3 | 15 | 1 | 6 | 21 |

Total Vol. 749 752 1501 1630 1447 3077

| | | Daily Totals | | |
|----|----|--------------|------|----------|
| NB | SB | EB | WB | Combined |
| | | 2379 | 2199 | 4578 |

| Split % | AM | | | PM | | |
|-----------|-------|-------|-------|-------|-------|-------|
| | 49.9% | 50.1% | 32.8% | 53.0% | 47.0% | 67.2% |
| Peak Hour | 11:30 | 11:45 | 11:45 | 14:45 | 12:15 | 12:00 |
| Volume | 212 | 221 | 428 | 228 | 221 | 422 |
| P.H.F. | 0.91 | 0.82 | 0.96 | 0.92 | 0.82 | 0.94 |

FAMOSA E-O NIMITZ

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | |
|-----------|----|----|----|-----|-----------|-----|-----|-----|-----|----|-----|-----|
| 00:00 | | | 4 | 1 | 12:00 | | | 44 | 49 | | | |
| 00:15 | | | 2 | 1 | 12:15 | | | 48 | 56 | | | |
| 00:30 | | | 1 | 0 | 12:30 | | | 37 | 45 | | | |
| 00:45 | | | 2 | 9 | 0 | 2 | 11 | 48 | 177 | 44 | 194 | 371 |
| 01:00 | | | 2 | 0 | 13:00 | | | 34 | 34 | | | |
| 01:15 | | | 1 | 0 | 13:15 | | | 48 | 55 | | | |
| 01:30 | | | 3 | 2 | 13:30 | | | 40 | 42 | | | |
| 01:45 | | | 1 | 7 | 1 | 3 | 10 | 36 | 158 | 48 | 179 | 337 |
| 02:00 | | | 2 | 0 | 14:00 | | | 49 | 52 | | | |
| 02:15 | | | 2 | 2 | 14:15 | | | 69 | 47 | | | |
| 02:30 | | | 2 | 2 | 14:30 | | | 66 | 100 | | | |
| 02:45 | | | 1 | 7 | 2 | 6 | 13 | 56 | 240 | 60 | 259 | 499 |
| 03:00 | | | 1 | 0 | 15:00 | | | 44 | 60 | | | |
| 03:15 | | | 0 | 0 | 15:15 | | | 40 | 51 | | | |
| 03:30 | | | 0 | 1 | 15:30 | | | 53 | 51 | | | |
| 03:45 | | | 1 | 2 | 1 | 2 | 4 | 43 | 180 | 46 | 208 | 388 |
| 04:00 | | | 0 | 0 | 16:00 | | | 77 | 43 | | | |
| 04:15 | | | 2 | 2 | 16:15 | | | 84 | 53 | | | |
| 04:30 | | | 1 | 0 | 16:30 | | | 104 | 57 | | | |
| 04:45 | | | 1 | 4 | 5 | 7 | 11 | 85 | 350 | 80 | 233 | 583 |
| 05:00 | | | 1 | 5 | 17:00 | | | 75 | 53 | | | |
| 05:15 | | | 1 | 1 | 17:15 | | | 74 | 51 | | | |
| 05:30 | | | 7 | 4 | 17:30 | | | 59 | 61 | | | |
| 05:45 | | | 4 | 13 | 8 | 18 | 31 | 67 | 275 | 67 | 232 | 507 |
| 06:00 | | | 10 | 14 | 18:00 | | | 68 | 56 | | | |
| 06:15 | | | 3 | 13 | 18:15 | | | 54 | 63 | | | |
| 06:30 | | | 12 | 18 | 18:30 | | | 79 | 68 | | | |
| 06:45 | | | 18 | 43 | 33 | 78 | 121 | 57 | 258 | 69 | 256 | 514 |
| 07:00 | | | 28 | 38 | 19:00 | | | 49 | 44 | | | |
| 07:15 | | | 68 | 64 | 19:15 | | | 56 | 45 | | | |
| 07:30 | | | 43 | 114 | 19:30 | | | 50 | 42 | | | |
| 07:45 | | | 32 | 171 | 63 | 279 | 450 | 34 | 189 | 63 | 194 | 383 |
| 08:00 | | | 46 | 51 | 20:00 | | | 41 | 33 | | | |
| 08:15 | | | 46 | 43 | 20:15 | | | 43 | 27 | | | |
| 08:30 | | | 33 | 38 | 20:30 | | | 29 | 22 | | | |
| 08:45 | | | 28 | 153 | 50 | 182 | 335 | 24 | 137 | 46 | 128 | 265 |
| 09:00 | | | 40 | 40 | 21:00 | | | 20 | 16 | | | |
| 09:15 | | | 45 | 38 | 21:15 | | | 21 | 18 | | | |
| 09:30 | | | 36 | 35 | 21:30 | | | 20 | 21 | | | |
| 09:45 | | | 41 | 162 | 31 | 144 | 306 | 14 | 75 | 16 | 71 | 146 |
| 10:00 | | | 33 | 51 | 22:00 | | | 15 | 15 | | | |
| 10:15 | | | 19 | 39 | 22:15 | | | 12 | 12 | | | |
| 10:30 | | | 31 | 34 | 22:30 | | | 14 | 11 | | | |
| 10:45 | | | 40 | 123 | 41 | 165 | 288 | 12 | 53 | 9 | 47 | 100 |
| 11:00 | | | 44 | 31 | 23:00 | | | 6 | 12 | | | |
| 11:15 | | | 38 | 42 | 23:15 | | | 5 | 10 | | | |
| 11:30 | | | 44 | 37 | 23:30 | | | 5 | 6 | | | |
| 11:45 | | | 39 | 165 | 42 | 152 | 317 | 6 | 22 | 7 | 35 | 57 |

Total Vol. 859 1038 **1897** 2114 2036 **4150**

| | | Daily Totals | | | | |
|--|--|--------------|----|------|------|-------------|
| | | NB | SB | EB | WB | Combined |
| | | | | 2973 | 3074 | 6047 |

| | AM | | | PM | | |
|-----------|-------|-------|--------------|-------|-------|--------------|
| Split % | 45.3% | 54.7% | 31.4% | 50.9% | 49.1% | 68.6% |
| Peak Hour | 07:15 | 07:15 | 07:15 | 16:00 | 14:30 | 16:15 |
| Volume | 189 | 292 | 481 | 350 | 271 | 591 |
| P.H.F. | 0.69 | 0.64 | 0.77 | 0.84 | 0.68 | 0.90 |

FAMOSA E-O NIMITZ

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | |
|-----------|----|----|----|-----|-----------|-----|-----|-----|-----|----|-----|-----|
| 00:00 | | | 8 | 3 | 12:00 | | | 35 | 37 | | | |
| 00:15 | | | 7 | 2 | 12:15 | | | 41 | 47 | | | |
| 00:30 | | | 3 | 6 | 12:30 | | | 39 | 59 | | | |
| 00:45 | | | 4 | 22 | 2 | 13 | 35 | 47 | 162 | 37 | 180 | 342 |
| 01:00 | | | 4 | 1 | 13:00 | | | 36 | 40 | | | |
| 01:15 | | | 2 | 2 | 13:15 | | | 40 | 38 | | | |
| 01:30 | | | 1 | 0 | 13:30 | | | 30 | 48 | | | |
| 01:45 | | | 2 | 9 | 1 | 4 | 13 | 37 | 143 | 46 | 172 | 315 |
| 02:00 | | | 1 | 2 | 14:00 | | | 50 | 36 | | | |
| 02:15 | | | 4 | 0 | 14:15 | | | 54 | 43 | | | |
| 02:30 | | | 1 | 5 | 14:30 | | | 65 | 85 | | | |
| 02:45 | | | 2 | 8 | 0 | 7 | 15 | 52 | 221 | 59 | 223 | 444 |
| 03:00 | | | 1 | 1 | 15:00 | | | 46 | 41 | | | |
| 03:15 | | | 2 | 1 | 15:15 | | | 57 | 57 | | | |
| 03:30 | | | 2 | 1 | 15:30 | | | 61 | 57 | | | |
| 03:45 | | | 1 | 6 | 2 | 5 | 11 | 74 | 238 | 56 | 211 | 449 |
| 04:00 | | | 3 | 1 | 16:00 | | | 88 | 49 | | | |
| 04:15 | | | 1 | 1 | 16:15 | | | 127 | 54 | | | |
| 04:30 | | | 3 | 5 | 16:30 | | | 116 | 54 | | | |
| 04:45 | | | 1 | 8 | 0 | 7 | 15 | 117 | 448 | 75 | 232 | 680 |
| 05:00 | | | 2 | 3 | 17:00 | | | 70 | 48 | | | |
| 05:15 | | | 1 | 5 | 17:15 | | | 88 | 62 | | | |
| 05:30 | | | 6 | 5 | 17:30 | | | 64 | 70 | | | |
| 05:45 | | | 9 | 18 | 6 | 19 | 37 | 87 | 309 | 87 | 267 | 576 |
| 06:00 | | | 9 | 16 | 18:00 | | | 69 | 81 | | | |
| 06:15 | | | 4 | 12 | 18:15 | | | 59 | 76 | | | |
| 06:30 | | | 9 | 17 | 18:30 | | | 47 | 78 | | | |
| 06:45 | | | 17 | 39 | 38 | 83 | 122 | 44 | 219 | 84 | 319 | 538 |
| 07:00 | | | 33 | 33 | 19:00 | | | 64 | 69 | | | |
| 07:15 | | | 70 | 73 | 19:15 | | | 48 | 76 | | | |
| 07:30 | | | 62 | 119 | 19:30 | | | 47 | 40 | | | |
| 07:45 | | | 32 | 197 | 60 | 285 | 482 | 25 | 184 | 55 | 240 | 424 |
| 08:00 | | | 54 | 45 | 20:00 | | | 30 | 33 | | | |
| 08:15 | | | 40 | 52 | 20:15 | | | 27 | 26 | | | |
| 08:30 | | | 32 | 39 | 20:30 | | | 36 | 28 | | | |
| 08:45 | | | 36 | 162 | 52 | 188 | 350 | 24 | 117 | 35 | 122 | 239 |
| 09:00 | | | 53 | 51 | 21:00 | | | 31 | 20 | | | |
| 09:15 | | | 36 | 53 | 21:15 | | | 25 | 14 | | | |
| 09:30 | | | 42 | 47 | 21:30 | | | 21 | 16 | | | |
| 09:45 | | | 29 | 160 | 30 | 181 | 341 | 22 | 99 | 14 | 64 | 163 |
| 10:00 | | | 32 | 28 | 22:00 | | | 21 | 17 | | | |
| 10:15 | | | 35 | 36 | 22:15 | | | 4 | 15 | | | |
| 10:30 | | | 32 | 41 | 22:30 | | | 18 | 17 | | | |
| 10:45 | | | 34 | 133 | 32 | 137 | 270 | 11 | 54 | 8 | 57 | 111 |
| 11:00 | | | 45 | 28 | 23:00 | | | 6 | 11 | | | |
| 11:15 | | | 39 | 37 | 23:15 | | | 7 | 5 | | | |
| 11:30 | | | 44 | 38 | 23:30 | | | 10 | 11 | | | |
| 11:45 | | | 43 | 171 | 45 | 148 | 319 | 5 | 28 | 3 | 30 | 58 |

| | | | | | | | | | | |
|-------------------|--|--|-----|------|-------------|--|--|------|------|-------------|
| Total Vol. | | | 933 | 1077 | 2010 | | | 2222 | 2117 | 4339 |
|-------------------|--|--|-----|------|-------------|--|--|------|------|-------------|

| | | Daily Totals | | | | |
|--|--|--------------|----|------|------|-------------|
| | | NB | SB | EB | WB | Combined |
| | | | | 3155 | 3194 | 6349 |

| Split % | AM | | | PM | | |
|------------------|-------|-------|--------------|-------|-------|--------------|
| | | | | | | |
| | 46.4% | 53.6% | 31.7% | 51.2% | 48.8% | 68.3% |
| Peak Hour | 07:15 | 07:15 | 07:15 | 16:00 | 17:45 | 16:00 |
| Volume | 218 | 297 | 515 | 448 | 322 | 680 |
| P.H.F. | 0.78 | 0.62 | 0.71 | 0.88 | 0.93 | 0.89 |

FAMOSA E-O NIMITZ

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | | | |
|-----------|----|----|----|-----|-----------|-----|-----|-------|-----|-----|----|-----|-----|
| 00:00 | | | 6 | 2 | 12:00 | | | 37 | 51 | | | | |
| 00:15 | | | 4 | 1 | 12:15 | | | 44 | 51 | | | | |
| 00:30 | | | 6 | 1 | 12:30 | | | 39 | 54 | | | | |
| 00:45 | | | 4 | 20 | 2 | 6 | 26 | 12:45 | 36 | 156 | 46 | 202 | 358 |
| 01:00 | | | 2 | 2 | 13:00 | | | 43 | 53 | | | | |
| 01:15 | | | 3 | 1 | 13:15 | | | 47 | 36 | | | | |
| 01:30 | | | 1 | 1 | 13:30 | | | 43 | 45 | | | | |
| 01:45 | | | 1 | 7 | 0 | 4 | 11 | 13:45 | 45 | 178 | 56 | 190 | 368 |
| 02:00 | | | 3 | 2 | 14:00 | | | 50 | 70 | | | | |
| 02:15 | | | 1 | 2 | 14:15 | | | 72 | 47 | | | | |
| 02:30 | | | 3 | 0 | 14:30 | | | 60 | 103 | | | | |
| 02:45 | | | 1 | 8 | 2 | 6 | 14 | 14:45 | 49 | 231 | 59 | 279 | 510 |
| 03:00 | | | 6 | 2 | 15:00 | | | 40 | 49 | | | | |
| 03:15 | | | 1 | 1 | 15:15 | | | 58 | 56 | | | | |
| 03:30 | | | 1 | 1 | 15:30 | | | 64 | 63 | | | | |
| 03:45 | | | 1 | 9 | 1 | 5 | 14 | 15:45 | 74 | 236 | 59 | 227 | 463 |
| 04:00 | | | 1 | 1 | 16:00 | | | 90 | 56 | | | | |
| 04:15 | | | 2 | 4 | 16:15 | | | 93 | 77 | | | | |
| 04:30 | | | 1 | 1 | 16:30 | | | 112 | 63 | | | | |
| 04:45 | | | 1 | 5 | 1 | 7 | 12 | 16:45 | 72 | 367 | 75 | 271 | 638 |
| 05:00 | | | 3 | 3 | 17:00 | | | 79 | 71 | | | | |
| 05:15 | | | 2 | 1 | 17:15 | | | 83 | 58 | | | | |
| 05:30 | | | 4 | 6 | 17:30 | | | 66 | 60 | | | | |
| 05:45 | | | 9 | 18 | 8 | 18 | 36 | 17:45 | 60 | 288 | 81 | 270 | 558 |
| 06:00 | | | 7 | 9 | 18:00 | | | 60 | 73 | | | | |
| 06:15 | | | 8 | 15 | 18:15 | | | 61 | 58 | | | | |
| 06:30 | | | 13 | 23 | 18:30 | | | 50 | 66 | | | | |
| 06:45 | | | 20 | 48 | 30 | 77 | 125 | 18:45 | 49 | 220 | 87 | 284 | 504 |
| 07:00 | | | 38 | 40 | 19:00 | | | 44 | 73 | | | | |
| 07:15 | | | 64 | 83 | 19:15 | | | 50 | 60 | | | | |
| 07:30 | | | 76 | 118 | 19:30 | | | 35 | 42 | | | | |
| 07:45 | | | 34 | 212 | 61 | 302 | 514 | 19:45 | 48 | 177 | 44 | 219 | 396 |
| 08:00 | | | 47 | 41 | 20:00 | | | 43 | 38 | | | | |
| 08:15 | | | 36 | 47 | 20:15 | | | 28 | 24 | | | | |
| 08:30 | | | 41 | 39 | 20:30 | | | 37 | 26 | | | | |
| 08:45 | | | 32 | 156 | 56 | 183 | 339 | 20:45 | 41 | 149 | 40 | 128 | 277 |
| 09:00 | | | 42 | 44 | 21:00 | | | 28 | 36 | | | | |
| 09:15 | | | 33 | 41 | 21:15 | | | 18 | 18 | | | | |
| 09:30 | | | 42 | 43 | 21:30 | | | 13 | 14 | | | | |
| 09:45 | | | 41 | 158 | 44 | 172 | 330 | 21:45 | 23 | 82 | 12 | 80 | 162 |
| 10:00 | | | 34 | 32 | 22:00 | | | 14 | 12 | | | | |
| 10:15 | | | 38 | 42 | 22:15 | | | 12 | 11 | | | | |
| 10:30 | | | 30 | 30 | 22:30 | | | 10 | 7 | | | | |
| 10:45 | | | 30 | 132 | 47 | 151 | 283 | 22:45 | 11 | 47 | 5 | 35 | 82 |
| 11:00 | | | 38 | 34 | 23:00 | | | 6 | 9 | | | | |
| 11:15 | | | 49 | 30 | 23:15 | | | 11 | 3 | | | | |
| 11:30 | | | 39 | 40 | 23:30 | | | 5 | 5 | | | | |
| 11:45 | | | 32 | 158 | 46 | 150 | 308 | 23:45 | 3 | 25 | 5 | 22 | 47 |

Total Vol. 931 1081 **2012** 2156 2207 **4363**

| | | Daily Totals | | | | |
|--|--|--------------|----|------|------|-------------|
| | | NB | SB | EB | WB | Combined |
| | | | | 3087 | 3288 | 6375 |

| Split % | AM | | | PM | | |
|------------------|-------|-------|--------------|-------|-------|--------------|
| | 46.3% | 53.7% | 31.6% | 49.4% | 50.6% | 68.4% |
| Peak Hour | 07:15 | 07:15 | 07:15 | 15:45 | 16:15 | 16:15 |
| Volume | 221 | 303 | 524 | 369 | 286 | 642 |
| P.H.F. | 0.73 | 0.64 | 0.68 | 0.82 | 0.93 | 0.92 |

VALETA N-O FAMOSA

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | |
|-----------|-----|-----|----|-----|-----------|-------|----|-----|----|-----|-----|
| 00:00 | 4 | 4 | | | 12:00 | 29 | 20 | | | | |
| 00:15 | 1 | 2 | | | 12:15 | 20 | 15 | | | | |
| 00:30 | 1 | 1 | | | 12:30 | 20 | 13 | | | | |
| 00:45 | 4 | 10 | 4 | 11 | 21 | 12:45 | 27 | 96 | 15 | 63 | 159 |
| 01:00 | 0 | 2 | | | 13:00 | 20 | 13 | | | | |
| 01:15 | 0 | 1 | | | 13:15 | 14 | 23 | | | | |
| 01:30 | 0 | 2 | | | 13:30 | 20 | 21 | | | | |
| 01:45 | 0 | 0 | 3 | 8 | 8 | 13:45 | 31 | 85 | 32 | 89 | 174 |
| 02:00 | 0 | 2 | | | 14:00 | 30 | 34 | | | | |
| 02:15 | 0 | 3 | | | 14:15 | 26 | 57 | | | | |
| 02:30 | 1 | 1 | | | 14:30 | 91 | 44 | | | | |
| 02:45 | 2 | 3 | 0 | 6 | 9 | 14:45 | 33 | 180 | 39 | 174 | 354 |
| 03:00 | 3 | 3 | | | 15:00 | 29 | 33 | | | | |
| 03:15 | 0 | 2 | | | 15:15 | 25 | 29 | | | | |
| 03:30 | 0 | 1 | | | 15:30 | 28 | 32 | | | | |
| 03:45 | 2 | 5 | 0 | 6 | 11 | 15:45 | 24 | 106 | 35 | 129 | 235 |
| 04:00 | 0 | 0 | | | 16:00 | 29 | 37 | | | | |
| 04:15 | 0 | 1 | | | 16:15 | 39 | 49 | | | | |
| 04:30 | 1 | 0 | | | 16:30 | 35 | 48 | | | | |
| 04:45 | 1 | 2 | 1 | 2 | 4 | 16:45 | 35 | 138 | 46 | 180 | 318 |
| 05:00 | 2 | 0 | | | 17:00 | 33 | 28 | | | | |
| 05:15 | 1 | 2 | | | 17:15 | 32 | 37 | | | | |
| 05:30 | 0 | 5 | | | 17:30 | 33 | 32 | | | | |
| 05:45 | 1 | 4 | 3 | 10 | 14 | 17:45 | 34 | 132 | 41 | 138 | 270 |
| 06:00 | 7 | 4 | | | 18:00 | 44 | 33 | | | | |
| 06:15 | 7 | 8 | | | 18:15 | 31 | 35 | | | | |
| 06:30 | 9 | 6 | | | 18:30 | 30 | 43 | | | | |
| 06:45 | 17 | 40 | 21 | 39 | 79 | 18:45 | 51 | 156 | 26 | 137 | 293 |
| 07:00 | 26 | 36 | | | 19:00 | 24 | 24 | | | | |
| 07:15 | 111 | 108 | | | 19:15 | 21 | 23 | | | | |
| 07:30 | 184 | 97 | | | 19:30 | 19 | 19 | | | | |
| 07:45 | 32 | 353 | 37 | 278 | 631 | 19:45 | 26 | 90 | 22 | 88 | 178 |
| 08:00 | 19 | 32 | | | 20:00 | 25 | 19 | | | | |
| 08:15 | 21 | 13 | | | 20:15 | 14 | 24 | | | | |
| 08:30 | 26 | 19 | | | 20:30 | 15 | 15 | | | | |
| 08:45 | 28 | 94 | 22 | 86 | 180 | 20:45 | 25 | 79 | 18 | 76 | 155 |
| 09:00 | 24 | 21 | | | 21:00 | 21 | 10 | | | | |
| 09:15 | 24 | 30 | | | 21:15 | 10 | 11 | | | | |
| 09:30 | 20 | 20 | | | 21:30 | 10 | 15 | | | | |
| 09:45 | 28 | 96 | 23 | 94 | 190 | 21:45 | 10 | 51 | 13 | 49 | 100 |
| 10:00 | 26 | 22 | | | 22:00 | 8 | 8 | | | | |
| 10:15 | 26 | 19 | | | 22:15 | 3 | 5 | | | | |
| 10:30 | 15 | 20 | | | 22:30 | 7 | 8 | | | | |
| 10:45 | 20 | 87 | 22 | 83 | 170 | 22:45 | 5 | 23 | 7 | 28 | 51 |
| 11:00 | 19 | 30 | | | 23:00 | 6 | 4 | | | | |
| 11:15 | 15 | 17 | | | 23:15 | 5 | 4 | | | | |
| 11:30 | 17 | 17 | | | 23:30 | 9 | 9 | | | | |
| 11:45 | 15 | 66 | 14 | 78 | 144 | 23:45 | 0 | 20 | 9 | 26 | 46 |

| | | | | | | | | | | |
|-------------------|-----|-----|--|--|-------------|------|------|---------------------|----|-----------------|
| Total Vol. | 760 | 701 | | | 1461 | 1156 | 1177 | | | 2333 |
| | | | | | | | | Daily Totals | | |
| | | | | | | NB | SB | EB | WB | Combined |
| | | | | | | 1916 | 1878 | | | 3794 |

| | AM | | | | PM | | | |
|------------------|-----------|-------|--------------|--|-----------|-------|--------------|--|
| Split % | 52.0% | 48.0% | 38.5% | | 49.5% | 50.5% | 61.5% | |
| Peak Hour | 07:00 | 07:00 | 07:00 | | 14:00 | 16:00 | 14:00 | |
| Volume | 353 | 278 | 631 | | 180 | 180 | 354 | |
| P.H.F. | 0.48 | 0.64 | 0.56 | | 0.65 | 0.92 | 0.66 | |

VALETA N-O FAMOSA

| AM Period | NB | SB | EB | WB | PM Period | NB | SB | EB | WB | | |
|-----------|-----|-----|----|-----|-----------|-------|----|-----|----|-----|-----|
| 00:00 | 0 | 3 | | | 12:00 | 19 | 22 | | | | |
| 00:15 | 1 | 1 | | | 12:15 | 23 | 19 | | | | |
| 00:30 | 1 | 1 | | | 12:30 | 17 | 13 | | | | |
| 00:45 | 0 | 2 | 0 | 5 | 7 | 12:45 | 20 | 79 | 14 | 68 | 147 |
| 01:00 | 0 | 0 | | | 13:00 | 21 | 20 | | | | |
| 01:15 | 0 | 2 | | | 13:15 | 19 | 13 | | | | |
| 01:30 | 0 | 0 | | | 13:30 | 16 | 18 | | | | |
| 01:45 | 1 | 1 | 0 | 2 | 3 | 13:45 | 19 | 75 | 17 | 68 | 143 |
| 02:00 | 0 | 0 | | | 14:00 | 38 | 22 | | | | |
| 02:15 | 0 | 0 | | | 14:15 | 46 | 22 | | | | |
| 02:30 | 1 | 1 | | | 14:30 | 52 | 81 | | | | |
| 02:45 | 0 | 1 | 1 | 2 | 3 | 14:45 | 38 | 174 | 29 | 154 | 328 |
| 03:00 | 0 | 0 | | | 15:00 | 14 | 28 | | | | |
| 03:15 | 0 | 0 | | | 15:15 | 18 | 32 | | | | |
| 03:30 | 1 | 0 | | | 15:30 | 24 | 28 | | | | |
| 03:45 | 0 | 1 | 0 | 0 | 1 | 15:45 | 29 | 85 | 21 | 109 | 194 |
| 04:00 | 0 | 0 | | | 16:00 | 46 | 36 | | | | |
| 04:15 | 2 | 0 | | | 16:15 | 60 | 37 | | | | |
| 04:30 | 0 | 0 | | | 16:30 | 77 | 35 | | | | |
| 04:45 | 1 | 3 | 0 | 0 | 3 | 16:45 | 60 | 243 | 60 | 168 | 411 |
| 05:00 | 2 | 0 | | | 17:00 | 48 | 30 | | | | |
| 05:15 | 2 | 3 | | | 17:15 | 43 | 27 | | | | |
| 05:30 | 1 | 4 | | | 17:30 | 46 | 35 | | | | |
| 05:45 | 2 | 7 | 5 | 12 | 19 | 17:45 | 46 | 183 | 41 | 133 | 316 |
| 06:00 | 2 | 7 | | | 18:00 | 45 | 42 | | | | |
| 06:15 | 5 | 8 | | | 18:15 | 30 | 48 | | | | |
| 06:30 | 8 | 11 | | | 18:30 | 63 | 51 | | | | |
| 06:45 | 22 | 37 | 19 | 45 | 82 | 18:45 | 38 | 176 | 46 | 187 | 363 |
| 07:00 | 18 | 32 | | | 19:00 | 29 | 26 | | | | |
| 07:15 | 101 | 90 | | | 19:15 | 33 | 35 | | | | |
| 07:30 | 185 | 91 | | | 19:30 | 33 | 18 | | | | |
| 07:45 | 25 | 329 | 24 | 237 | 566 | 19:45 | 20 | 115 | 32 | 111 | 226 |
| 08:00 | 19 | 26 | | | 20:00 | 12 | 14 | | | | |
| 08:15 | 21 | 28 | | | 20:15 | 11 | 22 | | | | |
| 08:30 | 24 | 20 | | | 20:30 | 19 | 18 | | | | |
| 08:45 | 28 | 92 | 24 | 98 | 190 | 20:45 | 14 | 56 | 35 | 89 | 145 |
| 09:00 | 20 | 26 | | | 21:00 | 10 | 11 | | | | |
| 09:15 | 27 | 27 | | | 21:15 | 13 | 12 | | | | |
| 09:30 | 23 | 19 | | | 21:30 | 3 | 7 | | | | |
| 09:45 | 15 | 85 | 13 | 85 | 170 | 21:45 | 10 | 36 | 7 | 37 | 73 |
| 10:00 | 20 | 27 | | | 22:00 | 9 | 3 | | | | |
| 10:15 | 18 | 8 | | | 22:15 | 7 | 5 | | | | |
| 10:30 | 18 | 17 | | | 22:30 | 10 | 2 | | | | |
| 10:45 | 8 | 64 | 18 | 70 | 134 | 22:45 | 8 | 34 | 3 | 13 | 47 |
| 11:00 | 17 | 28 | | | 23:00 | 3 | 6 | | | | |
| 11:15 | 18 | 20 | | | 23:15 | 5 | 3 | | | | |
| 11:30 | 16 | 22 | | | 23:30 | 2 | 2 | | | | |
| 11:45 | 15 | 66 | 23 | 93 | 159 | 23:45 | 2 | 12 | 4 | 15 | 27 |

| | | | | | | | | | | | |
|-------------------|-----|-----|--|--|-------------|--|------|------|--|--|-------------|
| Total Vol. | 688 | 649 | | | 1337 | | 1268 | 1152 | | | 2420 |
|-------------------|-----|-----|--|--|-------------|--|------|------|--|--|-------------|

| | | | | | Daily Totals | | | | |
|--|--|--|--|--|--------------|------|----|----|----------|
| | | | | | NB | SB | EB | WB | Combined |
| | | | | | 1956 | 1801 | | | 3757 |

| | AM | | | | PM | | | |
|------------------|-------|-------|--|--------------|-------|-------|--|--------------|
| Split % | 51.5% | 48.5% | | 35.6% | 52.4% | 47.6% | | 64.4% |
| Peak Hour | 07:15 | 07:00 | | 07:00 | 16:15 | 18:00 | | 16:00 |
| Volume | 330 | 237 | | 566 | 245 | 187 | | 411 |
| P.H.F. | 0.45 | 0.65 | | 0.51 | 0.83 | 0.92 | | 0.86 |

VALETA N-O FAMOSA

| AM Period | | | | PM Period | | | |
|-----------|----|-----|--------|-----------|-------|----|------------|
| NB | SB | EB | WB | NB | SB | EB | WB |
| 00:00 | 1 | 0 | | 12:00 | 23 | 12 | |
| 00:15 | 3 | 0 | | 12:15 | 14 | 20 | |
| 00:30 | 0 | 2 | | 12:30 | 16 | 29 | |
| 00:45 | 1 | 5 | 1 3 | 8 | 12:45 | 19 | 72 22 83 |
| 01:00 | 3 | 0 | | 13:00 | 26 | 15 | |
| 01:15 | 0 | 1 | | 13:15 | 22 | 20 | |
| 01:30 | 2 | 0 | | 13:30 | 12 | 25 | |
| 01:45 | 0 | 5 | 1 2 | 7 | 13:45 | 24 | 84 16 76 |
| 02:00 | 0 | 0 | | 14:00 | 31 | 14 | |
| 02:15 | 1 | 0 | | 14:15 | 38 | 30 | |
| 02:30 | 1 | 1 | | 14:30 | 48 | 77 | |
| 02:45 | 2 | 4 | 1 2 | 6 | 14:45 | 34 | 151 33 154 |
| 03:00 | 0 | 0 | | 15:00 | 30 | 30 | |
| 03:15 | 0 | 0 | | 15:15 | 32 | 32 | |
| 03:30 | 1 | 1 | | 15:30 | 28 | 35 | |
| 03:45 | 0 | 1 | 0 1 | 2 | 15:45 | 42 | 132 27 124 |
| 04:00 | 0 | 0 | | 16:00 | 50 | 35 | |
| 04:15 | 0 | 0 | | 16:15 | 74 | 34 | |
| 04:30 | 1 | 2 | | 16:30 | 61 | 44 | |
| 04:45 | 0 | 1 | 0 2 | 3 | 16:45 | 62 | 247 55 168 |
| 05:00 | 0 | 0 | | 17:00 | 41 | 29 | |
| 05:15 | 2 | 1 | | 17:15 | 41 | 29 | |
| 05:30 | 6 | 0 | | 17:30 | 47 | 43 | |
| 05:45 | 7 | 15 | 2 3 | 18 | 17:45 | 49 | 178 50 151 |
| 06:00 | 7 | 6 | | 18:00 | 54 | 46 | |
| 06:15 | 5 | 2 | | 18:15 | 25 | 47 | |
| 06:30 | 6 | 16 | | 18:30 | 29 | 21 | |
| 06:45 | 23 | 41 | 20 44 | 85 | 18:45 | 28 | 136 32 146 |
| 07:00 | 38 | 27 | | 19:00 | 43 | 34 | |
| 07:15 | 89 | 91 | | 19:15 | 23 | 30 | |
| 07:30 | 98 | 139 | | 19:30 | 30 | 22 | |
| 07:45 | 35 | 260 | 29 286 | 546 | 19:45 | 23 | 119 32 118 |
| 08:00 | 29 | 20 | | 20:00 | 18 | 19 | |
| 08:15 | 20 | 25 | | 20:15 | 22 | 16 | |
| 08:30 | 16 | 14 | | 20:30 | 18 | 18 | |
| 08:45 | 20 | 85 | 27 86 | 171 | 20:45 | 13 | 71 21 74 |
| 09:00 | 34 | 24 | | 21:00 | 20 | 14 | |
| 09:15 | 31 | 22 | | 21:15 | 15 | 11 | |
| 09:30 | 21 | 19 | | 21:30 | 8 | 13 | |
| 09:45 | 12 | 98 | 15 80 | 178 | 21:45 | 10 | 53 7 45 |
| 10:00 | 18 | 12 | | 22:00 | 7 | 6 | |
| 10:15 | 15 | 21 | | 22:15 | 3 | 3 | |
| 10:30 | 8 | 18 | | 22:30 | 5 | 4 | |
| 10:45 | 18 | 59 | 17 68 | 127 | 22:45 | 4 | 19 0 13 |
| 11:00 | 25 | 22 | | 23:00 | 2 | 5 | |
| 11:15 | 17 | 18 | | 23:15 | 2 | 2 | |
| 11:30 | 26 | 17 | | 23:30 | 9 | 10 | |
| 11:45 | 20 | 88 | 19 76 | 164 | 23:45 | 2 | 15 2 19 |

| | | | | | | | | | |
|-------------------|-----|-----|--|-------------|--|---------------------|------|----|-------------|
| Total Vol. | 662 | 653 | | 1315 | | 1277 | 1171 | | 2448 |
| | | | | | | Daily Totals | | | |
| | | | | | | NB | SB | EB | WB |
| | | | | | | 1939 | 1824 | | |
| | | | | | | | | | 3763 |

| | AM | | | PM | | |
|------------------|-------|-------|--------------|-------|-------|--------------|
| Split % | 50.3% | 49.7% | 34.9% | 52.2% | 47.8% | 65.1% |
| Peak Hour | 07:00 | 07:00 | 07:00 | 16:00 | 17:30 | 16:00 |
| Volume | 260 | 286 | 546 | 247 | 186 | 415 |
| P.H.F. | 0.66 | 0.51 | 0.58 | 0.83 | 0.93 | 0.89 |

INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:
3/15/14
SATURDAY

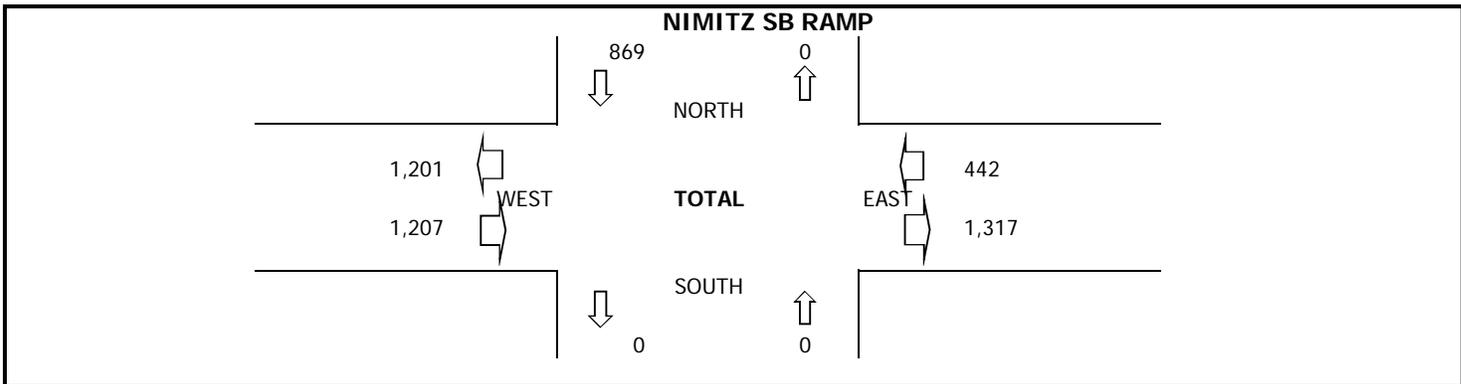
LOCATION: POINT LOMA
NORTH/SOUTH: NIMITZ SB RAMP
EAST/WEST: FAMOSA

PROJECT #: PTD14-0307-03
LOCATION #: 3
CONTROL: SIGNAL

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|----------------|----|----|----------------|----|-----|-----------|----|----|-----------|----|----|-------|
| | NIMITZ SB RAMP | | | NIMITZ SB RAMP | | | FAMOSA | | | FAMOSA | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | X | X | X | 0.5 | X | 0.5 | X | 1 | X | X | 1 | X | |

| INTERSECTION TURNING MOVEMENT | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL | | |
|-------------------------------|------------|----|----|------------|----|-----|-----------|-------|-------|-----------|------|-------|-------|--|-----|
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | | | |
| | 12:00 PM | | | | 13 | | 97 | | 149 | | | 54 | | | 313 |
| | 12:15 PM | | | | 16 | | 103 | | 149 | | | 48 | | | 316 |
| | 12:30 PM | | | | 15 | | 119 | | 153 | | | 46 | | | 333 |
| | 12:45 PM | | | | 12 | | 100 | | 163 | | | 57 | | | 332 |
| | 1:00 PM | | | | 14 | | 86 | | 169 | | | 69 | | | 338 |
| | 1:15 PM | | | | 17 | | 96 | | 145 | | | 62 | | | 320 |
| | 1:30 PM | | | | 12 | | 73 | | 149 | | | 53 | | | 287 |
| | 1:45 PM | | | | 11 | | 85 | | 130 | | | 53 | | | 279 |
| | 2:00 PM | | | | | | | | | | | | | | 0 |
| | 2:15 PM | | | | | | | | | | | | | | 0 |
| | 2:30 PM | | | | | | | | | | | | | | 0 |
| | 2:45 PM | | | | | | | | | | | | | | 0 |
| | 3:00 PM | | | | | | | | | | | | | | 0 |
| | 3:15 PM | | | | | | | | | | | | | | 0 |
| | 3:30 PM | | | | | | | | | | | | | | 0 |
| | 3:45 PM | | | | | | | | | | | | | | 0 |
| | 4:00 PM | | | | | | | | | | | | | | 0 |
| | 4:15 PM | | | | | | | | | | | | | | 0 |
| 4:30 PM | | | | | | | | | | | | | 0 | | |
| 4:45 PM | | | | | | | | | | | | | 0 | | |
| VOLUMES | 0 | 0 | 0 | 110 | 0 | 759 | 0 | 1,207 | 0 | 0 | 442 | 0 | 2,518 | | |
| APPROACH % | 0% | 0% | 0% | 13% | 0% | 87% | 0% | 100% | 0% | 0% | 100% | 0% | | | |
| APP/DEPART | 0 | / | 0 | 869 | / | 0 | 1,207 | / | 1,317 | 442 | / | 1,201 | 0 | | |
| BEGIN PEAK HR | 12:30 PM | | | | | | | | | | | | | | |
| VOLUMES | 0 | 0 | 0 | 58 | 0 | 401 | 0 | 630 | 0 | 0 | 234 | 0 | 1,323 | | |
| APPROACH % | 0% | 0% | 0% | 13% | 0% | 87% | 0% | 100% | 0% | 0% | 100% | 0% | | | |
| PEAK HR FACTOR | 0.000 | | | 0.856 | | | 0.932 | | | 0.848 | | | 0.979 | | |
| APP/DEPART | 0 | / | 0 | 459 | / | 0 | 630 | / | 688 | 234 | / | 635 | 0 | | |



INTERSECTION TURNING MOVEMENT COUNTS

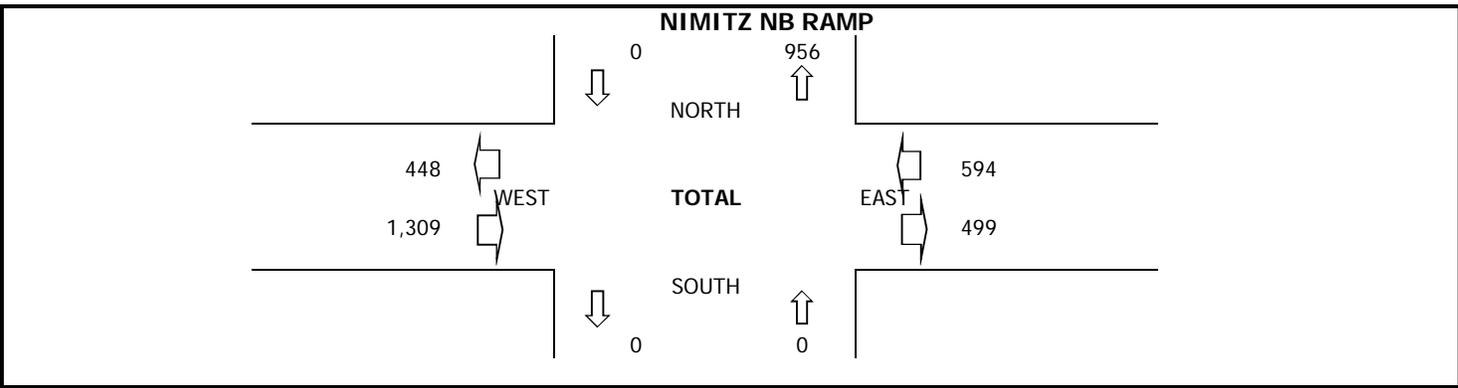
PREPARED BY: PACIFIC TECHNICAL DATA

| | | |
|-------------------------------------|---|--|
| DATE: 3/15/14 SATURDAY | LOCATION: POINT LOMA NORTH/SOUTH: NIMITZ NB RAMP EAST/WEST: FAMOSA | PROJECT #: PTD14-0307-03 LOCATION #: 2 CONTROL: NO STOP |
|-------------------------------------|---|--|

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | S | E ▶ |
| | OTHER | | ▼ | |
| | OTHER | | | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|----------------|----|----|----------------|----|----|-----------|----|----|-----------|----|----|-------|
| | NIMITZ NB RAMP | | | NIMITZ NB RAMP | | | FAMOSA | | | FAMOSA | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | X | X | X | X | X | X | 1 | 1 | X | X | 1 | 0 | |

| INTERSECTION TURNING MOVEMENT | 12:00 PM | | | | | | 98 | 60 | | | 61 | 19 | 238 | |
|-------------------------------|----------|----|-----|-------|----|----|-------|-----|-----|-------|-----|-----|-------|-----|
| | 12:15 PM | | | | | | | 118 | 47 | | | 48 | 24 | 237 |
| | 12:30 PM | | | | | | | 102 | 64 | | | 43 | 15 | 224 |
| | 12:45 PM | | | | | | | 105 | 66 | | | 55 | 9 | 235 |
| | 1:00 PM | | | | | | | 104 | 73 | | | 70 | 18 | 265 |
| | 1:15 PM | | | | | | | 98 | 67 | | | 62 | 16 | 243 |
| | 1:30 PM | | | | | | | 99 | 62 | | | 55 | 23 | 239 |
| | 1:45 PM | | | | | | | 86 | 60 | | | 54 | 22 | 222 |
| | 2:00 PM | | | | | | | | | | | | | 0 |
| | 2:15 PM | | | | | | | | | | | | | 0 |
| | 2:30 PM | | | | | | | | | | | | | 0 |
| | 2:45 PM | | | | | | | | | | | | | 0 |
| | 3:00 PM | | | | | | | | | | | | | 0 |
| | 3:15 PM | | | | | | | | | | | | | 0 |
| | 3:30 PM | | | | | | | | | | | | | 0 |
| | 3:45 PM | | | | | | | | | | | | | 0 |
| | 4:00 PM | | | | | | | | | | | | | 0 |
| | 4:15 PM | | | | | | | | | | | | | 0 |
| | 4:30 PM | | | | | | | | | | | | | 0 |
| | 4:45 PM | | | | | | | | | | | | | 0 |
| VOLUMES | 0 | 0 | 0 | 0 | 0 | 0 | 810 | 499 | 0 | 0 | 448 | 146 | 1,903 | |
| APPROACH % | 0% | 0% | 0% | 0% | 0% | 0% | 62% | 38% | 0% | 0% | 75% | 25% | | |
| APP/DEPART | 0 | / | 956 | 0 | / | 0 | 1,309 | / | 499 | 594 | / | 448 | 0 | |
| BEGIN PEAK HR | 12:45 PM | | | | | | | | | | | | | |
| VOLUMES | 0 | 0 | 0 | 0 | 0 | 0 | 406 | 268 | 0 | 0 | 242 | 66 | 982 | |
| APPROACH % | 0% | 0% | 0% | 0% | 0% | 0% | 60% | 40% | 0% | 0% | 79% | 21% | | |
| PEAK HR FACTOR | 0.000 | | | 0.000 | | | 0.952 | | | 0.875 | | | 0.926 | |
| APP/DEPART | 0 | / | 472 | 0 | / | 0 | 674 | / | 268 | 308 | / | 242 | 0 | |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:
3/15/14
SATURDAY

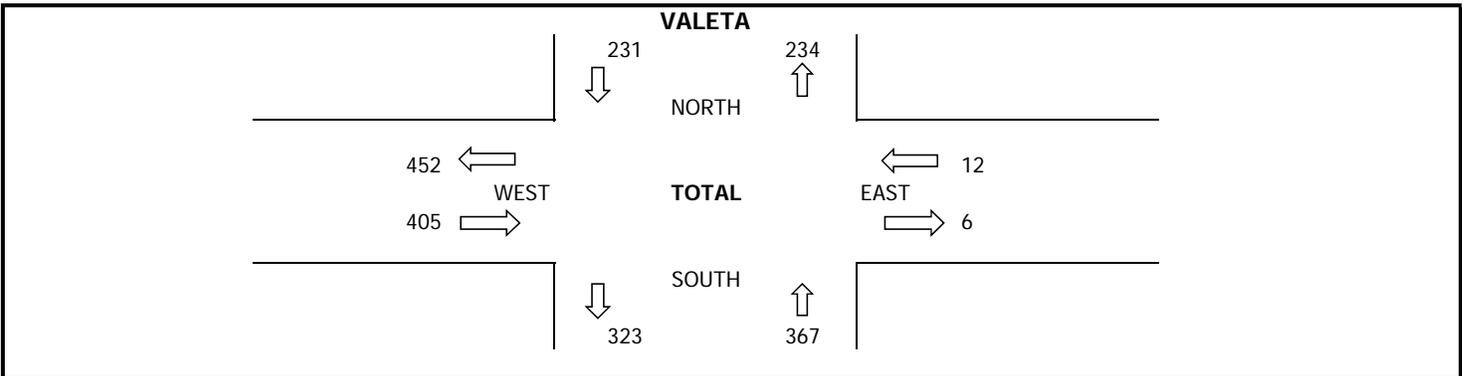
LOCATION: POINT LOMA
NORTH/SOUTH: VALETA
EAST/WEST: FAMOSA

PROJECT #: PTD14-0307-03
LOCATION #: 1
CONTROL: 4-WAY STOP

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | | E ▶ |
| | OTHER | | S | |
| | OTHER | | ▼ | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
| | VALETA | | | VALETA | | | FAMOSA | | | FAMOSA | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | |

| INTERSECTION TURNING MOVEMENT | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL | | |
|-------------------------------|------------|-----|-----|------------|-------|-----|-----------|----|-----|-----------|-----|-----|-------|---|-----|
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | | | |
| | 12:00 PM | 39 | 9 | 0 | 0 | 4 | 23 | 18 | 0 | 28 | 0 | 2 | | 0 | 123 |
| | 12:15 PM | 34 | 12 | 0 | 0 | 8 | 16 | 17 | 0 | 27 | 0 | 2 | | 0 | 116 |
| | 12:30 PM | 26 | 14 | 0 | 1 | 8 | 17 | 19 | 0 | 28 | 0 | 1 | | 0 | 114 |
| | 12:45 PM | 30 | 9 | 0 | 0 | 8 | 20 | 31 | 0 | 28 | 1 | 1 | | 0 | 128 |
| | 1:00 PM | 26 | 12 | 0 | 0 | 9 | 21 | 22 | 3 | 31 | 1 | 0 | | 0 | 125 |
| | 1:15 PM | 49 | 9 | 0 | 0 | 8 | 32 | 13 | 0 | 52 | 1 | 1 | | 0 | 165 |
| | 1:30 PM | 31 | 11 | 1 | 1 | 10 | 22 | 15 | 0 | 29 | 0 | 1 | | 0 | 121 |
| | 1:45 PM | 44 | 11 | 0 | 0 | 10 | 13 | 12 | 0 | 32 | 0 | 1 | | 0 | 123 |
| | 2:00 PM | | | | | | | | | | | | | | 0 |
| | 2:15 PM | | | | | | | | | | | | | | 0 |
| | 2:30 PM | | | | | | | | | | | | | | 0 |
| | 2:45 PM | | | | | | | | | | | | | | 0 |
| | 3:00 PM | | | | | | | | | | | | | | 0 |
| | 3:15 PM | | | | | | | | | | | | | | 0 |
| | 3:30 PM | | | | | | | | | | | | | | 0 |
| | 3:45 PM | | | | | | | | | | | | | | 0 |
| | 4:00 PM | | | | | | | | | | | | | | 0 |
| | 4:15 PM | | | | | | | | | | | | | | 0 |
| 4:30 PM | | | | | | | | | | | | | 0 | | |
| 4:45 PM | | | | | | | | | | | | | 0 | | |
| VOLUMES | 279 | 87 | 1 | 2 | 65 | 164 | 147 | 3 | 255 | 3 | 9 | 0 | 1,015 | | |
| APPROACH % | 76% | 24% | 0% | 1% | 28% | 71% | 36% | 1% | 63% | 25% | 75% | 0% | | | |
| APP/DEPART | 367 | / | 234 | 231 | / | 323 | 405 | / | 6 | 12 | / | 452 | 0 | | |
| BEGIN PEAK HR | 12:45 PM | | | | | | | | | | | | | | |
| VOLUMES | 136 | 41 | 1 | 1 | 35 | 95 | 81 | 3 | 140 | 3 | 3 | 0 | 539 | | |
| APPROACH % | 76% | 23% | 1% | 1% | 27% | 73% | 36% | 1% | 63% | 50% | 50% | 0% | | | |
| PEAK HR FACTOR | 0.767 | | | | 0.819 | | 0.862 | | | 0.750 | | | 0.817 | | |
| APP/DEPART | 178 | / | 122 | 131 | / | 178 | 224 | / | 5 | 6 | / | 234 | 0 | | |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:
3/19/14
WEDNESDAY

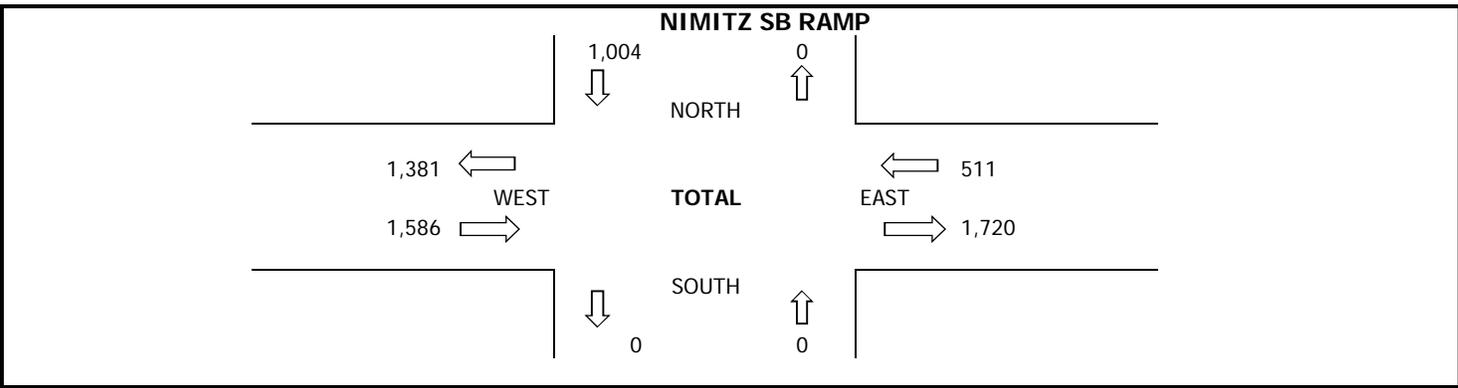
LOCATION: POINT LOMA
NORTH/SOUTH: NIMITZ SB RAMP
EAST/WEST: FAMOSA

PROJECT #: PTD14-0307-03
LOCATION #: 1
CONTROL: SIGNAL

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | | E ▶ |
| | OTHER | | S | |
| | OTHER | | ▼ | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|----------------|----|----|----------------|----|-----|-----------|----|----|-----------|----|----|-------|
| | NIMITZ SB RAMP | | | NIMITZ SB RAMP | | | FAMOSA | | | FAMOSA | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | X | X | X | 0.5 | X | 0.5 | X | 1 | X | X | 1 | X | |

| INTERSECTION TURNING MOVEMENT | 4:00 PM | | | | 16 | | 108 | | 223 | | | 47 | | 394 | |
|-------------------------------|---------|----|----|-------|----|-----|-------|-------|-------|-------|------|-------|-------|-------|---|
| | 4:15 PM | | | | 24 | | 107 | | 213 | | | 68 | | 412 | |
| | 4:30 PM | | | | 10 | | 93 | | 210 | | | 82 | | 395 | |
| | 4:45 PM | | | | 17 | | 103 | | 196 | | | 62 | | 378 | |
| | 5:00 PM | | | | 17 | | 114 | | 185 | | | 58 | | 374 | |
| | 5:15 PM | | | | 19 | | 118 | | 202 | | | 72 | | 411 | |
| | 5:30 PM | | | | 16 | | 126 | | 183 | | | 62 | | 387 | |
| | 5:45 PM | | | | 15 | | 101 | | 174 | | | 60 | | 350 | |
| | 6:00 PM | | | | | | | | | | | | | | 0 |
| | 6:15 PM | | | | | | | | | | | | | | 0 |
| | 6:30 PM | | | | | | | | | | | | | | 0 |
| | 6:45 PM | | | | | | | | | | | | | | 0 |
| | 7:00 PM | | | | | | | | | | | | | | 0 |
| | 7:15 PM | | | | | | | | | | | | | | 0 |
| | 7:30 PM | | | | | | | | | | | | | | 0 |
| | 7:45 PM | | | | | | | | | | | | | | 0 |
| | 8:00 PM | | | | | | | | | | | | | | 0 |
| | 8:15 PM | | | | | | | | | | | | | | 0 |
| | 8:30 PM | | | | | | | | | | | | | | 0 |
| | 8:45 PM | | | | | | | | | | | | | | 0 |
| VOLUMES | 0 | 0 | 0 | 134 | 0 | 870 | 0 | 1,586 | 0 | 0 | 511 | 0 | 0 | 3,101 | |
| APPROACH % | 0% | 0% | 0% | 13% | 0% | 87% | 0% | 100% | 0% | 0% | 100% | 0% | 0% | | |
| APP/DEPART | 0 | / | 0 | 1,004 | / | 0 | 1,586 | / | 1,720 | 511 | / | 1,381 | 0 | | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | | |
| VOLUMES | 0 | 0 | 0 | 67 | 0 | 411 | 0 | 842 | 0 | 0 | 259 | 0 | 0 | 1,579 | |
| APPROACH % | 0% | 0% | 0% | 14% | 0% | 86% | 0% | 100% | 0% | 0% | 100% | 0% | 0% | | |
| PEAK HR FACTOR | 0.000 | | | 0.912 | | | 0.944 | | | 0.790 | | | 0.958 | | |
| APP/DEPART | 0 | / | 0 | 478 | / | 0 | 842 | / | 909 | 259 | / | 670 | 0 | | |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:
3/19/14
WEDNESDAY

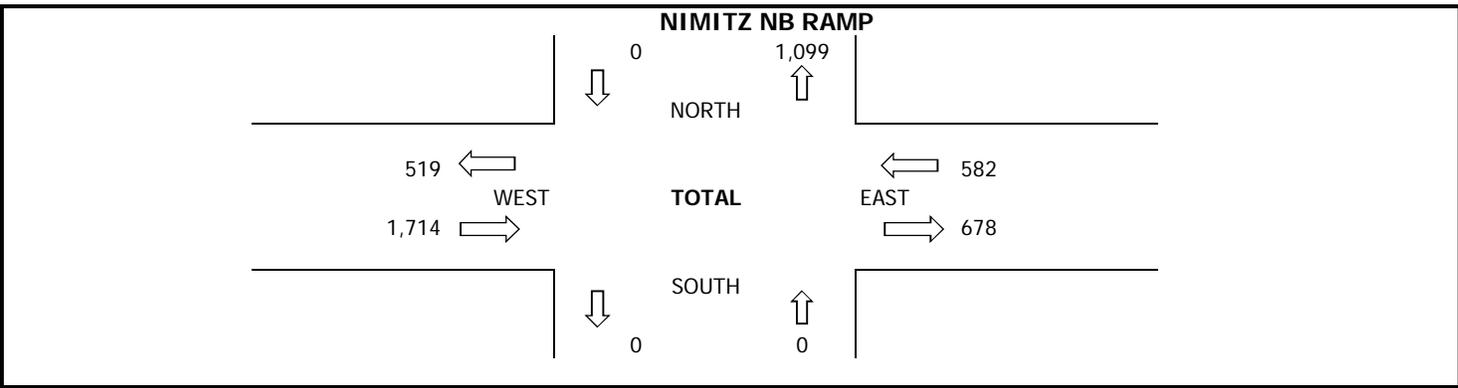
LOCATION: POINT LOMA
NORTH/SOUTH: NIMITZ NB RAMP
EAST/WEST: FAMOSA

PROJECT #: PTD14-0307-03
LOCATION #: 2
CONTROL: NO STOP

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | | E ▶ |
| | OTHER | | S | |
| | OTHER | | ▼ | |

| LANES: | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|----------------|----|----|----------------|----|----|-----------|----|----|-----------|----|----|-------|
| | NIMITZ NB RAMP | | | NIMITZ NB RAMP | | | FAMOSA | | | FAMOSA | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| | X | X | X | X | X | X | 1 | 1 | X | X | 1 | 0 | |

| INTERSECTION TURNING MOVEMENT | 4:00 PM | | | | | | 125 | 110 | | | 48 | 6 | 289 |
|-------------------------------|---------|----|-------|-------|----|----|-------|-----|-----|-------|-----|-----|-------|
| | 4:15 PM | | | | | | 129 | 107 | | | 73 | 7 | 316 |
| | 4:30 PM | | | | | | 130 | 89 | | | 83 | 9 | 311 |
| | 4:45 PM | | | | | | 134 | 80 | | | 60 | 9 | 283 |
| | 5:00 PM | | | | | | 110 | 92 | | | 67 | 5 | 274 |
| | 5:15 PM | | | | | | 146 | 75 | | | 65 | 9 | 295 |
| | 5:30 PM | | | | | | 134 | 63 | | | 66 | 11 | 274 |
| | 5:45 PM | | | | | | 128 | 62 | | | 57 | 7 | 254 |
| | 6:00 PM | | | | | | | | | | | | 0 |
| | 6:15 PM | | | | | | | | | | | | 0 |
| | 6:30 PM | | | | | | | | | | | | 0 |
| | 6:45 PM | | | | | | | | | | | | 0 |
| | 7:00 PM | | | | | | | | | | | | 0 |
| | 7:15 PM | | | | | | | | | | | | 0 |
| | 7:30 PM | | | | | | | | | | | | 0 |
| | 7:45 PM | | | | | | | | | | | | 0 |
| | 8:00 PM | | | | | | | | | | | | 0 |
| | 8:15 PM | | | | | | | | | | | | 0 |
| | 8:30 PM | | | | | | | | | | | | 0 |
| | 8:45 PM | | | | | | | | | | | | 0 |
| VOLUMES | 0 | 0 | 0 | 0 | 0 | 0 | 1,036 | 678 | 0 | 0 | 519 | 63 | 2,296 |
| APPROACH % | 0% | 0% | 0% | 0% | 0% | 0% | 60% | 40% | 0% | 0% | 89% | 11% | |
| APP/DEPART | 0 | / | 1,099 | 0 | / | 0 | 1,714 | / | 678 | 582 | / | 519 | 0 |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | |
| VOLUMES | 0 | 0 | 0 | 0 | 0 | 0 | 518 | 386 | 0 | 0 | 264 | 31 | 1,199 |
| APPROACH % | 0% | 0% | 0% | 0% | 0% | 0% | 57% | 43% | 0% | 0% | 89% | 11% | |
| PEAK HR FACTOR | 0.000 | | | 0.000 | | | 0.958 | | | 0.802 | | | 0.949 |
| APP/DEPART | 0 | / | 549 | 0 | / | 0 | 904 | / | 386 | 295 | / | 264 | 0 |



INTERSECTION TURNING MOVEMENT COUNTS

PREPARED BY: PACIFIC TECHNICAL DATA

DATE:
3/19/14
WEDNESDAY

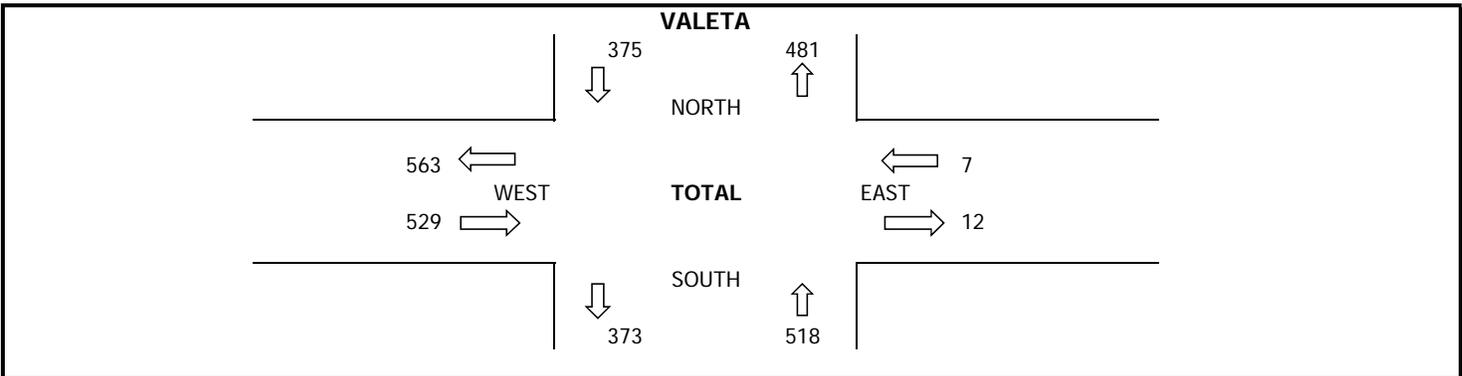
LOCATION: POINT LOMA
NORTH/SOUTH: VALETA
EAST/WEST: FAMOSA

PROJECT #: PTD14-0307-03
LOCATION #: 3
CONTROL: 4-WAY STOP

| | | | | |
|--------|-------|-----|---|-----|
| NOTES: | AM | | ▲ | |
| | PM | | N | |
| | MD | ◀ W | | E ▶ |
| | OTHER | | S | |
| | OTHER | | ▼ | |

| | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL |
|--------|------------|----|----|------------|----|----|-----------|----|----|-----------|----|----|-------|
| | VALETA | | | VALETA | | | FAMOSA | | | FAMOSA | | | |
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | |
| LANES: | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | |

| INTERSECTION TURNING MOVEMENT | NORTHBOUND | | | SOUTHBOUND | | | EASTBOUND | | | WESTBOUND | | | TOTAL | |
|-------------------------------|------------|-----|-------|------------|-------|-----|-----------|----|-------|-----------|-----|-----|-------|-----|
| | NL | NT | NR | SL | ST | SR | EL | ET | ER | WL | WT | WR | | |
| | 4:00 PM | 27 | 46 | 1 | 1 | 14 | 35 | 49 | 0 | 33 | 0 | 1 | 0 | 207 |
| | 4:15 PM | 39 | 46 | 1 | 0 | 23 | 39 | 47 | 0 | 32 | 1 | 0 | 0 | 228 |
| | 4:30 PM | 41 | 24 | 1 | 1 | 17 | 45 | 41 | 0 | 34 | 0 | 1 | 0 | 205 |
| | 4:45 PM | 39 | 20 | 0 | 0 | 10 | 29 | 20 | 0 | 35 | 1 | 0 | 0 | 154 |
| | 5:00 PM | 33 | 14 | 1 | 0 | 10 | 29 | 32 | 0 | 34 | 1 | 0 | 0 | 154 |
| | 5:15 PM | 44 | 21 | 0 | 0 | 9 | 27 | 27 | 0 | 31 | 0 | 0 | 0 | 159 |
| | 5:30 PM | 38 | 19 | 0 | 0 | 20 | 27 | 27 | 0 | 36 | 1 | 0 | 0 | 168 |
| | 5:45 PM | 37 | 23 | 3 | 1 | 7 | 31 | 25 | 2 | 24 | 0 | 1 | 0 | 154 |
| | 6:00 PM | | | | | | | | | | | | | 0 |
| | 6:15 PM | | | | | | | | | | | | | 0 |
| | 6:30 PM | | | | | | | | | | | | | 0 |
| | 6:45 PM | | | | | | | | | | | | | 0 |
| | 7:00 PM | | | | | | | | | | | | | 0 |
| | 7:15 PM | | | | | | | | | | | | | 0 |
| | 7:30 PM | | | | | | | | | | | | | 0 |
| | 7:45 PM | | | | | | | | | | | | | 0 |
| | 8:00 PM | | | | | | | | | | | | | 0 |
| | 8:15 PM | | | | | | | | | | | | | 0 |
| 8:30 PM | | | | | | | | | | | | | 0 | |
| 8:45 PM | | | | | | | | | | | | | 0 | |
| VOLUMES | 298 | 213 | 7 | 3 | 110 | 262 | 268 | 2 | 259 | 4 | 3 | 0 | 1,429 | |
| APPROACH % | 58% | 41% | 1% | 1% | 29% | 70% | 51% | 0% | 49% | 55% | 41% | 5% | | |
| APP/DEPART | 518 | / | 481 | 375 | / | 373 | 529 | / | 12 | 7 | / | 563 | 0 | |
| BEGIN PEAK HR | 4:00 PM | | | | | | | | | | | | | |
| VOLUMES | 146 | 136 | 3 | 2 | 64 | 148 | 157 | 0 | 134 | 2 | 2 | 0 | 794 | |
| APPROACH % | 51% | 48% | 1% | 1% | 30% | 69% | 54% | 0% | 46% | 50% | 50% | 0% | | |
| PEAK HR FACTOR | 0.828 | | 0.849 | | 0.887 | | 1.000 | | 0.871 | | | | | |
| APP/DEPART | 285 | / | 293 | 214 | / | 200 | 291 | / | 5 | 4 | / | 296 | 0 | |



Appendix B

City of San Diego Traffic Study Checklist

CITY OF SAN DIEGO
 TRANSPORTATION DEVELOPMENT SECTION
 TRAFFIC IMPACT STUDY
 SCREEN CHECK

To be completed by City Staff:
 Date Received _____
 Reviewer _____
 Date Screen Check _____

To be completed by consultant (including page #):
 Name of Traffic Study CORREIA MIDDLE SCHOOL SPORTS COMPLEX
 Consultant LOS ENGINEERING, INC.
 Date Submitted APRIL 2014

Indicate Page # in report:

| | | Satisfactory | | |
|------------------|--|--------------------------|--------------------------|--------------------------|
| | | YES | NO | NOT REQUIRED |
| pg. <u>ii</u> | 1. Table of contents, list of figures and list of tables. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>iv</u> | 2. Executive summary. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>2</u> | 3. Map of the proposed project location | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 4. General project description and background information: | | | |
| pg. <u>11</u> | a. Proposed project description (acres, dwelling units...) | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>13</u> | b. Total trip generation of proposed project. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>11</u> | c. Community plan assumption for the proposed site. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>6</u> | d. Discuss how project affects the Congestion Management program. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>7</u> | 5. Parking, transit and on-site circulation discussions are included. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>8</u> | 6. Map of the Transportation Impact Study Area and specific intersections studied in the traffic report. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>8</u> | 7. Existing Transportation Conditions: | | | |
| | a. Figure identifying roadway conditions including raised medians, median openings, separate left and right turn lanes, roadway and intersection dimensions, bike lanes, parking, number of travel lanes, posted speed, intersection controls, turn restrictions and intersection lane configurations. | <input type="checkbox"/> | <input type="checkbox"/> | |
| | b. Figure indicating the daily (ADT) and peak hour volumes. | <input type="checkbox"/> | <input type="checkbox"/> | |
| | c. Figure or table showing level of service (LOS) for intersections during peak hours and roadway sections within the study area (analysis sheets included in the appendix). | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 8. Project Trip Generation: | | | |
| pg. <u>13-15</u> | Table showing the calculated project generated daily (ADT) and the peak hour volumes. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>17</u> | 9. Project Trip Distribution using the current TRANPLAN Computer Traffic Model (provide a computer plot) or manual assignment if previously approved. (Identify which method was used.) | <input type="checkbox"/> | <input type="checkbox"/> | |
| | 10. Project Traffic Assignment: | | | |
| pg. <u>18</u> | a. Figure indicating the daily (ADT) and peak hour volumes. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>NA</u> | b. Figure showing pass-by-trip adjustments, if cumulative trip rates are used. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | 11. Existing + Other Pending Projects: | | | |
| pg. <u>22</u> | a. Figure indicating the daily (ADT) and peak hour volumes. | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>21</u> | b. Figure or table showing the projected LOS for intersections during peak hours and roadway sections within the study area (analysis sheets included in the appendix). | <input type="checkbox"/> | <input type="checkbox"/> | |
| pg. <u>NA</u> | c. Traffic signal warrant analysis for appropriate locations (signal warrants included in the appendix). | <input type="checkbox"/> | <input type="checkbox"/> | |

12. Existing + Other Pending Projects + Project (short term cumulative):

- pg. 24 a. Figure or table showing the projected LOS for intersections during peak hours and roadway sections with the project (analysis sheets included in the appendix).
- pg. 23 b. Figure showing other projects that were included in the study, and the assignment of their site traffic.
- pg. NA c. Traffic signal warrant analysis for appropriate locations (signal warrants in the appendix).

13. Build-out Transportation Conditions (if project conforms to the community plan):

- pg. 25 a. Build-out ADT and street classification that reflect the community plan.
- pg. 25 b. Figure or table showing the build-out LOS for intersections during peak hours and roadway sections with the project (analysis sheets included in the appendix).
- pg. NA c. Traffic signal warrant analysis at appropriate locations (signal warrants included in the appendix).

14. Build-out Transportation Conditions (if project does not conform to the community plan):

- pg. NA a. Build-out ADT and street classification as shown in the community plan.
- pg. NA b. Build-out ADT and street classification for two scenarios: with the proposed project and with the land use assumed in the community plan.
- pg. NA c. Figure or table showing the build-out LOS for intersections during peak hours and roadway sections for two scenarios: with the proposed project and with the land use assumed in the community plan (analysis sheets included in the appendix).
- pg. NA d. Traffic signal warrant analysis at appropriate locations with the land use assumed in the community plan (signal warrants included in the appendix).

- pg. 30 15. A summary table showing the comparison of Existing, Existing + Other Pending Projects, Existing + Other Pending Projects + Proposed Project, and Buildout, LOS on roadway sections and intersections during peak hours.

16. Transportation Mitigation Measures.

- pg. 30 a. Table identifying the mitigations required that are the responsibility of the developer and others. A phasing plan is required if mitigations are proposed in phases.
- pg. NA b. Figure showing all proposed mitigations that include: intersection lane configurations, lane widths, raised medians, median openings, roadway and intersection dimensions, right-of-way, offset, etc.

- pg. ON FILE 17. The traffic study is signed by a California Registered Traffic Engineer.

- pg. 4 18. The Highway Capacity Manual Operational Method or other approved method is used at appropriate locations within the study area.

- pg. 6 19. Analysis complies with Congestion Management requirements.

- pg. NA 20. Appropriate freeway analysis is included.

- pg. NA 21. Appropriate freeway ramp metering analysis is included.

THE TRAFFIC STUDY SCREEN CHECK FOR THE SUBJECT PROJECT IS:

Approved
 Not approved because the following items are missing:

Appendix C

SANDAG CMP Roadways

Exhibit 4-1
List of CMP System Roadways

| CMP Freeways: |
|--|
| Interstate 5: Orange County Line to U.S./Mexico Border |
| Interstate 8: Nimitz Boulevard to Imperial County Line |
| Interstate 15: Riverside County Line to I-5 |
| Interstate 805: I-5 (North) to I-5 (South) |
| State Route 52: I-5 to SR 25 |
| State Route 54: I-5 to Briarwood Road |
| State Route 56: I-5 to Carmel Valley Road and I-15 to Black Mountain Road |
| State Route 67: Maplevue Street to I-8 |
| State Route 78: I-5 to North Broadway |
| State Route 94: I-5 to Avocado Boulevard |
| State Route 125: SR 54 to SR 94 |
| State Route 163: I-15 to I-5 |
| State Route 905: Oro Vista Road to Otay Mesa Road |
| CMP Highways: |
| State Route 54: I-8 to SR 94 |
| State Route 67: SR 78 to Maplevue Valley |
| State Route 75: I-5 (North) to I-5 (South) |
| State Route 76: Coast Highway to SR 79 |
| State Route 78: North Broadway to Imperial County Line |
| State Route 79: Riverside County Line to I-8 |
| State Route 94: Avocado Boulevard to Old Highway 80 |
| State Route 282: Alameda Boulevard to Orange Avenue |
| CMP Arterials: |
| (1) Balboa Avenue: I-5 to I-15 ¹ |
| (2) Centre City Parkway: I-15 (North) to I-15 (South) |
| (3) Fletcher Parkway/Broadway/E. Main Street/Greenfield Drive: I-8 (West) to I-8 (East) |
| (4) La Jolla Village Drive/Miramar Road: I-5 to I-15 |
| (5) Manchester Avenue/El Camino Real: I-5 to SR 76/Mission Avenue |
| (6) Nimitz Blvd./North Harbor Dr./Grape & Hawthorne Streets/Pacific Highway/Harbor Drive: I-8 to I-5 |
| (7) Olivenhain Road/Rancho Santa Fe Road: El Camino Real to SR 78 |
| (8) Otay Mesa Road-Interim SR 905: SR 905 (West) to SR 905 (East) ² |
| (9) Palomar Airport Road/San Marcos Boulevard: I-5 to SR 78 |
| (10) Sea World Drive/Friars Road/Mission Gorge Road/Woodside Avenue: I-5 to SR 67 |
| (11) Scripps Poway Parkway: I-15 to SR 67 |
| (12) SR 54 & Sweetwater Road-Interim SR 125: I-805 to Broadway ² |

¹This CMP Arterial was formerly designated as CMP State Highway 274.

²These CMP Arterials are designated as interim facilities on the CMP network and will be replaced by a state highway following their construction.

Appendix D

Community Plan Roadway Classifications

Peninsula Community Plan and Local Coastal Program Land Use Plan

July 14, 1987

This plan has been prepared by the City of San Diego Planning
Department and the Peninsula Community Planning Board.

City of San Diego Planning Department
202 C Street, MS 4A
San Diego, CA 92101



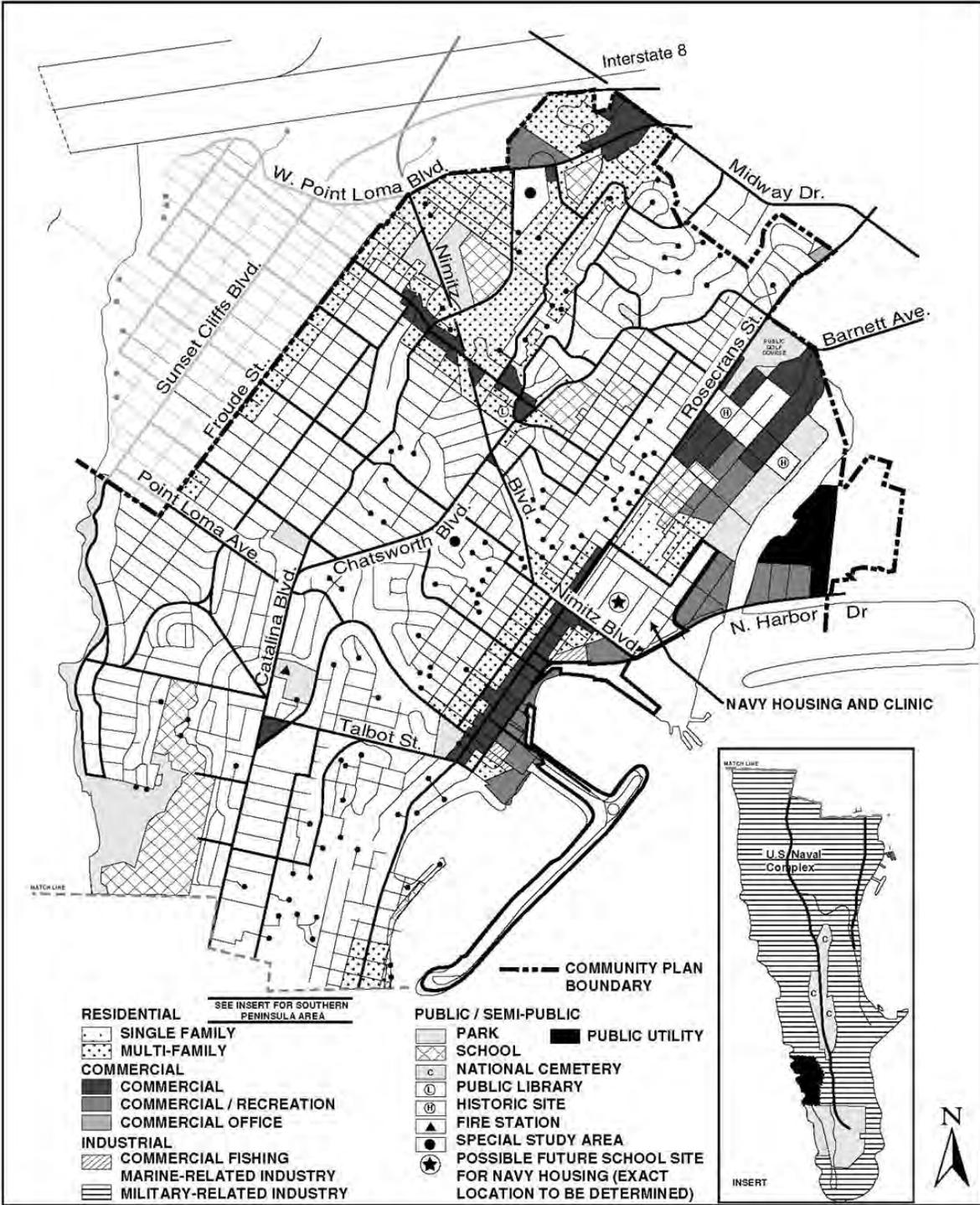
Printed on recycled paper.

This information, or this document (or portions thereof), will be made available in alternative formats upon request.

Peninsula Community Plan

The following information has been incorporated into this December 2005 posting of this plan:

| Amendment | Date Approved by Planning Commission | Resolution Number | Date Adopted by City Council | Resolution Number |
|--|---|------------------------------|---|------------------------------|
| Peninsula Community Plan adopted | March 12, 1987 | 6866-PC | July 14, 1987 | R-268871 |
| Certified by California Coastal Commission October 11, 1989 | | | | |
| Type B CPIOZ established | | | June 20, 1989 | R-273822 |
| Single-family neighborhood protection designation | | | September 11, 1989 | R-274362 |
| North Bay Revitalization Program Amendment | | | January 19, 1999 | R-291202 |
| NTC land use designation changed | September 28, 2000 | | October 3, 2000 | R-293938 |
| Land use redesignation from Industrial-Commercial to Multifamily Residential. | December 18, 2003 | | April 27, 2004 | R-299138 |
| Land use redesignation from Industrial, Commercial Fishing/Marine Related Industry to Commercial Recreation | October 7, 2008 | R-4092 | May 31, 2011 | R-306814 |

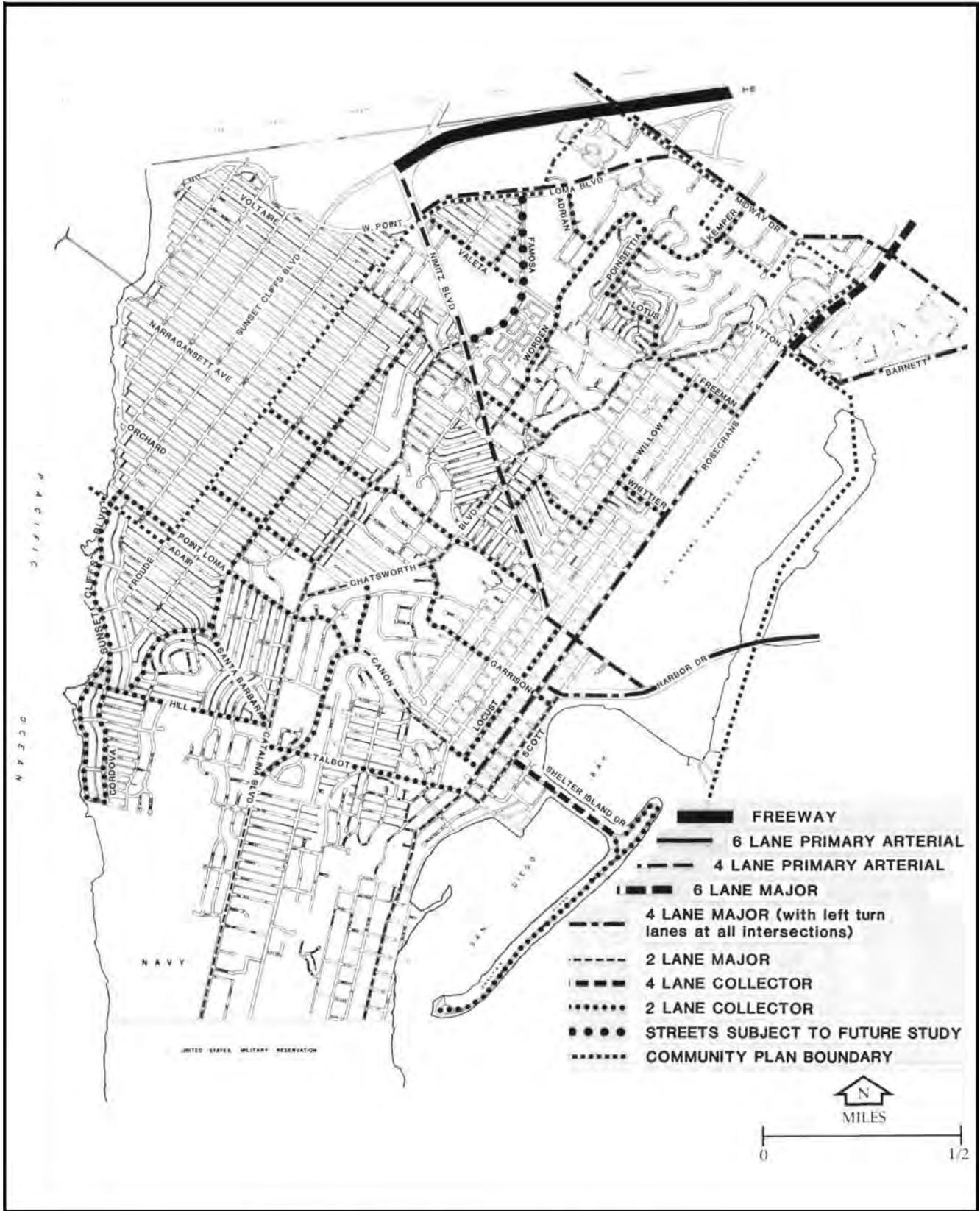


Land Use
Peninsula Community Plan
 CITY OF SAN DIEGO • PLANNING DEPARTMENT

figure
5

H:\jaha\mapping\convertedmaomaps\peninsula\pen_tu_11g5_withAmend.ai
 05/25/06 JAA

5. Land Use Plan



Proposed 1995 Vehicular Circulation System Peninsula Community Plan

CITY OF SAN DIEGO PLANNING DEPARTMENT

FIGURE 13

Appendix E

Transit Map and Schedule





CASH FARES / Tarifas en efectivo

| | |
|---|---------------|
| Exact fare, please / Favor de pagar la cantidad exacta | |
| Day Pass (Regional) / Pase diario (Regional) | \$5.00 |
| One-Way Fare / Tarifa de una dirección | \$2.25 |
| Senior (60+)/Disabled/Medicare Mayores de 60 años/Discapacitados/Medicare | \$1.10* |
| Children 5 & under / Niños de 5 años o menos <small>Up to two children ride free per paying adult / Máximo dos niños viajan gratis por cada adulto</small> | FREE / GRATIS |

MONTHLY PASSES / Pases mensual

| | |
|--|----------|
| Adult / Adulto | \$72.00 |
| Senior (60+)/Disabled/Medicare Mayores de 60 años/Discapacitados/Medicare | \$18.00* |
| Youths (18 and under) Jóvenes (18 años o menos) | \$36.00* |

*I.D. required for discount fare or pass.
*Se requiere identificación para tarifas o pases de descuento.

DAY PASS (REGIONAL) / Pase diario (Regional)

Valid for unlimited travel for one person on Trolley, most MTS buses, NCTD BREEZE and SPRINTER. Valid for a discount on COASTER fares. Not valid on Premium Express, Rural, Access, or special service buses.

Válidos para viajes ilimitados de una sola persona para: el Trolley, la mayoría de los autobuses de MTS, y los servicios del NCTD de BREEZE y SPRINTER. Válidos para acceder a descuentos en el COASTER, pero no para las rutas Premium Express, rurales, Access, ni los servicios especiales.

DIRECTORY / Directorio

| | |
|---|---|
| Regional Transit Information <i>Información de transporte público regional</i> | 511 or/ó (619) 233-3004 |
| TTY/TDD (teletype for hearing impaired) <i>Teletipo para sordos</i> | (619) 234-5005 or/ó (888) 722-4889 |
| InfoExpress (24-hour info via Touch-Tone phone) <i>Información las 24 horas (via teléfono de teclas)</i> | (619) 685-4900 |
| Customer Service / Suggestions <i>Servicio al cliente / Sugerencias</i> | (619) 557-4555 |
| SafeWatch | (619) 557-4500 |
| Lost & Found <i>Objetos extraviados</i> | Weekday (619) 427-5660 Saturday (877) 841-3278 (800) 409-3310 |
| The Transit Store | (619) 234-1060 1st & Broadway, Downtown San Diego M-F 9am-5pm |

For MTS online trip planning www.sdmts.com
Planificación de viajes por Internet

For more information on riding MTS services, pick up a Rider's Guide on a bus or at The Transit Store, or visit www.sdmts.com.
Para obtener más información sobre el uso de los servicios de MTS, recoja un 'Rider's Guide' en un autobús o en The Transit Store, o visita a www.sdmts.com.

Thank you for riding MTS! ¡Gracias por viajar con MTS!

923

Ocean Beach – Downtown

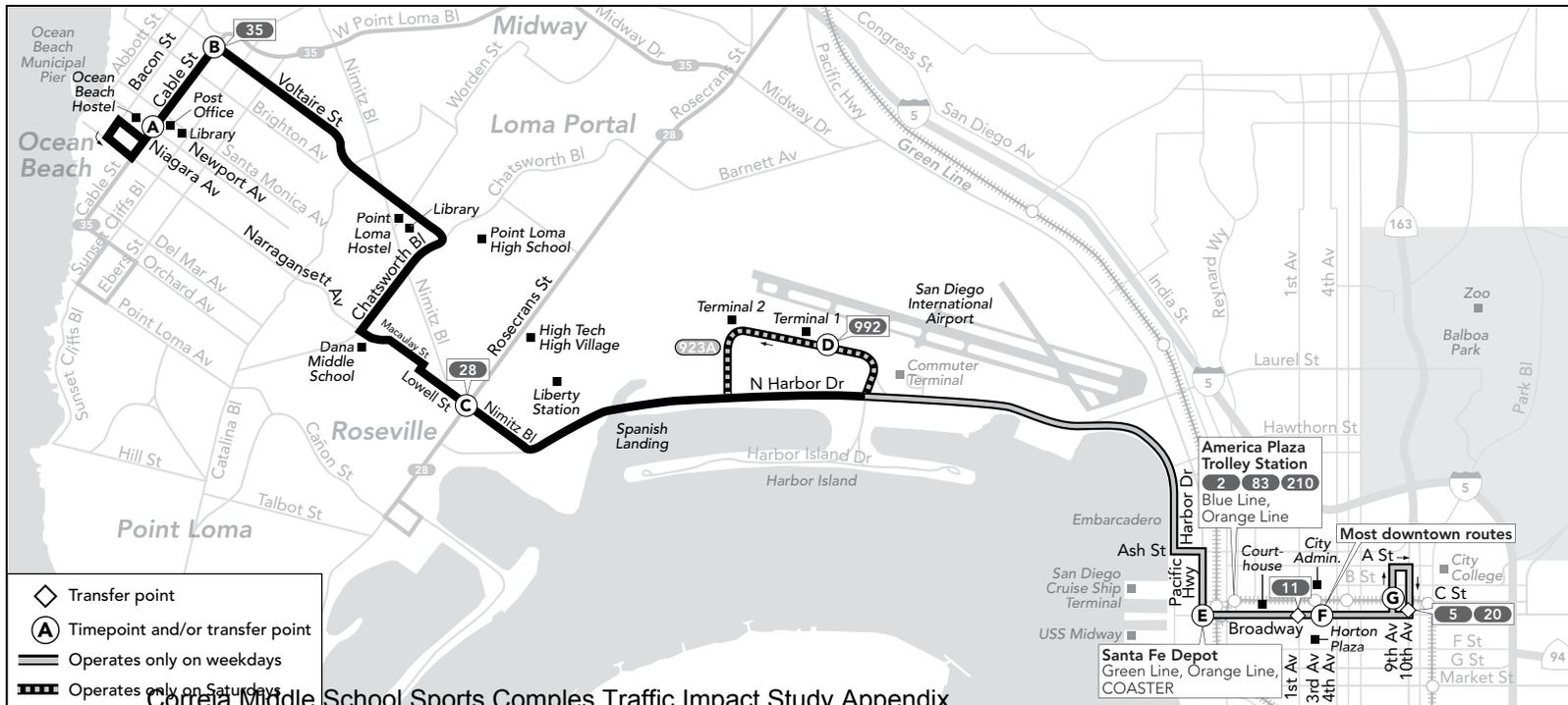
via Voltaire St. / Harbor Dr.

DESTINATIONS

- Embarcadero
- Horton Plaza
- Liberty Station
- Point Loma High School
- SD International Airport
- Voltaire St.



America Plaza
Santa Fe Depot



The schedules and other information shown in this timetable are subject to change. MTS does not assume responsibility for errors in timetables nor for any inconvenience caused by delayed buses.

Los horarios e información que se indican en este itinerario están sujetos a cambios. MTS no asume responsabilidad por errores en los itinerarios, ni por ningún perjuicio que se origine por los autobuses.

Alternative formats available upon request. Please call: (619) 557-4555
 Formato alternativo disponible al preguntar. Favor de llamar: (619) 557-4555

Route 923 – Monday through Friday / lunes a viernes

Ocean Beach ➔ Downtown

| (A) Cable St. & Newport Av. DEPART | (B) Cable St. & Voltaire St. | (C) Nimitz Bl. & Rosecrans St. | (E) Broadway & Pacific Highway | (F) Broadway & 3rd Av. | (G) 9th Av. & C St. ARRIVE |
|--|---------------------------------|-----------------------------------|-----------------------------------|---------------------------|----------------------------------|
| 5:14a | 5:20a | 5:30a | 5:40a | 5:44a | 5:50a |
| 5:44 | 5:50 | 6:00 | 6:10 | 6:14 | 6:20 |
| 6:14 | 6:20 | 6:30 | 6:40 | 6:44 | 6:50 |
| 6:41 | 6:48 | 6:59 | 7:10 | 7:15 | 7:22 |
| 7:11 | 7:18 | 7:29 | 7:40 | 7:45 | 7:52 |
| 7:41 | 7:48 | 7:59 | 8:10 | 8:15 | 8:22 |
| 8:11 | 8:18 | 8:29 | 8:40 | 8:45 | 8:52 |
| 8:41 | 8:48 | 8:59 | 9:10 | 9:15 | 9:22 |
| 9:11 | 9:18 | 9:29 | 9:40 | 9:45 | 9:52 |
| 9:37 | 9:45 | 9:57 | 10:10 | 10:15 | 10:23 |
| 10:07 | 10:15 | 10:27 | 10:40 | 10:45 | 10:53 |
| 10:37 | 10:45 | 10:57 | 11:10 | 11:15 | 11:23 |
| 11:07 | 11:15 | 11:27 | 11:40 | 11:45 | 11:53 |
| 11:37 | 11:45 | 11:57 | 12:10p | 12:15p | 12:23p |
| 12:07p | 12:15p | 12:27p | 12:40 | 12:45 | 12:53 |
| 12:37 | 12:45 | 12:57 | 1:10 | 1:15 | 1:23 |
| 1:05 | 1:13 | 1:26 | 1:40 | 1:45 | 1:53 |
| 1:35 | 1:43 | 1:56 | 2:10 | 2:15 | 2:23 |
| 2:05 | 2:13 | 2:26 | 2:40 | 2:45 | 2:53 |
| 2:35 | 2:43 | 2:56 | 3:10 | 3:15 | 3:23 |
| 3:05 | 3:13 | 3:26 | 3:40 | 3:45 | 3:53 |
| 3:35 | 3:43 | 3:56 | 4:10 | 4:15 | 4:23 |
| 4:05 | 4:13 | 4:26 | 4:40 | 4:45 | 4:53 |
| 4:35 | 4:43 | 4:56 | 5:10 | 5:15 | 5:23 |
| 5:05 | 5:13 | 5:26 | 5:40 | 5:45 | 5:53 |
| 5:35 | 5:43 | 5:56 | 6:10 | 6:15 | 6:23 |
| 6:05 | 6:13 | 6:26 | 6:40 | 6:45 | 6:53 |
| 6:39 | 6:46 | 6:57 | 7:10 | 7:15 | 7:22 |

Downtown ➔ Ocean Beach

| (G) 9th Av. & C St. DEPART | (F) Broadway & 4th Av. | (E) Pacific Highway & Broadway | (C) Nimitz Bl. & Rosecrans St. | (B) Cable St. & Voltaire St. | (A) Cable St. & Newport Av. ARRIVE |
|----------------------------------|---------------------------|-----------------------------------|-----------------------------------|---------------------------------|--|
| 5:41a | 5:45a | 5:50a | 6:02a | 6:11a | 6:15a |
| 6:11 | 6:15 | 6:20 | 6:32 | 6:41 | 6:45 |
| 6:38 | 6:43 | 6:50 | 7:02 | 7:12 | 7:17 |
| 7:08 | 7:13 | 7:20 | 7:32 | 7:42 | 7:47 |
| 7:38 | 7:43 | 7:50 | 8:02 | 8:12 | 8:17 |
| 8:08 | 8:13 | 8:20 | 8:32 | 8:42 | 8:47 |
| 8:38 | 8:43 | 8:50 | 9:02 | 9:12 | 9:17 |
| 9:08 | 9:13 | 9:20 | 9:32 | 9:42 | 9:47 |
| 9:36 | 9:41 | 9:50 | 10:02 | 10:13 | 10:19 |
| 10:06 | 10:11 | 10:20 | 10:32 | 10:43 | 10:49 |
| 10:36 | 10:41 | 10:50 | 11:02 | 11:13 | 11:19 |
| 11:06 | 11:11 | 11:20 | 11:32 | 11:43 | 11:49 |
| 11:36 | 11:41 | 11:50 | 12:02p | 12:13p | 12:19p |
| 12:06p | 12:11p | 12:20p | 12:32 | 12:43 | 12:49 |
| 12:36 | 12:41 | 12:50 | 1:02 | 1:13 | 1:19 |
| 1:06 | 1:11 | 1:20 | 1:32 | 1:44 | 1:50 |
| 1:36 | 1:41 | 1:50 | 2:02 | 2:14 | 2:20 |
| 2:06 | 2:11 | 2:20 | 2:32 | 2:44 | 2:50 |
| 2:36 | 2:41 | 2:50 | 3:02 | 3:14 | 3:20 |
| 3:08 | 3:13 | 3:20 | 3:33 | 3:46 | 3:52 |
| 3:38 | 3:43 | 3:50 | 4:03 | 4:16 | 4:22 |
| 4:08 | 4:13 | 4:20 | 4:33 | 4:46 | 4:52 |
| 4:38 | 4:43 | 4:50 | 5:03 | 5:16 | 5:22 |
| 5:08 | 5:13 | 5:20 | 5:33 | 5:46 | 5:52 |
| 5:38 | 5:43 | 5:50 | 6:03 | 6:16 | 6:22 |
| 6:08 | 6:13 | 6:20 | 6:33 | 6:44 | 6:49 |
| 6:39 | 6:44 | 6:50 | 7:02 | 7:12 | 7:16 |

Route 923 – Saturday / sábado

Ocean Beach ➔ SD Int'l Airport

| (A) Cable St. & Newport Av. DEPART | (B) Cable St. & Voltaire St. | (C) Nimitz Bl. & Rosecrans St. | (D) Airport Terminal 1 ARRIVE | Route 992 | |
|--|---------------------------------|-----------------------------------|-------------------------------------|-------------------------------------|---|
| | | | | (D) Airport Terminal 1 DEPART | (D) City College Trolley Station ARRIVE |
| A 6:03a | 6:10a | 6:21a | 6:26a | 6:28a | 6:51a |
| A 7:05 | 7:12 | 7:23 | 7:28 | 7:29 | 7:54 |
| A 8:05 | 8:12 | 8:23 | 8:28 | 8:29 | 8:54 |
| A 9:05 | 9:12 | 9:23 | 9:28 | 9:29 | 9:54 |
| A 10:02 | 10:10 | 10:22 | 10:28 | 10:29 | 10:54 |
| A 11:02 | 11:10 | 11:22 | 11:28 | 11:29 | 11:56 |
| A 12:02p | 12:10p | 12:22p | 12:28p | 12:29p | 12:56p |
| A 1:02 | 1:10 | 1:22 | 1:28 | 1:29 | 1:56 |
| A 2:02 | 2:10 | 2:22 | 2:28 | 2:29 | 2:56 |
| A 3:02 | 3:10 | 3:22 | 3:28 | 3:29 | 3:56 |
| A 4:02 | 4:10 | 4:22 | 4:28 | 4:29 | 4:56 |
| A 5:02 | 5:10 | 5:22 | 5:28 | 5:29 | 5:56 |
| A 6:02 | 6:10 | 6:22 | 6:28 | 6:29 | 6:56 |

Route 992

| Route 992 | | SD Int'l Airport ➔ Ocean Beach | | | |
|---|-------------------------------------|-------------------------------------|-----------------------------------|---------------------------------|--|
| (D) City College Trolley Station DEPART | (D) Airport Terminal 1 ARRIVE | (D) Airport Terminal 1 DEPART | (C) Nimitz Bl. & Rosecrans St. | (B) Cable St. & Voltaire St. | (A) Cable St. & Newport Av. ARRIVE |
| 6:07a | 6:28a | 6:32a | B 6:37a | 6:45a | 6:49a |
| 7:06 | 7:29 | 7:32 | B 7:37 | 7:45 | 7:49 |
| 8:06 | 8:29 | 8:32 | B 8:37 | 8:45 | 8:49 |
| 9:06 | 9:29 | 9:32 | B 9:38 | 9:48 | 9:54 |
| 10:06 | 10:29 | 10:32 | B 10:38 | 10:48 | 10:54 |
| 11:06 | 11:29 | 11:32 | B 11:38 | 11:48 | 11:54 |
| 12:06p | 12:29p | 12:32p | B 12:38p | 12:48p | 12:54p |
| 1:06 | 1:29 | 1:32 | B 1:38 | 1:48 | 1:54 |
| 2:06 | 2:29 | 2:32 | B 2:38 | 2:48 | 2:54 |
| 3:06 | 3:29 | 3:32 | B 3:38 | 3:48 | 3:54 |
| 4:06 | 4:29 | 4:32 | B 4:38 | 4:48 | 4:54 |
| 5:06 | 5:29 | 5:32 | B 5:38 | 5:48 | 5:54 |
| 6:06 | 6:29 | 6:35 | B 6:41 | 6:49 | 6:54 |

A = Route 923A ending at San Diego International Airport. For continuing service to Downtown San Diego, transfer to Route 992 at San Diego International Airport.
 Ruta 923A que termina en el Aeropuerto Internacional de San Diego. Para continuar el servicio al Centro de San Diego, use la Ruta 992 en el Aeropuerto Internacional de San Diego.
 B = Route 923 will wait up to 8 minutes for connections from Route 992. / La ruta 923 esperará hasta 8 minutos para conexiones con la ruta 992.

Route 923 – Sunday / domingo

Route 923 does not operate on Sunday. Alternative Sunday service may include Routes 28, 35, or 992.
 Ruta 923 no opera los domingos. Servicio alternativo de domingo puede incluir las rutas 28, 35, o 992.

A Saturday or Sunday schedule will be operated on the following holidays and observed holidays
 Se operará con horario de sábado o domingo durante los siguientes días festivos y feriados observados
 Correia Middle School Sports Complex Traffic Impact Study Appendix

>>> New Year's Day, Presidents' Day, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas
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Appendix F

City of San Diego *Bicycle Master Plan Update* Excerpts



City of San Diego Bicycle Master Plan Update

San Diego, California

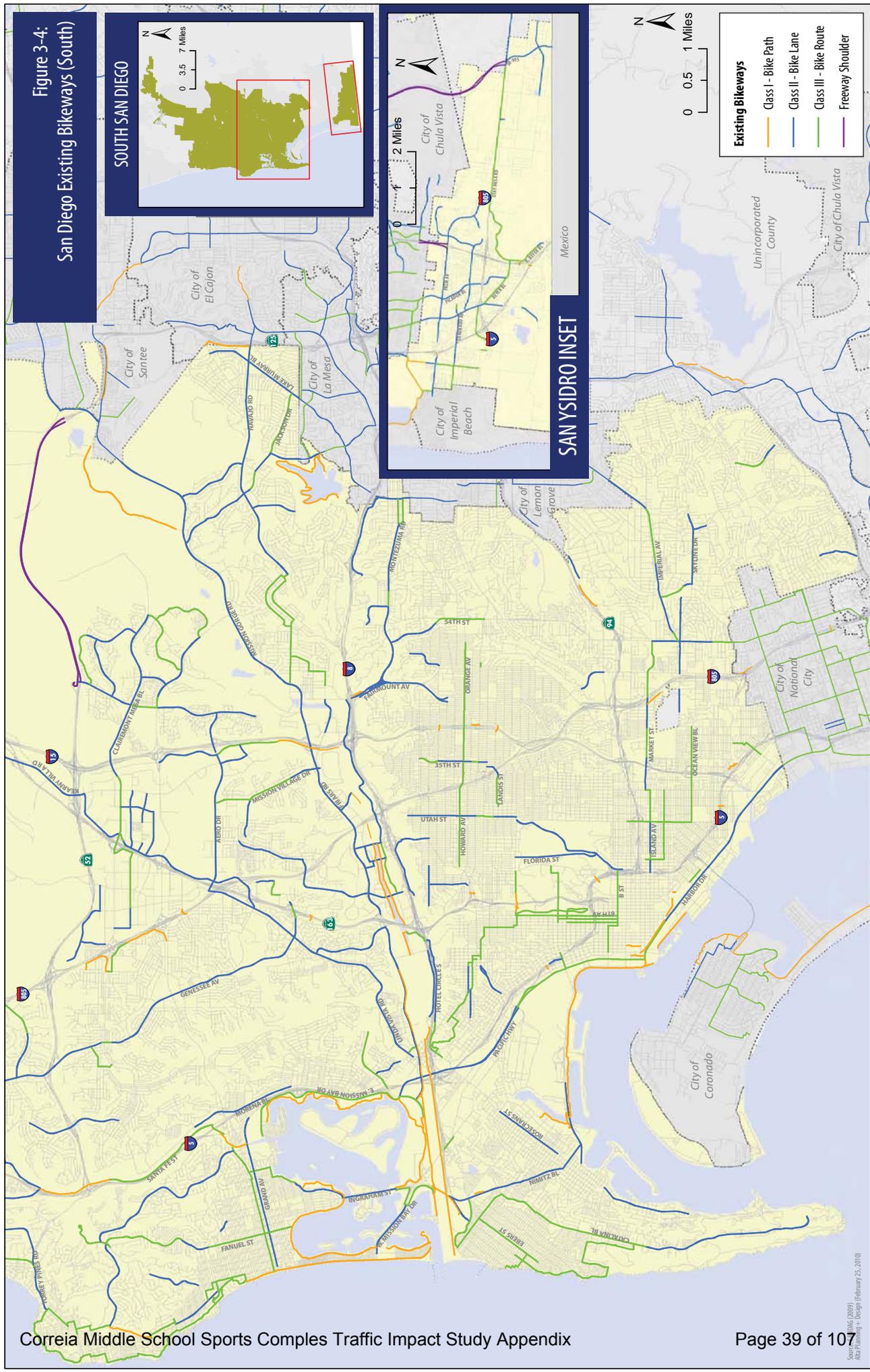
June 2011

PREPARED BY:
Alta Planning + Design

PREPARED FOR:
Correia Middle School Sports Complex Traffic Impact Study Appendix
The City of San Diego



Figure 3-4:
San Diego Existing Bikeways (South)



Source: SDMG (2009)
Map Planning + Design (February 25, 2010)

Appendix G

Existing LOS Calculations

SAT Midday Existing

1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 630 | 234 | 0 | 58 | 401 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.93 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1475 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1475 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 685 | 254 | 0 | 63 | 436 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 271 |
| Lane Group Flow (vph) | 0 | 685 | 254 | 0 | 63 | 165 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | 10 | | 10 | 10 |
| Turn Type | NA | NA | | NA | Perm | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 23.9 | 23.9 | | 19.4 | 19.4 |
| Effective Green, g (s) | | 23.9 | 23.9 | | 19.4 | 19.4 |
| Actuated g/C Ratio | | 0.47 | 0.47 | | 0.38 | 0.38 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 868 | 868 | | 669 | 558 |
| v/s Ratio Prot | | c0.37 | 0.14 | | 0.04 | |
| v/s Ratio Perm | | | | | | c0.11 |
| v/c Ratio | | 0.79 | 0.29 | | 0.09 | 0.30 |
| Uniform Delay, d1 | | 11.6 | 8.5 | | 10.3 | 11.2 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 4.8 | 0.2 | | 0.3 | 1.3 |
| Delay (s) | | 16.4 | 8.7 | | 10.6 | 12.5 |
| Level of Service | | B | A | | B | B |
| Approach Delay (s) | | 16.4 | 8.7 | | 12.3 | |
| Approach LOS | | B | A | | B | |

| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|-----|
| HCM Average Control Delay | 13.6 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.57 | | |
| Actuated Cycle Length (s) | 51.3 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 53.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LOS Engineering, Inc.

SAT Midday Existing

2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | | ↑ | ↑ | | | |
| Volume (veh/h) | 406 | 268 | 242 | 66 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 441 | 291 | 263 | 72 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 360 | | | | 1523 | 349 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 360 | | | | 1523 | 349 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 63 | | | | 100 | 100 |
| cM capacity (veh/h) | 1199 | | | | 81 | 680 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 441 | 291 | 335 |
| Volume Left | 441 | 0 | 0 |
| Volume Right | 0 | 0 | 72 |
| cSH | 1199 | 1700 | 1700 |
| Volume to Capacity | 0.37 | 0.17 | 0.20 |
| Queue Length 95th (ft) | 43 | 0 | 0 |
| Control Delay (s) | 9.7 | 0.0 | 0.0 |
| Lane LOS | A | | |
| Approach Delay (s) | 5.9 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|---|
| Average Delay | 4.0 | | |
| Intersection Capacity Utilization | 53.2% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

SAT Midday Existing
3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|-------------|-------------|-------------|-------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 81 | 3 | 140 | 3 | 3 | 0 | 136 | 41 | 1 | 1 | 35 | 95 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 88 | 3 | 152 | 3 | 3 | 0 | 148 | 45 | 1 | 1 | 38 | 103 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 243 | 7 | 193 | 142 | | | | | | | | |
| Volume Left (vph) | 88 | 3 | 148 | 1 | | | | | | | | |
| Volume Right (vph) | 152 | 0 | 1 | 103 | | | | | | | | |
| Hadj (s) | -0.27 | 0.13 | 0.18 | -0.40 | | | | | | | | |
| Departure Headway (s) | 4.4 | 5.2 | 4.8 | 4.3 | | | | | | | | |
| Degree Utilization, x | 0.30 | 0.01 | 0.26 | 0.17 | | | | | | | | |
| Capacity (veh/h) | 759 | 628 | 705 | 772 | | | | | | | | |
| Control Delay (s) | 9.3 | 8.2 | 9.5 | 8.2 | | | | | | | | |
| Approach Delay (s) | 9.3 | 8.2 | 9.5 | 8.2 | | | | | | | | |
| Approach LOS | A | A | A | A | | | | | | | | |

| Intersection Summary | | | |
|-----------------------------------|-------|-----|------------------------|
| Delay | | 9.1 | |
| HCM Level of Service | | A | |
| Intersection Capacity Utilization | 49.9% | | ICU Level of Service A |
| Analysis Period (min) | | 15 | |

LOS Engineering, Inc.

SAT Midday Existing
4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Volume (veh/h) | 0 | 0 | 0 | 122 | 131 | 0 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 133 | 142 | 0 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 325 | 192 | 167 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 325 | 192 | 167 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 641 | 814 | 1381 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|------------------------|------|------|------|
| Volume Total | 0 | 133 | 142 |
| Volume Left | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 |
| cSH | 1700 | 1381 | 1700 |
| Volume to Capacity | 0.00 | 0.00 | 0.08 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 |
| Approach LOS | A | | |

| Intersection Summary | | | |
|-----------------------------------|-------|-----|------------------------|
| Average Delay | | 0.0 | |
| Intersection Capacity Utilization | 26.2% | | ICU Level of Service A |
| Analysis Period (min) | | 15 | |

LOS Engineering, Inc.

WED PM Existing

1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 842 | 259 | 0 | 67 | 411 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.93 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1465 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1465 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 915 | 282 | 0 | 73 | 447 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 311 |
| Lane Group Flow (vph) | 0 | 915 | 282 | 0 | 73 | 136 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | NA | NA | | NA | Perm | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 31.2 | 31.2 | | 17.2 | 17.2 |
| Effective Green, g (s) | | 31.2 | 31.2 | | 17.2 | 17.2 |
| Actuated g/C Ratio | | 0.55 | 0.55 | | 0.30 | 0.30 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1031 | 1031 | | 540 | 447 |
| v/s Ratio Prot | | c0.49 | 0.15 | | 0.04 | |
| v/s Ratio Perm | | | | | | c0.09 |
| v/c Ratio | | 0.89 | 0.27 | | 0.14 | 0.30 |
| Uniform Delay, d1 | | 11.1 | 6.6 | | 14.2 | 15.0 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 9.4 | 0.1 | | 0.5 | 1.8 |
| Delay (s) | | 20.4 | 6.8 | | 14.7 | 16.8 |
| Level of Service | | C | A | | B | B |
| Approach Delay (s) | | 20.4 | 6.8 | | 16.5 | |
| Approach LOS | | C | A | | B | |

| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|-----|
| HCM Average Control Delay | 17.0 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.68 | | |
| Actuated Cycle Length (s) | 56.4 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 64.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LOS Engineering, Inc.

WED PM Existing

2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | | ↑ | ↑ | | | |
| Volume (veh/h) | 518 | 386 | 264 | 31 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 563 | 420 | 287 | 34 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 346 | | | | 1899 | 354 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 346 | | | | 1899 | 354 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 54 | | | | 100 | 100 |
| cM capacity (veh/h) | 1213 | | | | 40 | 676 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 563 | 420 | 321 |
| Volume Left | 563 | 0 | 0 |
| Volume Right | 0 | 0 | 34 |
| cSH | 1213 | 1700 | 1700 |
| Volume to Capacity | 0.46 | 0.25 | 0.19 |
| Queue Length 95th (ft) | 63 | 0 | 0 |
| Control Delay (s) | 10.5 | 0.0 | 0.0 |
| Lane LOS | B | | |
| Approach Delay (s) | 6.0 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|---|
| Average Delay | | 4.5 | |
| Intersection Capacity Utilization | 64.3% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

WED PM Existing

3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|-------------|-------------|-------------|-------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 157 | 0 | 134 | 2 | 2 | 0 | 146 | 136 | 3 | 2 | 64 | 148 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 171 | 0 | 146 | 2 | 2 | 0 | 159 | 148 | 3 | 2 | 70 | 161 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 316 | 4 | 310 | 233 | | | | | | | | |
| Volume Left (vph) | 171 | 2 | 159 | 2 | | | | | | | | |
| Volume Right (vph) | 146 | 0 | 3 | 161 | | | | | | | | |
| Hadj (s) | -0.13 | 0.13 | 0.13 | -0.38 | | | | | | | | |
| Departure Headway (s) | 5.2 | 6.0 | 5.2 | 4.9 | | | | | | | | |
| Degree Utilization, x | 0.45 | 0.01 | 0.45 | 0.31 | | | | | | | | |
| Capacity (veh/h) | 654 | 492 | 644 | 689 | | | | | | | | |
| Control Delay (s) | 12.4 | 9.1 | 12.5 | 10.1 | | | | | | | | |
| Approach Delay (s) | 12.4 | 9.1 | 12.5 | 10.1 | | | | | | | | |
| Approach LOS | B | A | B | B | | | | | | | | |

Intersection Summary

| | | | |
|-----------------------------------|-------|----------------------|---|
| Delay | 11.8 | | |
| HCM Level of Service | B | | |
| Intersection Capacity Utilization | 62.5% | ICU Level of Service | B |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

WED PM Existing

4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Volume (veh/h) | 0 | 0 | 0 | 293 | 214 | 0 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 318 | 233 | 0 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 601 | 283 | 258 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 601 | 283 | 258 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 444 | 725 | 1280 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|------------------------|------|------|------|
| Volume Total | 0 | 318 | 233 |
| Volume Left | 0 | 0 | 0 |
| Volume Right | 0 | 0 | 0 |
| cSH | 1700 | 1280 | 1700 |
| Volume to Capacity | 0.00 | 0.00 | 0.14 |
| Queue Length 95th (ft) | 0 | 0 | 0 |
| Control Delay (s) | 0.0 | 0.0 | 0.0 |
| Lane LOS | A | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 |
| Approach LOS | A | | |

Intersection Summary

| | | | |
|-----------------------------------|-------|----------------------|---|
| Average Delay | 0.0 | | |
| Intersection Capacity Utilization | 31.1% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

Appendix H

Vehicle Occupancy Data from Mission Bay Events

Vehicle Occupancy Study (Sunday March 23, 2014)
Family Use with Baseball and Soccer Games, Observing Fans, and Tennis
Bob McEvoy Field Mission Bay San Diego, California

| Time | Occupancy | Sport | Time | Occupancy | Sport |
|------|-----------|----------|------|-----------|----------|------|-----------|----------|------|-----------|----------|----------------|------------|----------|
| 858 | 2 | BASEBALL | 1040 | 3 | SOCCER | 1116 | 5 | BASEBALL | 1203 | 2 | SOCCER | 1258 | 3 | SOCCER |
| 859 | 3 | TENNIS | 1040 | 2 | TENNIS | 1117 | 2 | FAN | 1205 | 3 | BASEBALL | 1259 | 4 | SOCCER |
| 900 | 2 | TENNIS | 1041 | 1 | FAN | 1118 | 2 | BASEBALL | 1206 | 2 | FAN | 1300 | 2 | SOCCER |
| 901 | 3 | BASEBALL | 1042 | 3 | BASEBALL | 1118 | 3 | SOCCER | 1206 | 3 | SOCCER | 1302 | 3 | BASEBALL |
| 954 | 3 | TENNIS | 1042 | 4 | SOCCER | 1120 | 3 | SOCCER | 1208 | 4 | BASEBALL | 1305 | 3 | BASEBALL |
| 955 | 2 | BASEBALL | 1042 | 2 | SOCCER | 1120 | 2 | SOCCER | 1208 | 3 | SOCCER | 1305 | 4 | SOCCER |
| 955 | 2 | BASEBALL | 1043 | 3 | SOCCER | 1122 | 3 | SOCCER | 1209 | 2 | BASEBALL | 1306 | 4 | SOCCER |
| 958 | 2 | BASEBALL | 1044 | 3 | SOCCER | 1122 | 4 | SOCCER | 1213 | 1 | FAN | 1307 | 2 | SOCCER |
| 958 | 2 | BASEBALL | 1045 | 2 | SOCCER | 1125 | 3 | SOCCER | 1214 | 3 | SOCCER | 1308 | 4 | SOCCER |
| 1001 | 3 | BASEBALL | 1046 | 3 | BASEBALL | 1126 | 3 | BASEBALL | 1215 | 4 | SOCCER | 1309 | 4 | SOCCER |
| 1003 | 3 | BASEBALL | 1046 | 3 | TENNIS | 1127 | 4 | SOCCER | 1218 | 3 | SOCCER | 1310 | 3 | SOCCER |
| 1005 | 2 | SOCCER | 1048 | 4 | BASEBALL | 1128 | 4 | SOCCER | 1218 | 2 | SOCCER | 1311 | 2 | SOCCER |
| 1006 | 2 | BASEBALL | 1048 | 1 | FAN | 1132 | 2 | BASEBALL | 1219 | 2 | SOCCER | 1313 | 5 | SOCCER |
| 1007 | 4 | BASEBALL | 1048 | 1 | FAN | 1139 | 2 | BASEBALL | 1220 | 4 | SOCCER | 1315 | 5 | SOCCER |
| 1008 | 3 | SOCCER | 1049 | 3 | BASEBALL | 1139 | 4 | BASEBALL | 1222 | 3 | BASEBALL | 1315 | 4 | SOCCER |
| 1011 | 2 | SOCCER | 1050 | 3 | BASEBALL | 1139 | 3 | TENNIS | 1222 | 2 | SOCCER | 1316 | 3 | BASEBALL |
| 1011 | 3 | SOCCER | 1050 | 4 | SOCCER | 1140 | 2 | SOCCER | 1224 | 1 | FAN | 1318 | 4 | SOCCER |
| 1013 | 2 | TENNIS | 1052 | 3 | BASEBALL | 1141 | 3 | SOCCER | 1224 | 1 | FAN | 1319 | 2 | BASEBALL |
| 1014 | 2 | TENNIS | 1053 | 2 | BASEBALL | 1141 | 3 | SOCCER | 1224 | 2 | SOCCER | 1319 | 2 | FAN |
| 1015 | 2 | BASEBALL | 1054 | 3 | SOCCER | 1142 | 4 | SOCCER | 1225 | 3 | SOCCER | 1320 | 2 | BASEBALL |
| 1015 | 2 | SOCCER | 1055 | 3 | SOCCER | 1142 | 5 | SOCCER | 1230 | 2 | SOCCER | 1320 | 3 | SOCCER |
| 1016 | 3 | SOCCER | 1058 | 2 | SOCCER | 1142 | 3 | SOCCER | 1230 | 4 | SOCCER | 1321 | 2 | SOCCER |
| 1017 | 3 | SOCCER | 1058 | 3 | SOCCER | 1143 | 2 | BASEBALL | 1231 | 3 | SOCCER | 1322 | 4 | SOCCER |
| 1019 | 2 | BASEBALL | 1100 | 2 | BASEBALL | 1144 | 4 | BASEBALL | 1233 | 3 | SOCCER | 1322 | 3 | SOCCER |
| 1019 | 3 | SOCCER | 1101 | 2 | FAN | 1144 | 4 | SOCCER | 1233 | 3 | SOCCER | 1323 | 3 | BASEBALL |
| 1022 | 3 | SOCCER | 1103 | 3 | SOCCER | 1145 | 3 | SOCCER | 1239 | 3 | BASEBALL | 1325 | 3 | SOCCER |
| 1023 | 2 | BASEBALL | 1105 | 3 | BASEBALL | 1145 | 2 | SOCCER | 1239 | 4 | BASEBALL | 1326 | 3 | SOCCER |
| 1023 | 1 | REFF | 1105 | 2 | TENNIS | 1147 | 3 | SOCCER | 1240 | 4 | SOCCER | 1328 | 4 | SOCCER |
| 1024 | 2 | SOCCER | 1106 | 3 | SOCCER | 1148 | 3 | BASEBALL | 1241 | 2 | SOCCER | 1328 | 3 | SOCCER |
| 1026 | 2 | SOCCER | 1108 | 3 | BASEBALL | 1149 | 1 | FAN | 1242 | 4 | SOCCER | 1330 | 2 | SOCCER |
| 1026 | 4 | SOCCER | 1108 | 3 | SOCCER | 1150 | 1 | FAN | 1244 | 5 | SOCCER | | | |
| 1027 | 3 | SOCCER | 1109 | 4 | SOCCER | 1151 | 2 | SOCCER | 1244 | 3 | SOCCER | Min | 1 | |
| 1028 | 4 | SOCCER | 1110 | 2 | SOCCER | 1152 | 2 | SOCCER | 1248 | 2 | BASEBALL | Max | 5 | |
| 1029 | 5 | SOCCER | 1110 | 3 | SOCCER | 1152 | 2 | SOCCER | 1249 | 3 | SOCCER | Average | 2.9 | |
| 1029 | 4 | SOCCER | 1111 | 2 | SOCCER | 1155 | 3 | BASEBALL | 1250 | 3 | SOCCER | BASEBALL | 53 | 27% |
| 1030 | 2 | SOCCER | 1111 | 4 | SOCCER | 1156 | 3 | SOCCER | 1250 | 2 | SOCCER | FAN | 12 | 6% |
| 1031 | 2 | BASEBALL | 1112 | 3 | BASEBALL | 1156 | 4 | SOCCER | 1252 | 3 | BASEBALL | REFEREE | 1 | |
| 1033 | 3 | SOCCER | 1112 | 4 | SOCCER | 1157 | 4 | SOCCER | 1252 | 4 | SOCCER | SOCCER | 122 | 62% |
| 1035 | 4 | SOCCER | 1113 | 3 | SOCCER | 1158 | 2 | SOCCER | 1253 | 2 | SOCCER | TENNIS | 10 | 5% |
| 1035 | 2 | TENNIS | 1114 | 2 | BASEBALL | 1158 | 3 | SOCCER | 1253 | 2 | SOCCER | TOTAL | 198 | |
| 1036 | 3 | BASEBALL | 1115 | 3 | SOCCER | 1200 | 4 | BASEBALL | 1255 | 4 | SOCCER | | | |
| 1037 | 4 | SOCCER | 1115 | 4 | SOCCER | 1203 | 4 | BASEBALL | 1258 | 4 | SOCCER | | | |

Vehicle Occuancy Study (Sunday March 23, 2014)

Adult Soccer Teams/Leagues (up to 2 similtianious games)

North of Bob McEvoy Field in Mission Bay San Diego, California

| Time | Occupancy | Sport | Time | Occupancy | Sport |
|------|-----------|--------|------|----------------|------------|
| 948 | 1 | SOCCER | 1159 | 2 | SOCCER |
| 951 | 1 | SOCCER | 1159 | 3 | SOCCER |
| 951 | 2 | SOCCER | 1202 | 1 | SOCCER |
| 952 | 1 | SOCCER | 1209 | 1 | SOCCER |
| 952 | 2 | SOCCER | 1215 | 1 | SOCCER |
| 953 | 1 | SOCCER | 1220 | 1 | SOCCER |
| 954 | 2 | SOCCER | 1228 | 1 | SOCCER |
| 955 | 3 | SOCCER | 1229 | 3 | SOCCER |
| 956 | 1 | SOCCER | 1233 | 3 | SOCCER |
| 957 | 1 | SOCCER | 1238 | 1 | SOCCER |
| 958 | 2 | SOCCER | 1241 | 1 | SOCCER |
| 1001 | 2 | SOCCER | 1248 | 1 | SOCCER |
| 1002 | 1 | SOCCER | 1255 | 1 | SOCCER |
| 1008 | 1 | SOCCER | 1258 | 2 | SOCCER |
| 1015 | 1 | SOCCER | 1300 | 1 | SOCCER |
| 1018 | 1 | SOCCER | 1310 | 2 | FAN |
| 1019 | 3 | FAN | 1312 | 1 | SOCCER |
| 1020 | 2 | SOCCER | 1313 | 1 | SOCCER |
| 1025 | 1 | SOCCER | 1318 | 1 | SOCCER |
| 1026 | 1 | SOCCER | 1322 | 1 | SOCCER |
| 1030 | 1 | SOCCER | 1328 | 2 | SOCCER |
| 1033 | 2 | SOCCER | 1330 | 3 | FAN |
| 1038 | 1 | SOCCER | | Min | 1 |
| 1041 | 1 | SOCCER | | Max | 3 |
| 1048 | 2 | SOCCER | | Average | 1.5 |
| 1052 | 3 | SOCCER | | | |
| 1055 | 2 | SOCCER | | | |
| 1059 | 1 | SOCCER | | | |
| 1100 | 1 | SOCCER | | | |
| 1102 | 1 | SOCCER | | | |
| 1103 | 1 | SOCCER | | | |
| 1105 | 2 | FAN | | | |
| 1121 | 1 | SOCCER | | | |
| 1123 | 3 | SOCCER | | | |
| 1128 | 2 | SOCCER | | | |
| 1131 | 2 | SOCCER | | | |
| 1135 | 1 | SOCCER | | | |
| 1138 | 1 | SOCCER | | | |
| 1138 | 1 | SOCCER | | | |
| 1139 | 1 | SOCCER | | | |
| 1141 | 2 | SOCCER | | | |
| 1148 | 1 | SOCCER | | | |
| 1151 | 2 | SOCCER | | | |
| 1152 | 2 | SOCCER | | | |
| 1156 | 1 | SOCCER | | | |
| 1158 | 1 | SOCCER | | | |
| 1159 | 1 | SOCCER | | | |

Appendix I

City of San Diego Trip Rates



San Diego Municipal Code

Land Development Code

Trip Generation Manual

Revised May 2003



Printed on recycled paper

This information, document, or portions thereof, will be made available in alternative formats upon request.

TABLE 1 (Continued)

May 2003

TRIP GENERATION RATE SUMMARY
(WEEKDAY)

| LAND USE | DRIVEWAY ⁽¹⁾⁽²⁾ VEHICLE TRIP RATE | CUMULATIVE ⁽⁸⁾ VEHICLE TRIP RATE | PEAK HOUR AND IN/OUT RATIO | |
|---|---|---|-------------------------------|-------------|
| | | | AM (IN:OUT) | PM (IN:OUT) |
| LODGING ⁽³⁾ | | | | |
| Hotel (w/convention facilities/restaurant) | 10 trips/room; 300 trips/acre | 10 trips/room; 300 trips/acre | 6% (6:4) | 8% (6:4) |
| Motel | 9 trips/room; 200 trips/acre | 9 trips/room; 200 trips/acre | 8% (4:6) | 9% (4:6) |
| Resort Hotel | 8 trips/room; 100 trips/acre | 8 trips/room; 100 trips/acre | 5% (6:4) | 7% (6:4) |
| MILITARY BASE ⁽³⁾ | | | | |
| | 2.5 trips/employee (military or civilian) | 2.5 trips/employee (military or civilian) | 9% (9:1) | 10% (6:4) |
| OFFICE | | | | |
| Commercial Office ⁽⁶⁾ | $\text{Ln}(T) = 0.756 \text{Ln}(x) + 3.95$; 450 trips/acre | $\text{Ln}(T) = 0.756 \text{Ln}(x) + 3.95$; 450 trips/acre | 13% (9:1) | 14% (2:8) |
| Corporate Headquarters/Single Tenant Office | 10 trips/1,000 sq. ft. | 10 trips/1,000 sq. ft. | 15% (9:1) | 15% (1:9) |
| Department of Motor Vehicles | 180 trips/1,000 sq. ft.; 900 trips/acre | 18 trips/1,000 sq. ft. | 6% (6:4) | 11% (4:6) |
| Government Office (Civic Center): | 30 trips/1,000 sq. ft. | | 9% (9:1) | 12% (3:7) |
| Less than 100,000 sq. ft. | | 20 trips/1,000 sq. ft. | 9% (9:1) | 12% (3:7) |
| 100,000 sq. ft. or more | | 16 trips/1,000 sq. ft. | 9% (9:1) | 12% (3:7) |
| Medical Office: | 50 trips/1,000 sq. ft.; 500 trips/acre | | 6% (8:2) | 10% (3:7) |
| Less than 100,000 sq. ft. | | 20 trips/1,000 sq. ft. | 6% (8:2) | 10% (3:7) |
| 100,000 sq. ft. or more | | 16 trips/1,000 sq. ft. | 6% (8:2) | 10% (3:7) |
| Post Office: | | | | |
| Distribution (central/walk-in only) | 90 trips/1,000 sq. ft. | 76 trips/1,000 sq. ft. | 5% | 7% |
| Community (without mail drop lane) | 200 trips/1,000 sq. ft.; 1,300 trips/acre | 168 trips/1,000 sq. ft.; 1,092 trips/acre | 6% (6:4) | 9% (5:5) |
| Community (with mail drop lane) | 300 trips/1,000 sq. ft.; 2,000 trips/acre | | 7% (5:5) | 9% (3:7) |
| Less than 100,000 sq. ft. | | 168 trips/1,000 sq. ft.; 1,092 trips/acre | 7% (5:5) | 7% (6:4) |
| 100,000 sq. ft. or more | | 252 trips/1,000 sq. ft.; 1,680 trips/acre | 7% (5:5) | 8% (7:3) |
| RECREATION | | | | |
| Bowling Center | 30 trips/lane; 300 trips/acre | 30 trips/lane; 300 trips/acre | 7% (7:3) | 10% (4:6) |
| Golf Course | 600 trips/course; 40 trips/hole; 8 trips/acre | 600 trips/course; 40 trips/hole; 8 trips/acre | 6% (8:2) | 9% (3:7) |
| Marina | 4 trips/berth; 20 trips/acre | 4 trips/berth; 20 trips/acre | 3% (3:7) | 7% (6:4) |
| Movie Theater | 80 trips/1,000 sq. ft.; 1.8 trips/seat | 80 trips/1,000 sq. ft.; 1.8 trips/seat | 0.3% | 8% (7:3) |
| Park: | | | | |
| Beach, Ocean or Bay | 600 trips/1,000 ft. shoreline; 60 trips/acre | 600 trips/1,000 ft. shoreline; 60 trips/acre | -- | 11% (4:6) |
| Developed | 50 trips/acre | 50 trips/acre | 4% | 8% |
| Undeveloped | 5 trips/acre | 5 trips/acre | 4% | 8% |
| Racquetball/Tennis/Health Club | 40 trips/1,000 sq. ft.; 40 trips/court; 300 trips/acre | 40 trips/1,000 sq. ft.; 40 trips/court; 300 trips/acre | 4% (6:4) | 9% (6:4) |
| San Diego Zoo | 115 trips/acre | 115 trips/acre | -- | -- |
| Sea World | 80 trips/acre | 80 trips/acre | -- | -- |
| Sport Facility: | | | | |
| Indoor | 30 trips/acre | 30 trips/acre | -- | -- |
| Outdoor | 50 trips/acre | 50 trips/acre | -- | -- |

Appendix J

Instituted of Transportation Engineers Trip Rates

TRIP GENERATION MANUAL

9th Edition • Volume 2: Data

Trip Generation Rates, Plots and Equations

- Port and Terminal (Land Uses 000–099)
- Industrial (Land Uses 100–199)
- Residential (Land Uses 200–299)
- Lodging (Land Uses 300–399)
- Recreational (Land Uses 400–499)



Institute of Transportation Engineers

Soccer Complex (488)

Average Vehicle Trip Ends vs: Fields
On a: Weekday

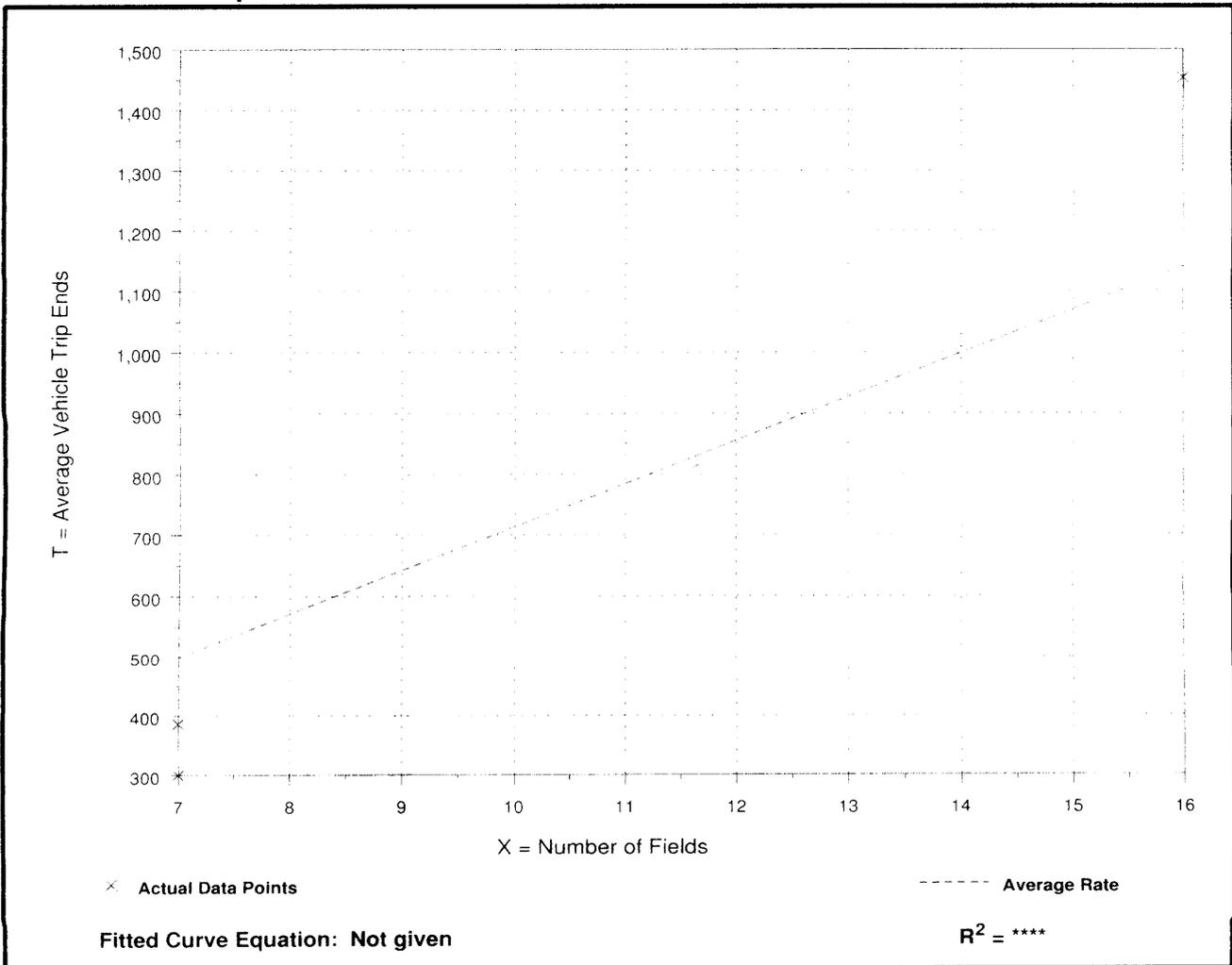
Number of Studies: 3
Average Number of Fields: 10
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Field

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 71.33 | 42.86 - 90.81 | 23.12 |

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Soccer Complex (488)

Average Vehicle Trip Ends vs: **Fields**
 On a: **Weekday,**
Peak Hour of Adjacent Street Traffic,
One Hour Between 7 and 9 a.m.

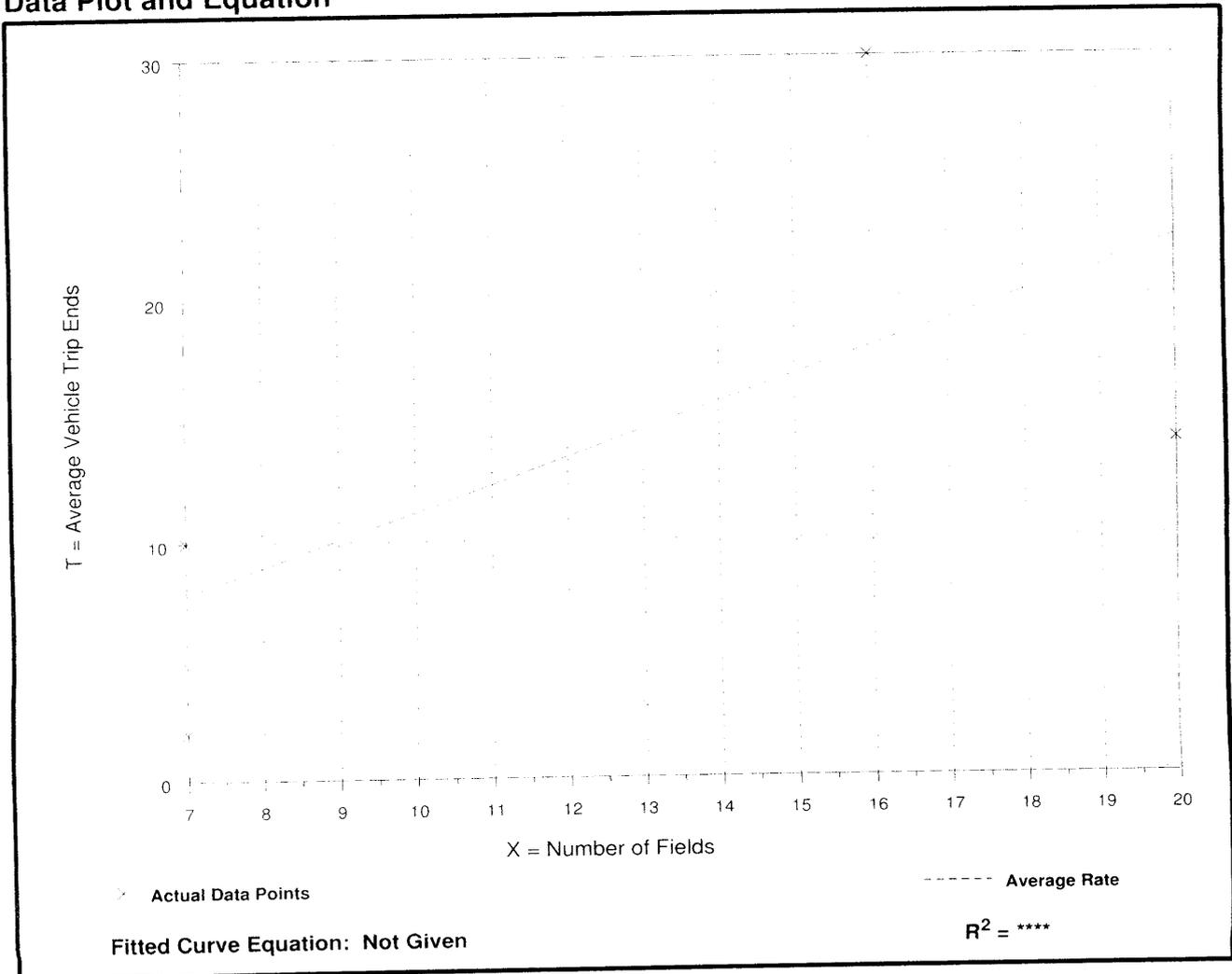
Number of Studies: 4
 Average Number of Fields: 13
 Directional Distribution: 57% entering, 43% exiting

Trip Generation per Field

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 1.12 | 0.29 - 1.88 | 1.19 |

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Soccer Complex (488)

Average Vehicle Trip Ends vs: Fields
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

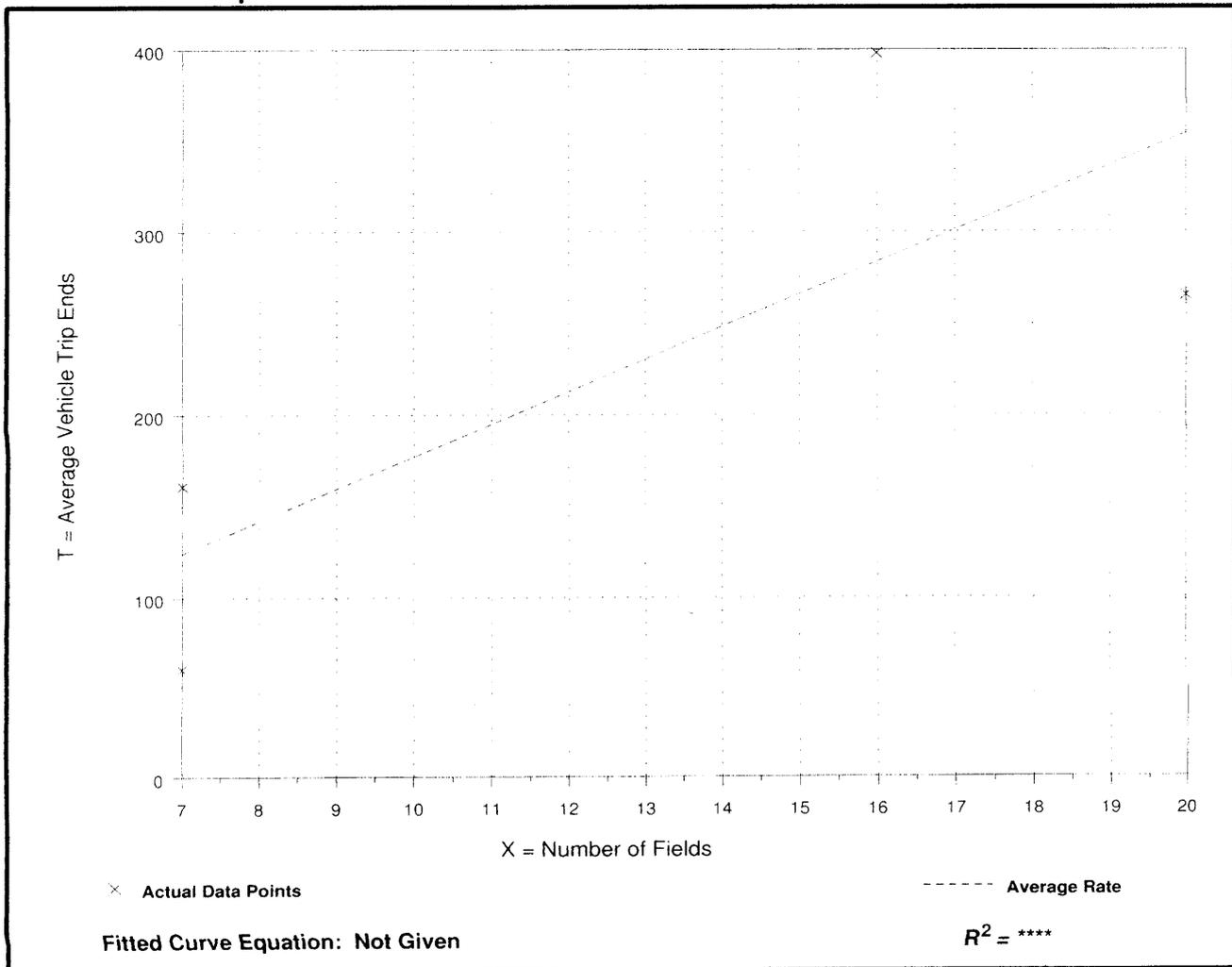
Number of Studies: 4
 Average Number of Fields: 13
 Directional Distribution: 67% entering, 33% exiting

Trip Generation per Field

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 17.70 | 8.71 - 24.88 | 7.55 |

Data Plot and Equation

Caution - Use Carefully - Small Sample Size



Land Use: 488 Soccer Complex

Independent Variables with One Observation

The following trip generation data are for independent variables with only one observation. This information is shown in this table only; there are no related plots for these data.

Users are cautioned to use data with care because of the small sample size.

| <u>Independent Variable</u> | <u>Trip Generation Rate</u> | <u>Size of Independent Variable</u> | <u>Number of Studies</u> | <u>Directional Distribution</u> |
|----------------------------------|-------------------------------------|---|----------------------------------|---------------------------------|
| Fields | | | | |
| Saturday | 117.43 | 7 | 1 | 50% entering, 50% exiting |
| Sunday Peak Hour of Generator | 28.10 | 20 | 1 | 41% entering, 59% exiting |

Soccer Complex (488)

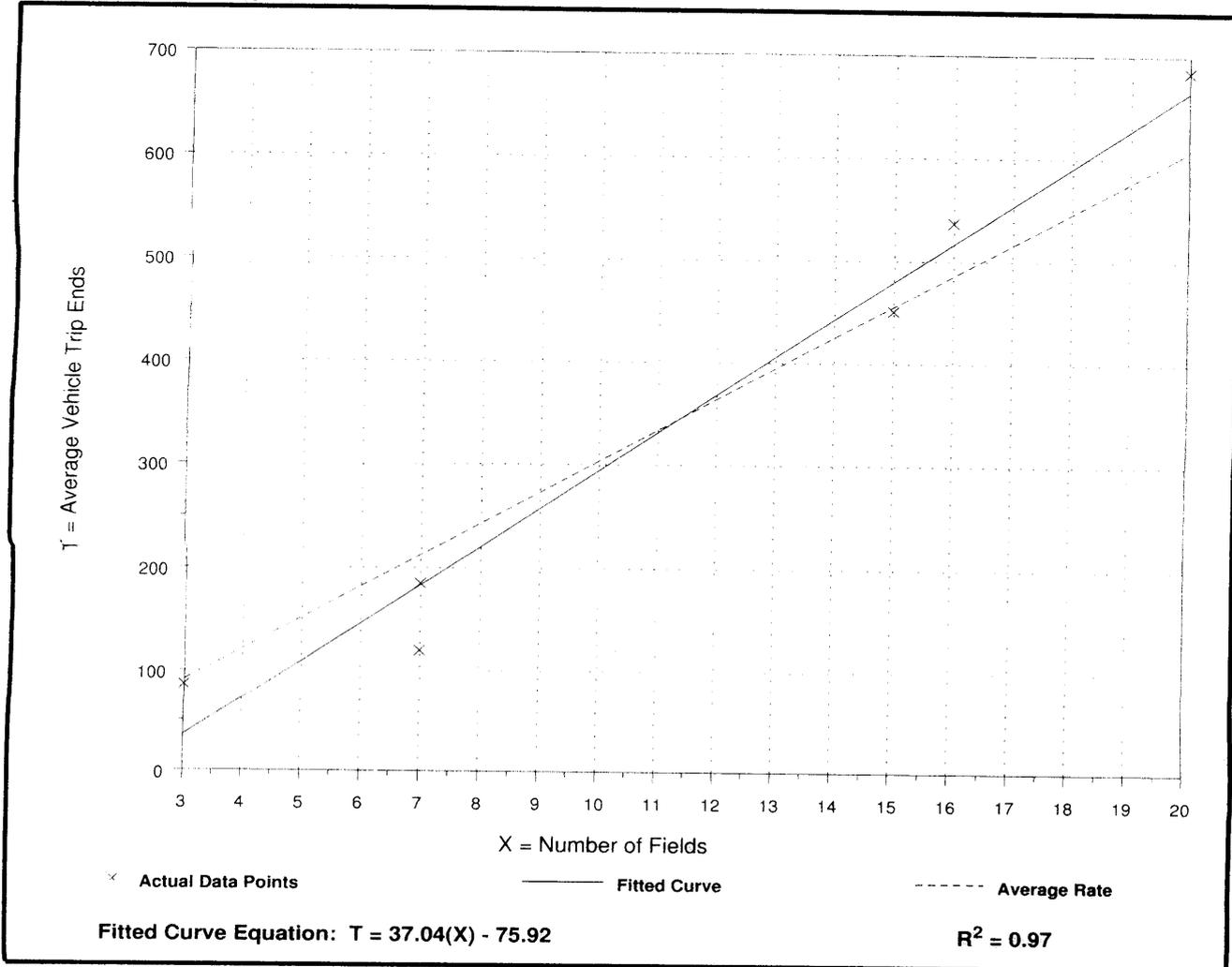
Average Vehicle Trip Ends vs: Fields
On a: Saturday,
Peak Hour of Generator

Number of Studies: 6
 Average Number of Fields: 11
 Directional Distribution: 48% entering, 52% exiting

Trip Generation per Field

| Average Rate | Range of Rates | Standard Deviation |
|--------------|----------------|--------------------|
| 30.34 | 17.14 - 34.20 | 7.42 |

Data Plot and Equation



Appendix K

City of San Diego *Consultant's Guide to Park Design & Development* Excerpts

Consultant's Guide to Park Design & Development

"We enrich lives through quality parks and programs."

City of San Diego Park and Recreation Department's Vision Statement

Prepared by:
Administrative Services Division
Park and Recreation Department
202 C Street, MS 35
San Diego, CA 92101-3860

November, 2011



- (7) Walls adjacent to turf shall have a mow curb per Section 2.4, Paving, Walkways and Mow Curbs.

2.7 PARKING AREAS

Parking areas shall meet the City's Parking Regulations (Municipal Code § 142.0500), California Building Code Title 24, Americans with Disabilities Act, San Diego Standard Drawings, and the parking ratios listed below. Non-programmed parkland includes passive recreation areas and picnic areas that are not scheduled for regular activities. Unusable park land such as steep slopes or natural areas should not be used in calculating parking space requirements. See 2.17.1 for planting requirements in parking areas.

2.7.1 Parking Ratio for Neighborhood Parks

- (1) Provide five (5) parking spaces per acre of non-programmed parkland.
- (2) Multi-Purpose Fields: When a neighborhood park has softball fields, provide an additional thirty (30) parking spaces per backstop.
- (3) Parking may be provided by on-site parking facilities or on adjacent streets. If parking is provided on adjacent streets, only those spaces immediately adjacent to the park may be included; parking spaces located across the street or on non-adjacent streets will not be included.

2.7.2 Parking Ratio for Community Parks

- (1) Provide five parking spaces per acre of non-programmed parkland.
- (2) Recreation Centers: One (1) parking space per 200 square feet of building.
- (2) Swimming Pool Facility: One (1) parking space per 175 square feet of pool surface area, in addition to the parking spaces required for the recreation center.
- (3) Multi-Purpose Fields: Thirty (30) parking spaces per backstop, in addition to the parking spaces required for the recreation center or swimming pool facility.
- (4) Tennis Courts: Twelve (12) parking spaces per six courts, in addition to the parking spaces required for the recreation center. If less than six courts are provided, no additional parking is required.

- 2.7.3 Parking Area Paving:** Geotechnical testing shall be conducted to provide a paving section design for the parking lot and all vehicular access paths. Parking lot paving shall be constructed with asphaltic concrete (AC) pavement on cement treated base (CTB). Provide a pavement section on the construction plans based on R-values and Schedule 'J' pavement recommendations of the San Diego Standard Drawings, Cul-de-sac Criteria and CBR's for parking lots. Specify AR 8000 oil.
- 2.7.4 Dimensions:** Dimensions for parking spaces and drive aisles shall meet or exceed the Land Development Code, Parking Regulations, Municipal Code §142.0500.
- 2.7.5 Striping:** The paint utilized for striping and mark-outs shall be based on the Greenbook specifications.
- 2.7.6 Parking Areas Adjacent to Turf:** To compensate for vehicular over-hang adjacent to turf areas, provide a minimum four foot wide concrete strip to allow operation of mowers when vehicles are parked. Where a walkway is required, see Section 2.4, Paving Walkways and Mow Curbs.
- 2.7.7 Maintenance/Access Strip:** Where parking spaces are adjacent to landscaped areas, provide a twelve inch wide concrete strip of paving for user and maintenance access.

2.8 TRASH ENCLOSURES

Trash enclosures shall be constructed with concrete masonry block. Trash enclosures shall be located within parking lot areas where feasible. Trash enclosures shall be sized to house a minimum of two dumpsters; one for trash and one for recycling. A heavy vehicle load paving section for the drive lane and the concrete apron shall be provided at the head of the enclosure. Minimum size of the concrete apron shall be sufficient to allow refuse vehicle access to the trash receptacles. Specific dimensions, location and design shall be reviewed and approved by the Park and Recreation Department. The walls of the trash enclosure shall be treated with anti-graffiti coating inside and out. The enclosures shall have solid steel doors or chain link doors with screening slats with locking ability.

2.9 SITE FURNITURE

- 2.9.1 General:** All parks shall have picnic tables, benches, drinking fountains, barbecues, bicycle racks, trash receptacles and other site furnishings as necessary. Types of site furniture selected shall be based on the type of park, design character, durability and maintenance. Precast concrete furniture with anti-graffiti coating is preferred for durability. Site furnishings shall complement each other in color, materials and form. Site furniture shall be permanently secured to the paving per the manufacturer's recommendations. Site furniture that bolts together is not permitted. Site furniture shall be selected from the Approved Manufacturers and Products List in Appendix E.

Appendix L

Existing with Project LOS Calculations

SAT Midday Existing + Project

1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|-------|-------|------|----------------------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 661 | 265 | 0 | 105 | 401 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.93 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1473 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1473 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 718 | 288 | 0 | 114 | 436 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 274 |
| Lane Group Flow (vph) | 0 | 718 | 288 | 0 | 114 | 162 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | 10 | | 10 | |
| Turn Type | | NA | NA | | NA | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 24.8 | 24.8 | | 19.3 | 19.3 |
| Effective Green, g (s) | | 24.8 | 24.8 | | 19.3 | 19.3 |
| Actuated g/C Ratio | | 0.48 | 0.48 | | 0.37 | 0.37 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 887 | 887 | | 656 | 546 |
| v/s Ratio Prot | | c0.39 | 0.15 | | 0.06 | |
| v/s Ratio Perm | | | | | | c0.11 |
| v/c Ratio | | 0.81 | 0.32 | | 0.17 | 0.30 |
| Uniform Delay, d1 | | 11.6 | 8.5 | | 11.0 | 11.6 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 5.5 | 0.2 | | 0.6 | 1.4 |
| Delay (s) | | 17.1 | 8.7 | | 11.6 | 13.0 |
| Level of Service | | B | A | | B | B |
| Approach Delay (s) | | 17.1 | 8.7 | | 12.7 | |
| Approach LOS | | B | A | | B | |
| Intersection Summary | | | | | | |
| HCM Average Control Delay | | | 14.0 | | HCM Level of Service | B |
| HCM Volume to Capacity ratio | | | 0.58 | | | |
| Actuated Cycle Length (s) | | | 52.1 | | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | | | 54.8% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

LOS Engineering, Inc.

SAT Midday Existing + Project

2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis

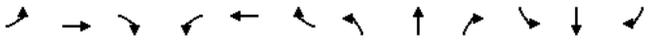
| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|
| Lane Configurations | | ↑ | ↑ | | | |
| Volume (veh/h) | 406 | 346 | 273 | 113 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 441 | 376 | 297 | 123 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 445 | | | | 1667 | 408 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 445 | | | | 1667 | 408 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 60 | | | | 100 | 100 |
| cM capacity (veh/h) | 1116 | | | | 63 | 630 |
| Direction, Lane # | | | | | | |
| | EB 1 | EB 2 | WB 1 | | | |
| Volume Total | 441 | 376 | 420 | | | |
| Volume Left | 441 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 123 | | | |
| cSH | 1116 | 1700 | 1700 | | | |
| Volume to Capacity | 0.40 | 0.22 | 0.25 | | | |
| Queue Length 95th (ft) | 48 | 0 | 0 | | | |
| Control Delay (s) | 10.3 | 0.0 | 0.0 | | | |
| Lane LOS | B | | | | | |
| Approach Delay (s) | 5.6 | | 0.0 | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 3.7 | | | |
| Intersection Capacity Utilization | | | 54.8% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |

LOS Engineering, Inc.

SAT Midday Existing + Project

3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 159 | 3 | 140 | 3 | 3 | 0 | 136 | 51 | 1 | 1 | 45 | 173 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 173 | 3 | 152 | 3 | 3 | 0 | 148 | 55 | 1 | 1 | 49 | 188 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 328 | 7 | 204 | 238 | | | | | | | | |
| Volume Left (vph) | 173 | 3 | 148 | 1 | | | | | | | | |
| Volume Right (vph) | 152 | 0 | 1 | 188 | | | | | | | | |
| Hadj (s) | -0.14 | 0.13 | 0.18 | -0.44 | | | | | | | | |
| Departure Headway (s) | 4.9 | 5.7 | 5.3 | 4.6 | | | | | | | | |
| Degree Utilization, x | 0.45 | 0.01 | 0.30 | 0.31 | | | | | | | | |
| Capacity (veh/h) | 696 | 549 | 641 | 722 | | | | | | | | |
| Control Delay (s) | 11.7 | 8.7 | 10.5 | 9.7 | | | | | | | | |
| Approach Delay (s) | 11.7 | 8.7 | 10.5 | 9.7 | | | | | | | | |
| Approach LOS | B | A | B | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Delay | | | | 10.8 | | | | | | | | |
| HCM Level of Service | | | | B | | | | | | | | |
| Intersection Capacity Utilization | 60.4% | | | ICU Level of Service | B | | | | | | | |
| Analysis Period (min) | | | | 15 | | | | | | | | |

LOS Engineering, Inc.

SAT Midday Existing + Project

4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis



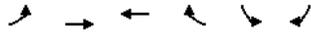
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|----------------------|------|------|------|
| Lane Configurations | ↕ | | | ↕ | ↕ | |
| Volume (veh/h) | 15 | 88 | 88 | 122 | 131 | 15 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 16 | 96 | 96 | 133 | 142 | 16 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 524 | 201 | 184 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 524 | 201 | 184 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 96 | 88 | 93 | | | |
| cM capacity (veh/h) | 458 | 806 | 1362 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 112 | 228 | 159 | | | |
| Volume Left | 16 | 96 | 0 | | | |
| Volume Right | 96 | 0 | 16 | | | |
| cSH | 725 | 1362 | 1700 | | | |
| Volume to Capacity | 0.15 | 0.07 | 0.09 | | | |
| Queue Length 95th (ft) | 14 | 6 | 0 | | | |
| Control Delay (s) | 10.9 | 3.6 | 0.0 | | | |
| Lane LOS | B | A | | | | |
| Approach Delay (s) | 10.9 | 3.6 | 0.0 | | | |
| Approach LOS | B | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 4.1 | | | |
| Intersection Capacity Utilization | 43.5% | | ICU Level of Service | A | | |
| Analysis Period (min) | | | 15 | | | |

LOS Engineering, Inc.

WED PM Existing + Project

1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 852 | 269 | 0 | 83 | 411 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.93 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1465 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1465 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 926 | 292 | 0 | 90 | 447 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 311 |
| Lane Group Flow (vph) | 0 | 926 | 292 | 0 | 90 | 136 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | NA | NA | | NA | Perm | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 31.4 | 31.4 | | 17.2 | 17.2 |
| Effective Green, g (s) | | 31.4 | 31.4 | | 17.2 | 17.2 |
| Actuated g/C Ratio | | 0.55 | 0.55 | | 0.30 | 0.30 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1034 | 1034 | | 538 | 445 |
| v/s Ratio Prot | | c0.50 | 0.16 | | 0.05 | |
| v/s Ratio Perm | | | | | | c0.09 |
| v/c Ratio | | 0.90 | 0.28 | | 0.17 | 0.31 |
| Uniform Delay, d1 | | 11.1 | 6.7 | | 14.4 | 15.1 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 10.1 | 0.2 | | 0.7 | 1.8 |
| Delay (s) | | 21.3 | 6.8 | | 15.1 | 16.9 |
| Level of Service | | C | A | | B | B |
| Approach Delay (s) | | 21.3 | 6.8 | | 16.6 | |
| Approach LOS | | C | A | | B | |

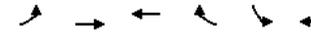
| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|-----|
| HCM Average Control Delay | 17.4 | HCM Level of Service | B |
| HCM Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 56.6 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 64.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LOS Engineering, Inc.

WED PM Existing + Project

2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | | ↑ | ↑ | | | |
| Volume (veh/h) | 518 | 412 | 274 | 47 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 563 | 448 | 298 | 51 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 374 | | | | 1947 | 373 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 374 | | | | 1947 | 373 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 52 | | | | 100 | 100 |
| cM capacity (veh/h) | 1185 | | | | 36 | 659 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 563 | 448 | 349 |
| Volume Left | 563 | 0 | 0 |
| Volume Right | 0 | 0 | 51 |
| cSH | 1185 | 1700 | 1700 |
| Volume to Capacity | 0.48 | 0.26 | 0.21 |
| Queue Length 95th (ft) | 66 | 0 | 0 |
| Control Delay (s) | 10.8 | 0.0 | 0.0 |
| Lane LOS | B | | |
| Approach Delay (s) | 6.0 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|---|
| Average Delay | 4.5 | | |
| Intersection Capacity Utilization | 64.8% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

WED PM Existing + Project
3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 183 | 0 | 134 | 2 | 2 | 0 | 146 | 139 | 3 | 2 | 67 | 174 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 199 | 0 | 146 | 2 | 2 | 0 | 159 | 151 | 3 | 2 | 73 | 189 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 345 | 4 | 313 | 264 | | | | | | | | |
| Volume Left (vph) | 199 | 2 | 159 | 2 | | | | | | | | |
| Volume Right (vph) | 146 | 0 | 3 | 189 | | | | | | | | |
| Hadj (s) | -0.10 | 0.13 | 0.13 | -0.39 | | | | | | | | |
| Departure Headway (s) | 5.3 | 6.2 | 5.4 | 5.0 | | | | | | | | |
| Degree Utilization, x | 0.51 | 0.01 | 0.47 | 0.37 | | | | | | | | |
| Capacity (veh/h) | 638 | 469 | 625 | 673 | | | | | | | | |
| Control Delay (s) | 13.6 | 9.3 | 13.1 | 10.8 | | | | | | | | |
| Approach Delay (s) | 13.6 | 9.3 | 13.1 | 10.8 | | | | | | | | |
| Approach LOS | B | A | B | B | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Delay | | | | 12.6 | | | | | | | | |
| HCM Level of Service | | | | B | | | | | | | | |
| Intersection Capacity Utilization | 66.9% | | | ICU Level of Service | C | | | | | | | |
| Analysis Period (min) | | | | 15 | | | | | | | | |

LOS Engineering, Inc.

WED PM Existing + Project
4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|----------------------|------|------|------|
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Volume (veh/h) | 5 | 29 | 29 | 293 | 214 | 5 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 5 | 32 | 32 | 318 | 233 | 5 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 667 | 285 | 263 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 667 | 285 | 263 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 99 | 96 | 98 | | | |
| cM capacity (veh/h) | 396 | 723 | 1274 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 37 | 350 | 238 | | | |
| Volume Left | 5 | 32 | 0 | | | |
| Volume Right | 32 | 0 | 5 | | | |
| cSH | 645 | 1274 | 1700 | | | |
| Volume to Capacity | 0.06 | 0.02 | 0.14 | | | |
| Queue Length 95th (ft) | 5 | 2 | 0 | | | |
| Control Delay (s) | 10.9 | 0.9 | 0.0 | | | |
| Lane LOS | B | A | | | | |
| Approach Delay (s) | 10.9 | 0.9 | 0.0 | | | |
| Approach LOS | B | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 1.2 | | | |
| Intersection Capacity Utilization | 48.9% | | ICU Level of Service | A | | |
| Analysis Period (min) | | | 15 | | | |

LOS Engineering, Inc.

Appendix M

Cumulative Project Details

Cumulative Project: Point Loma High School Athletic Facilities Upgrade Project

The Point Loma cumulative project is the improvement of the existing athletic field located at 2335 Chatsworth Blvd (Point Loma High School). While the cumulative traffic for Point Loma will use Nimitz Boulevard, only a minimal amount of cumulative traffic may use Famosa Boulevard and Valeta Street. The 1% ambient growth accounts for the possibility that some of this cumulative traffic may use the study area roadways.

Cumulative Project: 7-11

The 7-11 cumulative project is located on the northwest corner of Rosecrans Street and Hugo Street.. While the cumulative traffic from this 7-11 will use Nimitz Boulevard, only a minimal amount of cumulative traffic may use Famosa Boulevard and Valeta Street. The 1% ambient growth accounts for the possibility that some of this cumulative traffic may use the study area roadways.

RE: Point Loma cumulative question and PTS

From: **Elhamad, Ismail** (IElhamad@sandiego.gov) You moved this message to its current location.
Sent: Mon 5/20/13 10:17 AM
To: 'Justin Rasas' (justin@loengineering.com)
Cc: Gonsalves, Ann (AGonsalves@sandiego.gov)

Justin,

7-11 at the northwest corner of Rosecrans St and Hugo ST with 2500 s.f., 1700 ADT.

Thanks..Ismail

From: Justin Rasas [mailto:justin@loengineering.com]
Sent: Monday, May 20, 2013 9:52 AM
To: Elhamad, Ismail
Cc: Gonsalves, Ann
Subject: RE: Point Loma cumulative question and PTS

Hi Ismail,

Are there any cumulative projects in Point Loma? I'm interested about projects in the vicinity of Liberty Station or around Rosecrans/Nimitz.

Thanks,
Justin Rasas, P.E. (RCE 60690), PTOE
Principal

LOS Engineering, Inc.
11622 El Camino Real, Suite 100
San Diego, CA 92130
619.890.1253 Phone
619.374.7247 Fax

Justin@LOEngineering.com

www.LOEngineering.com

Appendix N

Near-Term LOS Calculations

SAT Midday Near-Term

1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|-------|-------|------|---------------------------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 643 | 239 | 0 | 59 | 409 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.93 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1474 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1474 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 699 | 260 | 0 | 64 | 445 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 278 |
| Lane Group Flow (vph) | 0 | 699 | 260 | 0 | 64 | 167 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | | NA | NA | | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 24.3 | 24.3 | | 19.4 | 19.4 |
| Effective Green, g (s) | | 24.3 | 24.3 | | 19.4 | 19.4 |
| Actuated g/C Ratio | | 0.47 | 0.47 | | 0.38 | 0.38 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 875 | 875 | | 664 | 553 |
| v/s Ratio Prot | | c0.38 | 0.14 | | 0.04 | |
| v/s Ratio Perm | | | | | | c0.11 |
| v/c Ratio | | 0.80 | 0.30 | | 0.10 | 0.30 |
| Uniform Delay, d1 | | 11.6 | 8.4 | | 10.5 | 11.4 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 5.1 | 0.2 | | 0.3 | 1.4 |
| Delay (s) | | 16.8 | 8.6 | | 10.8 | 12.8 |
| Level of Service | | B | A | | B | B |
| Approach Delay (s) | | 16.8 | 8.6 | | 12.5 | |
| Approach LOS | | B | A | | B | |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 13.9 | | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | | | 0.58 | | | |
| Actuated Cycle Length (s) | | | 51.7 | | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | | | 53.8% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

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SAT Midday Near-Term

2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|
| Lane Configurations | | ↑ | ↑ | | | |
| Volume (veh/h) | 414 | 273 | 247 | 67 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 450 | 297 | 268 | 73 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 366 | | | | 1552 | 355 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 366 | | | | 1552 | 355 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 62 | | | | 100 | 100 |
| cM capacity (veh/h) | 1192 | | | | 76 | 675 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | | | |
| Volume Total | 450 | 297 | 341 | | | |
| Volume Left | 450 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 73 | | | |
| cSH | 1192 | 1700 | 1700 | | | |
| Volume to Capacity | 0.38 | 0.17 | 0.20 | | | |
| Queue Length 95th (ft) | 45 | 0 | 0 | | | |
| Control Delay (s) | 9.8 | 0.0 | 0.0 | | | |
| Lane LOS | A | | | | | |
| Approach Delay (s) | 5.9 | | 0.0 | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 4.1 | | | |
| Intersection Capacity Utilization | | | 53.8% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |

LOS Engineering, Inc.

SAT Midday Near-Term
3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|------|
| Lane Configurations | ↔ | | | ↔ | | | ↔ | | | ↔ | | |
| Sign Control | Stop | | | Stop | | | Stop | | | Stop | | |
| Volume (vph) | 83 | 3 | 143 | 3 | 3 | 0 | 139 | 42 | 1 | 1 | 36 | 97 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 90 | 3 | 155 | 3 | 3 | 0 | 151 | 46 | 1 | 1 | 39 | 105 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 249 | 7 | 198 | 146 | | | | | | | | |
| Volume Left (vph) | 90 | 3 | 151 | 1 | | | | | | | | |
| Volume Right (vph) | 155 | 0 | 1 | 105 | | | | | | | | |
| Hadj (s) | -0.27 | 0.13 | 0.18 | -0.40 | | | | | | | | |
| Departure Headway (s) | 4.5 | 5.2 | 4.9 | 4.4 | | | | | | | | |
| Degree Utilization, x | 0.31 | 0.01 | 0.27 | 0.18 | | | | | | | | |
| Capacity (veh/h) | 755 | 623 | 702 | 767 | | | | | | | | |
| Control Delay (s) | 9.4 | 8.2 | 9.6 | 8.3 | | | | | | | | |
| Approach Delay (s) | 9.4 | 8.2 | 9.6 | 8.3 | | | | | | | | |
| Approach LOS | A | A | A | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Delay | | | 9.2 | | | | | | | | | |
| Level of Service | | | A | | | | | | | | | |
| Intersection Capacity Utilization | | | 50.4% | ICU Level of Service | | | | | | | | A |
| Analysis Period (min) | | | 15 | | | | | | | | | |

LOS Engineering, Inc.

SAT Midday Near-Term
4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | ↔ | | | ↔ | | |
| Volume (veh/h) | 0 | 0 | 0 | 124 | 134 | 0 |
| Sign Control | Stop | | Free | | Free | |
| Grade | 0% | | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 135 | 146 | 0 |
| Pedestrians | 25 | | 25 | | 25 | |
| Lane Width (ft) | 12.0 | | 12.0 | | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | 4.0 | | 4.0 | |
| Percent Blockage | 2 | | 2 | | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | None | | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 330 | 196 | 171 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 330 | 196 | 171 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 637 | 811 | 1377 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 0 | 135 | 146 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 0 | | | |
| cSH | 1700 | 1377 | 1700 | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.09 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Lane LOS | A | | | | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Approach LOS | A | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.0 | | | |
| Intersection Capacity Utilization | | | 26.3% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

LOS Engineering, Inc.

WED PM Near-Term

1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 859 | 264 | 0 | 68 | 419 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.92 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1464 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1464 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 934 | 287 | 0 | 74 | 455 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 318 |
| Lane Group Flow (vph) | 0 | 934 | 287 | 0 | 74 | 137 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | 10 | | 10 | |
| Turn Type | | NA | NA | | Prot | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 31.7 | 31.7 | | 17.1 | 17.1 |
| Effective Green, g (s) | | 31.7 | 31.7 | | 17.1 | 17.1 |
| Actuated g/C Ratio | | 0.56 | 0.56 | | 0.30 | 0.30 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1039 | 1039 | | 532 | 440 |
| v/s Ratio Prot | | c0.50 | 0.15 | | 0.04 | |
| v/s Ratio Perm | | | | | | c0.09 |
| v/c Ratio | | 0.90 | 0.28 | | 0.14 | 0.31 |
| Uniform Delay, d1 | | 11.1 | 6.6 | | 14.5 | 15.3 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 10.3 | 0.1 | | 0.5 | 1.8 |
| Delay (s) | | 21.5 | 6.7 | | 15.0 | 17.1 |
| Level of Service | | C | A | | B | B |
| Approach Delay (s) | | 21.5 | 6.7 | | 16.9 | |
| Approach LOS | | C | A | | B | |

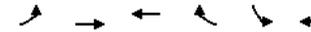
| Intersection Summary | | | |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay | 17.7 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.69 | | |
| Actuated Cycle Length (s) | 56.8 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 65.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LOS Engineering, Inc.

WED PM Near-Term

2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↓ | ↑ | ↓ | | | |
| Volume (veh/h) | 528 | 394 | 269 | 32 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 574 | 428 | 292 | 35 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 352 | | | | 1936 | 360 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 352 | | | | 1936 | 360 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 52 | | | | 100 | 100 |
| cM capacity (veh/h) | 1207 | | | | 37 | 670 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 574 | 428 | 327 |
| Volume Left | 574 | 0 | 0 |
| Volume Right | 0 | 0 | 35 |
| cSH | 1207 | 1700 | 1700 |
| Volume to Capacity | 0.48 | 0.25 | 0.19 |
| Queue Length 95th (ft) | 66 | 0 | 0 |
| Control Delay (s) | 10.7 | 0.0 | 0.0 |
| Lane LOS | B | | |
| Approach Delay (s) | 6.1 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|---|
| Average Delay | 4.6 | | |
| Intersection Capacity Utilization | 65.2% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

WED PM Near-Term

3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 160 | 0 | 137 | 2 | 2 | 0 | 149 | 139 | 3 | 2 | 65 | 151 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 174 | 0 | 149 | 2 | 2 | 0 | 162 | 151 | 3 | 2 | 71 | 164 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 323 | 4 | 316 | 237 | | | | | | | | |
| Volume Left (vph) | 174 | 2 | 162 | 2 | | | | | | | | |
| Volume Right (vph) | 149 | 0 | 3 | 164 | | | | | | | | |
| Hadj (s) | -0.14 | 0.13 | 0.13 | -0.38 | | | | | | | | |
| Departure Headway (s) | 5.2 | 6.1 | 5.3 | 4.9 | | | | | | | | |
| Degree Utilization, x | 0.47 | 0.01 | 0.46 | 0.32 | | | | | | | | |
| Capacity (veh/h) | 650 | 486 | 641 | 683 | | | | | | | | |
| Control Delay (s) | 12.6 | 9.1 | 12.7 | 10.2 | | | | | | | | |
| Approach Delay (s) | 12.6 | 9.1 | 12.7 | 10.2 | | | | | | | | |
| Approach LOS | B | A | B | B | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Delay | | | | 12.0 | | | | | | | | |
| Level of Service | | | | B | | | | | | | | |
| Intersection Capacity Utilization | | | | 63.5% | ICU Level of Service | | B | | | | | |
| Analysis Period (min) | | | | 15 | | | | | | | | |

LOS Engineering, Inc.

WED PM Near-Term

4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | ↔ | | | ↔ | ↔ | |
| Volume (veh/h) | 0 | 0 | 0 | 299 | 218 | 0 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 325 | 237 | 0 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 612 | 287 | 262 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 612 | 287 | 262 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 438 | 721 | 1275 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 0 | 325 | 237 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 0 | | | |
| cSH | 1700 | 1275 | 1700 | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.14 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Lane LOS | A | | | | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Approach LOS | A | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.0 | | | |
| Intersection Capacity Utilization | | | 31.4% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

LOS Engineering, Inc.

Appendix O

Near-Term with Project LOS Calculations

SAT Midday Near-Term + Project
1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|-------|-------|------|---------------------------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 674 | 270 | 0 | 106 | 409 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.93 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1473 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1473 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 733 | 293 | 0 | 115 | 445 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 282 |
| Lane Group Flow (vph) | 0 | 733 | 293 | 0 | 115 | 163 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | NA | NA | | Prot | Perm | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 25.3 | 25.3 | | 19.3 | 19.3 |
| Effective Green, g (s) | | 25.3 | 25.3 | | 19.3 | 19.3 |
| Actuated g/C Ratio | | 0.48 | 0.48 | | 0.37 | 0.37 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 896 | 896 | | 649 | 540 |
| v/s Ratio Prot | | c0.39 | 0.16 | | 0.06 | |
| v/s Ratio Perm | | | | | | c0.11 |
| v/c Ratio | | 0.82 | 0.33 | | 0.18 | 0.30 |
| Uniform Delay, d1 | | 11.7 | 8.4 | | 11.3 | 11.9 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 5.9 | 0.2 | | 0.6 | 1.4 |
| Delay (s) | | 17.5 | 8.6 | | 11.9 | 13.3 |
| Level of Service | | B | A | | B | B |
| Approach Delay (s) | | 17.5 | 8.6 | | 13.0 | |
| Approach LOS | | B | A | | B | |
| Intersection Summary | | | | | | |
| HCM 2000 Control Delay | | | 14.3 | | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | | | 0.59 | | | |
| Actuated Cycle Length (s) | | | 52.6 | | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | | | 55.5% | | ICU Level of Service | B |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

LOS Engineering, Inc.

SAT Midday Near-Term + Project
2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|------|-------|------|----------------------|------|
| Lane Configurations | | ↑ | ↑ | | | |
| Volume (veh/h) | 414 | 351 | 278 | 114 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 450 | 382 | 302 | 124 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 451 | | | | 1696 | 414 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 451 | | | | 1696 | 414 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 59 | | | | 100 | 100 |
| cM capacity (veh/h) | 1109 | | | | 59 | 625 |
| Direction, Lane # | | | | | | |
| | EB 1 | EB 2 | WB 1 | | | |
| Volume Total | 450 | 382 | 426 | | | |
| Volume Left | 450 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 124 | | | |
| cSH | 1109 | 1700 | 1700 | | | |
| Volume to Capacity | 0.41 | 0.22 | 0.25 | | | |
| Queue Length 95th (ft) | 50 | 0 | 0 | | | |
| Control Delay (s) | 10.4 | 0.0 | 0.0 | | | |
| Lane LOS | B | | | | | |
| Approach Delay (s) | 5.7 | | 0.0 | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 3.7 | | | |
| Intersection Capacity Utilization | | | 55.5% | | ICU Level of Service | B |
| Analysis Period (min) | | | 15 | | | |

LOS Engineering, Inc.

SAT Midday Near-Term + Project
3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|-------------|----------------------|------|------|------|------|------|------|------|
| Lane Configurations | | ↔ | | | ↔ | | | ↔ | | | ↔ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 161 | 3 | 143 | 3 | 3 | 0 | 139 | 52 | 1 | 1 | 46 | 175 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 175 | 3 | 155 | 3 | 3 | 0 | 151 | 57 | 1 | 1 | 50 | 190 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 334 | 7 | 209 | 241 | | | | | | | | |
| Volume Left (vph) | 175 | 3 | 151 | 1 | | | | | | | | |
| Volume Right (vph) | 155 | 0 | 1 | 190 | | | | | | | | |
| Hadj (s) | -0.14 | 0.13 | 0.18 | -0.44 | | | | | | | | |
| Departure Headway (s) | 4.9 | 5.7 | 5.3 | 4.7 | | | | | | | | |
| Degree Utilization, x | 0.45 | 0.01 | 0.31 | 0.31 | | | | | | | | |
| Capacity (veh/h) | 691 | 543 | 638 | 717 | | | | | | | | |
| Control Delay (s) | 11.9 | 8.8 | 10.6 | 9.8 | | | | | | | | |
| Approach Delay (s) | 11.9 | 8.8 | 10.6 | 9.8 | | | | | | | | |
| Approach LOS | B | A | B | A | | | | | | | | |
| Intersection Summary | | | | | | | | | | | | |
| Delay | | | | 10.9 | | | | | | | | |
| Level of Service | | | | B | | | | | | | | |
| Intersection Capacity Utilization | | | | 61.0% | ICU Level of Service | | | | | | | B |
| Analysis Period (min) | | | | 15 | | | | | | | | |

LOS Engineering, Inc.

SAT Midday Near-Term + Project
4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis

| Movement | EBL | EBR | NBL | NBT | SBT | SBR | |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|---|
| Lane Configurations | ↔ | | | ↔ | ↔ | | |
| Volume (veh/h) | 15 | 88 | 88 | 124 | 134 | 15 | |
| Sign Control | Stop | | | Free | Free | | |
| Grade | 0% | | | 0% | 0% | | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Hourly flow rate (vph) | 16 | 96 | 96 | 135 | 146 | 16 | |
| Pedestrians | 25 | | | 25 | 25 | | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | | |
| Percent Blockage | 2 | | | 2 | 2 | | |
| Right turn flare (veh) | | | | | | | |
| Median type | | | | None | None | | |
| Median storage (veh) | | | | | | | |
| Upstream signal (ft) | | | | | | | |
| pX, platoon unblocked | | | | | | | |
| vC, conflicting volume | 530 | 204 | 187 | | | | |
| vC1, stage 1 conf vol | | | | | | | |
| vC2, stage 2 conf vol | | | | | | | |
| vCu, unblocked vol | 530 | 204 | 187 | | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | | |
| tC, 2 stage (s) | | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | | |
| p0 queue free % | 96 | 88 | 93 | | | | |
| cM capacity (veh/h) | 454 | 802 | 1358 | | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | | |
| Volume Total | 112 | 230 | 162 | | | | |
| Volume Left | 16 | 96 | 0 | | | | |
| Volume Right | 96 | 0 | 16 | | | | |
| cSH | 722 | 1358 | 1700 | | | | |
| Volume to Capacity | 0.16 | 0.07 | 0.10 | | | | |
| Queue Length 95th (ft) | 14 | 6 | 0 | | | | |
| Control Delay (s) | 10.9 | 3.6 | 0.0 | | | | |
| Lane LOS | B | A | | | | | |
| Approach Delay (s) | 10.9 | 3.6 | 0.0 | | | | |
| Approach LOS | B | | | | | | |
| Intersection Summary | | | | | | | |
| Average Delay | | | 4.1 | | | | |
| Intersection Capacity Utilization | | | 43.6% | ICU Level of Service | | | A |
| Analysis Period (min) | | | 15 | | | | |

LOS Engineering, Inc.

WED PM Near-Term + Project

1: Famosa Blvd & Nimitz SB Ramp

HCM Signalized Intersection Capacity Analysis



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|-------|------|------|------|-------|
| Lane Configurations | | ↑ | ↑ | | ↓ | ↓ |
| Volume (vph) | 0 | 869 | 274 | 0 | 84 | 419 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.92 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1463 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1463 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 945 | 298 | 0 | 91 | 455 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 319 |
| Lane Group Flow (vph) | 0 | 945 | 298 | 0 | 91 | 136 |
| Confl. Peds. (#/hr) | | 25 | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | 10 | | 10 | |
| Turn Type | NA | NA | | Prot | Perm | |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 32.3 | 32.3 | | 17.1 | 17.1 |
| Effective Green, g (s) | | 32.3 | 32.3 | | 17.1 | 17.1 |
| Actuated g/C Ratio | | 0.56 | 0.56 | | 0.30 | 0.30 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1048 | 1048 | | 527 | 435 |
| v/s Ratio Prot | | c0.51 | 0.16 | | 0.05 | |
| v/s Ratio Perm | | | | | | c0.09 |
| v/c Ratio | | 0.90 | 0.28 | | 0.17 | 0.31 |
| Uniform Delay, d1 | | 11.1 | 6.5 | | 14.9 | 15.6 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 10.7 | 0.2 | | 0.7 | 1.9 |
| Delay (s) | | 21.8 | 6.7 | | 15.6 | 17.5 |
| Level of Service | | C | A | | B | B |
| Approach Delay (s) | | 21.8 | 6.7 | | 17.2 | |
| Approach LOS | | C | A | | B | |

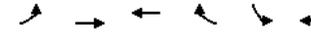
| Intersection Summary | | | |
|-----------------------------------|-------|---------------------------|-----|
| HCM 2000 Control Delay | 17.9 | HCM 2000 Level of Service | B |
| HCM 2000 Volume to Capacity ratio | 0.70 | | |
| Actuated Cycle Length (s) | 57.4 | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | 65.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |
| c Critical Lane Group | | | |

LOS Engineering, Inc.

WED PM Near-Term + Project

2: Famosa Blvd & Nimitz NB Ramp

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↓ | ↑ | ↓ | | | |
| Volume (veh/h) | 528 | 420 | 279 | 48 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 574 | 457 | 303 | 52 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 380 | | | | 1984 | 379 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 380 | | | | 1984 | 379 |
| IC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| IC, 2 stage (s) | | | | | | |
| IF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 51 | | | | 100 | 100 |
| cM capacity (veh/h) | 1178 | | | | 34 | 654 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 574 | 457 | 355 |
| Volume Left | 574 | 0 | 0 |
| Volume Right | 0 | 0 | 52 |
| cSH | 1178 | 1700 | 1700 |
| Volume to Capacity | 0.49 | 0.27 | 0.21 |
| Queue Length 95th (ft) | 69 | 0 | 0 |
| Control Delay (s) | 10.9 | 0.0 | 0.0 |
| Lane LOS | B | | |
| Approach Delay (s) | 6.1 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|-------|----------------------|---|
| Average Delay | | 4.5 | |
| Intersection Capacity Utilization | 65.7% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

WED PM Near-Term + Project

3: Valeta St & Famosa Blvd

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|--------------------------|-------------|-------------|-------------|-------------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Sign Control | | Stop | | | Stop | | | Stop | | | Stop | |
| Volume (vph) | 186 | 0 | 137 | 2 | 2 | 0 | 149 | 142 | 3 | 2 | 68 | 177 |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 202 | 0 | 149 | 2 | 2 | 0 | 162 | 154 | 3 | 2 | 74 | 192 |
| Direction, Lane # | EB 1 | WB 1 | NB 1 | SB 1 | | | | | | | | |
| Volume Total (vph) | 351 | 4 | 320 | 268 | | | | | | | | |
| Volume Left (vph) | 202 | 2 | 162 | 2 | | | | | | | | |
| Volume Right (vph) | 149 | 0 | 3 | 192 | | | | | | | | |
| Hadj (s) | -0.11 | 0.13 | 0.13 | -0.39 | | | | | | | | |
| Departure Headway (s) | 5.3 | 6.3 | 5.4 | 5.0 | | | | | | | | |
| Degree Utilization, x | 0.52 | 0.01 | 0.48 | 0.37 | | | | | | | | |
| Capacity (veh/h) | 635 | 463 | 621 | 668 | | | | | | | | |
| Control Delay (s) | 14.0 | 9.3 | 13.4 | 11.0 | | | | | | | | |
| Approach Delay (s) | 14.0 | 9.3 | 13.4 | 11.0 | | | | | | | | |
| Approach LOS | B | A | B | B | | | | | | | | |

Intersection Summary

| | | | |
|-----------------------------------|-------|----------------------|---|
| Delay | 12.9 | | |
| Level of Service | B | | |
| Intersection Capacity Utilization | 67.9% | ICU Level of Service | C |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

WED PM Near-Term + Project

4: Valeta St & Project Access

HCM Unsignalized Intersection Capacity Analysis



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↕ | | | ↕ | ↕ | |
| Volume (veh/h) | 5 | 29 | 29 | 299 | 218 | 5 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 5 | 32 | 32 | 325 | 237 | 5 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 678 | 290 | 267 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 678 | 290 | 267 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 99 | 96 | 98 | | | |
| cM capacity (veh/h) | 391 | 719 | 1269 | | | |

| Direction, Lane # | EB 1 | NB 1 | SB 1 |
|------------------------|------|------|------|
| Volume Total | 37 | 357 | 242 |
| Volume Left | 5 | 32 | 0 |
| Volume Right | 32 | 0 | 5 |
| cSH | 640 | 1269 | 1700 |
| Volume to Capacity | 0.06 | 0.02 | 0.14 |
| Queue Length 95th (ft) | 5 | 2 | 0 |
| Control Delay (s) | 11.0 | 0.9 | 0.0 |
| Lane LOS | B | A | |
| Approach Delay (s) | 11.0 | 0.9 | 0.0 |
| Approach LOS | B | | |

Intersection Summary

| | | | |
|-----------------------------------|-------|----------------------|---|
| Average Delay | 1.2 | | |
| Intersection Capacity Utilization | 49.3% | ICU Level of Service | A |
| Analysis Period (min) | 15 | | |

LOS Engineering, Inc.

Appendix P

Horizon Year (2035) SANDAG Traffic Model Network

SANDAG 2035 Segment Volumes and Number of Lanes on Famosa Blvd

Forecasted Volumes 2035

[TFIC Home](#)

[2008](#)

[2020](#)

[2035](#)



Pan



Zoom In



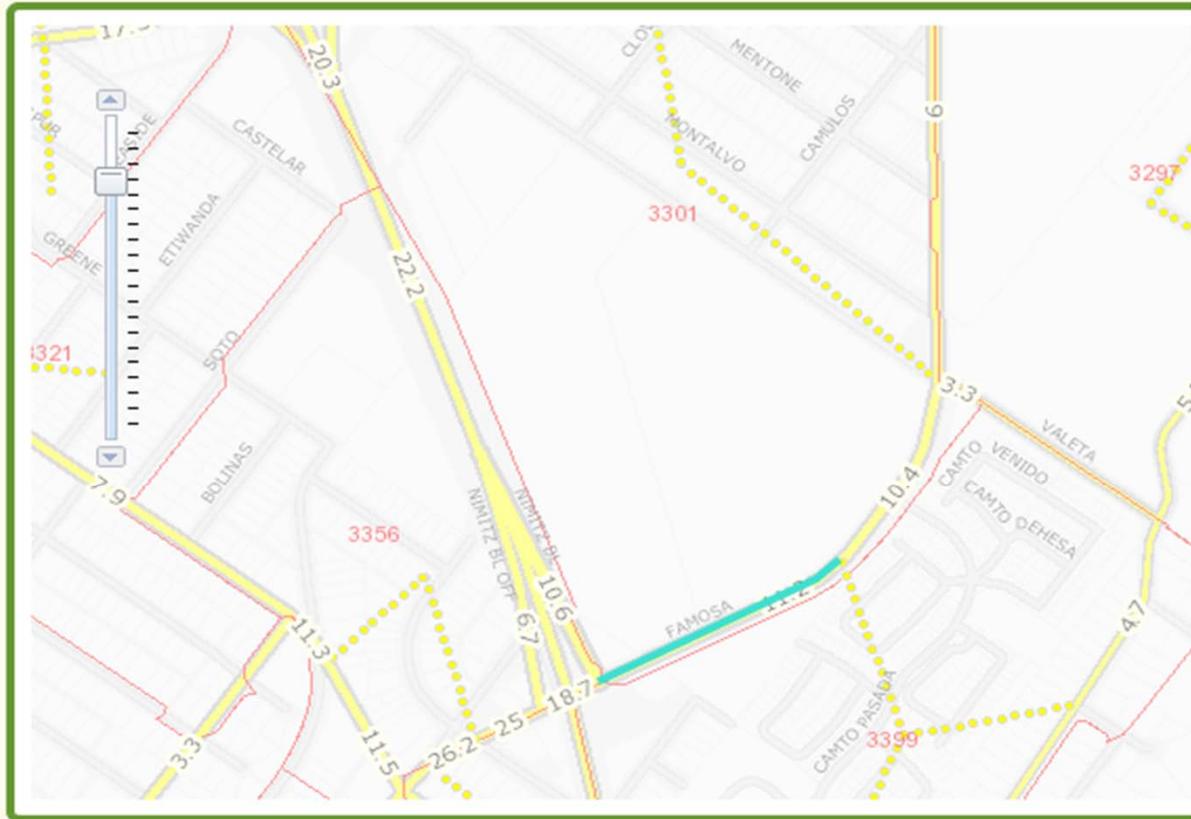
Zoom Out



Identify

[Get TAZ Report](#)

| | |
|--------------------------------|------------------------|
| ROAD NAME: | FAMOSA |
| Forecasted Volume (in 1000's): | 11.2 |
| Posted Speed: | 35 |
| Number of Lanes: | 4 |
| One Way or Two (1 or 2): | 2 |
| Median Type: | RAISED OR FIXED MEDIAN |
| Functional Class: | MAJOR ARTERIAL |



Forecasted Volumes 2035

[TFIC Home](#)

[2008](#)

[2020](#)

[2050](#)



Pan



Zoom In

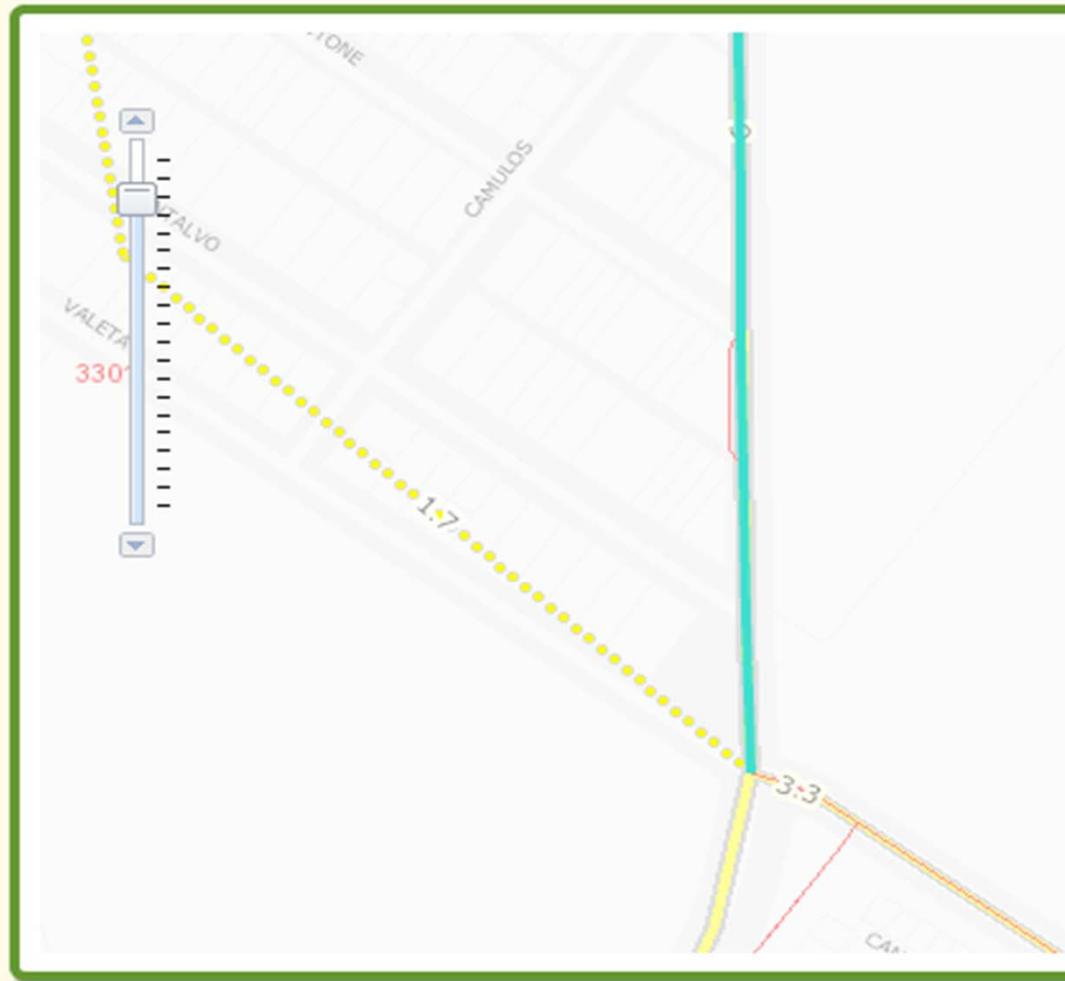


Zoom Out



Identify

| | |
|--------------------------------|----------------|
| ROAD NAME: | FAMOSA |
| Forecasted Volume (in 1000's): | 6 |
| Posted Speed: | 35 |
| Number of Lanes: | 4 |
| One Way or Two (1 or 2): | 2 |
| Median Type: | NO MEDIAN |
| Functional Class: | MAJOR ARTERIAL |



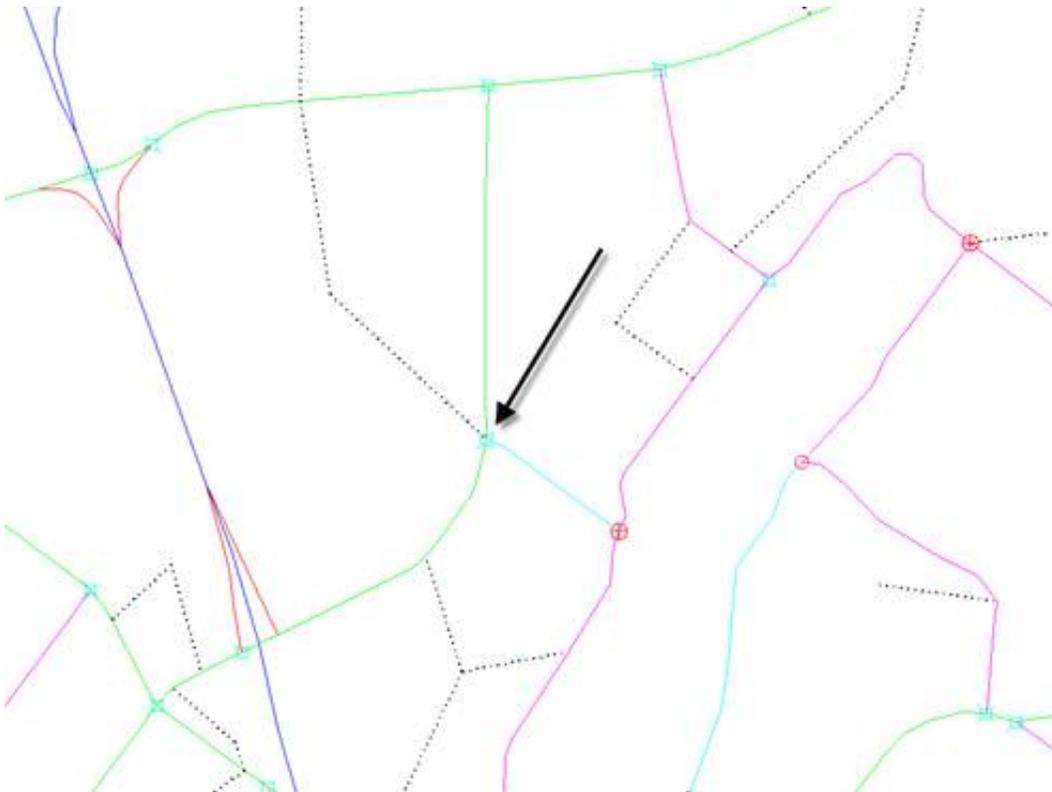
RE: S12 turn moves question

From: **Calandra, Mike** (Mike.Calandra@sandag.org) You moved this message to its current location.
Sent: Wed 4/02/14 2:04 PM
To: 'Justin Rasas' (justin@loengineering.com)

Justin,

I hope to be able to run this for you over this weekend at the latest...

The intersection is signalized in the 2035 RC network:



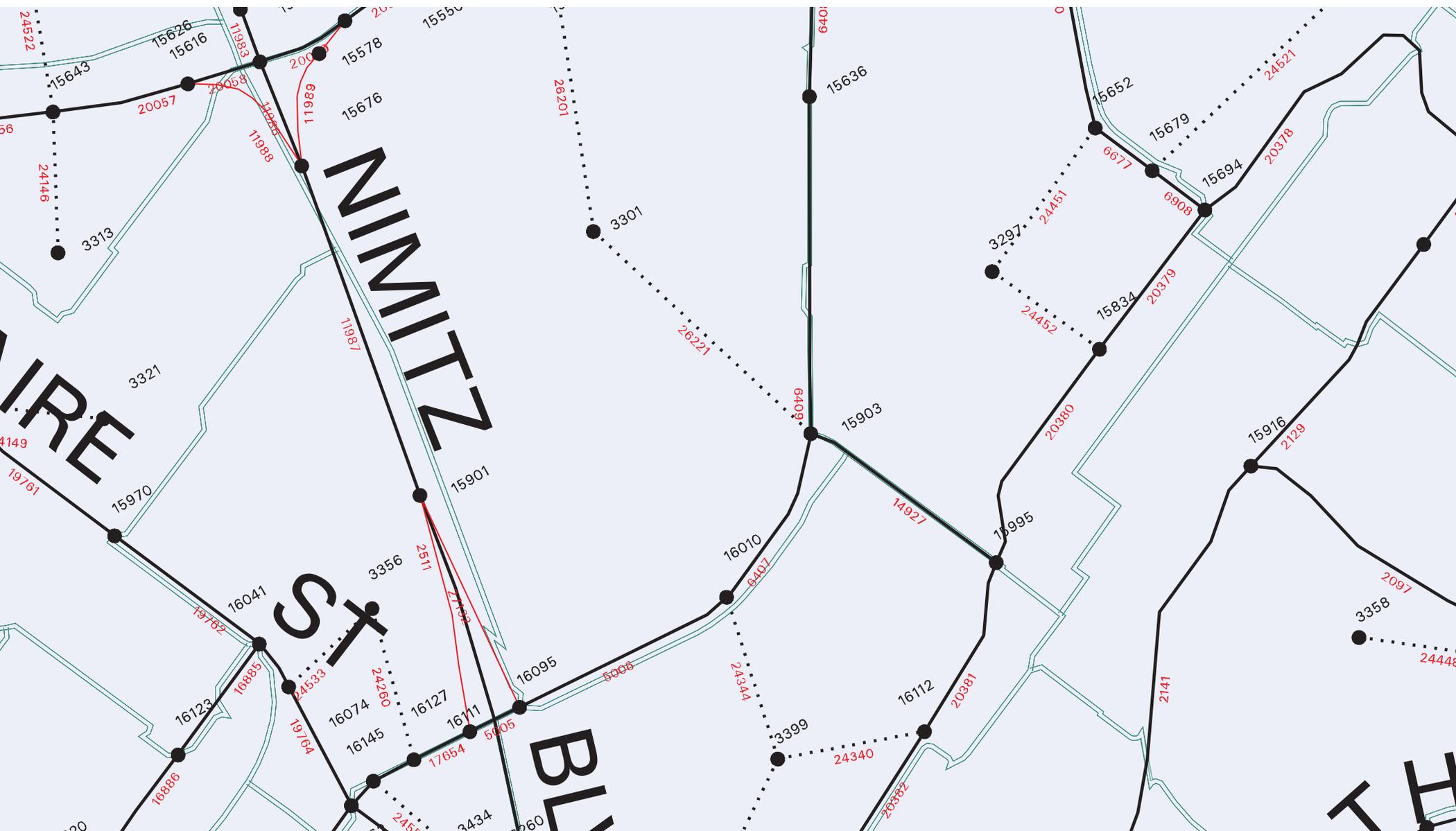
SANDAG Series 12 2035 Highway Network Node and ID Plot

POINT LOMA Area

Model Run 9/06/13
2035 RC RTP11

Node Numbers:

- #** Intersection Node Number
- #** Link ID Number



| FROMLINK | TOLINK | NODE | 3 hr PM VOLUME | Conversion Factor to 1 hr | 1 hr PM VOLUME |
|-----------------|---------------|-------------|---------------------------|--------------------------------------|---------------------------|
| 6407 | 6409 | 15903 | 160 | 0.34 | 60 |
| 6407 | 14927 | 15903 | 42 | 0.34 | 20 |
| 6407 | 26221 | 15903 | 44 | 0.34 | 20 |
| 6409 | 6407 | 15903 | 827 | 0.34 | 290 |
| 14927 | 6407 | 15903 | 107 | 0.34 | 40 |
| 14927 | 6409 | 15903 | 11 | 0.34 | 10 |
| 14927 | 26221 | 15903 | 98 | 0.34 | 40 |
| 26221 | 6407 | 15903 | 116 | 0.34 | 40 |
| 26221 | 14927 | 15903 | 40 | 0.34 | 20 |

Appendix Q

Horizon Year (2035) Intersection Turn Move Calculations

| Time | INTID | EXISTING | | | | | | | | | BUILD-OUT | | | | | | | | | | | | | | |
|----------------------------|-------|--|-------|------|------|------|-------|-------|--------|-------|-----------|-------|------|--|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | EBL | EBT | EBR | WBL | WBT | WBR |
| 1) Famosa/SB Nimitz | | 1000 | | | 5800 | | | 18900 | | | 13100 | | | 1000 | | | 6700 | | | 25000 | | | 18700 | | |
| SAT E | | 0 | 0 | 0 | 58 | 0 | 401 | 0 | 630 | 0 | 0 | 234 | 0 | | | | | | | | | | | | |
| SAT 2035 | | 0 | 0 | 0 | 120 | 0 | 460 | 0 | 830 | 0 | 0 | 330 | 0 | 0.000 | 0.000 | 0.000 | 0.010 | 0.000 | 0.069 | 0.000 | 0.033 | 0.000 | 0.000 | 0.018 | 0.000 |
| PM E | | 0 | 0 | 0 | 67 | 0 | 411 | 0 | 842 | 0 | 0 | 259 | 0 | | | | | | | | | | | | |
| PM 2035 | | 0 | 0 | 0 | (90) | 0 | (470) | 0 | (1110) | 0 | 0 | (370) | 0 | 0.000 | 0.000 | 0.000 | 0.012 | 0.000 | 0.071 | 0.000 | 0.045 | 0.000 | 0.000 | 0.020 | 0.000 |
| 2) Famosa/NB Nimitz | | 1000 | | | 1000 | | | 13100 | | | 6231 | | | 1000 | | | 1000 | | | 18700 | | | 11200 | | |
| SAT E | | 0 | 0 | 0 | 0 | 0 | 0 | 406 | 268 | 0 | 0 | 242 | 66 | | | | | | | | | | | | |
| SAT 2035 | | 0 | 0 | 0 | 0 | 0 | 0 | 580 | 380 | 0 | 0 | 430 | 120 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.031 | 0.020 | 0.000 | 0.000 | 0.039 | 0.011 |
| PM E | | 0 | 0 | 0 | 0 | 0 | 0 | 518 | 386 | 0 | 0 | 264 | 31 | | | | | | | | | | | | |
| PM 2035 | | 0 | 0 | 0 | 0 | 0 | 0 | (740) | (550) | 0 | 0 | (470) | (60) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 | 0.040 | 0.029 | 0.000 | 0.000 | 0.042 | 0.005 |
| 3) Famosa/Valetta | | The SANDAG year 2035 traffic model has Famosa Blvd extended to W. Point Loma Blvd; therefore, growth factoring not applied, rather SANDAG turn moves used as starting point. | | | | | | | | | | | | | | | | | | | | | | | |
| SAT E | | 136 | 41 | 1 | 1 | 35 | 95 | 81 | 3 | 140 | 3 | 3 | 0 | | | | | | | | | | | | |
| SAT 2035 | | 150 | 50 | 10 | 10 | 50 | 110 | 100 | 200 | 160 | 10 | 200 | 10 | SAT 2035 volumes adjusted up from existing based on SANDAG approach below. | | | | | | | | | | | |
| PM E | | (146) | (136) | (3) | (2) | (64) | (148) | (157) | () | (134) | (2) | (2) | () | | | | | | | | | | | | |
| PM 2035 SANDAG | | (40) | (40) | (10) | () | (20) | (40) | (20) | (60) | (60) | () | (290) | () | | | | | | | | | | | | |
| PM 2035 to keep above E | | (160) | (150) | (10) | (10) | (80) | (160) | (170) | (60) | (150) | (10) | (290) | (10) | Final PM 2035 volumes adjusted up from SANDAG to be above existing | | | | | | | | | | | |

Year 2035 Volumes

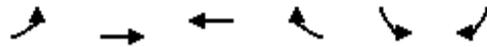
| | Existing ADT | SAT ADT | Change in Percentage | Weekday 2035 ADT | Saturday 2035 ADT | Rounded SAT 2035 ADT |
|-------------------------|-----------------|------------|-------------------------|---------------------|----------------------|-------------------------|
| Weekday | | | | | | |
| <u>Famosa Boulevard</u> | | | | | | |
| From Nimtz to Valeta | 6,231 | 7,213 | 116% | 11,200 | 12,965 | 13,000 |
| <u>Valeta Street</u> | | | | | | |
| From Camulos to Famosa | 3,868 | 3,225 | 83% | 4,300 (1) | 3,585 | 3,600 |

(1) SANDAG 2035 Valeta Volume lower than existing; therefore, 0.5% annual growth factor applied for 21 years to reach year 2035 growth factor of 1.11 (i.e. $3,868 \times 1.11 = 4,293$ rounded to 4,300)

Appendix R

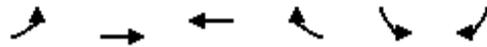
Horizon Year (2035) LOS Calculations

SAT Horizon Year
1: Famosa Blvd & Nimtiz SB Ramp



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|-------|-------|------|----------------------|-------|
| Lane Configurations | | ↑ | ↑ | | ↙ | ↗ |
| Volume (vph) | 0 | 840 | 340 | 0 | 120 | 470 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frbp, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.93 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1465 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1465 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 913 | 370 | 0 | 130 | 511 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 313 |
| Lane Group Flow (vph) | 0 | 913 | 370 | 0 | 130 | 198 |
| Confl. Peds. (#/hr) | 25 | | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | | NA | NA | | NA | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 31.3 | 31.3 | | 16.2 | 16.2 |
| Effective Green, g (s) | | 31.3 | 31.3 | | 16.2 | 16.2 |
| Actuated g/C Ratio | | 0.56 | 0.56 | | 0.29 | 0.29 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1051 | 1051 | | 517 | 428 |
| v/s Ratio Prot | | c0.49 | 0.20 | | 0.07 | |
| v/s Ratio Perm | | | | | | c0.14 |
| v/c Ratio | | 0.87 | 0.35 | | 0.25 | 0.46 |
| Uniform Delay, d1 | | 10.3 | 6.6 | | 15.0 | 16.1 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 7.8 | 0.2 | | 1.2 | 3.6 |
| Delay (s) | | 18.1 | 6.8 | | 16.2 | 19.7 |
| Level of Service | | B | A | | B | B |
| Approach Delay (s) | | 18.1 | 6.8 | | 19.0 | |
| Approach LOS | | B | A | | B | |
| Intersection Summary | | | | | | |
| HCM Average Control Delay | | | 16.2 | | HCM Level of Service | B |
| HCM Volume to Capacity ratio | | | 0.73 | | | |
| Actuated Cycle Length (s) | | | 55.5 | | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | | | 70.3% | | ICU Level of Service | C |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

SAT Horizon Year
2: Famosa Blvd & Nimitz NB Ramp



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 590 | 390 | 440 | 120 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 641 | 424 | 478 | 130 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage veh | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 634 | | | | 2300 | 593 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 634 | | | | 2300 | 593 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 32 | | | | 100 | 100 |
| cM capacity (veh/h) | 949 | | | | 14 | 495 |
| Direction, Lane # | EB 1 | EB 2 | WB 1 | | | |
| Volume Total | 641 | 424 | 609 | | | |
| Volume Left | 641 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 130 | | | |
| cSH | 949 | 1700 | 1700 | | | |
| Volume to Capacity | 0.68 | 0.25 | 0.36 | | | |
| Queue Length 95th (ft) | 137 | 0 | 0 | | | |
| Control Delay (s) | 16.3 | 0.0 | 0.0 | | | |
| Lane LOS | C | | | | | |
| Approach Delay (s) | 9.8 | | 0.0 | | | |
| Approach LOS | | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 6.2 | | | |
| Intersection Capacity Utilization | | | 70.3% | | ICU Level of Service | C |
| Analysis Period (min) | | | 15 | | | |

SAT Horizon Year
3: Valeta St & Famosa Blvd

HCM Signalized Intersection Capacity Analysis

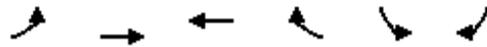
| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | |
| Volume (vph) | 100 | 200 | 160 | 10 | 200 | 10 | 150 | 50 | 10 | 10 | 50 | 110 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frbp, ped/bikes | 1.00 | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.95 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 0.98 | 1.00 | | 1.00 | 1.00 | | 0.98 | 1.00 | |
| Frt | 1.00 | 0.93 | | 1.00 | 0.99 | | 1.00 | 0.97 | | 1.00 | 0.90 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 3197 | | 1728 | 3500 | | 1770 | 1802 | | 1730 | 1579 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 3197 | | 1728 | 3500 | | 1770 | 1802 | | 1730 | 1579 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 109 | 217 | 174 | 11 | 217 | 11 | 163 | 54 | 11 | 11 | 54 | 120 |
| RTOR Reduction (vph) | 0 | 115 | 0 | 0 | 4 | 0 | 0 | 7 | 0 | 0 | 94 | 0 |
| Lane Group Flow (vph) | 109 | 276 | 0 | 11 | 224 | 0 | 163 | 58 | 0 | 11 | 80 | 0 |
| Confl. Peds. (#/hr) | 25 | | 25 | 25 | | 25 | 25 | | 25 | 25 | | 25 |
| Confl. Bikes (#/hr) | | | 10 | | | 10 | | | 10 | | | 10 |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 6.9 | 18.7 | | 0.5 | 12.3 | | 8.2 | 19.0 | | 0.5 | 11.3 | |
| Effective Green, g (s) | 6.9 | 18.7 | | 0.5 | 12.3 | | 8.2 | 19.0 | | 0.5 | 11.3 | |
| Actuated g/C Ratio | 0.13 | 0.34 | | 0.01 | 0.22 | | 0.15 | 0.35 | | 0.01 | 0.21 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 223 | 1093 | | 16 | 787 | | 265 | 626 | | 16 | 326 | |
| v/s Ratio Prot | c0.06 | c0.09 | | 0.01 | 0.06 | | c0.09 | 0.03 | | 0.01 | c0.05 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.49 | 0.25 | | 0.69 | 0.28 | | 0.62 | 0.09 | | 0.69 | 0.24 | |
| Uniform Delay, d1 | 22.3 | 13.0 | | 27.0 | 17.6 | | 21.8 | 12.0 | | 27.0 | 18.1 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 1.7 | 0.1 | | 80.1 | 0.2 | | 4.2 | 0.1 | | 80.1 | 0.4 | |
| Delay (s) | 23.9 | 13.1 | | 107.1 | 17.8 | | 26.0 | 12.1 | | 107.1 | 18.5 | |
| Level of Service | C | B | | F | B | | C | B | | F | B | |
| Approach Delay (s) | | 15.5 | | | 21.9 | | | 22.0 | | | 23.8 | |
| Approach LOS | | B | | | C | | | C | | | C | |
| Intersection Summary | | | | | | | | | | | | |
| HCM Average Control Delay | | | 19.4 | | | | HCM Level of Service | | | | B | |
| HCM Volume to Capacity ratio | | | 0.35 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 54.7 | | | | Sum of lost time (s) | | | 12.0 | | |
| Intersection Capacity Utilization | | | 49.9% | | | | ICU Level of Service | | | A | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c Critical Lane Group | | | | | | | | | | | | |

SAT Horizon Year
4: Valeta St & Project Access



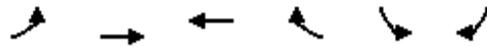
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 160 | 170 | 0 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 174 | 185 | 0 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh | | | | | | |
| Upstream signal (ft) | | | | 521 | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 409 | 235 | 210 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 409 | 235 | 210 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 574 | 771 | 1333 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 0 | 174 | 185 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 0 | | | |
| cSH | 1700 | 1333 | 1700 | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.11 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Lane LOS | A | | | | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Approach LOS | A | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.0 | | | |
| Intersection Capacity Utilization | | | 27.1% | ICU Level of Service | | A |
| Analysis Period (min) | | | 15 | | | |

PM Horizon Year
1: Famosa Blvd & Nimtiz SB Ramp



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|-------|-------|------|----------------------|-------|
| Lane Configurations | | ↑ | ↑ | | ↙ | ↗ |
| Volume (vph) | 0 | 1120 | 370 | 0 | 90 | 480 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frbp, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.90 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1422 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1422 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1217 | 402 | 0 | 98 | 522 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 370 |
| Lane Group Flow (vph) | 0 | 1217 | 402 | 0 | 98 | 152 |
| Confl. Peds. (#/hr) | 25 | | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | | NA | NA | | NA | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 59.5 | 59.5 | | 19.1 | 19.1 |
| Effective Green, g (s) | | 59.5 | 59.5 | | 19.1 | 19.1 |
| Actuated g/C Ratio | | 0.69 | 0.69 | | 0.22 | 0.22 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1280 | 1280 | | 390 | 314 |
| v/s Ratio Prot | | c0.65 | 0.22 | | 0.06 | |
| v/s Ratio Perm | | | | | | c0.11 |
| v/c Ratio | | 0.95 | 0.31 | | 0.25 | 0.48 |
| Uniform Delay, d1 | | 12.2 | 5.4 | | 27.8 | 29.4 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 14.9 | 0.1 | | 1.5 | 5.2 |
| Delay (s) | | 27.2 | 5.5 | | 29.4 | 34.7 |
| Level of Service | | C | A | | C | C |
| Approach Delay (s) | | 27.2 | 5.5 | | 33.9 | |
| Approach LOS | | C | A | | C | |
| Intersection Summary | | | | | | |
| HCM Average Control Delay | | | 25.1 | | HCM Level of Service | C |
| HCM Volume to Capacity ratio | | | 0.84 | | | |
| Actuated Cycle Length (s) | | | 86.6 | | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | | | 78.9% | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

PM Horizon Year
2: Famosa Blvd & Nimitz NB Ramp



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↶ | ↷ | ↷ | | | |
| Volume (veh/h) | 750 | 560 | 480 | 60 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 815 | 609 | 522 | 65 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 612 | | | | 2843 | 604 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 612 | | | | 2843 | 604 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 16 | | | | 100 | 100 |
| cM capacity (veh/h) | 967 | | | | 3 | 488 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 815 | 609 | 587 |
| Volume Left | 815 | 0 | 0 |
| Volume Right | 0 | 0 | 65 |
| cSH | 967 | 1700 | 1700 |
| Volume to Capacity | 0.84 | 0.36 | 0.35 |
| Queue Length 95th (ft) | 260 | 0 | 0 |
| Control Delay (s) | 25.0 | 0.0 | 0.0 |
| Lane LOS | C | | |
| Approach Delay (s) | 14.3 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|--|-------|----------------------|
| Average Delay | | 10.1 | |
| Intersection Capacity Utilization | | 78.9% | ICU Level of Service |
| Analysis Period (min) | | 15 | D |

PM Horizon Year
3: Valeta St & Famosa Blvd

HCM Signalized Intersection Capacity Analysis

| |  |  |  |  |  |  |  |  |  |  |  |  | |
|-----------------------------------|---|--|---|---|--|---|---|---|---|---|---|---|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |   | |  |   | |  |  | |  |  | | |
| Volume (vph) | 170 | 60 | 150 | 10 | 290 | 10 | 160 | 150 | 10 | 10 | 80 | 160 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | | |
| Frbp, ped/bikes | 1.00 | 0.94 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.94 | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | |
| Frt | 1.00 | 0.89 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.90 | | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | |
| Satd. Flow (prot) | 1770 | 2977 | | 1705 | 3511 | | 1770 | 1839 | | 1770 | 1575 | | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | |
| Satd. Flow (perm) | 1770 | 2977 | | 1705 | 3511 | | 1770 | 1839 | | 1770 | 1575 | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 185 | 65 | 163 | 11 | 315 | 11 | 174 | 163 | 11 | 11 | 87 | 174 | |
| RTOR Reduction (vph) | 0 | 98 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 91 | 0 | |
| Lane Group Flow (vph) | 185 | 130 | 0 | 11 | 324 | 0 | 174 | 171 | 0 | 11 | 170 | 0 | |
| Confl. Peds. (#/hr) | 25 | | 25 | 25 | | 25 | 25 | | 25 | 25 | | 25 | |
| Confl. Bikes (#/hr) | | | 10 | | | 10 | | | 10 | | | 10 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | | |
| Permitted Phases | | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.2 | 26.9 | | 0.6 | 15.3 | | 11.7 | 17.9 | | 6.3 | 12.5 | | |
| Effective Green, g (s) | 12.2 | 26.9 | | 0.6 | 15.3 | | 11.7 | 17.9 | | 6.3 | 12.5 | | |
| Actuated g/C Ratio | 0.18 | 0.40 | | 0.01 | 0.23 | | 0.17 | 0.26 | | 0.09 | 0.18 | | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Lane Grp Cap (vph) | 319 | 1183 | | 15 | 793 | | 306 | 486 | | 165 | 291 | | |
| v/s Ratio Prot | c0.10 | 0.04 | | 0.01 | c0.09 | | c0.10 | 0.09 | | 0.01 | c0.11 | | |
| v/s Ratio Perm | | | | | | | | | | | | | |
| v/c Ratio | 0.58 | 0.11 | | 0.73 | 0.41 | | 0.57 | 0.35 | | 0.07 | 0.59 | | |
| Uniform Delay, d1 | 25.4 | 12.9 | | 33.5 | 22.3 | | 25.7 | 20.2 | | 28.0 | 25.2 | | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | |
| Incremental Delay, d2 | 2.6 | 0.0 | | 103.2 | 0.3 | | 2.4 | 0.4 | | 0.2 | 3.0 | | |
| Delay (s) | 28.0 | 12.9 | | 136.7 | 22.7 | | 28.1 | 20.6 | | 28.2 | 28.2 | | |
| Level of Service | C | B | | F | C | | C | C | | C | C | | |
| Approach Delay (s) | | 19.6 | | | 26.4 | | | 24.4 | | | 28.2 | | |
| Approach LOS | | B | | | C | | | C | | | C | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM Average Control Delay | | | 24.2 | | | | | | | | | HCM Level of Service | C |
| HCM Volume to Capacity ratio | | | 0.53 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 67.7 | | | | | | | | | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | | | 58.4% | | | | | | | | | ICU Level of Service | B |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c | Critical Lane Group | | | | | | | | | | | | |

PM Horizon Year
4: Valeta St & Project Access



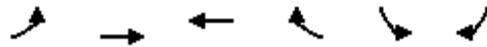
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 0 | 0 | 0 | 330 | 250 | 0 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 0 | 0 | 0 | 359 | 272 | 0 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | | | 521 | | |
| pX, platoon unblocked | 0.97 | | | | | |
| vC, conflicting volume | 680 | 322 | 297 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 656 | 322 | 297 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 100 | 100 | 100 | | | |
| cM capacity (veh/h) | 401 | 689 | 1238 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 0 | 359 | 272 | | | |
| Volume Left | 0 | 0 | 0 | | | |
| Volume Right | 0 | 0 | 0 | | | |
| cSH | 1700 | 1238 | 1700 | | | |
| Volume to Capacity | 0.00 | 0.00 | 0.16 | | | |
| Queue Length 95th (ft) | 0 | 0 | 0 | | | |
| Control Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Lane LOS | A | | | | | |
| Approach Delay (s) | 0.0 | 0.0 | 0.0 | | | |
| Approach LOS | A | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 0.0 | | | |
| Intersection Capacity Utilization | | | 33.0% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |

Appendix S

Horizon Year (2035) with Project LOS Calculations

SAT Horizon Year + Project
 1: Famosa Blvd & Nimitz SB Ramp

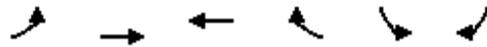
HCM Signalized Intersection Capacity Analysis



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|-------|--------|------|----------------------|-------|
| Lane Configurations | | ↑ | ↑ | | ↙ | ↗ |
| Volume (vph) | 0 | 871 | 371 | 0 | 167 | 470 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frbp, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.92 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1464 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1464 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 947 | 403 | 0 | 182 | 511 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 293 |
| Lane Group Flow (vph) | 0 | 947 | 403 | 0 | 182 | 218 |
| Confl. Peds. (#/hr) | 25 | | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | | NA | NA | | NA | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 32.2 | 32.2 | | 16.1 | 16.1 |
| Effective Green, g (s) | | 32.2 | 32.2 | | 16.1 | 16.1 |
| Actuated g/C Ratio | | 0.57 | 0.57 | | 0.29 | 0.29 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1066 | 1066 | | 506 | 419 |
| v/s Ratio Prot | | c0.51 | 0.22 | | 0.10 | |
| v/s Ratio Perm | | | | | | c0.15 |
| v/c Ratio | | 0.89 | 0.38 | | 0.36 | 0.52 |
| Uniform Delay, d1 | | 10.5 | 6.6 | | 16.0 | 16.9 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 9.2 | 0.2 | | 2.0 | 4.5 |
| Delay (s) | | 19.7 | 6.8 | | 18.0 | 21.4 |
| Level of Service | | B | A | | B | C |
| Approach Delay (s) | | 19.7 | 6.8 | | 20.5 | |
| Approach LOS | | B | A | | C | |
| Intersection Summary | | | | | | |
| HCM Average Control Delay | | | 17.4 | | HCM Level of Service | B |
| HCM Volume to Capacity ratio | | | 0.77 | | | |
| Actuated Cycle Length (s) | | | 56.3 | | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | | | 122.8% | | ICU Level of Service | H |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

LOS Engineering, Inc.

SAT Horizon Year + Project
 2: Famosa Blvd & Nimitz NB Ramp



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↖ | ↑ | ↗ | | | |
| Volume (veh/h) | 590 | 468 | 471 | 167 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 641 | 509 | 512 | 182 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 718 | | | | 2444 | 653 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 718 | | | | 2444 | 653 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 27 | | | | 100 | 100 |
| cM capacity (veh/h) | 883 | | | | 9 | 458 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 641 | 509 | 693 |
| Volume Left | 641 | 0 | 0 |
| Volume Right | 0 | 0 | 182 |
| cSH | 883 | 1700 | 1700 |
| Volume to Capacity | 0.73 | 0.30 | 0.41 |
| Queue Length 95th (ft) | 164 | 0 | 0 |
| Control Delay (s) | 19.1 | 0.0 | 0.0 |
| Lane LOS | C | | |
| Approach Delay (s) | 10.6 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|--|--------|----------------------|
| Average Delay | | 6.6 | |
| Intersection Capacity Utilization | | 122.8% | ICU Level of Service |
| Analysis Period (min) | | 15 | H |

SAT Horizon Year + Project
3: Valeta St & Famosa Blvd

HCM Signalized Intersection Capacity Analysis

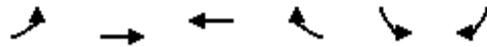
| |  |  |  |  |  |  |  |  |  |  |  |  | |
|-----------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|------|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR | |
| Lane Configurations |  |  | |  |  | |  |  | |  |  | | |
| Volume (vph) | 178 | 200 | 160 | 10 | 200 | 10 | 150 | 60 | 10 | 10 | 60 | 188 | |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | | |
| Frbp, ped/bikes | 1.00 | 0.97 | | 1.00 | 1.00 | | 1.00 | 0.99 | | 1.00 | 0.93 | | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 0.97 | 1.00 | | 1.00 | 1.00 | | 0.97 | 1.00 | | |
| Frt | 1.00 | 0.93 | | 1.00 | 0.99 | | 1.00 | 0.98 | | 1.00 | 0.89 | | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | |
| Satd. Flow (prot) | 1770 | 3188 | | 1721 | 3499 | | 1770 | 1810 | | 1724 | 1543 | | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | |
| Satd. Flow (perm) | 1770 | 3188 | | 1721 | 3499 | | 1770 | 1810 | | 1724 | 1543 | | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | |
| Adj. Flow (vph) | 193 | 217 | 174 | 11 | 217 | 11 | 163 | 65 | 11 | 11 | 65 | 204 | |
| RTOR Reduction (vph) | 0 | 105 | 0 | 0 | 4 | 0 | 0 | 7 | 0 | 0 | 134 | 0 | |
| Lane Group Flow (vph) | 193 | 286 | 0 | 11 | 224 | 0 | 163 | 69 | 0 | 11 | 135 | 0 | |
| Confl. Peds. (#/hr) | 25 | | 25 | 25 | | 25 | 25 | | 25 | 25 | | 25 | |
| Confl. Bikes (#/hr) | | | 10 | | | 10 | | | 10 | | | 10 | |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | | |
| Permitted Phases | | | | | | | | | | | | | |
| Actuated Green, G (s) | 12.1 | 25.3 | | 0.6 | 13.8 | | 9.0 | 21.5 | | 0.6 | 13.1 | | |
| Effective Green, g (s) | 12.1 | 25.3 | | 0.6 | 13.8 | | 9.0 | 21.5 | | 0.6 | 13.1 | | |
| Actuated g/C Ratio | 0.19 | 0.40 | | 0.01 | 0.22 | | 0.14 | 0.34 | | 0.01 | 0.20 | | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | |
| Lane Grp Cap (vph) | 335 | 1260 | | 16 | 754 | | 249 | 608 | | 16 | 316 | | |
| v/s Ratio Prot | c0.11 | 0.09 | | 0.01 | c0.06 | | c0.09 | 0.04 | | 0.01 | c0.09 | | |
| v/s Ratio Perm | | | | | | | | | | | | | |
| v/c Ratio | 0.58 | 0.23 | | 0.69 | 0.30 | | 0.65 | 0.11 | | 0.69 | 0.43 | | |
| Uniform Delay, d1 | 23.6 | 12.9 | | 31.6 | 21.0 | | 26.0 | 14.7 | | 31.6 | 22.2 | | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | |
| Incremental Delay, d2 | 2.4 | 0.1 | | 80.1 | 0.2 | | 6.1 | 0.1 | | 80.1 | 0.9 | | |
| Delay (s) | 26.0 | 12.9 | | 111.7 | 21.3 | | 32.1 | 14.8 | | 111.7 | 23.1 | | |
| Level of Service | C | B | | F | C | | C | B | | F | C | | |
| Approach Delay (s) | | 17.3 | | | 25.4 | | | 26.6 | | | 26.6 | | |
| Approach LOS | | B | | | C | | | C | | | C | | |
| Intersection Summary | | | | | | | | | | | | | |
| HCM Average Control Delay | | | 22.3 | | | | | | | | | HCM Level of Service | C |
| HCM Volume to Capacity ratio | | | 0.47 | | | | | | | | | | |
| Actuated Cycle Length (s) | | | 64.0 | | | | | | | | | Sum of lost time (s) | 16.0 |
| Intersection Capacity Utilization | | | 58.1% | | | | | | | | | ICU Level of Service | B |
| Analysis Period (min) | | | 15 | | | | | | | | | | |
| c | Critical Lane Group | | | | | | | | | | | | |

SAT Horizon Year + Project
4: Valeta St & Project Access



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|----------------------|------|------|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 15 | 88 | 88 | 160 | 170 | 15 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 16 | 96 | 96 | 174 | 185 | 16 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | 521 | | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 608 | 243 | 226 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 608 | 243 | 226 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 96 | 87 | 93 | | | |
| cM capacity (veh/h) | 408 | 763 | 1314 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 112 | 270 | 201 | | | |
| Volume Left | 16 | 96 | 0 | | | |
| Volume Right | 96 | 0 | 16 | | | |
| cSH | 677 | 1314 | 1700 | | | |
| Volume to Capacity | 0.17 | 0.07 | 0.12 | | | |
| Queue Length 95th (ft) | 15 | 6 | 0 | | | |
| Control Delay (s) | 11.4 | 3.2 | 0.0 | | | |
| Lane LOS | B | A | | | | |
| Approach Delay (s) | 11.4 | 3.2 | 0.0 | | | |
| Approach LOS | B | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 3.7 | | | |
| Intersection Capacity Utilization | | | 46.3% | ICU Level of Service | A | |
| Analysis Period (min) | | | 15 | | | |

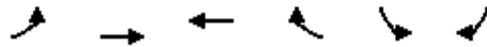
PM Horizon Year + Project
1: Famosa Blvd & Nimtiz SB Ramp



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|-----------------------------------|------|-------|-------|------|----------------------|-------|
| Lane Configurations | | ↑ | ↑ | | ↘ | ↘ |
| Volume (vph) | 0 | 1130 | 380 | 0 | 106 | 480 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Lane Util. Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frbp, ped/bikes | | 1.00 | 1.00 | | 1.00 | 0.90 |
| Flpb, ped/bikes | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Frt | | 1.00 | 1.00 | | 1.00 | 0.85 |
| Flt Protected | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (prot) | | 1863 | 1863 | | 1770 | 1421 |
| Flt Permitted | | 1.00 | 1.00 | | 0.95 | 1.00 |
| Satd. Flow (perm) | | 1863 | 1863 | | 1770 | 1421 |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 0 | 1228 | 413 | 0 | 115 | 522 |
| RTOR Reduction (vph) | 0 | 0 | 0 | 0 | 0 | 363 |
| Lane Group Flow (vph) | 0 | 1228 | 413 | 0 | 115 | 159 |
| Confl. Peds. (#/hr) | 25 | | | 25 | 25 | 25 |
| Confl. Bikes (#/hr) | | | | 10 | | 10 |
| Turn Type | | NA | NA | | NA | Perm |
| Protected Phases | | 4 | 8 | | 6 | |
| Permitted Phases | | | | | | 6 |
| Actuated Green, G (s) | | 59.9 | 59.9 | | 19.1 | 19.1 |
| Effective Green, g (s) | | 59.9 | 59.9 | | 19.1 | 19.1 |
| Actuated g/C Ratio | | 0.69 | 0.69 | | 0.22 | 0.22 |
| Clearance Time (s) | | 4.0 | 4.0 | | 4.0 | 4.0 |
| Vehicle Extension (s) | | 3.0 | 3.0 | | 3.0 | 3.0 |
| Lane Grp Cap (vph) | | 1283 | 1283 | | 389 | 312 |
| v/s Ratio Prot | | c0.66 | 0.22 | | 0.06 | |
| v/s Ratio Perm | | | | | | c0.11 |
| v/c Ratio | | 0.96 | 0.32 | | 0.30 | 0.51 |
| Uniform Delay, d1 | | 12.4 | 5.4 | | 28.3 | 29.8 |
| Progression Factor | | 1.00 | 1.00 | | 1.00 | 1.00 |
| Incremental Delay, d2 | | 15.8 | 0.1 | | 1.9 | 5.8 |
| Delay (s) | | 28.2 | 5.6 | | 30.3 | 35.7 |
| Level of Service | | C | A | | C | D |
| Approach Delay (s) | | 28.2 | 5.6 | | 34.7 | |
| Approach LOS | | C | A | | C | |
| Intersection Summary | | | | | | |
| HCM Average Control Delay | | | 25.9 | | HCM Level of Service | C |
| HCM Volume to Capacity ratio | | | 0.85 | | | |
| Actuated Cycle Length (s) | | | 87.0 | | Sum of lost time (s) | 8.0 |
| Intersection Capacity Utilization | | | 79.5% | | ICU Level of Service | D |
| Analysis Period (min) | | | 15 | | | |
| c Critical Lane Group | | | | | | |

LOS Engineering, Inc.

PM Horizon Year + Project
2: Famosa Blvd & Nimitz NB Ramp



| Movement | EBL | EBT | WBT | WBR | SBL | SBR |
|------------------------|------|------|------|------|------|------|
| Lane Configurations | ↶ | ↷ | ↷ | | | |
| Volume (veh/h) | 750 | 586 | 490 | 76 | 0 | 0 |
| Sign Control | | Free | Free | | Stop | |
| Grade | | 0% | 0% | | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 815 | 637 | 533 | 83 | 0 | 0 |
| Pedestrians | | 25 | 25 | | 25 | |
| Lane Width (ft) | | 12.0 | 12.0 | | 0.0 | |
| Walking Speed (ft/s) | | 4.0 | 4.0 | | 4.0 | |
| Percent Blockage | | 2 | 2 | | 0 | |
| Right turn flare (veh) | | | | | | |
| Median type | | None | None | | | |
| Median storage (veh) | | | | | | |
| Upstream signal (ft) | | 272 | | | | |
| pX, platoon unblocked | | | | | | |
| vC, conflicting volume | 640 | | | | 2891 | 624 |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 640 | | | | 2891 | 624 |
| tC, single (s) | 4.1 | | | | 6.4 | 6.2 |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 2.2 | | | | 3.5 | 3.3 |
| p0 queue free % | 14 | | | | 100 | 100 |
| cM capacity (veh/h) | 944 | | | | 2 | 475 |

| Direction, Lane # | EB 1 | EB 2 | WB 1 |
|------------------------|------|------|------|
| Volume Total | 815 | 637 | 615 |
| Volume Left | 815 | 0 | 0 |
| Volume Right | 0 | 0 | 83 |
| cSH | 944 | 1700 | 1700 |
| Volume to Capacity | 0.86 | 0.37 | 0.36 |
| Queue Length 95th (ft) | 280 | 0 | 0 |
| Control Delay (s) | 27.4 | 0.0 | 0.0 |
| Lane LOS | D | | |
| Approach Delay (s) | 15.4 | | 0.0 |
| Approach LOS | | | |

| Intersection Summary | | | |
|-----------------------------------|--|-------|----------------------|
| Average Delay | | 10.8 | |
| Intersection Capacity Utilization | | 79.5% | ICU Level of Service |
| Analysis Period (min) | | 15 | D |

PM Horizon Year + Project
3: Valeta St & Famosa Blvd

HCM Signalized Intersection Capacity Analysis

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-----------------------------------|---|--|---|---|--|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |   | |  |   | |  |  | |  |  | |
| Volume (vph) | 196 | 60 | 150 | 10 | 290 | 10 | 160 | 153 | 10 | 10 | 83 | 186 |
| Ideal Flow (vphpl) | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 | 1900 |
| Total Lost time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Lane Util. Factor | 1.00 | 0.95 | | 1.00 | 0.95 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frbp, ped/bikes | 1.00 | 0.94 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 0.94 | |
| Flpb, ped/bikes | 1.00 | 1.00 | | 0.96 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Frt | 1.00 | 0.89 | | 1.00 | 0.99 | | 1.00 | 0.99 | | 1.00 | 0.90 | |
| Flt Protected | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (prot) | 1770 | 2973 | | 1703 | 3511 | | 1770 | 1839 | | 1770 | 1563 | |
| Flt Permitted | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | | 0.95 | 1.00 | |
| Satd. Flow (perm) | 1770 | 2973 | | 1703 | 3511 | | 1770 | 1839 | | 1770 | 1563 | |
| Peak-hour factor, PHF | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Adj. Flow (vph) | 213 | 65 | 163 | 11 | 315 | 11 | 174 | 166 | 11 | 11 | 90 | 202 |
| RTOR Reduction (vph) | 0 | 98 | 0 | 0 | 2 | 0 | 0 | 3 | 0 | 0 | 100 | 0 |
| Lane Group Flow (vph) | 213 | 130 | 0 | 11 | 324 | 0 | 174 | 174 | 0 | 11 | 192 | 0 |
| Confl. Peds. (#/hr) | 25 | | 25 | 25 | | 25 | 25 | | 25 | 25 | | 25 |
| Confl. Bikes (#/hr) | | | 10 | | | 10 | | | 10 | | | 10 |
| Turn Type | Prot | NA | | Prot | NA | | Prot | NA | | Prot | NA | |
| Protected Phases | 7 | 4 | | 3 | 8 | | 5 | 2 | | 1 | 6 | |
| Permitted Phases | | | | | | | | | | | | |
| Actuated Green, G (s) | 13.2 | 28.1 | | 0.6 | 15.5 | | 11.9 | 19.3 | | 6.3 | 13.7 | |
| Effective Green, g (s) | 13.2 | 28.1 | | 0.6 | 15.5 | | 11.9 | 19.3 | | 6.3 | 13.7 | |
| Actuated g/C Ratio | 0.19 | 0.40 | | 0.01 | 0.22 | | 0.17 | 0.27 | | 0.09 | 0.19 | |
| Clearance Time (s) | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | | 4.0 | 4.0 | |
| Vehicle Extension (s) | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | | 3.0 | 3.0 | |
| Lane Grp Cap (vph) | 332 | 1188 | | 15 | 774 | | 300 | 505 | | 159 | 305 | |
| v/s Ratio Prot | c0.12 | 0.04 | | 0.01 | c0.09 | | c0.10 | 0.09 | | 0.01 | c0.12 | |
| v/s Ratio Perm | | | | | | | | | | | | |
| v/c Ratio | 0.64 | 0.11 | | 0.73 | 0.42 | | 0.58 | 0.34 | | 0.07 | 0.63 | |
| Uniform Delay, d1 | 26.4 | 13.2 | | 34.8 | 23.5 | | 26.9 | 20.4 | | 29.3 | 26.0 | |
| Progression Factor | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | |
| Incremental Delay, d2 | 4.2 | 0.0 | | 103.2 | 0.4 | | 2.7 | 0.4 | | 0.2 | 4.2 | |
| Delay (s) | 30.6 | 13.3 | | 138.0 | 23.9 | | 29.6 | 20.8 | | 29.5 | 30.2 | |
| Level of Service | C | B | | F | C | | C | C | | C | C | |
| Approach Delay (s) | | 21.6 | | | 27.6 | | | 25.2 | | | 30.1 | |
| Approach LOS | | C | | | C | | | C | | | C | |
| Intersection Summary | | | | | | | | | | | | |
| HCM Average Control Delay | | | 25.7 | | | HCM Level of Service | | | | C | | |
| HCM Volume to Capacity ratio | | | 0.56 | | | | | | | | | |
| Actuated Cycle Length (s) | | | 70.3 | | | Sum of lost time (s) | | | 16.0 | | | |
| Intersection Capacity Utilization | | | 61.7% | | | ICU Level of Service | | | | B | | |
| Analysis Period (min) | | | 15 | | | | | | | | | |
| c | Critical Lane Group | | | | | | | | | | | |

LOS Engineering, Inc.

PM Horizon Year + Project
4: Valeta St & Project Access



| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
|-----------------------------------|-------------|-------------|-------------|------|----------------------|------|
| Lane Configurations | | | | | | |
| Volume (veh/h) | 5 | 29 | 29 | 330 | 250 | 5 |
| Sign Control | Stop | | | Free | Free | |
| Grade | 0% | | | 0% | 0% | |
| Peak Hour Factor | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 | 0.92 |
| Hourly flow rate (vph) | 5 | 32 | 32 | 359 | 272 | 5 |
| Pedestrians | 25 | | | 25 | 25 | |
| Lane Width (ft) | 12.0 | | | 12.0 | 12.0 | |
| Walking Speed (ft/s) | 4.0 | | | 4.0 | 4.0 | |
| Percent Blockage | 2 | | | 2 | 2 | |
| Right turn flare (veh) | | | | | | |
| Median type | | | | None | None | |
| Median storage veh | | | | | | |
| Upstream signal (ft) | | | | 521 | | |
| pX, platoon unblocked | 0.97 | | | | | |
| vC, conflicting volume | 746 | 324 | 302 | | | |
| vC1, stage 1 conf vol | | | | | | |
| vC2, stage 2 conf vol | | | | | | |
| vCu, unblocked vol | 720 | 324 | 302 | | | |
| tC, single (s) | 6.4 | 6.2 | 4.1 | | | |
| tC, 2 stage (s) | | | | | | |
| tF (s) | 3.5 | 3.3 | 2.2 | | | |
| p0 queue free % | 98 | 95 | 97 | | | |
| cM capacity (veh/h) | 356 | 687 | 1233 | | | |
| Direction, Lane # | EB 1 | NB 1 | SB 1 | | | |
| Volume Total | 37 | 390 | 277 | | | |
| Volume Left | 5 | 32 | 0 | | | |
| Volume Right | 32 | 0 | 5 | | | |
| cSH | 605 | 1233 | 1700 | | | |
| Volume to Capacity | 0.06 | 0.03 | 0.16 | | | |
| Queue Length 95th (ft) | 5 | 2 | 0 | | | |
| Control Delay (s) | 11.3 | 0.9 | 0.0 | | | |
| Lane LOS | B | A | | | | |
| Approach Delay (s) | 11.3 | 0.9 | 0.0 | | | |
| Approach LOS | B | | | | | |
| Intersection Summary | | | | | | |
| Average Delay | | | 1.1 | | | |
| Intersection Capacity Utilization | | | 51.8% | | ICU Level of Service | A |
| Analysis Period (min) | | | 15 | | | |