TRAFFIC IMPACT ANALYSIS

CONCORDIA UNIVERSITY CAMPUS MASTER BUILD-OUT PLAN

CITY OF IRVINE, COUNTY OF ORANGE, CALIFORNIA

PLANNING AREA 21
TURTLE ROCK

CASE FILE NUMBERS:
00612052-PCPU
00629029-PZC

This Traffic Impact Analysis has been prepared under the supervision of
Leslie E. Card, P.E.

Signed Leslie E. Card

LSA

June 3, 2016

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00612052-PCPU
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Submitted to:

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LSA Project No. CUI1301

LSA

June 3, 2016

TABLE OF CONTENTS

FIGURES

TABLES

APPENDICES

CONCORDIA UNIVERSITY CAMPUS MASTER BUILD-OUT PLAN TRAFFIC IMPACT ANALYSIS

LSA Associates, Inc. (LSA) has prepared the following analysis to identify the short-term and long-range traffic impacts as a result of the update of the Campus Master Build-Out Plan for Concordia University in the City of Irvine (City). The existing campus is generally located north of Turtle Rock Drive, south of University Drive, east of Culver Drive, and west of Ridgeline Drive in Planning Area (PA) 21 (Turtle Rock). LSA has prepared this analysis consistent with the approved scope of work dated August 25, 2015 (a copy of which is provided in Appendix A). This Traffic Impact Analysis (TIA) was prepared in accordance with the applicable sections of the City's TIA Guidelines, adopted August 24, 2004, Transportation Design Procedures (TDPs) (February 2007), the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies (December 2002), and the California Environmental Quality Act (CEQA).

EXECUTIVE SUMMARY

The purpose of this TIA is to determine the potential circulation impacts associated with the proposed Campus Master Build-Out Plan (Conditional Use Permit [CUP] modification 00612052-PCPU). Additionally, a Zone Change application has been filed (Case No. 00629029-PZC) to update the Special Development Requirements (SDR) in Zoning Code Section 9-21-7. The TIA will evaluate the methodology and average daily trip (ADT) cap identified in Section 9-21-7(B)-10.

The 72.76-acre (ac) Concordia University main campus is currently improved with 16 institutional buildings comprising approximately 243,571 total square feet (sf). Four existing residential halls provide 256 units with 1,024 available dorm beds (4 beds per unit). Access to the campus is provided via gated entry points from Ridgeline Drive to the east and Turtle Rock Drive to the west.

Prior City approvals (43809-CPM) provide for a campus master build out to allow development of an additional 77,649 sf of institutional buildings beyond the current uses, for a total of 321,220 sf on the campus site. A fifth residential hall is also included in the approved campus build-out plan (12273-CPU), increasing the total number of units from 256 to 330 (74 additional units) and increasing the total number of dorm beds from 1,024 to 1,320 (296 additional beds).

The proposed Campus Master Build-Out Plan includes a maximum of up to 321,220 total institutional square footage on campus, which represents the approved allocation on site. The plan also relocates the fifth residence hall to a more convenient centralized location, closer to classrooms and farther away from adjacent residential neighborhoods. This TIA evaluates the proposed project, which involves demolition of 71,231 sf of existing institutional structures and development of 148,880 sf of new institutional buildings (i.e., a net increase of 77,649 sf) and 296 new dorm beds for a total campus build out of 321,220 institutional square footage and 330 dorm units (1,320 beds). For purposes of this TIA, it is assumed that by 2017, the addition of 48,580 institutional square footage will be constructed (a 38,550 sf Music/Worship/Theology Building, an Astronomy Center, a 3,300 sf Concordia University Center [CU Center] addition, and a 6,730 sf field restroom and lockers). The remaining 29,069 institutional square footage and 296 dorm beds will be constructed by 2035.

The approved scope of work assumed 39,750 sf of institutional use in Phase 1 (2017). Based on planning efforts since that time, the interim year analysis scenario (2017) was expanded to include Phase 2 of the proposed Campus Master Build-Out Plan. This TIA evaluates the short-term impacts based on the current project description of 48,580 institutional square footage in the first and second phases. This presents a conservative analysis, as all 48,580 sf of institutional use may not be constructed by 2017.

The proposed Campus Master Build-Out Plan also includes various upgrades to athletic facilities and outdoor space. Planned new facilities include a lap/recreational pool, two additional tennis courts (for a total of six) and two new sand volleyball courts to be primarily used by students.

An enhanced traffic and parking management plan for special events will help ease congestion during well-attended events on campus. Several internal circulation improvements will be implemented as part of the Campus Master Build-Out Plan. These project design features include the following:

- Installing a traffic signal, a second outbound lane for residential and Concordia University traffic, and a new pedestrian crosswalk with appropriate signage at the intersection of Ridgeline Drive/Concordia East;
- Improving the physical roadway and operation in the East Gate and Dorm Road area by adding a stop-controlled intersection at Ascension/Concordia East with uncontrolled flow for inbound traffic, and adding a dedicated westbound left-turn lane at Ascension/Concordia East;
- Realigning the parking lot entrance (i.e., Area E) with Dorm Road and creating a four-way stop-controlled intersection, including adding a dedicated westbound left-turn lane on Concordia East at Dorm Road;
- Relocating the District Office access driveway from Concordia East to Dorm Road; and
- Reconfiguring the existing parking areas throughout the campus.

This study focuses on the daily, a.m. peak-hour, and p.m. peak-hour levels of service (LOS) at 33 intersections and 38 roadway segments within the study area bounded by Alton Parkway on the north, State Route 73 (SR-73) and Shady Canyon Drive on the south, Jeffrey Road and Ridgeline Drive on the east, and Culver Drive and University Drive on the west. Project impacts were determined based on analysis of the following scenarios:

- Existing No Project (243,571 institutional square footage)
- Existing Plus Campus Master Build-Out Plan (addition of 77,649 institutional square footage)
- 2017 Approved No Project (243,571 institutional square footage)
- 2017 Approved Plus Campus Master Build-Out Plan (addition of 48,580 institutional square footage)
- 2017 Pending No Project (243,571 institutional square footage)
- 2017 Pending Plus Campus Master Build-Out Plan (addition of 48,580 institutional square footage)
- 2035 Approved No Project (243,571 institutional square footage)

- 2035 Approved Plus Campus Master Build-Out Plan (addition of 77,649 institutional square footage)
- 2035 Pending No Project (243,571 institutional square footage)
- 2035 Pending Plus Campus Master Build-Out Plan (addition of 77,649 institutional square footage)
- Post-2035 Approved No Project (243,571 institutional square footage)
- Post-2035 Approved Plus Campus Master Build-Out Plan (addition of 77,649 institutional square footage)
- Post-2035 Pending No Project (243,571 institutional square footage)
- Post-2035 Pending Plus Campus Master Build-Out Plan (addition of 77,649 institutional square footage)

Based on the results of this TIA and the study area LOS, the addition of project traffic to existing and 2017, 2035, and post-2035 approved and pending traffic volumes would not significantly impact the study area intersections or roadways according to the City's performance criteria, with the exception of the following:

- Ridgeline Drive/University Drive intersection
- University Drive roadway segment between Ridgeline Drive and Michelson Drive

Feasible improvements have been identified to offset the significant impact at these locations. All identified impacts will be adequately mitigated by either the project's fair-share contribution or the project's implementation of physical improvements, consistent with the results of the Environmental Impact Report (EIR) and the Mitigation, Monitoring, and Reporting Program (MMRP).

Project design features were also analyzed based on the City's TDPs. As a result, no impacts to vehicle access were identified using the following design guidelines:

- **TDP-3:** Left-Turn In/Out Access
- **TDP-4:** Right-Turn Lanes at Uncontrolled Driveways
- **TDP-10:** Distance Between Driveways and Intersections
- **TDP-14:** Driveway Lengths
- **TDP-15** Gate Stacking

The proposed project would not meet the requirements of TDP-1 (Turn-Lane Pocket Lengths) for the westbound left-turn lanes at Ridgeline Drive/University Drive; however, the project will be conditioned to extend the turn pockets by 50 feet (ft) (25 ft per lane) in the event the City's planned improvement project at this intersection is not approved by City Council. Based on evaluation of TDP-12 (Signal Warrants), a traffic signal is warranted at the intersection of Ridgeline Drive/ Concordia East. As such, Concordia University will install a traffic signal and an additional shared left-right eastbound lane at Ridgeline Drive/Concordia East. This improvement will mitigate an LOS deficiency and meet TDP-3 requirements. Ridgeline Drive/Concordia East would not require left-turn phasing per TDP-13 (Left-Turn Signal Phasing) as a signalized intersection.

The proposed project incorporates design features to accommodate pedestrian circulation on site. Pedestrian traffic is afforded safe travel via sidewalks throughout the site that connect to the public street system. The existing 11 ft pedestrian/bicycle trail that runs throughout the campus and connects the Turtle Rock Vistas development to the east and Ridgeline Drive to the west will be realigned as necessary. This pedestrian/bicycle trail will remain open and continue to be maintained at all times during the development and construction of the proposed Campus Master Build-Out Plan.

Bicycle travel can occur off site, along several existing on-street bikeways adjacent to the project site (i.e., Ridgeline Drive, Turtle Rock Drive, University Drive, Campus Drive, Jeffrey Road, Culver Drive, and Michelson Drive), as well as on the University Trail bike trail north of the campus. On-site bicycle travel can occur along Concordia East, Concordia West, and Dorm Road, as well as along the internal residential streets connected to Concordia East and Concordia West (i.e., Faith, Joy, Daystar, and Ascension). In addition, the existing pedestrian/bicycle trail that generally runs through the middle of the campus will remain, and bicyclists will have access to all existing and proposed facilities.

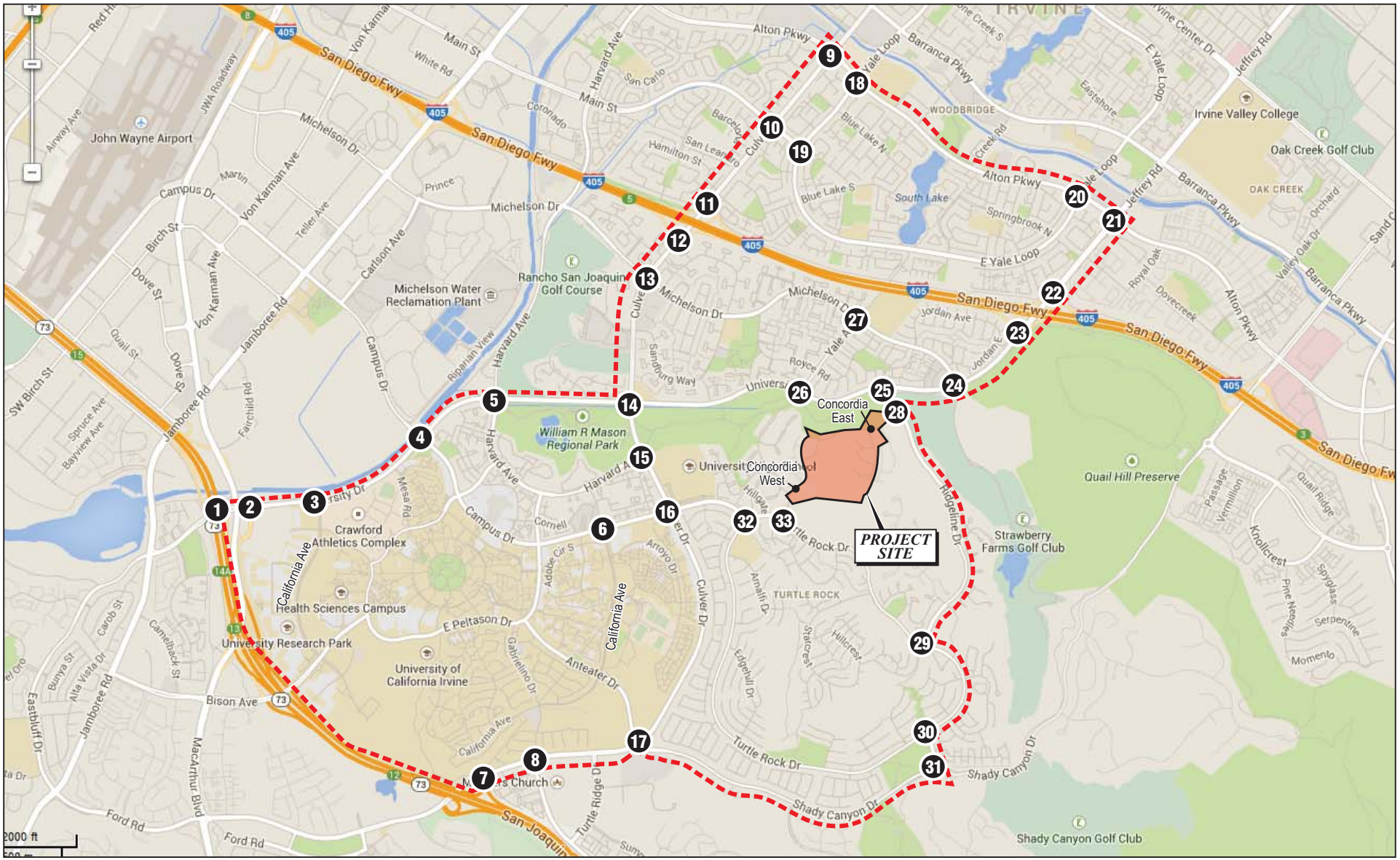
Transit facilities are currently located approximately 1 mile from the campus at the intersections of Michelson Drive/University Drive and Culver Drive/Campus Drive. Orange County Transportation Authority (OCTA) bus stops are provided at the northeast and northwest corners of Culver Drive/Campus Drive for Routes 79 and 175, as well as at the northeast and southwest corners of Michelson Drive/Jordan Drive (north of Michelson Drive/University Drive) for Route 175. OCTA bus route 79 provides transportation to and from the Cities of Tustin and Newport Beach via Irvine Boulevard, Culver Drive, and University Drive. Route 175 provides transportation to and from the Northwood and University Town Center areas of the City.

INTRODUCTION

Project Site

The project site is generally located north of Turtle Rock Drive, south of University Drive, east of Culver Drive, and west of Ridgeline Drive within PA 21, as shown on Figure 1. Access to the site is provided via two gated access points via Ridgeline Drive to the east and Turtle Rock Drive to the west. Within the gates, the University is adjacent to two residential communities; Concordia East with 82 single-family dwelling units and Concordia West with 69 single-family residential units.

The proposed project includes the net addition of 77,649 institutional square footage and 296 dorm beds for a total campus build out of 321,220 institutional square footage and 330 dorm units (1,320 beds). Phases 1 and 2 will include the addition of 48,580 institutional square footage (38,550 sf Music/Worship/Theology Building, Astronomy Center 3,300 sf CU Center addition, and 6,730 sf field restroom and lockers). For the purposes of this TIA, it is assumed that Phases 1 and 2 will be constructed by 2017. A site plan of the Conceptual Master Build-Out Plan is provided on Figure 2.



LSA

LEGEND

- - Study Area Boundary

- Study Area Intersection

N

0 1700 3400

FEET

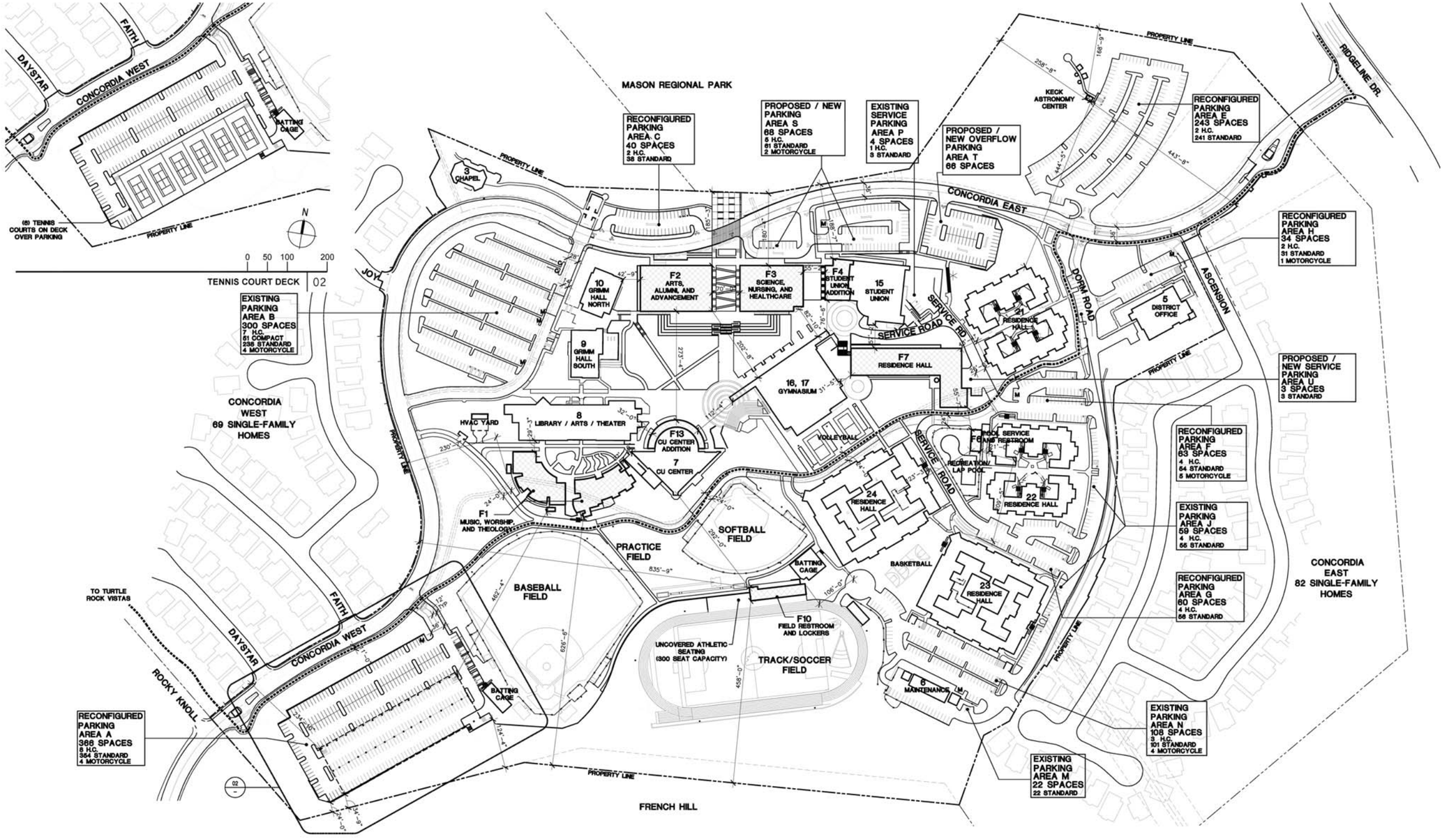
SOURCE: Google Maps

FIGURE 1

Concordia University

Project Location and Study Area

I:\CUI1301\G\Location&Study Ints.cdr (12/17/2015)



SOURCE: LPA

FIGURE 2

Concordia University
Campus Master Build-Out Plan

I:\CUI1301\G\Master Plan.cdr (4/28/2016)

Existing Operations

Concordia University operates, in accordance with its mission statement, as a Lutheran institution of higher learning, offering programs in liberal arts and professional studies to traditional undergraduate, graduate, and adult students. Operations at the main campus primarily, but not exclusively, focus on the education of traditional undergraduate students (ages 18 to 22). Most of these traditional undergraduate students live on campus in one of the University's residence halls. There is also a fairly large group of traditional undergraduate commuter students and a smaller group of commuter students who are enrolled in one of the University's graduate or adult educational programs.

The general operations of the main campus fall into four categories: Academic Life, Student Life, University Life, and Auxiliary/Community Life. These categories, and associated activities, are summarized below.

- **Academic Life.** The primary use of the campus is academic. During all three terms (Fall, Spring, and Summer), students use classrooms, labs, rehearsal rooms, or other educational facilities on campus (e.g., the library, tutoring facilities). The graduate and adult programs do not generally follow the traditional two-semester undergraduate calendar. Consequently, some of these programs run "year round." During the Fall and Spring Semesters, classes begin as early as 7:30 a.m. and are held until 10:00 p.m. Most classes are scheduled during the weekdays (Monday through Friday) but, as further discussed under the "Weekend Traffic and Special Events" section of this report (page 72), it is not uncommon for classrooms, labs, or rehearsal rooms to be scheduled for weekends as well. The library, tutor, and group study rooms are also available for student use on weekends.
- **Student Life.** The campus is also used for extracurricular activities. Approximately 400 to 500 undergraduate students are involved in intercollegiate athletics. The University regularly hosts intercollegiate competitions on campus for basketball, volleyball, soccer, baseball, softball, and other sports involving student athletes. Hundreds of students also participate in choirs, musical groups, theatre groups, student clubs, Bible study, and devotional and service activities. Sports competitions are generally held in the late afternoon, in the evening, or on weekends. Intermural athletic activities are scheduled late into the evening. Classrooms and other meeting areas are available for student clubs, Bible studies, and other formal or informal student gatherings. Additionally, the University regularly presents vocal and instrumental recitals as well as theatrical and musical productions involving students and faculty. Approximately 18 theatre productions are held during the Fall Semester, and approximately 20 theater productions are held during the Spring Semester. Each production includes three to four shows, which are held in the evenings or on weekends. Approximately 15 musical performances are held on campus in either the CU Center or the Good Shepherd Chapel during the Fall Semester, and approximately 18 musical performances are held during the Spring Semester. Musical performances are generally scheduled for evenings or weekends. Almost all of the Student Life activity occurs during the Fall and Spring Semesters, although some intercollegiate sport seasons begin before the Fall Semester or end after the Spring Semester.
- **University Life.** The University hosts events that are not strictly Academic or Student Life events. These include lectures and convocations, donor and alumni events, and—most importantly on the Concordia University main campus—worship services. These events are intentionally offered to constituents both inside and outside of the immediate University community to gather support and to celebrate the University. "Admissions" events, which are

offered to bring potential students (and their families) to campus, are also included in this category. University Life events are offered throughout the year, and are generally held in the evenings or on weekends. However, worship is offered during the day, four times each week during the Fall and Spring Semesters, and "admissions" events may also be held on weekdays. With the exception of some donor events and Christmas concerts (for which tickets are purchased), University Life events are typically free of charge. One unique (and free) University Life event that has been particularly enjoyed by members of the Irvine community is the "Concerts on the Green" series that features live music enjoyed on the campus quad on three weekend evenings in July (during the Summer Term). Summer camps for athletics are also offered during the Summer Term.

- **Auxiliary/Community Life.** Like most institutions of higher learning, the University rents its facilities to auxiliary and community groups during those periods of time that the campus is not in high use, primarily the Summer Term. These types of events have sometimes been referred to as "conferencing" events and have historically included recitals, weddings, memorials, conferences, workshops, and athletics. Athletics represents the largest use category. Some of these events are also considered special events due to the number of attendees; special events are further discussed under "Weekend Traffic and Special Events."

  In accordance with the Special Development Requirements found in Section 9-21-7.B of the City's Zoning Ordinance, Concordia entered into a Joint Use Agreement with the City in 1993, granting the City year-round (weekday and weekend) regularly scheduled use of certain athletic and parking facilities. The Joint Use Agreement was amended in 1996 and remains in effect. While the Joint Use Agreement allows various athletic facilities to be used, the only facility currently being used under this agreement is the gymnasium. Over the past 2 years, under the provisions of this agreement, the City used the gymnasium for 160 days (4 days per week for 40 weeks). Increased usage of the gymnasium beyond historical levels is permitted to the extent allowed for 208 days (i.e., 4 days per week for 52 weeks per year) under the provisions of the Joint Use Agreement. Joint use of the athletic facilities by the City is included in the Auxiliary/ Community Life category of campus use.

Traffic generated along Concordia Drive past the internal residential roadways is dictated by the daily schedules and activities that occur on campus. For the activities that occur on a daily basis during the Fall and Spring Semesters, the primary attendee is a student, faculty, or staff member. These events and activities are geared toward a student body that does not generate additional external traffic or parking on campus. To have a better understanding of what uses and activities generate traffic by time of day, Concordia University provided the Daily Schedules of all general activities and special events on typical weekdays in October 2014 and April 2015, and during a busy weekend in April 2015. The Daily Schedules for Concordia University (including all events, activities, students, staffing, and visitors) for October 30, 2014, and April 14–19, 2015, are provided as Appendix J. As shown in the Daily Schedules, the weekday activity was consistent with typical academic programs and attendance.

Study Area Boundary

Concordia University is bordered by open space to the north and south, and existing residential communities to the east and west. As illustrated on Figure 1, the study area includes the following intersections within the area bounded by Alton Parkway on the north, SR-73 and Shady Canyon Drive on the south, Jeffrey Road and Ridgeline Drive on the east, and Culver Drive and University

Drive on the west. The study area was developed based on discussion with the City and in review of Caltrans guidelines:

1. MacArthur Boulevard southbound ramps/University Drive
2. MacArthur Boulevard northbound ramps/University Drive
3. California Avenue/University Drive
4. Campus Drive/University Drive
5. Harvard Avenue/University Drive
6. California Avenue/Campus Drive
7. SR-73 northbound ramps/Bonita Canyon Drive
8. Newport Coast Drive/Bonita Canyon Drive
9. Culver Drive/Alton Parkway
10. Culver Drive/Main Street
11. Culver Drive/Interstate 405 (I-405) northbound ramps
12. Culver Drive/I-405 southbound ramps
13. Culver Drive/Michelson Drive
14. Culver Drive/University Drive
15. Culver Drive/Harvard Avenue
16. Culver Drive/Campus Drive
17. Culver Drive/Shady Canyon Drive
18. West Yale Loop/Alton Parkway
19. West Yale Loop/Main Street
20. East Yale Loop/Alton Parkway
21. Jeffrey Road/Alton Parkway
22. Jeffrey Road/I-405 northbound ramps
23. University Drive/I-405 southbound ramps
24. Michelson Drive/University Drive
25. Ridgeline Drive/University Drive
26. Yale Avenue/University Drive
27. Yale Avenue/Michelson Drive *
28. Ridgeline Drive/Concordia East *
29. Ridgeline Drive/Turtle Rock Drive *
30. Sunnyhill/Turtle Rock Drive *
31. Sunnyhill/Shady Canyon Drive *

32. Turtle Rock Drive/Campus Drive
33. Turtle Rock Drive/Concordia West *

* *unsignalized intersection*

Roadway segments between each of the study area intersections are also analyzed as part of this TIA.

Existing, General Plan, and Proposed Site Uses

The existing campus includes 16 institutional buildings totaling approximately 243,571 sf and 4 residential halls comprising 256 units and 1,024 total dorm beds (4 beds per unit). The current General Plan designation for the site is Educational Facilities. The current zoning is Turtle Rock–6.1: Institutional.

This TIA evaluates the proposed project, which involves demolition of 71,231 sf of existing institutional structures and development of 148,880 sf of new institutional buildings (i.e., a net increase of 77,649 sf) and 74 dorm units (296 beds) for a total campus build out of 321,220 institutional square footage and 330 dorm units (1,320 beds). This TIA assumes that by 2017, the addition of 48,580 institutional square footage will be constructed. The remaining 29,069 institutional square footage and 296 dorm beds will be constructed by 2035.

PERFORMANCE CRITERIA

Signalized Intersections

To determine the peak-hour operations at signalized intersections within the study area, the intersection capacity utilization (ICU) methodology was used. The ICU methodology compares the volume-to-capacity (v/c) ratios of conflicting turn movements at an intersection, sums these critical conflicting v/c ratios for each intersection approach, and determines the overall ICU. The resulting ICU is expressed in terms of LOS, where LOS A represents free-flow activity and LOS F represents overcapacity operation. Parameters set by the City for ICU calculations, including lane capacity, right-turn treatment, and clearance interval, are included in the analysis.

According to the City's TIA Guidelines, LOS at an intersection or roadway is considered to be unsatisfactory when the ICU exceeds 0.90 (LOS D). The relationship of ICU to LOS is demonstrated in the following table.

Levels of Service	ICU
A	0.00–0.60
B	0.61–0.70
C	0.71–0.80
D	0.81–0.90
E	0.91–1.00
F	> 1.00

Source: City of Irvine Traffic Impact Analysis Guidelines, (August 24, 2004).
ICU = Intersection Capacity Utilization

A project impact occurs when the intersection in question exceeds the acceptable LOS and the impact of the development is greater than or equal to 0.02, rounded to the second decimal place. Project mitigation will be required back to 0.90 or baseline, if the baseline is greater than 0.90.

For an intersection projected to be deficient in the most recent *Citywide Circulation Phasing Analysis Report* (*2012 Citywide Circulation Phasing Analysis Report*, June 19, 2013), a project impact occurs when the impact of development is greater than or equal to 0.010, rounded to the third decimal place. Project mitigation will be required, at a minimum, back to baseline or a fair-share contribution toward mitigation back to an acceptable LOS. These criteria are to be applied to the study area intersections of Culver Drive/University Drive, Jeffrey Road/Alton Parkway, Michelson Drive/University Drive, and Ridgeline Drive/University Drive in the interim year (2017) only.

In addition to the ICU methodology of calculating intersection LOS, the 2010 Highway Capacity Manual (HCM 2010) methodology was used to determine the LOS at signalized Caltrans intersections within the study area. The HCM 2010 signalized intersection methodology presents LOS in terms of control delay in seconds per vehicle. The resulting delay is expressed in terms of LOS, as in the ICU methodology. The relationship of delay to LOS is demonstrated in the following table:

Levels of Service	Signalized Intersection Delay (seconds)
A	≤10.0
B	>10.0 and ≤20.0
C	>20.0 and ≤35.0
D	>35.0 and ≤55.0
E	>55.0 and ≤80.0
F	>80.0

Source: Highway Capacity Manual (2010).

According to the Caltrans Guide for the Preparation of Traffic Impact Studies, "Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D." Caltrans has determined that a significant project impact occurs for any signalized Caltrans-controlled intersection where project traffic causes the LOS to deteriorate from satisfactory (LOS C or better) to unsatisfactory (LOS D, E, or F); or the addition of project traffic causes an increase in delay at an intersection already operating at unsatisfactory LOS (D, E, or F).

Unsignalized Intersections

The HCM 2010 methodology was used to determine the LOS at unsignalized intersections within the study area. The HCM 2010 unsignalized intersection methodology presents LOS in terms of total intersection delay and approach delay of the major and minor streets in seconds per vehicle. The resulting delay is expressed in terms of LOS. The relationship of delay to LOS is demonstrated in the following table:

Levels of Service	Unsignalized Intersection Delay (seconds)
A	≤10.0
B	>10.0 and ≤15.0
C	>15.0 and ≤25.0
D	>25.0 and ≤35.0
E	>35.0 and ≤50.0
F	>50.0

Source: Highway Capacity Manual (2010).

The City's TIA Guidelines do not have performance criteria for unsignalized intersections. If an unsignalized intersection operates at unsatisfactory LOS E or F (greater than 35 seconds of delay) in the baseline condition and project trips are added, a peak-hour signal warrant analysis (per TDP-12) will be conducted to determine if a traffic signal is required. A peak-hour signal warrant analysis will also be conducted if an unsignalized intersection operates at satisfactory LOS in the baseline condition and additional project trips cause the intersection to operate at unsatisfactory LOS E or F. If the peak-hour signal warrant is met for an unsignalized intersection operating at LOS E or F, the project would be responsible for a fair-share contribution toward installation of a traffic signal to improve the operation of the intersection. The project's fair-share percentage is calculated by dividing the difference of the existing plus project volume and the existing no project volume by the existing no project volume and multiplying by 100.

Roadway Segments

Roadway link v/c ratios were determined using the City's theoretical daily capacities. Facility types were taken from the City General Plan and the countywide Master Plan of Arterial Highways (MPAH). The following table illustrates theoretical daily capacities (as contained in the City's TIA Guidelines) for roadways within the study area:

Facility Type	Number of Lanes	Theoretical Capacity[1]
Major Highway	8	72,000
	7	63,000
	6	54,000
Primary Highway	4	32,000
Secondary Highway	4	28,000
Commuter	2	13,000

Source: City of Irvine Traffic Impact Analysis Guidelines, (August 24, 2004).

[1] The theoretical capacity of a seven-lane Major Highway is interpolated from the theoretical capacities of a six-lane and an eight-lane Major Highway.

A project impact occurs when the roadway link in question exceeds the acceptable LOS and the impact of the development is greater than or equal to 0.02, rounded to the second decimal place. Project mitigation will be required back to 0.90 or baseline, if the baseline is greater than 0.90.

A peak-hour link analysis (per the City's TIA Guidelines) was utilized for evaluating roadway capacity conditions and the need for mitigation measures. The peak-hour link analysis determines directional a.m. and p.m. peak-hour v/c ratios for each link that is projected to exceed LOS standards. The peak-hour capacity is determined by multiplying the number of midblock lanes for each direction by a lane capacity of 1,600 vehicles per hour. If the peak-hour v/c results do not meet the City's LOS standards, additional lanes will be needed for each deficient direction consistent with the MPAH. The added lane may function as either an auxiliary lane (which does not go through the downstream intersection) or a through lane, as determined by the ICU analysis of the downstream intersection.

The Caltrans Guide for the Preparation of Traffic Impact Studies recommends evaluation of State highway facilities where a project will add over 100 peak-hour trips, as well as State facilities that are experiencing noticeable delays where a project will add 50 to 100 peak-hour trips. An evaluation of Caltrans intersections in the project study area has been provided in this TIA. However, the project would add fewer than 50 peak-hour trips to any freeway ramp or freeway mainline segment. Therefore, analysis of Caltrans freeway facilities (e.g., mainline, ramp, ramp meter, and queuing) is not required based on the State's guidelines.

The access points on Ridgeline Drive and Turtle Rock Drive and the intersection of University Drive/Ridgeline Drive were analyzed based on the design criteria recommended in the City's TDPs. The TDPs establish uniform policies and procedures for reviewing traffic design plans in the City. These guidelines were used to evaluate the roadway design features that may be impacted by the proposed project. A description and analysis of each applicable design criterion are provided later in this TIA.

ANALYSIS METHODOLOGY/APPROACH

Traffic volume forecasts were prepared using the latest version of the Irvine Transportation Analysis Model (ITAM) (Model No. 12). ITAM integrates trip generation, distribution, and assignment into the methodology used to forecast trips. Trip generation in this model is not based on land use, but rather on socioeconomic data. The socioeconomic approach to traffic modeling is premised on more precise demographic assumptions that look beyond the simple land uses reflected in the City's Zoning Code. As a result, the current ITAM does not contain land use-based trip rates that can easily be used to determine the trip generation of a land development proposal.

The project trips assigned to study area intersections and roadway segments for existing, 2017, 2035, and post-2035 approved and pending conditions are based on the ITAM, which is the OCTA sanctioned subarea model for the City.

All modeling protocol (including trip generation, distribution, and assignment) is consistent with local, regional, and national guidance for such features. All project trip generation is accounted for in the ITAM, and the impacts of the project reflect the contribution of its trips to the local street system. All project traffic, as well as cumulative traffic and growth within the City and adjacent cities (i.e., Santa Ana, Tustin, and Newport Beach), is accounted for. The ITAM is the appropriate tool to evaluate discrete project-related circulation impacts for the City.

The ITAM was used to forecast 2017, 2035, and post-2035 approved and pending conditions with and without the project. The "approved" condition includes each application for development currently approved by the City. The "pending" condition represents the planned growth for the City per the General Plan, as well as all of the projects in the City that are approved (but not yet built) and currently under review.

The existing plus project scenario was determined by considering the traffic volume differential between the existing (no project) and existing plus project ITAM runs. This differential was added to existing counts conducted at study area intersections and roadway segments to determine existing plus project conditions in the ITAM.

LSA prepared the forecast data for this project based on the latest version of the ITAM. The scenarios examined for each condition are as follows:

- **2017 Approved No Project:** The ITAM 2017 model run (Y17-12 or higher) includes the impacts of each application for development approved by the City. Any additional development beyond the existing uses for the project that might be assumed in the ITAM was deleted for the analysis of this scenario. The Concordia University land uses for this no project condition include the existing land uses of 243,571 sf of institutional use.
- **2017 Approved Plus Campus Master Build-Out Plan:** The ITAM 2017 model run (Y17-12 or higher) includes the impacts of each application for development approved by the City. In 2017, the proposed Campus Master Build-Out Plan includes a total of 292,151 sf of institutional use (an increase of 48,580 sf over existing uses).
- **2017 Pending No Project:** The ITAM 2017 model run (Y17-12 or higher) includes the cumulative impacts of each application for development currently approved and under review by the City. Any additional development beyond the existing uses for the project that might be assumed in the ITAM was deleted for the analysis of this scenario. The Concordia University land uses for this no project condition include the existing land uses of 243,571 sf of institutional use.
- **2017 Pending Plus Campus Master Build-Out Plan:** The ITAM 2017 model run (Y17-12 or higher) includes the cumulative impacts of each application for development currently approved and under review by the City. In 2017, the proposed Campus Master Build-Out Plan includes a total of 292,151 sf of institutional use (an increase of 48,580 sf over existing uses).
- **2035 Approved No Project:** The ITAM 2035 model run (Y35-12 or higher) includes the impacts of each application for development currently approved by the City. The Concordia University uses for this no project condition include the existing land uses of 243,571 institutional use.
- **2035 Approved Plus Campus Master Build-Out Plan:** The ITAM 2035 model run (Y35-12 or higher) includes the impacts of each application for development currently approved by the City. The proposed Campus Master Build-Out Plan includes a total of 321,220 institutional square footage (an increase of 77,649 institutional square footage over existing uses).
- **2035 Pending No Project:** The ITAM 2035 model run (Y35-12 or higher) includes the cumulative impacts of each application for development currently approved and under review by the City. The Concordia University land uses for this no project condition include the existing land uses of 243,571 institutional use.

- **2035 Pending Plus Campus Master Build-Out Plan:** The ITAM 2035 model run (Y35-12 or higher) includes the cumulative impacts of each application for development currently approved and under review by the City. The proposed Campus Master Build-Out Plan includes a total of 321,220 institutional square footage (an increase of 77,649 institutional square footage over existing uses).
- **Post-2035 Approved No Project:** The ITAM post-2035 model run (P35-12 or higher) includes the impacts of each application for development currently approved by the City. The Concordia University land uses for this no project condition include the existing land uses of 243,571 sf of institutional use.
- **Post-2035 Approved Plus Campus Master Build-Out Plan:** The ITAM post-2035 model run (P35-12 or higher) includes the impacts of each application for development currently approved by the City. The proposed Campus Master Build-Out Plan includes a total of 321,220 institutional square footage (an increase of 77,649 institutional square footage over existing uses).
- **Post-2035 Pending No Project:** The ITAM post-2035 model run (P35-12 or higher) includes the cumulative impacts of each application for development currently approved and under review by the City. The Concordia University land uses for this no project condition include the existing land uses of 243,571 sf of institutional use.
- **Post-2035 Pending Plus Campus Master Build-Out Plan:** The ITAM post-2035 model run (P35-12 or higher) includes the cumulative impacts of each application for development currently approved and under review by the City. The proposed Campus Master Build-Out Plan includes a total of 321,220 sf of institutional use (an increase of 77,649 sf of institutional use over existing uses).

Project impacts are identified at study area intersections and roadway segments for all future conditions, assuming improvements to the circulation system identified in the ITAM. LSA prepared forecast intersection turn movement LOS volumes, ICU worksheets, and ADT volumes. ADT volumes and v/c ratios are presented in the analysis for the study area roadway segments for each scenario. ITAM forecast traffic volumes and calculations for the existing, 2017, 2035, and post-2035 approved and pending scenarios are referenced throughout this TIA and are provided in Appendix B.

PROPOSED PROJECT TRAFFIC

Trip Generation

The ITAM socioeconomic trip rates are used for traffic impact analysis purposes (i.e., evaluation of study area intersections and roadway segments under existing, 2017, 2035, and post-2035 approved and pending conditions).

For the purpose of disclosing the approximate number of trips generated by the proposed project, including a net increase of 77,649 sf of institutional use, trip rates were developed from ADT counts conducted at the two Concordia University gates and adjacent residential streets on Thursday, October 30, 2014. The residential street volumes were subtracted from the total gate volumes to determine the University-only traffic volumes for the existing 243,571 sf of institutional use. The a.m. and p.m. peak hours were identified from the daily traffic counts as 8:00 to 9:00 a.m. and 4:30 to 5:30 p.m., respectively. The surveyed trip rates are also used for evaluation of the City's TDPs, and

for establishing the daily trip budget, which are described later in this TIA. The project trip generation using the surveyed trip rates is shown in Table A. The existing count data used to derive the trip rate information are provided in Appendix C.

The project would add 296 dorm beds to the existing 1,024 dorm beds. However, the Concordia University trip generation rates are based on institutional square footage using ADT counts that include dorm beds.

As shown in Table A, the existing 243,571 sf of institutional use generate approximately 4,732 ADT, 360 a.m. peak-hour trips (247 inbound and 113 outbound), and 421 p.m. peak-hour trips (141 inbound and 281 outbound). The proposed Campus Master Build-Out Plan is forecast to generate 6,241 ADT, 475 a.m. peak-hour trips (327 inbound and 148 outbound), and 555 p.m. peak-hour trips (186 inbound and 369 outbound). The proposed project constitutes a net increase of 1,509 ADT, 115 a.m. peak-hour trips (80 inbound and 35 outbound), and 134 p.m. peak-hour trips (45 inbound and 89 outbound) compared to the existing uses.

For informational purposes only, Phases 1 and 2 of the project (48,580 institutional square footage) is anticipated to generate approximately 944 ADT, 72 a.m. peak-hour trips (50 inbound and 22 outbound), and 84 p.m. peak-hour trips (28 inbound and 56 outbound) by 2017. The access analysis provided later in this report evaluates the entire project of 77,649 institutional square footage.

Trip Distribution and Assignment

Directions of approach to and departure from the site are based on the ITAM distribution for the project traffic analysis zone (TAZ 272) for a.m. peak-hour, p.m. peak-hour, and daily conditions. The model data, prepared by LSA, represent the baseline traffic volumes plus the trips generated by the proposed project under each project scenario.

For purposes of the access analysis, the a.m. and p.m. peak-hour trip distribution percentages were identified from the existing ADT counts for the two gated entries, as well as the intersection counts at Ridgeline Drive/Concordia East and Turtle Rock Drive/Concordia West. These percentages were used to distribute and assign project trips in and out of the campus. The results of the access analysis are discussed later in this report.

PHASING

The proposed project will be developed in multiple phases. Phase 1 will include a 38,550 sf Music/Worship/Theology Building and an Astronomy Center. Phase 2 will include a 3,300 sf CU Center addition, and a 6,730 sf field restroom and lockers. For purposes of this TIA, the addition of 48,580 institutional square footage (Phases 1 and 2) is assumed to be constructed by 2017. Building demolition is not required for Phases 1 and 2. The remaining 29,069 institutional square footage will be constructed by 2035.

Table A: Concordia University Campus Master Build-Out Plan Trip Generation

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Trip Rates[1]									
Concordia University		TSF	19.43	1.02	0.46	1.48	0.58	1.15	1.73
Existing Trip Generation									
Existing Campus[2]	**243.571**	**TSF**	**4,732**	**247**	**113**	**360**	**141**	**280**	**421**
Campus Master Build-Out Plan Trip Generation									
Phases 1 and 2 (by 2017)	48.580	TSF	944	50	22	72	28	56	84
Remaining (after 2017)[3]	29.069	TSF	565	30	13	43	17	33	50
Total[4]	**77.649**	**TSF**	**1,509**	**80**	**35**	**115**	**45**	**89**	**134**
Existing Plus Campus Master Build-Out Plan Trip Generation									
Grand Total	**321.220**	**TSF**	**6,241**	**327**	**148**	**475**	**186**	**369**	**555**

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

[1] Trip rates were developed from 24-hour counts conducted at the two Concordia gates and the residential streets on Thursday, October 30, 2014. The residential street volumes were subtracted from the total gate volumes to determine the university-only traffic volumes. The a.m. and p.m. peak hours were identified from the counts as 8:00-9:00 a.m. and 4:30-5:30 p.m., respectively.

[2] The existing counts include traffic generated from 243,571 square feet (sf) of institutional use as well as 1,024 dorm beds (256 units).

[3] The remaining (after 2017) plan includes the increase of 29,069 sf of institutional use and the increase of 296 dorm beds (74 units).

[4] The Campus Master Buildout Plan includes the increase of 77,649 sf of institutional use and the increase of 296 dorm beds (74 units).

TSF = thousand square feet

EXISTING CONDITIONS

Existing Site Uses

The existing Concordia University campus includes 243,571 sf of institutional use within 20 buildings and 1,024 dorm beds within 256 units in four residential halls. Existing residential uses surround the site, including the Concordia East community with 82 single-family dwelling units, and the Concordia West community with 69 single-family residential units.

Key roadways in the vicinity of the project are as follows:

- **University Drive:** University Drive is designated as a Major Highway in the City's General Plan and MPAH between I-405 and Michelson Drive and between Culver Drive and SR-73. University Drive is designated as a Primary Highway between Michelson Drive and Culver Drive. University Drive is a four- to six-lane divided roadway north of the University. University Drive provides primary access to and from I-405 and SR-73.
- **Ridgeline Drive:** Ridgeline Drive is designated as a Secondary Highway in the City's General Plan and MPAH. It is a four-lane undivided roadway east of the University. Primary access to the site is provided via Ridgeline Drive at the gated entry along Concordia East.
- **Turtle Rock Drive:** Turtle Rock Drive is designated as a Commuter Highway in the City's General Plan and MPAH. It is a two- to four-lane undivided roadway located south and west of the University. Primary access to the site is provided via Turtle Rock Drive at the gated entry along Concordia West.
- **Concordia Drive (East and West):** Concordia Drive is the two-lane roadway that traverses the campus and provides access for university staff, faculty, and visitors, as well as residents of the Concordia East and Concordia West communities at Ridgeline Drive and Turtle Rock Drive.
- **Dorm Road:** Dorm Road is the two-lane roadway that serves the four existing residence halls. This roadway will be realigned with the reconfigured parking lot (Area E) entrance to create a new four-way stop-controlled intersection.
- **Internal Residential Roads connected to Concordia Drive (East and West):** The two-lane internal residential roads of Ascension, Daystar, Faith, and Joy are directly accessible via Concordia Drive (East and West). Ascension serves the Concordia East community, and the Concordia West community is served by Daystar, Faith, and Joy.

Existing No Project and Plus Project Traffic Volumes and LOS

Existing peak-hour traffic counts for the study area intersections and daily (24-hour) counts for the roadway segments were conducted by National Data & Surveying Services (NDS). The existing traffic counts are provided in Appendix D. Counts were conducted on October 30, 2014, to represent the peak of Concordia University activities during a typical weekday during the Fall Semester. Counts were also conducted in April 2015 during the Spring Semester for three consecutive weekdays (Tuesday, April 15, 2015–Thursday, April 16, 2015) and one weekend (Saturday, April 18, 2015, and Sunday, April 19, 2015). A comparison of the October 2014 and April 2015 traffic volumes is provided in Appendix C. The count data was submitted to City staff. October 2014 had higher traffic volumes on a typical weekday and during the a.m. and p.m. peak hours. Therefore, the October 2014 volumes were used for the LOS and impact analyses. For purposes of the TDPs, volumes for the

weekday October 2014 and the average of the three April 2015 weekdays were both evaluated. The Saturday (April 2015) count was used for assessment of weekend and special event activities and events.

To demonstrate the affect the project would have on the study area intersections and roadway segments in the existing condition, an existing plus project LOS analysis was prepared using the ITAM model. This analysis assumes the proposed project would generate 1,509 ADT, 115 a.m. peak-hour trips, and 134 p.m. peak-hour trips; the entire trip generation for 77,649 sf of institutional use is added to the existing (October 2014) condition.

Although it is unlikely to develop the entire project immediately in this time frame, one interpretation of CEQA requires this analysis be conducted to disclose the project's potential effects in an existing setting. As such, mitigation measures are identified for the 2017, 2035, and post-2035 scenarios only.

As previously discussed, the ICU methodology was used to determine the LOS at signalized study area intersections. The existing (no project and plus project) ICU worksheets are provided in Appendix B. The HCM 2010 methodology was used to determine the LOS at Caltrans intersections and unsignalized intersections within the study area. The HCM worksheets for existing (and all future) conditions are included in Appendix E. A summary of existing (no project and plus project) intersection LOS is presented in Table B. As this table indicates, all study area intersections currently operate at satisfactory LOS with the exception of Ridgeline Drive/University Drive (LOS E in the p.m. peak hour) and Ridgeline Drive/Concordia East (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour). With the addition of the Campus Master Build-Out Plan in an existing setting, the intersection of Ridgeline Drive/University Drive is forecast to continue operating at unsatisfactory LOS. Full build out of the Master Plan in the existing condition would cause an impact at the intersection of Ridgeline Drive/University Drive. However, the intersection of Ridgeline Drive/ Concordia East would no longer be deficient as a signalized intersection. As described above, mitigation measures are identified for the future scenarios analyzed in this report.

Existing (no project and plus project) ADT volumes and v/c ratios are presented in Table C. As this table indicates, all study area roadway segments currently operate at satisfactory LOS with the exception of the following:

- University Drive between the I-405 southbound ramps and Michelson Drive (LOS E)
- University Drive between Michelson Drive and Ridgeline Drive (LOS F)
- University Drive between Ridgeline Drive and Yale Avenue (LOS E)
- University Drive between Yale Avenue and Culver Drive (LOS F)
- University Drive between Campus Drive and California Avenue (LOS E)

With the addition of the project in an existing setting, the same study area roadway segments are forecast to continue operating at unsatisfactory LOS E or F. The v/c ratios would increase by 0.02 or greater at University Drive between the I-405 southbound ramps and Michelson Drive (0.95 to 0.97) and University Drive between Michelson Drive and Ridgeline Drive (1.40 to 1.42) with implementation of the project in the existing condition.

Table B: Existing Intersection LOS Summary

Study Area No.	ITAM Node No.	Intersection	No Project				Plus Project				Peak-Hour Δ ICU or Delay		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	AM	PM	
1	194	MacArthur Boulevard SB Ramps/University Drive	0.49	A	0.52	A	0.49	A	0.53	A	0.00	0.01	No
2	193	MacArthur Boulevard NB Ramps/University Drive	0.44	A	0.33	A	0.44	A	0.33	A	0.00	0.00	No
3	192	California Avenue/University Drive	0.86	D	0.77	C	0.86	D	0.77	C	0.00	0.00	No
4	190	Campus Drive/University Drive	0.79	C	0.80	C	0.79	C	0.79	C	0.00	(0.01)	No
5	189	Harvard Avenue/University Drive	0.70	B	0.75	C	0.70	B	0.75	C	0.00	0.00	No
6	216	California Avenue/Campus Drive	0.46	A	0.61	B	0.46	A	0.61	B	0.00	0.00	No
7	240	SR-73 NB Ramps/Bonita Canyon Drive	0.47	A	0.55	A	0.48	A	0.56	A	0.01	0.01	No
		HCM	*9.0*	*A*	*11.4*	*B*	*9.1*	*A*	*11.6*	*B*	*0.1*	*0.2*	No
8	239	Newport Coast Drive/Bonita Canyon Drive	0.77	C	0.68	B	0.76	C	0.69	B	(0.01)	0.01	No
9	229	Culver Drive/Alton Parkway	0.73	C	0.82	D	0.72	C	0.82	D	(0.01)	0.00	No
10	230	Culver Drive/Main Street	0.70	B	0.68	B	0.70	B	0.68	B	0.00	0.00	No
11	232	Culver Drive/I-405 NB Ramps	0.58	A	0.78	C	0.58	A	0.78	C	0.00	0.00	No
		HCM	*14.4*	*B*	*24.2*	*C*	*15.6*	*B*	*24.1*	*C*	*1.2*	*(0.1)*	No
12	233	Culver Drive/I-405 SB Ramps	0.67	B	0.72	C	0.68	B	0.72	C	0.01	0.00	No
		HCM	*19.3*	*B*	*23.3*	*C*	*19.1*	*B*	*23.2*	*C*	*(0.2)*	*(0.1)*	No
13	234	Culver Drive/Michelson Drive	0.69	B	0.88	D	0.69	B	0.89	D	0.00	0.01	No
14	235	Culver Drive/University Drive	0.75	C	0.87	D	0.75	C	0.87	D	0.00	0.00	No
15	236	Culver Drive/Harvard Avenue	0.58	A	0.66	B	0.58	A	0.65	B	0.00	(0.01)	No
16	237	Culver Drive/Campus Drive	0.56	A	0.55	A	0.56	A	0.56	A	0.00	0.01	No
17	238	Culver Drive/Shady Canyon Drive	0.67	B	0.54	A	0.67	B	0.54	A	0.00	0.00	No
18	268	West Yale Loop/Alton Parkway	0.49	A	0.55	A	0.49	A	0.55	A	0.00	0.00	No
19	272	West Yale Loop/Main Street	0.66	B	0.33	A	0.66	B	0.33	A	0.00	0.00	No
20	271	East Yale Loop/Alton Parkway	0.62	B	0.60	A	0.62	B	0.60	A	0.00	0.00	No
21	291	Jeffrey Road/Alton Parkway	0.90	D	0.82	D	0.89	D	0.82	D	(0.01)	0.00	No
22	293	Jeffrey Road/I-405 NB Ramps	0.74	C	0.72	C	0.75	C	0.72	C	0.01	0.00	No
		HCM	*31.3*	*C*	*24.5*	*C*	*43.6*	*D*	*24.6*	*C*	*12.3*	*0.1*	No
23	294	University Drive/I-405 SB Ramps	0.64	B	0.60	A	0.65	B	0.60	A	0.01	0.00	No
		HCM	*8.5*	*A*	*9.6*	*A*	*8.4*	*A*	*9.5*	*A*	*(0.1)*	*(0.1)*	No
24	295	Michelson Drive/University Drive	0.74	C	0.88	D	0.74	C	0.88	D	0.00	0.00	No
25	276	Ridgeline Drive/University Drive	0.89	D	0.92	E	0.90	D	0.94	E	0.01	0.02	Yes
26	275	Yale Avenue/University Drive	0.70	B	0.57	A	0.70	B	0.57	A	0.00	0.00	No
27	273	Yale Avenue/Michelson Drive *HCM*	*9.4*	*A*	*23.2*	*C*	*9.6*	*A*	*24.5*	*C*	*0.2*	*1.3*	No
28	492	Ridgeline Drive/Concordia East[1]	*43.5*	*E*	*>50.0*	*F*	0.33	A	0.33	A	-	-	No
29	278	Ridgeline Drive/Turtle Rock Drive *HCM*	*28.9*	*D*	*16.7*	*C*	*29.1*	*D*	*16.7*	*C*	*0.2*	*0.0*	No
30	279	Sunnyhill/Turtle Rock Drive *HCM*	*14.2*	*B*	*10.1*	*B*	*14.2*	*B*	*10.1*	*B*	*0.0*	*0.0*	No
31	494	Sunnyhill/Shady Canyon Drive *HCM*	*13.5*	*B*	*10.7*	*B*	*13.5*	*B*	*10.7*	*B*	*0.0*	*0.0*	No
32	277	Turtle Rock Drive/Campus Drive	0.66	B	0.35	A	0.67	B	0.38	A	0.01	0.03	No
33	493	Turtle Rock Drive/Concordia West *HCM*	*14.2*	*B*	*14.2*	*B*	*14.4*	*B*	*14.5*	*B*	*0.2*	*0.3*	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
= exceeds City's level of service (LOS) criteria
= significant impact
Delay is reported in seconds.
[1] Ridgeline Drive/Concordia East will be signalized with the project, with the addition of a shared eastbound left-right lane.

EBT = eastbound through
HCM = Highway Capacity Manual
I-405 = Interstate 405
ICU = Intersection Capacity Utilization
ITAM = Irvine Transportation Analysis Model

NB = northbound
NBR = northbound right
SB = southbound
SR-73 = State Route 73

Table C: Existing ADT Volumes and V/C Ratios

ITAM Post No.	Roadway	Segment	Capacity	No Project			Plus Project			Δ V/C	Significant Impact?
				ADT	V/C	LOS	ADT	V/C	LOS		
220	Culver Drive	Alton to Main	54,000	45,385	0.84	D	45,400	0.84	D	0.00	No
222	Culver Drive	Main to I-405 NB ramps	54,000	48,713	0.90	D	48,700	0.90	D	0.00	No
224	Culver Drive	I-405 SB ramps to Michelson	54,000	42,366	0.78	C	42,400	0.79	C	0.01	No
225	Culver Drive	Michelson to University	54,000	35,247	0.65	B	35,300	0.65	B	0.00	No
227	Culver Drive	University to Harvard	54,000	43,004	0.80	C	43,000	0.80	C	0.00	No
228	Culver Drive	Harvard to Campus	54,000	36,147	0.67	B	36,100	0.67	B	0.00	No
229	Culver Drive	Campus to Shady Canyon	32,000	22,200	0.69	B	22,200	0.69	B	0.00	No
94	Bonita Canyon Road	Shady Canyon to Newport Coast	32,000	19,202	0.60	A	19,200	0.60	A	0.00	No
233	Bonita Canyon Road	Newport Coast to SR-73 NB ramps	32,000	22,707	0.71	C	22,700	0.71	C	0.00	No
299	Jeffrey Road	Alton to I-405 NB ramps	54,000	45,519	0.84	D	45,600	0.84	D	0.00	No
347	University Drive	I-405 SB ramps to Michelson	54,000	51,553	0.95	E	52,200	0.97	E	0.02	-
		AM Peak Hour									
		northbound	*4,800*	*2,303*	*0.48*	*A*	*2,311*	*0.48*	*A*	*0.00*	*No*
		southbound	*4,800*	*2,666*	*0.56*	*A*	*2,703*	*0.56*	*A*	*0.00*	*No*
		PM Peak Hour									
		northbound	*4,800*	*2,640*	*0.55*	*A*	*2,667*	*0.56*	*A*	*0.01*	*No*
		southbound	*4,800*	*2,213*	*0.46*	*A*	*2,219*	*0.46*	*A*	*0.00*	*No*
886	University Drive	Michelson to Ridgeline	32,000	44,737	1.40	F	45,400	1.42	F	0.02	-
		AM Peak Hour									
		eastbound	*3,200*	*2,034*	*0.64*	*B*	*2,043*	*0.64*	*B*	*0.00*	*No*
		westbound	*3,200*	*2,541*	*0.79*	*C*	*2,578*	*0.81*	*D*	*0.02*	*No*
		PM Peak Hour									
		eastbound	*3,200*	*2,164*	*0.68*	*B*	*2,192*	*0.69*	*B*	*0.01*	*No*
		westbound	*3,200*	*1,902*	*0.59*	*A*	*1,905*	*0.60*	*A*	*0.01*	*No*
885	University Drive	Ridgeline to Yale	32,000	32,062	1.00	E	32,100	1.00	E	0.00	No
883	University Drive	Yale to Culver	32,000	32,552	1.02	F	32,600	1.02	F	0.00	No
881	University Drive	Culver to Harvard	54,000	22,259	0.41	A	22,300	0.41	A	0.00	No
186	University Drive	Harvard to Campus	54,000	28,507	0.53	A	28,700	0.53	A	0.00	No
187	University Drive	Campus to California	32,000	32,102	1.00	E	32,300	1.01	F	0.01	No
189	University Drive	California to MacArthur NB ramps	32,000	27,344	0.85	D	27,400	0.86	D	0.01	No
279	Ridgeline Drive	University to Concordia East	28,000	17,167	0.61	B	18,200	0.65	B	0.04	No
280	Ridgeline Drive	Concordia East to Turtle Rock	28,000	11,538	0.41	A	11,500	0.41	A	0.00	No
283	Sunnyhill	Ridgeline to Turtle Rock	13,000	6,103	0.47	A	6,100	0.47	A	0.00	No
893	Campus Drive	University to California	32,000	19,528	0.61	B	19,600	0.61	B	0.00	No
898	Campus Drive	California to Culver	32,000	16,759	0.52	A	16,900	0.53	A	0.01	No
899	Campus Drive	Culver to Turtle Rock	32,000	15,386	0.48	A	15,600	0.49	A	0.01	No
281	Turtle Rock Drive	Concordia West to Campus	13,000	8,363	0.64	B	8,600	0.66	B	0.02	No
282	Turtle Rock Drive	Campus to Sunnyhill	13,000	3,704	0.28	A	3,700	0.28	A	0.00	No
901	Turtle Rock Drive	Concordia West to Ridgeline	13,000	6,839	0.53	A	6,800	0.52	A	(0.01)	No
902	Turtle Rock Drive	Ridgeline to Sunnyhill	13,000	8,550	0.66	B	8,600	0.66	B	0.00	No
784	Alton Parkway	Culver to West Yale Loop	32,000	21,003	0.66	B	21,000	0.66	B	0.00	No
789	Alton Parkway	West Yale Loop to East Yale Loop	32,000	22,887	0.72	C	22,900	0.72	C	0.00	No
792	Alton Parkway	East Yale Loop to Jeffrey	32,000	25,656	0.80	C	25,700	0.80	C	0.00	No
265	West Yale Loop	south of Alton	28,000	7,243	0.26	A	7,200	0.26	A	0.00	No
275	East Yale Loop	south of Alton	28,000	4,887	0.17	A	4,900	0.18	A	0.01	No
828	Main Street	Culver to West Yale Loop	32,000	13,185	0.41	A	13,200	0.41	A	0.00	No
851		Culver to Yale	13,000	10,143	0.78	C	10,300	0.79	C	0.01	No
853	Michelson Drive	Yale to University	13,000	6,470	0.50	A	6,600	0.51	A	0.01	No
278	Yale Avenue	Michelson to University	13,000	1,000	0.08	A	1,000	0.08	A	0.00	No
2582	Shady Canyon Drive	Culver to Sunnyhill	13,000	7,810	0.60	A	7,800	0.60	A	0.00	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
ADT = average daily trips
NB = northbound
SR-73 = State Route 73
= exceeds City's level of service (LOS) criteria
I-405 = Interstate 405
SB = southbound
V/C = volume-to-capacity ratio
Italics = Peak-Hour Link Analysis
ITAM = Irvine Transportation Analysis Model

However, a peak-hour link analysis shows that both roadway segments will operate at satisfactory LOS (with v/c ratios below 0.90) in both directions during both peak hours. Therefore, the Campus Master Build-Out Plan can be implemented in an existing setting with no significant daily roadway impacts.

FUTURE CONDITIONS

The following discussion presents the results of the 2017, 2035, and post-2035 approved and pending analysis with and without the project. Under 2017 approved and pending plus project conditions, a total of 292,151 institutional square footage (an increase of 48,580 sf) has been assumed on site. Under 2035 and post-2035 approved and pending plus project conditions, a total of 321,220 institutional square footage (an increase of 77,649 sf) has been assumed on site. All future traffic volume and LOS worksheets are provided in Appendix B.

2017 Approved No Project and Plus Project Traffic Volumes and LOS

Table D presents a summary of the intersection LOS for 2017 approved (no project and plus project) conditions. As this table indicates, all study area intersections are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Jeffrey Road/Alton Parkway (LOS E in the a.m. peak hour)
- Michelson Drive/University Drive (LOS E in the p.m. peak hour)
- Ridgeline Drive/University Drive (LOS F in the p.m. peak hour)
- Yale Avenue/Michelson Drive (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- Ridgeline Drive/Concordia East (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)

With addition of Phase 1 and 2 of the Campus Master Build-Out Plan in 2017, Ridgeline Drive/University Drive is forecast to operate at unsatisfactory LOS F during the p.m. peak hour. The deficient p.m. peak-hour ICU at Ridgeline Drive/University Drive would increase by 0.010 (1.008 to 1.018). This is not a project impact (0.02), but rather a circulation phasing impact (0.01). Based on the City's TIA Guidelines, project mitigation at a Circulation Phasing Analysis Report intersection can include a fair-share contribution toward mitigating the intersection back to acceptable LOS. Improvements are currently planned by the City for Ridgeline Drive/University Drive (University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project) to include a second northbound right-turn lane and a third eastbound through lane. Ridgeline Drive/University Drive was identified as deficient in the 2012 Citywide Circulation Phasing Analysis Report. With the addition of a second northbound right-turn lane and a third eastbound through lane, Ridgeline Drive/University Drive would operate at satisfactory LOS during both peak hours. The mitigated LOS worksheet is provided in Appendix F.

Because the proposed project contributes 0.010 to a deficient circulation phasing intersection, it would be responsible for a fair-share contribution toward the overall intersection improvements to Ridgeline Drive/University Drive. The project's fair-share percentage is calculated by dividing the difference of the 2017 approved plus project volume and the 2017 approved no project volume by the 2017 approved no project volume and multiplying by 100.

Table D: 2017 Approved Intersection LOS Summary

Study Area No.	ITAM Node No.	Intersection	No Project				Plus Project				Peak-Hour Δ ICU or Delay		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	AM	PM	
1	194	MacArthur Boulevard SB Ramps/University Drive	0.44	A	0.38	A	0.44	A	0.38	A	0.00	0.00	No
2	193	MacArthur Boulevard NB Ramps/University Drive	0.43	A	0.46	A	0.43	A	0.46	A	0.00	0.00	No
3	192	California Avenue/University Drive	0.62	B	0.82	D	0.60	A	0.82	D	(0.02)	0.00	No
4	190	Campus Drive/University Drive	0.83	D	0.82	D	0.83	D	0.82	D	0.00	0.00	No
5	189	Harvard Avenue/University Drive	0.66	B	0.69	B	0.66	B	0.70	B	0.00	0.01	No
6	216	California Avenue/Campus Drive	0.41	A	0.69	B	0.41	A	0.69	B	0.00	0.00	No
7	240	SR-73 NB Ramps/Bonita Canyon Drive	0.50	A	0.52	A	0.49	A	0.52	A	(0.01)	0.00	No
		HCM	*9.3*	*A*	*11.8*	*B*	*9.3*	*A*	*12.1*	*B*	*0.0*	*0.3*	No
8	239	Newport Coast Drive/Bonita Canyon Drive	0.43	A	0.52	A	0.44	A	0.52	A	0.01	0.00	No
9	229	Culver Drive/Alton Parkway	0.82	D	0.89	D	0.83	D	0.89	D	0.01	0.00	No
10	230	Culver Drive/Main Street	0.67	B	0.66	B	0.68	B	0.66	B	0.01	0.00	No
11	232	Culver Drive/I-405 NB Ramps	0.55	A	0.74	C	0.55	A	0.74	C	0.00	0.00	No
		HCM	*13.8*	*B*	*21.0*	*C*	*13.8*	*B*	*21.3*	*C*	*0.0*	*0.3*	No
12	233	Culver Drive/I-405 SB Ramps	0.58	A	0.70	B	0.59	A	0.70	B	0.01	0.00	No
		HCM	*14.6*	*B*	*25.6*	*C*	*14.6*	*B*	*25.4*	*C*	*0.0*	*(0.2)*	No
13	234	Culver Drive/Michelson Drive	0.65	B	0.90	D	0.64	B	0.90	D	(0.01)	0.00	No
14	235	Culver Drive/University Drive[1]	0.700	B	0.800	C	0.697	B	0.797	C	(0.003)	(0.003)	No
15	236	Culver Drive/Harvard Avenue	0.63	B	0.62	B	0.64	B	0.62	B	0.01	0.00	No
16	237	Culver Drive/Campus Drive	0.62	B	0.57	A	0.62	B	0.57	A	0.00	0.00	No
17	238	Culver Drive/Shady Canyon Drive	0.54	A	0.47	A	0.53	A	0.47	A	(0.01)	0.00	No
18	268	West Yale Loop/Alton Parkway	0.57	A	0.70	B	0.57	A	0.70	B	0.00	0.00	No
19	272	West Yale Loop/Main Street	0.69	B	0.36	A	0.69	B	0.36	A	0.00	0.00	No
20	271	East Yale Loop/Alton Parkway	0.68	B	0.67	B	0.68	B	0.67	B	0.00	0.00	No
21	291	Jeffrey Road/Alton Parkway[1]	0.947	E	0.871	D	0.945	E	0.871	D	(0.002)	0.000	No
22	293	Jeffrey Road/I-405 NB Ramps	0.79	C	0.80	C	0.80	C	0.80	C	0.01	0.00	No
		HCM	*42.2*	*D*	*38.0*	*D*	*43.2*	*D*	*39.6*	*D*	*1.0*	*1.6*	No
23	294	University Drive/I-405 SB Ramps	0.69	B	0.65	B	0.70	B	0.66	B	0.01	0.01	No
		HCM	*12.3*	*B*	*13.3*	*B*	*12.3*	*B*	*13.4*	*B*	*0.0*	*0.1*	No
24	295	Michelson Drive/University Drive[1]	0.669	B	0.973	E	0.669	B	0.975	E	0.000	0.002	No
25	276	Ridgeline Drive/University Drive[1*]	0.812	D	1.008	F	0.817	D	1.018	F	0.005	0.010	Yes
		with planned improvements[2]	0.75	C	0.71	C	0.74	C	0.72	C	(0.01)	0.01	No
26	275	Yale Avenue/University Drive	0.73	C	0.71	C	0.72	C	0.71	C	(0.01)	0.00	No
27	273	Yale Avenue/Michelson Drive *HCM*	*41.2*	*E*	*>50.0*	*F*	*44.1*	*E*	*>50.0*	*F*	*2.9*	-	No
		with signalization	0.44	A	0.42	A	0.44	A	0.43	A	*0.0*	0.01	No
28	492	Ridgeline Drive/Concordia East[3]	*44.6*	*E*	*>50.0*	*F*	0.33	A	0.32	A	-	-	No
29	278	Ridgeline Drive/Turtle Rock Drive *HCM*	*24.1*	*C*	*15.9*	*C*	*24.1*	*C*	*15.9*	*C*	*0.0*	*0.0*	No
30	279	Sunnyhill/Turtle Rock Drive *HCM*	*12.4*	*B*	*10.3*	*B*	*12.4*	*B*	*10.3*	*B*	*0.0*	*0.0*	No
31	494	Sunnyhill/Shady Canyon Drive *HCM*	*7.1*	*A*	*7.5*	*A*	*7.1*	*A*	*7.5*	*A*	*0.0*	*0.0*	No
32	277	Turtle Rock Drive/Campus Drive	0.67	B	0.40	A	0.67	B	0.40	A	0.00	0.00	No
33	493	Turtle Rock Drive/Concordia West *HCM*	*14.4*	*B*	*13.1*	*B*	*15.4*	*C*	*12.8*	*B*	*1.0*	*(0.3)*	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change

= exceeds City's level of service (LOS) criteria

= significant impact

Delay is reported in seconds.

EBT = eastbound through

HCM = Highway Capacity Manual

I-405 = Interstate 405

ICU = Intersection Capacity Utilization

ITAM = Irvine Transportation Analysis Model

NB = northbound

NBR = northbound right

SB = southbound

SR-73 = State Route 73

[1] 2012 Citywide Circulation Phasing Analysis Report intersection

[2] Addition of a 2nd NBR lane and a 3rd EBT lane

[3] Ridgeline Drive/Concordia East will be signalized with the project, with the addition of a shared eastbound left-right lane.

* The significant impact at Ridgeline/University is a Circulation Phasing impact and not a Δ 0.02 impact.

The 2017 approved no project and plus project volumes are provided in Appendix B. The a.m. and p.m. peak-hour fair-share calculations (provided in Appendix F) are as follows:

- **AM Peak Hour:** (4,630 - 4,599) / 4,599 x 100 = 0.67 percent
- **PM Peak Hour:** (5,178 - 5,139) / 5,139 x 100 = 0.76 percent

The project is responsible for a fair-share contribution of 0.76 percent toward the improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project in 2017. The project will be conditioned to participate in the fair-share contribution as part of the project approval.

The a.m. and p.m. peak-hour delays at the unsignalized intersections of Yale Avenue/Michelson Drive and Ridgeline Drive/Concordia East are already deficient in the no project condition. The need for traffic signals at these intersections is evaluated in the TDP-12 (Signal Warrants) analysis provided later in this report. Based on the results of this analysis, a traffic signal is not warranted for Yale Avenue/Michelson Drive. Based on the signal warrants, Concordia University will improve the intersection of Ridgeline Drive/Concordia East by adding a traffic signal and a shared left-right eastbound lane as part of the project. Ridgeline Drive/Concordia East would no longer be deficient as a signalized intersection. Phase 1 and 2 of the Campus Master Build-Out Plan can be implemented in a 2017 approved condition with no significant peak-hour intersection impacts.

The ADT volumes and v/c ratios for 2017 approved (no project and plus project) conditions are presented in Table E. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Culver Drive between Main Street and the I-405 northbound ramps (LOS E)
- Culver Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- Jeffrey Road between Alton Parkway and the I-405 northbound ramps (LOS E)
- University Drive between the I-405 southbound ramps and Michelson Drive (LOS E)
- University Drive between Michelson Drive and Ridgeline Drive (LOS F)
- University Drive between Ridgeline Drive and Yale Avenue (LOS F)
- University Drive between Yale Avenue and Culver Drive (LOS F)
- University Drive between Campus Drive and California Avenue (LOS E)
- University Drive between California Avenue and MacArthur Boulevard northbound ramps (LOS E)
- Alton Parkway between East Yale Loop and Jeffrey Road (LOS E)

With the addition of the phased project, the same study area roadway segments are forecast to continue operating at unsatisfactory LOS E or F. However, the roadway segment v/c ratios do not increase by 0.02 or greater at these locations. Therefore, no significant project impacts are created on roadway segments with implementation of Phase 1 and 2 of the Campus Master Build-Out Plan in the 2017 approved condition.

Table E: 2017 Approved ADT Volumes and V/C Ratios

ITAM Post No.	Roadway	Segment	Capacity	No Project			Plus Project			Δ V/C	Significant Impact?
				ADT	V/C	LOS	ADT	V/C	LOS		
220	Culver Drive	Alton to Main	54,000	45,700	0.85	D	45,600	0.84	D	(0.01)	No
222	Culver Drive	Main to I-405 NB ramps	54,000	53,400	0.99	E	53,400	0.99	E	0.00	No
224	Culver Drive	I-405 SB ramps to Michelson	54,000	55,100	1.02	F	55,200	1.02	F	0.00	No
225	Culver Drive	Michelson to University	54,000	39,600	0.73	C	39,600	0.73	C	0.00	No
227	Culver Drive	University to Harvard	54,000	46,600	0.86	D	46,600	0.86	D	0.00	No
228	Culver Drive	Harvard to Campus	54,000	36,700	0.68	B	36,600	0.68	B	0.00	No
229	Culver Drive	Campus to Shady Canyon	32,000	23,000	0.72	C	23,100	0.72	C	0.00	No
94	Bonita Canyon Road	Shady Canyon to Newport Coast	32,000	19,600	0.61	B	19,600	0.61	B	0.00	No
233	Bonita Canyon Road	Newport Coast to SR-73 NB ramps	32,000	19,700	0.62	B	19,700	0.62	B	0.00	No
299	Jeffrey Road	Alton to I-405 NB ramps	54,000	50,000	0.93	E	50,000	0.93	E	0.00	No
347	University Drive	I-405 SB ramps to Michelson	54,000	53,000	0.98	E	53,200	0.99	E	0.01	No
886	University Drive	Michelson to Ridgeline	32,000	45,500	1.42	F	45,800	1.43	F	0.01	No
885	University Drive	Ridgeline to Yale	32,000	33,600	1.05	F	33,500	1.05	F	0.00	No
883	University Drive	Yale to Culver	32,000	34,900	1.09	F	34,800	1.09	F	0.00	No
881	University Drive	Culver to Harvard	54,000	22,800	0.42	A	22,800	0.42	A	0.00	No
186	University Drive	Harvard to Campus	54,000	22,600	0.42	A	22,600	0.42	A	0.00	No
187	University Drive	Campus to California	32,000	30,200	0.94	E	30,200	0.94	E	0.00	No
189	University Drive	California to MacArthur NB ramps	32,000	30,100	0.94	E	30,100	0.94	E	0.00	No
279	Ridgeline Drive	University to Concordia East	28,000	12,100	0.43	A	12,300	0.44	A	0.01	No
280	Ridgeline Drive	Concordia East to Turtle Rock	28,000	12,100	0.43	A	12,100	0.43	A	0.00	No
283	Sunnyhill	Ridgeline to Turtle Rock	13,000	5,700	0.44	A	5,700	0.44	A	0.00	No
893	Campus Drive	University to California	32,000	23,100	0.72	C	23,200	0.73	C	0.01	No
898	Campus Drive	California to Culver	32,000	18,800	0.59	A	18,800	0.59	A	0.00	No
899	Campus Drive	Culver to Turtle Rock	32,000	17,800	0.56	A	17,900	0.56	A	0.00	No
281	Turtle Rock Drive	Concordia West to Campus	13,000	7,000	0.54	A	7,100	0.55	A	0.01	No
282	Turtle Rock Drive	Campus to Sunnyhill	13,000	4,000	0.31	A	4,000	0.31	A	0.00	No
901	Turtle Rock Drive	Concordia West to Ridgeline	13,000	7,000	0.54	A	7,000	0.54	A	0.00	No
902	Turtle Rock Drive	Ridgeline to Sunnyhill	13,000	7,000	0.54	A	7,000	0.54	A	0.00	No
784	Alton Parkway	Culver to West Yale Loop	32,000	25,300	0.79	C	25,300	0.79	C	0.00	No
789	Alton Parkway	West Yale Loop to East Yale Loop	32,000	23,400	0.73	C	23,300	0.73	C	0.00	No
792	Alton Parkway	East Yale Loop to Jeffrey	32,000	29,600	0.93	E	29,600	0.93	E	0.00	No
265	West Yale Loop	south of Alton	28,000	6,500	0.23	A	6,500	0.23	A	0.00	No
275	East Yale Loop	south of Alton	28,000	4,400	0.16	A	4,400	0.16	A	0.00	No
828	Main Street	Culver to West Yale Loop	32,000	14,200	0.44	A	14,200	0.44	A	0.00	No
851	Michelson Drive	Culver to Yale	13,000	9,600	0.74	C	9,600	0.74	C	0.00	No
853	Michelson Drive	Yale to University	13,000	8,100	0.62	B	8,200	0.63	B	0.01	No
278	Yale Avenue	Michelson to University	13,000	1,100	0.08	A	1,100	0.08	A	0.00	No
2582	Shady Canyon Drive	Culver to Sunnyhill	13,000	7,700	0.59	A	7,700	0.59	A	0.00	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change

= exceeds City's level of service (LOS) criteria

ADT = average daily trips

I-405 = Interstate 405

ITAM = Irvine Transportation Analysis Model

NB = northbound

SB = southbound

SR-73 = State Route 73

V/C = volume-to-capacity ratio

2017 Pending No Project and Plus Project Traffic Volumes and LOS

Table F presents a summary of the intersection LOS for 2017 pending (no project and plus project) conditions. As this table indicates, all study area intersections are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Jeffrey Road/Alton Parkway (LOS E in the a.m. peak hour)
- Michelson Drive/University Drive (LOS E in the p.m. peak hour)
- Ridgeline Drive/University Drive (LOS F in the p.m. peak hour)
- Yale Avenue/Michelson Drive (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- Ridgeline Drive/Concordia East (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)

With the addition of the phased project, the same study area intersections, with the exception of Ridgeline Drive/Concordia East, are forecast to continue operating at unsatisfactory LOS E or F. The deficient peak-hour ICUs at the Citywide Circulation Phasing Report intersections of Jeffrey Road/Alton Parkway, Michelson Drive/University Drive, and Ridgeline Drive/University Drive would not increase by 0.01 or greater.

The a.m. and p.m. peak-hour delays at the unsignalized intersections of Yale Avenue/Michelson Drive and Ridgeline Drive/Concordia East are already deficient in the no project condition. The need for traffic signals at these intersections is evaluated in the TDP-12 (Signal Warrants) analysis provided later in this report. Based on the results of this analysis, a traffic signal is not warranted for Yale Avenue/Michelson Drive. However, a traffic signal is warranted at Ridgeline Drive/Concordia East. Based on the signal warrants, Concordia University will improve the intersection of Ridgeline Drive/Concordia East by adding a traffic signal and a shared left-right eastbound lane as part of the project. Ridgeline Drive/Concordia East would no longer be deficient as a signalized intersection. Phase 1 and 2 of the Campus Master Build-Out Plan can be implemented in a 2017 pending condition with no significant peak-hour intersection impacts.

The ADT volumes and v/c ratios for 2017 pending (no project and plus project) conditions are presented in Table G. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Culver Drive between Main Street and the I-405 northbound ramps (LOS E)
- Culver Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- Jeffrey Road between Alton Parkway and the I-405 northbound ramps (LOS E)
- University Drive between the I-405 southbound ramps and Michelson Drive (LOS E)
- University Drive between Michelson Drive and Ridgeline Drive (LOS F)
- University Drive between Ridgeline Drive and Yale Avenue (LOS F)
- University Drive between Yale Avenue and Culver Drive (LOS F)
- University Drive between Campus Drive and California Avenue (LOS E)

Table F: 2017 Pending Intersection LOS Summary

Study Area No.	ITAM Node No.	Intersection	No Project				Plus Project				Peak-Hour Δ ICU or Delay		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	AM	PM	
1	194	MacArthur Boulevard SB Ramps/University Drive	0.45	A	0.38	A	0.45	A	0.38	A	0.00	0.00	No
2	193	MacArthur Boulevard NB Ramps/University Drive	0.43	A	0.46	A	0.43	A	0.46	A	0.00	0.00	No
3	192	California Avenue/University Drive	0.62	B	0.82	D	0.62	B	0.82	D	0.00	0.00	No
4	190	Campus Drive/University Drive	0.83	D	0.82	D	0.83	D	0.82	D	0.00	0.00	No
5	189	Harvard Avenue/University Drive	0.66	B	0.69	B	0.66	B	0.69	B	0.00	0.00	No
6	216	California Avenue/Campus Drive	0.42	A	0.69	B	0.42	A	0.69	B	0.00	0.00	No
7	240	SR-73 NB Ramps/Bonita Canyon Drive	0.49	A	0.53	A	0.50	A	0.53	A	0.01	0.00	No
		HCM	*9.3*	*A*	*11.8*	*B*	*9.3*	*A*	*11.8*	*B*	*0.0*	*0.0*	No
8	239	Newport Coast Drive/Bonita Canyon Drive	0.44	A	0.52	A	0.43	A	0.52	A	(0.01)	0.00	No
9	229	Culver Drive/Alton Parkway	0.81	D	0.89	D	0.81	D	0.89	D	0.00	0.00	No
10	230	Culver Drive/Main Street	0.68	B	0.66	B	0.68	B	0.66	B	0.00	0.00	No
11	232	Culver Drive/I-405 NB Ramps	0.55	A	0.74	C	0.55	A	0.74	C	0.00	0.00	No
		HCM	*14.3*	*B*	*21.0*	*C*	*13.8*	*B*	*21.2*	*C*	*(0.5)*	*0.2*	No
12	233	Culver Drive/I-405 SB Ramps	0.58	A	0.70	B	0.58	A	0.70	B	0.00	0.00	No
		HCM	*14.7*	*B*	*25.3*	*C*	*14.6*	*B*	*23.3*	*C*	*(0.1)*	*(2.0)*	No
13	234	Culver Drive/Michelson Drive	0.64	B	0.90	D	0.64	B	0.90	D	0.00	0.00	No
14	235	Culver Drive/University Drive[1]	0.701	C	0.798	C	0.701	C	0.800	C	0.000	0.002	No
15	236	Culver Drive/Harvard Avenue	0.63	B	0.61	B	0.64	B	0.61	B	0.01	0.00	No
16	237	Culver Drive/Campus Drive	0.62	B	0.57	A	0.62	B	0.57	A	0.00	0.00	No
17	238	Culver Drive/Shady Canyon Drive	0.53	A	0.47	A	0.54	A	0.48	A	0.01	0.01	No
18	268	West Yale Loop/Alton Parkway	0.57	A	0.70	B	0.57	A	0.70	B	0.00	0.00	No
19	272	West Yale Loop/Main Street	0.67	B	0.36	A	0.68	B	0.36	A	0.01	0.00	No
20	271	East Yale Loop/Alton Parkway	0.68	B	0.66	B	0.68	B	0.66	B	0.00	0.00	No
21	291	Jeffrey Road/Alton Parkway[1]	0.952	E	0.874	D	0.950	E	0.873	D	(0.002)	(0.001)	No
22	293	Jeffrey Road/I-405 NB Ramps	0.79	C	0.80	C	0.80	C	0.81	D	0.01	0.01	No
		HCM	*42.4*	*D*	*38.1*	*D*	*43.9*	*D*	*38.0*	*D*	*1.5*	*(0.1)*	No
23	294	University Drive/I-405 SB Ramps	0.69	B	0.66	B	0.70	B	0.66	B	0.01	0.00	No
		HCM	*12.1*	*B*	*13.5*	*B*	*12.3*	*B*	*13.5*	*B*	*0.2*	*0.0*	No
24	295	Michelson Drive/University Drive[1]	0.675	B	0.976	E	0.672	B	0.978	E	(0.003)	0.002	No
25	276	Ridgeline Drive/University Drive[1]	0.816	D	1.011	F	0.816	D	1.018	F	0.000	0.007	No
		with planned improvements[2]	0.75	C	0.74	C	0.74	C	0.72	C	(0.01)	(0.02)	No
26	275	Yale Avenue/University Drive	0.73	C	0.71	C	0.73	C	0.71	C	0.00	0.00	No
27	273	Yale Avenue/Michelson Drive *HCM*	*42.5*	*E*	*>50.0*	*F*	*42.7*	*E*	*>50.0*	*F*	*0.2*	-	No
		with signalization	0.44	A	0.42	A	0.44	A	0.42	A	*0.0*	0.00	No
28	492	Ridgeline Drive/Concordia East[3]	*44.2*	*E*	*>50.0*	*F*	0.33	A	0.32	A	-	-	No
29	278	Ridgeline Drive/Turtle Rock Drive *HCM*	*24.1*	*C*	*15.9*	*C*	*24.1*	*C*	*15.9*	*C*	*0.0*	*0.0*	No
30	279	Sunnyhill/Turtle Rock Drive *HCM*	*12.4*	*B*	*10.4*	*B*	*12.4*	*B*	*10.4*	*B*	*0.0*	*0.0*	No
31	494	Sunnyhill/Shady Canyon Drive *HCM*	*7.1*	*A*	*7.5*	*A*	*7.1*	*A*	*7.5*	*A*	*0.0*	*0.0*	No
32	277	Turtle Rock Drive/Campus Drive	0.66	B	0.40	A	0.67	B	0.40	A	0.01	0.00	No
33	493	Turtle Rock Drive/Concordia West *HCM*	*14.8*	*B*	*13.1*	*B*	*15.4*	*C*	*12.8*	*B*	*0.6*	*(0.3)*	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
= exceeds City's level of service (LOS) criteria
= significant impact
Delay is reported in seconds.
[1] 2012 Citywide Circulation Phasing Analysis Report intersection
[2] Addition of a 2nd NBR lane and a 3rd EBT lane
[3] Ridgeline Drive/Concordia East will be signalized with the project, with the addition of a shared eastbound left-right lane.

EBT = eastbound through
HCM = Highway Capacity Manual
I-405 = Interstate 405
ICU = Intersection Capacity Utilization
ITAM = Irvine Transportation Analysis Model

NB = northbound
NBR = northbound right
SB = southbound
SR-73 = State Route 73

Table G: 2017 Pending ADT Volumes and V/C Ratios

ITAM Post No.	Roadway	Segment	Capacity	No Project			Plus Project			Δ V/C	Significant Impact?
				ADT	V/C	LOS	ADT	V/C	LOS		
220	Culver Drive	Alton to Main	54,000	45,700	0.85	D	45,700	0.85	D	0.00	No
222	Culver Drive	Main to I-405 NB ramps	54,000	53,500	0.99	E	53,400	0.99	E	0.00	No
224	Culver Drive	I-405 SB ramps to Michelson	54,000	55,200	1.02	F	55,300	1.02	F	0.00	No
225	Culver Drive	Michelson to University	54,000	39,600	0.73	C	39,700	0.74	C	0.01	No
227	Culver Drive	University to Harvard	54,000	46,600	0.86	D	46,600	0.86	D	0.00	No
228	Culver Drive	Harvard to Campus	54,000	36,600	0.68	B	36,600	0.68	B	0.00	No
229	Culver Drive	Campus to Shady Canyon	32,000	23,100	0.72	C	23,100	0.72	C	0.00	No
94	Bonita Canyon Road	Shady Canyon to Newport Coast	32,000	19,600	0.61	B	19,600	0.61	B	0.00	No
233	Bonita Canyon Road	Newport Coast to SR-73 NB ramps	32,000	19,800	0.62	B	19,700	0.62	B	0.00	No
299	Jeffrey Road	Alton to I-405 NB ramps	54,000	50,000	0.93	E	50,100	0.93	E	0.00	No
347	University Drive	I-405 SB ramps to Michelson	54,000	53,100	0.98	E	53,400	0.99	E	0.01	No
886	University Drive	Michelson to Ridgeline	32,000	45,500	1.42	F	45,900	1.43	F	0.01	No
885	University Drive	Ridgeline to Yale	32,000	33,600	1.05	F	33,500	1.05	F	0.00	No
883	University Drive	Yale to Culver	32,000	34,900	1.09	F	34,800	1.09	F	0.00	No
881	University Drive	Culver to Harvard	54,000	22,900	0.42	A	22,900	0.42	A	0.00	No
186	University Drive	Harvard to Campus	54,000	22,800	0.42	A	22,800	0.42	A	0.00	No
187	University Drive	Campus to California	32,000	30,400	0.95	E	30,400	0.95	E	0.00	No
189	University Drive	California to MacArthur NB ramps	32,000	30,200	0.94	E	30,100	0.94	E	0.00	No
279	Ridgeline Drive	University to Concordia East	28,000	12,100	0.43	A	12,400	0.44	A	0.01	No
280	Ridgeline Drive	Concordia East to Turtle Rock	28,000	12,100	0.43	A	12,100	0.43	A	0.00	No
283	Sunnyhill	Ridgeline to Turtle Rock	13,000	5,700	0.44	A	5,700	0.44	A	0.00	No
893	Campus Drive	University to California	32,000	23,100	0.72	C	23,100	0.72	C	0.00	No
898	Campus Drive	California to Culver	32,000	18,800	0.59	A	18,800	0.59	A	0.00	No
899	Campus Drive	Culver to Turtle Rock	32,000	17,700	0.55	A	17,800	0.56	A	0.01	No
281	Turtle Rock Drive	Concordia West to Campus	13,000	7,000	0.54	A	7,100	0.55	A	0.01	No
282	Turtle Rock Drive	Campus to Sunnyhill	13,000	4,000	0.31	A	4,000	0.31	A	0.00	No
901	Turtle Rock Drive	Concordia West to Ridgeline	13,000	7,000	0.54	A	7,000	0.54	A	0.00	No
902	Turtle Rock Drive	Ridgeline to Sunnyhill	13,000	7,000	0.54	A	7,000	0.54	A	0.00	No
784	Alton Parkway	Culver to West Yale Loop	32,000	25,600	0.80	C	25,600	0.80	C	0.00	No
789	Alton Parkway	West Yale Loop to East Yale Loop	32,000	23,500	0.73	C	23,600	0.74	C	0.01	No
792	Alton Parkway	East Yale Loop to Jeffrey	32,000	29,800	0.93	E	29,900	0.93	E	0.00	No
265	West Yale Loop	south of Alton	28,000	6,600	0.24	A	6,600	0.24	A	0.00	No
275	East Yale Loop	south of Alton	28,000	4,400	0.16	A	4,400	0.16	A	0.00	No
828	Main Street	Culver to West Yale Loop	32,000	14,200	0.44	A	14,200	0.44	A	0.00	No
851	Michelson Drive	Culver to Yale	13,000	9,600	0.74	C	9,600	0.74	C	0.00	No
853	Michelson Drive	Yale to University	13,000	8,100	0.62	B	8,200	0.63	B	0.01	No
278	Yale Avenue	Michelson to University	13,000	1,100	0.08	A	1,100	0.08	A	0.00	No
2582	Shady Canyon Drive	Culver to Sunnyhill	13,000	7,700	0.59	A	7,700	0.59	A	0.00	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change

= exceeds City's level of service (LOS) criteria

ADT = average daily trips

I-405 = Interstate 405

ITAM = Irvine Transportation Analysis Model

NB = northbound

SB = southbound

SR-73 = State Route 73

V/C = volume-to-capacity ratio

- University Drive between California Avenue and MacArthur Boulevard northbound ramps (LOS E)
- Alton Parkway between East Yale Loop and Jeffrey Road (LOS E)

With the addition of the phased project, the same study area roadway segments are forecast to continue operating at unsatisfactory LOS E or F. However, the roadway segment v/c ratios do not increase by 0.02 or greater at these locations. Therefore, no significant project impacts are created on roadway segments with implementation of Phase 1 and 2 of the Campus Master Build-Out Plan in the 2017 pending condition.

2035 Approved No Project and Plus Project Traffic Volumes and LOS

Table H presents a summary of the intersection LOS for 2035 approved (no project and plus project) conditions. As this table indicates, all study area intersections are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Campus Drive/University Drive (LOS E in the p.m. peak hour)
- Culver Drive/Alton Parkway (LOS E in the p.m. peak hour)
- Jeffrey Road/Alton Parkway (LOS E in the a.m. and p.m. peak hours)
- Michelson Drive/University Drive (LOS F in the p.m. peak hour)
- Ridgeline Drive/University Drive (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- Ridgeline Drive/Concordia East (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)

With the addition of the project, the same study area intersections, with the exception of Ridgeline Drive/Concordia East, are forecast to continue operating at unsatisfactory LOS E or F, along with Yale Avenue/Michelson Drive (LOS E in the a.m. peak hour). The deficient peak-hour ICUs at Campus Drive/University Drive, Culver Drive/Alton Parkway, Jeffrey Road/Alton Parkway, and Michelson Drive/University Drive would not increase by 0.02 or greater.

The deficient p.m. peak-hour ICU at Ridgeline Drive/University Drive would increase by 0.02 (i.e., 1.09 to 1.11). As such, the project would be responsible for the addition of a second northbound right-turn lane as mitigation to offset this project impact. As an alternative mitigation measure, the project will be required to pay its fair-share contribution toward the identified improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project conducted by the City. The alternative mitigation shall be selected as the preferred mitigation should the City Council approve the improvement project prior to completion of the Campus Master Build-Out Plan. The mitigated LOS worksheets are provided in Appendix F.

The project's fair-share percentage is calculated by dividing the difference of the 2035 approved plus project volume and the 2035 approved no project volume by the 2035 approved no project volume and multiplying by 100. The 2035 approved no project and plus project volumes are provided in Appendix B.

Table H: 2035 Approved Intersection LOS Summary

Study Area No.	ITAM Node No.	Intersection	No Project				Plus Project				Peak-Hour Δ ICU or Delay		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	AM	PM	
1	194	MacArthur Boulevard SB Ramps/University Drive	0.66	B	0.50	A	0.66	B	0.50	A	0.00	0.00	No
2	193	MacArthur Boulevard NB Ramps/University Drive	0.53	A	0.63	B	0.53	A	0.63	B	0.00	0.00	No
3	192	California Avenue/University Drive	0.88	D	0.84	D	0.88	D	0.84	D	0.00	0.00	No
4	190	Campus Drive/University Drive	0.83	D	0.91	E	0.83	D	0.92	E	0.00	0.01	No
5	189	Harvard Avenue/University Drive	0.70	B	0.81	D	0.70	B	0.81	D	0.00	0.00	No
6	216	California Avenue/Campus Drive	0.54	A	0.79	C	0.54	A	0.80	C	0.00	0.01	No
7	240	SR-73 NB Ramps/Bonita Canyon Drive	0.54	A	0.59	A	0.55	A	0.59	A	0.01	0.00	No
		HCM	*10.3*	*B*	*16.7*	*B*	*10.5*	*B*	*16.7*	*B*	*0.2*	*0.0*	No
8	239	Newport Coast Drive/Bonita Canyon Drive	0.53	A	0.57	A	0.53	A	0.57	A	0.00	0.00	No
9	229	Culver Drive/Alton Parkway	0.84	D	0.93	E	0.84	D	0.93	E	0.00	0.00	No
10	230	Culver Drive/Main Street	0.67	B	0.70	B	0.67	B	0.70	B	0.00	0.00	No
11	232	Culver Drive/I-405 NB Ramps	0.59	A	0.76	C	0.60	A	0.76	C	0.01	0.00	No
		HCM	*15.7*	*B*	*22.5*	*C*	*15.7*	*B*	*22.1*	*C*	*0.0*	*(0.4)*	No
12	233	Culver Drive/I-405 SB Ramps	0.64	B	0.74	C	0.64	B	0.74	C	0.00	0.00	No
		HCM	*15.8*	*B*	*25.3*	*C*	*15.9*	*B*	*24.7*	*C*	*0.1*	*(0.6)*	No
13	234	Culver Drive/Michelson Drive	0.69	B	0.88	D	0.69	B	0.88	D	0.00	0.00	No
14	235	Culver Drive/University Drive	0.81	D	0.90	D	0.81	D	0.90	D	0.00	0.00	No
15	236	Culver Drive/Harvard Avenue	0.75	C	0.74	C	0.75	C	0.74	C	0.00	0.00	No
16	237	Culver Drive/Campus Drive	0.67	B	0.63	B	0.67	B	0.63	B	0.00	0.00	No
17	238	Culver Drive/Shady Canyon Drive	0.56	A	0.57	A	0.56	A	0.57	A	0.00	0.00	No
18	268	West Yale Loop/Alton Parkway	0.61	B	0.74	C	0.61	B	0.74	C	0.00	0.00	No
19	272	West Yale Loop/Main Street	0.71	C	0.39	A	0.72	C	0.39	A	0.01	0.00	No
20	271	East Yale Loop/Alton Parkway	0.73	C	0.68	B	0.73	C	0.68	B	0.00	0.00	No
21	291	Jeffrey Road/Alton Parkway	0.98	E	0.95	E	0.98	E	0.95	E	0.00	0.00	No
22	293	Jeffrey Road/I-405 NB Ramps	0.84	D	0.85	D	0.84	D	0.85	D	0.00	0.00	No
		HCM	*49.9*	*D*	*49.4*	*D*	*51.3*	*D*	*50.0*	*D*	*1.4*	*0.6*	No
23	294	University Drive/I-405 SB Ramps	0.74	C	0.71	C	0.75	C	0.71	C	0.01	0.00	No
		HCM	*13.5*	*B*	*14.3*	*B*	*14.0*	*B*	*14.4*	*B*	*0.5*	*0.1*	No
24	295	Michelson Drive/University Drive	0.85	D	1.06	F	0.85	D	1.07	F	0.00	0.01	No
25	276	Ridgeline Drive/University Drive	0.93	E	1.09	F	0.94	E	1.11	F	0.01	0.02	Yes
		with planned improvements[1]	0.79	C	0.76	C	0.79	C	0.76	C	0.00	0.00	No
		with planned improvements[2]	-	-	-	-	0.79	C	0.99	E	-	-	No
26	275	Yale Avenue/University Drive	0.79	C	0.76	C	0.79	C	0.76	C	0.00	0.00	No
27	273	Yale Avenue/Michelson Drive *HCM*	*34.7*	*D*	*23.4*	*C*	*36.7*	*E*	*23.9*	*C*	*2.0*	*0.5*	No
28	492	Ridgeline Drive/Concordia East[3]	*43.1*	*E*	*>50.0*	*F*	0.33	A	0.34	A	-	-	No
29	278	Ridgeline Drive/Turtle Rock Drive *HCM*	*25.3*	*D*	*15.6*	*C*	*25.1*	*D*	*15.7*	*C*	*(0.2)*	*0.1*	No
30	279	Sunnyhill/Turtle Rock Drive *HCM*	*12.4*	*B*	*10.3*	*B*	*12.3*	*B*	*10.3*	*B*	*(0.1)*	*0.0*	No
31	494	Sunnyhill/Shady Canyon Drive *HCM*	*7.3*	*A*	*7.5*	*A*	*7.3*	*A*	*7.2*	*A*	*0.0*	*(0.3)*	No
32	277	Turtle Rock Drive/Campus Drive	0.70	B	0.43	A	0.71	C	0.45	A	0.01	0.02	No
33	493	Turtle Rock Drive/Concordia West *HCM*	*16.1*	*C*	*13.9*	*B*	*16.8*	*C*	*14.5*	*B*	*0.7*	*0.6*	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
= exceeds City's level of service (LOS) criteria
= significant impact
Delay is reported in seconds.
EBT = eastbound through
HCM = Highway Capacity Manual
I-405 = Interstate 405
ICU = Intersection Capacity Utilization
ITAM = Irvine Transportation Analysis Model
NB = northbound
NBR = northbound right
SB = southbound
SR-73 = State Route 73

[1] Addition of a 2nd NBR lane and a 3rd EBT lane

[2] Addition of a 2nd NBR lane

[3] Ridgeline Drive/Concordia East will be signalized with the project, with the addition of a shared eastbound left-right lane.

The a.m. and p.m. peak-hour fair-share calculations (provided in Appendix F) are as follows:

- **AM Peak Hour:** (5,280 - 5,141) / 5,141 x 100 = 2.70 percent
- **PM Peak Hour:** (5,620 - 5,580) / 5,580 x 100 = 0.72 percent

As a result, the project is responsible for a fair-share contribution of 2.70 percent toward the improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project in 2035. The project will be conditioned to participate in the fair-share contribution as part of the project approval.

The a.m. peak-hour delay at the unsignalized intersections of Yale Avenue/Michelson Drive and Ridgeline Drive/Concordia East changes from LOS D to LOS E (acceptable LOS to unacceptable LOS). The need for traffic signals at these intersections is evaluated in the TDP-12 (Signal Warrants) analysis provided later in this report. Based on the results of this analysis, a traffic signal is not warranted for Yale Avenue/Michelson Drive. Based on the signal warrants, Concordia University will improve the intersection of Ridgeline Drive/Concordia East by adding a traffic signal and a shared left-right eastbound lane as part of the project. Ridgeline Drive/Concordia East would no longer be deficient as a signalized intersection. Therefore, with these improvements, the Campus Master Build-Out Plan can be implemented in a 2035 approved condition with no significant peak-hour intersection impacts.

The ADT volumes and v/c ratios for 2035 approved (no project and plus project) conditions are presented in Table I. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Culver Drive between Alton Parkway and Main Street (LOS E)
- Culver Drive between Main Street and the I-405 northbound ramps (LOS F)
- Culver Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- Culver Drive between University Drive and Harvard Avenue (LOS E)
- Jeffrey Road between Alton Parkway and the I-405 northbound ramps (LOS E)
- University Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- University Drive between Michelson Drive and Ridgeline Drive (LOS F)
- University Drive between Ridgeline Drive and Yale Avenue (LOS F)
- University Drive between Yale Avenue and Culver Drive (LOS F)
- Alton Parkway between East Yale Loop and Jeffrey Road (LOS F)

With the addition of the project, the same study area roadway segments are forecast to continue operating at unsatisfactory LOS E or F. Because the deficient v/c ratio would increase by 0.02 at University Drive between Michelson Drive and Ridgeline Drive (1.62 to 1.64) with implementation of the project, a peak-hour link analysis was conducted for this roadway segment.

Table I: 2035 Approved ADT Volumes and V/C Ratios

ITAM Post No.	Roadway	Segment	Capacity	No Project			Plus Project			Δ V/C	Significant Impact?
				ADT	V/C	LOS	ADT	V/C	LOS		
220	Culver Drive	Alton to Main	54,000	49,000	0.91	E	49,000	0.91	E	0.00	No
222	Culver Drive	Main to I-405 NB ramps	54,000	56,200	1.04	F	56,200	1.04	F	0.00	No
224	Culver Drive	I-405 SB ramps to Michelson	54,000	59,700	1.11	F	59,900	1.11	F	0.00	No
225	Culver Drive	Michelson to University	54,000	44,000	0.81	D	44,100	0.82	D	0.01	No
227	Culver Drive	University to Harvard	54,000	53,800	1.00	E	53,800	1.00	E	0.00	No
228	Culver Drive	Harvard to Campus	54,000	41,100	0.76	C	41,100	0.76	C	0.00	No
229	Culver Drive	Campus to Shady Canyon	32,000	26,100	0.82	D	26,100	0.82	D	0.00	No
94	Bonita Canyon Road	Shady Canyon to Newport Coast	32,000	18,300	0.57	A	18,900	0.59	A	0.02	No
233	Bonita Canyon Road	Newport Coast to SR-73 NB ramps	32,000	23,600	0.74	C	23,600	0.74	C	0.00	No
299	Jeffrey Road	Alton to I-405 NB ramps	54,000	53,900	1.00	E	54,100	1.00	E	0.00	No
347	University Drive	I-405 SB ramps to Michelson	54,000	61,000	1.13	F	61,500	1.14	F	0.01	No
886	University Drive	Michelson to Ridgeline	32,000	51,900	1.62	F	52,500	1.64	F	0.02	-
		AM Peak Hour									
		eastbound	*3,200*	*2,140*	*0.67*	*B*	*2,151*	*0.67*	*B*	*0.00*	*No*
		eastbound [1]	*4,800*	*2,140*	*0.45*	*A*	*2,151*	*0.45*	*A*	*0.00*	*No*
		westbound	*3,200*	*2,651*	*0.83*	*D*	*2,694*	*0.84*	*D*	*0.01*	*No*
		PM Peak Hour									
		eastbound	*3,200*	*2,868*	*0.90*	*D*	*2,897*	*0.91*	*E*	*0.01*	*Yes*
		eastbound [1]	*4,800*	*2,868*	*0.60*	*A*	*2,897*	*0.60*	*A*	*0.00*	*No*
		westbound	*3,200*	*2,326*	*0.73*	*C*	*2,332*	*0.73*	*C*	*0.00*	*No*
885	University Drive	Ridgeline to Yale	32,000	39,300	1.23	F	39,100	1.22	F	(0.01)	No
883	University Drive	Yale to Culver	32,000	40,800	1.28	F	40,600	1.27	F	(0.01)	No
881	University Drive	Culver to Harvard	54,000	26,000	0.48	A	26,000	0.48	A	0.00	No
186	University Drive	Harvard to Campus	54,000	23,100	0.43	A	23,000	0.43	A	0.00	No
187	University Drive	Campus to California	54,000	29,600	0.55	A	29,600	0.55	A	0.00	No
189	University Drive	California to MacArthur NB ramps	54,000	36,100	0.67	B	36,100	0.67	B	0.00	No
279	Ridgeline Drive	University to Concordia East	28,000	12,100	0.43	A	12,500	0.45	A	0.02	No
280	Ridgeline Drive	Concordia East to Turtle Rock	28,000	12,100	0.43	A	12,100	0.43	A	0.00	No
283	Sunnyhill	Ridgeline to Turtle Rock	13,000	3,800	0.29	A	3,800	0.29	A	0.00	No
893	Campus Drive	University to California	32,000	24,100	0.75	C	24,200	0.76	C	0.01	No
898	Campus Drive	California to Culver	32,000	20,100	0.63	B	20,200	0.63	B	0.00	No
899	Campus Drive	Culver to Turtle Rock	32,000	18,600	0.58	A	18,900	0.59	A	0.01	No
281	Turtle Rock Drive	Concordia West to Campus	13,000	7,600	0.58	A	7,800	0.60	A	0.02	No
282	Turtle Rock Drive	Campus to Sunnyhill	13,000	4,100	0.32	A	4,100	0.32	A	0.00	No
901	Turtle Rock Drive	Concordia West to Ridgeline	13,000	7,700	0.59	A	7,700	0.59	A	0.00	No
902	Turtle Rock Drive	Ridgeline to Sunnyhill	13,000	7,200	0.55	A	7,200	0.55	A	0.00	No
784	Alton Parkway	Culver to West Yale Loop	32,000	28,300	0.88	D	28,300	0.88	D	0.00	No
789	Alton Parkway	West Yale Loop to East Yale Loop	32,000	25,900	0.81	D	25,900	0.81	D	0.00	No
792	Alton Parkway	East Yale Loop to Jeffrey	32,000	32,200	1.01	F	32,200	1.01	F	0.00	No
265	West Yale Loop	south of Alton	28,000	7,000	0.25	A	7,000	0.25	A	0.00	No
275	East Yale Loop	south of Alton	28,000	4,500	0.16	A	4,500	0.16	A	0.00	No
828	Main Street	Culver to West Yale Loop	32,000	14,400	0.45	A	14,500	0.45	A	0.00	No
851	Michelson Drive	Culver to Yale	13,000	8,400	0.65	B	8,400	0.65	B	0.00	No
853	Michelson Drive	Yale to University	13,000	7,000	0.54	A	7,100	0.55	A	0.01	No
278	Yale Avenue	Michelson to University	13,000	1,300	0.10	A	1,300	0.10	A	0.00	No
2582	Shady Canyon Drive	Culver to Sunnyhill	13,000	7,700	0.59	A	7,700	0.59	A	0.00	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
ADT = average daily trips
NB = northbound
SR-73 = State Route 73
= exceeds City's level of service (LOS) criteria
I-405 = Interstate 405
SB = southbound
V/C = volume-to-capacity ratio
= significant impact
ITAM = Irvine Transportation Analysis Model

Italics = Peak-Hour Link Analysis

[1] With third eastbound lane on University Drive between Ridgeline Drive and Michelson Drive

University Drive between Michelson Drive and Ridgeline Drive would operate at satisfactory LOS D (0.90) in the eastbound direction during the p.m. peak hour. With the addition of the project, this roadway segment would operate at unsatisfactory LOS E (0.91) in the eastbound direction during the p.m. peak hour, resulting in a significant impact.

The project will be required to implement a third eastbound through lane along University Drive between Ridgeline Drive and Michelson Drive to offset the project impact in 2035 approved conditions. Prior to the issuance of a building permit for additional square footage in Phases 3 and 4, the project applicant will be responsible for implementing this improvement or for demonstrating in a subsequent traffic analysis to the satisfaction of the Director of Community Development that the improvement is no longer needed. However, if the improvement has been identified or implemented in a short-term interim-year condition by others, the project applicant will be responsible for a fair-share contribution toward implementation of this improvement.

The project's fair-share percentage is calculated by dividing the difference of the 2035 approved plus project volume and the 2035 approved no project volume by the 2035 approved no project volume and multiplying by 100. The a.m. and p.m. peak-hour fair-share calculations (provided in Appendix F) are as follows:

- **AM Peak Hour:** (2,151 - 2,140) / 2,140 x 100 = 0.51 percent
- **PM Peak Hour:** (2,897 - 2,868) / 2,868 x 100 = 1.01 percent

As a result, the project's fair-share contribution would be 1.01 percent toward the third eastbound through lane along University Drive between Ridgeline Drive and Michelson Drive. The additional capacity of the third eastbound lane would result in satisfactory LOS A (0.60) along this segment of University Drive in the eastbound direction during the p.m. peak hour. Therefore, with these improvements, no significant project impacts are created on roadway segments with implementation of the Campus Master Build-Out Plan in the 2035 approved condition.

2035 Pending No Project and Plus Project Traffic Volumes and LOS

Table J presents a summary of the intersection LOS for 2035 pending (no project and plus project) conditions. As this table indicates, all study area intersections are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Campus Drive/University Drive (LOS E in the p.m. peak hour)
- Culver Drive/Alton Parkway (LOS E in the p.m. peak hour)
- Jeffrey Road/Alton Parkway (LOS E in the a.m. and p.m. peak hours)
- Michelson Drive/University Drive (LOS F in the p.m. peak hour)
- Ridgeline Drive/University Drive (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- Yale Avenue/Michelson Drive (LOS E in the a.m. peak hour)
- Ridgeline Drive/Concordia East (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)

Table J: 2035 Pending Intersection LOS Summary

Study Area No.	ITAM Node No.	Intersection	No Project				Plus Project				Peak-Hour Δ ICU or Delay		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	AM	PM	
1	194	MacArthur Boulevard SB Ramps/University Drive	0.66	B	0.51	A	0.66	B	0.51	A	0.00	0.00	No
2	193	MacArthur Boulevard NB Ramps/University Drive	0.54	A	0.63	B	0.54	A	0.63	B	0.00	0.00	No
3	192	California Avenue/University Drive	0.88	D	0.84	D	0.89	D	0.84	D	0.01	0.00	No
4	190	Campus Drive/University Drive	0.82	D	0.92	E	0.83	D	0.92	E	0.01	0.00	No
5	189	Harvard Avenue/University Drive	0.70	B	0.81	D	0.70	B	0.81	D	0.00	0.00	No
6	216	California Avenue/Campus Drive	0.53	A	0.78	C	0.52	A	0.79	C	(0.01)	0.01	No
7	240	SR-73 NB Ramps/Bonita Canyon Drive	0.55	A	0.59	A	0.54	A	0.59	A	(0.01)	0.00	No
		HCM	*10.3*	*B*	*16.8*	*B*	*10.4*	*B*	*16.2*	*B*	*0.1*	*(0.6)*	No
8	239	Newport Coast Drive/Bonita Canyon Drive	0.53	A	0.57	A	0.53	A	0.57	A	0.00	0.00	No
9	229	Culver Drive/Alton Parkway	0.86	D	0.94	E	0.86	D	0.94	E	0.00	0.00	No
10	230	Culver Drive/Main Street	0.67	B	0.70	B	0.67	B	0.70	B	0.00	0.00	No
11	232	Culver Drive/I-405 NB Ramps	0.60	A	0.76	C	0.59	A	0.76	C	(0.01)	0.00	No
		HCM	*15.8*	*B*	*22.1*	*C*	*15.7*	*B*	*22.3*	*C*	*(0.1)*	*0.2*	No
12	233	Culver Drive/I-405 SB Ramps	0.64	B	0.74	C	0.65	B	0.74	C	0.01	0.00	No
		HCM	*16.0*	*B*	*25.1*	*C*	*16.2*	*B*	*24.9*	*C*	*0.2*	*(0.2)*	No
13	234	Culver Drive/Michelson Drive	0.69	B	0.88	D	0.69	B	0.87	D	0.00	(0.01)	No
14	235	Culver Drive/University Drive	0.82	D	0.90	D	0.81	D	0.90	D	(0.01)	0.00	No
15	236	Culver Drive/Harvard Avenue	0.76	C	0.74	C	0.75	C	0.74	C	(0.01)	0.00	No
16	237	Culver Drive/Campus Drive	0.68	B	0.62	B	0.68	B	0.62	B	0.00	0.00	No
17	238	Culver Drive/Shady Canyon Drive	0.56	A	0.57	A	0.56	A	0.57	A	0.00	0.00	No
18	268	West Yale Loop/Alton Parkway	0.62	B	0.74	C	0.62	B	0.74	C	0.00	0.00	No
19	272	West Yale Loop/Main Street	0.69	B	0.39	A	0.69	B	0.39	A	0.00	0.00	No
20	271	East Yale Loop/Alton Parkway	0.73	C	0.68	B	0.73	C	0.68	B	0.00	0.00	No
21	291	Jeffrey Road/Alton Parkway	0.98	E	0.97	E	0.98	E	0.96	E	0.00	(0.01)	No
22	293	Jeffrey Road/I-405 NB Ramps	0.84	D	0.86	D	0.86	D	0.86	D	0.02	0.00	No
		HCM	*51.2*	*D*	*51.8*	*D*	*54.3*	*D*	*53.2*	*D*	*3.1*	*1.4*	No
23	294	University Drive/I-405 SB Ramps	0.74	C	0.72	C	0.75	C	0.72	C	0.01	0.00	No
		HCM	*13.4*	*B*	*15.1*	*B*	*14.2*	*B*	*15.0*	*B*	*0.8*	*(0.1)*	No
24	295	Michelson Drive/University Drive	0.86	D	1.07	F	0.87	D	1.08	F	0.01	0.01	No
25	276	Ridgeline Drive/University Drive	0.94	E	1.10	F	0.95	E	1.10	F	0.01	0.00	No
		with planned improvements[1]	0.79	C	0.76	C	0.79	C	0.76	C	0.00	0.00	No
26	275	Yale Avenue/University Drive	0.79	C	0.76	C	0.79	C	0.76	C	0.00	0.00	No
27	273	Yale Avenue/Michelson Drive *HCM*	*36.7*	*E*	*23.9*	*C*	*36.7*	*E*	*24.4*	*C*	*0.0*	*0.5*	No
28	492	Ridgeline Drive/Concordia East[2]	*43.5*	*E*	*>50.0*	*F*	0.33	A	0.33	A	-	-	No
29	278	Ridgeline Drive/Turtle Rock Drive *HCM*	*25.3*	*D*	*15.6*	*C*	*25.1*	*D*	*15.6*	*C*	*(0.2)*	*0.0*	No
30	279	Sunnyhill/Turtle Rock Drive *HCM*	*12.4*	*B*	*10.3*	*B*	*12.4*	*B*	*10.3*	*B*	*0.0*	*0.0*	No
31	494	Sunnyhill/Shady Canyon Drive *HCM*	*7.3*	*A*	*7.2*	*A*	*7.3*	*A*	*7.2*	*A*	*0.0*	*0.0*	No
32	277	Turtle Rock Drive/Campus Drive	0.70	B	0.43	A	0.72	C	0.45	A	0.02	0.02	No
33	493	Turtle Rock Drive/Concordia West *HCM*	*16.1*	*C*	*13.7*	*B*	*17.1*	*C*	*14.4*	*B*	*1.0*	*0.7*	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
= exceeds City's level of service (LOS) criteria
= significant impact
Delay is reported in seconds.
[1] Addition of a 2nd NBR lane and a 3rd EBT lane
[2] Ridgeline Drive/Concordia East will be signalized with the project, with the addition of a shared eastbound left-right lane.

EBT = eastbound through
HCM = Highway Capacity Manual
I-405 = Interstate 405
ICU = Intersection Capacity Utilization
ITAM = Irvine Transportation Analysis Model

NB = northbound
NBR = northbound right
SB = southbound
SR-73 = State Route 73

With the addition of the project, the same study area intersections, with the exception of Ridgeline Drive/Concordia East, are forecast to continue operating at unsatisfactory LOS E or F. The deficient peak-hour ICUs at Campus Drive/University Drive, Culver Drive/Alton Parkway, Jeffrey Road/Alton Parkway, Michelson Drive/University Drive, and Ridgeline Drive/University Drive would not increase by 0.02 or greater.

The a.m. and p.m. peak-hour delays at the unsignalized intersections of Yale Avenue/Michelson Drive and Ridgeline Drive/Concordia East are already deficient in the no project condition. The need for traffic signals at these intersections is evaluated in the TDP-12 (Signal Warrants) analysis provided later in this report. Based on the results of this analysis, a traffic signal is not warranted for Yale Avenue/Michelson Drive. Based on the signal warrants, Concordia University will improve the intersection of Ridgeline Drive/Concordia East by adding a traffic signal and a shared left-right eastbound lane as part of the project. Ridgeline Drive/Concordia East would no longer be deficient as a signalized intersection. Therefore, with these improvements, the Campus Master Build-Out Plan can be implemented in a 2035 pending condition with no significant peak-hour intersection impacts.

The ADT volumes and v/c ratios for 2035 pending (no project and plus project) conditions are presented in Table K. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Culver Drive between Alton Parkway and Main Street (LOS E)
- Culver Drive between Main Street and the I-405 northbound ramps (LOS F)
- Culver Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- Culver Drive between University Drive and Harvard Avenue (LOS E)
- Jeffrey Road between Alton Parkway and the I-405 northbound ramps (LOS F)
- University Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- University Drive between Michelson Drive and Ridgeline Drive (LOS F)
- University Drive between Ridgeline Drive and Yale Avenue (LOS F)
- University Drive between Yale Avenue and Culver Drive (LOS F)
- Alton Parkway between East Yale Loop and Jeffrey Road (LOS F)

With the addition of the project, the same study area roadway segments are forecast to continue operating at unsatisfactory LOS E or F. Because the deficient v/c ratio would increase by 0.02 at University Drive between Michelson Drive and Ridgeline Drive (1.64 to 1.66) with implementation of the project, a peak-hour link analysis was conducted for this roadway segment. University Drive between Michelson Drive and Ridgeline Drive would operate at satisfactory LOS D (0.90) in the eastbound direction during the p.m. peak hour. With the addition of the project, this roadway segment would operate at unsatisfactory LOS E (0.91) in the eastbound direction during the p.m. peak hour, resulting in a significant impact.

The project will be required to pay a fair-share contribution toward the third eastbound through lane along University Drive between Ridgeline Drive and Michelson Drive to offset the project impact in 2035 pending conditions.

Table K: 2035 Pending ADT Volumes and V/C Ratios

ITAM Post No.	Roadway	Segment	Capacity	No Project			Plus Project			Δ V/C	Significant Impact?
				ADT	V/C	LOS	ADT	V/C	LOS		
220	Culver Drive	Alton to Main	54,000	49,200	0.91	E	49,200	0.91	E	0.00	No
222	Culver Drive	Main to I-405 NB ramps	54,000	56,200	1.04	F	56,200	1.04	F	0.00	No
224	Culver Drive	I-405 SB ramps to Michelson	54,000	59,500	1.10	F	59,700	1.11	F	0.01	No
225	Culver Drive	Michelson to University	54,000	43,900	0.81	D	43,900	0.81	D	0.00	No
227	Culver Drive	University to Harvard	54,000	54,100	1.00	E	54,100	1.00	E	0.00	No
228	Culver Drive	Harvard to Campus	54,000	41,300	0.76	C	41,200	0.76	C	0.00	No
229	Culver Drive	Campus to Shady Canyon	32,000	26,200	0.82	D	26,200	0.82	D	0.00	No
94	Bonita Canyon Road	Shady Canyon to Newport Coast	32,000	18,900	0.59	A	18,900	0.59	A	0.00	No
233	Bonita Canyon Road	Newport Coast to SR-73 NB ramps	32,000	23,700	0.74	C	23,700	0.74	C	0.00	No
299	Jeffrey Road	Alton to I-405 NB ramps	54,000	54,400	1.01	F	54,400	1.01	F	0.00	No
347	University Drive	I-405 SB ramps to Michelson	54,000	61,700	1.14	F	62,300	1.15	F	0.01	No
886	University Drive	Michelson to Ridgeline	32,000	52,400	1.64	F	53,100	1.66	F	0.02	-
		AM Peak Hour									
		eastbound	*3,200*	*2,183*	*0.68*	*B*	*2,200*	*0.69*	*B*	*0.01*	*No*
		eastbound [1]	*4,800*	*2,183*	*0.45*	*A*	*2,200*	*0.46*	*A*	*0.01*	*No*
		westbound	*3,200*	*2,657*	*0.83*	*D*	*2,711*	*0.85*	*D*	*0.02*	*No*
		PM Peak Hour									
		eastbound	*3,200*	*2,878*	*0.90*	*D*	*2,903*	*0.91*	*E*	*0.01*	*Yes*
		eastbound [1]	*4,800*	*2,878*	*0.60*	*A*	*2,903*	*0.60*	*A*	*0.00*	*No*
		westbound	*3,200*	*2,331*	*0.73*	*C*	*2,350*	*0.73*	*C*	*0.00*	*No*
885	University Drive	Ridgeline to Yale	32,000	39,900	1.25	F	39,800	1.24	F	(0.01)	No
883	University Drive	Yale to Culver	32,000	41,300	1.29	F	41,300	1.29	F	0.00	No
881	University Drive	Culver to Harvard	54,000	26,100	0.48	A	26,100	0.48	A	0.00	No
186	University Drive	Harvard to Campus	54,000	23,100	0.43	A	23,100	0.43	A	0.00	No
187	University Drive	Campus to California	54,000	29,700	0.55	A	29,800	0.55	A	0.00	No
189	University Drive	California to MacArthur NB ramps	54,000	36,200	0.67	B	36,200	0.67	B	0.00	No
279	Ridgeline Drive	University to Concordia East	28,000	12,100	0.43	A	12,500	0.45	A	0.02	No
280	Ridgeline Drive	Concordia East to Turtle Rock	28,000	12,100	0.43	A	12,100	0.43	A	0.00	No
283	Sunnyhill	Ridgeline to Turtle Rock	13,000	3,800	0.29	A	3,800	0.29	A	0.00	No
893	Campus Drive	University to California	32,000	24,200	0.76	C	24,300	0.76	C	0.00	No
898	Campus Drive	California to Culver	32,000	20,000	0.63	B	20,200	0.63	B	0.00	No
899	Campus Drive	Culver to Turtle Rock	32,000	18,700	0.58	A	19,000	0.59	A	0.01	No
281	Turtle Rock Drive	Concordia West to Campus	13,000	7,600	0.58	A	7,800	0.60	A	0.02	No
282	Turtle Rock Drive	Campus to Sunnyhill	13,000	4,100	0.32	A	4,100	0.32	A	0.00	No
901	Turtle Rock Drive	Concordia West to Ridgeline	13,000	7,600	0.58	A	7,700	0.59	A	0.01	No
902	Turtle Rock Drive	Ridgeline to Sunnyhill	13,000	7,200	0.55	A	7,200	0.55	A	0.00	No
784	Alton Parkway	Culver to West Yale Loop	32,000	28,600	0.89	D	28,600	0.89	D	0.00	No
789	Alton Parkway	West Yale Loop to East Yale Loop	32,000	26,200	0.82	D	26,200	0.82	D	0.00	No
792	Alton Parkway	East Yale Loop to Jeffrey	32,000	32,400	1.01	F	32,400	1.01	F	0.00	No
265	West Yale Loop	south of Alton	28,000	7,100	0.25	A	7,100	0.25	A	0.00	No
275	East Yale Loop	south of Alton	28,000	4,500	0.16	A	4,500	0.16	A	0.00	No
828	Main Street	Culver to West Yale Loop	32,000	14,500	0.45	A	14,500	0.45	A	0.00	No
851	Michelson Drive	Culver to Yale	13,000	8,400	0.65	B	8,400	0.65	B	0.00	No
853	Michelson Drive	Yale to University	13,000	7,100	0.55	A	7,100	0.55	A	0.00	No
278	Yale Avenue	Michelson to University	13,000	1,300	0.10	A	1,300	0.10	A	0.00	No
2582	Shady Canyon Drive	Culver to Sunnyhill	13,000	7,700	0.59	A	7,700	0.59	A	0.00	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
ADT = average daily trips
NB = northbound
SR-73 = State Route 73
= exceeds City's level of service (LOS) criteria
I-405 = Interstate 405
SB = southbound
V/C = volume-to-capacity ratio
= significant impact
ITAM = Irvine Transportation Analysis Model

Italics = Peak-Hour Link Analysis

[1] With third eastbound lane on University Drive between Ridgeline Drive and Michelson Drive

Prior to the issuance of a building permit for additional institutional square footage in Phases 3 and 4, the project applicant will be responsible for a fair-share contribution toward implementation of this improvement.

The project's fair-share percentage is calculated by dividing the difference of the 2035 pending plus project volume and the 2035 pending no project volume by the 2035 pending no project volume and multiplying by 100. The a.m. and p.m. peak-hour fair-share calculations (provided in Appendix F) are as follows:

- **AM Peak Hour:** (2,200 - 2,183) / 2,183 x 100 = 0.78 percent
- **PM Peak Hour:** (2,903 - 2,878) / 2,878 x 100 = 0.87 percent

As a result, the project's fair-share contribution would be 0.87 percent toward the third eastbound through lane along University Drive between Ridgeline Drive and Michelson Drive. The additional capacity of the third eastbound lane would result in satisfactory LOS A (0.60) along this segment of University Drive in the eastbound direction during the p.m. peak hour. Therefore, with these improvements, no significant project impacts are created on roadway segments with implementation of the Campus Master Build-Out Plan in the 2035 pending condition.

Post-2035 Approved No Project and Plus Project Traffic Volumes and LOS

Table L presents a summary of the intersection LOS for post-2035 approved (no project and plus project) conditions. As this table indicates, all study area intersections are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Campus Drive/University Drive (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- Culver Drive/Alton Parkway (LOS E in the p.m. peak hour)
- Jeffrey Road/Alton Parkway (LOS F in the a.m. peak hour and LOS E in the p.m. peak hour)
- Michelson Drive/University Drive (LOS F in the p.m. peak hour)
- Ridgeline Drive/University Drive (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- Yale Avenue/University Drive (LOS E in the a.m. peak hour)
- Yale Avenue/Michelson Drive (LOS E in the a.m. peak hour)
- Ridgeline Drive/Concordia East (LOS F in the a.m. and p.m. peak hours)

With the addition of the project, the same study area intersections, with the exception of Ridgeline Drive/Concordia East, are forecast to continue operating at unsatisfactory LOS E or F. The deficient peak-hour ICUs at Campus Drive/University Drive, Culver Drive/Alton Parkway, Jeffrey Road/Alton Parkway, Michelson Drive/University Drive, and Yale Avenue/University Drive would not increase by 0.02 or greater.

Table L: Post-2035 Approved Intersection LOS Summary

Study Area No.	ITAM Node No.	Intersection	No Project				Plus Project				Peak-Hour Δ ICU or Delay		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	AM	PM	
1	194	MacArthur Boulevard SB Ramps/University Drive	0.70	B	0.58	A	0.70	B	0.58	A	0.00	0.00	No
2	193	MacArthur Boulevard NB Ramps/University Drive	0.63	B	0.72	C	0.63	B	0.72	C	0.00	0.00	No
3	192	California Avenue/University Drive	0.90	D	0.87	D	0.90	D	0.87	D	0.00	0.00	No
4	190	Campus Drive/University Drive	1.00	E	1.19	F	1.00	E	1.18	F	0.00	(0.01)	No
5	189	Harvard Avenue/University Drive	0.75	C	0.82	D	0.76	C	0.83	D	0.01	0.01	No
6	216	California Avenue/Campus Drive	0.61	B	0.86	D	0.62	B	0.86	D	0.01	0.00	No
7	240	SR-73 NB Ramps/Bonita Canyon Drive	0.57	A	0.59	A	0.56	A	0.59	A	(0.01)	0.00	No
		HCM	*10.7*	*B*	*13.9*	*B*	*10.5*	*B*	*13.9*	*B*	*(0.2)*	*0.0*	No
8	239	Newport Coast Drive/Bonita Canyon Drive	0.52	A	0.57	A	0.52	A	0.57	A	0.00	0.00	No
9	229	Culver Drive/Alton Parkway	0.80	C	0.94	E	0.80	C	0.94	E	0.00	0.00	No
10	230	Culver Drive/Main Street	0.67	B	0.71	C	0.67	B	0.71	C	0.00	0.00	No
11	232	Culver Drive/I-405 NB Ramps	0.66	B	0.88	D	0.66	B	0.88	D	0.00	0.00	No
		HCM	*19.8*	*B*	*51.8*	*D*	*20.0*	*B*	*53.0*	*D*	*0.2*	*1.2*	No
12	233	Culver Drive/I-405 SB Ramps	0.64	B	0.75	C	0.64	B	0.75	C	0.00	0.00	No
		HCM	*14.8*	*B*	*28.3*	*C*	*14.8*	*B*	*28.6*	*C*	*0.0*	*0.3*	No
13	234	Culver Drive/Michelson Drive	0.64	B	0.80	C	0.64	B	0.81	D	0.00	0.01	No
14	235	Culver Drive/University Drive	0.82	D	0.89	D	0.82	D	0.89	D	0.00	0.00	No
15	236	Culver Drive/Harvard Avenue	0.73	C	0.73	C	0.73	C	0.73	C	0.00	0.00	No
16	237	Culver Drive/Campus Drive	0.65	B	0.62	B	0.65	B	0.64	B	0.00	0.02	No
17	238	Culver Drive/Shady Canyon Drive	0.54	A	0.60	A	0.54	A	0.61	B	0.00	0.01	No
18	268	West Yale Loop/Alton Parkway	0.55	A	0.72	C	0.55	A	0.73	C	0.00	0.01	No
19	272	West Yale Loop/Main Street	0.67	B	0.39	A	0.67	B	0.39	A	0.00	0.00	No
20	271	East Yale Loop/Alton Parkway	0.75	C	0.69	B	0.75	C	0.69	B	0.00	0.00	No
21	291	Jeffrey Road/Alton Parkway	1.01	F	0.93	E	1.01	F	0.93	E	0.00	0.00	No
22	293	Jeffrey Road/I-405 NB Ramps	0.84	D	0.81	D	0.85	D	0.81	D	0.01	0.00	No
		HCM	*54.9*	*D*	*38.4*	*D*	*54.1*	*D*	*38.4*	*D*	*(0.8)*	*0.0*	No
23	294	University Drive/I-405 SB Ramps	0.75	C	0.70	B	0.76	C	0.70	B	0.01	0.00	No
		HCM	*15.0*	*B*	*15.4*	*B*	*15.4*	*B*	*15.7*	*B*	*0.4*	*0.3*	No
24	295	Michelson Drive/University Drive	0.80	C	1.03	F	0.80	C	1.04	F	0.00	0.01	No
25	276	Ridgeline Drive/University Drive	0.92	E	1.08	F	0.92	E	1.10	F	0.00	0.02	Yes
		with planned improvements[1]	0.84	D	0.74	C	0.84	D	0.73	C	0.00	(0.01)	No
		with planned improvements[2]	-	-	-	-	0.84	D	0.95	E	-	-	No
26	275	Yale Avenue/University Drive	0.99	E	0.75	C	0.99	E	0.74	C	0.00	(0.01)	No
27	273	Yale Avenue/Michelson Drive *HCM*	*43.0*	*E*	*31.1*	*D*	*44.0*	*E*	*31.1*	*D*	*1.0*	*0.0*	No
		with signalization	0.60	A	0.52	A	0.60	A	0.52	A	0.00	0.00	No
28	492	Ridgeline Drive/Concordia East[3]	*>50.0*	*F*	*>50.0*	*F*	0.34	A	0.34	A	-	-	No
29	278	Ridgeline Drive/Turtle Rock Drive *HCM*	*24.3*	*C*	*16.3*	*C*	*24.3*	*C*	*16.0*	*C*	*0.0*	*(0.3)*	No
30	279	Sunnyhill/Turtle Rock Drive *HCM*	*12.3*	*B*	*10.4*	*B*	*12.3*	*B*	*10.4*	*B*	*0.0*	*0.0*	No
31	494	Sunnyhill/Shady Canyon Drive *HCM*	*7.1*	*A*	*7.5*	*A*	*7.1*	*A*	*7.5*	*A*	*0.0*	*0.0*	No
32	277	Turtle Rock Drive/Campus Drive	0.65	B	0.37	A	0.65	B	0.38	A	0.00	0.01	No
33	493	Turtle Rock Drive/Concordia West *HCM*	*15.1*	*C*	*12.6*	*B*	*14.7*	*B*	*13.0*	*B*	*(0.4)*	*0.4*	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change

= exceeds City's level of service (LOS) criteria

= significant impact

Delay is reported in seconds.

EBT = eastbound through

HCM = Highway Capacity Manual

I-405 = Interstate 405

ICU = Intersection Capacity Utilization

ITAM = Irvine Transportation Analysis Model

NB = northbound

NBR = northbound right

SB = southbound

SR-73 = State Route 73

[1] Addition of a 2nd NBR lane and a 3rd EBT lane

[2] Addition of a 2nd NBR lane

[3] Ridgeline Drive/Concordia East will be signalized with the project, with the addition of a shared eastbound left-right lane.

The deficient p.m. peak-hour ICU at Ridgeline Drive/University Drive would increase by 0.02 (1.08 to 1.10). As such, the project would be responsible for the addition of a second northbound right-turn lane as mitigation to offset this project impact.

As an alternative mitigation measure, the project will be required to pay its fair-share contribution toward the identified improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project conducted by the City. The alternative mitigation shall be selected as the preferred mitigation should the City Council approve the improvement project prior to completion of the Campus Master Build-Out Plan. The mitigated LOS worksheets are provided in Appendix F.

The project's fair-share percentage is calculated by dividing the difference of the post-2035 approved plus project volume and the post-2035 approved no project volume by the post-2035 approved no project volume and multiplying by 100. The post-2035 approved no project and plus project volumes are provided in Appendix B. The a.m. and p.m. peak-hour fair-share calculations (provided in Appendix F) are as follows:

- **AM Peak Hour:** (5,280 - 5,191) / 5,191 x 100 = 1.71 percent
- **PM Peak Hour:** (5,540 - 5,500) / 5,500 x 100 = 0.73 percent

As a result, the project is responsible for a fair-share contribution of 1.71 percent toward the improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project in post-2035 (approved). The project will be conditioned to participate in the fair-share contribution as part of the project approval.

The peak-hour delays at the unsignalized intersections of Yale Avenue/Michelson Drive and Ridgeline Drive/Concordia East are already deficient in the no project condition. The need for traffic signals at these intersections is evaluated in the TDP-12 (Signal Warrants) analysis provided later in this report. Based on the results of this analysis, a traffic signal is not warranted for Yale Avenue/ Michelson Drive. Based on the signal warrants, Concordia University will improve the intersection of Ridgeline Drive/Concordia East by adding a traffic signal and a shared left-right eastbound lane as part of the project. Ridgeline Drive/Concordia East would no longer be deficient as a signalized intersection. Therefore, with these improvements, the Campus Master Build-Out Plan can be implemented in a post-2035 approved condition with no significant peak-hour intersection impacts.

The ADT volumes and v/c ratios for post-2035 approved (no project and plus project) conditions are presented in Table M. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Culver Drive between Alton Parkway and Main Street (LOS E)
- Culver Drive between Main Street and the I-405 northbound ramps (LOS F)
- Culver Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- Culver Drive between University Drive and Harvard Avenue (LOS E)
- Jeffrey Road between Alton Parkway and the I-405 northbound ramps (LOS E)
- University Drive between the I-405 southbound ramps and Michelson Drive (LOS F)

Table M: Post-2035 Approved ADT Volumes and V/C Ratios

ITAM Post No.	Roadway	Segment	Capacity	No Project			Plus Project			Δ V/C	Significant Impact?
				ADT	V/C	LOS	ADT	V/C	LOS		
220	Culver Drive	Alton to Main	54,000	50,100	0.93	E	50,100	0.93	E	0.00	No
222	Culver Drive	Main to I-405 NB ramps	54,000	56,600	1.05	F	56,600	1.05	F	0.00	No
224	Culver Drive	I-405 SB ramps to Michelson	54,000	59,800	1.11	F	59,900	1.11	F	0.00	No
225	Culver Drive	Michelson to University	54,000	43,500	0.81	D	43,600	0.81	D	0.00	No
227	Culver Drive	University to Harvard	54,000	52,000	0.96	E	52,000	0.96	E	0.00	No
228	Culver Drive	Harvard to Campus	54,000	38,200	0.71	C	38,200	0.71	C	0.00	No
229	Culver Drive	Campus to Shady Canyon	32,000	24,900	0.78	C	25,000	0.78	C	0.00	No
94	Bonita Canyon Road	Shady Canyon to Newport Coast	32,000	18,900	0.59	A	18,900	0.59	A	0.00	No
233	Bonita Canyon Road	Newport Coast to SR-73 NB ramps	32,000	23,500	0.73	C	23,500	0.73	C	0.00	No
299	Jeffrey Road	Alton to I-405 NB ramps	54,000	52,500	0.97	E	52,500	0.97	E	0.00	No
347	University Drive	I-405 SB ramps to Michelson	54,000	59,300	1.10	F	59,900	1.11	F	0.01	No
886	University Drive	Michelson to Ridgeline	32,000	51,200	1.60	F	51,800	1.62	F	0.02	-
		AM Peak Hour									
		eastbound	*3,200*	*2,024*	*0.63*	*B*	*2,044*	*0.64*	*B*	*0.01*	*No*
		eastbound [1]	*4,800*	*2,024*	*0.42*	*A*	*2,044*	*0.43*	*A*	*0.01*	*No*
		westbound	*3,200*	*2,788*	*0.87*	*D*	*2,835*	*0.89*	*D*	*0.02*	*No*
		PM Peak Hour									
		eastbound	*3,200*	*2,793*	*0.87*	*D*	*2,828*	*0.88*	*D*	*0.01*	*No*
		eastbound [1]	*4,800*	*2,793*	*0.58*	*A*	*2,828*	*0.59*	*A*	*0.01*	*No*
		westbound	*3,200*	*2,279*	*0.71*	*C*	*2,318*	*0.72*	*C*	*0.01*	*No*
885	University Drive	Ridgeline to Yale	32,000	38,900	1.22	F	38,700	1.21	F	(0.01)	No
883	University Drive	Yale to Culver	32,000	43,600	1.36	F	43,500	1.36	F	0.00	No
881	University Drive	Culver to Harvard	54,000	29,300	0.54	A	29,200	0.54	A	0.00	No
186	University Drive	Harvard to Campus	54,000	26,500	0.49	A	26,500	0.49	A	0.00	No
187	University Drive	Campus to California	54,000	34,300	0.64	B	34,300	0.64	B	0.00	No
189	University Drive	California to MacArthur NB ramps	54,000	40,200	0.74	C	40,200	0.74	C	0.00	No
279	Ridgeline Drive	University to Concordia East	28,000	12,100	0.43	A	13,000	0.46	A	0.03	No
280	Ridgeline Drive	Concordia East to Turtle Rock	28,000	12,100	0.43	A	12,100	0.43	A	0.00	No
283	Sunnyhill	Ridgeline to Turtle Rock	13,000	3,800	0.29	A	3,800	0.29	A	0.00	No
893	Campus Drive	University to California	32,000	32,400	1.01	F	32,500	1.02	F	0.01	No
898	Campus Drive	California to Culver	32,000	21,500	0.67	B	21,700	0.68	B	0.01	No
899	Campus Drive	Culver to Turtle Rock	32,000	18,100	0.57	A	18,400	0.58	A	0.01	No
281	Turtle Rock Drive	Concordia West to Campus	13,000	7,000	0.54	A	7,300	0.56	A	0.02	No
282	Turtle Rock Drive	Campus to Sunnyhill	13,000	4,000	0.31	A	4,000	0.31	A	0.00	No
901	Turtle Rock Drive	Concordia West to Ridgeline	13,000	7,100	0.55	A	7,100	0.55	A	0.00	No
902	Turtle Rock Drive	Ridgeline to Sunnyhill	13,000	7,000	0.54	A	7,000	0.54	A	0.00	No
784	Alton Parkway	Culver to West Yale Loop	32,000	26,600	0.83	D	26,600	0.83	D	0.00	No
789	Alton Parkway	West Yale Loop to East Yale Loop	32,000	24,100	0.75	C	24,100	0.75	C	0.00	No
792	Alton Parkway	East Yale Loop to Jeffrey	32,000	30,200	0.94	E	30,200	0.94	E	0.00	No
265	West Yale Loop	south of Alton	28,000	7,200	0.26	A	7,300	0.26	A	0.00	No
275	East Yale Loop	south of Alton	28,000	4,600	0.16	A	4,600	0.16	A	0.00	No
828	Main Street	Culver to West Yale Loop	32,000	13,900	0.43	A	13,900	0.43	A	0.00	No
851	Michelson Drive	Culver to Yale	13,000	7,300	0.56	A	7,300	0.56	A	0.00	No
853	Michelson Drive	Yale to University	13,000	6,600	0.51	A	6,800	0.52	A	0.01	No
278	Yale Avenue	Michelson to University	13,000	4,500	0.35	A	4,600	0.35	A	0.00	No
2582	Shady Canyon Drive	Culver to Sunnyhill	13,000	7,900	0.61	B	7,800	0.60	A	(0.01)	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change | ADT = average daily trips | NB = northbound | SR-73 = State Route 73

= exceeds City's level of service (LOS) criteria | I-405 = Interstate 405 | SB = southbound | V/C = volume-to-capacity ratio

Italics = Peak-Hour Link Analysis | ITAM = Irvine Transportation Analysis Model

[1] With Ridgeline Drive/University Drive eastbound auxiliary lane

[1] With third eastbound lane on University Drive between Ridgeline Drive and Michelson Drive

- University Drive between Michelson Drive and Ridgeline Drive (LOS F)
- University Drive between Ridgeline Drive and Yale Avenue (LOS F)
- University Drive between Yale Avenue and Culver Drive (LOS F)
- Campus Drive between University Drive and California Avenue (LOS F)
- Alton Parkway between East Yale Loop and Jeffrey Road (LOS E)

With the addition of the project, the same study area roadway segments are forecast to continue operating at unsatisfactory LOS E or F. The deficient v/c ratio would increase by 0.02 at University Drive between Michelson Drive and Ridgeline Drive (1.60 to 1.62). However, a peak-hour link analysis shows that this roadway segment would operate at satisfactory LOS (with v/c ratios below 0.90) in both directions during both peak hours. Therefore, no significant project impacts are created on roadway segments with implementation of the Campus Master Build-Out Plan in the post-2035 approved condition.

Post-2035 Pending No Project and Plus Project Traffic Volumes and LOS

Table N presents a summary of the intersection LOS for post-2035 pending (no project and plus project) conditions with the anticipated circulation network. As this table indicates, all study area intersections are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- California Avenue/University Drive (LOS E in the a.m. peak hour)
- Campus Drive/University Drive (LOS F in the a.m. and p.m. peak hours)
- Culver Drive/Alton Parkway (LOS E in the p.m. peak hour)
- Jeffrey Road/Alton Parkway (LOS F in the a.m. peak hour and LOS E in the p.m. peak hour)
- Michelson Drive/University Drive (LOS F in the p.m. peak hour)
- Ridgeline Drive/University Drive (LOS E in the a.m. peak hour and LOS F in the p.m. peak hour)
- Yale Avenue/University Drive (LOS E in the a.m. peak hour)
- Yale Avenue/Michelson Drive (LOS E in the a.m. peak hour)
- Ridgeline Drive/Concordia East (LOS F in the a.m. and p.m. peak hours)

With the addition of the project, the same study area intersections, with the exception of Ridgeline Drive/Concordia East, are forecast to continue operating at unsatisfactory LOS E or F. The deficient peak-hour ICUs at California Avenue/University Drive, Campus Drive/University Drive, Culver Drive/Alton Parkway, Jeffrey Road/Alton Parkway, Michelson Drive/University Drive, and Yale Avenue/University Drive would not increase by 0.02 or greater.

The deficient p.m. peak-hour ICU at Ridgeline Drive/University Drive would increase by 0.03 (1.07 to 1.10). As such, the project would be responsible for the addition of a second northbound right-turn lane as mitigation to offset this project impact.

Table N: Post-2035 Pending Intersection LOS Summary

Study Area No.	ITAM Node No.	Intersection	No Project				Plus Project				Peak-Hour Δ ICU or Delay		Significant Impact?
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour				
			ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	ICU / *Delay*	LOS	AM	PM	
1	194	MacArthur Boulevard SB Ramps/University Drive	0.72	C	0.59	A	0.72	C	0.59	A	0.00	0.00	No
2	193	MacArthur Boulevard NB Ramps/University Drive	0.63	B	0.73	C	0.63	B	0.73	C	0.00	0.00	No
3	192	California Avenue/University Drive	0.91	E	0.87	D	0.91	E	0.87	D	0.00	0.00	No
4	190	Campus Drive/University Drive	1.02	F	1.20	F	1.01	F	1.20	F	(0.01)	0.00	No
5	189	Harvard Avenue/University Drive	0.76	C	0.84	D	0.76	C	0.83	D	0.00	(0.01)	No
6	216	California Avenue/Campus Drive	0.61	B	0.87	D	0.62	B	0.86	D	0.01	(0.01)	No
7	240	SR-73 NB Ramps/Bonita Canyon Drive	0.57	A	0.59	A	0.56	A	0.60	A	(0.01)	0.01	No
		HCM	*11.0*	*B*	*14.8*	*B*	*10.5*	*B*	*15.3*	*B*	*(0.5)*	*0.5*	No
8	239	Newport Coast Drive/Bonita Canyon Drive	0.52	A	0.57	A	0.51	A	0.58	A	(0.01)	0.01	No
9	229	Culver Drive/Alton Parkway	0.81	D	0.94	E	0.81	D	0.94	E	0.00	0.00	No
10	230	Culver Drive/Main Street	0.67	B	0.71	C	0.67	B	0.71	C	0.00	0.00	No
11	232	Culver Drive/I-405 NB Ramps	0.65	B	0.88	D	0.65	B	0.88	D	0.00	0.00	No
		HCM	*19.8*	*B*	*51.8*	*D*	*27.9*	*C*	*51.5*	*D*	*8.1*	*(0.3)*	No
12	233	Culver Drive/I-405 SB Ramps	0.64	B	0.75	C	0.64	B	0.75	C	0.00	0.00	No
		HCM	*14.9*	*B*	*28.6*	*C*	*19.3*	*B*	*28.7*	*C*	*4.4*	*0.1*	No
13	234	Culver Drive/Michelson Drive	0.64	B	0.80	C	0.65	B	0.80	C	0.01	0.00	No
14	235	Culver Drive/University Drive	0.82	D	0.90	D	0.82	D	0.90	D	0.00	0.00	No
15	236	Culver Drive/Harvard Avenue	0.73	C	0.72	C	0.73	C	0.73	C	0.00	0.01	No
16	237	Culver Drive/Campus Drive	0.65	B	0.62	B	0.64	B	0.64	B	(0.01)	0.02	No
17	238	Culver Drive/Shady Canyon Drive	0.54	A	0.61	B	0.54	A	0.61	B	0.00	0.00	No
18	268	West Yale Loop/Alton Parkway	0.57	A	0.74	C	0.57	A	0.74	C	0.00	0.00	No
19	272	West Yale Loop/Main Street	0.68	B	0.38	A	0.67	B	0.38	A	(0.01)	0.00	No
20	271	East Yale Loop/Alton Parkway	0.74	C	0.69	B	0.74	C	0.68	B	0.00	(0.01)	No
21	291	Jeffrey Road/Alton Parkway	1.01	F	0.92	E	1.02	F	0.93	E	0.01	0.01	No
22	293	Jeffrey Road/I-405 NB Ramps	0.85	D	0.82	D	0.86	D	0.82	D	0.01	0.00	No
		HCM	*54.7*	*D*	*39.2*	*D*	*55.6*	*E*	*39.5*	*D*	*0.9*	*0.3*	No
23	294	University Drive/I-405 SB Ramps	0.76	C	0.71	C	0.77	C	0.70	B	0.01	(0.01)	No
		HCM	*15.3*	*B*	*15.5*	*B*	*16.1*	*B*	*15.3*	*B*	*0.8*	*(0.2)*	No
24	295	Michelson Drive/University Drive	0.80	C	1.03	F	0.81	D	1.04	F	0.01	0.01	No
25	276	Ridgeline Drive/University Drive	0.92	E	1.07	F	0.93	E	1.10	F	0.01	0.03	Yes
		with planned improvements[1]	0.85	D	0.74	C	0.85	D	0.75	C	0.00	0.01	No
		with planned improvements[2]	-	-	-	-	0.85	D	0.97	E	-	-	No
26	275	Yale Avenue/University Drive	1.00	E	0.75	C	1.00	E	0.75	C	0.00	0.00	No
27	273	Yale Avenue/Michelson Drive *HCM*	*43.9*	*E*	*31.8*	*D*	*45.2*	*E*	*32.2*	*D*	*1.3*	*0.4*	No
		with signalization	0.60	A	0.51	A	0.61	B	0.53	A	0.01	0.02	No
28	492	Ridgeline Drive/Concordia East[3]	*>50.0*	*F*	*>50.0*	*F*	0.34	A	0.34	A	-	-	No
29	278	Ridgeline Drive/Turtle Rock Drive *HCM*	*24.3*	*C*	*16.2*	*C*	*24.3*	*C*	*16.0*	*C*	*0.0*	*(0.2)*	No
30	279	Sunnyhill/Turtle Rock Drive *HCM*	*12.3*	*B*	*10.3*	*B*	*12.3*	*B*	*10.3*	*B*	*0.0*	*0.0*	No
31	494	Sunnyhill/Shady Canyon Drive *HCM*	*7.1*	*A*	*7.5*	*A*	*7.1*	*A*	*7.5*	*A*	*0.0*	*0.0*	No
32	277	Turtle Rock Drive/Campus Drive	0.66	B	0.37	A	0.67	B	0.40	A	0.01	0.03	No
33	493	Turtle Rock Drive/Concordia West *HCM*	*14.9*	*B*	*12.8*	*B*	*15.1*	*C*	*13.0*	*B*	*0.2*	*0.2*	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change

= exceeds City's level of service (LOS) criteria

= significant impact

Delay is reported in seconds.

EBT = eastbound through

HCM = Highway Capacity Manual

I-405 = Interstate 405

ICU = Intersection Capacity Utilization

ITAM = Irvine Transportation Analysis Model

NB = northbound

NBR = northbound right

SB = southbound

SR-73 = State Route 73

[1] Addition of a 2nd NBR lane and a 3rd EBT lane

[2] Addition of a 2nd NBR lane

[3] Ridgeline Drive/Concordia East will be signalized with the project, with the addition of a shared eastbound left-right lane.

As an alternative mitigation measure, the project will be required to pay its fair-share contribution toward the identified improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project conducted by the City. The alternative mitigation shall be selected as the preferred mitigation should the City Council approve the improvement project prior to completion of the Campus Master Build-Out Plan. The mitigated LOS worksheets are provided in Appendix F.

The project's fair-share percentage is calculated by dividing the difference of the post-2035 pending plus project volume and the post-2035 pending no project volume by the post-2035 pending no project volume and multiplying by 100. The post-2035 pending no project and plus project volumes are provided in Appendix B. The a.m. and p.m. peak-hour fair-share calculations (provided in Appendix F) are as follows:

- **AM Peak Hour:** (5,318 - 5,240) / 5,240 x 100 = 1.49 percent
- **PM Peak Hour:** (5,590 - 5,550) / 5,550 x 100 = 0.72 percent

As a result, the project is responsible for a fair-share contribution of 1.49 percent toward the improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project in post-2035 (pending). The project will be conditioned to participate in the fair-share contribution as part of the project approval.

The peak-hour delays at the unsignalized intersections of Yale Avenue/Michelson Drive and Ridgeline Drive/Concordia East are already deficient in the no project condition. The need for traffic signals at these intersections is evaluated in the TDP-12 (Signal Warrants) analysis provided later in this report. Based on the results of this analysis, a traffic signal is not warranted for Yale Avenue/ Michelson Drive. Based on the signal warrants, Concordia University will improve the intersection of Ridgeline Drive/Concordia East by adding a traffic signal and a shared left-right eastbound lane as part of the project. Ridgeline Drive/Concordia East would no longer be deficient as a signalized intersection. Therefore, with these improvements, the project can be implemented in a post-2035 pending condition with no significant peak-hour intersection impacts.

The ADT volumes and v/c ratios for post-2035 pending (no project and plus project alternatives) conditions are presented in Table O. As this table indicates, all study area roadway segments are forecast to operate at satisfactory LOS in the no project condition with the exception of the following:

- Culver Drive between Alton Parkway and Main Street (LOS E)
- Culver Drive between Main Street and the I-405 northbound ramps (LOS F)
- Culver Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- Culver Drive between University Drive and Harvard Avenue (LOS E)
- Jeffrey Road between Alton Parkway and the I-405 northbound ramps (LOS E)
- University Drive between the I-405 southbound ramps and Michelson Drive (LOS F)
- University Drive between Michelson Drive and Ridgeline Drive (LOS F)
- University Drive between Ridgeline Drive and Yale Avenue (LOS F)
- University Drive between Yale Avenue and Culver Drive (LOS F)

Table O: Post-2035 Pending ADT Volumes and V/C Ratios

ITAM Post No.	Roadway	Segment	Capacity	No Project			Plus Project			Δ V/C	Significant Impact?
				ADT	V/C	LOS	ADT	V/C	LOS		
220	Culver Drive	Alton to Main	54,000	50,300	0.93	E	50,400	0.93	E	0.00	No
222	Culver Drive	Main to I-405 NB ramps	54,000	56,700	1.05	F	56,700	1.05	F	0.00	No
224	Culver Drive	I-405 SB ramps to Michelson	54,000	59,800	1.11	F	59,900	1.11	F	0.00	No
225	Culver Drive	Michelson to University	54,000	43,400	0.80	C	43,500	0.81	D	0.01	No
227	Culver Drive	University to Harvard	54,000	52,000	0.96	E	52,000	0.96	E	0.00	No
228	Culver Drive	Harvard to Campus	54,000	38,300	0.71	C	38,200	0.71	C	0.00	No
229	Culver Drive	Campus to Shady Canyon	32,000	24,900	0.78	C	24,900	0.78	C	0.00	No
94	Bonita Canyon Road	Shady Canyon to Newport Coast	32,000	18,900	0.59	A	18,900	0.59	A	0.00	No
233	Bonita Canyon Road	Newport Coast to SR-73 NB ramps	32,000	23,700	0.74	C	23,700	0.74	C	0.00	No
299	Jeffrey Road	Alton to I-405 NB ramps	54,000	52,700	0.98	E	52,700	0.98	E	0.00	No
347	University Drive	I-405 SB ramps to Michelson	54,000	59,500	1.10	F	60,100	1.11	F	0.01	No
886	University Drive	Michelson to Ridgeline	32,000	51,400	1.61	F	52,000	1.63	F	0.02	-
		AM Peak Hour									
		eastbound	*3,200*	*2,043*	*0.64*	*B*	*2,061*	*0.64*	*B*	*0.00*	*No*
		eastbound [1]	*4,800*	*2,043*	*0.43*	*A*	*2,061*	*0.43*	*A*	*0.00*	*No*
		westbound	*3,200*	*2,818*	*0.88*	*D*	*2,858*	*0.89*	*D*	*0.01*	*No*
		PM Peak Hour									
		eastbound	*3,200*	*2,789*	*0.87*	*D*	*2,833*	*0.89*	*D*	*0.02*	*No*
		eastbound [1]	*4,800*	*2,789*	*0.58*	*A*	*2,833*	*0.59*	*A*	*0.01*	*No*
		westbound	*3,200*	*2,334*	*0.73*	*C*	*2,338*	*0.73*	*C*	*0.00*	*No*
885	University Drive	Ridgeline to Yale	32,000	39,300	1.23	F	39,200	1.23	F	0.00	No
883	University Drive	Yale to Culver	32,000	44,100	1.38	F	44,000	1.38	F	0.00	No
881	University Drive	Culver to Harvard	54,000	29,500	0.55	A	29,500	0.55	A	0.00	No
186	University Drive	Harvard to Campus	54,000	26,800	0.50	A	26,700	0.49	A	(0.01)	No
187	University Drive	Campus to California	54,000	34,600	0.64	B	34,500	0.64	B	0.00	No
189	University Drive	California to MacArthur NB ramps	54,000	40,600	0.75	C	40,700	0.75	C	0.00	No
279	Ridgeline Drive	University to Concordia East	28,000	12,100	0.43	A	12,700	0.45	A	0.02	No
280	Ridgeline Drive	Concordia East to Turtle Rock	28,000	12,100	0.43	A	12,100	0.43	A	0.00	No
283	Sunnyhill	Ridgeline to Turtle Rock	13,000	3,800	0.29	A	3,800	0.29	A	0.00	No
893	Campus Drive	University to California	32,000	32,600	1.02	F	32,700	1.02	F	0.00	No
898	Campus Drive	California to Culver	32,000	21,400	0.67	B	21,500	0.67	B	0.00	No
899	Campus Drive	Culver to Turtle Rock	32,000	18,300	0.57	A	18,600	0.58	A	0.01	No
281	Turtle Rock Drive	Concordia West to Campus	13,000	7,100	0.55	A	7,300	0.56	A	0.01	No
282	Turtle Rock Drive	Campus to Sunnyhill	13,000	4,000	0.31	A	4,000	0.31	A	0.00	No
901	Turtle Rock Drive	Concordia West to Ridgeline	13,000	7,100	0.55	A	7,100	0.55	A	0.00	No
902	Turtle Rock Drive	Ridgeline to Sunnyhill	13,000	7,000	0.54	A	7,000	0.54	A	0.00	No
784	Alton Parkway	Culver to West Yale Loop	32,000	27,000	0.84	D	27,000	0.84	D	0.00	No
789	Alton Parkway	West Yale Loop to East Yale Loop	32,000	24,600	0.77	C	24,600	0.77	C	0.00	No
792	Alton Parkway	East Yale Loop to Jeffrey	32,000	30,600	0.96	E	30,500	0.95	E	(0.01)	No
265	West Yale Loop	south of Alton	28,000	7,300	0.26	A	7,300	0.26	A	0.00	No
275	East Yale Loop	south of Alton	28,000	4,500	0.16	A	4,500	0.16	A	0.00	No
828	Main Street	Culver to West Yale Loop	32,000	13,900	0.43	A	13,900	0.43	A	0.00	No
851	Michelson Drive	Culver to Yale	13,000	7,400	0.57	A	7,400	0.57	A	0.00	No
853	Michelson Drive	Yale to University	13,000	6,700	0.52	A	6,900	0.53	A	0.01	No
278	Yale Avenue	Michelson to University	13,000	4,500	0.35	A	4,600	0.35	A	0.00	No
2582	Shady Canyon Drive	Culver to Sunnyhill	13,000	7,900	0.61	B	7,900	0.61	B	0.00	No

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

Δ = change
ADT = average daily trips
NB = northbound
SR-73 = State Route 73
= exceeds City's level of service (LOS) criteria
I-405 = Interstate 405
SB = southbound
V/C = volume-to-capacity ratio
Italics = Peak-Hour Link Analysis
ITAM = Irvine Transportation Analysis Model

[1] With Ridgeline Drive/University Drive eastbound auxiliary lane

[1] With third eastbound lane on University Drive between Ridgeline Drive and Michelson Drive

- Campus Drive between University Drive and California Avenue (LOS F)
- Alton Parkway between East Yale Loop and Jeffrey Road (LOS E)

With the addition of the project, the same study area roadway segments are forecast to continue operating at unsatisfactory LOS E or F. The deficient v/c ratio would increase by 0.02 at University Drive between Michelson Drive and Ridgeline Drive (1.61 to 1.63). However, a peak-hour link analysis shows that this roadway segment would operate at satisfactory LOS (with v/c ratios below 0.90) in both directions during both peak hours. Therefore, no significant project impacts are created on roadway segments with implementation of the Campus Master Build-Out Plan in the post-2035 pending condition.

SPECIAL ISSUES

Project Access and Internal Circulation

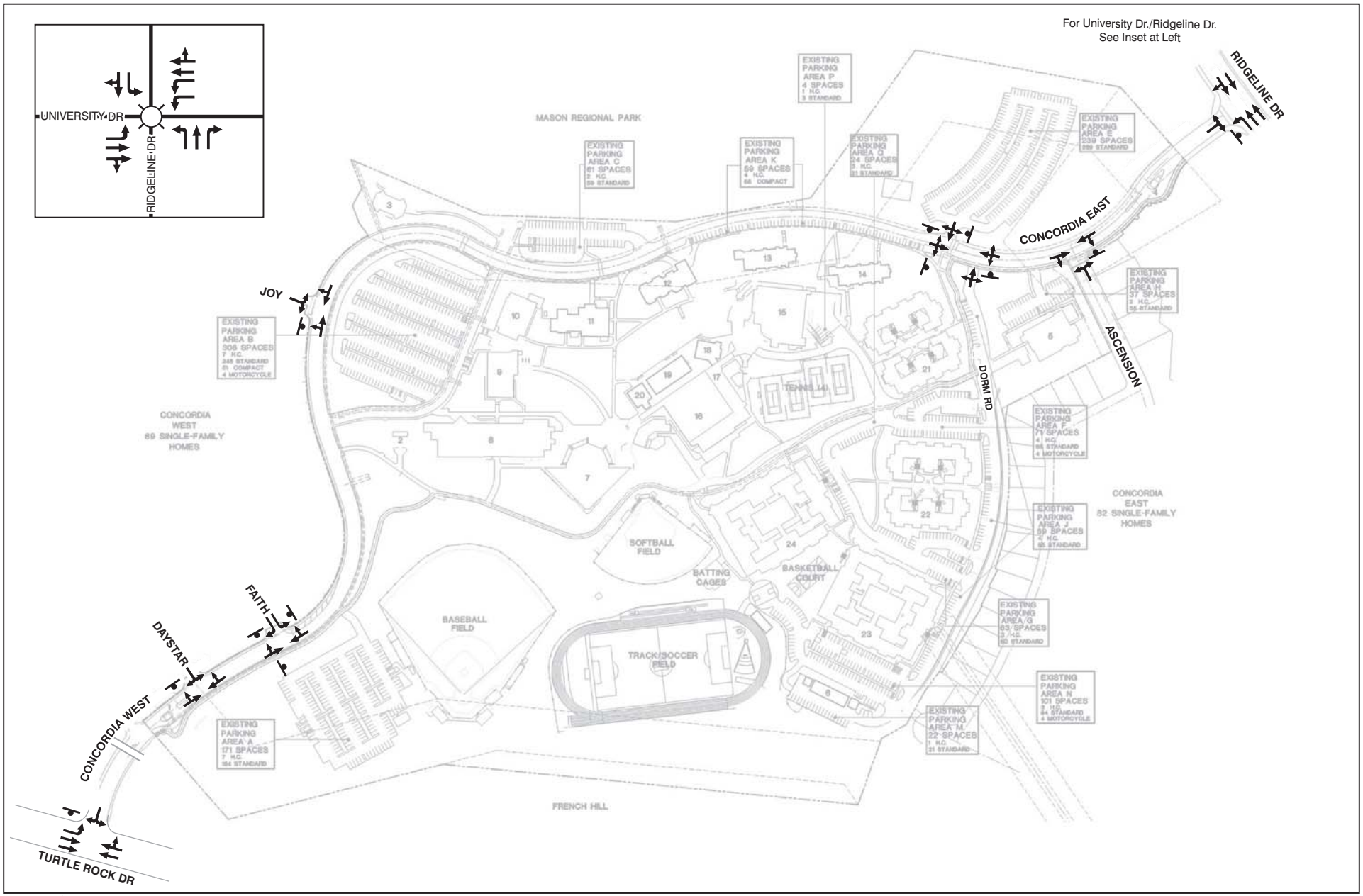
Access to CU is provided via two gated entries at the intersections of Ridgeline Drive/Concordia East and Turtle Rock Drive/Concordia West. A traffic signal is proposed at Ridgeline Drive/Concordia East as part of the project. In addition, this intersection will include a second outbound (eastbound) lane for residential and Concordia University traffic.

The evaluation of the project access based on the City's TDP criteria is provided in the existing plus project scenario. As previously discussed, existing counts were conducted in October 2014 and April 2015 (provided in Appendix D). The October 2014 volumes are higher with respect to traffic generated by campus activity, as more students were on campus in the fall. However, for certain turn movements not associated with the school along University Drive, Ridgeline Drive, and Turtle Rock Drive, the April 2015 volumes are higher. Therefore, LSA has presented an evaluation of the TDPs using both sets of existing traffic count data.

The existing geometries and traffic control for the internal on-campus intersections are shown on Figure 3. The existing (October 2014 and April 2015) volumes for Ridgeline Drive/Concordia East, Turtle Rock Drive/Concordia West, and the internal on-campus intersections are shown on Figures 4 and 5. The Campus Master Build-Out Plan project trip distribution and assignment is shown on Figure 6. The existing plus project peak-hour traffic volumes for October 2014 and April 2015 conditions are illustrated on Figures 7 and 8, respectively.

The trip generation represents the net increase of 77,649 institutional square footage per the proposed Campus Master Build-Out Plan (from Table A). The trip distribution is based on the existing traffic counts, as future students are anticipated to generally travel in the same direction as existing travel patterns to and from campus.

This analysis has been conducted consistent with the approved scope of work and the TDPs. Applicable design criteria for this project include TDP-1 (Turn-Lane Pocket Lengths), TDP-3 (Left-Turn In/Out Access), TDP-4 (Right-Turn Lanes at Uncontrolled Driveways), TDP-9 (Distance Between Signalized Intersections), TDP-10 (Distance Between Driveways and Intersections), TDP-12 (Traffic Signal Warrants), TDP-13 (Left-Turn Signal Phasing), TDP-14 (Driveway Lengths), and TDP-15 (Gate Stacking Analysis).



LSA

LEGEND

- Travel Lane
- Stop Sign
- Traffic Signal

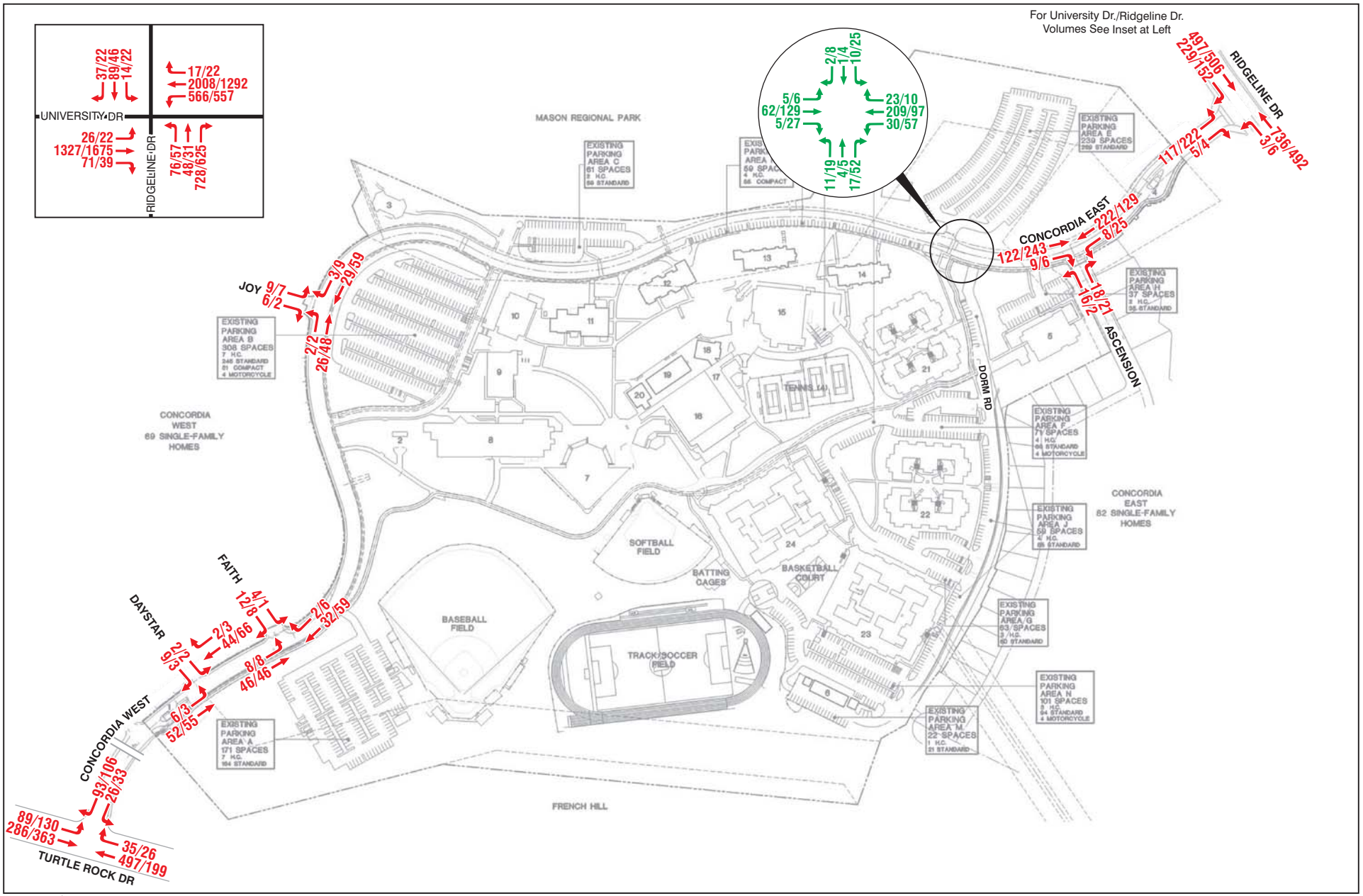
FIGURE 3

Concordia University

Existing Intersection Geometrics

PLAN SOURCE: LPA

I:\CUI1301\G\Existing Geometrics.cdr (1/29/2016)



LSA

N

LEGEND

XX/YY - AM/PM Peak Hour Volumes

XX/YY - Counts at Dorm Road/Concordia East were not taken in October 2014. The counts shown were developed based on upstream/downstream data and the April 2015 counts.

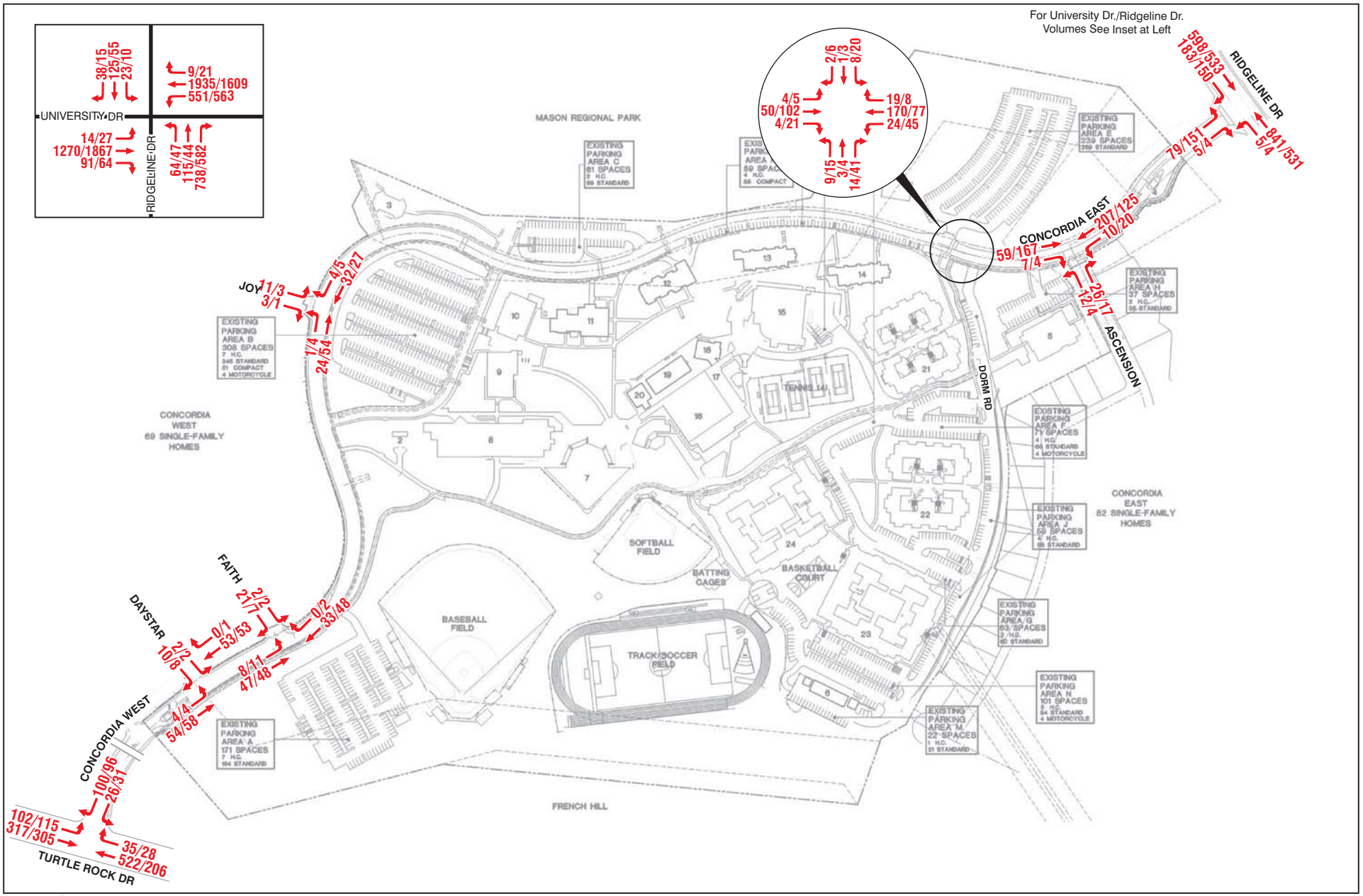
FIGURE 4

Concordia University

Existing (October 2014) Traffic Volumes

PLAN SOURCE: LPA

I:\CUI1301\G\Existing (Oct 2014) Volumes.cdr (1/29/2016)



LSA

LEGEND

XX/YY - AM/PM Peak Hour Volumes

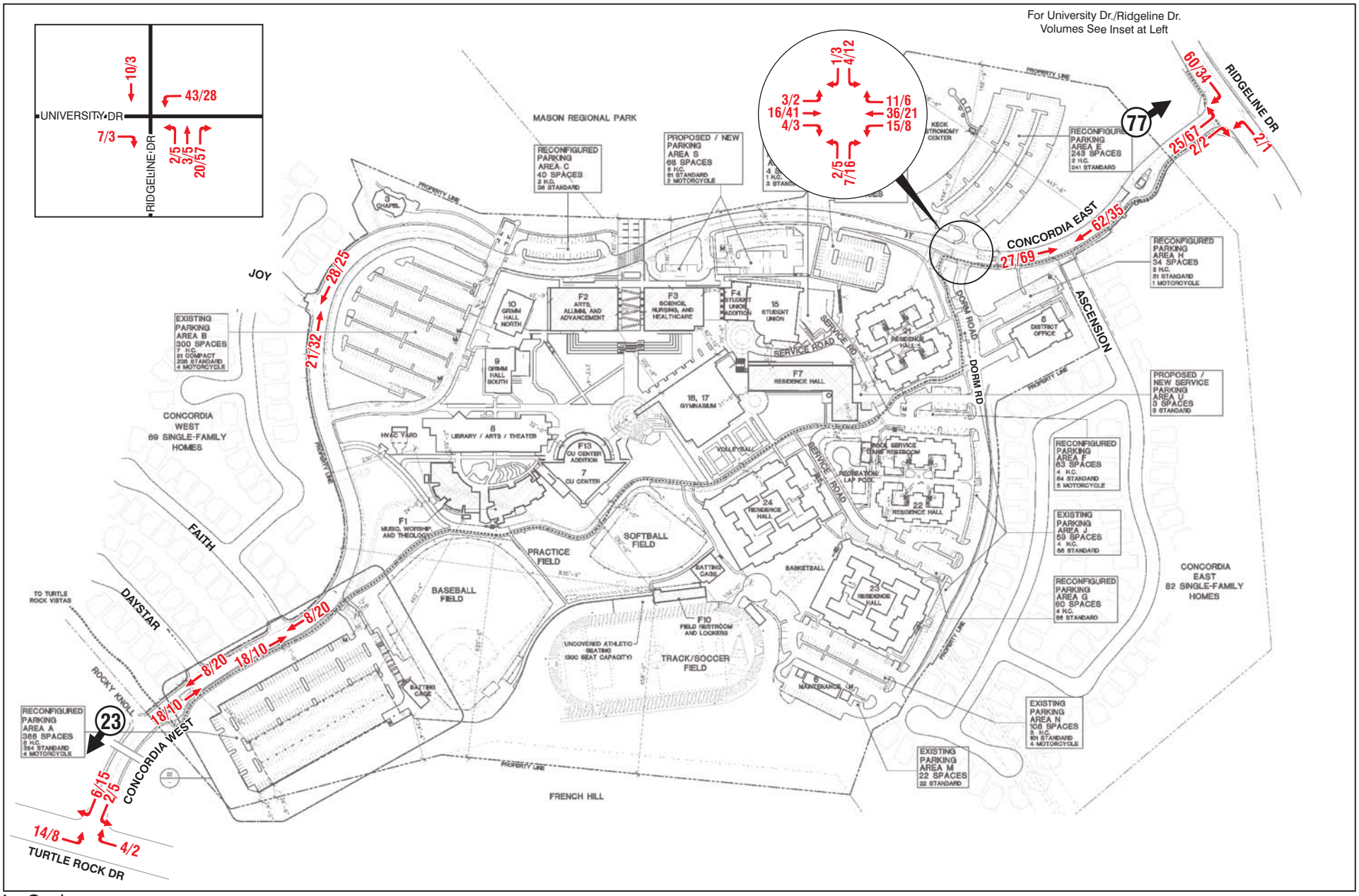
FIGURE 5

Concordia University

Existing (April 2015) Traffic Volumes

PLAN SOURCE: LPA

I:\CUI1301\G\Existing (April 2015) Volumes.cdr (1/29/2016)



LSA

LEGEND

XX/YY - AM/PM Peak Hour Volumes

(XX) - Regional Trip Distribution Percentage

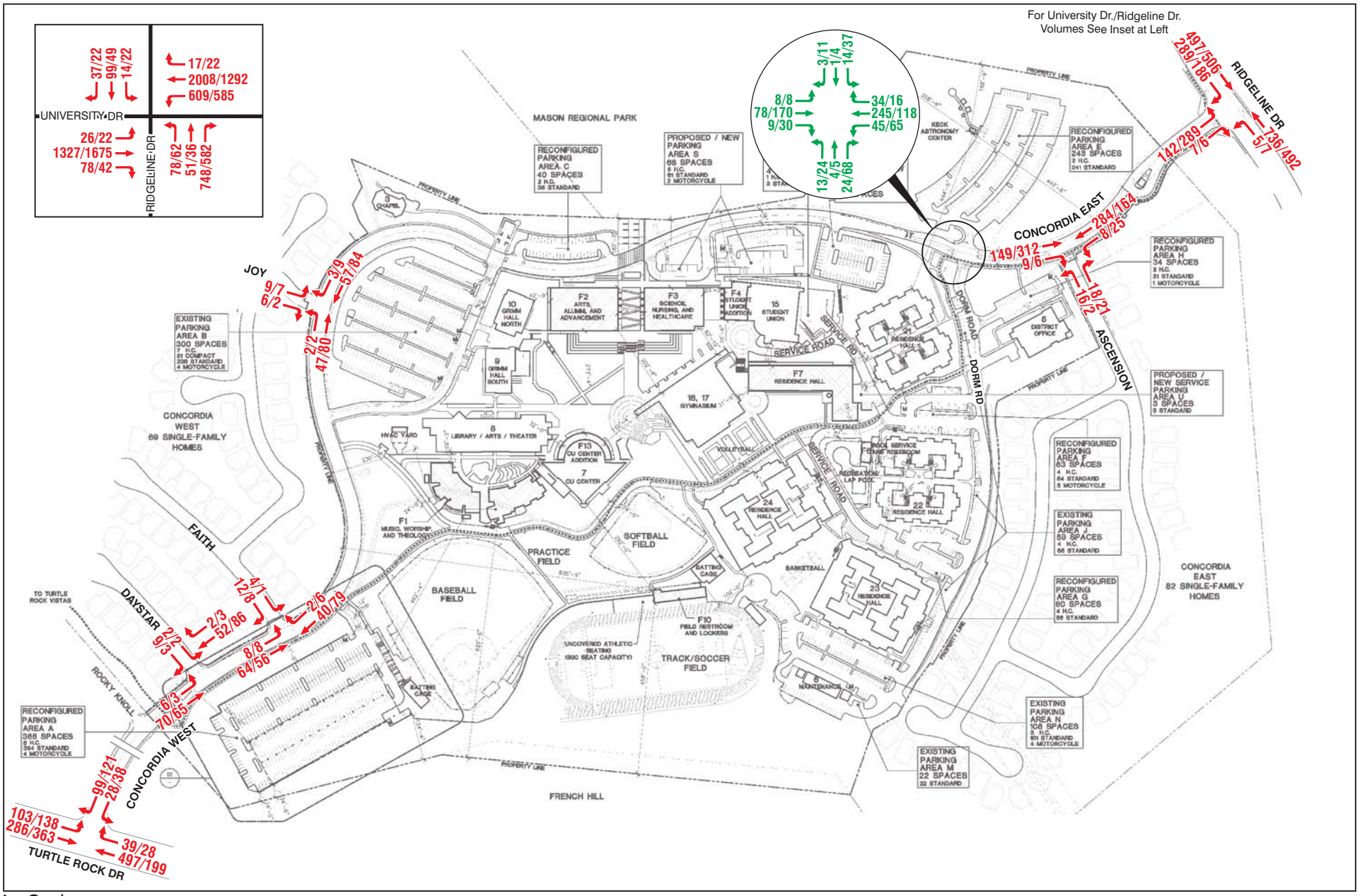
FIGURE 6

Concordia University

Project Trip Distribution and Assignment

PLAN SOURCE: LPA

I:\CUI1301\G\Trip Distribution.cdr (4/28/2016)



LSA

LEGEND

XX/YY - AM/PM Peak Hour Volumes

XX/YY - Counts at Dorm Road/Concordia East were not taken in October 2014. The counts shown were developed based on upstream/downstream data and the April 2015 counts.

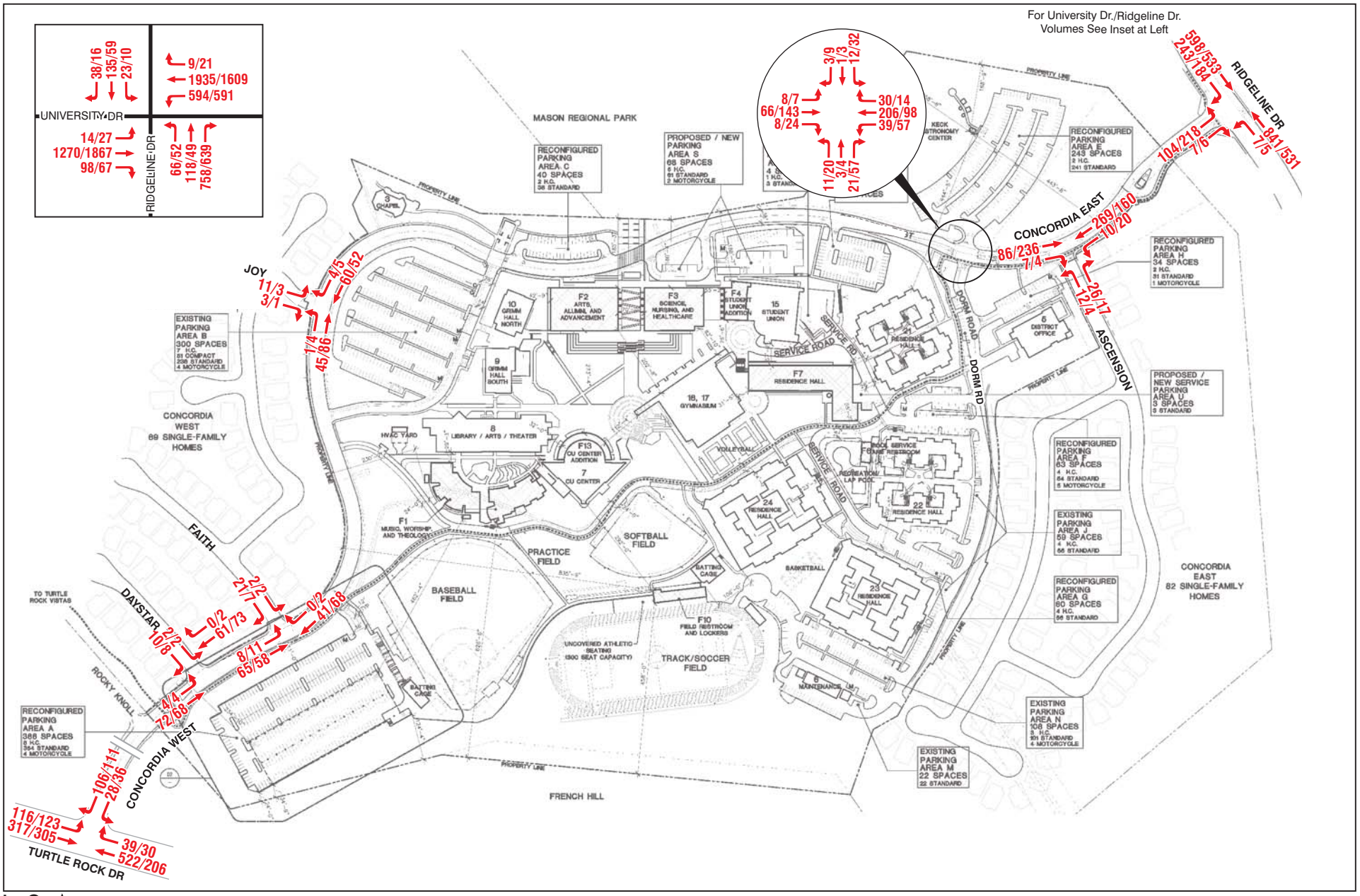
FIGURE 7

Concordia University

Existing (October 2014) Plus Project Traffic Volumes

PLAN SOURCE: LPA

I:\CUI1301\G\Existing (Oct 2014)+Project Volumes.cdr (4/28/2016)



LSA

LEGEND

XX/YY - AM/PM Peak Hour Volumes

FIGURE 8

Concordia University

Existing (April 2015) Plus Project Traffic Volumes

PLAN SOURCE: LPA

I:\CUI1301\G\Existing (April 2015)+Project Volumes.cdr (4/28/2016)

TDP-1: Turn-Lane Pocket Lengths. The purpose of the turn pocket length is to allow the turning vehicle to exit the through movement and decelerate into the turn pocket without impacting the through movement. For signalized intersections, the minimum single turn pocket length for Major, Primary, and Secondary Highways (i.e., University Drive, Ridgeline Drive, and Turtle Rock Drive) is 150 ft. Storage lengths for unsignalized intersections should be designed based on 1 ft for each peak-hour left-turning vehicle.

Ridgeline Drive/University Drive (Northbound Left-Turn Lane). The northbound left-turn lane at the signalized intersection of Ridgeline Drive/University Drive is approximately 150 ft with a 90 ft transition. The existing (October 2014) left-turn demand at this location is 76 vehicles during the a.m. peak hour and 57 vehicles during the p.m. peak hour. Based on TDP-1 criteria, the northbound left-turn storage length meets the 150 ft required to accommodate the existing 76 a.m. peak-hour vehicles. The existing (October 2014) plus project left-turn demand at this location is 78 a.m. and 62 p.m. peak-hour vehicles (i.e. the addition of 2 a.m. and 5 p.m. peak-hour vehicles), which would also require a 150 ft left-turn lane. As in the existing (October 2014) condition, the 150 ft northbound left-turn pocket meets TDP-1 criteria.

The existing (April 2015) left-turn demand at this location is 64 vehicles during the a.m. peak hour and 47 vehicles during the p.m. peak hour. Based on TDP-1 criteria, the northbound left-turn storage length meets the 150 ft required to accommodate the existing 64 a.m. peak-hour vehicles. The existing (April 2015) plus project left-turn demand at this location is 66 a.m. and 52 p.m. peak-hour vehicles (i.e. the addition of two a.m. and five p.m. peak-hour vehicles), which would also require a 150 ft left-turn lane. As in the existing (April 2015) condition, the 150 ft northbound left-turn pocket meets TDP-1 criteria. Therefore, no changes to the design of the northbound left-turn lane are required with implementation of the Campus Master Build-Out Plan.

Ridgeline Drive/University Drive (Westbound Left-Turn Lanes). The dual westbound left-turn lanes at Ridgeline Drive/University Drive are approximately 305 ft (620 ft total) with a 150 ft transition. The existing (October 2014) left-turn demand at this location is 566 vehicles during the a.m. peak hour and 557 vehicles during the p.m. peak hour. Based on TDP-1 criteria, the dual westbound left-turn lanes would not meet the 710 total ft (355 ft per lane) required to accommodate the existing 566 a.m. peak-hour vehicles. The existing (October 2014) plus project left-turn demand at this location is 609 a.m. and 585 p.m. peak-hour vehicles (i.e. the addition of 43 a.m. and 28 p.m. peak-hour vehicles), which would require a 760 ft left-turn lane. As in the existing (October 2014) condition, the 305 ft dual westbound left-turn lanes do not meet TDP-1 criteria.

The existing (April 2015) left-turn demand at this location is 551 vehicles during the a.m. peak hour and 563 vehicles during the p.m. peak hour. Based on TDP-1 criteria, the dual westbound left-turn lanes would not meet the 710 total ft (355 ft per lane) required to accommodate the existing 563 p.m. peak-hour vehicles. The existing (April 2015) plus project left-turn demand at this location is 594 a.m. and 591 p.m. peak-hour vehicles (i.e., the addition of 43 a.m. and 28 p.m. peak-hour vehicles), which would require a 740 ft left-turn lane. As in the existing (April 2015) condition, the 305 ft dual westbound left-turn lanes do not meet TDP-1 criteria.

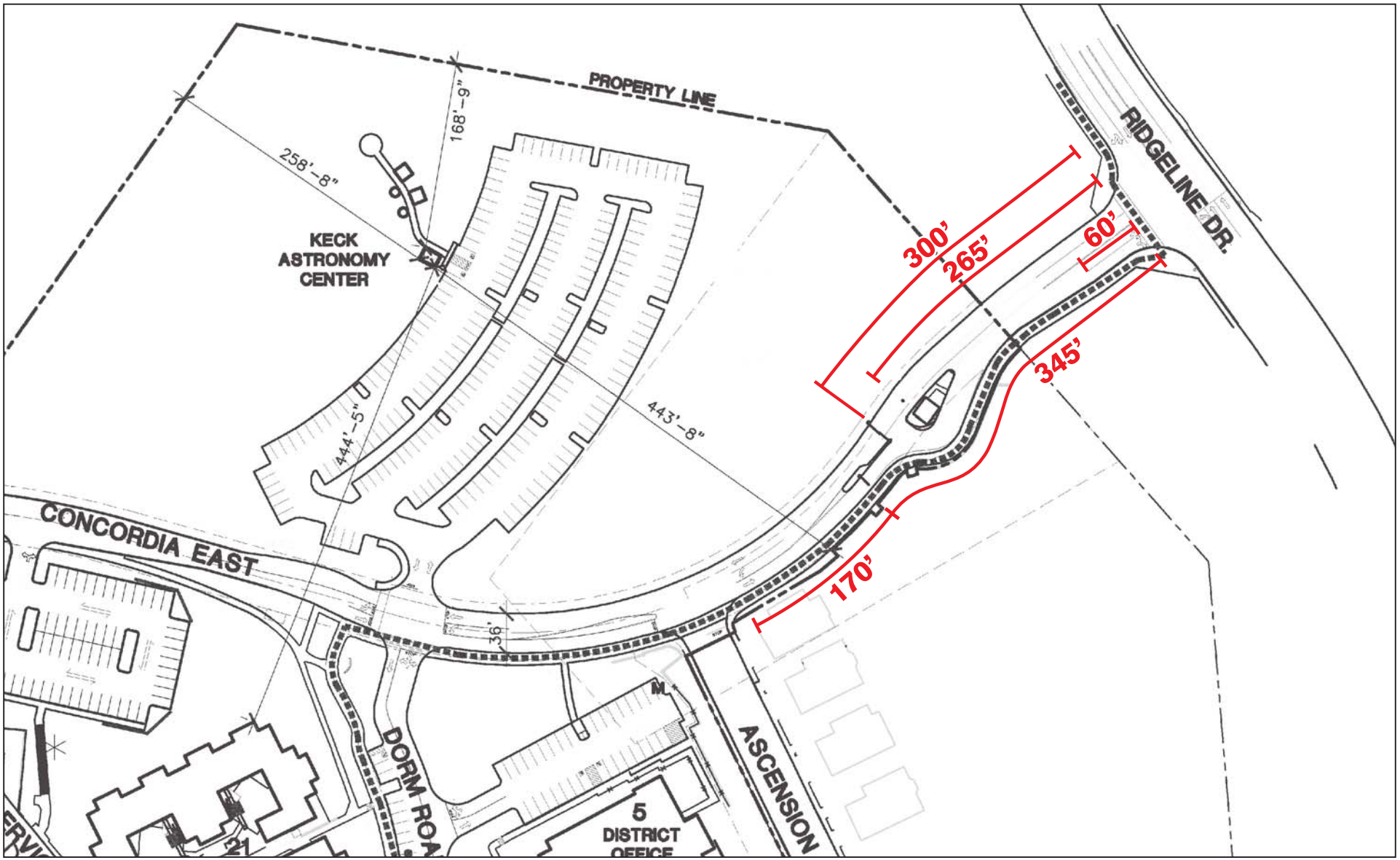
Based on the October counts, the project would be responsible for extending the turn pocket length a total of 50 ft (25 ft per lane) to offset the project's increment (from 710 ft to 760 ft). As an alternative improvement, the project will be required to pay its fair-share contribution toward the identified improvements of the University Drive and Ridgeline Drive/Rosa Drew Lane Improvement Project (including the extension of the westbound left-turn pocket) conducted by the City. The alternative improvement shall be selected as the preferred improvement should the City Council approve the improvement project prior to completion of the Campus Master Build-Out Plan.

Ridgeline Drive/Concordia East (Northbound Left-Turn Lane). The northbound left-turn lane at the unsignalized intersection of Ridgeline Drive/Concordia East is approximately 100 ft with a 60 ft transition. As shown on Figure 4, the existing (October 2014) left-turn demand at this location is three vehicles during the a.m. peak hour and six vehicles during the p.m. peak hour. Based on TDP-1 criteria, the northbound left-turn lane meets the 90 ft required to accommodate the existing six p.m. peak-hour vehicles. A traffic signal is proposed at this intersection as part of the project. The existing (October 2014) plus project left-turn demand at this location is five a.m. and seven p.m. peak-hour vehicles (i.e. the addition of two a.m. peak-hour vehicles and one p.m. peak-hour vehicle), which would require a 90 ft left-turn lane. As in the existing (October 2014) condition, the 100 ft northbound left-turn pocket meets TDP-1 criteria.

The existing (April 2015) left-turn demand at this location is five vehicles during the a.m. peak hour and four vehicles during the p.m. peak hour, as shown on Figure 5. Based on TDP-1 criteria, the northbound left-turn lane meets the 90 ft required to accommodate the existing five a.m. peak-hour vehicles. As stated above, a traffic signal is proposed at this intersection as part of the project. The existing (April 2015) plus project left-turn demand at this location is seven a.m. and five p.m. peak-hour vehicles (i.e. the addition of two a.m. peak-hour vehicles and one p.m. peak-hour vehicle), which would require a 90 ft left-turn lane. As in the existing (April 2015) condition, the 100 ft northbound left-turn pocket meets TDP-1 criteria.

Therefore, no changes to the design of the northbound left turn lane are required with implementation of the Campus Master Build-Out Plan. The proposed traffic signal at this intersection would improve the overall intersection operation.

Ridgeline Drive/Concordia East (Shared Eastbound Left-Turn/Right-Turn Lane). The outbound lane at Ridgeline Drive/Concordia East is currently a shared eastbound left-turn/right-turn lane approximately 15 ft wide that extends approximately 345 ft from Ridgeline Drive to the exit gate (East Gate Measurements are shown on Figure 9). As shown on Figure 4, the existing (October 2014) outbound demand at this location is 122 vehicles during the a.m. peak hour (117 left turns and 5 right turns) and 226 vehicles during the p.m. peak hour (222 left turns and 4 right turns). Based on TDP-1 criteria, the shared left-turn/right-turn lane meets the 226 ft required to accommodate the existing 226 p.m. peak-hour vehicles. A traffic signal and an additional 60 ft eastbound shared left-right turn lane are proposed at this intersection as part of the project. The existing shared left-right turn lane will be converted to a left-turn-only lane. The additional left-turn lane would increase the outbound left-turn storage length to approximately 405 ft from Ridgeline Drive to the exit gate.



LSA

FIGURE 9

N

0 65 130
FEET

BASE SOURCE: LPA

Concordia University

East Gate Lane Measurements

I:\CUI1301\G\East Gate Measurements.cdr (4/28/2016)

The project would add 27 outbound a.m. peak-hour vehicles (25 left turns and 2 right turns) and 69 outbound p.m. peak-hour vehicles (67 left turns and 2 right turns). The existing (October 2014) plus project outbound demand at this location is 149 a.m. peak-hour vehicles (142 left turns and 7 right turns) and 295 p.m. peak-hour vehicles (289 left turns and 6 right turns), which would require a 375 ft lane. As in the existing (October 2014) condition, the proposed 405 ft outbound lanes meet TDP-1 criteria.

The existing (April 2015) outbound demand at this location is 84 vehicles during the a.m. peak hour (79 left turns and 5 right turns) and 155 vehicles during the p.m. peak hour (151 left turns and 4 right turns), as shown on Figure 5. Based on TDP-1 criteria, the shared left-turn/right-turn lane meets the 155 ft required to accommodate the existing 155 p.m. peak-hour vehicles.

As stated above, a traffic signal and an additional 60 ft eastbound shared left-right turn lane are proposed at this intersection as part of the project. The existing shared left-right turn lane will be converted to a left-turn-only lane. The additional left-turn lane would increase the outbound left-turn storage length to approximately 405 ft from Ridgeline Drive to the exit gate. The project would add 27 outbound a.m. peak-hour vehicles (25 left turns and 2 right turns) and 69 outbound p.m. peak-hour vehicles (67 left turns and 2 right turns) The existing (April 2015) plus project outbound demand at this location is 111 a.m. peak-hour vehicles (104 left turns and 7 right turns) and 224 p.m. peak-hour vehicles (218 left turns and 6 right turns), which would require a 275 ft

Turtle Rock Drive/Concordia West (Southbound Left-Turn Lane). The southbound left-turn lane at the unsignalized intersection of Turtle Rock Drive/Concordia West is approximately 110 ft with a 90 ft transition. As shown on Figure 4, the existing (October 2014) left-turn demand at this location is 89 vehicles during the a.m. peak hour and 130 vehicles during the p.m. peak hour. Based on TDP-1 criteria, the southbound left-turn lane does not meet the 130 ft required to accommodate the existing 130 p.m. peak-hour vehicles. The existing (October 2014) plus project left-turn demand at this location is 103 a.m. and 138 p.m. peak-hour vehicles (i.e., the addition of 14 a.m. and 8 p.m. peak-hour vehicles), which would require a 138 ft left-turn lane. As in the existing condition, the 110 ft southbound left-turn pocket does not meet TDP-1 criteria.

The existing (April 2015) left-turn demand at this location is 102 vehicles during the a.m. peak hour and 115 vehicles during the p.m. peak hour, as shown on Figure 5. Based on TDP-1 criteria, the southbound left-turn lane does not meet the 115 ft required to accommodate the existing 115 p.m. peak-hour vehicles. The existing (April 2015) plus project left-turn demand at this location is 116 a.m. and 123 p.m. peak-hour vehicles (i.e., the addition of 14 a.m. and 8 p.m. peak-hour vehicles), which would require a 123 ft left-turn lane. As in the existing (April 2015) condition, the 110 ft southbound left-turn pocket does not meet TDP-1 criteria.

The project will be responsible for extending the southbound left-turn lane from 110 ft to 140 ft (an addition of 30 ft) in order to satisfy TDP-1 based on the higher October 2014 traffic volume data. This improvement is feasible because approximately 180 ft of landscape is provided in the median before the Hillgate/Turtle Rock Drive intersection.

TDP-3: Left-Turn In/Out Access. TDP-3 provides guidelines to determine whether left-in only or left-in/left-out access will be considered along Major, Primary, Secondary, and Commuter Streets. This guideline is based on the volume of vehicles entering and/or exiting a driveway in relationship to the conflicting volumes along the highway. Figure 3.2 (Left-Turn Access Criteria) in the City's TDP presents a graph in which the left-turn volumes are compared to the conflicting volumes. Left-turn in/out access is considered acceptable when the point representing the left-turn volume and the conflicting volume lies below the line. Access is not recommended when this point is above the line. A summary of the TDP-3 analysis of the unsignalized intersections of Ridgeline Drive/Concordia East and Turtle Rock Drive/Concordia West for existing (October 2014 and April 2015) and existing plus project conditions is provided in Tables P and Q, respectively.

As shown in Table P, left-in access is acceptable at Ridgeline Drive/Concordia East; however, left-out access would not meet the City's TDP-3 criteria. Although left-out access was unacceptable at Ridgeline Drive/Concordia East as an unsignalized intersection, the University will improve the intersection of Ridgeline Drive/Concordia East by adding a traffic signal as part of the project. With installation of a traffic signal, TDP-3 criteria for left-turn in/out access at Ridgeline Drive/Concordia East would be met.

As shown in Table Q, left-in/left-out access is acceptable at Turtle Rock Drive/Concordia West per TDP-3.

TDP-4: Right-Turn Lanes at Uncontrolled Driveways. TDP-4 states that right-turn lanes at unsignalized driveways on Secondary Highways (i.e., Ridgeline Drive) should be provided when the peak-hour right-turn volume is greater than 200 peak-hour vehicles. Based on comparison of the October 2014 and April 2015 traffic volume data, the southbound right-turn volumes were higher in October 2014. As illustrated on Figure 4, 229 existing (October 2014) a.m. peak-hour vehicles currently make a southbound right turn at Ridgeline Drive/Concordia East. The project would add 60 a.m. peak-hour southbound right-turn vehicles for a total southbound right-turn demand of 289 vehicles. Under existing and existing plus project conditions, a southbound right-turn lane would be required at the unsignalized intersection of Ridgeline Drive/Concordia East.

As part of the Campus Master Build-Out Plan, the University will be improving the intersection by adding a traffic signal. With installation of a traffic signal, Ridgeline Drive/Concordia East would operate at satisfactory LOS with its current geometrics (i.e., shared southbound through/right-turn lane). Therefore, a southbound right-turn lane is neither required nor recommended for Ridgeline Drive/Concordia East.

In addition, the provision of a dedicated southbound right-turn lane at Ridgeline Drive/Concordia East would introduce a potential merge issue for drivers making a westbound left turn at Ridgeline Drive/University Drive.

Vehicles that currently try to enter the campus driveway from the westbound No. 1 left-turn lane have a short distance (560 ft) to merge over one lane before turning right into the campus. Adding a right-turn deceleration lane would require one additional lane for this merge.

Table P: TDP-3 Analysis Summary of Ridgeline Drive/Concordia East

Existing Conditions (October 2014)

Turn Movement	No Project Peak-Hour Volumes		Plus Project Peak-Hour Volumes		Δ Peak-Hour Volumes	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound Left (NBL)	3	6	5	7	2	1
Northbound Through (NBT)	736	492	736	492	0	0
Southbound Through (SBT)	497	506	497	506	0	0
Southbound Right (SBR)	229	152	289	186	60	34
Eastbound Left (EBL)	117	222	142	289	25	67
Eastbound Right (EBR)	5	4	7	6	2	2
Left-In Access						
LTV-I (NBL)	3	6	5	7	2	1
V_C[1]	726	658	786	692	60	34
Acceptable?	**Yes**	**Yes**	**Yes**	**Yes**	**-**	**-**
Left-Out Access						
LTV-O (EBL)	117	222	142	289	25	67
V_C[2]	1,351	1,080	1,383	1,098	32	18
Acceptable?	**No**	**No**	**No**	**No**	**-**	**-**

Existing Conditions (April 2015)

Turn Movement	No Project Peak-Hour Volumes		Plus Project Peak-Hour Volumes		Δ Peak-Hour Volumes	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound Left (NBL)	5	4	7	5	2	1
Northbound Through (NBT)	841	531	841	531	0	0
Southbound Through (SBT)	598	533	598	533	0	0
Southbound Right (SBR)	183	150	243	184	60	34
Eastbound Left (EBL)	79	151	104	218	25	67
Eastbound Right (EBR)	5	4	7	6	2	2
Left-In Access						
LTV-I (NBL)	5	4	7	5	2	1
V_C[1]	781	683	841	717	60	34
Acceptable?	**Yes**	**Yes**	**Yes**	**Yes**	**-**	**-**
Left-Out Access						
LTV-O (EBL)	79	151	104	218	25	67
V_C[2]	1,536	1,143	1,568	1,161	32	18
Acceptable?	**No**	**No**	**No**	**No**	**-**	**-**

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

[1] V_C = SBT + SBR

[2] V_C = NBL + NBT + SBT + 1/2 SBR

Δ = change

LTV-I = left-turn volume in

LTV-O = left-turn volume out

V_C = conflicting volume

Table Q: TDP-3 Analysis Summary of Turtle Rock Drive/Concordia West

Existing Conditions (October 2014)

Turn Movement	No Project Peak-Hour Volumes		Plus Project Peak-Hour Volumes		Δ Peak-Hour Volumes	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound Through (NBT)	497	199	497	199	0	0
Northbound Right (NBR)	35	26	39	28	4	2
Southbound Left (SBL)	89	130	103	138	14	8
Southbound Through (SBT)	286	363	286	363	0	0
Westbound Left (WBL)	26	33	28	38	2	5
Westbound Right (WBR)	93	106	99	121	6	15
Left-In Access						
LTV-I (SBL)	89	130	103	138	14	8
V_C[1]	532	225	536	227	4	2
Acceptable?	**Yes**	**Yes**	**Yes**	**Yes**	**-**	**-**
Left-Out Access						
LTV-O (WBL)	497	199	497	199	0	0
V_C[2]	890	705	906	714	16	9
Acceptable?	**Yes**	**Yes**	**Yes**	**Yes**	**-**	**-**

Existing Conditions (April 2015)

Turn Movement	No Project Peak-Hour Volumes		Plus Project Peak-Hour Volumes		Δ Peak-Hour Volumes	
	AM	**PM**	**AM**	**PM**	**AM**	**PM**
Northbound Through (NBT)	522	206	522	206	0	0
Northbound Right (NBR)	35	28	39	30	4	2
Southbound Left (SBL)	102	115	116	123	14	8
Southbound Through (SBT)	317	305	317	305	0	0
Westbound Left (WBL)	26	31	28	36	2	5
Westbound Right (WBR)	100	96	106	111	6	15
Left-In Access						
LTV-I (SBL)	102	115	116	123	14	8
V_C[1]	557	234	561	236	4	2
Acceptable?	**Yes**	**Yes**	**Yes**	**Yes**	**-**	**-**
Left-Out Access						
LTV-O (WBL)	522	206	522	206	0	0
V_C[2]	959	640	975	649	16	9
Acceptable?	**Yes**	**Yes**	**Yes**	**Yes**	**-**	**-**

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

[1] V_C = NBT + NBR

[2] V_C = NBT + 1/2 NBR + SBL + SBT.

Δ = change

LTV-I = left-turn volume in

LTV-O = left-turn volume out

V_C = conflicting volume

Furthermore, Ridgeline Drive provides two southbound lanes with a capacity of 3,200 peak-hour vehicles (or 1,600 vehicles per hour per lane). With implementation of the Campus Master Build-Out Plan, fewer than 290 peak-hour vehicles would make a right turn at Ridgeline Drive/Concordia East while fewer than 600 peak-hour vehicles would travel south through this intersection toward Turtle Rock Drive. In the unlikely event that campus vehicles are temporarily queued back onto Ridgeline Drive, adequate roadway capacity is provided within a single southbound through lane.

As described later in this report, inbound queuing from Concordia East onto Ridgeline Drive does not occur during typical weekday operations.

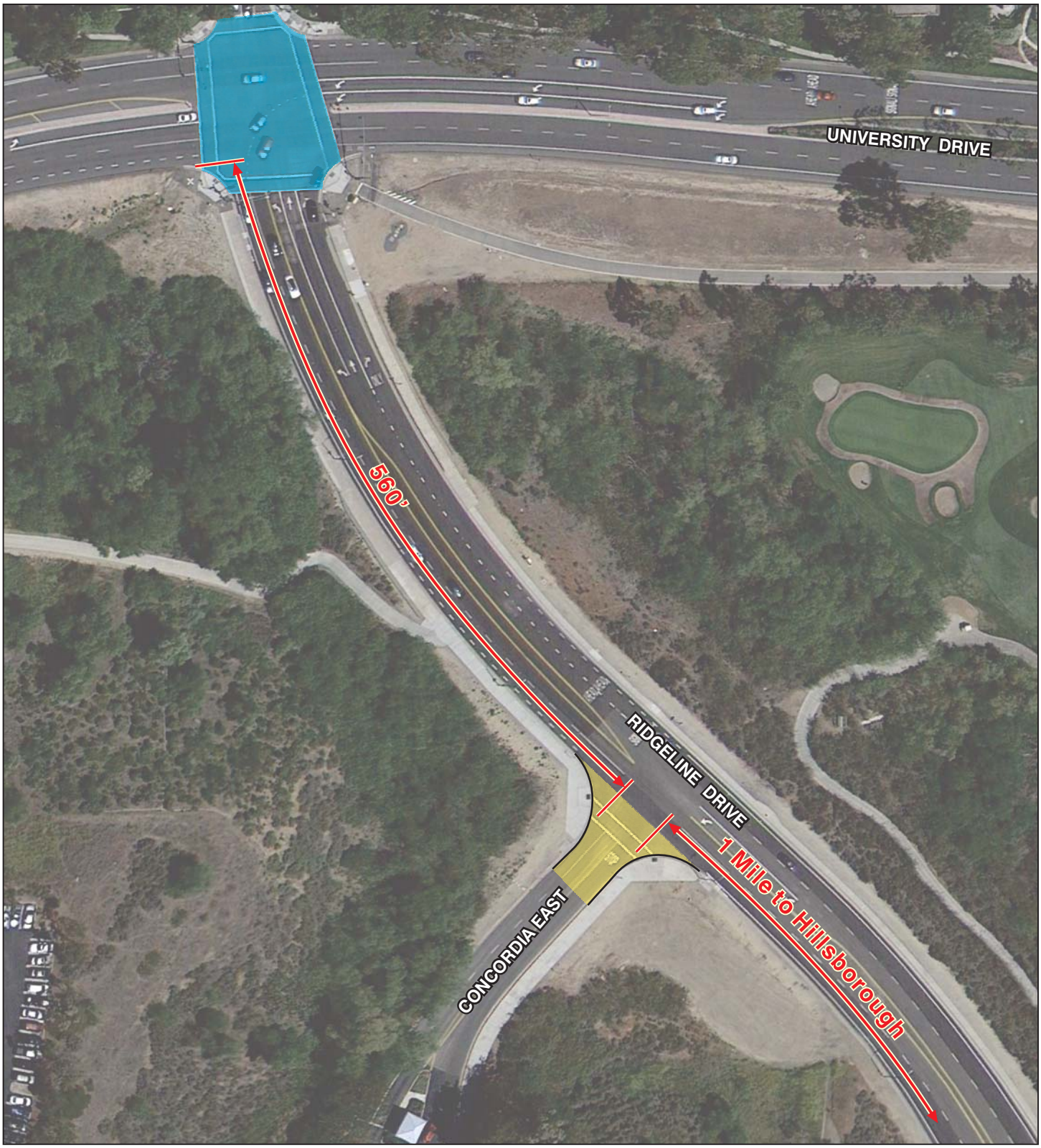
TDP-4 also states that right-turn lanes are not required on Commuter Streets (i.e., Turtle Rock Drive). As such, a northbound right-turn lane is not required at Turtle Rock Drive/Concordia West. Furthermore, based on review of the low northbound right-turn volumes (i.e., fewer than 40 peak-hour vehicles) for existing (October 2014 and April 2015) conditions and with the proposed Campus Master Build-Out Plan, a right-turn lane is not required.

TDP-9: Distance Between Signalized Intersections. TDP-9 states that the recommended minimum spacing required for Secondary Streets (i.e., Ridgeline Drive) is 400 ft, as long as there are no road restrictions or extenuating circumstances (i.e., insufficient left-turn storage) which may dictate that the recommended minimum spacing cannot be met. The spacing between the signalized intersection of Ridgeline Drive/University Drive and the unsignalized intersection of Ridgeline Drive/Concordia East is approximately 500 ft. As such, when Ridgeline Drive/Concordia East is converted to a signalized intersection, the TDP-9 criteria for distance between signalized intersections will be satisfied.

TDP-10: Distance Between Driveways and Intersections. According to the criteria contained in TDP-10, it is recommended there be a minimum of 185 ft between a driveway and an intersection (or between two driveways) on Secondary Highways (i.e., Ridgeline Drive). The minimum recommended distance between a driveway and an intersection (or between two driveways) on Commuter Streets (i.e., Turtle Rock Drive) is 150 ft. The distance between driveways should be measured from the centerline of each driveway. The distance between an intersection and a driveway should be measured from the curb face of the street to the curb face of the driveway. The project driveways (Concordia East and Concordia West) and adjacent driveways along Ridgeline Drive and Turtle Rock Drive are illustrated on Figures 10 and 11, respectively. The Campus Master Build-Out Plan does not propose to change or modify these two driveways from their existing configurations.

As shown on Figure 10, Ridgeline Drive/Concordia East is approximately 560 ft south of Ridgeline Drive/University Drive and approximately 1 mile north of Hillsborough/Ridgeline Drive. Therefore, TDP-10 is met for Ridgeline Drive/Concordia East.

As shown on Figure 11, Turtle Rock Drive/Concordia West is approximately 420 ft east of Hillgate/ Turtle Rock Drive and approximately 475 ft northwest of Sycamore Creek/Turtle Rock Drive. Therefore, TDP-10 is met for Turtle Rock Drive/Concordia West.



LSA

FIGURE 10

LEGEND

- Project Driveway
- Adjacent Intersection

N

0 50 100

FEET

SOURCE: Google Earth

Concordia University

Ridgeline Drive Driveway Locations

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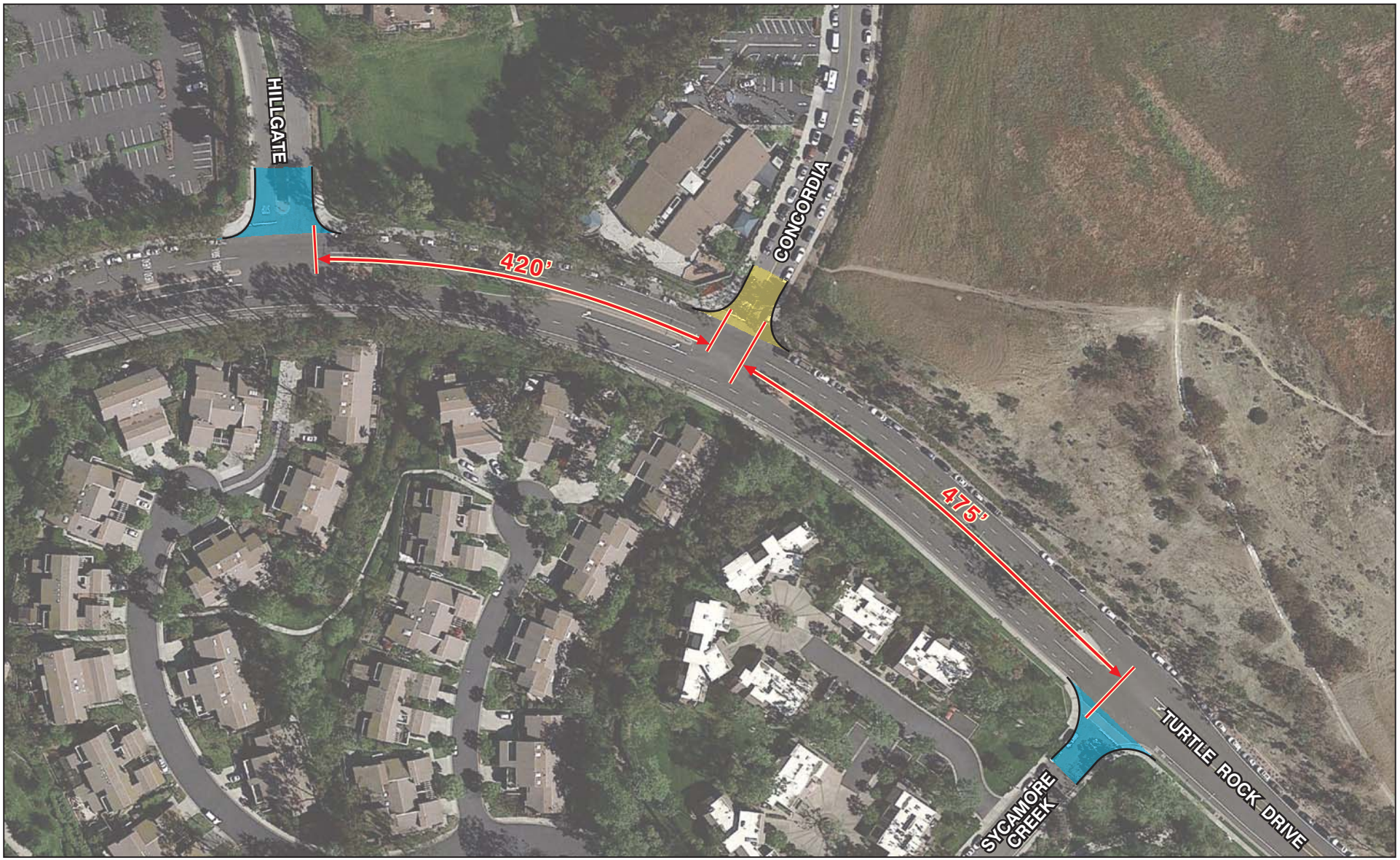

LSA

LEGEND

- Project Driveway
- Adjacent Intersection

N

0 70 140

FEET

SOURCE: Google Earth

FIGURE 11

Concordia University

Turtle Rock Drive Driveway Locations

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TDP-12: Signal Warrants. TDP-12 provides guidance to determine whether installation of a traffic signal is justified at a particular location. The peak-hour signal warrant is generally intended for use at locations where traffic conditions are such that for a minimum of 1 hour of an average day, the minor street (i.e., Concordia East, Concordia West, and Yale Avenue) suffers undue delay when entering or crossing the major street (i.e., Ridgeline Drive, Turtle Rock Drive, and Michelson Drive). TDP-12 has been evaluated based on the LOS analysis for deficient unsignalized intersections.

Ridgeline Drive/Concordia East. As shown in the intersection LOS analysis presented in this TIA, the unsignalized intersection of Ridgeline Drive/Concordia East is forecast to operate at unsatisfactory LOS E or F (i.e., greater than 35 seconds of delay) during one or both peak hours for all existing and future (no project) conditions. As stated in the project description, Concordia University will be improving the intersection of Ridgeline Drive/Concordia East by adding a traffic signal. A peak-hour signal warrant analysis per TDP-12 criteria has been prepared to determine if the installation of a traffic signal at this intersection is warranted. The Ridgeline Drive/Concordia East signal warrant analysis is summarized in Table R. Based on the results of this analysis, a signal is warranted at Ridgeline Drive/Concordia East for existing (October 2014 and April 2015), 2017, 2035, and post-2035 horizon years, with and without the Campus Master Build-Out Plan, for approved and pending conditions.

In addition to the peak-hour signal warrant of TDP-12, a more extensive signal warrant analysis was conducted based on the *California Manual on Uniform Traffic Control Devices* (CAMUTCD), 2012 Edition. Traffic Signal Warrants 1 and 2 of the CAMUTCD were conducted. As previously discussed, counts were conducted in October 2014 and April 2015. Because the campus traffic volumes were higher in October 2014, those volumes have been used for this supplemental signal warrant analysis. The CAMUTCD Traffic Signal Warrants Worksheets (and reference tables and figures) are provided in Appendix G.

As described below, based on CAMUTCD Traffic Signal Warrants 1 and 2, the signalization of Ridgeline Drive/Concordia East is warranted. CAMUTCD Traffic Signal Warrant 3 (Peak Hour) is identical to the peak-hour signal warrant of TDP-12.

Warrant 1: Eight-Hour Vehicular Volume. Warrant 1 is intended for application where a large volume of intersection traffic is the principal reason to consider installing a traffic control signal. The thresholds shown in Table 4C-1 of the CAMUTCD have been compared to the existing traffic volumes, and as a result, the traffic volumes exceed the thresholds of Condition A (Minimum Vehicular Volume) as indicated in Traffic Signal Warrants Worksheet 1. Therefore, the Eight-Hour Vehicular Volume warrant is satisfied. Condition B (Interruption of Continuous Flow) is not included, as Condition A is satisfied.

Table R: TDP-12 Analysis of Ridgeline Drive/Concordia East

Existing Conditions (October 2014)

Street	Name	Approach Movement	No Project AM	No Project PM	Plus Project AM	Plus Project PM
Minor	**Concordia**	EBL	117	222	142	289
(1 Lane)	**East**	EBR	5	4	7	6
		Total	**122**	**226**	**149**	**295**
Major	**Ridgeline**	NBL	3	6	5	7
(2 Lanes)	**Drive**	NBT	736	492	736	492
		SBT	497	506	497	506
		SBR	229	152	289	186
		Total	**1,465**	**1,156**	**1,527**	**1,191**
Signal Warranted?[1]			**Yes**	**Yes**	**Yes**	**Yes**

Existing Conditions (April 2015)

Street	Name	Approach Movement	No Project AM	No Project PM	Plus Project AM	Plus Project PM
Minor	**Concordia**	EBL	79	151	104	218
(1 Lane)	**East**	EBR	5	4	7	6
		Total	**84**	**155**	**111**	**224**
Major	**Ridgeline**	NBL	5	4	7	5
(2 Lanes)	**Drive**	NBT	841	531	841	531
		SBT	598	533	598	533
		SBR	183	150	243	184
		Total	**1,627**	**1,218**	**1,689**	**1,253**
Signal Warranted?[1]			**Yes**	**Yes**	**Yes**	**Yes**

2017 Conditions

Street	Name	Approach Movement	Approved No Project AM	Approved No Project PM	Plus Project AM	Plus Project PM	Pending No Project AM	Pending No Project PM	Plus Project AM	Plus Project PM
Minor	**Concordia**	EBL	115	225	115	225	115	225	115	226
(1 Lane)	**East**	EBR	5	4	5	4	5	4	5	4
		Total	**120**	**229**	**120**	**229**	**120**	**229**	**120**	**230**
Major	**Ridgeline**	NBL	3	7	4	7	3	6	4	6
(2 Lanes)	**Drive**	NBT	735	491	735	490	735	491	735	494
		SBT	505	510	505	520	505	520	505	513
		SBR	247	154	286	164	237	155	286	166
		Total	**1,490**	**1,162**	**1,530**	**1,181**	**1,480**	**1,172**	**1,530**	**1,179**
Signal Warranted?[1]			**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

2035 Conditions

Street	Name	Approach Movement	Approved No Project AM	Approved No Project PM	Plus Project AM	Plus Project PM	Pending No Project AM	Pending No Project PM	Plus Project AM	Plus Project PM
Minor	**Concordia**	EBL	116	223	124	233	115	223	116	233
(1 Lane)	**East**	EBR	5	5	5	7	5	5	4	6
		Total	**121**	**228**	**129**	**240**	**120**	**228**	**120**	**239**
Major	**Ridgeline**	NBL	3	7	4	12	3	7	3	10
(2 Lanes)	**Drive**	NBT	740	487	736	487	735	487	739	487
		SBT	498	505	501	503	505	505	499	504
		SBR	228	163	310	198	227	163	309	190
		Total	**1,469**	**1,162**	**1,551**	**1,200**	**1,470**	**1,162**	**1,550**	**1,191**
Signal Warranted?[1]			**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Post-2035 Conditions

Street	Name	Approach Movement	Approved No Project AM	Approved No Project PM	Plus Project AM	Plus Project PM	Pending No Project AM	Pending No Project PM	Plus Project AM	Plus Project PM
Minor	**Concordia**	EBL	133	236	163	296	132	236	159	292
(1 Lane)	**East**	EBR	6	4	7	5	7	4	8	6
		Total	**139**	**240**	**170**	**301**	**139**	**240**	**167**	**298**
Major	**Ridgeline**	NBL	3	6	4	7	4	6	5	8
(2 Lanes)	**Drive**	NBT	733	504	732	504	729	494	721	488
		SBT	497	506	496	505	499	506	498	504
		SBR	238	154	318	173	239	154	319	172
		Total	**1,471**	**1,170**	**1,550**	**1,189**	**1,471**	**1,160**	**1,543**	**1,172**
Signal Warranted?[1]			**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**	**Yes**

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

[1] A signal is warranted when the highest approach volume of the Minor Street (Concordia East) exceeds 75 peak-hour vehicles and the total approach volume of the Major Street (Ridgeline Drive) exceeds 1,300 peak-hour vehicles.

EBL = eastbound left, EBR = eastbound right, NBL = northbound left, NBT = northbound through, SBR = southbound right, SBT = southbound through, TDP-12 = Transportation Design Procedure 12

Warrant 2: Four-Hour Vehicular Volume. Warrant 2 is intended for use in locations where the volume of intersecting traffic is the principal reason to consider installing a traffic signal. The thresholds shown in Figure 4C-2 of the CAMUTCD were compared to the existing traffic volumes, and as a result, the traffic volumes exceed the thresholds indicated in Traffic Signal Warrants Worksheet 2. Therefore, the Four-Hour Vehicular Volume warrant is satisfied.

Accident Data. LSA queried the Statewide Integrated Traffic Records System (SWITRS) to identify the number and type of collisions occurring at or near the intersection of Ridgeline Drive/Concordia East. Between January 1, 2010, and December 31, 2014, six collisions have occurred. Table S summarizes the accident history in the vicinity of Ridgeline Drive/ Concordia East.

All collisions at or near the intersection of Ridgeline Drive/Concordia East occurred during clear weather. Four collisions occurred on weekdays, and two occurred on the weekend. Four of the six were broadside collisions occurring after a driver failed to yield right-of-way or otherwise improperly turned at the intersection. One of the collisions occurred when a driver was traveling at an unsafe speed and rear-ended another vehicle just north of the intersection. One of the collisions occurred when a driver was traveling at an unsafe speed and hit a fixed object. After one of the collisions, passengers suffered from visible injuries. After another collision, passengers reported an injury.

Additional Intersection Improvement. With the installation of a traffic signal at Ridgeline Drive/Concordia East and no other intersection improvements, the intersection would operate at satisfactory LOS A (refer to Table F). However, Concordia University has also included an additional eastbound shared left-right lane at the intersection as part of the project description. This will improve the operation of the intersection for residential and Concordia University traffic.

Yale Avenue/Michelson Drive. As shown in the intersection LOS analysis presented in this TIA, the unsignalized intersection of Yale Avenue/Michelson Drive is forecast to operate at unsatisfactory LOS E (i.e., greater than 35 seconds of delay) during the p.m. peak hour for 2017 conditions and unsatisfactory LOS E or F during the a.m. peak hour for post-2035 conditions. Therefore, a peak-hour signal warrant analysis per TDP-12 criteria has been prepared to determine if the installation of a traffic signal at this intersection is warranted. The Yale Avenue/Michelson Drive signal warrant analysis is summarized in Table T. Based on the results of this analysis, a signal is not warranted at Yale Avenue/Michelson Drive for the 2017 or post-2035 horizon years, with or without the project, for approved and pending conditions. The project would add a maximum of 11 vehicles to Yale Avenue/Michelson Drive during 2017 approved and pending conditions (which represents an approximately 1.07 percent increase in total intersection volume). During post-2035 approved and pending conditions, a maximum of 15 peak-hour vehicles would be added to this intersection (which represents an approximately 1.75 percent increase in total intersection volume).

Table S: Ridgeline Drive/Concordia East Accident History

Date	Day of the Week	Time of Day	Location	Injury	Description
8/24/2010	Tuesday	11:08 p.m.	55 feet west of intersection	No injury	While traveling at an unsafe speed, vehicle hit a fixed object
1/27/2011	Thursday	8:55 a.m.	In intersection	Complaint of injury	Failing to properly yield right-of-way, vehicle broadsided another vehicle
9/4/2011	Sunday	5:55 p.m.	In intersection	Visible injury	Failing to properly yield right-of-way, vehicle broadsided another vehicle
5/22/2012	Tuesday	12:40 p.m.	42 feet north of intersection	No injury	While traveling at an unsafe speed, vehicle rear ended another vehicle
9/20/2012	Thursday	8:11 p.m.	In intersection	No injury	Failing to properly yield right-of-way, vehicle broadsided another vehicle
2/18/2014	Saturday	6:36 p.m.	In intersection	No injury	Failing to turn properly, vehicle broadsided another vehicle

Source: Statewide Integrated Traffic Records System; January 1, 2010 to December 31, 2014

Table T: TDP-12 Analysis of Yale Avenue/Michelson Drive

2017 Conditions

Street	Name	Approach Movement	Approved No Project AM	Approved No Project PM	Plus Project AM	Plus Project PM	Pending No Project AM	Pending No Project PM	Plus Project AM	Plus Project PM
Minor	**Yale**	NBL	21	17	20	17	21	17	20	17
(2 Lanes)	**Avenue**	NBT	64	5	63	4	63	4	63	4
		NBR	85	28	87	29	86	29	87	29
		Total	**170**	**50**	**170**	**50**	**170**	**50**	**170**	**50**
Major	**Michelson**	EBL	87	39	88	38	88	38	89	38
(2 Lanes)	**Drive**	EBT	368	473	379	477	377	477	388	477
		EBR	45	17	44	16	46	16	45	16
		WBL	90	22	92	22	90	22	92	22
		WBT	430	532	428	539	431	530	428	539
		WBR	9	36	9	38	9	37	9	38
		Total	**1,029**	**1,119**	**1,040**	**1,130**	**1,041**	**1,120**	**1,051**	**1,130**
Signal Warranted?[1]			**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Post-2035 Conditions

Street	Name	Approach Movement	Approved No Project AM	Approved No Project PM	Plus Project AM	Plus Project PM	Pending No Project AM	Pending No Project PM	Plus Project AM	Plus Project PM
Minor	**Yale**	NBL	14	48	14	48	14	47	14	45
(2 Lanes)	**Avenue**	NBT	186	122	183	122	188	121	185	122
		NBR	102	74	103	74	101	74	102	73
		Total	**302**	**244**	**300**	**244**	**303**	**242**	**301**	**240**
Major	**Michelson**	EBL	153	180	156	180	159	178	162	179
(2 Lanes)	**Drive**	EBT	265	213	278	213	271	210	284	207
		EBR	50	25	51	25	50	25	51	24
		WBL	136	35	135	35	137	35	135	35
		WBT	233	266	232	266	234	267	233	266
		WBR	22	178	22	178	23	181	23	189
		Total	**859**	**897**	**874**	**897**	**874**	**896**	**888**	**900**
Signal Warranted?[1]			**No**	**No**	**No**	**No**	**No**	**No**	**No**	**No**

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

[1] A signal is warranted when the highest approach volume of the Minor Street (Yale Avenue) exceeds 150 peak-hour vehicles and the total approach volume of the Major Street (Michelson Drive) exceeds 1,800 peak-hour vehicles.

EBL = eastbound left, EBR = eastbound right, EBT = eastbound through, NBL = northbound left, NBR = northbound right, NBT = northbound through, TDP-12 = Transportation Design Procedure 12, WBL = westbound left, WBR = westbound right WBT = westbound through

Turtle Rock Drive/Concordia West. Consistent with the approved scope of work, a peak-hour signal warrant analysis per TDP-12 has been prepared for existing and existing plus project conditions to determine if the installation of a traffic signal at this intersection is warranted. The Turtle Rock Drive/Concordia West signal warrant analysis is summarized in Table U. Based on the results of this analysis, a signal is not warranted for the p.m. peak hour under existing (October 2014 and April 2015) and existing plus project conditions. Although a signal is warranted for the a.m. peak hour under existing (October 2014 and April 2015) and existing plus project conditions, this intersection is forecast to operate at satisfactory LOS for existing, 2017, 2035, and post-2035 horizon years, with and without the project, for approved and pending conditions as an unsignalized intersection.

Therefore, a traffic signal is neither required nor recommended for Turtle Rock Drive/Concordia West.

TDP-13: Left-Turn Signal Phasing. TDP-13 provides guidance to determine whether left-turn phasing is required. Figure 13.1 (Left-Turn Phasing Guidelines) in the City's TDP presents a graph in which the left-turn volumes are compared to the opposing volumes at a signalized intersection. Left-turn phasing is required when the point representing the left-turn volume and the opposing volume is above the line. Generally, left-turn signal phasing is not recommended when the point lies below the line. Based on review of the existing (October 2014 and April 2015) plus project volumes, fewer than 290 peak-hour vehicles are forecast to make an eastbound left turn out of Concordia East onto Ridgeline Drive. This turn movement does not have an opposing westbound volume as Ridgeline Drive/Concordia East is a three-legged intersection (i.e., no east leg). Fewer than 10 peak-hour vehicles are projected to make a northbound left turn from Ridgeline Drive onto Concordia East. Because the opposing southbound volume of fewer than 800 peak-hour vehicles is below the threshold of 1,000 peak-hour vehicles, left-turn signal phasing is not required per TDP-13.

TDP-14: Driveway Lengths. TDP-14 provides guidance regarding sufficient driveway length to allow vehicles "to enter the parking area without causing subsequent vehicles to back out on the City street system." The measurement of sufficient length is based on the distance from the back of the sidewalk or stop bar to the first intersecting parking space or traffic control measure on site. The minimum unsignalized driveway length should be 25 ft and should increase at a rate of 1 ft of storage per peak-hour vehicle (in 25 ft increments). The minimum signalized driveway length should be 75 ft and should increase at a rate of 1 ft of storage per peak-hour vehicle (in 25 ft increments).

Ridgeline Drive/Concordia East. The unsignalized intersection of Ridgeline Drive/Concordia East (shown on Figure 9) provides two inbound lanes into Concordia University: a 300 ft student/ resident inbound lane with a "transponder-operated gate" and a 265 ft visitor inbound lane (measured from the back of the Ridgeline Drive crosswalk to the gate arm and guard shack) for a total driveway length of 565 ft. Based on comparison of the October 2014 and April 2015 traffic volume data, the peak-hour entering volumes at Ridgeline Drive/Concordia East were higher in October 2014. The existing volumes in October 2014 were 232 vehicles during the a.m. peak hour and 158 vehicles during the p.m. peak hour. Based on TDP-14 criteria, a minimum driveway length of 250 ft is required.

Table U: TDP-12 Analysis of Turtle Rock Drive/Concordia West

Existing Conditions (October 2014)

Street	Name	Approach Movement	No Project AM	No Project PM	Plus Project AM	Plus Project PM
Minor	**Concordia**	WBL	26	33	28	38
(1 Lane)	**West Drive**	WBR	93	106	99	121
		Total	**119**	**139**	**127**	**159**
Major	**Turtle**	NBT	497	199	497	199
(2 Lanes)	**Rock Drive**	NBR	35	26	39	28
		SBL	89	130	103	138
		SBT	286	363	286	363
		Total	**907**	**718**	**925**	**728**
Signal Warranted?[1]			**Yes**	**No**	**Yes**	**No**

Existing Conditions (April 2015)

Street	Name	Approach Movement	No Project AM	No Project PM	Plus Project AM	Plus Project PM
Minor	**Concordia**	WBL	26	31	28	36
(1 Lane)	**West Drive**	WBR	100	96	106	111
		Total	**126**	**127**	**134**	**147**
Major	**Turtle**	NBT	522	206	522	206
(2 Lanes)	**Rock Drive**	NBR	35	28	39	30
		SBL	102	115	116	123
		SBT	317	305	317	305
		Total	**976**	**654**	**994**	**664**
Signal Warranted?[1]			**Yes**	**No**	**Yes**	**No**

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

[1] A signal is warranted when the highest approach volume of the Minor Street (Concordia West) exceeds 75 peak-hour vehicles and the total approach volume of the Major Street (Turtle Rock Drive) exceeds 1,300 peak-hour vehicles.

NBR = northbound right, NBT = northbound through, SBL = southbound left, SBT = southbound through,
TDP-12 = Transportation Design Procedure 12, WBL = westbound left, WBR = westbound right

A traffic signal is proposed at this intersection as part of the project. The existing plus project peak-hour entering volumes are 294 a.m. and 193 p.m. peak-hour vehicles (i.e., the addition of 62 a.m. and 35 p.m. peak-hour project vehicles). As a signalized intersection, these volumes would require a 350 ft driveway. Therefore, the existing driveway would meet TDP-14 with the proposed Campus Master Build-Out Plan.

Turtle Rock Drive/Concordia West. The unsignalized intersection of Turtle Rock Drive/ Concordia West has a 640 ft long driveway (measured from the Turtle Rock Drive stop bar to the gate arm). An additional 65 ft of throat length is provided within the visitor lane at the guard shack. Based on comparison of the October 2014 and April 2015 traffic volume data, the peak-hour entering volumes at Turtle Rock Drive/Concordia West were higher in October 2014. The existing volumes in October 2014 were 124 vehicles during the a.m. peak hour and 156 vehicles during the p.m. peak hour. Based on TDP-14 criteria, a minimum driveway length of 150 ft is required. The existing plus project peak-hour entering volumes are 142 a.m. and 166 p.m. peak-hour vehicles (i.e., the addition of 18 a.m. and 10 p.m. peak-hour vehicles). Based on TDP-14 criteria, a minimum driveway length of 175 ft is required. Therefore, the existing driveway length would meet TDP-14 with the proposed Campus Master Build-Out Plan.

TDP-15: Gate Stacking Analysis. Per TDP-15, a Crommelin methodology analysis is recommended to ensure vehicle queuing does not occur onto a City street. The Crommelin methodology is described in Robert Crommelin's *Entrance-Exit Design and Control for Major Parking Facilities* (1972) provided in Appendix H. The Crommelin methodology applies a distribution statistical methodology where vehicular reservoir needs (queuing) at a site can be determined for a given traffic volume and the service rate of the proposed gate device. The Crommelin report has service rates for different gates. Based on the volume of inbound traffic and the design capacities (i.e., service rates), the traffic intensity is determined. Traffic intensity is the ratio between the average arrival rate (peak-hour volume) and the gate service rate, which results in the length (22 ft per vehicle) necessary for adequate reservoir space. Table V shows the Crommelin methodology analysis for the inbound vehicles at both gated entries.

The existing (October 2014) plus project inbound volumes shown on Figure 7 have been utilized for the gate stacking analysis. In the Crommelin methodology, two service rates were identified for this analysis. The "code-carded operated gate" control at 340 vehicles per hour (veh/hr) was utilized for student and resident vehicles. This is conservative, as the system in place uses a transponder for each vehicle and does not require a vehicle to stop and insert a card. The "direction-info needed gate" control at 195 veh/hr was utilized for visitor vehicles. Visitors were calculated as 35 percent of the total inbound vehicles in the a.m. peak hour and 60 percent of the total inbound vehicles in the p.m. peak hour based on observations collected at each gate in October 2014.

Based on this analysis, the student/resident lane at the Concordia East gate requires a reservoir of 66 ft (i.e., three vehicles). The visitor lane at the Concordia East gate and guard shack requires a reservoir of 22 ft (one vehicle). As previously described, 300 ft and 265 ft inbound lanes are provided along Concordia East. Therefore TDP-15 is met at the gated entry along Concordia East for all students, residents, and visitors with the proposed Campus Master Build-Out Plan.

Table V: TDP-15 Analysis

Gate	No. of Lanes	Service Rate[1]	Arrival Rate (Peak-Hour Volume)		Traffic Intensity[2]		Reservoir Required (ft)[3]
			AM	PM	AM	PM	
Concordia East							
Residents/Students/Staff *Entering*	1	340	191	77	0.56	0.23	22
Guests/Visitors *Entering*	1	195	103	116	0.53	0.59	22
Total *Entering*	**2**	**–**	**294**	**193**	**–**	**–**	**–**
Concordia West							
Residents/Students/Staff *Entering*	1	340	49	27	0.14	0.08	22
Guests/Visitors *Entering*	1	195	27	41	0.14	0.21	22
Total *Entering*	**2**	**–**	**76**	**68**	**–**	**–**	**–**

Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016)

[1] Service Rate is the Design Capacity from Robert Crommelin's Entrance-Exit Design and Control for Major Parking Facilities (1972). Coded-Card Operated Gate (340 vehicles per hour) and Direction-Info Needed Gate (195 vehicles per hour).

[2] Traffic Intensity is the Arrival Rate (peak-hour volume) ÷ Service Rate per the "Reservoir Needs vs. Traffic Intensity" table in the Crommelin report.

[3] Number of vehicles indicated in the "Reservoir Needs vs. Traffic Intensity" table. Reservoir required is 22 ft per vehicle.

ft = feet

N/A = not applicable

The student/resident lane and the visitor lane at the Concordia West gate and guard shack both require a reservoir of 22 ft (one vehicle). As previously described, a 640 ft inbound lane is provided at the Concordia West gate with a 65 ft visitor lane at the guard shack. Therefore, TDP-15 is met at the gated entry along Concordia West for all students, residents, and visitors with the proposed Campus Master Build-Out Plan.

Circulation Phasing

LSA reviewed the City's 2012 *Citywide Circulation Phasing Analysis Report* (June 19, 2013) to identify any impacted locations within the project study area. The purpose of the Circulation Phasing Analysis Report is to provide the City with the necessary analysis to implement roadway and intersection improvements in a systematic way to maintain adequate mobility throughout the City over the next 5 years (through 2017). This study evaluates citywide roadway segments and intersections to identify components that fail to meet the City's performance criteria and recommends improvements and/or a plan of action to maintain acceptable levels of mobility within the City.

The City's analysis recommended physical improvements to meet the City's LOS standards for existing and 2017 conditions in five locations. Four of these intersections are within the project study area, including Culver Drive/University Drive, Ridgeline Drive/University Drive, Michelson Drive/ University Drive, and Jeffrey Road/Alton Parkway.

Based on the results of the Circulation Phasing Analysis Report, the City is currently designing intersection improvements at Culver Drive/University Drive, Ridgeline Drive/University Drive, and Jeffrey Road/Alton Parkway to improve the existing and future operations at these intersections. In addition, the City is currently preparing a study to confirm the results of the Circulation Phasing Analysis and identify improvements along the University Drive corridor between Yale Avenue and east of Michelson Drive (toward I-405).

Based on the results presented in this TIA, the Campus Master Build-Out Plan would result in a significant impact to Ridgeline Drive/University Drive under 2017 approved conditions. However, the City is currently designing improvements for this intersection (i.e., a second northbound right-turn lane and a third eastbound through lane) that would restore the LOS to satisfactory levels. The project will be required to pay its fair-share contribution toward these intersection improvements in 2017.

Congestion Management Program Consistency Requirements

As presented in Table A, Concordia University currently generates 4,732 ADT. With the proposed Campus Master Build-Out Plan, Concordia University would generate 6,241 ADT. As such, the proposed project is forecast to generate approximately 1,509 ADT. The project would not generate more than 2,400 ADT, and the project does not take direct access to a Congestion Management Program (CMP) facility. Therefore, a CMP-level analysis is not required.

Pedestrian Circulation

Objective B-3 of the City's General Plan Circulation Element is "to establish a pedestrian circulation system to support and encourage walking as a mode of transportation." The City has established the following three policies to support Objective B-3:

1. Link residences with schools, shopping centers, and other public facilities, both within a planning area and to adjacent planning areas, through an internal system of trails.
2. Require development to provide safe, convenient, and direct pedestrian access to surrounding land uses and transit stops. Issues such as anticipated interaction between pedestrians and vehicles, proposed infrastructure improvements, and design standards shall be considered.
3. Design and locate land uses to encourage access to them by nonautomotive means.

In support of Objective B-3, the project incorporates a continuous system of sidewalks within the project site. The pedestrian amenities within the site and at its adjacencies have been designed to comply with the City's objective. Where modes intersect (i.e., streets and sidewalks), accessible ramps are incorporated. Safe access to the public street system via paths and sidewalks throughout the campus will be provided. Sidewalks are currently located on both sides of Ridgeline Drive, Turtle Rock Drive, University Drive, Campus Drive, Culver Drive, and Michelson Drive. Sidewalks are also provided on one or both sides of Concordia East and Concordia West to connect to various campus walkways, buildings, and parking areas. With signalization of Ridgeline Drive/Concordia East and the provision of a second outbound lane, the project will improve the existing sidewalk along the south side of Concordia East and will install a new pedestrian crosswalk with appropriate signage along Ridgeline Drive on the south side of the intersection. Land uses in close proximity to the project site include other future residential sites, retail and commercial uses, and employment centers. All these land use types are accessible by nonautomotive means.

Pedestrian sidewalks and the existing 11 ft pedestrian/bicycle trail that generally runs through the middle of campus and connects the Turtle Rock Vistas development to the east and Ridgeline Drive to the west will remain open and continue to be maintained during development and construction of the project. The pedestrian/bicycle trail will be realigned as necessary. Students and visitors will be able to walk to all existing and new buildings and parking areas at all times. The campus will incorporate all modes of transportation.

Bicycle Circulation

The City's General Plan includes a list of goals and objectives for bicycle planning. As stated in the General Plan, the bicycle circulation objective is "To plan, provide and maintain a comprehensive bicycle trail network that, together with the regional trail system, encourages increased use of bicycle trails for commuters and recreational purposes." Ridgeline Drive, Turtle Rock Drive, University Drive, Campus Drive, Jeffrey Road, Culver Drive, and Michelson Drive currently provide on-street (Class II) bike lanes on both sides of the street in the project vicinity. University Trail, which connects the San Diego Creek Trail to Ridgeline Drive, also provides a trail for bicycle use. Therefore, bicycle travel can occur along these routes to and from the University and employment, shopping, and recreation destinations.

On-site bicycle travel can occur along Concordia East, Concordia West, and Dorm Road, as well as along the internal residential streets connected to Concordia East and Concordia West (i.e., Faith, Joy, Daystar, and Ascension). Figure 12 shows the pedestrian paths and bike trails and paths in the vicinity of the project site.

In addition, the existing pedestrian/bicycle trail that generally runs through the middle of the campus will remain, and bicyclists will have access to all existing and proposed facilities. Drivers and bicyclists should comply with all laws regulating the safety of travel along these roadways.

Transit Facilities

Transit facilities will be accessible to and from the project site via sidewalks along Concordia East, Concordia West, Ridgeline Drive, Turtle Rock Drive, University Drive, Campus Drive, Culver Drive, and Michelson Drive. This is an important feature, as OCTA stops are provided at the northeast and northwest corners of Culver Drive/Campus Drive for Routes 79 and 175, as well as at the northeast and southwest corners of Michelson Drive/Jordan Drive (north of Michelson Drive/University Drive) for Route 175. OCTA Route 79 provides transportation to and from the cities of Tustin and Newport Beach via Irvine Boulevard, Culver Drive, and University Drive. Route 175 provides transportation to and from the Northwood and the University Town Center areas of the City.

The OCTA bus system map and bus stop locations are provided in Appendix I.

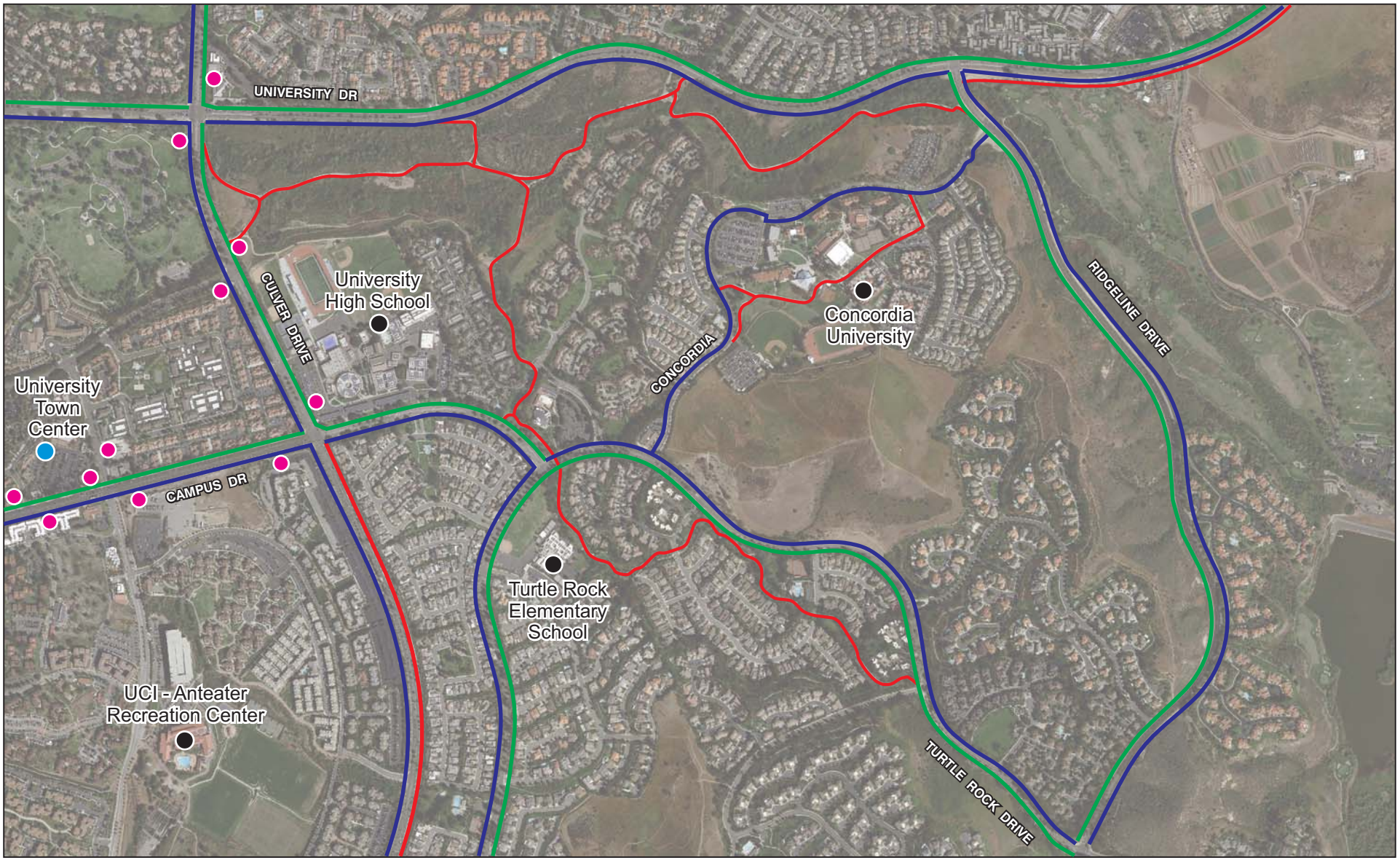
WEEKEND TRAFFIC AND SPECIAL EVENTS

Weekend Schedule

In addition to the typical weekday activities that occur on campus as previously described (see "Introduction; Existing, General Plan, and Proposed Site Uses"), weekend activities and activities that would be considered "special events" also occur on campus and are summarized below.

- **Academic Life.** As previously discussed, it is not uncommon for classrooms, labs, or rehearsal rooms to be scheduled for weekends.
- **Student Life.** As previously discussed, Student Life activities often occur on weekends (particularly in the Fall and Spring Semesters). Athletic competitions, vocal and instrumental recitals, theatrical and musical productions are often scheduled for weekends.
- **University Life.** As previously discussed, University Life activities often occur on weekends. Some of these events are also considered special events due to the number of attendees; special events are further discussed below.
- **Auxiliary/Community Life.** As previously discussed, Auxiliary/Community Life activities often occur on weekends. Some of these events are also considered special events due to the number of attendees; special events are further discussed below.

Special events are held at the main campus throughout the year (e.g., move-in day, graduations, Christmas concerts, homecoming, and athletic tournaments). Special events typically attract guests and visitors from outside the University and occur outside of typical campus weekday peak hours (8:00 a.m. to 9:00 a.m. and 4:30 p.m. to 5:30 p.m.) or during the weekends.



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FEET

SOURCE: Google Maps

LEGEND

- Class 1 Trails*
- Class 2 Trails*
- Sidewalks
- School
- Retail
- Transit Stop

*Referenced from the City of Irvine
General Plan Circulation Element (June 2012)

FIGURE 12

Concordia University

Bicycle and Pedestrian Access

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These special events have the potential to attract a larger number of attendees and associated vehicle trips to the campus in concentrated time periods. This is a concern for the residents of the adjacent communities. Due to the number of visitors, parking concerns, and related vehicle trips associated with special events, special events must be coordinated campuswide and authorized by the Campus Safety and University Services Departments.

As previously identified, to have a better understanding of what uses and activities generate traffic by time of day, Concordia University provided the Daily Schedules of all general activities and special events on typical weekdays in October 2014 and April 2015 and during a busy weekend in April 2015. The Daily Schedules for Concordia University (including all events, activities, students, staffing, and visitors) for October 30, 2014 and April 14–19, 2015 are provided in Appendix J. As shown, the well-attended events that occurred on Saturday, April 18, 2015, and Sunday, April 19, 2015, were as follows:

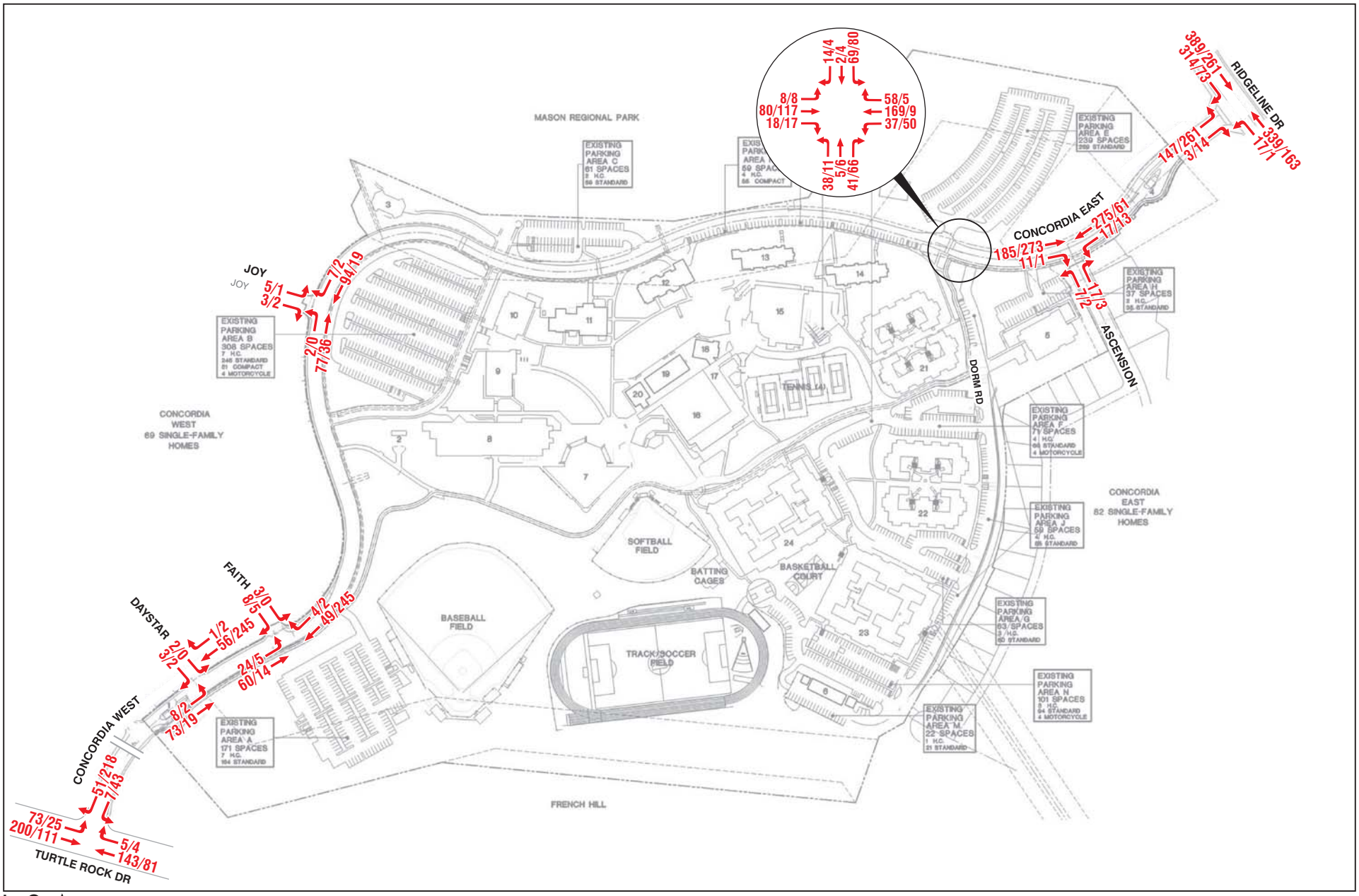
- CUI Baseball vs Vanguard University: 12:00 to 6:00 p.m. Saturday (325 students/staff and visitors)
- Concordia University Men's Lacrosse vs. Biola: 4:00 to 6:00 p.m. Saturday (100 students/staff and visitors)
- Women's OC High School All Star Game: Saturday, 5:00 to 7:00 p.m. Saturday (1,500 visitors)
- Men's OC High School All Star Game: Saturday, 7:00 to 9:00 p.m. Saturday (2,000 visitors)
- MasterWorks Concert: Saturday, 7:30 to 9:30 p.m. Saturday (357 visitors)
- MasterWorks Concert: Sunday, 3:00 to 5:00 p.m. Sunday (497 visitors)

Saturday, April 18, 2015, was a unique day in which several large events on campus overlapped. The following presents an analysis of the traffic operations internal to the campus during these large events:

Intersection Operations

Based on residents' concerns with traffic during large events along Concordia Drive and the east gate area, traffic counts and queuing observations, including video surveillance, were conducted on Saturday, April 18, 2015, and Sunday, April 19, 2015. The evaluation of on-site traffic, specifically on Saturday, April 18, 2015, was selected knowing that several large overlapping events were scheduled that day. The traffic counts, conducted by NDS, were collected at the two gated access locations of Ridgeline Drive/Concordia East and Turtle Rock Drive/Concordia West. The counts and surveys are provided in Appendix D.

The weekend counts were conducted to analyze the operations and queuing on Concordia Drive at the interface with the public street system and at the two gate locations during weekend and special event conditions. The traffic volume counts conducted on Saturday, April 18, 2015, illustrated on Figure 13, were higher than the counts conducted on Sunday, April 19, 2015. Based on review of the count data, the highest concentration of inbound vehicles on Saturday, April 18, 2015, occurred between 6:00 and 7:00 p.m. The highest concentration of outbound vehicles on Saturday, April 18, 2015, occurred between 9:00 and 10:00 p.m.



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LEGEND

XX/YY - AM/PM Peak Hour Volumes

Peak inbound volumes identified between 6:00 pm and 7:00 pm and peak outbound volumes identified between 9:00 pm and 10:00 pm.

FIGURE 13

Concordia University

Existing (April 2015) Saturday Traffic Volumes

PLAN SOURCE: LPA

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An HCM unsignalized intersection analysis was conducted for the two terminal intersections along Concordia Drive during the Saturday, April 18, 2015, inbound peak-hour and outbound peak-hour conditions. This analysis presents a conservative assessment of weekend conditions as Saturday, April 18, 2015, had significant events on campus that are not typical for weekend on-campus activities. The HCM analysis worksheets are provided in Appendix K. The results of the HCM analysis are summarized in Table W.

Table W: Saturday Intersection LOS

Intersection	Saturday, April 18, 2015			
	Inbound Peak Hour[1]		Outbound Peak Hour[2]	
	Delay (seconds)[3]	LOS	Delay (seconds)	LOS
Ridgeline Drive/ Concordia East	28.5	D	17.8	C
Turtle Rock Drive/ Concordia West	9.4	A	10.3	B

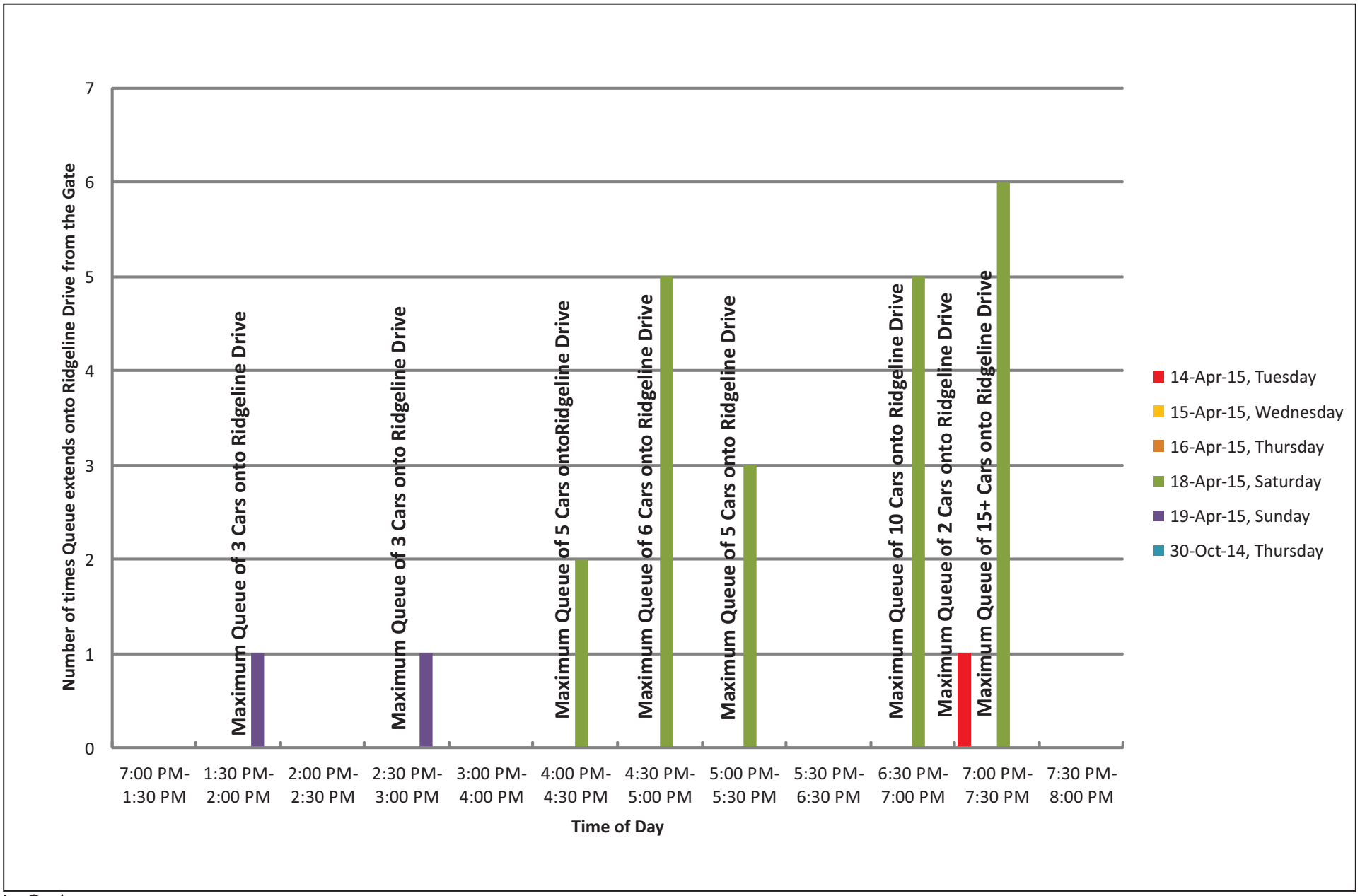
Source: Concordia University Campus Master Build-Out Plan Traffic Impact Analysis (LSA Associates, Inc., June 2016).
[1] Saturday inbound peak-hour volumes occurred between 6:00 p.m. and 7:00 p.m.
[2] Saturday outbound peak-hour volumes occurred between 9:00 p.m. and 10:00 p.m.
[3] The delay reported is in seconds per vehicle.
LOS = level of service

As shown in Table W, the two gated intersections operate at LOS D or better during the peak Saturday inbound and outbound periods. Even with the platooning of vehicles entering or exiting the campus on this busy Saturday, the operation of these internal intersections met the City's LOS standards. One reason for this is that traffic on Ridgeline Drive and Turtle Rock Drive is relatively low on Saturdays during peak times to allow vehicles to enter and exit the campus. Based on this conservative analysis, the internal intersections are anticipated to continue operating at satisfactory LOS during all other days and times, when special events and other campus activities are spread more evenly throughout the day. In addition, the installation of a traffic signal at Ridgeline Drive/Concordia East will improve the operation of this intersection.

Inbound and Outbound Queuing

NDS recorded 24-hour video surveillance for every traffic count survey (both weekday and weekend) along Concordia Drive. LSA reviewed this video data and identified the maximum queues that formed for the inbound and outbound movements at Ridgeline Drive/Concordia East and Turtle Rock Drive/Concordia West. The purpose of this was to identify whether inbound vehicles currently queue onto the public street system (at Ridgeline Drive on the east or Turtle Rock Drive on the west), and whether outbound vehicles queue internally past residential streets (at Ascension on the east or Daystar on the west).

Figure 14 provides a summary of the inbound video queue surveys conducted on October 30, 2014, and April 14–16, 18, and 19, 2015, for the Ridgeline Drive/Concordia East access. Based on review of the queuing surveillance data, peak inbound queuing occurred on Saturday, April 18, 2015, between 7:00 and 7:30 p.m.



LSA

FIGURE 14

Concordia University

Ridgeline Drive/Concordia East Gate
Inbound Queue

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This time period corresponds to the events scheduled on campus (as described above). There were instances during this period when vehicles queued onto Ridgeline Drive.

The queues for inbound traffic are a function of the gate operation and guard operator rather than volume of traffic. The video files showed that the resident/student gate and the visitor gate were in the down position when the platoon of vehicles would enter the site (for the weekday and weekend time periods observed). Because of the special events taking place on campus, most of the vehicles were visitors who stopped at the guard shack. This caused a delay for entering vehicles and eventually caused vehicles to back out onto Ridgeline Drive.

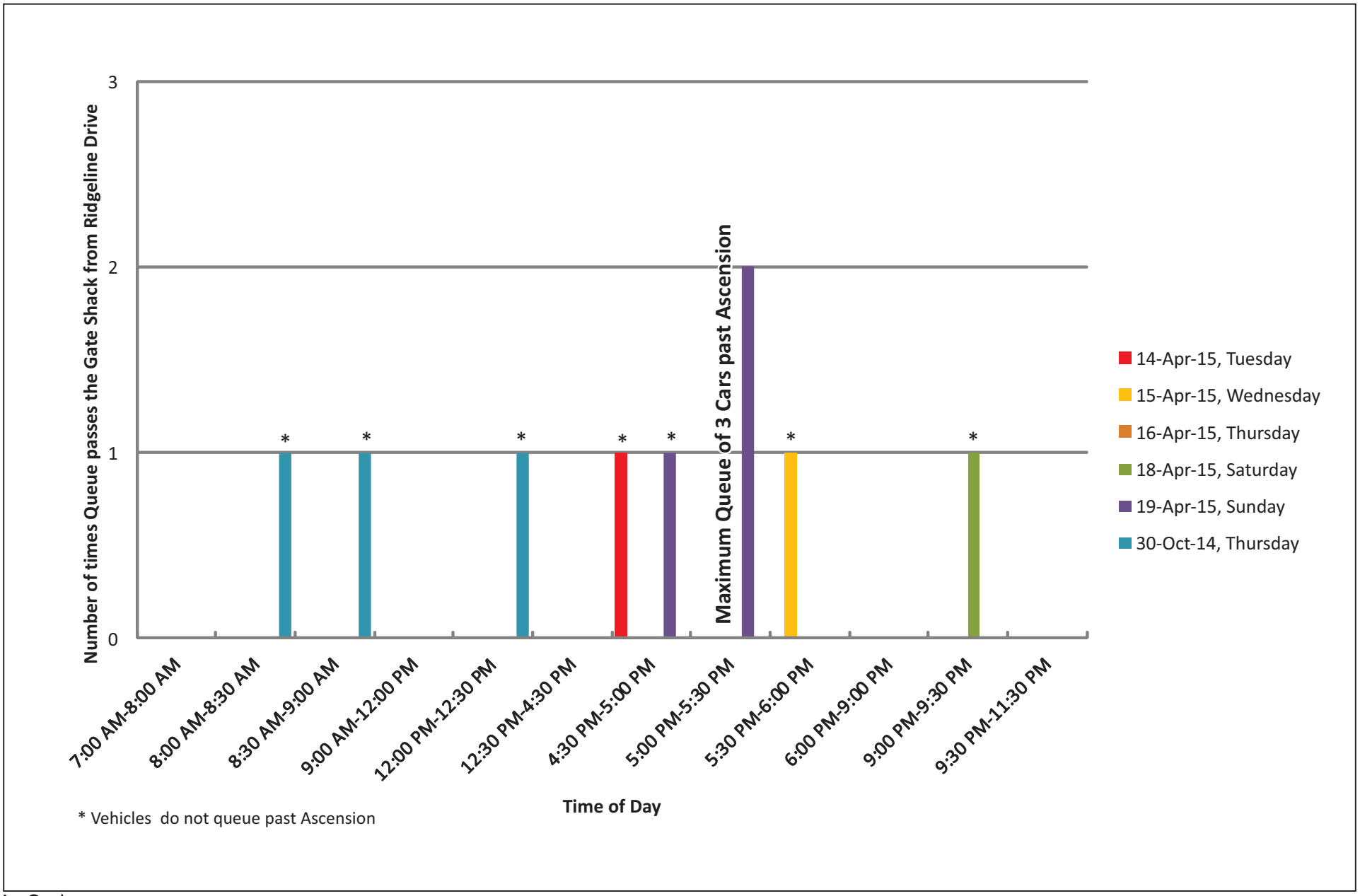
As described later in this report, Concordia implemented and will continue to refine its Traffic and Parking Management Plan (provided in Appendix L) that will alleviate this queuing condition for special events. As provided in the access analysis earlier in the report (TDP-15), a gate analysis was conducted for typical weekday conditions and adequate stacking distance is anticipated with build out of the Campus Master Build-Out Plan.

Figure 15 provides a summary of the outbound video queue surveys conducted on October 30, 2014, and April 14–16, 18, and 19, 2015, for the Ridgeline Drive/Concordia East access. Based on review of the queuing surveillance data, the peak outbound queuing occurred between 5:00 p.m. and 5:30 p.m. on Sunday, April 19, 2015. This time period corresponds to the end of the music concert on site. There were only two instances during this 30-minute period when vehicles queued past the guard shack. Only one of these times did vehicles queue past Ascension. University safety personnel were directing traffic at this location to keep the intersection clear for residents on Ascension. With the installation of a traffic signal and an additional eastbound turn lane at Ridgeline Drive/Concordia East, outbound vehicles will be provided more capacity to exit the University and not queue back past the guard shack.

Similar to inbound traffic, the Traffic Management Plan will address potential queuing of outbound traffic during weekends and special events to ensure that residents are provided access in and out of their community without excessive delay.

For the Turtle Rock Drive/Concordia West location, there were no instances observed where inbound or outbound queuing occurred at the west gate during typical weekdays or during the weekends or special events.

The proposed Campus Master Build-Out Plan update includes certain components that have the potential to increase weekend/special event traffic. These proposed project components include, but are not limited to, the CU Center addition that would increase the overall existing seating capacity from approximately 500 seats to approximately 800 seats (Phase 2); the provision of bleachers with seating for approximately 300 people on the proposed viewing deck at the soccer/track field (Phase 2); and the inclusion of a small theatre (approximately 400 seats) for use by theatre students in the proposed Arts, Alumni, and Advancement Building (Phase 4). However, the proposed on-site improvements included as part of the master plan, and required implementation of strategies identified in the Traffic and Parking Management Plan, as described in subsequent sections of this report, would ensure that these project components do not adversely impact on-campus traffic operations or queuing.



LSA

FIGURE 15

Concordia University

Ridgeline Drive/Concordia East Gate
Outbound Queue

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On-Site Improvements

The proposed Campus Master Build-Out Plan will implement several internal circulation improvements on site. These improvements are not mitigation to offset a significant impact, but are project design features intended to improve the daily operation and safety along Concordia Drive during typical operations, weekends, and special events. These improvements are recommended based on discussion with the surrounding community. The improvements, illustrated on Figure 16, include the following:

- Installing a traffic signal, a second outbound lane for residential and Concordia University traffic, and a new pedestrian crosswalk with appropriate signage at the intersection of Ridgeline Drive/Concordia East;
- Improving the physical roadway and operation in the East Gate and Dorm Road area by adding a stop-controlled intersection at Ascension/Concordia East with uncontrolled flow for inbound traffic, and by adding a dedicated westbound left-turn lane on Concordia East at Ascension;
- Realigning the parking lot entrance (Area E) with Dorm Road and creating a four-way stop-controlled intersection, including adding a dedicated westbound left-turn lane on Concordia East at Dorm Road;
- Relocating the District Office access driveway from Concordia East to Dorm Road; and
- Reconfiguring the existing parking areas throughout the campus.

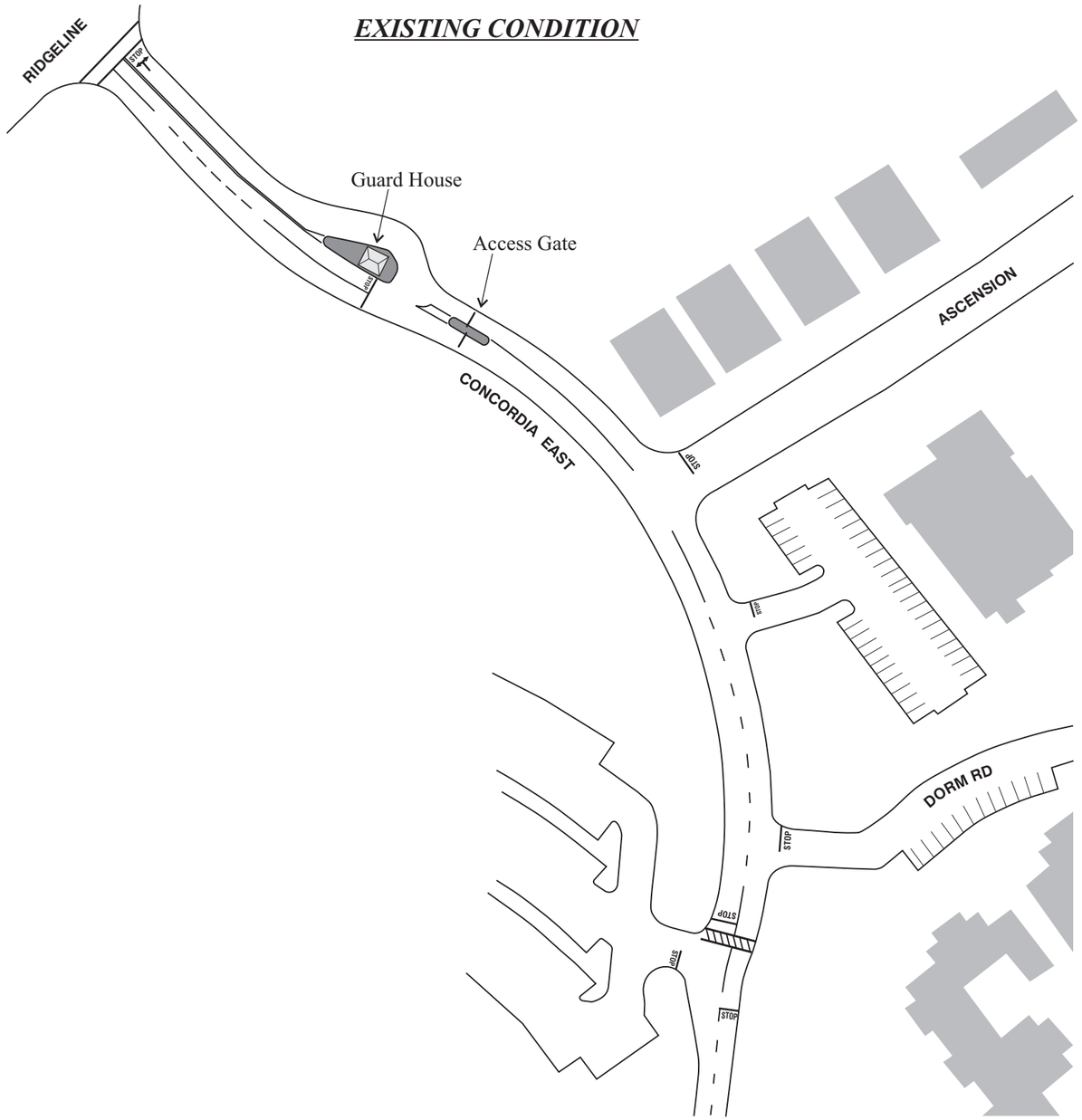
These improvements will ease traffic and congestion during typical weekday operations, as well as weekend and special event operations, which was a concern of the residential community.

TRAFFIC AND PARKING MANAGEMENT PLAN

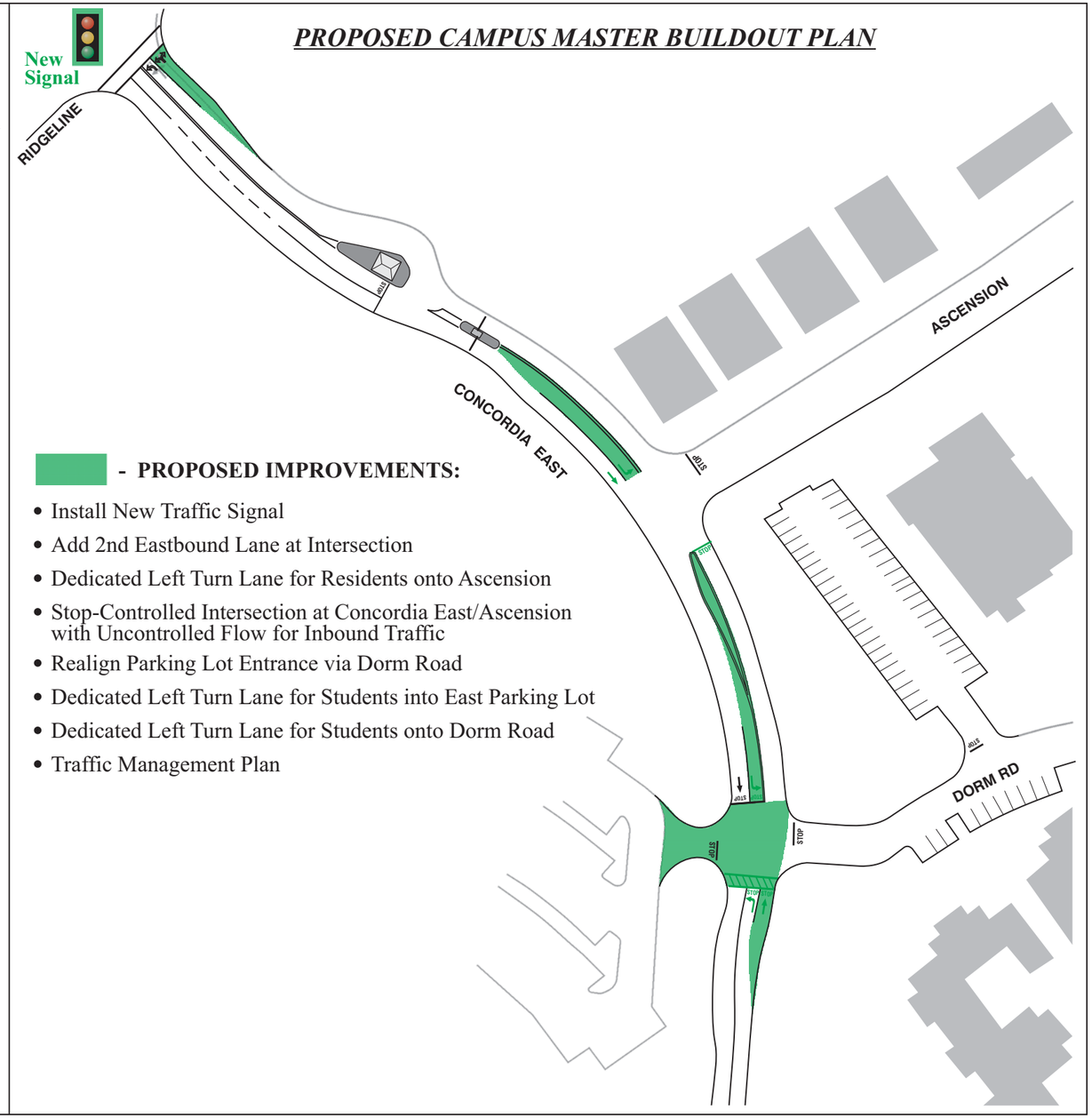
Concordia University holds a variety of events throughout the year. During these special events, traffic flow throughout the campus can increase, leading to temporary congestion within the internal roadways and intersections. The Concordia University Traffic and Parking Management Plan (April 2016), provided in Appendix L, is an implementation plan to manage on-site traffic and parking based on these special events. Specific measures and actions that are taken during high-volume events include the following:

- **Gatehouses:** During periods of heavy traffic, both the entry and exit control arms will be locked in the open position. Gatehouse attendants will forgo the normal procedure of stopping visitor vehicles entering campus. Maintaining unimpeded traffic flow increases the capacity of the entries two- to threefold during periods of increased traffic. Vehicles not displaying a "Concordia" parking decal will be screened at another location further inside the campus. This is intended to prevent vehicles from backing up onto city streets and to make entering and exiting campus quicker and easier.
- **Parking Lots:** Vehicles entering campus will be directed to parking lots designated for specific events (e.g., vehicles entering campus for a baseball game will be directed to the west parking lot). This will ensure visitors are parked in an area closest to the event they are attending. This will also reduce the number of vehicles "circling" the campus looking for parking.

EXISTING CONDITION



PROPOSED CAMPUS MASTER BUILDOUT PLAN



- PROPOSED IMPROVEMENTS:

- Install New Traffic Signal
- Add 2nd Eastbound Lane at Intersection
- Dedicated Left Turn Lane for Residents onto Ascension
- Stop-Controlled Intersection at Concordia East/Ascension with Uncontrolled Flow for Inbound Traffic
- Realign Parking Lot Entrance via Dorm Road
- Dedicated Left Turn Lane for Students into East Parking Lot
- Dedicated Left Turn Lane for Students onto Dorm Road
- Traffic Management Plan

LSA

FIGURE 16

N

Concordia University

Project Design Features

PLAN SOURCE: LPA

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The Department of Campus Safety will work with event coordinators to provide parking instructions to guests prior to the event. At times, special parking passes are issued to expected guests in advance of their arrival so they can move more quickly through the gatehouse screening.

- **Uniformed Safety Personnel:** Uniformed safety personnel will be assigned to key positions on campus to assist with the flow of traffic and parking. Key positions include all entrances and exits and within all parking lots, crosswalks, and fire lanes. Uniformed safety personnel will be assigned to key intersections, including Concordia East and Ascension Drive. Uniformed safety personnel will work to ensure intersections remain clear for turning vehicles and pedestrians needing to cross streets. Safety personnel assigned to the intersection of Concordia East and Ascension Drive will ensure the intersection remains clear to allow vehicles to enter and exit the private neighborhood. Safety personnel will also be assigned as roving units to continually monitor traffic flow and parking.

  Uniformed safety personnel will wear reflective vests while on duty. Each will be equipped with a campus safety radio and traffic directional devices (e.g., hand-held stop signs, flashlights, and directional wands).

- **Signs:** Temporary signs will be posted on campus to help direct vehicles to the proper designated parking lots. Temporary "No Event Parking" signs will be placed at each entrance to the private neighborhoods. In addition, signs indicating directions to the I-405 will be posted at the Turtle Rock Drive gate.

- **Bus Parking:** Large buses entering campus will be requested to do so via the Turtle Rock Drive gate. Buses remaining on campus will be directed to park in designated bus parking areas (i.e., at the rear of the main lot, in the west lot, or the Pacific Southwest District loading zone). Buses will not be permitted to idle while parked on campus.

- **Egress:** Vehicles exiting the campus after an event will be directed and required to exit the campus via either the Ridgeline Drive or Turtle Rock Drive gate depending on the parking lot utilized. Sending exiting traffic to both gates will help reduce vehicle back-up at the Ridgeline Drive gate. As previously stated, uniformed safety personnel will be assigned to the intersection of Concordia East and Ascension Drive to ensure the intersection remains clear for vehicles entering and exiting the private neighborhood.

- **Off-Site Parking:** Off-site parking and shuttle service will be considered depending on the nature and size of an event. Off-site parking and shuttle service has been used during well-attended events with great success. Off-site parking and shuttle service will be considered for large events and multiple events when on-campus parking is anticipated to reach capacity. Off-site parking locations that have been used include University High School, Light of Christ Lutheran Church, Turtle Rock Preschool, and Mariners Church Irvine.

- **Irvine Police Department:** The Irvine Police Department will be notified in advance anytime large events or multiple events have the potential to impact local traffic (i.e., traffic backing up onto Ridgeline Drive or Turtle Rock Drive). The Irvine Police Department will be requested to provide traffic direction on local streets surrounding the campus. At such time as a traffic signal is installed at Ridgeline Drive and Concordia East, Concordia University will seek to establish a contract for services with the Irvine Police Department to staff an officer(s) to work the pickle at the control box (similar to the existing arrangement with Mariners Church Irvine).

These measures are already in effect, and have helped traffic flow efficiently and safely throughout CU. Although outbound vehicles on Ridgeline Drive/Concordia East temporarily queued past the gatehouse and reached the intersection of Ascension/Concordia East on Sunday, April 19, 2015, uniformed safety personnel kept the intersection clear and directed residents into and out of Ascension with minimal delay. This plan helps with traffic and parking within the campus by providing guests and visitors clear direction. This will ensure that guests and visitors will park closest to the event they are attending, and will also reduce the number of vehicles that slow down and wander throughout the campus, searching for a parking space.

The Traffic and Parking Management Plan addresses operational issues associated with special events on campus, both for existing conditions and for future conditions with implementation of the Campus Master Build-Out Plan.

SPECIAL DEVELOPMENT REQUIREMENTS – DAILY TRIP CAP ANALYSIS

A Zone Change is proposed to update the SDR in Zoning Ordinance Section 9-21-7, adopted in conjuction with the 1992 Christ College General Plan Amendment and Zone Change. As pertains to traffic, Zoning Ordinance Section 9-21-7(B) currently states the following:

Special Development Requirement 10:

Any development applications for institutional use within the campus site shall demonstrate to the satisfaction of the Director of Community Development that the projected total average daily traffic from the site, based on the City of Irvine trip generation rates approved with General Plan Amendment 4237-GA for the campus (330 institutional housing units at four trips per unit and 1,800 full-time equivalent students at 1.21 trips per student), does not exceed 3,500 average daily trips.

Special Development Requirement 20:

In conjunction with submittal of any tentative tract map covering Chapel Hill Vista, Christ College Irvine campus build-out, and/or Hillcrest Vista, the applicant shall submit a traffic analysis, in accordance with a City-approved scope of work, addressing specifically, but not limited to, the intersections of University Drive and Ridgeline Drive, and Ridgeline Drive and Concordia. Based upon the study, additional mitigation measures may be placed on the map.

The proposed Zone Change would eliminate SDRs 10 and 20 from the Zoning Ordinance. Appendix M provides justification, based on current and projected conditions on site, for updating the current requirements which will be incorporated into the Concordia University CUP as a Condition of Approval.

Concordia University will establish an annual monitoring program to ensure that the daily trip cap of 6,241 ADT is not exceeded. If the ADT cap is exceeded, Concordia University will be responsible for identifying and implementing measures to reduce the ADT in order to meet the daily cap.

REQUIRED MITIGATION MEASURES AND/OR RECOMMENDATIONS

Based on the results of this analysis, the development of the project can be implemented without significantly affecting the surrounding roadway system in the existing, 2017, 2035, or post-2035 horizons, with the exception of the following:

- **Ridgeline Drive/University Drive intersection**
  - Existing, 2017 Approved, 2035 Approved, and Post-2035 Approved and Pending LOS (ICU)
  - TDP-1 (Turn-Lane Pocket Lengths), dual westbound left-turn lanes
- **University Drive eastbound roadway segment between Ridgeline Drive and Michelson Drives**
  - 2035 Approved and Pending Peak Hour v/c ratios
- **Turtle Rock Drive/Concordia West intersection**
  - TDP-1 (Turn-Lane Pocket Lengths), southbound left-turn lane

The project will be responsible for the following improvements in order to mitigate the deficiencies identified above:

2017 Approved (Phases 1 and 2)

- **Ridgeline Drive/University Drive Intersection**
  - Payment of a 0.76 percent fair-share contribution for the planned improvements currently being designed by the City that would improve the overall operations of this intersection, resulting in satisfactory LOS and meeting TDP-1 design criteria for the dual westbound left-turn lanes to mitigate the Circulation Phasing impact. In case the City's project is not approved, the project will extend the westbound left-turn lane by 25 ft per lane at Ridgeline Drive/University Drive.
- **Ridgeline Drive/Concordia East Intersection**
  - With the installation of a traffic signal as a project design feature, this intersection would operate at satisfactory LOS and would meet TDP-3 and TDP-12 design criteria.
- **Turtle Rock Drive/Concordia West Intersection**
  - Lengthening the southbound left-turn lane from 110 ft to 140 ft to meet TDP-1 design criteria.

2035/Post-2035 (Campus Build Out)

- **Ridgeline Drive/University Drive Intersection**
  - Implementation of a second northbound right-turn lane to offset the project's impact in 2035 approved and post-2035 approved conditions. Prior to the issuance of a building permit for additional institutional square footage in Phases 3 and 4, the project applicant will be responsible for implementing this improvement or demonstrating in a subsequent traffic

analysis to the satisfaction of the Director of Community Development that the improvement is no longer needed.

  - As alternative mitigation, if it is demonstrated that the second northbound right-turn lane has been or is being implemented by others prior to the issuance of a building permit for additional institutional square footage in Phases 3 and 4, the project applicant will be responsible for a fair-share contribution toward implementation of this improvement. Payment of a 2.7 percent fair-share contribution (corresponding to 2035 approved conditions, which represents the highest calculation of 2035, post-2035, approved, and pending conditions) toward the planned improvements currently being designed by the City would improve the overall operations of this intersection, resulting in satisfactory LOS and meeting TDP-1 for the dual westbound left-turn lanes. The alternative mitigation shall be selected as the preferred mitigation should the City Council approve the improvement project prior to completion of the Campus Master Build-Out Plan.

- **University Drive Eastbound Roadway Segment Between Ridgeline Drive and Michelson Drive**
  - Implementation of a third eastbound through lane between Ridgeline Drive and Michelson Drive to offset the project's impact in 2035 approved conditions. Prior to the issuance of a building permit for additional institutional square footage in Phases 3 and 4, the project applicant will be responsible for implementing this improvement or demonstrating in a subsequent traffic analysis to the satisfaction of the Director of Community Development that the improvement is no longer needed. However, if the improvement has been identified or implemented in a short-term interim-year condition by others, the project applicant will be responsible for a 1.01 percent fair-share contribution (corresponding to 2035 approved p.m. peak-hour conditions, which represents the highest peak-hour calculation of 2035 approved and pending conditions) toward implementation of this improvement.
- **Ridgeline Drive/Concordia East Intersection**
  - With the installation of a traffic signal as a project design feature, this intersection would operate at satisfactory LOS and would meet TDP-3 and TDP-12 design criteria.
- **Turtle Rock Drive/Concordia West Intersection**
  - Lengthening the southbound left-turn lane from 110 ft to 140 ft to meet TDP-1 design criteria.

CONCLUSIONS

The Concordia University Campus Master Build-Out Plan TIA has been prepared to identify the short-term and long-range traffic impacts as a result of the update of the Campus Master Build-Out Plan for CU. Prior City approvals provide for a campus master build out to allow development of an additional 77,649 sf of institutional buildings beyond the current uses, for a total of 321,220 sf on the campus site. A fifth residential hall is also included in the approved campus build-out plan, increasing the total number of units from 256 to 330 (74 additional units) and increasing the total number of dorm beds from 1,024 to 1,320 (296 additional beds).

This study analyzed potential traffic impacts for existing and future daily, a.m. peak-hour, and p.m. peak-hour time periods at 33 intersections and 38 roadway segments surrounding the campus. Based on the results of this TIA and study area LOS, the addition of project traffic to existing and 2017, 2035, and post-2035 approved and pending traffic volumes would not significantly impact the study area intersections or roadways according to the City's performance criteria, with the exception of the following locations:

- Ridgeline Drive/University Drive intersection
- University Drive roadway segment between Ridgeline Drive and Michelson Drive

Recommendations have been provided to meet the City's LOS standards.

An access analysis consistent with the City's TDPs was conducted for the primary access locations that interface with the public street system. Based on this analysis and the recommendations provided herein, the project would meet all applicable City design criteria.

To improve the internal circulation on site for students and residents, the following project design features are included in the project description:

- Installing a traffic signal, a second outbound lane for residential and Concordia University traffic, and a new pedestrian crosswalk with appropriate signage at the intersection of Ridgeline Drive/ Concordia East;
- Improving the physical roadway and operation in the East Gate and Dorm Road area by adding a stop-controlled intersection at Ascension/Concordia East with uncontrolled flow for inbound traffic, and adding a dedicated westbound left-turn lane at Ascension/Concordia East;
- Realigning the parking lot entrance (Area E) with Dorm Road and creating a four-way stop-controlled intersection, including adding a dedicated westbound left-turn lane on Concordia East at Dorm Road;
- Relocating the District Office access driveway from Concordia East to Dorm Road; and
- Reconfiguring the existing parking areas throughout the campus.

An enhanced traffic and parking management plan has been established by Concordia University to improve the on-site circulation during special events. Implementation of this plan during highly attended events will ensure residents maintain access in and out of their community while reducing the potential for queuing onto public streets.

The project incorporates design features to accommodate pedestrian and bicycle interaction. Pedestrian and bicycle traffic is afforded safe travel via sidewalks throughout the site that connect to the public street system, including the transit stops on Michelson Drive and Campus Drive in proximity to the project site. The existing 11 ft pedestrian/bicycle trail that runs throughout the campus and connects the Turtle Rock Vistas development to the east and Ridgeline Drive to the west will be realigned as necessary. This pedestrian/bicycle trail will remain open and continue to be maintained at all times during the development and construction of the proposed Campus Master Build-Out Plan.

APPENDIX A

APPROVED SCOPE OF WORK

SCOPE OF WORK
CONCORDIA UNIVERSITY CAMPUS MASTER BUILD-OUT PLAN
TRAFFIC IMPACT ANALYSIS
CASE NO. 00612052-PCPU & 00629029-PZC

The purpose of this analysis is to determine short-term and long-term traffic impacts resulting from the update of the Campus Master Build-Out Plan for Concordia University in the City of Irvine (City). The existing campus is generally located north of Turtle Rock Drive, south of University Drive, east of Culver Drive, and west of Ridgeline Drive within Planning Area 21 (PA 21). Access to the campus is provided via gated entry points from Ridgeline Drive to the east and Turtle Rock Drive to the west.

PROJECT DESCRIPTION

The 71.082-acre Concordia University main campus in Irvine (PA 21 - Turtle Rock) is currently improved with 20 institutional buildings (comprising 243,571 total square feet [sf]). Four existing residential halls provide 256 units with 1,024 available beds (4 beds per unit).

Prior City approvals provide for a campus master build out to allow development of an additional 77,649 sf of institutional buildings beyond the current uses, for a total of 321,220 sf on the campus site. A fifth residential hall is also included in the approved campus build out plan, increasing the total number of units from 256 to 330 (74 additional units) and increasing the total number of beds from 1,024 to 1,320 beds (4 beds per unit).

The proposed Campus Master Build-Out Plan (Conditional Use Permit modification 00612052-PCPU) includes a maximum of up to 321,220 institutional sf total on campus, which represents the approved allocation on site. The plan also relocates the fifth residence hall to a more convenient, centralized location, closer to classrooms and farther away from residential neighborhoods. In the first phase, a total of 38,980 sf will be constructed (37,780 sf Music/Worship/Theology Building and 1,200 sf Astronomy Center).

Additionally, a Zone Change application has been filed (Case No. 00629029-PZC) to update the special development requirements (SDR) in Zoning Code Section 9-21-7. The traffic study will evaluate the methodology and daily trip cap identified in Section 9-21-7(B)-10.

An enhanced traffic management system for special events will help to ease congestion during well-attended events. Several other internal circulation improvements will be implemented as part of the Campus Master Build-Out Plan. These improvements include:

8/25/15
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- Improving the physical roadway in the East Gate and Dorm Road area by adding a 3-way stop-controlled intersection at Ascension/Concordia East and adding a dedicated westbound left turn lane at Ascension/Concordia East;
- Re-aligning Dorm Road with the Reconfigured Parking lot (Area E) entrance and creating a 4-way stop controlled intersection, including adding a dedicated westbound left turn lane on Concordia East at Dorm Road;
- Reconfiguring the existing parking areas throughout the campus.

The proposed Campus Master Build-Out Plan also includes various upgrades to athletic facilities and "outdoor space." Planned new facilities include a lap/recreational pool as well as two additional tennis courts (six total) and two new sand volleyball courts.

This Traffic Impact Analysis (TIA) will be developed in accordance with the applicable sections of the City's TIA Guidelines (adopted by the City Council on August 24, 2004), and the City's Transportation Design Procedures (TDPs) (adopted in February 2007) and will include the following key elements.

I. EXECUTIVE SUMMARY

This section will provide a short, clear, and concise description of the project and TIA findings. The proposed study recommendations and project mitigation measures will also be included in this section, if necessary.

II. INTRODUCTION

This section of the report will include a comprehensive description of the project and key elements of the TIA, including planning area description, general terrain features, and existing/proposed uses on site. The specific surrounding land uses on each adjacent parcel will also be described. The following elements are identified for the purpose of conducting the TIA.

A. Project Site

A project location (and study area intersection) map has been attached to this scope of work and will be provided in the TIA. A project site plan will also be included in this section of the report. The project site is generally located north of Turtle Rock Drive, south of University Drive, east of Culver Drive, and west of Ridgeline Drive within PA 21. Access to the project site will continue to be provided via two gated access points off of Ridgeline Drive to the east and Turtle Rock Drive to the west.

9/25/15
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B. Study Area Boundary

The study area will include the following intersections (and roadway links between each intersection) in the City's traffic model (Irvine Transportation Analysis Model [ITAM]):

1. University Drive southbound ramps/MacArthur Boulevard
2. University Drive northbound ramps/MacArthur Boulevard
3. University Drive/California Avenue
4. University Drive/Campus Drive
5. University Drive/Harvard Avenue
6. Campus Drive/California Avenue
7. Bonita Canyon Drive/State Route 73 (SR-73) northbound ramps
8. Bonita Canyon Drive/Newport Coast Drive
9. Culver Drive/Alton Parkway
10. Culver Drive/Main Street
11. Culver Drive/Interstate 405 (I-405) northbound ramps
12. Culver Drive/I-405 southbound ramps
13. Culver Drive/Michelson Drive
14. Culver Drive/University Drive
15. Culver Drive/Harvard Avenue
16. Culver Drive/Campus Drive
17. Culver Drive/Shady Canyon Drive
18. West Yale Loop/Alton Parkway
19. West Yale Loop/Main Street
20. East Yale Loop/Alton Parkway
21. Jeffrey Road/Alton Parkway
22. Jeffrey Road/I-405 northbound ramps
23. University Drive/I-405 southbound ramps
24. University Drive/Michelson Drive
25. University Drive/Ridgeline Drive
26. University Drive/Yale Avenue
27. Michelson Drive/Yale Avenue
28. Ridgeline Drive/Concordia East Drive

8/25/15

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29. Ridgeline Drive/Turtle Rock Drive
30. Sunnyhill/Turtle Rock Drive
31. Sunnyhill/Shady Canyon Drive
32. Turtle Rock Drive/Campus Drive
33. Turtle Rock Drive/Concordia West Drive

Adjacent roadway links and intersections in the study area, as well as key locations within the campus, will be analyzed in the study. If significant impacts are identified at the boundary of the initial study area, the analysis area will be expanded accordingly.

C. Existing, General Plan, and Proposed Site Uses

The existing and proposed land uses for the project site will be described in this section. Also, the following tables will be prepared in this section of the report:

- Existing site: land uses, square footage of each type of land use
- Build out of the site: land uses, square footage of each type of land use

III. PERFORMANCE CRITERIA

The performance criteria to determine potential project impacts and mitigation will be consistent with the City's criteria, as approved by the City Council on August 24, 2004. Also, the most recently approved peak-hour link capacity methodology will be utilized for evaluating roadway capacity conditions and the need for mitigation measures (if necessary).

IV. EXISTING CONDITIONS

A. Existing Site Uses

Existing land uses on site will be identified. The existing site has approximately 243,571 sf of institutional use and 256 dorms with 1,024 beds.

B. Existing Roadways and Intersections

The characteristics of the site's surrounding roadway network will be surveyed to verify the existing number of lanes, traffic signal locations, intersection configurations, and other visible factors that may have to be included in the analysis.

Existing roadway volumes, volume-to-capacity (v/c) ratios, and level of service (LOS) at intersections will be included for the above roadways and intersections.

8/25/15
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V. ANALYSIS METHODOLOGY/APPROACH

LSA Associates, Inc. (LSA) will collect peak-hour and average daily traffic (ADT) counts at study area intersections and roadway segments. New traffic counts will be collected for intersections and roadways for which current data (less than 1 year old from the date of the scope of work approval) is not available. If new traffic counts are needed, they will be collected when Irvine schools are in session. Traffic counts will not be conducted during the week of any holidays. All traffic counts will: (1) be collected according to standard traffic engineering requirements; (2) include surveys of Tuesday, Wednesday, or Thursday representative of a typical active day with traffic generated by students, faculty, residents, staff and visitors.; and (3) be conducted between 7:00 a.m. and 9:00 a.m. for the a.m. peak hour and between 4:00 p.m. and 6:00 p.m. for the p.m. peak hour. The highest 1-hour period within the 2-hour count period is considered the peak hour of commute traffic. All traffic counts will be provided as an appendix to the TIA.

Study area intersections will be analyzed using the Intersection Capacity Utilization (ICU) methodology for signalized intersections and the Highway Capacity Manual (HCM) methodology for unsignalized intersections and the California Department of Transportation (Caltrans)-controlled ramp intersections. The roadway segments between the intersections will also be analyzed in the report. Daily traffic volumes and v/c ratios will be presented in the analysis for these roadway segments. A peak-hour link analysis will be conducted for roadway segments that exceed the City's standard performance LOS.

To disclose the effect of adding the project land use in an existing setting, the following analyses will be conducted:

- Existing (2015)
- Existing Plus Campus Master Build-Out Plan

For purposes of the Existing Plus Project (Campus Master Build-Out Plan) analysis, the project trips will be determined by considering the traffic volume differential between the Existing No Project and the Existing Plus Project (Campus Master Build-Out Plan) ITAM runs. This differential will be added to the existing counts to determine Existing Plus Campus Master Build-Out Plan conditions. The Existing No Project ITAM run will be provided by City staff.

The approved version (Model Number 12 or higher) of the ITAM will also be used for conducting all future year model runs. The following ITAM runs will be conducted for the study.

- 2017 Approved Baseline (modified to represent existing land uses for Concordia University)
- 2017 Approved Baseline Plus Campus Master Build-Out Plan
- 2017 Pending Baseline (modified to represent existing land uses for Concordia University)
- 2017 Pending Baseline Plus Campus Master Build-Out Plan
- 2035 Approved Baseline (modified to represent existing land uses for Concordia University)

8/25/15

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- 2035 Approved Baseline Plus Campus Master Build-Out Plan
- 2035 Pending Baseline (modified to represent existing land uses for Concordia University)
- 2035 Pending Baseline Plus Campus Master Build-Out Plan
- Post-2035 Approved Baseline (modified to represent existing land uses for Concordia University)
- Post-2035 Approved Baseline Plus Campus Master Build-Out Plan
- Post-2035 Pending Baseline (modified to represent existing land uses for Concordia University)
- Post-2035 Pending Baseline Plus Campus Master Build-Out Plan

The future conditions described above are based on the roadway network and land use assumptions envisioned to be in place by the respective horizon years. City staff has incorporated all approved and pending projects to be analyzed for the cumulative setting in the latest version of ITAM.

City staff will make all necessary land use and network changes for the baseline (approved and pending) scenarios and will provide LSA with the baseline ITAM files (modified to represent current/approved land uses). LSA will prepare the forecast "plus project" ITAM data for the Campus Master Build-Out Plan scenarios. A description of any changes to the ITAM for this project will be provided to the City for review and approval prior to implementation. The ITAM data will be post-processed and used in the LOS analysis.

VI. FUTURE TRAFFIC CONDITIONS

LSA will analyze the effects of the change in institutional square footage on the study area intersections and roadway segments for existing, 2017, 2035, and post-2035 horizons.

LSA will request the future baseline ITAM from City staff. LSA will revise the land use and incorporate network changes related to the "plus Campus Master Build-Out Plan" scenarios. As a result, the following future year ITAM runs will be provided in the traffic study:

1. **2017 Approved Baseline:** The ITAM 2017 run (Y17-12 or higher) will include the impacts of each application for development approved by the City. Any additional development beyond the existing uses for the project that might be assumed in ITAM will be deleted for the analysis of this scenario. The Concordia University land uses for this short-term no project condition include the existing land uses of 243,571 sf of institutional use and 1,024 dorm beds.
2. **2017 Approved Baseline Plus Proposed Campus Master Build-Out Plan:** The ITAM 2017 run (Y17-12 or higher) will include the impacts of each application for development approved by the City. The Proposed Campus Master Build-Out Plan first-phase scenario includes a total of 282,551 sf of institutional use (an increase of 38,980 sf over existing uses) and 1,024 dorm beds.
3. **2017 Pending Baseline:** The ITAM 2017 run (Y17-12 or higher) will include the cumulative impacts of each application for development currently approved and under review by the City. Any additional development beyond the existing uses for the project that might be assumed in ITAM will be deleted for the analysis of this scenario. The Concordia University land uses for

8/25/15
Approved by Kerwin Lau for Transportation

this short-term no project condition include the existing land uses of 243,571 sf of institutional use and 1,024 dorm beds.

4. **2017 Pending Baseline Plus Proposed Campus Master Build-Out Plan:** The ITAM 2017 run (Y17-12 or higher) will include the cumulative impacts of each application for development currently approved and under review by the City. The Proposed Campus Master Build-Out Plan first-phase scenario includes a total of 282,551 sf of institutional use (an increase of 38,980 sf over existing uses) and 1,024 dorm beds.
5. **2035 Approved Baseline:** The ITAM 2035 run (Y35-12 or higher) will include the impacts of each application for development currently approved by the City. The Concordia University land uses for this baseline (no project) scenario will include the existing land uses of 243,571 sf of institutional use and 1,024 dorm beds.
6. **2035 Approved Baseline Plus Proposed Campus Master Build-Out Plan:** The ITAM 2035 run (Y35-12 or higher) will include the impacts of each application for development currently approved by the City. The Proposed Campus Master Build-Out Plan scenario includes a total of 321,220 sf of institutional use and 1,320 dorm beds.
7. **2035 Pending Baseline:** The ITAM 2035 run (Y35-12 or higher) will include the cumulative impacts of each application for development currently approved and under review by the City. The Concordia University land uses for this baseline (no project) scenario will include the existing land uses of 243,571 sf of institutional use and 1,024 dorm beds.
8. **2035 Pending Baseline Plus Proposed Campus Master Build-Out Plan:** The ITAM 2035 run (Y35-12 or higher) will include the cumulative impacts of each application for development currently approved and under review by the City. The Proposed Campus Master Build-Out Plan scenario includes a total of 321,220 sf of institutional use and 1,320 dorm beds.
9. **Post-2035 Approved Baseline:** The ITAM Post-2035 run (P35-12 or higher) will include the impacts of each application for development currently approved by the City. The Concordia University land uses for this baseline (no project) scenario will include the existing land uses of 243,571 sf of institutional use and 1,024 dorm beds.
10. **Post-2035 Approved Baseline Plus Proposed Campus Master Build-Out Plan:** The ITAM Post-2035 run (P35-12 or higher) will include the impacts of each application for development currently approved by the City. The Proposed Campus Master Build-Out Plan scenario includes a total of 321,220 sf of institutional use and 1,320 dorm beds.
11. **Post-2035 Pending Baseline:** The ITAM Post-2035 run (P35-12 or higher) will include the cumulative impacts of each application for development currently approved and under review by the City. The Concordia University land uses for this baseline (no project) scenario will include the existing land uses of 243,571 sf of institutional use and 1,024 dorm beds.
12. **Post-2035 Pending Baseline Plus Proposed Campus Master Build-Out Plan:** The ITAM Post-2035 run (P35-12 or higher) will include the cumulative impacts of each application for development currently approved and under review by the City. The Proposed Campus Master Build-Out Plan scenario includes a total of 321,220 sf of institutional use and 1,320 dorm beds.

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LSA will utilize the approved version of the ITAM forecasts to analyze these conditions at study area intersections and roadway segments. In addition, City staff will review the ITAM network and land uses for the baseline and "plus Campus Master Build-Out Plan" scenarios to ensure that they accurately reflect the project impacts. LSA will provide a copy of the "plus Campus Master Build-Out Plan" ITAM runs (compact disc) with the TIA to the City/Project Manager for review.

Project impacts will be identified at study area intersections for the existing, 2017, 2035, and post-2035 (approved and pending) conditions, assuming improvements to the circulation system identified by the City. Daily traffic volumes and v/c ratios will also be presented in the analysis for the study area roadway segments for each scenario. The City's peak-hour link analysis (per the adopted City TIA Guidelines) will be utilized for evaluating roadway capacity conditions and the need for mitigation measures (if necessary).The peak-hour link analysis will determine directional a.m. and p.m. peak-hour v/c ratios for each link that is projected to exceed LOS standards. The peak-hour capacity will be determined by multiplying the midblock number of lanes for each direction by a lane capacity of 1,600 vehicles per hour. Where the distance between controlled intersections is one or more miles, the midblock number of lanes shall be multiplied by a lane capacity of 2,000 vehicles per hour.

VII. PROPOSED PROJECT IMPACTS

A. Trip Generation

LSA will generate a.m. peak-hour trips, p.m. peak-hour trips, and ADT for the Campus Master Build-out Plan based on an extrapolation of existing traffic count data. Traffic counts will be collected for existing conditions that correspond to the existing institutional square footage provided on campus (i.e., 243,571 sf). This data will establish trip rates to be used for the Campus Master Build-Out Plan (i.e., 321,220 sf). This information will be provided in tabular form. The trip generation discussion will include a table that compares the proposed gross trip generation of the Campus Master Build-Out Plan to the existing trip generation for the site.

B. Adjustments to Trip Generation

No adjustments to the trip generation shall be made without prior written approval from the City.

C. Trip Distribution and Trip Assignment

The directions of approach to and departure from the site will be obtained based on existing traffic counts and the ITAM distribution. A map indicating regional directions of trip distribution will be presented in the TIA. The project regional trip distribution and assignment will be based on the ITAM select zone analysis performed for the Post-2035 Approved Baseline a.m. peak-hour, p.m. peak-hour, and daily conditions.

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VIII. PHASING

A mitigation phasing plan consisting of improvements to offset potential traffic impacts of the development will be identified, as needed, for the horizon years identified in the phasing scenarios. For purposes of this analysis, the first phase of the Campus Master Build-Out Plan includes development of Building F-1 (37,780 sf) and Building F-9 (1,200 sf) for a total of 38,980 sf by the year 2017. There are no demolitions required for the first phase.

IX. SPECIAL ANALYSES/ISSUES

A. Access Analysis

An access analysis of the project entry points on Ridgeline Drive and Turtle Rock Drive as well as the internal circulation system will be performed. LSA will review existing traffic volumes and project volume forecasts at the access locations and determine the adequacy of the interface with the arterial street system using the City's TDPs.

LSA will collect peak-hour turn movement counts at Ridgeline Drive/Concordia East, Concordia West/Turtle Rock Drive, Ascension/Concordia East, Joy/Concordia West, Faith/Concordia West and Daystar/Concordia West. The peak hour counts will be conducted for 3 weekdays (Tuesday, Wednesday and Thursday) and averaged for use in this analysis. In addition, average daily traffic volumes will be conducted for 3 weekdays on multiple sections of Concordia Drive (east and west) as well as the residential streets (Ascension, Joy, Faith and Daystar).

The traffic volume differential between existing and Campus Master Build-Out Plan will be assigned in and out of the project access driveways along Concordia Drive. Trip distribution and driveway allocation will be determined using the distribution patterns from the most recent version of the ITAM and the results of existing traffic counts. An exhibit will be provided that shows the existing and existing plus Campus Master Build-Out Plan project turning volumes at the access points to the project site. The exhibit will be drawn roughly to scale, with the distances between driveways and intersections dimensioned.

A Highway Capacity Manual (HCM) analysis will be conducted at the unsignalized access points for the campus (Ridgeline Drive/Concordia East and Turtle Rock Drive/Concordia West) to evaluate the levels of service with and without the buildout of the proposed Campus Master Build-Out Plan. An HCM analysis will also be conducted at the signalized intersection of Ridgeline Drive/University Drive to evaluate potential operational improvements at this location.

LSA will analyze the applicable traffic signal warrants and LOS calculations for existing (unsignalized) conditions at Ridgeline Drive/Concordia East. LSA will request the latest 5-year history of the Statewide Integrated Traffic Records System (SWITRS) accident data from the City for Ridgeline Drive/Concordia East. Other roadway improvements may be proposed to enhance the mobility of traffic both off-campus and on-campus. Each of these improvements will be evaluated in the access analysis.

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The internal circulation analysis will address specific design requirements of the City based on existing counts (3 days), the proposed access plan, and the project trip assignment. This analysis is to ensure that the project will continue to meet or exceed the City's TDP requirements. Specific design features to be evaluated include intersection left-turn pocket lengths (TDP-1) (i.e., northbound and westbound left-turn pockets at Ridgeline Drive/University Drive, northbound and eastbound left-turn pockets at Ridgeline Drive/Concordia East, and the eastbound left-turn pocket at Concordia West/Turtle Rock Drive), left-turn in/out access (TDP-3), right-turn lanes at uncontrolled driveways (TDP-4), distance between signalized intersections (TDP-9), distance between driveways and intersections (TDP-10), traffic signal warrants (TDP-12), left-turn signal phasing (TDP-13), driveway lengths (TDP-14) and gate stacking (TDP-15).

A summary of the proposed project and results of the analysis will be prepared. Based upon these results, recommendations will be presented for the design of the project access driveways and interface with adjacent streets. These recommendations will be consistent with the City's TDP.

B. Circulation Phasing

An analysis of any impacted intersections identified in the City's 2012 Circulation Phasing Analysis Report within the project study area (if any) will be included in this section.

C. Congestion Management Program (CMP) Land Use Coordination Requirements

The City's "CMP Monitoring Checklist: Land Use Coordination Component" will be completed and included in the TIA if the proposed project is forecast to generate 2,400 or more ADT, or greater than 1,600 ADT directly onto the CMP Highway System.

D. Pedestrian Circulation

The pedestrian circulation on site and the connection to the adjacent public facilities and corresponding traffic control measures within the project site will be discussed in this section. The TIA will include a discussion of how policies a, b, and c of General Plan Objective B-3 will be met with implementation of the Campus Master Build-Out Plan.

E. Bicycle Circulation

Bicycle circulation on site and the connection to adjacent bicycle facilities will be discussed in this section. LSA will document how the project will conform to applicable policies of Objective B-4 of the City's General Plan.

F. Transit Facilities

The TIA will identify the transit facilities (e.g., the Orange County Transit Authority [OCTA] bus, the University of California, Irvine (UCI) Anteater, and iShuttle) within the project vicinity. If a bus stop

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is located adjacent to the campus, LSA will discuss pedestrian access and bus stop turnout design per City guidelines.

G. Transportation Management Plan

The TIA will summarize the University's procedures to control traffic and parking during special events on-campus.

H. Weekend Analysis

The weekend analysis will examine how the adjacent and internal roadways/intersections operate during peak campus activity on a weekend. LSA will collect turn movement counts at Ridgeline Drive/University Drive, Ridgeline Drive/Concordia East, Concordia West/Turtle Rock Drive, Ascension/Concordia East, Joy/Concordia West, Faith/Concordia West and Daystar/Concordia West. The turn movement counts will be conducted on a Saturday and Sunday during the peak activity anticipated on campus. LSA will work with Concordia University to identify the highest two hour time period to conduct the weekend counts based on the activities/events planned. In addition, average daily traffic volumes will be conducted for a Saturday and Sunday on multiple sections of Concordia Drive (east and west) as well as the residential streets (Ascension, Joy, Faith and Daystar) on the weekend.

An operational analysis will be performed, including but not limited to stacking of vehicles of northbound through traffic and eastbound left-turn traffic at Ridgeline Drive/Concordia East, stacking of vehicles at Concordia West/Turtle Rock Drive and intersection delays at Ridgeline Drive/Concordia East and Concordia West/Turtle Rock Drive during the peak weekend period. Improvements will be recommended to alleviate any operational issues identified on the weekend.

I. Special Development Requirements – Daily Trip Cap Analysis

Section 9-21-7 (B)-10 of the City's Zoning Code states:

Any development applications for institutional use within the campus site shall demonstrate to the satisfaction of the Director of Community Development that the projected total average daily traffic from the site, based on the City of Irvine trip generation rates approved with General Plan Amendment 4237-GA for the campus (330 institutional housing units at four trips per unit and 1,800 full-time equivalent students at 1.21 trips per student), does not exceed 3,500 average daily trips.

LSA will review the methodology used to generate the original daily trip cap. The traffic modes, methods, and patterns used in General Plan Amendment 4237-GA may differ from todays' and it is important that the methodology reflects current travel patterns and operation of the campus.

New daily (24-hour) traffic counts will be conducted on Concordia Drive at the east and west entrances. LSA will compare this information with other trip generation sources, such as ITE and data

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provided for similar private universities. This information will be used to develop a revised methodology and daily trip cap that is more accurate and realistic for Concordia University.

X. REQUIRED MITIGATION MEASURES AND/OR RECOMMENDATIONS

Based on the results and in accordance with the adopted City TIA Guidelines, physical and/or operational improvements and/or alternative mitigation measure improvements required to mitigate any potentially adverse impacts due to the proposed build out of the Campus Master Build-Out Plan will be identified.

XI. CONCLUSIONS

A summary of the results of the analysis and recommendations will be prepared.

XII. REVISIONS TO ANALYSIS

Revisions to the TIA will be provided in response to the City's comments.

XIII. SIGNATURE

The TIA will be prepared under the supervision of, and signed, stamped, and dated by, a registered traffic engineer or a registered professional civil engineer with appropriate engineering and/or planning credentials.

Attachments:

Figure 1 – Project Location and Study Area Intersections

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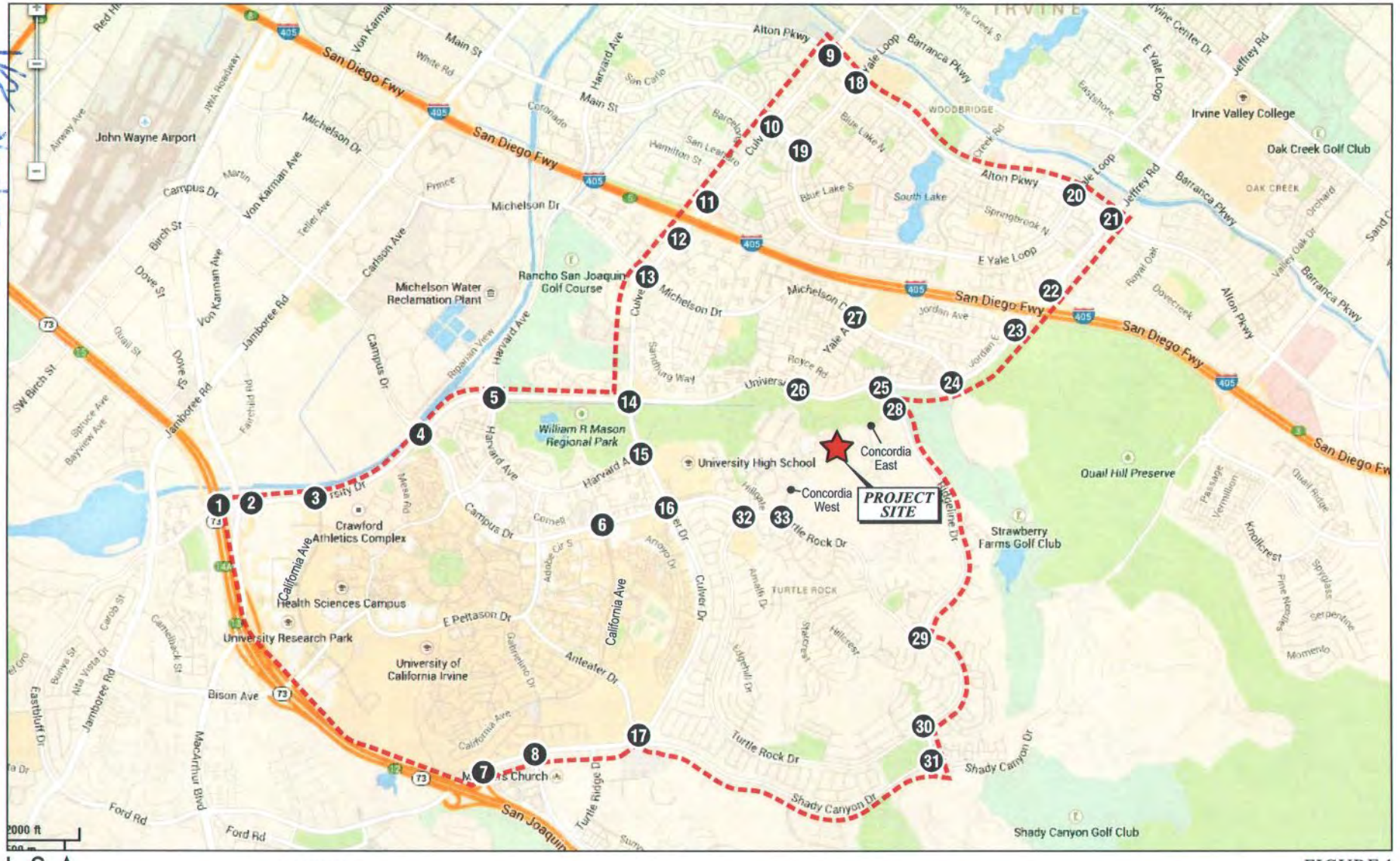

LSA

LEGEND

- Study Area Boundary
- # - Study Area Intersection

N

0 1700 3400

FEET

SOURCE: Google Maps

I:\CUI1301\G\Location&Study Ints.cdr (9/18/14)

FIGURE 1

Concordia University

Project Location and Study Area

APPENDIX B

ITAM TRAFFIC FORECASTS

189 . Harvard Av. at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	62	.04*	75	.04
NBT	2	3400	274	.08	646	.19*
NBR	d	1700	56	.03	178	.10
SBL	1	1700	32	.02	84	.05*
SBT	2	3400	562	.17*	492	.14
SBR	d	1700	453	.27	259	.15
EBL	1	1700	113	.07*	454	.27*
EBT	3	5100	787	.16	1575	.32
EBR	0	0	34		54	
WBL	1	1700	62	.04	103	.06
WBT	3	5100	1561	.32*	898	.19*
WBR	0	0	78		80	
Right Turn Adjustment			SBR	.05*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .70 .75

190 . University Dr. at Campus Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	81	.05*	131	.08*
NBT	3	5100	791	.16	1482	.29
NBR	1	1700	308	.18	281	.17
SBL	1	1700	116	.07	68	.04
SBT	2	3400	1677	.49*	1054	.31*
SBR	1	1700	373	.22	136	.08
EBL	1	1700	67	.04	336	.20
EBT	2	3400	371	.11*	582	.17*
EBR	d	1700	206	.12	134	.08
WBL	1	1700	147	.09*	315	.19*
WBT	2	3400	335	.10	506	.15
WBR	d	1700	37	.02	271	.16
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .79 .80

192 . California Av. at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	33	.01*	174	.05*
NBT	0	0	0		0	
NBR	1	1700	113	.07	665	.39
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1048	.31*	1048	.31
EBR	1	1700	123	.07	123	.07
WBL	1	1700	835	.49*	76	.04
WBT	2	3400	955	.28	1409	.41*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.26*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .86 .77

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	0	.00	14	.01*
NBT	0	0	0		0	
NBR	1	1700	58	.03	141	.08
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1495	.29*	875	.17*
EBR	d	1700	60	.04	53	.03
WBL	2	3400	329	.10*	329	.10*
WBT	2	3400	407	.12	407	.12
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .44 .33

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	20	.01*	32	.02*
NBT	0	0	0		0	
NBR	1	1700	189	.11	226	.13
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1454	.31*	944	.21*
EBR	0	0	107		117	
WBL	2	3400	273	.08*	831	.24*
WBT	3	5100	716	.14	752	.15
WBR	0	0	0		0	
Right Turn Adjustment			NBR	.04*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .49 .52

216 . California Av. at Campus Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	114	.07	203	.12*
NBT	1	1700	163	.10*	243	.14
NBR	1	1700	51	.03	109	.06
SBL	1	1700	121	.07*	118	.07
SBT	1	1700	129	.08	211	.12*
SBR	1	1700	40	.02	46	.03
EBL	1	1700	33	.02*	129	.08
EBT	2	3400	165	.07	640	.25*
EBR	0	0	72		208	
WBL	1	1700	101	.06	125	.07*
WBT	2	3400	606	.22*	453	.15
WBR	0	0	144		62	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .46 .61

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	164	.05*	212	.06
NBT	3	5100	930	.18	1999	.39*
NBR	1	1700	228	.13	356	.21
SBL	2	3400	135	.04	256	.08*
SBT	3	5100	1965	.39*	1194	.23
SBR	f		316		258	
EBL	2	3400	139	.04*	340	.10
EBT	2	3400	353	.10	784	.23*
EBR	1	1700	207	.12	233	.14
WBL	2	3400	314	.09	230	.07*
WBT	2	3400	667	.20*	612	.18
WBR	1	1700	191	.11	270	.16
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .73 .82

230 . Culver Dr. at Main St.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	116	.03*	156	.05
NBT	3	5100	1111	.22	2027	.40*
NBR	1	1700	164	.10	453	.27
SBL	2	3400	99	.03	177	.05*
SBT	3	5100	2070	.41*	1380	.27
SBR	f		315		106	
EBL	2	3400	108	.03	482	.14
EBT	2	3400	153	.05*	427	.13*
EBR	f		179		321	
WBL	2	3400	529	.16*	173	.05*
WBT	2	3400	364	.11	99	.03
WBR	1	1700	100	.06	55	.03
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .70 .68

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1379	.27	2581	.51*
NBR	f		734		310	
SBL	0	0	0		0	
SBT	3	5100	1894	.37*	1541	.30
SBR	f		1186		402	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	548	.16*	444	.13*
WBT	0	0	0		0	
WBR	1	1700	136	.08	370	.22
Right Turn Adjustment					WBR	.09*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.78

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1426	.28	1838	.36*
NBR	f		429		944	
SBL	0	0	0		0	
SBT	3	5100	2037	.40*	1592	.31
SBR	f		405		396	
EBL	1.5		685	{.22}*	1052	.31*
EBT	0	5100	0	.22	0	
EBR	1.5		449		503	.30
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		6	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.72

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	232	.07*	230	.07
NBT	3	5100	1179	.24	1654	.33*
NBR	0	0	24		50	
SBL	2	3400	284	.08	581	.17*
SBT	3	5100	1437	.28*	1209	.24
SBR	1	1700	764	.45	312	.18
EBL	2	3400	244	.07*	773	.23
EBT	1	1700	121	.07	422	.25*
EBR	1	1700	146	.09	236	.14
WBL	1	1700	103	.06	141	.08*
WBT	2	3400	202	.06*	182	.05
WBR	1	1700	303	.18	335	.20
Right Turn Adjustment			Multi	.16*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.88

235 . Culver Dr. at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	75	.04
NBT	3	5100	1142	.22	1463	.29*
NBR	d	1700	652	.38	697	.41
SBL	1	1700	70	.04	48	.03*
SBT	3	5100	1154	.29*	1086	.25
SBR	0	0	315		185	
EBL	2	3400	82	.02	405	.12
EBT	3	5100	682	.15*	1288	.28*
EBR	0	0	73		132	
WBL	2	3400	744	.22*	744	.22*
WBT	3	5100	1402	.29	1402	.29
WBR	0	0	78		78	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.87

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	87	.05*	103	.06*
NBT	3	5100	1563	.31	1603	.31
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1599	.39*	1418	.36*
SBR	0	0	386		399	
EBL	2	3400	292	.09*	639	.19*
EBT	0	0	0		0	
EBR	1	1700	118	.07	162	.10
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.66

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	68	.04*	79	.05*
NBT	3	5100	758	.15	949	.19
NBR	d	1700	125	.07	121	.07
SBL	2	3400	353	.10	376	.11
SBT	2	3400	790	.23*	842	.25*
SBR	1	1700	320	.19	301	.18
EBL	2	3400	99	.03	365	.11
EBT	2	3400	220	.07*	397	.15*
EBR	0	0	26		100	
WBL	1	1700	177	.10*	88	.05*
WBT	2	3400	451	.13	221	.07
WBR	1	1700	508	.30	281	.17
Right Turn Adjustment				WBR .07*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.55

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	229	.13*	130	.08
NBT	2	3400	844	.25	1012	.30*
NBR	1	1700	255	.15	382	.22
SBL	1	1700	41	.02	55	.03*
SBT	2	3400	834	.25*	860	.25
SBR	1	1700	60	.04	52	.03
EBL	1	1700	33	.02	59	.03
EBT	2	3400	37	.01*	118	.03*
EBR	1	1700	145	.09	193	.11
WBL	1	1700	386	.23*	190	.11*
WBT	1	1700	81	.05	37	.02
WBR	1	1700	83	.05	36	.02
Right Turn Adjustment					EBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.54

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	550	.16	1042	.31
NBR	1	1700	275	.16	344	.20
SBL	2	3400	165	.05	307	.09
SBT	1	1700	726	.43*	722	.42*
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	493	.29*	353	.21*
WBT	0	0	0		0	
WBR	1	1700	211	.12	135	.08
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.77		.68

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	713	.21	1376	.40*
NBR	1	1700	47	.03	33	.02
SBL	1	1700	172	.10	98	.06*
SBT	2	3400	1052	.31*	975	.29
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	389	.11*	148	.04*
WBT	0	0	0		0	
WBR	1	1700	66	.04	29	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.47		.55

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	157	.09*	111	.07*
NBT	2	3400	206	.06	190	.06
NBR	d	1700	219	.13	229	.13
SBL	1	1700	48	.03	51	.03
SBT	2	3400	143	.04*	107	.03*
SBR	d	1700	112	.07	113	.07
EBL	1	1700	88	.05*	83	.05
EBT	2	3400	561	.17	1117	.33*
EBR	d	1700	88	.05	191	.11
WBL	1	1700	137	.08	79	.05*
WBT	2	3400	873	.26*	882	.26
WBR	d	1700	85	.05	128	.08
Right Turn Adjustment					NBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.49		.55

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	152	.09	86	.05*
NBT	2	3400	198	.06*	157	.05
NBR	d	1700	475	.28	235	.14
SBL	2	3400	189	.06*	129	.04
SBT	2	3400	78	.02	146	.04*
SBR	d	1700	107	.06	52	.03
EBL	1	1700	88	.05*	173	.10
EBT	2	3400	589	.20	992	.34*
EBR	0	0	104		148	
WBL	2	3400	219	.06	420	.12*
WBT	2	3400	909	.27*	750	.22
WBR	d	1700	119	.07	131	.08
Right Turn Adjustment			NBR	.13*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.60

272 . W. Yale Lp. at Main St.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	727	.43*	219	.13*
NBT	2	3400	298	.09	167	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	171	.05*	144	.04*
SBR	d	1700	303	.18	99	.06
EBL	2	3400	79	.02*	387	.11*
EBT	0	0	0		0	
EBR	2	3400	368	.11	666	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.11*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.33

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	10	(.01)*	11	(.01)*
NBT	1	1700	4	.01	1	.01
NBR	d	1700	14	.01	58	.03
SBL	0	0	5		0	
SBT	1	1700	0	.00*	2	.00*
SBR	d	1700	4	.00	2	.00
EBL	1	1700	7	.00	2	.00
EBT	1	1700	173	.10*	505	.30*
EBR	d	1700	25	.01	15	.01
WBL	1	1700	16	.01*	19	.01*
WBT	1	1700	177	.10	241	.14
WBR	d	1700	0	.00	2	.00
Right Turn Adjustment					NBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.17		.38

275 . Yale Av. at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	34	.02*	17	.01*
SBT	0	0	0		0	
SBR	1	1700	69	.04	52	.03
EBL	1	1700	31	.02*	42	.02
EBT	2	3400	1385	.41	1733	.51*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2087	.61*	1356	.40
WBR	d	1700	20	.01	33	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.57

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	76	.04*	57	.03*
NBT	1	1700	48	.03	31	.02
NBR	1	1700	728	.43	625	.37
SBL	1	1700	14	.01	22	.01
SBT	1	1700	89	.07*	46	.04*
SBR	0	0	37		22	
EBL	1	1700	26	.02*	22	.01
EBT	2	3400	1327	.39	1675	.49*
EBR	d	1700	71	.04	39	.02
WBL	2	3400	566	.17	557	.16*
WBT	2	3400	2008	.59*	1292	.38
WBR	d	1700	17	.01	22	.01
Right Turn Adjustment			NBR	.12*	NBR	.15*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .89 .92

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	499	.29*	212	.12*
NBT	1	1700	135	.08	33	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	106	.03*	46	.01*
SBR	1	1700	508	.30	259	.15
EBL	2	3400	263	.08*	488	.14*
EBT	0	0	0		0	
EBR	1	1700	276	.16	311	.18
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.21*	SBR	.03*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .66 .35

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	4		5	
NBT	1	1700	52	.05*	26	.03*
NBR	0	0	28		14	
SBL	1	1700	248	.15*	282	.17*
SBT	1	1700	19	.01	30	.02
SBR	1	1700	287	.17	132	.08
EBL	0	0	229		176	
EBT	1	1700	87	.19*	80	.15*
EBR	d	1700	9	.01	11	.01
WBL	1	1700	11	.01*	20	.01*
WBT	1	1700	112	.07	52	.03
WBR	d	1700	398	.23	297	.17
Right Turn Adjustment			WBR	.05*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .50 .41

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	40	.02*	15	.01*
NBT	0	0	0		0	
NBR	1	1700	393	.23	172	.10
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	110	.06	64	.04
EBR	1	1700	56	.03	19	.01
WBL	0	0	224		224	
WBT	1	1700	97	.19*	97	.19*
WBR	0	0	0		0	
Right Turn Adjustment			NBR	.11*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .37 .25

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	279	.08*	483	.14*
NBT	3	5100	757	.15	1291	.25
NBR	f		221		294	
SBL	2	3400	213	.06	390	.11
SBT	3	5100	1699	.36*	1161	.27*
SBR	0	0	120		200	
EBL	2	3400	154	.05	255	.08
EBT	2	3400	604	.18*	841	.25*
EBR	d	1700	524	.31	302	.18
WBL	2	3400	532	.16*	368	.11*
WBT	2	3400	831	.24	667	.20
WBR	d	1700	111	.07	120	.07
Right Turn Adjustment			EBR	.07*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .90 .82

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1156	.23	1709	.34*
NBR	f		252		95	
SBL	0	0	0		0	
SBT	3	5100	1564	.31*	1287	.25
SBR	f		1436		557	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1294	.38*	1112	.33*
WBT	0	0	0		0	
WBR	1	1700	104	.06	409	.24
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .74 .72

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1127	.22	1408	.28
NBR	f		1202		1230	
SBL	0	0	0		0	
SBT	3	5100	2592	.51*	2182	.43*
SBR	f		263		240	
EBL	2	3400	272	.08*	402	.12*
EBT	0	0	0		0	
EBR	1	1700	74	.04	46	.03
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .64 .60

295 . Michelson Dr. at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	45	.03
NBT	1	1700	0	.00*	11	.07*
NBR	0	0	2		106	
SBL	2	3400	308	.09*	577	.17*
SBT	1	1700	5	.02	10	.03
SBR	0	0	26		35	
EBL	1	1700	18	.01	18	.01
EBT	2	3400	1966	.58*	1958	.58*
EBR	d	1700	15	.01	29	.02
WBL	1	1700	37	.02*	23	.01*
WBT	3	5100	2462	.48	1852	.36
WBR	d	1700	166	.10	322	.19
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .74 .88

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	6	.00
NBT	2	3400	736	.22*	492	.14
NBR	0	0	0		0	
SBL	0	0	0		2	
SBT	2	3400	497	.21	506	.19*
SBR	0	0	229		152	
EBL	0	0	117	(.07)*	222	(.13)*
EBT	1	1700	0	.07	0	.13
EBR	0	0	5		4	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.37

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	26		26	
SBT	1	1700	0	.07*	0	.07*
SBR	0	0	93		93	
EBL	1	1700	89	.05*	89	.05*
EBT	2	3400	286	.08	286	.08
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	497	.15*	497	.15*
WBR	d	1700	35	.02	35	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.32		.32

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	160	.09*	137	.08*
SBT	0	0	0		0	
SBR	1	1700	154	.09	264	.16
EBL	1	1700	202	.12*	125	.07*
EBT	2	3400	206	.06	128	.04
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	256	.29*	75	.09*
WBR	0	0	232		80	
Right Turn Adjustment					SBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.55		.32

189 . Harvard Av. at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	62	.04*	75	.04
NBT	2	3400	275	.08	648	.19*
NBR	d	1700	55	.03	174	.10
SBL	1	1700	32	.02	84	.05*
SBT	2	3400	563	.17*	495	.15
SBR	d	1700	453	.27	259	.15
EBL	1	1700	113	.07*	454	.27*
EBT	3	5100	785	.16	1576	.32
EBR	0	0	34		54	
WBL	1	1700	51	.03	105	.06
WBT	3	5100	1559	.32*	895	.19*
WBR	0	0	78		80	
Right Turn Adjustment			SBR	.05*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.75

190 . University Dr. at Campus Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	81	.05*	130	.08*
NBT	3	5100	788	.15	1483	.29
NBR	1	1700	309	.18	280	.16
SBL	1	1700	116	.07	68	.04
SBT	2	3400	1679	.49*	1051	.31*
SBR	1	1700	370	.22	136	.08
EBL	1	1700	67	.04	336	.20*
EBT	2	3400	372	.11*	586	.17
EBR	d	1700	206	.12	134	.08
WBL	1	1700	145	.09*	313	.18
WBT	2	3400	336	.10	508	.15*
WBR	d	1700	37	.02	271	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.79		.79

192 . California Av. at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	34	.01*	173	.05*
NBT	0	0	0		0	
NBR	1	1700	112	.07	667	.39
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	1		0	
EBT	2	3400	1046	.31*	1048	.31
EBR	1	1700	123	.07	124	.07
WBL	1	1700	836	.49*	76	.04
WBT	2	3400	948	.28	1408	.41*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.26*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.86		.77

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	0	.00	14	.01*
NBT	0	0	0		0	
NBR	1	1700	56	.03	142	.08
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1495	.29*	875	.17*
EBR	d	1700	60	.04	53	.03
WBL	2	3400	332	.10*	327	.10*
WBT	2	3400	397	.12	407	.12
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.33

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	20	.01*	32	.02*
NBT	0	0	0		0	
NBR	1	1700	190	.11	228	.13
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1454	.31*	941	.21*
EBR	0	0	107		118	
WBL	2	3400	268	.08*	834	.25*
WBT	3	5100	711	.14	749	.15
WBR	0	0	0		0	
Right Turn Adjustment			NBR	.04*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.49		.53

216 . California Av. at Campus Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	112	.07	202	.12*
NBT	1	1700	164	.10*	245	.14
NBR	1	1700	52	.03	110	.06
SBL	1	1700	121	.07*	119	.07
SBT	1	1700	122	.07	208	.12*
SBR	1	1700	40	.02	46	.03
EBL	1	1700	32	.02*	129	.08
EBT	2	3400	172	.07	640	.25*
EBR	0	0	72		211	
WBL	1	1700	101	.06	127	.07*
WBT	2	3400	600	.22*	459	.15
WBR	0	0	144		62	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.46		.61

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	164	.05*	212	.06
NBT	3	5100	927	.18	1998	.39*
NBR	1	1700	228	.13	354	.21
SBL	2	3400	134	.04	257	.08*
SBT	3	5100	1963	.38*	1191	.23
SBR	f		319		259	
EBL	2	3400	140	.04*	341	.10
EBT	2	3400	351	.10	785	.23*
EBR	1	1700	207	.12	232	.14
WBL	2	3400	316	.09	231	.07*
WBT	2	3400	665	.20*	610	.18
WBR	1	1700	190	.11	271	.16
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.72		.82

230 . Culver Dr. at Main St.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	116	.03*	157	.05
NBT	3	5100	1110	.22	2024	.40*
NBR	1	1700	163	.10	453	.27
SBL	2	3400	98	.03	176	.05*
SBT	3	5100	2068	.41*	1379	.27
SBR	f		318		107	
EBL	2	3400	107	.03	482	.14
EBT	2	3400	154	.05*	427	.13*
EBR	f		179		329	
WBL	2	3400	533	.16*	172	.05*
WBT	2	3400	364	.11	100	.03
WBR	1	1700	100	.06	55	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.68

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1376	.27	2579	.51*
NBR	f		735		319	
SBL	0	0	0		0	
SBT	3	5100	1894	.37*	1546	.30
SBR	f		1188		402	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	551	.16*	451	.13*
WBT	0	0	0		0	
WBR	1	1700	136	.08	368	.22
Right Turn Adjustment					WBR	.09*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.78

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1428	.28	1845	.36*
NBR	f		429		940	
SBL	0	0	0		0	
SBT	3	5100	2039	.40*	1596	.31
SBR	f		406		404	
EBL	1.5		682	{.23}*	1052	.31*
EBT	0	5100	0	.23	0	
EBR	1.5		468		503	.30
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		6	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.72

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	231	.07*	229	.07
NBT	3	5100	1180	.24	1668	.34*
NBR	0	0	22		49	
SBL	2	3400	308	.09	586	.17*
SBT	3	5100	1438	.28*	1211	.24
SBR	1	1700	760	.45	309	.18
EBL	2	3400	243	.07*	759	.22
EBT	1	1700	125	.07	427	.25*
EBR	1	1700	145	.09	233	.14
WBL	1	1700	102	.06	141	.08*
WBT	2	3400	206	.06*	185	.05
WBR	1	1700	304	.18	337	.20
Right Turn Adjustment			Multi	.16*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.89

235 . Culver Dr. at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	74	.04
NBT	3	5100	1140	.22	1473	.29*
NBR	d	1700	656	.39	697	.41
SBL	1	1700	70	.04	48	.03*
SBT	3	5100	1155	.29*	1086	.25
SBR	0	0	312		185	
EBL	2	3400	83	.02	407	.12
EBT	3	5100	678	.15*	1283	.28*
EBR	0	0	73		132	
WBL	2	3400	743	.22*	734	.22*
WBT	3	5100	1393	.29	1401	.29
WBR	0	0	78		78	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.87

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	87	.05*	103	.06*
NBT	3	5100	1567	.31	1605	.31
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1588	.39*	1412	.35*
SBR	0	0	398		394	
EBL	2	3400	290	.09*	645	.19*
EBT	0	0	0		0	
EBR	1	1700	118	.07	162	.10
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.65

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	79	.05*
NBT	3	5100	754	.15	946	.19
NBR	d	1700	132	.08	124	.07
SBL	2	3400	352	.10	377	.11
SBT	2	3400	790	.23*	837	.25*
SBR	1	1700	311	.18	299	.18
EBL	2	3400	101	.03	361	.11
EBT	2	3400	226	.07*	402	.15*
EBR	0	0	26		100	
WBL	1	1700	179	.11*	94	.06*
WBT	2	3400	455	.13	230	.07
WBR	1	1700	513	.30	291	.17
Right Turn Adjustment				WBR	.06*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.56

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	229	.13*	129	.08
NBT	2	3400	849	.25	1012	.30*
NBR	1	1700	256	.15	382	.22
SBL	1	1700	40	.02	55	.03*
SBT	2	3400	839	.25*	863	.25
SBR	1	1700	60	.04	52	.03
EBL	1	1700	33	.02	59	.03
EBT	2	3400	37	.01*	118	.03*
EBR	1	1700	145	.09	193	.11
WBL	1	1700	385	.23*	190	.11*
WBT	1	1700	81	.05	37	.02
WBR	1	1700	82	.05	36	.02
Right Turn Adjustment					EBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.54

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	555	.16	1041	.31
NBR	1	1700	253	.15	351	.21
SBL	2	3400	165	.05	307	.09
SBT	1	1700	735	.43*	723	.43*
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	1	1700	477	.28*	349	.21*
WBT	0	0	0		0	
WBR	1	1700	211	.12	135	.08
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.76		.69

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	695	.20	1383	.41*
NBR	1	1700	46	.03	26	.02
SBL	1	1700	160	.09	97	.06*
SBT	2	3400	1057	.31*	973	.29
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	402	.12*	148	.04*
WBT	0	0	0		0	
WBR	1	1700	66	.04	29	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.48		.56

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	155	.09*	111	.07*
NBT	2	3400	205	.06	189	.06
NBR	d	1700	221	.13	229	.13
SBL	1	1700	49	.03	51	.03
SBT	2	3400	142	.04*	108	.03*
SBR	d	1700	111	.07	113	.07
EBL	1	1700	88	.05*	82	.05
EBT	2	3400	559	.16	1118	.33*
EBR	d	1700	88	.05	191	.11
WBL	1	1700	138	.08	79	.05*
WBT	2	3400	873	.26*	882	.26
WBR	d	1700	85	.05	128	.08
Right Turn Adjustment					NBR	.02*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.49		.55

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	151	.09	86	.05*
NBT	2	3400	199	.06*	157	.05
NBR	d	1700	472	.28	235	.14
SBL	2	3400	190	.06*	130	.04
SBT	2	3400	78	.02	145	.04*
SBR	d	1700	109	.06	53	.03
EBL	1	1700	87	.05*	173	.10
EBT	2	3400	589	.20	992	.34*
EBR	0	0	104		148	
WBL	2	3400	218	.06	422	.12*
WBT	2	3400	908	.27*	749	.22
WBR	d	1700	120	.07	131	.08
Right Turn Adjustment			NBR	.13*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.60

272 . W. Yale Lp. at Main St.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	732	.43*	219	.13*
NBT	2	3400	295	.09	167	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	171	.05*	145	.04*
SBR	d	1700	303	.18	99	.06
EBL	2	3400	80	.02*	387	.11*
EBT	0	0	0		0	
EBR	2	3400	368	.11	665	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.11*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.33

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	10	(.01)*	11	(.01)*
NBT	1	1700	4	.01	1	.01
NBR	d	1700	16	.01	58	.03
SBL	0	0	5		0	
SBT	1	1700	0	.00*	2	.00*
SBR	d	1700	4	.00	2	.00
EBL	1	1700	7	.00	2	.00
EBT	1	1700	199	.12*	513	.30*
EBR	d	1700	25	.01	15	.01
WBL	1	1700	15	.01*	20	.01*
WBT	1	1700	182	.11	247	.15
WBR	d	1700	0	.00	1	.00
Right Turn Adjustment					NBR	.01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.19		.38

275 . Yale Av. at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	34	.02*	17	.01*
SBT	0	0	0		0	
SBR	1	1700	70	.04	52	.03
EBL	1	1700	32	.02*	41	.02
EBT	2	3400	1384	.41	1729	.51*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2076	.61*	1344	.40
WBR	d	1700	20	.01	32	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.57

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	76	.04*	58	.03*
NBT	1	1700	54	.03	37	.02
NBR	1	1700	743	.44	662	.39
SBL	1	1700	14	.01	21	.01
SBT	1	1700	118	.09*	58	.05*
SBR	0	0	37		22	
EBL	1	1700	27	.02*	22	.01
EBT	2	3400	1322	.39	1668	.49*
EBR	d	1700	75	.04	41	.02
WBL	2	3400	617	.18	574	.17*
WBT	2	3400	1997	.59*	1279	.38
WBR	d	1700	14	.01	22	.01
Right Turn Adjustment			NBR	.11*	NBR	.15*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .90 .94

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	499	.29*	212	.12*
NBT	1	1700	135	.08	33	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	106	.03*	47	.01*
SBR	1	1700	522	.31	285	.17
EBL	2	3400	277	.08*	498	.15*
EBT	0	0	0		0	
EBR	1	1700	276	.16	311	.18
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.22*	SBR	.05*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .38

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	4		5	
NBT	1	1700	53	.05*	26	.03*
NBR	0	0	27		14	
SBL	1	1700	248	.15*	282	.17*
SBT	1	1700	19	.01	29	.02
SBR	1	1700	287	.17	133	.08
EBL	0	0	227		176	
EBT	1	1700	87	.18*	80	.15*
EBR	d	1700	9	.01	11	.01
WBL	1	1700	11	.01*	20	.01*
WBT	1	1700	110	.06	52	.03
WBR	d	1700	400	.24	297	.17
Right Turn Adjustment			WBR	.07*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .51 .41

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	40	.02*	15	.01*
NBT	0	0	0		0	
NBR	1	1700	393	.23	173	.10
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	110	.06	64	.04
EBR	1	1700	56	.03	19	.01
WBL	0	0	225		224	
WBT	1	1700	97	.19*	96	.19*
WBR	0	0	0		0	
Right Turn Adjustment			NBR	.11*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .37 .25

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	284	.08*	483	.14*
NBT	3	5100	746	.15	1305	.26
NBR	f		224		296	
SBL	2	3400	212	.06	390	.11
SBT	3	5100	1714	.36*	1165	.27*
SBR	0	0	118		201	
EBL	2	3400	153	.05	257	.08
EBT	2	3400	609	.18*	840	.25*
EBR	d	1700	518	.30	304	.18
WBL	2	3400	533	.16*	370	.11*
WBT	2	3400	827	.24	666	.20
WBR	d	1700	112	.07	116	.07
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .89 .82

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1158	.23	1719	.34*
NBR	f		253		95	
SBL	0	0	0		0	
SBT	3	5100	1571	.31*	1293	.25
SBR	f		1439		558	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1317	.39*	1109	.33*
WBT	0	0	0		0	
WBR	1	1700	100	.06	414	.24
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .75 .72

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1130	.22	1424	.28
NBR	f		1207		1242	
SBL	0	0	0		0	
SBT	3	5100	2628	.52*	2186	.43*
SBR	f		257		239	
EBL	2	3400	272	.08*	398	.12*
EBT	0	0	0		0	
EBR	1	1700	74	.04	48	.03
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .65 .60

295 . Michelson Dr. at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	45	.03
NBT	1	1700	0	.00*	11	.07*
NBR	0	0	2		106	
SBL	2	3400	308	.09*	576	.17*
SBT	1	1700	4	.02	10	.03
SBR	0	0	26		35	
EBL	1	1700	18	.01	18	.01
EBT	2	3400	1974	.58*	1986	.58*
EBR	d	1700	15	.01	29	.02
WBL	1	1700	37	.02*	23	.01*
WBT	3	5100	2499	.49	1855	.36
WBR	d	1700	167	.10	325	.19
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .74 .88

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	5	.00	7	.00
NBT	2	3400	734	.22	490	.14
NBR	0	0	0		0	
SBL	0	0	0		2	
SBT	2	3400	498	.24*	502	.20*
SBR	0	0	312		187	
EBL	1.5		140	(.04)*	267	(.08)*
EBT	0	3400	0	.04	0	.08
EBR	0.5		6		6	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .33 .33

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	26		26	
SBT	1	1700	0	.08*	0	.09*
SBR	0	0	110		120	
EBL	1	1700	102	.06*	100	.06*
EBT	2	3400	286	.08	285	.08
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	494	.15*	497	.15*
WBR	d	1700	35	.02	35	.02
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .34 .35

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	160	.09*	137	.08*
SBT	0	0	0		0	
SBR	1	1700	154	.09	264	.16
EBL	1	1700	202	.12*	125	.07*
EBT	2	3400	205	.06	128	.04
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	256	.29*	75	.09*
WBR	0	0	232		80	
Right Turn Adjustment					SBR	.03*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .32

189 . Harvard Av. at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	50	.03*	47	.03
NBT	2	3400	224	.07	680	.20*
NBR	d	1700	67	.04	143	.08
SBL	1	1700	34	.02	75	.04*
SBT	2	3400	445	.13*	457	.13
SBR	d	1700	351	.21	218	.13
EBL	1	1700	97	.06*	394	.23
EBT	3	5100	580	.12	1692	.34*
EBR	0	0	24		34	
WBL	1	1700	90	.05	109	.06*
WBT	3	5100	1780	.36*	785	.16
WBR	0	0	79		56	
Right Turn Adjustment			SBR	.03*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.69

190 . University Dr. at Campus Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	73	.04*	178	.10
NBT	3	5100	620	.12	1522	.30*
NBR	1	1700	298	.18	320	.19
SBL	1	1700	127	.07	80	.05*
SBT	2	3400	1731	.51*	824	.24
SBR	1	1700	300	.18	107	.06
EBL	1	1700	48	.03	423	.25*
EBT	2	3400	405	.12*	622	.18
EBR	d	1700	237	.14	84	.05
WBL	1	1700	182	.11*	395	.23
WBT	2	3400	316	.09	576	.17*
WBR	d	1700	22	.01	169	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.82

192 . California Av. at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	46	.01*	219	.06*
NBT	0	0	0		1	
NBR	1	1700	74	.04	762	.45
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1016	.30*	1048	.31
EBR	1	1700	352	.21	121	.07
WBL	2	3400	868	.26*	89	.03
WBT	2	3400	1104	.32	1271	.37*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.34*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.82

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	25	.01*	20	.01*
NBT	0	0	0		0	
NBR	1	1700	226	.13	250	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1179	.23*	950	.19*
EBR	d	1700	112	.07	90	.05
WBL	2	3400	309	.09*	700	.21*
WBT	2	3400	888	.26	810	.24
WBR	0	0	0		0	
Right Turn Adjustment				NBR	.05*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.43	.46

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	36	.02*	68	.04*
NBT	0	0	0		0	
NBR	1	1700	276	.16	111	.07
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1044	.22*	1033	.21*
EBR	0	0	64		39	
WBL	2	3400	116	.03*	262	.08*
WBT	3	5100	944	.19	805	.16
WBR	0	0	0		0	
Right Turn Adjustment				NBR	.12*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.44	.38

216 . California Av. at Campus Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	120	.07*	245	.14*
NBT	1	1700	104	.06	293	.17
NBR	1	1700	110	.06	122	.07
SBL	1	1700	119	.07	127	.07
SBT	1	1700	123	.07*	274	.16*
SBR	1	1700	41	.02	39	.02
EBL	1	1700	24	.01*	103	.06
EBT	2	3400	212	.08	601	.26*
EBR	0	0	57		276	
WBL	1	1700	120	.07	130	.08*
WBT	2	3400	539	.21*	496	.16
WBR	0	0	191		54	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.41		.69

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	139	.04*	247	.07
NBT	3	5100	928	.18	1879	.37*
NBR	1	1700	256	.15	404	.24
SBL	2	3400	208	.06	328	.10*
SBT	3	5100	1963	.38*	1126	.22
SBR	f		342		316	
EBL	2	3400	138	.04*	392	.12
EBT	2	3400	466	.14	938	.28*
EBR	1	1700	188	.11	230	.14
WBL	2	3400	300	.09	305	.09*
WBT	2	3400	1038	.31*	717	.21
WBR	1	1700	234	.14	289	.17
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.82		.89

230 . Culver Dr. at Main St.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	109	.03*	176	.05
NBT	3	5100	1085	.21	2009	.39*
NBR	1	1700	165	.10	397	.23
SBL	2	3400	68	.02	146	.04*
SBT	3	5100	2012	.39*	1327	.26
SBR	f		329		174	
EBL	2	3400	126	.04	479	.14
EBT	2	3400	137	.04*	439	.13*
EBR	f		169		263	
WBL	2	3400	549	.16*	183	.05*
WBT	2	3400	342	.10	100	.03
WBR	1	1700	99	.06	56	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.66

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1308	.26	2452	.48*
NBR	f		820		340	
SBL	0	0	0		0	
SBT	3	5100	1613	.32*	1386	.27
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	607	.18*	424	.12*
WBT	0	0	0		0	
WBR	1	1700	152	.09	358	.21
Right Turn Adjustment					WBR	.09*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .74

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1560	.31	1751	.34*
NBR	f		370		821	
SBL	0	0	0		0	
SBT	3	5100	1867	.37*	1437	.28
SBR	f		380		361	
EBL	1.5		470	(.16)*	1044	(.31)*
EBT	0	5100	0	.16	0	(.31)
EBR	1.5		353		626	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .58 .70

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	227	.07	323	.10
NBT	3	5100	1237	.25*	1633	.33*
NBR	0	0	25		38	
SBL	2	3400	269	.08*	576	.17*
SBT	3	5100	1337	.26	1161	.23
SBR	1	1700	644	.38	376	.22
EBL	2	3400	308	.09	704	.21
EBT	1	1700	227	.13*	437	.26*
EBR	1	1700	175	.10	221	.13
WBL	1	1700	151	.09*	157	.09*
WBT	2	3400	250	.07	241	.07
WBR	1	1700	398	.23	323	.19
Right Turn Adjustment			Multi	.05*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .65 .90

235 . Culver Dr. at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	52	.03*	56	.03
NBT	4	6800	1096	.16	1462	.22*
NBR	2	3400	706	.21	945	.28
SBL	1	1700	30	.02	66	.04*
SBT	3	5100	1243	.24*	1024	.20
SBR	d	1700	295	.17	137	.08
EBL	2	3400	85	.03	277	.08
EBT	3	5100	555	.11*	1412	.28*
EBR	d	1700	51	.03	43	.03
WBL	2	3400	905	.27*	746	.22*
WBT	3	5100	1443	.29	728	.15
WBR	0	0	39		62	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						

TOTAL CAPACITY UTILIZATION .70 .81

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	68	.04*	44	.03*
NBT	3	5100	1564	.31	1724	.34
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1756	.44*	1473	.36*
SBR	0	0	502		376	
EBL	2	3400	356	.10*	596	.18*
EBT	0	0	0		0	
EBR	1	1700	144	.08	147	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .63 .62

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	96	.06
NBT	3	5100	723	.14	960	.19*
NBR	d	1700	130	.08	113	.07
SBL	2	3400	468	.14	515	.15*
SBT	2	3400	886	.26*	934	.27
SBR	1	1700	396	.23	299	.18
EBL	2	3400	161	.05*	352	.10*
EBT	2	3400	264	.09	376	.14
EBR	0	0	25		92	
WBL	1	1700	221	.13	58	.03
WBT	2	3400	649	.19*	236	.07*
WBR	1	1700	579	.34	325	.19
Right Turn Adjustment				WBR	.03*	WBR .01*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .62 .57

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	185	.05*	124	.04
NBT	2	3400	849	.25	1019	.30*
NBR	1	1700	217	.13	316	.19
SBL	1	1700	31	.02	51	.03*
SBT	2	3400	906	.27*	829	.24
SBR	1	1700	58	.03	41	.02
EBL	1	1700	44	.03	44	.03
EBT	2	3400	31	.01*	73	.02*
EBR	1	1700	165	.10	173	.10
WBL	2	3400	379	.11*	189	.06*
WBT	1	1700	57	.07	25	.04
WBR	0	0	56		36	
Right Turn Adjustment			EBR	.05*	EBR	.01*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .54 .47

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	541	.16	1009	.30*
NBR	1	1700	261	.15	331	.19
SBL	2	3400	159	.05	269	.08*
SBT	2	3400	776	.23*	661	.19
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	514	.15*	309	.09*
WBT	0	0	0		0	
WBR	1	1700	189	.11	171	.10
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .43 .52

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	702	.21	1374	.40*
NBR	1	1700	59	.03	26	.02
SBL	2	3400	221	.07	74	.02*
SBT	2	3400	1058	.31*	876	.26
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	462	.14*	174	.05*
WBT	0	0	0		0	
WBR	1	1700	48	.03	36	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.52

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	149	.09*	129	.08*
NBT	2	3400	257	.08	192	.06
NBR	d	1700	164	.10	219	.13
SBL	1	1700	52	.03	55	.03
SBT	2	3400	125	.04*	134	.04*
SBR	d	1700	83	.05	121	.07
EBL	1	1700	128	.08*	79	.05
EBT	2	3400	695	.20	1385	.41*
EBR	d	1700	97	.06	156	.09
WBL	1	1700	117	.07	201	.12*
WBT	2	3400	1048	.31*	1020	.30
WBR	d	1700	105	.06	60	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.70

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	181	.11	92	.05
NBT	2	3400	322	.09*	153	.05*
NBR	d	1700	526	.31	225	.13
SBL	2	3400	163	.05*	156	.05*
SBT	2	3400	112	.03	132	.04
SBR	d	1700	165	.10	91	.05
EBL	1	1700	146	.09*	245	.14
EBT	2	3400	651	.23	1188	.39*
EBR	0	0	142		125	
WBL	2	3400	220	.06	433	.13*
WBT	2	3400	994	.29*	957	.28
WBR	d	1700	117	.07	152	.09
Right Turn Adjustment		NBR		.11*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.67

272 . W. Yale Lp. at Main St.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	779	.46*	278	.16*
NBT	2	3400	311	.09	172	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	189	.06*	186	.05*
SBR	d	1700	281	.17	95	.06
EBL	2	3400	89	.03*	351	.10*
EBT	0	0	0		0	
EBR	2	3400	331	.10	669	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.36

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	21		17	(.01)*
NBT	1	1700	64	.05*	5	.01
NBR	d	1700	85	.05	28	.02
SBL	0	0	67	(.04)*	33	
SBT	1	1700	55	.07	12	.03*
SBR	d	1700	88	.05	35	.02
EBL	1	1700	87	.05*	39	.02*
EBT	1	1700	368	.22	473	.28
EBR	d	1700	45	.03	17	.01
WBL	1	1700	90	.05	22	.01
WBT	1	1700	430	.25*	532	.31*
WBR	d	1700	9	.01	36	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.42

275 . Yale Av. at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	58	.03*	21	.01*
SBT	0	0	0		0	
SBR	1	1700	92	.05	29	.02
EBL	1	1700	56	.03*	59	.03
EBT	2	3400	1142	.34	2209	.65*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2098	.62*	1581	.47
WBR	d	1700	14	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.71

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	60	.04*	56	.03*
NBT	1	1700	85	.05	39	.02
NBR	1	1700	684	.40	576	.34
SBL	1	1700	18	.01	8	.00
SBT	1	1700	62	.06*	52	.04*
SBR	0	0	39		20	
EBL	1	1700	18	.01*	29	.02
EBT	2	3400	1115	.33	2116	.62*
EBR	d	1700	65	.04	70	.04
WBL	2	3400	436	.13	598	.18*
WBT	2	3400	2000	.59*	1544	.45
WBR	d	1700	17	.01	31	.02
Right Turn Adjustment			NBR	.07*	NBR	.09*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .82 1.01

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	515	.30*	224	.13*
NBT	1	1700	139	.08	36	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	128	.04*	54	.02*
SBR	1	1700	505	.30	316	.19
EBL	2	3400	271	.08*	434	.13*
EBT	0	0	0		0	
EBR	1	1700	372	.22	336	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.20*	SBR	.07*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .67 .40

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		6	
NBT	1	1700	69	.07*	26	.02*
NBR	0	0	34		8	
SBL	1	1700	183	.11*	328	.19*
SBT	1	1700	24	.01	61	.04
SBR	1	1700	263	.15	166	.10
EBL	0	0	191	(.11)*	107	
EBT	1	1700	82	.16	105	.12*
EBR	d	1700	7	.00	10	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	220	.13*	68	.04
WBR	d	1700	381	.22	217	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .48 .39

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	96	.06*	99	.06*
NBT	0	0	0		0	
NBR	1	1700	106	.06	181	.11
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	324	.19*	139	.08
EBR	1	1700	121	.07	71	.04
WBL	0	0	109	(.06)*	109	
WBT	1	1700	214	.19	181	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	456	.13*	667	.20*
NBT	3	5100	978	.19	1644	.32
NBR	f		186		332	
SBL	2	3400	280	.08	402	.12
SBT	3	5100	1931	.38*	1231	.24*
SBR	d	1700	158	.09	210	.12
EBL	2	3400	162	.05	278	.08
EBT	2	3400	545	.16*	875	.26*
EBR	d	1700	554	.33	369	.22
WBL	2	3400	540	.16*	420	.12*
WBT	2	3400	818	.24	823	.24
WBR	d	1700	132	.08	158	.09
Right Turn Adjustment			EBR	.07*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .95 .87

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1250	.25	2216	.43*
NBR	f		270		110	
SBL	0	0	0		0	
SBT	3	5100	1930	.38*	1543	.30
SBR	f		1350		421	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1240	.36*	1092	.32*
WBT	0	0	0		0	
WBR	1	1700	140	.08	379	.22
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .79 .80

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1112	.22	1803	.35
NBR	f		990		1290	
SBL	0	0	0		0	
SBT	3	5100	2721	.53*	2269	.44*
SBR	f		380		270	
EBL	2	3400	388	.11*	547	.16*
EBT	0	0	0		0	
EBR	1	1700	109	.06	91	.05
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .69 .65

295 . Michelson Dr. at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	27	.02
NBT	1	1700	1	.00*	8	.04*
NBR	0	0	7		55	
SBL	2	3400	429	.13*	493	.15*
SBT	1	1700	8	.03	7	.02
SBR	0	0	38		32	
EBL	1	1700	11	.01	39	.02
EBT	2	3400	1594	.47*	2472	.73*
EBR	d	1700	10	.01	9	.01
WBL	1	1700	32	.02*	24	.01*
WBT	3	5100	2431	.48	1861	.36
WBR	d	1700	327	.19	454	.27
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .98

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	7	.00
NBT	2	3400	735	.22	491	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	505	.22*	510	.20*
SBR	0	0	247		154	
EBL	0	0	115	(.07)*	225	(.13)*
EBT	1	1700	0	.07	0	.13
EBR	0	0	5		4	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.38

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	25		39	
SBT	1	1700	0	.01*	0	.02*
SBR	d	1700	115	.07	143	.08
EBL	1	1700	91	.05*	143	.08*
EBT	2	3400	285	.08	371	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	515	.15*	217	.06*
WBR	d	1700	29	.02	27	.02
Right Turn Adjustment			SBR	.02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.21

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	2	.00	1	.00
SBT	0	0	0		0	
SBR	1	1700	10	.01	1	.00
EBL	1	1700	2	.00	10	.01*
EBT	2	3400	2	.00	10	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	10	.01*	1	.00*
WBR	0	0	2		1	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.07		.06

189 . Harvard Av. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	51	.03*	45	.03
NBT	2	3400	221	.07	675	.20*
NBR	d	1700	68	.04	141	.08
SBL	1	1700	32	.02	77	.05*
SBT	2	3400	459	.14*	457	.13
SBR	d	1700	339	.20	215	.13
EBL	1	1700	94	.06*	397	.23
EBT	3	5100	581	.12	1692	.34*
EBR	0	0	26		33	
WBL	1	1700	96	.06	110	.06*
WBT	3	5100	1787	.37*	780	.16
WBR	0	0	76		58	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.70

190 . University Dr. at Campus Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	74	.04*	177	.10
NBT	3	5100	611	.12	1524	.30*
NBR	1	1700	298	.18	319	.19
SBL	1	1700	126	.07	80	.05*
SBT	2	3400	1720	.51*	825	.24
SBR	1	1700	299	.18	106	.06
EBL	1	1700	48	.03	424	.25*
EBT	2	3400	406	.12*	621	.18
EBR	d	1700	238	.14	85	.05
WBL	1	1700	182	.11*	401	.24
WBT	2	3400	317	.09	577	.17*
WBR	d	1700	22	.01	172	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.82

192 . California Av. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	48	.01*	221	.07*
NBT	0	0	0		1	
NBR	1	1700	72	.04	757	.45
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	998	.29*	1053	.31
EBR	1	1700	369	.22	122	.07
WBL	2	3400	861	.25*	88	.03
WBT	2	3400	1112	.33	1269	.37*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.33*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.82

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	25	.01*	20	.01*
NBT	0	0	0		0	
NBR	1	1700	225	.13	260	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1170	.23*	950	.19*
EBR	d	1700	111	.07	90	.05
WBL	2	3400	310	.09*	710	.21*
WBT	2	3400	898	.26	800	.24
WBR	0	0	0		0	
Right Turn Adjustment				NBR	.05*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.43	.46

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	35	.02*	69	.04*
NBT	0	0	0		0	
NBR	1	1700	275	.16	112	.07
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1040	.22*	1028	.21*
EBR	0	0	64		39	
WBL	2	3400	116	.03*	261	.08*
WBT	3	5100	949	.19	801	.16
WBR	0	0	0		0	
Right Turn Adjustment			NBR	.12*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.38

216 . California Av. at Campus Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	117	.07*	243	.14*
NBT	1	1700	104	.06	293	.17
NBR	1	1700	109	.06	124	.07
SBL	1	1700	114	.07	128	.08
SBT	1	1700	117	.07*	273	.16*
SBR	1	1700	39	.02	38	.02
EBL	1	1700	25	.01*	103	.06
EBT	2	3400	217	.08	610	.26*
EBR	0	0	58		276	
WBL	1	1700	116	.07	133	.08*
WBT	2	3400	524	.21*	502	.16
WBR	0	0	191		55	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.41		.69

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	139	.04*	247	.07
NBT	3	5100	927	.18	1879	.37*
NBR	1	1700	255	.15	404	.24
SBL	2	3400	210	.06	328	.10*
SBT	3	5100	1965	.39*	1126	.22
SBR	f		344		316	
EBL	2	3400	138	.04*	392	.12
EBT	2	3400	466	.14	938	.28*
EBR	1	1700	187	.11	230	.14
WBL	2	3400	298	.09	305	.09*
WBT	2	3400	1037	.31*	717	.21
WBR	1	1700	235	.14	289	.17
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.89

230 . Culver Dr. at Main St.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	109	.03*	176	.05
NBT	3	5100	1085	.21	2009	.39*
NBR	1	1700	165	.10	397	.23
SBL	2	3400	68	.02	146	.04*
SBT	3	5100	2021	.40*	1327	.26
SBR	f		329		174	
EBL	2	3400	126	.04	479	.14
EBT	2	3400	137	.04*	439	.13*
EBR	f		169		263	
WBL	2	3400	550	.16*	183	.05*
WBT	2	3400	342	.10	100	.03
WBR	1	1700	99	.06	56	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.66

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1305	.26	2452	.48*
NBR	f		830		340	
SBL	0	0	0		0	
SBT	3	5100	1614	.32*	1386	.27
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	606	.18*	424	.12*
WBT	0	0	0		0	
WBR	1	1700	155	.09	358	.21
Right Turn Adjustment					WBR	.09*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.55		.74

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1557	.31	1751	.34*
NBR	f		370		830	
SBL	0	0	0		0	
SBT	3	5100	1870	.37*	1429	.28
SBR	f		380		360	
EBL	1.5		473	{.17}*	1039	{.31}*
EBT	0	5100	0	.17	0	{.31}
EBR	1.5		370		631	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.70

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	225	.07	324	.10
NBT	3	5100	1242	.25*	1634	.33*
NBR	0	0	26		38	
SBL	2	3400	283	.08*	574	.17*
SBT	3	5100	1342	.26	1159	.23
SBR	1	1700	648	.38	374	.22
EBL	2	3400	302	.09	703	.21
EBT	1	1700	231	.14*	438	.26*
EBR	1	1700	169	.10	222	.13
WBL	1	1700	148	.09*	158	.09*
WBT	2	3400	247	.07	242	.07
WBR	1	1700	397	.23	322	.19
Right Turn Adjustment				WBR	.03*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.90

235 . Culver Dr. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	53	.03*	56	.03
NBT	4	6800	1108	.16	1454	.21*
NBR	2	3400	701	.21	944	.28
SBL	1	1700	29	.02	66	.04*
SBT	3	5100	1242	.24*	1022	.20
SBR	d	1700	298	.18	138	.08
EBL	2	3400	86	.03	277	.08
EBT	3	5100	552	.11*	1413	.28*
EBR	d	1700	52	.03	42	.02
WBL	2	3400	899	.26*	737	.22*
WBT	3	5100	1451	.29	727	.15
WBR	0	0	38		62	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.69		.80

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	70	.04*	43	.03*
NBT	3	5100	1573	.31	1713	.34
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1737	.44*	1466	.36*
SBR	0	0	510		377	
EBL	2	3400	357	.11*	597	.18*
EBT	0	0	0		0	
EBR	1	1700	143	.08	144	.08
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.62

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	99	.06
NBT	3	5100	730	.14	959	.19*
NBR	d	1700	133	.08	115	.07
SBL	2	3400	463	.14	515	.15*
SBT	2	3400	880	.26*	928	.27
SBR	1	1700	387	.23	301	.18
EBL	2	3400	161	.05*	348	.10*
EBT	2	3400	264	.09	380	.14
EBR	0	0	25		93	
WBL	1	1700	225	.13	59	.03
WBT	2	3400	646	.19*	240	.07*
WBR	1	1700	580	.34	322	.19
Right Turn Adjustment				WBR	.03*	WBR .01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.57

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	187	.06*	124	.04
NBT	2	3400	860	.25	1019	.30*
NBR	1	1700	218	.13	316	.19
SBL	1	1700	31	.02	51	.03*
SBT	2	3400	901	.26*	829	.24
SBR	1	1700	57	.03	41	.02
EBL	1	1700	44	.03	44	.03
EBT	2	3400	31	.01*	73	.02*
EBR	1	1700	167	.10	173	.10
WBL	2	3400	382	.11*	189	.06*
WBT	1	1700	56	.07	25	.04
WBR	0	0	56		36	
Right Turn Adjustment				EBR	.04*	EBR .01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.53		.47

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	544	.16	1009	.30*
NBR	1	1700	275	.16	336	.20
SBL	2	3400	157	.05	264	.08*
SBT	2	3400	773	.23*	669	.20
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	542	.16*	321	.09*
WBT	0	0	0		0	
WBR	1	1700	189	.11	171	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.52

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	714	.21	1374	.40*
NBR	1	1700	65	.04	27	.02
SBL	2	3400	235	.07	83	.02*
SBT	2	3400	1055	.31*	886	.26
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	445	.13*	164	.05*
WBT	0	0	0		0	
WBR	1	1700	46	.03	36	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.49		.52

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	151	.09*	129	.08*
NBT	2	3400	258	.08	192	.06
NBR	d	1700	163	.10	219	.13
SBL	1	1700	51	.03	55	.03
SBT	2	3400	126	.04*	134	.04*
SBR	d	1700	84	.05	121	.07
EBL	1	1700	129	.08*	79	.05
EBT	2	3400	696	.20	1385	.41*
EBR	d	1700	98	.06	156	.09
WBL	1	1700	116	.07	201	.12*
WBT	2	3400	1045	.31*	1020	.30
WBR	d	1700	104	.06	60	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.70

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	181	.11	91	.05
NBT	2	3400	322	.09*	153	.05*
NBR	d	1700	526	.31	226	.13
SBL	2	3400	163	.05*	158	.05*
SBT	2	3400	112	.03	132	.04
SBR	d	1700	165	.10	91	.05
EBL	1	1700	146	.09*	243	.14
EBT	2	3400	651	.23	1186	.39*
EBR	0	0	142		123	
WBL	2	3400	220	.06	434	.13*
WBT	2	3400	994	.29*	958	.28
WBR	d	1700	117	.07	153	.09
Right Turn Adjustment			NBR	.11*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.67

272 . W. Yale Lp. at Main St.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	779	.46*	276	.16*
NBT	2	3400	311	.09	174	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	189	.06*	186	.05*
SBR	d	1700	281	.17	94	.06
EBL	2	3400	89	.03*	356	.10*
EBT	0	0	0		0	
EBR	2	3400	331	.10	664	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.36

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	20		17	(.01)*
NBT	1	1700	63	.05*	4	.01
NBR	d	1700	87	.05	28	.02
SBL	0	0	68	(.04)*	33	
SBT	1	1700	55	.07	12	.03*
SBR	d	1700	86	.05	35	.02
EBL	1	1700	88	.05*	39	.02*
EBT	1	1700	379	.22	473	.28
EBR	d	1700	44	.03	17	.01
WBL	1	1700	92	.05	22	.01
WBT	1	1700	428	.25*	542	.32*
WBR	d	1700	9	.01	36	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.43

275 . Yale Av. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	59	.03*	21	.01*
SBT	0	0	0		0	
SBR	1	1700	91	.05	29	.02
EBL	1	1700	55	.03*	59	.03
EBT	2	3400	1131	.33	2209	.65*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2089	.61*	1581	.47
WBR	d	1700	15	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.72		.71

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	59	.03*	54	.03*
NBT	1	1700	85	.05	39	.02
NBR	1	1700	686	.40	582	.34
SBL	1	1700	21	.01	8	.00
SBT	1	1700	75	.07*	52	.04*
SBR	0	0	44		20	
EBL	1	1700	18	.01*	29	.02
EBT	2	3400	1103	.32	2129	.63*
EBR	d	1700	68	.04	69	.04
WBL	2	3400	467	.14	618	.18*
WBT	2	3400	1987	.58*	1546	.45
WBR	d	1700	17	.01	32	.02
Right Turn Adjustment			NBR	.07*	NBR	.09*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .81 1.02

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	509	.30*	224	.13*
NBT	1	1700	141	.08	36	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	129	.04*	54	.02*
SBR	1	1700	511	.30	326	.19
EBL	2	3400	279	.08*	444	.13*
EBT	0	0	0		0	
EBR	1	1700	371	.22	336	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.20*	SBR	.07*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .67 .40

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		6	
NBT	1	1700	69	.07*	26	.02*
NBR	0	0	34		8	
SBL	1	1700	183	.11*	328	.19*
SBT	1	1700	24	.01	61	.04
SBR	1	1700	263	.15	166	.10
EBL	0	0	191	(.11)*	107	
EBT	1	1700	82	.16	105	.12*
EBR	d	1700	7	.00	10	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	220	.13*	68	.04
WBR	d	1700	381	.22	217	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .48 .39

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	96	.06*	97	.06*
NBT	0	0	0		0	
NBR	1	1700	106	.06	183	.11
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	324	.19*	141	.08
EBR	1	1700	121	.07	69	.04
WBL	0	0	109	(.06)*	113	
WBT	1	1700	214	.19	186	.18*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .29

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	442	.13*	665	.20*
NBT	3	5100	970	.19	1643	.32
NBR	f		182		331	
SBL	2	3400	284	.08	403	.12
SBT	3	5100	1935	.38*	1226	.24*
SBR	d	1700	158	.09	211	.12
EBL	2	3400	163	.05	278	.08
EBT	2	3400	543	.16*	875	.26*
EBR	d	1700	547	.32	366	.22
WBL	2	3400	549	.16*	417	.12*
WBT	2	3400	829	.24	824	.24
WBR	d	1700	137	.08	159	.09
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .94 .87

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1241	.24	2216	.43*
NBR	f		270		110	
SBL	0	0	0		0	
SBT	3	5100	1942	.38*	1543	.30
SBR	f		1352		421	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1263	.37*	1092	.32*
WBT	0	0	0		0	
WBR	1	1700	121	.07	379	.22
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 .80

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1122	.22	1808	.35
NBR	f		980		1290	
SBL	0	0	0		0	
SBT	3	5100	2751	.54*	2275	.45*
SBR	f		380		270	
EBL	2	3400	388	.11*	552	.16*
EBT	0	0	0		0	
EBR	1	1700	109	.06	95	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .70 .66

295 . Michelson Dr. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	28	.02
NBT	1	1700	1	.00*	8	.04*
NBR	0	0	7		54	
SBL	2	3400	427	.13*	490	.14*
SBT	1	1700	8	.03	7	.02
SBR	0	0	38		34	
EBL	1	1700	11	.01	39	.02
EBT	2	3400	1590	.47*	2485	.73*
EBR	d	1700	10	.01	10	.01
WBL	1	1700	32	.02*	24	.01*
WBT	3	5100	2456	.48	1888	.37
WBR	d	1700	328	.19	443	.26
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .97

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	7	.00
NBT	2	3400	735	.22	494	.15
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	505	.24*	506	.20*
SBR	0	0	296		173	
EBL	1.5		115	(.04)*	226	(.07)*
EBT	0	3400	0	.04	0	.07
EBR	0.5		5		4	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.33		.32

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	32		34	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	120	.07	149	.09
EBL	1	1700	94	.06*	147	.09*
EBT	2	3400	288	.08	376	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	510	.15*	221	.07*
WBR	d	1700	36	.02	23	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.23

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	2	.00	1	.00
SBT	0	0	0		0	
SBR	1	1700	10	.01	1	.00
EBL	1	1700	2	.00	10	.01*
EBT	2	3400	2	.00	10	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	10	.01*	1	.00*
WBR	0	0	2		1	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.07		.06

189 . Harvard Av. at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	52	.03*	48	.03
NBT	2	3400	220	.06	688	.20*
NBR	d	1700	68	.04	145	.09
SBL	1	1700	33	.02	75	.04*
SBT	2	3400	453	.13*	457	.13
SBR	d	1700	354	.21	217	.13
EBL	1	1700	96	.06*	396	.23
EBT	3	5100	589	.12	1700	.34*
EBR	0	0	26		34	
WBL	1	1700	91	.05	109	.06*
WBT	3	5100	1784	.36*	785	.16
WBR	0	0	74		56	
Right Turn Adjustment			SBR	.03*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.69

190 . University Dr. at Campus Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	74	.04*	179	.11
NBT	3	5100	619	.12	1530	.30*
NBR	1	1700	300	.18	321	.19
SBL	1	1700	128	.08	80	.05*
SBT	2	3400	1737	.51*	824	.24
SBR	1	1700	300	.18	107	.06
EBL	1	1700	49	.03	424	.25*
EBT	2	3400	412	.12*	622	.18
EBR	d	1700	241	.14	84	.05
WBL	1	1700	183	.11*	395	.23
WBT	2	3400	316	.09	575	.17*
WBR	d	1700	22	.01	170	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.82

192 . California Av. at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	46	.01*	218	.06*
NBT	0	0	0		1	
NBR	1	1700	74	.04	762	.45
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1016	.30*	1058	.31
EBR	1	1700	361	.21	121	.07
WBL	2	3400	869	.26*	89	.03
WBT	2	3400	1114	.33	1272	.37*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.34*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.82

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	25	.01*	20	.01*
NBT	0	0	0		0	
NBR	1	1700	226	.13	261	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1184	.23*	953	.19*
EBR	d	1700	108	.06	88	.05
WBL	2	3400	302	.09*	715	.21*
WBT	2	3400	905	.27	793	.23
WBR	0	0	0		0	
Right Turn Adjustment				NBR	.05*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.43	.46

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	37	.02*	68	.04*
NBT	0	0	0		0	
NBR	1	1700	285	.17	112	.07
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1035	.22*	1028	.21*
EBR	0	0	63		39	
WBL	2	3400	117	.03*	261	.08*
WBT	3	5100	963	.19	792	.16
WBR	0	0	0		0	
Right Turn Adjustment				NBR	.13*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.45	.38

216 . California Av. at Campus Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	119	.07*	245	.14*
NBT	1	1700	106	.06	286	.17
NBR	1	1700	109	.06	121	.07
SBL	1	1700	121	.07	126	.07
SBT	1	1700	131	.08*	278	.16*
SBR	1	1700	42	.02	38	.02
EBL	1	1700	25	.01*	101	.06
EBT	2	3400	210	.08	593	.26*
EBR	0	0	59		279	
WBL	1	1700	121	.07	133	.08*
WBT	2	3400	520	.21*	497	.16
WBR	0	0	189		53	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.42		.69

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	139	.04*	254	.07
NBT	3	5100	932	.18	1882	.37*
NBR	1	1700	269	.16	405	.24
SBL	2	3400	216	.06	325	.10*
SBT	3	5100	1954	.38*	1132	.22
SBR	f		339		322	
EBL	2	3400	145	.04*	394	.12
EBT	2	3400	516	.15	942	.28*
EBR	1	1700	199	.12	233	.14
WBL	2	3400	300	.09	307	.09*
WBT	2	3400	1035	.30*	734	.22
WBR	1	1700	234	.14	288	.17
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.81		.89

230 . Culver Dr. at Main St.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	107	.03*	176	.05
NBT	3	5100	1093	.21	2013	.39*
NBR	1	1700	160	.09	404	.24
SBL	2	3400	67	.02	148	.04*
SBT	3	5100	2015	.40*	1335	.26
SBR	f		327		174	
EBL	2	3400	137	.04	471	.14
EBT	2	3400	144	.04*	438	.13*
EBR	f		181		261	
WBL	2	3400	544	.16*	184	.05*
WBT	2	3400	336	.10	100	.03
WBR	1	1700	100	.06	56	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.66

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1304	.26	2462	.48*
NBR	f		830		340	
SBL	0	0	0		0	
SBT	3	5100	1618	.32*	1396	.27
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	602	.18*	424	.12*
WBT	0	0	0		0	
WBR	1	1700	156	.09	358	.21
Right Turn Adjustment					WBR	.09*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.55		.74

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1559	.31	1757	.34*
NBR	f		370		830	
SBL	0	0	0		0	
SBT	3	5100	1869	.37*	1441	.28
SBR	f		380		360	
EBL	1.5		471	(.16)*	1053	(.31)*
EBT	0	5100	0	.16	0	(.31)
EBR	1.5		361		629	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.58		.70

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	229	.07	323	.10
NBT	3	5100	1239	.25*	1633	.33*
NBR	0	0	26		38	
SBL	2	3400	274	.08*	576	.17*
SBT	3	5100	1338	.26	1161	.23
SBR	1	1700	652	.38	376	.22
EBL	2	3400	307	.09	704	.21
EBT	1	1700	230	.14*	437	.26*
EBR	1	1700	174	.10	221	.13
WBL	1	1700	149	.09*	157	.09*
WBT	2	3400	249	.07	241	.07
WBR	1	1700	394	.23	323	.19
Right Turn Adjustment				WBR	.03*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.90

235 . Culver Dr. at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	52	.03*	56	.03
NBT	4	6800	1103	.16	1463	.22*
NBR	2	3400	699	.21	943	.28
SBL	1	1700	30	.02	65	.04*
SBT	3	5100	1243	.24*	1024	.20
SBR	d	1700	295	.17	138	.08
EBL	2	3400	88	.03	280	.08
EBT	3	5100	561	.11*	1419	.28*
EBR	d	1700	52	.03	43	.03
WBL	2	3400	905	.27*	738	.22*
WBT	3	5100	1443	.29	727	.15
WBR	0	0	39		62	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.70		.81

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	73	.04*	43	.03*
NBT	3	5100	1567	.31	1721	.34
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1733	.44*	1476	.36*
SBR	0	0	517		368	
EBL	2	3400	353	.10*	594	.17*
EBT	0	0	0		0	
EBR	1	1700	147	.09	147	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.61

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	97	.06
NBT	3	5100	729	.14	967	.19*
NBR	d	1700	133	.08	115	.07
SBL	2	3400	463	.14	516	.15*
SBT	2	3400	883	.26*	934	.27
SBR	1	1700	384	.23	298	.18
EBL	2	3400	159	.05*	346	.10*
EBT	2	3400	265	.09	373	.14
EBR	0	0	25		91	
WBL	1	1700	224	.13	58	.03
WBT	2	3400	640	.19*	237	.07*
WBR	1	1700	574	.34	324	.19
Right Turn Adjustment				WBR	.03*	WBR .01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.57

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	185	.05*	125	.04
NBT	2	3400	856	.25	1030	.30*
NBR	1	1700	216	.13	318	.19
SBL	1	1700	31	.02	50	.03*
SBT	2	3400	899	.26*	825	.24
SBR	1	1700	58	.03	40	.02
EBL	1	1700	47	.03	44	.03
EBT	2	3400	33	.01*	72	.02*
EBR	1	1700	172	.10	175	.10
WBL	2	3400	379	.11*	190	.06*
WBT	1	1700	57	.07	25	.04
WBR	0	0	57		36	
Right Turn Adjustment				EBR	.05*	EBR .01*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.53		.47

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	540	.16	1009	.30*
NBR	1	1700	270	.16	331	.19
SBL	2	3400	160	.05	269	.08*
SBT	2	3400	770	.23*	661	.19
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	530	.16*	309	.09*
WBT	0	0	0		0	
WBR	1	1700	190	.11	171	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.52

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	715	.21	1377	.41*
NBR	1	1700	64	.04	27	.02
SBL	2	3400	226	.07	73	.02*
SBT	2	3400	1065	.31*	882	.26
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	455	.13*	168	.05*
WBT	0	0	0		0	
WBR	1	1700	45	.03	33	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.49		.53

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	155	.09*	134	.08*
NBT	2	3400	254	.07	194	.06
NBR	d	1700	161	.09	222	.13
SBL	1	1700	47	.03	54	.03
SBT	2	3400	122	.04*	134	.04*
SBR	d	1700	80	.05	121	.07
EBL	1	1700	137	.08*	79	.05
EBT	2	3400	742	.22	1389	.41*
EBR	d	1700	111	.07	161	.09
WBL	1	1700	117	.07	205	.12*
WBT	2	3400	1044	.31*	1037	.31
WBR	d	1700	99	.06	58	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.70

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	178	.10	91	.05*
NBT	2	3400	324	.10*	152	.04
NBR	d	1700	527	.31	226	.13
SBL	2	3400	166	.05*	157	.05
SBT	2	3400	109	.03	131	.04*
SBR	d	1700	165	.10	91	.05
EBL	1	1700	152	.09*	245	.14
EBT	2	3400	676	.24	1191	.39*
EBR	0	0	141		123	
WBL	2	3400	215	.06	437	.13*
WBT	2	3400	997	.29*	970	.29
WBR	d	1700	119	.07	154	.09
Right Turn Adjustment		NBR		.10*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.66

272 . W. Yale Lp. at Main St.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	772	.45*	276	.16*
NBT	2	3400	318	.09	174	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	207	.06*	186	.05*
SBR	d	1700	283	.17	94	.06
EBL	2	3400	84	.02*	356	.10*
EBT	0	0	0		0	
EBR	2	3400	336	.10	664	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.36

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	21		17	(.01)*
NBT	1	1700	63	.05*	4	.01
NBR	d	1700	86	.05	29	.02
SBL	0	0	67	(.04)*	35	
SBT	1	1700	55	.07	12	.03*
SBR	d	1700	88	.05	34	.02
EBL	1	1700	88	.05*	38	.02*
EBT	1	1700	377	.22	477	.28
EBR	d	1700	46	.03	16	.01
WBL	1	1700	90	.05	22	.01
WBT	1	1700	431	.25*	530	.31*
WBR	d	1700	9	.01	37	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.42

275 . Yale Av. at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	58	.03*	21	.01*
SBT	0	0	0		0	
SBR	1	1700	92	.05	29	.02
EBL	1	1700	56	.03*	59	.03
EBT	2	3400	1142	.34	2209	.65*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2098	.62*	1581	.47
WBR	d	1700	14	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.71

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	61	.04*	58	.03*
NBT	1	1700	86	.05	40	.02
NBR	1	1700	683	.40	573	.34
SBL	1	1700	18	.01	8	.00
SBT	1	1700	62	.06*	52	.04*
SBR	0	0	40		20	
EBL	1	1700	18	.01*	30	.02
EBT	2	3400	1125	.33	2119	.62*
EBR	d	1700	65	.04	73	.04
WBL	2	3400	429	.13	604	.18*
WBT	2	3400	2007	.59*	1542	.45
WBR	d	1700	17	.01	31	.02
Right Turn Adjustment			NBR	.07*	NBR	.09*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .82 1.01

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	510	.30*	224	.13*
NBT	1	1700	140	.08	36	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	130	.04*	54	.02*
SBR	1	1700	500	.29	316	.19
EBL	2	3400	270	.08*	434	.13*
EBT	0	0	0		0	
EBR	1	1700	370	.22	336	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.19*	SBR	.07*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .66 .40

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		6	
NBT	1	1700	69	.07*	26	.02*
NBR	0	0	34		8	
SBL	1	1700	183	.11*	328	.19*
SBT	1	1700	24	.01	61	.04
SBR	1	1700	263	.15	166	.10
EBL	0	0	191	(.11)*	107	
EBT	1	1700	82	.16	105	.12*
EBR	d	1700	7	.00	10	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	220	.13*	68	.04
WBR	d	1700	381	.22	217	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .48 .39

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	96	.06*	97	.06*
NBT	0	0	0		0	
NBR	1	1700	106	.06	183	.11
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	324	.19*	141	.08
EBR	1	1700	121	.07	69	.04
WBL	0	0	109	(.06)*	113	
WBT	1	1700	214	.19	186	.18*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .29

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	452	.13*	668	.20*
NBT	3	5100	981	.19	1648	.32
NBR	f		187		330	
SBL	2	3400	284	.08	404	.12
SBT	3	5100	1928	.38*	1229	.24*
SBR	d	1700	158	.09	212	.12
EBL	2	3400	166	.05	280	.08
EBT	2	3400	561	.17*	876	.26*
EBR	d	1700	563	.33	368	.22
WBL	2	3400	544	.16*	423	.12*
WBT	2	3400	822	.24	840	.25
WBR	d	1700	134	.08	161	.09
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .95 .87

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1250	.25	2215	.43*
NBR	f		270		110	
SBL	0	0	0		0	
SBT	3	5100	1940	.38*	1544	.30
SBR	f		1350		420	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1240	.36*	1096	.32*
WBT	0	0	0		0	
WBR	1	1700	140	.08	375	.22
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .79 .80

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1117	.22	1807	.35
NBR	f		1000		1290	
SBL	0	0	0		0	
SBT	3	5100	2717	.53*	2275	.45*
SBR	f		390		280	
EBL	2	3400	383	.11*	553	.16*
EBT	0	0	0		0	
EBR	1	1700	113	.07	95	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .69 .66

295 . Michelson Dr. at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	28	.02
NBT	1	1700	1	.00*	8	.04*
NBR	0	0	7		55	
SBL	2	3400	444	.13*	502	.15*
SBT	1	1700	10	.03	7	.02
SBR	0	0	40		33	
EBL	1	1700	12	.01	40	.02
EBT	2	3400	1589	.47*	2473	.73*
EBR	d	1700	13	.01	9	.01
WBL	1	1700	37	.02*	24	.01*
WBT	3	5100	2429	.48	1869	.37
WBR	d	1700	327	.19	462	.27
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .98

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	6	.00
NBT	2	3400	735	.22	491	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	505	.22*	520	.20*
SBR	0	0	237		155	
EBL	0	0	115	(.07)*	225	(.13)*
EBT	1	1700	0	.07	0	.13
EBR	0	0	5		4	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .34 .38

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	28		39	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	114	.07	143	.08
EBL	1	1700	89	.05*	143	.08*
EBT	2	3400	292	.09	371	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	516	.15*	217	.06*
WBR	d	1700	31	.02	27	.02
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .28 .21

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	2	.00	1	.00
SBT	0	0	0		0	
SBR	1	1700	10	.01	1	.00
EBL	1	1700	2	.00	10	.01*
EBT	2	3400	2	.00	10	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	10	.01*	1	.00*
WBR	0	0	2		1	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .07 .06

189 . Harvard Av. at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	52	.03*	47	.03
NBT	2	3400	220	.06	689	.20*
NBR	d	1700	68	.04	146	.09
SBL	1	1700	33	.02	76	.04*
SBT	2	3400	453	.13*	458	.13
SBR	d	1700	354	.21	217	.13
EBL	1	1700	96	.06*	394	.23*
EBT	3	5100	589	.12	1698	.34
EBR	0	0	26		33	
WBL	1	1700	91	.05	109	.06
WBT	3	5100	1784	.36*	785	.17*
WBR	0	0	74		57	
Right Turn Adjustment			SBR	.03*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.69

190 . University Dr. at Campus Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	74	.04*	177	.10
NBT	3	5100	629	.12	1521	.30*
NBR	1	1700	301	.18	321	.19
SBL	1	1700	127	.07	81	.05*
SBT	2	3400	1737	.51*	822	.24
SBR	1	1700	300	.18	107	.06
EBL	1	1700	49	.03	418	.25*
EBT	2	3400	412	.12*	618	.18
EBR	d	1700	241	.14	83	.05
WBL	1	1700	183	.11*	394	.23
WBT	2	3400	316	.09	575	.17*
WBR	d	1700	22	.01	170	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.82

192 . California Av. at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	46	.01*	219	.06*
NBT	0	0	0		1	
NBR	1	1700	74	.04	762	.45
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1016	.30*	1048	.31
EBR	1	1700	361	.21	121	.07
WBL	2	3400	879	.26*	89	.03
WBT	2	3400	1114	.33	1271	.37*
WBR	0	0	0		0	
Right Turn Adjustment					NBR	.34*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.82

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	24	.01*	19	.01*
NBT	0	0	0		0	
NBR	1	1700	226	.13	252	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1189	.23*	948	.19*
EBR	d	1700	113	.07	85	.05
WBL	2	3400	318	.09*	715	.21*
WBT	2	3400	889	.26	791	.23
WBR	0	0	0		0	
Right Turn Adjustment				NBR	.05*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.43	.46

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	35	.02*	68	.04*
NBT	0	0	0		0	
NBR	1	1700	286	.17	112	.07
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1044	.22*	1028	.21*
EBR	0	0	62		39	
WBL	2	3400	118	.03*	261	.08*
WBT	3	5100	935	.18	792	.16
WBR	0	0	0		0	
Right Turn Adjustment				NBR	.13*	
Clearance Interval					.05*	.05*
TOTAL CAPACITY UTILIZATION					.45	.38

216 . California Av. at Campus Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	123	.07*	243	.14*
NBT	1	1700	108	.06	294	.17
NBR	1	1700	109	.06	123	.07
SBL	1	1700	118	.07	126	.07
SBT	1	1700	130	.08*	277	.16*
SBR	1	1700	42	.02	37	.02
EBL	1	1700	25	.01*	101	.06
EBT	2	3400	213	.08	591	.26*
EBR	0	0	61		277	
WBL	1	1700	119	.07	136	.08*
WBT	2	3400	524	.21*	499	.16
WBR	0	0	187		55	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.42		.69

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	139	.04*	255	.08
NBT	3	5100	932	.18	1882	.37*
NBR	1	1700	269	.16	407	.24
SBL	2	3400	216	.06	324	.10*
SBT	3	5100	1954	.38*	1128	.22
SBR	f		339		320	
EBL	2	3400	145	.04*	390	.11
EBT	2	3400	516	.15	939	.28*
EBR	1	1700	199	.12	233	.14
WBL	2	3400	300	.09	309	.09*
WBT	2	3400	1035	.30*	735	.22
WBR	1	1700	234	.14	288	.17
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.81		.89

230 . Culver Dr. at Main St.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	105	.03*	177	.05
NBT	3	5100	1093	.21	2008	.39*
NBR	1	1700	159	.09	398	.23
SBL	2	3400	67	.02	145	.04*
SBT	3	5100	2019	.40*	1330	.26
SBR	f		328		173	
EBL	2	3400	137	.04	477	.14
EBT	2	3400	144	.04*	438	.13*
EBR	f		179		266	
WBL	2	3400	548	.16*	184	.05*
WBT	2	3400	339	.10	100	.03
WBR	1	1700	102	.06	56	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.66

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1304	.26	2459	.48*
NBR	f		820		340	
SBL	0	0	0		0	
SBT	3	5100	1628	.32*	1391	.27
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	602	.18*	419	.12*
WBT	0	0	0		0	
WBR	1	1700	156	.09	361	.21
Right Turn Adjustment					WBR	.09*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .55 .74

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1554	.30	1753	.34*
NBR	f		370		830	
SBL	0	0	0		0	
SBT	3	5100	1875	.37*	1437	.28
SBR	f		380		360	
EBL	1.5		466	(.16)*	1047	(.31)*
EBT	0	5100	0	.16	0	(.31)
EBR	1.5		365		623	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .58 .70

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	225	.07	322	.09
NBT	3	5100	1239	.25*	1637	.33*
NBR	0	0	27		37	
SBL	2	3400	288	.08*	577	.17*
SBT	3	5100	1342	.26	1163	.23
SBR	1	1700	649	.38	377	.22
EBL	2	3400	304	.09	708	.21
EBT	1	1700	236	.14*	436	.26*
EBR	1	1700	170	.10	220	.13
WBL	1	1700	148	.09*	157	.09*
WBT	2	3400	246	.07	241	.07
WBR	1	1700	396	.23	324	.19
Right Turn Adjustment				WBR	.03*	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .64 .90

235 . Culver Dr. at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	54	.03*	55	.03
NBT	4	6800	1096	.16	1462	.22*
NBR	2	3400	701	.21	936	.28
SBL	1	1700	29	.02	66	.04*
SBT	3	5100	1245	.24*	1022	.20
SBR	d	1700	296	.17	139	.08
EBL	2	3400	87	.03	282	.08
EBT	3	5100	560	.11*	1418	.28*
EBR	d	1700	54	.03	42	.02
WBL	2	3400	902	.27*	742	.22*
WBT	3	5100	1440	.29	730	.16
WBR	0	0	38		63	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						

TOTAL CAPACITY UTILIZATION .70 .81

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	70	.04*	42	.02*
NBT	3	5100	1562	.31	1714	.34
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1737	.44*	1473	.36*
SBR	0	0	520		370	
EBL	2	3400	358	.11*	597	.18*
EBT	0	0	0		0	
EBR	1	1700	143	.08	145	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .64 .61

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	99	.06
NBT	3	5100	721	.14	956	.19*
NBR	d	1700	132	.08	115	.07
SBL	2	3400	463	.14	519	.15*
SBT	2	3400	880	.26*	930	.27
SBR	1	1700	386	.23	301	.18
EBL	2	3400	160	.05*	342	.10*
EBT	2	3400	265	.09	376	.14
EBR	0	0	25		92	
WBL	1	1700	225	.13	59	.03
WBT	2	3400	647	.19*	240	.07*
WBR	1	1700	579	.34	322	.19
Right Turn Adjustment				WBR	.03*	WBR .01*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .62 .57

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	184	.05*	125	.04
NBT	2	3400	857	.25	1030	.30*
NBR	1	1700	216	.13	318	.19
SBL	1	1700	32	.02	50	.03*
SBT	2	3400	907	.27*	834	.25
SBR	1	1700	59	.03	40	.02
EBL	1	1700	46	.03	44	.03
EBT	2	3400	32	.01*	72	.02*
EBR	1	1700	164	.10	175	.10
WBL	2	3400	379	.11*	190	.06*
WBT	1	1700	57	.07	25	.04
WBR	0	0	58		36	
Right Turn Adjustment				EBR	.05*	EBR .02*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .54 .48

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	539	.16	1016	.30*
NBR	1	1700	254	.15	334	.20
SBL	2	3400	156	.05	266	.08*
SBT	2	3400	778	.23*	664	.20
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	522	.15*	316	.09*
WBT	0	0	0		0	
WBR	1	1700	191	.11	174	.10
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .43 .52

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	696	.20	1383	.41*
NBR	1	1700	63	.04	25	.01
SBL	2	3400	228	.07	75	.02*
SBT	2	3400	1063	.31*	887	.26
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	473	.14*	173	.05*
WBT	0	0	0		0	
WBR	1	1700	47	.03	37	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.50		.53

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	154	.09*	134	.08*
NBT	2	3400	254	.07	194	.06
NBR	d	1700	164	.10	222	.13
SBL	1	1700	48	.03	54	.03
SBT	2	3400	122	.04*	134	.04*
SBR	d	1700	80	.05	121	.07
EBL	1	1700	135	.08*	79	.05
EBT	2	3400	748	.22	1389	.41*
EBR	d	1700	109	.06	161	.09
WBL	1	1700	118	.07	205	.12*
WBT	2	3400	1046	.31*	1037	.31
WBR	d	1700	100	.06	58	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.70

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	178	.10	91	.05*
NBT	2	3400	322	.09*	152	.04
NBR	d	1700	528	.31	226	.13
SBL	2	3400	166	.05*	157	.05
SBT	2	3400	108	.03	131	.04*
SBR	d	1700	165	.10	91	.05
EBL	1	1700	151	.09*	245	.14
EBT	2	3400	678	.24	1191	.39*
EBR	0	0	140		123	
WBL	2	3400	213	.06	437	.13*
WBT	2	3400	990	.29*	970	.29
WBR	d	1700	118	.07	154	.09
Right Turn Adjustment		NBR	.11*			
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.66

272 . W. Yale Lp. at Main St.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	781	.46*	276	.16*
NBT	2	3400	310	.09	174	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	205	.06*	186	.05*
SBR	d	1700	284	.17	94	.06
EBL	2	3400	82	.02*	356	.10*
EBT	0	0	0		0	
EBR	2	3400	338	.10	664	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR	.09*			
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.36

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	20		17	(.01)*
NBT	1	1700	63	.05*	4	.01
NBR	d	1700	87	.05	29	.02
SBL	0	0	69	(.04)*	34	
SBT	1	1700	54	.07	12	.03*
SBR	d	1700	86	.05	34	.02
EBL	1	1700	89	.05*	38	.02*
EBT	1	1700	388	.23	477	.28
EBR	d	1700	45	.03	16	.01
WBL	1	1700	92	.05	22	.01
WBT	1	1700	428	.25*	539	.32*
WBR	d	1700	9	.01	38	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.44		.43

275 . Yale Av. at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	62	.04*	21	.01*
SBT	0	0	0		0	
SBR	1	1700	97	.06	29	.02
EBL	1	1700	55	.03*	59	.03
EBT	2	3400	1141	.34	2199	.65*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2089	.61*	1581	.47
WBR	d	1700	15	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.71

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	59	.03*	54	.03*
NBT	1	1700	84	.05	39	.02
NBR	1	1700	686	.40	582	.34
SBL	1	1700	21	.01	8	.00
SBT	1	1700	75	.07*	52	.04*
SBR	0	0	44		20	
EBL	1	1700	18	.01*	29	.02
EBT	2	3400	1121	.33	2129	.63*
EBR	d	1700	69	.04	69	.04
WBL	2	3400	468	.14	618	.18*
WBT	2	3400	1987	.58*	1546	.45
WBR	d	1700	17	.01	32	.02
Right Turn Adjustment			NBR	.08*	NBR	.09*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .82 1.02

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	514	.30*	224	.13*
NBT	1	1700	137	.08	36	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	128	.04*	54	.02*
SBR	1	1700	512	.30	326	.19
EBL	2	3400	275	.08*	444	.13*
EBT	0	0	0		0	
EBR	1	1700	375	.22	336	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.20*	SBR	.07*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .67 .40

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		6	
NBT	1	1700	69	.07*	26	.02*
NBR	0	0	34		8	
SBL	1	1700	183	.11*	328	.19*
SBT	1	1700	24	.01	61	.04
SBR	1	1700	263	.15	166	.10
EBL	0	0	191	(.11)*	107	
EBT	1	1700	82	.16	105	.12*
EBR	d	1700	7	.00	10	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	220	.13*	68	.04
WBR	d	1700	381	.22	217	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .48 .39

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	96	.06*	99	.06*
NBT	0	0	0		0	
NBR	1	1700	106	.06	181	.11
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	324	.19*	139	.08
EBR	1	1700	121	.07	71	.04
WBL	0	0	109	(.06)*	109	
WBT	1	1700	214	.19	181	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	437	.13*	670	.20*
NBT	3	5100	980	.19	1642	.32
NBR	f		183		332	
SBL	2	3400	286	.08	403	.12
SBT	3	5100	1926	.38*	1229	.24*
SBR	d	1700	158	.09	212	.12
EBL	2	3400	171	.05	278	.08
EBT	2	3400	561	.17*	876	.26*
EBR	d	1700	558	.33	368	.22
WBL	2	3400	546	.16*	423	.12*
WBT	2	3400	825	.24	838	.25
WBR	d	1700	139	.08	160	.09
Right Turn Adjustment			EBR	.06*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .95 .87

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1240	.24	2214	.43*
NBR	f		270		110	
SBL	0	0	0		0	
SBT	3	5100	1948	.38*	1544	.30
SBR	f		1350		420	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1252	.37*	1106	.33*
WBT	0	0	0		0	
WBR	1	1700	130	.08	376	.22
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 .81

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1122	.22	1813	.36
NBR	f		1000		1292	
SBL	0	0	0		0	
SBT	3	5100	2741	.54*	2288	.45*
SBR	f		390		280	
EBL	2	3400	388	.11*	551	.16*
EBT	0	0	0		0	
EBR	1	1700	109	.06	96	.06
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .70 .66

295 . Michelson Dr. at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	28	.02
NBT	1	1700	1	.00*	7	.04*
NBR	0	0	7		55	
SBL	2	3400	438	.13*	493	.15*
SBT	1	1700	8	.03	7	.02
SBR	0	0	37		32	
EBL	1	1700	11	.01	38	.02
EBT	2	3400	1594	.47*	2492	.73*
EBR	d	1700	10	.01	9	.01
WBL	1	1700	32	.02*	24	.01*
WBT	3	5100	2441	.48	1890	.37
WBR	d	1700	328	.19	445	.26
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .98

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	8	.00
NBT	2	3400	735	.22	487	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	505	.24*	515	.20*
SBR	0	0	296		172	
EBL	1.5		115	(.04)*	223	(.07)*
EBT	0	3400	0	.04	0	.07
EBR	0.5		5		5	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.33		.32

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	32		38	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	120	.07	153	.09
EBL	1	1700	94	.06*	145	.09*
EBT	2	3400	288	.08	372	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	510	.15*	217	.06*
WBR	d	1700	36	.02	25	.01
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.22

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	2	.00	9	.01*
SBT	0	0	0		0	
SBR	1	1700	10	.01	1	.00
EBL	1	1700	2	.00	10	.01*
EBT	2	3400	2	.00	1	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	10	.01*	1	.00*
WBR	0	0	2		1	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.07		.07

189 . Harvard Av. at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	64	.04*	58	.03
NBT	2	3400	317	.09	895	.26*
NBR	d	1700	121	.07	237	.14
SBL	1	1700	36	.02	88	.05*
SBT	2	3400	647	.19*	614	.18
SBR	d	1700	266	.16	186	.11
EBL	1	1700	85	.05*	325	.19
EBT	3	5100	653	.14	1758	.35*
EBR	0	0	37		40	
WBL	1	1700	176	.10	177	.10*
WBT	3	5100	1810	.37*	818	.17
WBR	0	0	88		63	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.81

190 . University Dr. at Campus Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	72	.04*	207	.12*
NBT	3	5100	659	.13	1446	.28
NBR	1	1700	265	.16	277	.16
SBL	1	1700	134	.08	79	.05
SBT	2	3400	1637	.48*	808	.24*
SBR	1	1700	349	.21	142	.08
EBL	1	1700	71	.04	511	.30*
EBT	2	3400	500	.15*	686	.20
EBR	d	1700	261	.15	92	.05
WBL	1	1700	182	.11*	351	.21
WBT	2	3400	389	.11	692	.20*
WBR	d	1700	29	.02	167	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.91

192 . California Av. at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	251	.07*	744	.22*
NBT	0	0	0		1	
NBR	1	1700	149	.09	865	.51
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	841	.25*	875	.26
EBR	1	1700	937	.55	506	.30
WBL	2	3400	873	.26*	134	.04
WBT	2	3400	949	.28	1146	.34*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.25*	NBR	.23*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.88		.84

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	18	.01*	13	.01*
NBT	0	0	0		0	
NBR	1	1700	241	.14	249	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1569	.31*	1184	.23*
EBR	d	1700	176	.10	132	.08
WBL	2	3400	484	.14*	1147	.34*
WBT	2	3400	782	.23	744	.22
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.53		.63

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	69	.04*	150	.09*
NBT	0	0	0		0	
NBR	1	1700	622	.37	397	.23
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1098	.23*	1013	.20*
EBR	0	0	62		28	
WBL	2	3400	108	.03*	272	.08*
WBT	3	5100	831	.16	720	.14
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.31*	NBR	.08*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.50

216 . California Av. at Campus Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	197	.12*	270	.16*
NBT	1	1700	178	.10	310	.18
NBR	1	1700	136	.08	139	.08
SBL	1	1700	111	.07	148	.09
SBT	1	1700	128	.08*	338	.20*
SBR	1	1700	51	.03	43	.03
EBL	1	1700	36	.02*	107	.06
EBT	2	3400	226	.09	675	.29*
EBR	0	0	68		327	
WBL	1	1700	126	.07	147	.09*
WBT	2	3400	676	.27*	510	.17
WBR	0	0	249		53	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.79

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	152	.04*	260	.08
NBT	3	5100	1101	.22	1933	.38*
NBR	1	1700	328	.19	426	.25
SBL	2	3400	244	.07	352	.10*
SBT	3	5100	1960	.38*	1282	.25
SBR	f		344		337	
EBL	2	3400	174	.05*	408	.12
EBT	2	3400	638	.19	1002	.29*
EBR	1	1700	218	.13	260	.15
WBL	2	3400	315	.09	378	.11*
WBT	2	3400	1097	.32*	833	.25
WBR	1	1700	267	.16	329	.19
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.84		.93

230 . Culver Dr. at Main St.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	107	.03*	170	.05
NBT	3	5100	1272	.25	2039	.40*
NBR	1	1700	152	.09	385	.23
SBL	2	3400	72	.02	172	.05*
SBT	3	5100	2011	.39*	1520	.30
SBR	f		371		204	
EBL	2	3400	169	.05	528	.16
EBT	2	3400	146	.04*	462	.14*
EBR	f		169		270	
WBL	2	3400	530	.16*	190	.06*
WBT	2	3400	372	.11	106	.03
WBR	1	1700	128	.08	63	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.70

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1470	.29	2536	.50*
NBR	f		790		340	
SBL	0	0	0		0	
SBT	3	5100	1672	.33*	1608	.32
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	728	.21*	482	.14*
WBT	0	0	0		0	
WBR	1	1700	180	.11	364	.21
Right Turn Adjustment					WBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.59		.76

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1611	.32	1872	.37*
NBR	f		330		845	
SBL	0	0	0		0	
SBT	3	5100	2073	.41*	1670	.33
SBR	f		380		402	
EBL	1.5		549	(.18)*	1016	(.32)*
EBT	0	5100	0	.18	0	(.32)
EBR	1.5		377		654	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.74

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	295	.09*	432	.13
NBT	3	5100	1317	.26	1792	.36*
NBR	0	0	27		35	
SBL	2	3400	233	.07	504	.15*
SBT	3	5100	1556	.31*	1407	.28
SBR	1	1700	694	.41	472	.28
EBL	2	3400	348	.10	761	.22
EBT	1	1700	252	.15*	401	.24*
EBR	1	1700	260	.15	281	.17
WBL	1	1700	149	.09*	142	.08*
WBT	2	3400	230	.07	226	.07
WBR	1	1700	300	.18	247	.15
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.88

235 . Culver Dr. at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	61	.04*	63	.04*
NBT	4	6800	1249	.18	1647	.24
NBR	2	3400	930	.27	993	.29
SBL	1	1700	37	.02	72	.04
SBT	3	5100	1455	.29*	1274	.25*
SBR	d	1700	327	.19	162	.10
EBL	2	3400	91	.03	324	.10
EBT	3	5100	683	.13*	1535	.30*
EBR	d	1700	59	.03	53	.03
WBL	2	3400	1016	.30*	883	.26*
WBT	3	5100	1532	.31	815	.17
WBR	0	0	40		70	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.81		.90

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	71	.04*	50	.03*
NBT	3	5100	1757	.34	1822	.36
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1909	.50*	1685	.44*
SBR	0	0	649		550	
EBL	2	3400	543	.16*	738	.22*
EBT	0	0	0		0	
EBR	1	1700	171	.10	155	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.74

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	84	.05*	96	.06*
NBT	3	5100	855	.17	994	.19
NBR	d	1700	131	.08	112	.07
SBL	2	3400	491	.14	561	.17
SBT	2	3400	949	.28*	1087	.32*
SBR	1	1700	520	.31	326	.19
EBL	2	3400	194	.06*	405	.12
EBT	2	3400	270	.09	417	.16*
EBR	0	0	26		110	
WBL	1	1700	197	.12	63	.04*
WBT	2	3400	708	.21*	238	.07
WBR	1	1700	594	.35	341	.20
Right Turn Adjustment				WBR .02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.63

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	347	.10*	179	.05
NBT	2	3400	1010	.30	1010	.30*
NBR	1	1700	224	.13	305	.18
SBL	1	1700	27	.02	45	.03*
SBT	2	3400	929	.27*	917	.27
SBR	1	1700	90	.05	52	.03
EBL	1	1700	48	.03	63	.04
EBT	2	3400	29	.01*	101	.03*
EBR	1	1700	184	.11	306	.18
WBL	2	3400	367	.11*	191	.06*
WBT	1	1700	83	.08	30	.04
WBR	0	0	52		30	
Right Turn Adjustment				EBR .02*	EBR	.10*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.57

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	528	.16*	941	.28*
NBR	1	1700	521	.31	566	.33
SBL	2	3400	202	.06*	304	.09*
SBT	2	3400	689	.20	605	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	884	.26*	505	.15*
WBT	0	0	0		0	
WBR	1	1700	226	.13	189	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.53		.57

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	916	.27*	1507	.44*
NBR	1	1700	72	.04	44	.03
SBL	2	3400	408	.12*	197	.06*
SBT	2	3400	1046	.31	864	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	354	.10*	123	.04*
WBT	0	0	0		0	
WBR	1	1700	74	.04	44	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.59

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	164	.10*	149	.09*
NBT	2	3400	245	.07	205	.06
NBR	d	1700	181	.11	217	.13
SBL	1	1700	55	.03	52	.03
SBT	2	3400	116	.03*	137	.04*
SBR	d	1700	88	.05	133	.08
EBL	1	1700	148	.09*	90	.05
EBT	2	3400	938	.28	1461	.43*
EBR	d	1700	114	.07	179	.11
WBL	1	1700	111	.07	224	.13*
WBT	2	3400	1141	.34*	1218	.36
WBR	d	1700	98	.06	66	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.74

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	178	.10	104	.06
NBT	2	3400	323	.10*	167	.05*
NBR	d	1700	528	.31	229	.13
SBL	2	3400	173	.05*	173	.05*
SBT	2	3400	106	.03	142	.04
SBR	d	1700	171	.10	113	.07
EBL	1	1700	185	.11*	272	.16
EBT	2	3400	823	.29	1222	.40*
EBR	0	0	162		124	
WBL	2	3400	217	.06	445	.13*
WBT	2	3400	1065	.31*	1136	.33
WBR	d	1700	128	.08	173	.10
Right Turn Adjustment		NBR		.11*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.68

272 . W. Yale Lp. at Main St.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	824	.48*	297	.17*
NBT	2	3400	317	.09	182	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	188	.06*	207	.06*
SBR	d	1700	281	.17	103	.06
EBL	2	3400	85	.03*	358	.11*
EBT	0	0	0		0	
EBR	2	3400	335	.10	703	.21
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.71		.39

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	18	(.01)*	18	(.01)*
NBT	1	1700	67	.05	6	.01
NBR	d	1700	99	.06	35	.02
SBL	0	0	82		34	
SBT	1	1700	66	.09*	16	.03*
SBR	d	1700	79	.05	31	.02
EBL	1	1700	85	.05	35	.02*
EBT	1	1700	399	.23*	360	.21
EBR	d	1700	47	.03	17	.01
WBL	1	1700	87	.05*	28	.02
WBT	1	1700	313	.18	430	.25*
WBR	d	1700	8	.00	40	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.43		.36

275 . Yale Av. at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	67	.04*	25	.01*
SBT	0	0	0		0	
SBR	1	1700	103	.06	35	.02
EBL	1	1700	57	.03*	59	.03
EBT	2	3400	1497	.44	2380	.70*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2283	.67*	1809	.53
WBR	d	1700	13	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.79		.76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	53	.03*	52	.03*
NBT	1	1700	79	.05	36	.02
NBR	1	1700	704	.41	588	.35
SBL	1	1700	22	.01	10	.01
SBT	1	1700	57	.06*	49	.04*
SBR	0	0	41		21	
EBL	1	1700	22	.01*	29	.02
EBT	2	3400	1484	.44	2322	.68*
EBR	d	1700	65	.04	62	.04
WBL	2	3400	418	.12	609	.18*
WBT	2	3400	2176	.64*	1767	.52
WBR	d	1700	20	.01	35	.02
Right Turn Adjustment			NBR	.14*	NBR	.11*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .93 1.09

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	513	.30*	233	.14*
NBT	1	1700	138	.08	46	.03
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	128	.04*	62	.02*
SBR	1	1700	563	.33	337	.20
EBL	2	3400	294	.09*	514	.15*
EBT	0	0	0		0	
EBR	1	1700	365	.21	348	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.22*	SBR	.07*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .70 .43

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	19		7	
NBT	1	1700	69	.07*	25	.02*
NBR	0	0	34		8	
SBL	1	1700	179	.11*	306	.18*
SBT	1	1700	23	.01	59	.03
SBR	1	1700	284	.17	186	.11
EBL	0	0	200	(.12)*	126	
EBT	1	1700	86	.17	130	.15*
EBR	d	1700	8	.00	13	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	238	.14*	80	.05
WBR	d	1700	372	.22	202	.12
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .49 .41

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	96	.06*	96	.06*
NBT	0	0	0		0	
NBR	1	1700	106	.06	178	.10
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	324	.19*	142	.08
EBR	1	1700	121	.07	70	.04
WBL	0	0	109	(.06)*	110	
WBT	1	1700	214	.19	184	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	482	.14*	669	.20*
NBT	3	5100	1217	.24	1647	.32
NBR	f		241		347	
SBL	2	3400	326	.10	453	.13
SBT	3	5100	1924	.38*	1392	.27*
SBR	d	1700	150	.09	228	.13
EBL	2	3400	189	.06	277	.08
EBT	2	3400	663	.20*	910	.27*
EBR	d	1700	578	.34	385	.23
WBL	2	3400	613	.18*	543	.16*
WBT	2	3400	880	.26	1023	.30
WBR	d	1700	167	.10	196	.12
Right Turn Adjustment			EBR	.03*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .98 .95

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1664	.33	2329	.46*
NBR	f		340		160	
SBL	0	0	0		0	
SBT	3	5100	2092	.41*	1818	.36
SBR	f		1320		461	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1288	.38*	1167	.34*
WBT	0	0	0		0	
WBR	1	1700	136	.08	356	.21
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .84 .85

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1593	.31	2042	.40
NBR	f		1070		1304	
SBL	0	0	0		0	
SBT	3	5100	2904	.57*	2634	.52*
SBR	f		430		331	
EBL	2	3400	407	.12*	485	.14*
EBT	0	0	0		0	
EBR	1	1700	116	.07	114	.07
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .74 .71

295 . Michelson Dr. at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	1	.00	27	.02
NBT	1	1700	1	.01*	7	.04*
NBR	0	0	8		56	
SBL	2	3400	564	.17*	517	.15*
SBT	1	1700	9	.03	6	.02
SBR	0	0	45		32	
EBL	1	1700	11	.01	39	.02
EBT	2	3400	2048	.60*	2767	.81*
EBR	d	1700	11	.01	9	.01
WBL	1	1700	30	.02*	25	.01*
WBT	3	5100	2642	.52	2181	.43
WBR	d	1700	289	.17	504	.30
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .85 1.06

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	7	.00
NBT	2	3400	740	.22*	487	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	498	.21	505	.20*
SBR	0	0	228		163	
EBL	0	0	116	(.07)*	223	(.13)*
EBT	1	1700	0	.07	0	.13
EBR	0	0	5		5	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .34 .38

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	30		37	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	130	.08	144	.08
EBL	1	1700	97	.06*	154	.09*
EBT	2	3400	300	.09	433	.13
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	550	.16*	246	.07*
WBR	d	1700	33	.02	26	.02
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .30 .23

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	3	.00	1	.00
SBT	0	0	0		0	
SBR	1	1700	9	.01	1	.00
EBL	1	1700	3	.00	10	.01*
EBT	2	3400	3	.00	10	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	21	.01*	1	.00*
WBR	0	0	3		1	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .07 .06

189 . Harvard Av. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	64	.04*	57	.03
NBT	2	3400	317	.09	898	.26*
NBR	d	1700	121	.07	236	.14
SBL	1	1700	36	.02	89	.05*
SBT	2	3400	651	.19*	613	.18
SBR	d	1700	271	.16	187	.11
EBL	1	1700	86	.05*	328	.19
EBT	3	5100	653	.14	1756	.35*
EBR	0	0	37		40	
WBL	1	1700	172	.10	177	.10*
WBT	3	5100	1795	.37*	816	.17
WBR	0	0	87		64	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.81

190 . University Dr. at Campus Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	74	.04*	207	.12*
NBT	3	5100	652	.13	1443	.28
NBR	1	1700	270	.16	280	.16
SBL	1	1700	133	.08	80	.05
SBT	2	3400	1622	.48*	809	.24*
SBR	1	1700	346	.20	142	.08
EBL	1	1700	70	.04	511	.30*
EBT	2	3400	507	.15*	696	.20
EBR	d	1700	266	.16	93	.05
WBL	1	1700	182	.11*	355	.21
WBT	2	3400	390	.11	698	.21*
WBR	d	1700	28	.02	168	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.83		.92

192 . California Av. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	253	.07*	741	.22*
NBT	0	0	0		1	
NBR	1	1700	148	.09	867	.51
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	842	.25*	873	.26
EBR	1	1700	941	.55	498	.29
WBL	2	3400	869	.26*	132	.04
WBT	2	3400	957	.28	1139	.34*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.25*	NBR	.23*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.88		.84

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	17	.01*	13	.01*
NBT	0	0	0		0	
NBR	1	1700	240	.14	249	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1570	.31*	1184	.23*
EBR	d	1700	167	.10	132	.08
WBL	2	3400	483	.14*	1147	.34*
WBT	2	3400	783	.23	744	.22
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.53		.63

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	68	.04*	147	.09*
NBT	0	0	0		0	
NBR	1	1700	626	.37	392	.23
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1094	.23*	1018	.20*
EBR	0	0	60		27	
WBL	2	3400	110	.03*	273	.08*
WBT	3	5100	832	.16	723	.14
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.31*	NBR	.08*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.50

216 . California Av. at Campus Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	197	.12*	271	.16*
NBT	1	1700	178	.10	321	.19
NBR	1	1700	135	.08	138	.08
SBL	1	1700	113	.07	145	.09
SBT	1	1700	134	.08*	332	.20*
SBR	1	1700	53	.03	43	.03
EBL	1	1700	37	.02*	113	.07
EBT	2	3400	232	.09	677	.30*
EBR	0	0	71		330	
WBL	1	1700	125	.07	148	.09*
WBT	2	3400	661	.27*	516	.17
WBR	0	0	245		56	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.80

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	151	.04*	260	.08
NBT	3	5100	1096	.21	1942	.38*
NBR	1	1700	327	.19	427	.25
SBL	2	3400	244	.07	351	.10*
SBT	3	5100	1955	.38*	1282	.25
SBR	f		342		337	
EBL	2	3400	175	.05*	408	.12
EBT	2	3400	639	.19	1001	.29*
EBR	1	1700	218	.13	260	.15
WBL	2	3400	316	.09	378	.11*
WBT	2	3400	1097	.32*	833	.25
WBR	1	1700	269	.16	329	.19
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.84		.93

230 . Culver Dr. at Main St.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	108	.03*	172	.05
NBT	3	5100	1265	.25	2035	.40*
NBR	1	1700	153	.09	388	.23
SBL	2	3400	72	.02	174	.05*
SBT	3	5100	2006	.39*	1515	.30
SBR	f		368		207	
EBL	2	3400	167	.05	531	.16
EBT	2	3400	145	.04*	469	.14*
EBR	f		169		271	
WBL	2	3400	535	.16*	194	.06*
WBT	2	3400	374	.11	111	.03
WBR	1	1700	128	.08	64	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.70

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1467	.29	2540	.50*
NBR	f		790		350	
SBL	0	0	0		0	
SBT	3	5100	1666	.33*	1606	.31
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	734	.22*	484	.14*
WBT	0	0	0		0	
WBR	1	1700	183	.11	360	.21
Right Turn Adjustment					WBR	.07*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.76

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1617	.32	1884	.37*
NBR	f		330		854	
SBL	0	0	0		0	
SBT	3	5100	2078	.41*	1680	.33
SBR	f		380		402	
EBL	1.5		543	(.18)*	1020	(.32)*
EBT	0	5100	0	.18	0	(.32)
EBR	1.5		392		651	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.74

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	291	.09*	434	.13
NBT	3	5100	1330	.27	1811	.36*
NBR	0	0	28		35	
SBL	2	3400	248	.07	505	.15*
SBT	3	5100	1564	.31*	1416	.28
SBR	1	1700	691	.41	471	.28
EBL	2	3400	341	.10	761	.22
EBT	1	1700	257	.15*	400	.24*
EBR	1	1700	252	.15	282	.17
WBL	1	1700	149	.09*	143	.08*
WBT	2	3400	227	.07	225	.07
WBR	1	1700	304	.18	248	.15
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.88

235 . Culver Dr. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	60	.04*	63	.04*
NBT	4	6800	1258	.19	1663	.24
NBR	2	3400	930	.27	995	.29
SBL	1	1700	37	.02	73	.04
SBT	3	5100	1460	.29*	1277	.25*
SBR	d	1700	328	.19	164	.10
EBL	2	3400	91	.03	326	.10
EBT	3	5100	683	.13*	1532	.30*
EBR	d	1700	59	.03	52	.03
WBL	2	3400	1011	.30*	871	.26*
WBT	3	5100	1522	.31	813	.17
WBR	0	0	41		70	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.81		.90

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	72	.04*	48	.03*
NBT	3	5100	1767	.35	1827	.36
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1897	.50*	1688	.44*
SBR	0	0	669		542	
EBL	2	3400	547	.16*	753	.22*
EBT	0	0	0		0	
EBR	1	1700	167	.10	152	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.74

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	85	.05*	98	.06*
NBT	3	5100	858	.17	990	.19
NBR	d	1700	138	.08	116	.07
SBL	2	3400	493	.15	562	.17
SBT	2	3400	939	.28*	1091	.32*
SBR	1	1700	498	.29	321	.19
EBL	2	3400	192	.06*	398	.12
EBT	2	3400	281	.09	423	.16*
EBR	0	0	27		112	
WBL	1	1700	207	.12	67	.04*
WBT	2	3400	719	.21*	251	.07
WBR	1	1700	603	.35	353	.21
Right Turn Adjustment				WBR .02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.63

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	346	.10*	178	.05
NBT	2	3400	1018	.30	1010	.30*
NBR	1	1700	223	.13	305	.18
SBL	1	1700	27	.02	45	.03*
SBT	2	3400	924	.27*	927	.27
SBR	1	1700	91	.05	53	.03
EBL	1	1700	48	.03	63	.04
EBT	2	3400	29	.01*	101	.03*
EBR	1	1700	182	.11	307	.18
WBL	2	3400	364	.11*	192	.06*
WBT	1	1700	83	.08	30	.03
WBR	0	0	53		29	
Right Turn Adjustment				EBR .02*	EBR	.10*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.57

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	532	.16*	943	.28*
NBR	1	1700	527	.31	569	.33
SBL	2	3400	203	.06*	301	.09*
SBT	2	3400	687	.20	610	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	890	.26*	510	.15*
WBT	0	0	0		0	
WBR	1	1700	230	.14	187	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.53		.57

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	923	.27*	1507	.44*
NBR	1	1700	73	.04	44	.03
SBL	2	3400	427	.13*	197	.06*
SBT	2	3400	1046	.31	864	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	354	.10*	123	.04*
WBT	0	0	0		0	
WBR	1	1700	77	.05	44	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.55		.59

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	164	.10*	147	.09*
NBT	2	3400	245	.07	204	.06
NBR	d	1700	181	.11	218	.13
SBL	1	1700	55	.03	52	.03
SBT	2	3400	116	.03*	136	.04*
SBR	d	1700	88	.05	132	.08
EBL	1	1700	148	.09*	89	.05
EBT	2	3400	938	.28	1460	.43*
EBR	d	1700	114	.07	177	.10
WBL	1	1700	111	.07	226	.13*
WBT	2	3400	1141	.34*	1221	.36
WBR	d	1700	98	.06	67	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.74

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	179	.11	105	.06
NBT	2	3400	323	.10*	167	.05*
NBR	d	1700	527	.31	228	.13
SBL	2	3400	172	.05*	173	.05*
SBT	2	3400	106	.03	144	.04
SBR	d	1700	171	.10	113	.07
EBL	1	1700	185	.11*	271	.16
EBT	2	3400	822	.29	1220	.40*
EBR	0	0	162		127	
WBL	2	3400	216	.06	449	.13*
WBT	2	3400	1059	.31*	1132	.33
WBR	d	1700	126	.07	172	.10
Right Turn Adjustment		NBR		.11*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.68

272 . W. Yale Lp. at Main St.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	833	.49*	297	.17*
NBT	2	3400	317	.09	182	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	188	.06*	207	.06*
SBR	d	1700	282	.17	103	.06
EBL	2	3400	85	.03*	358	.11*
EBT	0	0	0		0	
EBR	2	3400	335	.10	703	.21
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.72		.39

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	18	(.01)*	17	(.01)*
NBT	1	1700	66	.05	6	.01
NBR	d	1700	100	.06	36	.02
SBL	0	0	82		35	
SBT	1	1700	65	.09*	16	.03*
SBR	d	1700	79	.05	29	.02
EBL	1	1700	86	.05	34	.02*
EBT	1	1700	417	.25*	361	.21
EBR	d	1700	49	.03	16	.01
WBL	1	1700	86	.05*	29	.02
WBT	1	1700	313	.18	436	.26*
WBR	d	1700	8	.00	42	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.45		.37

275 . Yale Av. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	66	.04*	25	.01*
SBT	0	0	0		0	
SBR	1	1700	104	.06	35	.02
EBL	1	1700	58	.03*	59	.03
EBT	2	3400	1494	.44	2380	.70*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2266	.67*	1799	.53
WBR	d	1700	12	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.79		.76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	51	.03*	48	.03*
NBT	1	1700	78	.05	35	.02
NBR	1	1700	712	.42	606	.36
SBL	1	1700	22	.01	10	.01
SBT	1	1700	61	.06*	48	.04*
SBR	0	0	38		21	
EBL	1	1700	22	.01*	28	.02
EBT	2	3400	1487	.44	2333	.69*
EBR	d	1700	73	.04	57	.03
WBL	2	3400	486	.14	615	.18*
WBT	2	3400	2161	.64*	1761	.52
WBR	d	1700	20	.01	37	.02
Right Turn Adjustment			NBR	.15*	NBR	.12*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .94 1.11

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	514	.30*	234	.14*
NBT	1	1700	136	.08	45	.03
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	125	.04*	63	.02*
SBR	1	1700	586	.34	366	.22
EBL	2	3400	314	.09*	525	.15*
EBT	0	0	0		0	
EBR	1	1700	365	.21	347	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.23*	SBR	.09*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .71 .45

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	19		7	
NBT	1	1700	68	.07*	25	.02*
NBR	0	0	35		8	
SBL	1	1700	177	.10*	310	.18*
SBT	1	1700	23	.01	60	.04
SBR	1	1700	279	.16	180	.11
EBL	0	0	200	(.12)*	127	
EBT	1	1700	88	.17	130	.15*
EBR	d	1700	8	.00	13	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	242	.14*	77	.05
WBR	d	1700	372	.22	205	.12
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .48 .41

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	95	.06*	96	.06*
NBT	0	0	0		0	
NBR	1	1700	105	.06	178	.10
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	325	.19*	142	.08
EBR	1	1700	115	.07	70	.04
WBL	0	0	105	(.06)*	110	
WBT	1	1700	215	.19	184	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	475	.14*	671	.20*
NBT	3	5100	1199	.24	1657	.32
NBR	f		246		351	
SBL	2	3400	332	.10	457	.13
SBT	3	5100	1920	.38*	1386	.27*
SBR	d	1700	148	.09	227	.13
EBL	2	3400	185	.05	276	.08
EBT	2	3400	672	.20*	912	.27*
EBR	d	1700	573	.34	381	.22
WBL	2	3400	617	.18*	542	.16*
WBT	2	3400	877	.26	1021	.30
WBR	d	1700	166	.10	196	.12
Right Turn Adjustment			EBR	.03*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .98 .95

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1661	.33	2344	.46*
NBR	f		340		160	
SBL	0	0	0		0	
SBT	3	5100	2085	.41*	1824	.36
SBR	f		1320		461	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1305	.38*	1161	.34*
WBT	0	0	0		0	
WBR	1	1700	129	.08	371	.22
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .84 .85

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1590	.31	2057	.40
NBR	f		1080		1310	
SBL	0	0	0		0	
SBT	3	5100	2938	.58*	2643	.52*
SBR	f		420		330	
EBL	2	3400	410	.12*	483	.14*
EBT	0	0	0		0	
EBR	1	1700	122	.07	117	.07
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .75 .71

295 . Michelson Dr. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	26	.02
NBT	1	1700	1	.01*	7	.04*
NBR	0	0	8		57	
SBL	2	3400	554	.16*	507	.15*
SBT	1	1700	8	.03	6	.02
SBR	0	0	45		31	
EBL	1	1700	11	.01	39	.02
EBT	2	3400	2058	.61*	2796	.82*
EBR	d	1700	11	.01	9	.01
WBL	1	1700	31	.02*	25	.01*
WBT	3	5100	2674	.52	2193	.43
WBR	d	1700	288	.17	505	.30
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .85 1.07

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	12	.01*
NBT	2	3400	736	.22	487	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	501	.24*	503	.21*
SBR	0	0	310		198	
EBL	1.5		124	(.04)*	233	(.07)*
EBT	0	3400	0	.04	0	.07
EBR	0.5		5		7	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .33 .34

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	30		39	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	151	.09	173	.10
EBL	1	1700	116	.07*	165	.10*
EBT	2	3400	300	.09	431	.13
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	549	.16*	247	.07*
WBR	d	1700	34	.02	25	.01
Right Turn Adjustment		SBR		.02*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .32 .24

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	3	.00	1	.00
SBT	0	0	0		0	
SBR	1	1700	9	.01	1	.00
EBL	1	1700	3	.00	1	.00
EBT	2	3400	3	.00	10	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	21	.01*	1	.00*
WBR	0	0	3		1	
Right Turn Adjustment		SBR		.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .07 .05

189 . Harvard Av. at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	62	.04*	58	.03
NBT	2	3400	321	.09	898	.26*
NBR	d	1700	120	.07	234	.14
SBL	1	1700	37	.02	88	.05*
SBT	2	3400	650	.19*	613	.18
SBR	d	1700	270	.16	188	.11
EBL	1	1700	88	.05*	331	.19
EBT	3	5100	653	.14	1761	.35*
EBR	0	0	36		41	
WBL	1	1700	173	.10	177	.10*
WBT	3	5100	1807	.37*	827	.17
WBR	0	0	92		64	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .70 .81

190 . University Dr. at Campus Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	69	.04*	203	.12*
NBT	3	5100	656	.13	1449	.28
NBR	1	1700	259	.15	278	.16
SBL	1	1700	137	.08	82	.05
SBT	2	3400	1629	.48*	814	.24*
SBR	1	1700	349	.21	145	.09
EBL	1	1700	74	.04	516	.30*
EBT	2	3400	514	.15*	694	.20
EBR	d	1700	263	.15	90	.05
WBL	1	1700	178	.10*	351	.21
WBT	2	3400	381	.11	698	.21*
WBR	d	1700	30	.02	173	.10
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .82 .92

192 . California Av. at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	248	.07*	752	.22*
NBT	0	0	0		1	
NBR	1	1700	144	.08	867	.51
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	846	.25*	873	.26
EBR	1	1700	946	.56	507	.30
WBL	2	3400	864	.25*	133	.04
WBT	2	3400	962	.28	1138	.33*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.26*	NBR	.24*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .88 .84

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	18	.01*	13	.01*
NBT	0	0	0		0	
NBR	1	1700	249	.15	249	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1561	.31*	1194	.23*
EBR	d	1700	169	.10	132	.08
WBL	2	3400	481	.14*	1158	.34*
WBT	2	3400	782	.23	744	.22
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.03*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .54 .63

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	69	.04*	148	.09*
NBT	0	0	0		0	
NBR	1	1700	632	.37	402	.24
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1088	.23*	1018	.20*
EBR	0	0	61		27	
WBL	2	3400	109	.03*	273	.08*
WBT	3	5100	831	.16	722	.14
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.31*	NBR	.09*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .66 .51

216 . California Av. at Campus Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	198	.12*	266	.16*
NBT	1	1700	176	.10	320	.19
NBR	1	1700	135	.08	134	.08
SBL	1	1700	111	.07	147	.09
SBT	1	1700	127	.07*	339	.20*
SBR	1	1700	52	.03	44	.03
EBL	1	1700	37	.02*	114	.07
EBT	2	3400	234	.09	668	.29*
EBR	0	0	69		327	
WBL	1	1700	124	.07	144	.08*
WBT	2	3400	680	.27*	510	.17
WBR	0	0	247		56	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .53 .78

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	157	.05*	263	.08
NBT	3	5100	1107	.22	1939	.38*
NBR	1	1700	328	.19	427	.25
SBL	2	3400	244	.07	346	.10*
SBT	3	5100	1950	.38*	1287	.25
SBR	f		354		337	
EBL	2	3400	179	.05*	413	.12
EBT	2	3400	650	.19	1010	.30*
EBR	1	1700	222	.13	267	.16
WBL	2	3400	311	.09	387	.11*
WBT	2	3400	1122	.33*	851	.25
WBR	1	1700	266	.16	331	.19
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .86 .94

230 . Culver Dr. at Main St.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	108	.03*	177	.05
NBT	3	5100	1285	.25	2032	.40*
NBR	1	1700	154	.09	385	.23
SBL	2	3400	71	.02	177	.05*
SBT	3	5100	2000	.39*	1530	.30
SBR	f		364		219	
EBL	2	3400	168	.05	533	.16
EBT	2	3400	145	.04*	468	.14*
EBR	f		169		269	
WBL	2	3400	531	.16*	191	.06*
WBT	2	3400	368	.11	114	.03
WBR	1	1700	127	.07	64	.04
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .70

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1487	.29	2528	.50*
NBR	f		790		340	
SBL	0	0	0		0	
SBT	3	5100	1661	.33*	1625	.32
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	739	.22*	495	.15*
WBT	0	0	0		0	
WBR	1	1700	183	.11	362	.21
Right Turn Adjustment					WBR	.06*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.76

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1601	.31	1880	.37*
NBR	f		330		836	
SBL	0	0	0		0	
SBT	3	5100	2086	.41*	1700	.33
SBR	f		380		403	
EBL	1.5		569	(.18)*	1012	(.32)*
EBT	0	5100	0	.18	0	(.32)
EBR	1.5		364		658	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.74

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	297	.09*	441	.13
NBT	3	5100	1304	.26	1784	.36*
NBR	0	0	28		35	
SBL	2	3400	242	.07	504	.15*
SBT	3	5100	1561	.31*	1409	.28
SBR	1	1700	691	.41	489	.29
EBL	2	3400	344	.10	770	.23
EBT	1	1700	263	.15*	401	.24*
EBR	1	1700	263	.15	282	.17
WBL	1	1700	151	.09*	140	.08*
WBT	2	3400	231	.07	230	.07
WBR	1	1700	297	.17	246	.14
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.88

235 . Culver Dr. at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	61	.04*	62	.04*
NBT	4	6800	1245	.18	1651	.24
NBR	2	3400	974	.29	1004	.30
SBL	1	1700	39	.02	73	.04
SBT	3	5100	1467	.29*	1277	.25*
SBR	d	1700	328	.19	162	.10
EBL	2	3400	87	.03	321	.09
EBT	3	5100	689	.14*	1535	.30*
EBR	d	1700	57	.03	52	.03
WBL	2	3400	1019	.30*	884	.26*
WBT	3	5100	1533	.31	817	.17
WBR	0	0	40		71	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.82		.90

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	70	.04*	49	.03*
NBT	3	5100	1793	.35	1825	.36
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1931	.51*	1689	.44*
SBR	0	0	650		542	
EBL	2	3400	547	.16*	750	.22*
EBT	0	0	0		0	
EBR	1	1700	169	.10	154	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.76		.74

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	84	.05*	95	.06*
NBT	3	5100	867	.17	995	.20
NBR	d	1700	130	.08	113	.07
SBL	2	3400	493	.15	569	.17
SBT	2	3400	949	.28*	1090	.32*
SBR	1	1700	527	.31	325	.19
EBL	2	3400	197	.06*	397	.12
EBT	2	3400	267	.09	409	.15*
EBR	0	0	26		107	
WBL	1	1700	195	.11	64	.04*
WBT	2	3400	709	.21*	240	.07
WBR	1	1700	606	.36	348	.20
Right Turn Adjustment					WBR	.03*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.62

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	350	.10*	178	.05
NBT	2	3400	1021	.30	1010	.30*
NBR	1	1700	225	.13	305	.18
SBL	1	1700	26	.02	45	.03*
SBT	2	3400	928	.27*	927	.27
SBR	1	1700	88	.05	53	.03
EBL	1	1700	47	.03	63	.04
EBT	2	3400	29	.01*	101	.03*
EBR	1	1700	185	.11	307	.18
WBL	2	3400	368	.11*	192	.06*
WBT	1	1700	82	.08	30	.03
WBR	0	0	52		29	
Right Turn Adjustment			EBR	.02*	EBR	.10*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.57

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	534	.16*	943	.28*
NBR	1	1700	526	.31	569	.33
SBL	2	3400	203	.06*	301	.09*
SBT	2	3400	688	.20	605	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	874	.26*	505	.15*
WBT	0	0	0		0	
WBR	1	1700	226	.13	187	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.53		.57

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	917	.27*	1509	.44*
NBR	1	1700	74	.04	43	.03
SBL	2	3400	406	.12*	198	.06*
SBT	2	3400	1043	.31	862	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	357	.11*	121	.04*
WBT	0	0	0		0	
WBR	1	1700	73	.04	46	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.55		.59

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	165	.10*	153	.09*
NBT	2	3400	243	.07	206	.06
NBR	d	1700	182	.11	221	.13
SBL	1	1700	58	.03	53	.03
SBT	2	3400	119	.04*	141	.04*
SBR	d	1700	93	.05	137	.08
EBL	1	1700	148	.09*	89	.05
EBT	2	3400	949	.28	1466	.43*
EBR	d	1700	112	.07	181	.11
WBL	1	1700	109	.06	228	.13*
WBT	2	3400	1152	.34*	1240	.36
WBR	d	1700	99	.06	66	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.74

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	179	.11	103	.06
NBT	2	3400	322	.09*	165	.05*
NBR	d	1700	529	.31	231	.14
SBL	2	3400	174	.05*	176	.05*
SBT	2	3400	105	.03	142	.04
SBR	d	1700	172	.10	113	.07
EBL	1	1700	186	.11*	270	.16
EBT	2	3400	832	.29	1243	.40*
EBR	0	0	162		125	
WBL	2	3400	218	.06	454	.13*
WBT	2	3400	1084	.32*	1154	.34
WBR	d	1700	129	.08	175	.10
Right Turn Adjustment		NBR		.11*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.68

272 . W. Yale Lp. at Main St.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	824	.48*	297	.17*
NBT	2	3400	326	.10	186	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	194	.06*	209	.06*
SBR	d	1700	276	.16	103	.06
EBL	2	3400	84	.02*	364	.11*
EBT	0	0	0		0	
EBR	2	3400	336	.10	701	.21
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.08*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.39

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	18	(.01)*	17	(.01)*
NBT	1	1700	66	.05	6	.01
NBR	d	1700	100	.06	36	.02
SBL	0	0	82		35	
SBT	1	1700	65	.09*	16	.03*
SBR	d	1700	79	.05	29	.02
EBL	1	1700	86	.05	34	.02*
EBT	1	1700	417	.25*	361	.21
EBR	d	1700	49	.03	16	.01
WBL	1	1700	86	.05*	29	.02
WBT	1	1700	313	.18	436	.26*
WBR	d	1700	8	.00	42	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.45		.37

275 . Yale Av. at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	64	.04*	25	.01*
SBT	0	0	0		0	
SBR	1	1700	105	.06	35	.02
EBL	1	1700	58	.03*	59	.03
EBT	2	3400	1540	.45	2390	.70*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2291	.67*	1809	.53
WBR	d	1700	12	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.79		.76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	54	.03*	52	.03*
NBT	1	1700	78	.05	36	.02
NBR	1	1700	702	.41	588	.35
SBL	1	1700	22	.01	10	.01
SBT	1	1700	56	.06*	49	.04*
SBR	0	0	41		21	
EBL	1	1700	23	.01*	29	.02
EBT	2	3400	1530	.45	2332	.69*
EBR	d	1700	68	.04	62	.04
WBL	2	3400	417	.12	609	.18*
WBT	2	3400	2189	.64*	1767	.52
WBR	d	1700	19	.01	35	.02
Right Turn Adjustment			NBR	.15*	NBR	.11*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .94 1.10

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	516	.30*	234	.14*
NBT	1	1700	137	.08	45	.03
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	130	.04*	63	.02*
SBR	1	1700	564	.33	346	.20
EBL	2	3400	293	.09*	505	.15*
EBT	0	0	0		0	
EBR	1	1700	370	.22	347	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.22*	SBR	.07*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .70 .43

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	19		7	
NBT	1	1700	69	.07*	25	.02*
NBR	0	0	34		8	
SBL	1	1700	179	.11*	306	.18*
SBT	1	1700	23	.01	59	.03
SBR	1	1700	284	.17	186	.11
EBL	0	0	200	(.12)*	126	
EBT	1	1700	86	.17	130	.15*
EBR	d	1700	8	.00	13	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	238	.14*	80	.05
WBR	d	1700	372	.22	202	.12
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .49 .41

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	96	.06*	96	.06*
NBT	0	0	0		0	
NBR	1	1700	106	.06	178	.10
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	324	.19*	142	.08
EBR	1	1700	121	.07	70	.04
WBL	0	0	109	(.06)*	110	
WBT	1	1700	214	.19	184	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	491	.14*	663	.20*
NBT	3	5100	1235	.24	1702	.33
NBR	f		254		354	
SBL	2	3400	336	.10	468	.14
SBT	3	5100	1924	.38*	1414	.28*
SBR	d	1700	149	.09	228	.13
EBL	2	3400	187	.06	286	.08
EBT	2	3400	679	.20*	928	.27*
EBR	d	1700	574	.34	386	.23
WBL	2	3400	622	.18*	570	.17*
WBT	2	3400	890	.26	1058	.31
WBR	d	1700	168	.10	212	.12
Right Turn Adjustment			EBR	.03*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .98 .97

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1719	.34	2390	.47*
NBR	f		331		150	
SBL	0	0	0		0	
SBT	3	5100	2106	.41*	1868	.37
SBR	f		1304		480	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1294	.38*	1152	.34*
WBT	0	0	0		0	
WBR	1	1700	146	.09	360	.21
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .84 .86

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1632	.32	2073	.41
NBR	f		1090		1300	
SBL	0	0	0		0	
SBT	3	5100	2926	.57*	2647	.52*
SBR	f		430		340	
EBL	2	3400	398	.12*	507	.15*
EBT	0	0	0		0	
EBR	1	1700	114	.07	113	.07
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .74 .72

295 . Michelson Dr. at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	1	.00	27	.02
NBT	1	1700	1	.01*	7	.04*
NBR	0	0	8		57	
SBL	2	3400	583	.17*	526	.15*
SBT	1	1700	9	.03	6	.02
SBR	0	0	46		32	
EBL	1	1700	11	.01	39	.02
EBT	2	3400	2089	.61*	2777	.82*
EBR	d	1700	11	.01	9	.01
WBL	1	1700	30	.02*	25	.01*
WBT	3	5100	2642	.52	2191	.43
WBR	d	1700	298	.18	513	.30
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .86 1.07

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	7	.00
NBT	2	3400	735	.22	487	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	505	.22*	505	.20*
SBR	0	0	227		163	
EBL	0	0	115	(.07)*	223	(.13)*
EBT	1	1700	0	.07	0	.13
EBR	0	0	5		5	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .34 .38

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	30		34	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	130	.08	149	.09
EBL	1	1700	97	.06*	156	.09*
EBT	2	3400	300	.09	436	.13
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	550	.16*	251	.07*
WBR	d	1700	33	.02	24	.01
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .30 .23

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	3	.00	1	.00
SBT	0	0	0		0	
SBR	1	1700	9	.01	1	.00
EBL	1	1700	3	.00	1	.00
EBT	2	3400	3	.00	10	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	21	.01*	1	.00*
WBR	0	0	3		1	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .07 .05

189 . Harvard Av. at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	63	.04*	58	.03
NBT	2	3400	322	.09	899	.26*
NBR	d	1700	119	.07	235	.14
SBL	1	1700	37	.02	88	.05*
SBT	2	3400	652	.19*	614	.18
SBR	d	1700	272	.16	190	.11
EBL	1	1700	88	.05*	328	.19
EBT	3	5100	654	.14	1757	.35*
EBR	0	0	37		41	
WBL	1	1700	172	.10	176	.10*
WBT	3	5100	1796	.37*	822	.17
WBR	0	0	90		63	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .70 .81

190 . University Dr. at Campus Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	71	.04*	204	.12*
NBT	3	5100	659	.13	1444	.28
NBR	1	1700	265	.16	282	.17
SBL	1	1700	134	.08	83	.05
SBT	2	3400	1627	.48*	812	.24*
SBR	1	1700	345	.20	145	.09
EBL	1	1700	73	.04	511	.30*
EBT	2	3400	512	.15*	699	.21
EBR	d	1700	266	.16	89	.05
WBL	1	1700	182	.11*	353	.21
WBT	2	3400	387	.11	705	.21*
WBR	d	1700	30	.02	173	.10
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .83 .92

192 . California Av. at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	254	.07*	748	.22*
NBT	0	0	0		1	
NBR	1	1700	148	.09	863	.51
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	842	.25*	877	.26
EBR	1	1700	950	.56	507	.30
WBL	2	3400	870	.26*	133	.04
WBT	2	3400	956	.28	1142	.34*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.26*	NBR	.23*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .89 .84

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	18	.01*	12	.01*
NBT	0	0	0		0	
NBR	1	1700	249	.15	249	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1571	.31*	1198	.23*
EBR	d	1700	178	.10	129	.08
WBL	2	3400	482	.14*	1154	.34*
WBT	2	3400	782	.23	747	.22
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.03*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .54 .63

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	68	.04*	144	.08*
NBT	0	0	0		0	
NBR	1	1700	636	.37	404	.24
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1094	.23*	1016	.20*
EBR	0	0	60		26	
WBL	2	3400	110	.03*	274	.08*
WBT	3	5100	832	.16	726	.14
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.31*	NBR	.10*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .66 .51

216 . California Av. at Campus Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	194	.11*	270	.16*
NBT	1	1700	179	.11	319	.19
NBR	1	1700	139	.08	134	.08
SBL	1	1700	116	.07	148	.09
SBT	1	1700	134	.08*	338	.20*
SBR	1	1700	52	.03	45	.03
EBL	1	1700	36	.02*	116	.07
EBT	2	3400	235	.09	678	.30*
EBR	0	0	70		329	
WBL	1	1700	126	.07	142	.08*
WBT	2	3400	654	.26*	515	.17
WBR	0	0	245		55	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .52 .79

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	157	.05*	261	.08
NBT	3	5100	1106	.22	1942	.38*
NBR	1	1700	329	.19	427	.25
SBL	2	3400	245	.07	352	.10*
SBT	3	5100	1949	.38*	1290	.25
SBR	f		353		339	
EBL	2	3400	177	.05*	413	.12
EBT	2	3400	645	.19	1012	.30*
EBR	1	1700	219	.13	265	.16
WBL	2	3400	312	.09	386	.11*
WBT	2	3400	1120	.33*	850	.25
WBR	1	1700	267	.16	335	.20
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .86 .94

230 . Culver Dr. at Main St.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	109	.03*	172	.05
NBT	3	5100	1284	.25	2038	.40*
NBR	1	1700	153	.09	384	.23
SBL	2	3400	70	.02	178	.05*
SBT	3	5100	1995	.39*	1532	.30
SBR	f		370		215	
EBL	2	3400	172	.05	536	.16
EBT	2	3400	147	.04*	468	.14*
EBR	f		172		267	
WBL	2	3400	527	.16*	192	.06*
WBT	2	3400	373	.11	112	.03
WBR	1	1700	127	.07	65	.04
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .70

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1488	.29	2527	.50*
NBR	f		790		350	
SBL	0	0	0		0	
SBT	3	5100	1653	.32*	1618	.32
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	737	.22*	502	.15*
WBT	0	0	0		0	
WBR	1	1700	182	.11	363	.21
Right Turn Adjustment					WBR	.06*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .59 .76

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1610	.32	1898	.37*
NBR	f		330		838	
SBL	0	0	0		0	
SBT	3	5100	2085	.41*	1711	.34
SBR	f		380		404	
EBL	1.5		570	(.19)*	1008	(.32)*
EBT	0	5100	0	.19	0	(.32)
EBR	1.5		385		661	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .65 .74

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	298	.09*	441	.13
NBT	3	5100	1313	.26	1801	.36*
NBR	0	0	28		35	
SBL	2	3400	243	.07	506	.15*
SBT	3	5100	1562	.31*	1412	.28
SBR	1	1700	697	.41	491	.29
EBL	2	3400	341	.10	772	.23
EBT	1	1700	261	.15*	399	.23*
EBR	1	1700	258	.15	279	.16
WBL	1	1700	150	.09*	139	.08*
WBT	2	3400	232	.07	229	.07
WBR	1	1700	297	.17	247	.15
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .69 .87

235 . Culver Dr. at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	61	.04*	62	.04*
NBT	4	6800	1252	.18	1661	.24
NBR	2	3400	965	.28	1004	.30
SBL	1	1700	38	.02	73	.04
SBT	3	5100	1462	.29*	1277	.25*
SBR	d	1700	325	.19	162	.10
EBL	2	3400	88	.03	321	.09
EBT	3	5100	687	.13*	1526	.30*
EBR	d	1700	58	.03	52	.03
WBL	2	3400	1020	.30*	884	.26*
WBT	3	5100	1524	.31	817	.17
WBR	0	0	40		71	
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .81 .90

236 . Culver Dr. at Harvard Av.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	72	.04*	48	.03*
NBT	3	5100	1789	.35	1837	.36
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1896	.50*	1688	.44*
SBR	0	0	678		542	
EBL	2	3400	551	.16*	753	.22*
EBT	0	0	0		0	
EBR	1	1700	164	.10	152	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .75 .74

237 . Culver Dr. at Campus Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	83	.05*	95	.06*
NBT	3	5100	871	.17	998	.20
NBR	d	1700	136	.08	116	.07
SBL	2	3400	498	.15	568	.17
SBT	2	3400	942	.28*	1095	.32*
SBR	1	1700	500	.29	316	.19
EBL	2	3400	196	.06*	393	.12
EBT	2	3400	278	.09	417	.15*
EBR	0	0	26		109	
WBL	1	1700	204	.12	68	.04*
WBT	2	3400	709	.21*	250	.07
WBR	1	1700	616	.36	362	.21
Right Turn Adjustment				WBR	.03*	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .68 .62

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	346	.10*	178	.05
NBT	2	3400	1027	.30	1010	.30*
NBR	1	1700	224	.13	305	.18
SBL	1	1700	27	.02	45	.03*
SBT	2	3400	925	.27*	927	.27
SBR	1	1700	90	.05	53	.03
EBL	1	1700	48	.03	63	.04
EBT	2	3400	29	.01*	101	.03*
EBR	1	1700	183	.11	307	.18
WBL	2	3400	372	.11*	192	.06*
WBT	1	1700	84	.08	30	.03
WBR	0	0	54		29	
Right Turn Adjustment				EBR .02*	EBR	.10*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .56 .57

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	532	.16*	942	.28*
NBR	1	1700	527	.31	560	.33
SBL	2	3400	203	.06*	300	.09*
SBT	2	3400	687	.20	606	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	890	.26*	504	.15*
WBT	0	0	0		0	
WBR	1	1700	230	.14	188	.11
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .53 .57

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	916	.27*	1500	.44*
NBR	1	1700	73	.04	43	.03
SBL	2	3400	417	.12*	198	.06*
SBT	2	3400	1046	.31	862	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	354	.10*	121	.04*
WBT	0	0	0		0	
WBR	1	1700	74	.04	45	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.59

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	170	.10*	150	.09*
NBT	2	3400	246	.07	210	.06
NBR	d	1700	183	.11	219	.13
SBL	1	1700	57	.03	55	.03
SBT	2	3400	119	.04*	144	.04*
SBR	d	1700	94	.06	141	.08
EBL	1	1700	149	.09*	92	.05
EBT	2	3400	947	.28	1466	.43*
EBR	d	1700	114	.07	179	.11
WBL	1	1700	109	.06	227	.13*
WBT	2	3400	1155	.34*	1239	.36
WBR	d	1700	98	.06	68	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.62		.74

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	180	.11	105	.06
NBT	2	3400	323	.10*	165	.05*
NBR	d	1700	526	.31	231	.14
SBL	2	3400	172	.05*	175	.05*
SBT	2	3400	106	.03	142	.04
SBR	d	1700	172	.10	114	.07
EBL	1	1700	186	.11*	271	.16
EBT	2	3400	830	.29	1245	.40*
EBR	0	0	163		126	
WBL	2	3400	217	.06	452	.13*
WBT	2	3400	1076	.32*	1161	.34
WBR	d	1700	129	.08	174	.10
Right Turn Adjustment		NBR		.10*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.68

272 . W. Yale Lp. at Main St.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	824	.48*	294	.17*
NBT	2	3400	326	.10	186	.05
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	194	.06*	214	.06*
SBR	d	1700	276	.16	106	.06
EBL	2	3400	84	.02*	364	.11*
EBT	0	0	0		0	
EBR	2	3400	336	.10	696	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.08*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.69		.39

273 . Yale Av. at Michelson Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	18	(.01)*	18	(.01)*
NBT	1	1700	66	.05	6	.01
NBR	d	1700	100	.06	35	.02
SBL	0	0	82		34	
SBT	1	1700	65	.09*	16	.03*
SBR	d	1700	79	.05	31	.02
EBL	1	1700	86	.05	35	.02*
EBT	1	1700	417	.25*	360	.21
EBR	d	1700	49	.03	17	.01
WBL	1	1700	86	.05*	29	.02
WBT	1	1700	313	.18	440	.26*
WBR	d	1700	8	.00	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.45		.37

275 . Yale Av. at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	64	.04*	25	.01*
SBT	0	0	0		0	
SBR	1	1700	105	.06	35	.02
EBL	1	1700	58	.03*	59	.03
EBT	2	3400	1540	.45	2385	.70*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2281	.67*	1805	.53
WBR	d	1700	12	.01	41	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.79		.76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	52	.03*	49	.03*
NBT	1	1700	78	.05	35	.02
NBR	1	1700	712	.42	597	.35
SBL	1	1700	22	.01	10	.01
SBT	1	1700	61	.06*	49	.04*
SBR	0	0	38		21	
EBL	1	1700	22	.01*	28	.02
EBT	2	3400	1536	.45	2343	.69*
EBR	d	1700	76	.04	59	.03
WBL	2	3400	483	.14	622	.18*
WBT	2	3400	2180	.64*	1770	.52
WBR	d	1700	20	.01	37	.02
Right Turn Adjustment			NBR	.16*	NBR	.11*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .95 1.10

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	511	.30*	235	.14*
NBT	1	1700	139	.08	45	.03
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	131	.04*	64	.02*
SBR	1	1700	589	.35	375	.22
EBL	2	3400	311	.09*	525	.15*
EBT	0	0	0		0	
EBR	1	1700	369	.22	346	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.24*	SBR	.09*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .72 .45

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	19		7	
NBT	1	1700	68	.07*	25	.02*
NBR	0	0	35		8	
SBL	1	1700	175	.10*	306	.18*
SBT	1	1700	23	.01	59	.03
SBR	1	1700	279	.16	186	.11
EBL	0	0	205	(.12)*	126	
EBT	1	1700	91	.17	130	.15*
EBR	d	1700	8	.00	13	.01
WBL	1	1700	9	.01	19	.01*
WBT	1	1700	242	.14*	80	.05
WBR	d	1700	367	.22	202	.12
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .48 .41

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	96	.06*	96	.06*
NBT	0	0	0		0	
NBR	1	1700	106	.06	178	.10
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	324	.19*	142	.08
EBR	1	1700	121	.07	70	.04
WBL	0	0	109	(.06)*	110	
WBT	1	1700	214	.19	184	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .36 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	484	.14*	662	.19
NBT	3	5100	1234	.24	1685	.33*
NBR	f		254		353	
SBL	2	3400	339	.10	468	.14*
SBT	3	5100	1935	.38*	1414	.28
SBR	d	1700	149	.09	229	.13
EBL	2	3400	186	.05	285	.08
EBT	2	3400	676	.20*	929	.27*
EBR	d	1700	570	.34	386	.23
WBL	2	3400	625	.18*	570	.17*
WBT	2	3400	887	.26	1060	.31
WBR	d	1700	170	.10	210	.12
Right Turn Adjustment			EBR	.03*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .98 .96

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1722	.34	2393	.47*
NBR	f		330		150	
SBL	0	0	0		0	
SBT	3	5100	2124	.42*	1882	.37
SBR	f		1302		480	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1311	.39*	1158	.34*
WBT	0	0	0		0	
WBR	1	1700	140	.08	357	.21
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .86 .86

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1634	.32	2083	.41
NBR	f		1090		1310	
SBL	0	0	0		0	
SBT	3	5100	2964	.58*	2666	.52*
SBR	f		430		350	
EBL	2	3400	406	.12*	497	.15*
EBT	0	0	0		0	
EBR	1	1700	116	.07	114	.07
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .75 .72

295 . Michelson Dr. at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	1	.00	27	.02
NBT	1	1700	1	.01*	7	.04*
NBR	0	0	8		56	
SBL	2	3400	564	.17*	517	.15*
SBT	1	1700	9	.03	6	.02
SBR	0	0	45		32	
EBL	1	1700	11	.01	40	.02
EBT	2	3400	2108	.62*	2807	.83*
EBR	d	1700	11	.01	9	.01
WBL	1	1700	31	.02*	25	.01*
WBT	3	5100	2693	.53	2211	.43
WBR	d	1700	298	.18	513	.30
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .87 1.08

492 . Ridgeline Dr. at Concordia

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	10	.01*
NBT	2	3400	739	.22	487	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	499	.24*	504	.20*
SBR	0	0	309		190	
EBL	1.5		116	(.04)*	233	(.07)*
EBT	0	3400	0	.04	0	.07
EBR	0.5		4		6	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .33 .33

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	31		37	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	160	.09	178	.10
EBL	1	1700	116	.07*	167	.10*
EBT	2	3400	299	.09	433	.13
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	550	.16*	252	.07*
WBR	d	1700	34	.02	23	.01
Right Turn Adjustment		SBR		.02*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .32 .24

494 . Sunnyhill at Shady Canyon

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	3	.00	1	.00
SBT	0	0	0		0	
SBR	1	1700	9	.01	1	.00
EBL	1	1700	3	.00	1	.00
EBT	2	3400	3	.00	10	.00
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	21	.01*	1	.00*
WBR	0	0	3		1	
Right Turn Adjustment		SBR		.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .07 .05

189 . Harvard Av. at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	66	.04*	65	.04
NBT	2	3400	262	.08	830	.24*
NBR	d	1700	125	.07	214	.13
SBL	1	1700	40	.02	86	.05*
SBT	2	3400	591	.17*	570	.17
SBR	d	1700	297	.17	226	.13
EBL	1	1700	85	.05*	365	.21
EBT	3	5100	817	.17	1921	.38*
EBR	0	0	38		42	
WBL	1	1700	172	.10	168	.10*
WBT	3	5100	2164	.44*	1009	.21
WBR	0	0	84		64	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.82

190 . University Dr. at Campus Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	119	.07*	300	.18*
NBT	3	5100	774	.15	1521	.30
NBR	1	1700	362	.21	340	.20
SBL	1	1700	177	.10	103	.06
SBT	2	3400	1768	.52*	953	.28*
SBR	1	1700	557	.33	219	.13
EBL	1	1700	100	.06	624	.37*
EBT	2	3400	821	.24*	977	.29
EBR	d	1700	352	.21	119	.07
WBL	1	1700	211	.12*	409	.24
WBT	2	3400	664	.20	1052	.31*
WBR	d	1700	36	.02	184	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				1.00		1.19

192 . California Av. at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	274	.08*	872	.26*
NBT	0	0	0		1	
NBR	1	1700	157	.09	823	.48
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1075	.32*	1077	.32
EBR	1	1700	989	.58	614	.36
WBL	2	3400	865	.25*	126	.04
WBT	2	3400	1180	.35	1338	.39*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.20*	NBR	.17*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.90		.87

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	18	.01*	11	.01*
NBT	0	0	0		0	
NBR	1	1700	327	.19	255	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1763	.35*	1480	.29*
EBR	d	1700	157	.09	118	.07
WBL	2	3400	573	.17*	1265	.37*
WBT	2	3400	892	.26	921	.27
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.05*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.63		.72

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	94	.06*	121	.07*
NBT	0	0	0		0	
NBR	1	1700	649	.38	457	.27
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1271	.26*	1213	.24*
EBR	0	0	71		20	
WBL	2	3400	99	.03*	280	.08*
WBT	3	5100	986	.19	859	.17
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.30*	NBR	.14*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.70		.58

216 . California Av. at Campus Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	254	.15*	334	.20*
NBT	1	1700	161	.09	311	.18
NBR	1	1700	135	.08	174	.10
SBL	1	1700	127	.07	145	.09
SBT	1	1700	207	.12*	343	.20*
SBR	1	1700	76	.04	42	.02
EBL	1	1700	38	.02*	94	.06
EBT	2	3400	268	.11	730	.32*
EBR	0	0	113		367	
WBL	1	1700	150	.09	161	.09*
WBT	2	3400	740	.27*	534	.17
WBR	0	0	191		45	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.86

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	132	.04*	259	.08
NBT	3	5100	1086	.21	2063	.40*
NBR	1	1700	307	.18	429	.25
SBL	2	3400	253	.07	367	.11*
SBT	3	5100	1919	.38*	1283	.25
SBR	f		328		350	
EBL	2	3400	176	.05*	409	.12
EBT	2	3400	609	.18	946	.28*
EBR	1	1700	197	.12	235	.14
WBL	2	3400	283	.08	324	.10*
WBT	2	3400	961	.28*	742	.22
WBR	1	1700	268	.16	312	.18
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.80		.94

230 . Culver Dr. at Main St.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	90	.03*	147	.04
NBT	3	5100	1213	.24	2159	.42*
NBR	1	1700	149	.09	364	.21
SBL	2	3400	72	.02	176	.05*
SBT	3	5100	1988	.39*	1441	.28
SBR	f		322		192	
EBL	2	3400	169	.05	541	.16*
EBT	2	3400	149	.04*	422	.12
EBR	f		170		228	
WBL	2	3400	532	.16*	163	.05
WBT	2	3400	328	.10	90	.03*
WBR	1	1700	128	.08	65	.04
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.71

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1261	.25	2438	.48*
NBR	f		790		320	
SBL	0	0	0		0	
SBT	3	5100	1610	.32*	1455	.29
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	990	.29*	815	.24*
WBT	0	0	0		0	
WBR	1	1700	299	.18	592	.35
Right Turn Adjustment					WBR	.11*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.88

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1404	.28	1581	.31
NBR	f		503		1046	
SBL	0	0	0		0	
SBT	3	5100	2168	.43*	1794	.35*
SBR	f		412		402	
EBL	1.5		507	(.16)*	1196	.35*
EBT	0	5100	0	.16	0	
EBR	1.5		316		480	.28
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.75

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	228	.07*	397	.12
NBT	3	5100	1255	.25	1694	.34*
NBR	0	0	19		28	
SBL	2	3400	221	.07	451	.13*
SBT	3	5100	1553	.30*	1385	.27
SBR	1	1700	725	.43	475	.28
EBL	2	3400	403	.12	764	.22*
EBT	1	1700	215	.13*	348	.20
EBR	1	1700	233	.14	268	.16
WBL	1	1700	114	.07*	121	.07
WBT	2	3400	183	.05	197	.06*
WBR	1	1700	294	.17	222	.13
Right Turn Adjustment			SBR	.02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.80

235 . Culver Dr. at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	56	.03*	67	.04*
NBT	4	6800	1094	.16	1503	.22
NBR	2	3400	787	.23	967	.28
SBL	1	1700	36	.02	74	.04
SBT	3	5100	1337	.26*	1188	.23*
SBR	d	1700	343	.20	181	.11
EBL	2	3400	113	.03	326	.10
EBT	3	5100	822	.16*	1650	.32*
EBR	d	1700	68	.04	52	.03
WBL	2	3400	1090	.32*	860	.25*
WBT	3	5100	1877	.38	952	.20
WBR	0	0	47		70	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.82		.89

236 . Culver Dr. at Harvard Av.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	77	.05*	47	.03*
NBT	3	5100	1556	.31	1626	.32
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1781	.50*	1549	.42*
SBR	0	0	753		573	
EBL	2	3400	444	.13*	774	.23*
EBT	0	0	0		0	
EBR	1	1700	139	.08	151	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.73

237 . Culver Dr. at Campus Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	99	.06*	107	.06*
NBT	3	5100	786	.15	858	.17
NBR	d	1700	140	.08	105	.06
SBL	2	3400	444	.13	490	.14
SBT	2	3400	861	.25*	1012	.30*
SBR	1	1700	513	.30	338	.20
EBL	2	3400	196	.06*	421	.12
EBT	2	3400	316	.10	468	.18*
EBR	0	0	30		131	
WBL	1	1700	189	.11	58	.03*
WBT	2	3400	738	.22*	247	.07
WBR	1	1700	489	.29	275	.16
Right Turn Adjustment				SBR .01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.62

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	454	.13*	219	.06*
NBT	2	3400	906	.27	904	.27
NBR	1	1700	236	.14	306	.18
SBL	1	1700	24	.01	43	.03
SBT	2	3400	807	.24*	899	.26*
SBR	1	1700	101	.06	62	.04
EBL	1	1700	42	.02	68	.04
EBT	2	3400	31	.01*	121	.04*
EBR	1	1700	187	.11	373	.22
WBL	2	3400	374	.11*	208	.06*
WBT	1	1700	109	.09	39	.04
WBR	0	0	47		28	
Right Turn Adjustment					EBR	.13*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.60

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	531	.16*	939	.28*
NBR	1	1700	529	.31	542	.32
SBL	2	3400	210	.06*	298	.09*
SBT	2	3400	680	.20	625	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	851	.25*	515	.15*
WBT	0	0	0		0	
WBR	1	1700	229	.13	191	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.52		.57

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	935	.28*	1450	.43*
NBR	1	1700	117	.07	49	.03
SBL	2	3400	433	.13*	232	.07*
SBT	2	3400	1014	.30	861	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	386	.11*	122	.04*
WBT	0	0	0		0	
WBR	1	1700	55	.03	45	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.59

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	160	.09*	162	.10*
NBT	2	3400	239	.07	228	.07
NBR	d	1700	183	.11	220	.13
SBL	1	1700	56	.03	49	.03
SBT	2	3400	127	.04*	149	.04*
SBR	d	1700	86	.05	133	.08
EBL	1	1700	137	.08*	94	.06
EBT	2	3400	905	.27	1401	.41*
EBR	d	1700	117	.07	200	.12
WBL	1	1700	106	.06	210	.12*
WBT	2	3400	978	.29*	1046	.31
WBR	d	1700	85	.05	58	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.55		.72

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	164	.10	100	.06
NBT	2	3400	326	.10*	188	.06*
NBR	d	1700	559	.33	253	.15
SBL	2	3400	188	.06*	191	.06*
SBT	2	3400	129	.04	163	.05
SBR	d	1700	162	.10	108	.06
EBL	1	1700	174	.10*	270	.16
EBT	2	3400	816	.29	1196	.39*
EBR	0	0	179		127	
WBL	2	3400	243	.07	450	.13*
WBT	2	3400	926	.27*	953	.28
WBR	d	1700	121	.07	172	.10
Right Turn Adjustment		NBR		.17*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.69

272 . W. Yale Lp. at Main St.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	754	.44*	243	.14*
NBT	2	3400	316	.09	219	.06
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	194	.06*	255	.08*
SBR	d	1700	296	.17	107	.06
EBL	2	3400	94	.03*	391	.12*
EBT	0	0	0		0	
EBR	2	3400	326	.10	615	.18
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.39

273 . Yale Av. at Michelson Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	14	(.01)*	48	(.03)*
NBT	1	1700	186	.12	122	.10
NBR	d	1700	102	.06	74	.04
SBL	0	0	224		133	
SBT	1	1700	284	.30*	159	.17*
SBR	d	1700	163	.10	146	.09
EBL	1	1700	153	.09	180	.11*
EBT	1	1700	265	.16*	213	.13
EBR	d	1700	50	.03	25	.01
WBL	1	1700	136	.08*	35	.02
WBT	1	1700	233	.14	266	.16*
WBR	d	1700	22	.01	178	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.52

275 . Yale Av. at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	111	.07*	54	.03*
SBT	0	0	0		0	
SBR	1	1700	322	.19	140	.08
EBL	1	1700	132	.08*	192	.11
EBT	2	3400	1369	.40	2266	.67*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2488	.73*	1820	.54
WBR	d	1700	18	.01	78	.05
Right Turn Adjustment		SBR		.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.99		.75

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	64	.04*	57	.03*
NBT	1	1700	81	.05	38	.02
NBR	1	1700	694	.41	611	.36
SBL	1	1700	20	.01	9	.01
SBT	1	1700	57	.06*	49	.04*
SBR	0	0	44		22	
EBL	1	1700	21	.01*	28	.02
EBT	2	3400	1386	.41	2230	.66*
EBR	d	1700	69	.04	63	.04
WBL	2	3400	414	.12	607	.18*
WBT	2	3400	2323	.68*	1752	.52
WBR	d	1700	18	.01	34	.02
Right Turn Adjustment			NBR	.08*	NBR	.12*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .92 1.08

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	506	.30*	219	.13*
NBT	1	1700	144	.08	40	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	121	.04*	49	.01*
SBR	1	1700	480	.28	271	.16
EBL	2	3400	289	.09*	470	.14*
EBT	0	0	0		0	
EBR	1	1700	372	.22	341	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.17*	SBR	.04*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .65 .37

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		5	
NBT	1	1700	68	.07*	28	.02*
NBR	0	0	34		7	
SBL	1	1700	182	.11*	331	.19*
SBT	1	1700	23	.01	63	.04
SBR	1	1700	264	.16	157	.09
EBL	0	0	197	(.12)*	118	
EBT	1	1700	86	.17	102	.13*
EBR	d	1700	8	.00	10	.01
WBL	1	1700	9	.01	17	.01*
WBT	1	1700	222	.13*	58	.03
WBR	d	1700	379	.22	225	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .49 .40

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	97	.06*	96	.06*
NBT	0	0	0		0	
NBR	1	1700	107	.06	184	.11
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	323	.19*	146	.09
EBR	1	1700	126	.07	74	.04
WBL	0	0	114	(.07)*	116	
WBT	1	1700	213	.19	184	.18*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .37 .29

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	424	.12*	604	.18*
NBT	3	5100	1193	.23	1616	.32
NBR	f		187		310	
SBL	2	3400	314	.09	457	.13
SBT	3	5100	2075	.41*	1463	.29*
SBR	d	1700	164	.10	231	.14
EBL	2	3400	227	.07	299	.09
EBT	2	3400	629	.19*	895	.26*
EBR	d	1700	615	.36	396	.23
WBL	2	3400	550	.16*	495	.15*
WBT	2	3400	802	.24	898	.26
WBR	d	1700	170	.10	187	.11
Right Turn Adjustment			EBR	.08*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 1.01 .93

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1494	.29	2226	.44*
NBR	f		400		240	
SBL	0	0	0		0	
SBT	3	5100	2059	.40*	1758	.34
SBR	f		1440		571	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1331	.39*	1097	.32*
WBT	0	0	0		0	
WBR	1	1700	156	.09	298	.18
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .84 .81

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1427	.28	1941	.38
NBR	f		1080		1280	
SBL	0	0	0		0	
SBT	3	5100	2921	.57*	2441	.48*
SBR	f		430		410	
EBL	2	3400	433	.13*	569	.17*
EBT	0	0	0		0	
EBR	1	1700	139	.08	139	.08
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .75 .70

295 . Michelson Dr. at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	29	.02
NBT	1	1700	1	.01*	6	.04*
NBR	0	0	8		55	
SBL	2	3400	523	.15*	483	.14*
SBT	1	1700	8	.03	6	.02
SBR	0	0	45		33	
EBL	1	1700	7	.00	34	.02
EBT	2	3400	1929	.57*	2691	.79*
EBR	d	1700	11	.01	10	.01
WBL	1	1700	31	.02*	24	.01*
WBT	3	5100	2773	.54	2138	.42
WBR	d	1700	202	.12	400	.24
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 1.03

492 . Ridgeline Dr. at Concordia

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	3	.00	6	.00
NBT	2	3400	733	.22	504	.15
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	497	.22*	506	.19*
SBR	0	0	238		154	
EBL	0	0	133	(.08)*	236	(.14)*
EBT	1	1700	0	.08	0	.14
EBR	0	0	6		4	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.35		.38

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	29		32	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	92	.05	108	.06
EBL	1	1700	94	.06*	152	.09*
EBT	2	3400	308	.09	388	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	510	.15*	202	.06*
WBR	d	1700	39	.02	28	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.22

494 . Sunnyhill at Shady Canyon

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	6	.00	2	.00
SBT	0	0	0		0	
SBR	1	1700	24	.01	10	.01
EBL	1	1700	6	.00	18	.01*
EBT	2	3400	4	.00	18	.01
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	16	.01*	10	.01*
WBR	0	0	4		2	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.07		.07

189 . Harvard Av. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	65	.04*	65	.04
NBT	2	3400	261	.08	836	.25*
NBR	d	1700	127	.07	217	.13
SBL	1	1700	42	.02	86	.05*
SBT	2	3400	600	.18*	570	.17
SBR	d	1700	296	.17	225	.13
EBL	1	1700	83	.05*	360	.21
EBT	3	5100	811	.17	1907	.38*
EBR	0	0	37		42	
WBL	1	1700	174	.10	168	.10*
WBT	3	5100	2149	.44*	1009	.21
WBR	0	0	85		64	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .76 .83

190 . University Dr. at Campus Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	121	.07*	300	.18*
NBT	3	5100	775	.15	1508	.30
NBR	1	1700	367	.22	339	.20
SBL	1	1700	176	.10	103	.06
SBT	2	3400	1756	.52*	960	.28*
SBR	1	1700	555	.33	219	.13
EBL	1	1700	100	.06	620	.36*
EBT	2	3400	827	.24*	977	.29
EBR	d	1700	354	.21	120	.07
WBL	1	1700	210	.12*	410	.24
WBT	2	3400	664	.20	1050	.31*
WBR	d	1700	35	.02	182	.11
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 1.00 1.18

192 . California Av. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	273	.08*	874	.26*
NBT	0	0	0		1	
NBR	1	1700	158	.09	831	.49
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1074	.32*	1069	.31
EBR	1	1700	981	.58	613	.36
WBL	2	3400	863	.25*	127	.04
WBT	2	3400	1171	.34	1336	.39*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.20*	NBR	.17*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .90 .87

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	18	.01*	11	.01*
NBT	0	0	0		0	
NBR	1	1700	328	.19	253	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1768	.35*	1472	.29*
EBR	d	1700	153	.09	123	.07
WBL	2	3400	569	.17*	1260	.37*
WBT	2	3400	884	.26	931	.27
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.05*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .63 .72

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	92	.05*	125	.07*
NBT	0	0	0		0	
NBR	1	1700	654	.38	465	.27
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1266	.26*	1205	.24*
EBR	0	0	70		20	
WBL	2	3400	100	.03*	280	.08*
WBT	3	5100	988	.19	865	.17
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.31*	NBR	.14*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .70 .58

216 . California Av. at Campus Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	254	.15*	337	.20*
NBT	1	1700	161	.09	310	.18
NBR	1	1700	136	.08	173	.10
SBL	1	1700	124	.07	146	.09
SBT	1	1700	203	.12*	340	.20*
SBR	1	1700	73	.04	43	.03
EBL	1	1700	39	.02*	94	.06
EBT	2	3400	273	.11	733	.32*
EBR	0	0	116		362	
WBL	1	1700	153	.09	160	.09*
WBT	2	3400	746	.28*	553	.18
WBR	0	0	192		46	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .62 .86

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	131	.04*	262	.08
NBT	3	5100	1085	.21	2060	.40*
NBR	1	1700	308	.18	428	.25
SBL	2	3400	253	.07	366	.11*
SBT	3	5100	1917	.38*	1281	.25
SBR	f		326		353	
EBL	2	3400	175	.05*	409	.12
EBT	2	3400	609	.18	946	.28*
EBR	1	1700	197	.12	236	.14
WBL	2	3400	286	.08	323	.10*
WBT	2	3400	964	.28*	745	.22
WBR	1	1700	270	.16	311	.18
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 .94

230 . Culver Dr. at Main St.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	90	.03*	146	.04
NBT	3	5100	1213	.24	2161	.42*
NBR	1	1700	149	.09	362	.21
SBL	2	3400	72	.02	179	.05*
SBT	3	5100	1988	.39*	1447	.28
SBR	f		322		194	
EBL	2	3400	169	.05	543	.16*
EBT	2	3400	149	.04*	422	.12
EBR	f		170		227	
WBL	2	3400	532	.16*	163	.05
WBT	2	3400	328	.10	90	.03*
WBR	1	1700	128	.08	66	.04
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .71

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1260	.25	2435	.48*
NBR	f		790		320	
SBL	0	0	0		0	
SBT	3	5100	1610	.32*	1461	.29
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1000	.29*	809	.24*
WBT	0	0	0		0	
WBR	1	1700	300	.18	595	.35
Right Turn Adjustment					WBR	.11*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.66		.88

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1411	.28	1582	.31
NBR	f		503		1056	
SBL	0	0	0		0	
SBT	3	5100	2181	.43*	1803	.35*
SBR	f		412		402	
EBL	1.5		500	(.16)*	1195	.35*
EBT	0	5100	0	.16	0	
EBR	1.5		323		481	.28
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.75

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	229	.07*	397	.12
NBT	3	5100	1263	.25	1703	.34*
NBR	0	0	20		29	
SBL	2	3400	234	.07	451	.13*
SBT	3	5100	1560	.31*	1385	.27
SBR	1	1700	725	.43	475	.28
EBL	2	3400	397	.12	765	.23*
EBT	1	1700	223	.13*	347	.20
EBR	1	1700	230	.14	268	.16
WBL	1	1700	116	.07*	121	.07
WBT	2	3400	185	.05	197	.06*
WBR	1	1700	298	.18	223	.13
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.81

235 . Culver Dr. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	55	.03*	66	.04*
NBT	4	6800	1092	.16	1519	.22
NBR	2	3400	790	.23	965	.28
SBL	1	1700	36	.02	75	.04
SBT	3	5100	1338	.26*	1184	.23*
SBR	d	1700	341	.20	181	.11
EBL	2	3400	111	.03	329	.10
EBT	3	5100	816	.16*	1640	.32*
EBR	d	1700	67	.04	50	.03
WBL	2	3400	1088	.32*	856	.25*
WBT	3	5100	1866	.38	953	.20
WBR	0	0	47		72	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.82		.89

236 . Culver Dr. at Harvard Av.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	79	.05*	48	.03*
NBT	3	5100	1557	.31	1624	.32
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1789	.50*	1549	.42*
SBR	0	0	751		573	
EBL	2	3400	443	.13*	781	.23*
EBT	0	0	0		0	
EBR	1	1700	141	.08	154	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.73

237 . Culver Dr. at Campus Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	100	.06*	112	.07*
NBT	3	5100	785	.15	858	.17
NBR	d	1700	145	.09	109	.06
SBL	2	3400	451	.13	487	.14
SBT	2	3400	860	.25*	1015	.30*
SBR	1	1700	509	.30	338	.20
EBL	2	3400	194	.06*	409	.12
EBT	2	3400	326	.11	476	.18*
EBR	0	0	31		135	
WBL	1	1700	191	.11	62	.04*
WBT	2	3400	744	.22*	262	.08
WBR	1	1700	485	.29	277	.16
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.64

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	450	.13*	219	.06*
NBT	2	3400	908	.27	905	.27
NBR	1	1700	238	.14	307	.18
SBL	1	1700	24	.01	43	.03
SBT	2	3400	810	.24*	902	.27*
SBR	1	1700	99	.06	62	.04
EBL	1	1700	40	.02	67	.04
EBT	2	3400	29	.01*	120	.04*
EBR	1	1700	180	.11	371	.22
WBL	2	3400	377	.11*	207	.06*
WBT	1	1700	107	.09	39	.04
WBR	0	0	47		28	
Right Turn Adjustment					EBR	.13*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.61

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	531	.16*	938	.28*
NBR	1	1700	528	.31	548	.32
SBL	2	3400	219	.06*	302	.09*
SBT	2	3400	671	.20	618	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	833	.25*	512	.15*
WBT	0	0	0		0	
WBR	1	1700	237	.14	192	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.52		.57

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	945	.28*	1450	.43*
NBR	1	1700	114	.07	48	.03
SBL	2	3400	416	.12*	223	.07*
SBT	2	3400	1015	.30	860	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	385	.11*	123	.04*
WBT	0	0	0		0	
WBR	1	1700	55	.03	45	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.59

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	161	.09*	165	.10*
NBT	2	3400	238	.07	230	.07
NBR	d	1700	181	.11	225	.13
SBL	1	1700	56	.03	48	.03
SBT	2	3400	127	.04*	151	.04*
SBR	d	1700	87	.05	131	.08
EBL	1	1700	138	.08*	93	.05
EBT	2	3400	903	.27	1397	.41*
EBR	d	1700	118	.07	205	.12
WBL	1	1700	105	.06	214	.13*
WBT	2	3400	981	.29*	1043	.31
WBR	d	1700	84	.05	57	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.55		.73

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	164	.10	100	.06
NBT	2	3400	330	.10*	188	.06*
NBR	d	1700	558	.33	251	.15
SBL	2	3400	188	.06*	189	.06*
SBT	2	3400	132	.04	163	.05
SBR	d	1700	162	.10	108	.06
EBL	1	1700	177	.10*	271	.16
EBT	2	3400	814	.29	1190	.39*
EBR	0	0	182		128	
WBL	2	3400	246	.07	449	.13*
WBT	2	3400	924	.27*	952	.28
WBR	d	1700	123	.07	170	.10
Right Turn Adjustment		NBR		.17*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.75		.69

272 . W. Yale Lp. at Main St.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	754	.44*	243	.14*
NBT	2	3400	316	.09	219	.06
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	194	.06*	255	.08*
SBR	d	1700	296	.17	107	.06
EBL	2	3400	94	.03*	391	.12*
EBT	0	0	0		0	
EBR	2	3400	326	.10	615	.18
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.39

273 . Yale Av. at Michelson Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	14	(.01)*	48	(.03)*
NBT	1	1700	183	.12	122	.10
NBR	d	1700	103	.06	74	.04
SBL	0	0	229		133	
SBT	1	1700	284	.30*	159	.17*
SBR	d	1700	164	.10	146	.09
EBL	1	1700	156	.09	180	.11*
EBT	1	1700	278	.16*	213	.13
EBR	d	1700	51	.03	25	.01
WBL	1	1700	135	.08*	35	.02
WBT	1	1700	232	.14	266	.16*
WBR	d	1700	22	.01	178	.10
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.52

275 . Yale Av. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	108	.06*	52	.03*
SBT	0	0	0		0	
SBR	1	1700	325	.19	132	.08
EBL	1	1700	132	.08*	198	.12
EBT	2	3400	1365	.40	2258	.66*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2472	.73*	1818	.53
WBR	d	1700	18	.01	82	.05
Right Turn Adjustment		SBR		.07*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.99		.74

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	66	.04*	58	.03*
NBT	1	1700	82	.05	39	.02
NBR	1	1700	722	.42	656	.39
SBL	1	1700	18	.01	9	.01
SBT	1	1700	61	.06*	49	.04*
SBR	0	0	41		21	
EBL	1	1700	21	.01*	27	.02
EBT	2	3400	1380	.41	2215	.65*
EBR	d	1700	80	.05	61	.04
WBL	2	3400	479	.14	620	.18*
WBT	2	3400	2313	.68*	1751	.52
WBR	d	1700	17	.01	34	.02
Right Turn Adjustment			NBR	.08*	NBR	.15*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .92 1.10

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	498	.29*	220	.13*
NBT	1	1700	143	.08	39	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	118	.03*	50	.01*
SBR	1	1700	492	.29	290	.17
EBL	2	3400	307	.09*	481	.14*
EBT	0	0	0		0	
EBR	1	1700	372	.22	340	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.19*	SBR	.05*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .65 .38

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		6	
NBT	1	1700	68	.07*	27	.02*
NBR	0	0	34		7	
SBL	1	1700	182	.11*	327	.19*
SBT	1	1700	23	.01	62	.04
SBR	1	1700	264	.16	161	.09
EBL	0	0	197	(.12)*	114	
EBT	1	1700	86	.17	106	.13*
EBR	d	1700	8	.00	10	.01
WBL	1	1700	9	.01	18	.01*
WBT	1	1700	222	.13*	63	.04
WBR	d	1700	379	.22	219	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .49 .40

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	97	.06*	100	.06*
NBT	0	0	0		0	
NBR	1	1700	107	.06	184	.11
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	323	.19*	146	.09
EBR	1	1700	126	.07	77	.05
WBL	0	0	114	(.07)*	113	
WBT	1	1700	213	.19	180	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .37 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	416	.12*	598	.18*
NBT	3	5100	1172	.23	1621	.32
NBR	f		183		310	
SBL	2	3400	316	.09	459	.14
SBT	3	5100	2077	.41*	1461	.29*
SBR	d	1700	165	.10	230	.14
EBL	2	3400	228	.07	299	.09
EBT	2	3400	630	.19*	891	.26*
EBR	d	1700	612	.36	391	.23
WBL	2	3400	551	.16*	498	.15*
WBT	2	3400	808	.24	902	.27
WBR	d	1700	171	.10	190	.11
Right Turn Adjustment			EBR	.08*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 1.01 .93

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1489	.29	2228	.44*
NBR	f		401		260	
SBL	0	0	0		0	
SBT	3	5100	2060	.40*	1763	.35
SBR	f		1442		570	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1355	.40*	1097	.32*
WBT	0	0	0		0	
WBR	1	1700	153	.09	292	.17
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .85 .81

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1429	.28	1973	.39
NBR	f		1080		1282	
SBL	0	0	0		0	
SBT	3	5100	2949	.58*	2468	.48*
SBR	f		430		401	
EBL	2	3400	431	.13*	571	.17*
EBT	0	0	0		0	
EBR	1	1700	141	.08	146	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .76 .70

295 . Michelson Dr. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	29	.02
NBT	1	1700	1	.01*	6	.04*
NBR	0	0	8		55	
SBL	2	3400	513	.15*	483	.14*
SBT	1	1700	8	.03	6	.02
SBR	0	0	46		33	
EBL	1	1700	8	.00	34	.02
EBT	2	3400	1949	.57*	2731	.80*
EBR	d	1700	11	.01	10	.01
WBL	1	1700	31	.02*	24	.01*
WBT	3	5100	2813	.55	2168	.43
WBR	d	1700	202	.12	400	.24
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 1.04

492 . Ridgeline Dr. at Concordia

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	7	.00
NBT	2	3400	732	.22	504	.15
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	496	.24*	505	.20*
SBR	0	0	318		173	
EBL	1.5		163	(.05)*	296	(.09)*
EBT	0	3400	0	.05	0	.09
EBR	0.5		7		5	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.34

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	23		32	
SBT	1	1700	0	.01*	0	.02*
SBR	d	1700	99	.06	122	.07
EBL	1	1700	114	.07*	172	.10*
EBT	2	3400	307	.09	388	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	511	.15*	208	.06*
WBR	d	1700	36	.02	28	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.23

494 . Sunnyhill at Shady Canyon

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	6	.00	2	.00
SBT	0	0	0		0	
SBR	1	1700	24	.01	10	.01
EBL	1	1700	6	.00	18	.01*
EBT	2	3400	4	.00	18	.01
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	16	.01*	10	.01*
WBR	0	0	4		2	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.07		.07

189 . Harvard Av. at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	66	.04*	70	.04
NBT	2	3400	268	.08	838	.25*
NBR	d	1700	130	.08	219	.13
SBL	1	1700	41	.02	81	.05*
SBT	2	3400	595	.18*	578	.17
SBR	d	1700	293	.17	225	.13
EBL	1	1700	86	.05*	359	.21
EBT	3	5100	829	.17	1920	.39*
EBR	0	0	38		45	
WBL	1	1700	177	.10	177	.10*
WBT	3	5100	2180	.44*	1045	.22
WBR	0	0	86		62	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .76 .84

190 . University Dr. at Campus Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	121	.07*	306	.18*
NBT	3	5100	792	.16	1523	.30
NBR	1	1700	370	.22	341	.20
SBL	1	1700	176	.10	106	.06
SBT	2	3400	1778	.52*	982	.29*
SBR	1	1700	553	.33	227	.13
EBL	1	1700	103	.06	626	.37*
EBT	2	3400	836	.25*	983	.29
EBR	d	1700	362	.21	121	.07
WBL	1	1700	214	.13*	407	.24
WBT	2	3400	668	.20	1057	.31*
WBR	d	1700	36	.02	181	.11
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 1.02 1.20

192 . California Av. at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	280	.08*	882	.26*
NBT	0	0	0		1	
NBR	1	1700	160	.09	821	.48
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1090	.32*	1083	.32
EBR	1	1700	996	.59	624	.37
WBL	2	3400	864	.25*	127	.04
WBT	2	3400	1190	.35	1363	.40*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.21*	NBR	.16*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .91 .87

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	17	.01*	11	.01*
NBT	0	0	0		0	
NBR	1	1700	329	.19	255	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1791	.35*	1503	.29*
EBR	d	1700	152	.09	118	.07
WBL	2	3400	578	.17*	1289	.38*
WBT	2	3400	903	.27	934	.27
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.05*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .63 .73

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	94	.06*	122	.07*
NBT	0	0	0		0	
NBR	1	1700	659	.39	477	.28
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1281	.27*	1213	.24*
EBR	0	0	71		20	
WBL	2	3400	99	.03*	290	.09*
WBT	3	5100	996	.20	858	.17
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.31*	NBR	.14*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .72 .59

216 . California Av. at Campus Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	255	.15*	331	.19*
NBT	1	1700	161	.09	311	.18
NBR	1	1700	134	.08	178	.10
SBL	1	1700	123	.07	144	.08
SBT	1	1700	203	.12*	336	.20*
SBR	1	1700	74	.04	40	.02
EBL	1	1700	39	.02*	93	.05
EBT	2	3400	273	.11	739	.33*
EBR	0	0	117		369	
WBL	1	1700	150	.09	165	.10*
WBT	2	3400	740	.27*	538	.17
WBR	0	0	190		46	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .61 .87

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	138	.04*	264	.08
NBT	3	5100	1092	.21	2061	.40*
NBR	1	1700	313	.18	426	.25
SBL	2	3400	254	.07	366	.11*
SBT	3	5100	1904	.37*	1287	.25
SBR	f		339		357	
EBL	2	3400	177	.05*	420	.12
EBT	2	3400	623	.18	968	.28*
EBR	1	1700	200	.12	242	.14
WBL	2	3400	286	.08	331	.10*
WBT	2	3400	1013	.30*	770	.23
WBR	1	1700	270	.16	319	.19
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .81 .94

230 . Culver Dr. at Main St.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	92	.03*	153	.05
NBT	3	5100	1230	.24	2162	.42*
NBR	1	1700	149	.09	365	.21
SBL	2	3400	72	.02	183	.05*
SBT	3	5100	1987	.39*	1452	.28
SBR	f		326		205	
EBL	2	3400	171	.05	542	.16*
EBT	2	3400	149	.04*	425	.13
EBR	f		171		224	
WBL	2	3400	532	.16*	160	.05
WBT	2	3400	332	.10	94	.03*
WBR	1	1700	129	.08	65	.04
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .71

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1265	.25	2438	.48*
NBR	f		790		320	
SBL	0	0	0		0	
SBT	3	5100	1605	.31*	1465	.29
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	985	.29*	815	.24*
WBT	0	0	0		0	
WBR	1	1700	315	.19	592	.35
Right Turn Adjustment					WBR	.11*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.88

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1417	.28	1588	.31
NBR	f		485		1035	
SBL	0	0	0		0	
SBT	3	5100	2171	.43*	1798	.35*
SBR	f		404		412	
EBL	1.5		501	(.16)*	1184	.35*
EBT	0	5100	0	.16	0	
EBR	1.5		322		492	.29
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.75

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	232	.07*	414	.12
NBT	3	5100	1249	.25	1687	.34*
NBR	0	0	19		29	
SBL	2	3400	222	.07	453	.13*
SBT	3	5100	1542	.30*	1370	.27
SBR	1	1700	725	.43	497	.29
EBL	2	3400	407	.12	763	.22*
EBT	1	1700	223	.13*	351	.21
EBR	1	1700	240	.14	266	.16
WBL	1	1700	117	.07*	118	.07
WBT	2	3400	189	.06	203	.06*
WBR	1	1700	295	.17	219	.13
Right Turn Adjustment			SBR	.02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.80

235 . Culver Dr. at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	55	.03*	68	.04*
NBT	4	6800	1089	.16	1513	.22
NBR	2	3400	798	.23	976	.29
SBL	1	1700	37	.02	73	.04
SBT	3	5100	1330	.26*	1176	.23*
SBR	d	1700	340	.20	183	.11
EBL	2	3400	113	.03	326	.10
EBT	3	5100	836	.16*	1651	.32*
EBR	d	1700	67	.04	51	.03
WBL	2	3400	1102	.32*	873	.26*
WBT	3	5100	1894	.38	989	.21
WBR	0	0	48		72	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.82		.90

236 . Culver Dr. at Harvard Av.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	79	.05*	49	.03*
NBT	3	5100	1572	.31	1656	.32
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1804	.50*	1557	.42*
SBR	0	0	743		571	
EBL	2	3400	432	.13*	764	.22*
EBT	0	0	0		0	
EBR	1	1700	140	.08	153	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.72

237 . Culver Dr. at Campus Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	97	.06*	108	.06*
NBT	3	5100	787	.15	868	.17
NBR	d	1700	141	.08	106	.06
SBL	2	3400	453	.13	494	.15
SBT	2	3400	861	.25*	1010	.30*
SBR	1	1700	514	.30	340	.20
EBL	2	3400	196	.06*	422	.12
EBT	2	3400	316	.10	470	.18*
EBR	0	0	30		131	
WBL	1	1700	189	.11	59	.03*
WBT	2	3400	739	.22*	252	.07
WBR	1	1700	498	.29	280	.16
Right Turn Adjustment				SBR	.01*	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.62

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	451	.13*	221	.07*
NBT	2	3400	907	.27	906	.27
NBR	1	1700	237	.14	309	.18
SBL	1	1700	24	.01	42	.02
SBT	2	3400	811	.24*	892	.26*
SBR	1	1700	98	.06	61	.04
EBL	1	1700	42	.02	66	.04
EBT	2	3400	30	.01*	119	.04*
EBR	1	1700	188	.11	371	.22
WBL	2	3400	378	.11*	207	.06*
WBT	1	1700	106	.09	39	.04
WBR	0	0	46		28	
Right Turn Adjustment					EBR	.13*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.61

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	533	.16*	938	.28*
NBR	1	1700	546	.32	558	.33
SBL	2	3400	211	.06*	302	.09*
SBT	2	3400	679	.20	618	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	856	.25*	522	.15*
WBT	0	0	0		0	
WBR	1	1700	224	.13	192	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.52		.57

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	961	.28*	1470	.43*
NBR	1	1700	113	.07	50	.03
SBL	2	3400	437	.13*	231	.07*
SBT	2	3400	1018	.30	861	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	382	.11*	122	.04*
WBT	0	0	0		0	
WBR	1	1700	59	.03	45	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.59

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	170	.10*	166	.10*
NBT	2	3400	238	.07	229	.07
NBR	d	1700	182	.11	225	.13
SBL	1	1700	58	.03	50	.03
SBT	2	3400	128	.04*	153	.05*
SBR	d	1700	94	.06	137	.08
EBL	1	1700	140	.08*	93	.05
EBT	2	3400	920	.27	1410	.41*
EBR	d	1700	119	.07	202	.12
WBL	1	1700	103	.06	216	.13*
WBT	2	3400	1016	.30*	1080	.32
WBR	d	1700	83	.05	58	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.74

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	167	.10	104	.06
NBT	2	3400	326	.10*	187	.06*
NBR	d	1700	546	.32	249	.15
SBL	2	3400	184	.05*	187	.06*
SBT	2	3400	129	.04	162	.05
SBR	d	1700	165	.10	111	.07
EBL	1	1700	181	.11*	274	.16
EBT	2	3400	832	.30	1204	.39*
EBR	0	0	185		130	
WBL	2	3400	246	.07	448	.13*
WBT	2	3400	960	.28*	985	.29
WBR	d	1700	124	.07	169	.10
Right Turn Adjustment		NBR		.15*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.69

272 . W. Yale Lp. at Main St.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	752	.44*	246	.14*
NBT	2	3400	324	.10	229	.07
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	194	.06*	270	.08*
SBR	d	1700	298	.18	104	.06
EBL	2	3400	96	.03*	381	.11*
EBT	0	0	0		0	
EBR	2	3400	326	.10	630	.19
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.10*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.68		.38

273 . Yale Av. at Michelson Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	14	(.01)*	47	(.03)*
NBT	1	1700	188	.12	121	.10
NBR	d	1700	101	.06	74	.04
SBL	0	0	228		136	
SBT	1	1700	284	.30*	160	.17*
SBR	d	1700	163	.10	147	.09
EBL	1	1700	159	.09	178	.10*
EBT	1	1700	271	.16*	210	.12
EBR	d	1700	50	.03	25	.01
WBL	1	1700	137	.08*	35	.02
WBT	1	1700	234	.14	267	.16*
WBR	d	1700	23	.01	181	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.60		.51

275 . Yale Av. at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	112	.07*	53	.03*
SBT	0	0	0		0	
SBR	1	1700	321	.19	140	.08
EBL	1	1700	132	.08*	192	.11
EBT	2	3400	1398	.41	2282	.67*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2519	.74*	1874	.55
WBR	d	1700	18	.01	78	.05
Right Turn Adjustment		SBR		.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				1.00		.75

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	63	.04*	59	.03*
NBT	1	1700	80	.05	38	.02
NBR	1	1700	685	.40	600	.35
SBL	1	1700	20	.01	9	.01
SBT	1	1700	56	.06*	49	.04*
SBR	0	0	44		22	
EBL	1	1700	22	.01*	29	.02
EBT	2	3400	1415	.42	2241	.66*
EBR	d	1700	70	.04	65	.04
WBL	2	3400	414	.12	605	.18*
WBT	2	3400	2353	.69*	1799	.53
WBR	d	1700	18	.01	34	.02
Right Turn Adjustment			NBR	.07*	NBR	.11*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .92 1.07

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	512	.30*	221	.13*
NBT	1	1700	138	.08	39	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	117	.03*	50	.01*
SBR	1	1700	494	.29	279	.16
EBL	2	3400	295	.09*	471	.14*
EBT	0	0	0		0	
EBR	1	1700	376	.22	350	.21
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.19*	SBR	.04*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .66 .37

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		6	
NBT	1	1700	68	.07*	27	.02*
NBR	0	0	34		7	
SBL	1	1700	182	.11*	331	.19*
SBT	1	1700	23	.01	63	.04
SBR	1	1700	264	.16	156	.09
EBL	0	0	197	(.12)*	114	
EBT	1	1700	86	.17	105	.13*
EBR	d	1700	8	.00	10	.01
WBL	1	1700	9	.01	18	.01*
WBT	1	1700	222	.13*	61	.04
WBR	d	1700	379	.22	222	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .49 .40

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	97	.06*	101	.06*
NBT	0	0	0		0	
NBR	1	1700	107	.06	182	.11
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	323	.19*	138	.08
EBR	1	1700	126	.07	75	.04
WBL	0	0	114	(.07)*	115	
WBT	1	1700	213	.19	179	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .37 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	422	.12*	591	.17*
NBT	3	5100	1196	.23	1619	.32
NBR	f		194		310	
SBL	2	3400	331	.10	470	.14
SBT	3	5100	2081	.41*	1476	.29*
SBR	d	1700	166	.10	233	.14
EBL	2	3400	225	.07	302	.09
EBT	2	3400	645	.19*	900	.26*
EBR	d	1700	599	.35	389	.23
WBL	2	3400	570	.17*	515	.15*
WBT	2	3400	841	.25	936	.28
WBR	d	1700	179	.11	200	.12
Right Turn Adjustment			EBR	.07*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 1.01 .92

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1513	.30	2225	.44*
NBR	f		390		240	
SBL	0	0	0		0	
SBT	3	5100	2070	.41*	1798	.35
SBR	f		1450		571	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1330	.39*	1107	.33*
WBT	0	0	0		0	
WBR	1	1700	157	.09	299	.18
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .85 .82

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1442	.28	1948	.38
NBR	f		1080		1280	
SBL	0	0	0		0	
SBT	3	5100	2955	.58*	2493	.49*
SBR	f		400		410	
EBL	2	3400	428	.13*	562	.17*
EBT	0	0	0		0	
EBR	1	1700	135	.08	137	.08
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .76 .71

295 . Michelson Dr. at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	29	.02
NBT	1	1700	1	.01*	6	.04*
NBR	0	0	8		55	
SBL	2	3400	524	.15*	491	.14*
SBT	1	1700	8	.03	6	.02
SBR	0	0	45		34	
EBL	1	1700	7	.00	35	.02
EBT	2	3400	1948	.57*	2684	.79*
EBR	d	1700	11	.01	9	.01
WBL	1	1700	31	.02*	24	.01*
WBT	3	5100	2804	.55	2167	.42
WBR	d	1700	202	.12	418	.25
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .80 1.03

492 . Ridgeline Dr. at Concordia

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	4	.00	6	.00
NBT	2	3400	729	.21	494	.15
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	499	.22*	506	.19*
SBR	0	0	239		154	
EBL	0	0	132	{.08}*	236	{.14}*
EBT	1	1700	0	.08	0	.14
EBR	0	0	7		4	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.35		.38

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	27		33	
SBT	1	1700	0	.02*	0	.02*
SBR	d	1700	93	.05	107	.06
EBL	1	1700	94	.06*	152	.09*
EBT	2	3400	306	.09	397	.12
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	513	.15*	203	.06*
WBR	d	1700	37	.02	28	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.22

494 . Sunnyhill at Shady Canyon

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	6	.00	2	.00
SBT	0	0	0		0	
SBR	1	1700	24	.01	10	.01
EBL	1	1700	6	.00	18	.01*
EBT	2	3400	4	.00	18	.01
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	16	.01*	10	.01*
WBR	0	0	4		2	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.07		.07

189 . Harvard Av. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	67	.04*	69	.04
NBT	2	3400	271	.08	840	.25*
NBR	d	1700	135	.08	221	.13
SBL	1	1700	42	.02	82	.05*
SBT	2	3400	596	.18*	578	.17
SBR	d	1700	290	.17	225	.13
EBL	1	1700	82	.05*	357	.21
EBT	3	5100	823	.17	1917	.38*
EBR	0	0	37		45	
WBL	1	1700	177	.10	178	.10*
WBT	3	5100	2164	.44*	1046	.22
WBR	0	0	86		63	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .76 .83

190 . University Dr. at Campus Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	122	.07*	303	.18*
NBT	3	5100	784	.15	1513	.30
NBR	1	1700	377	.22	340	.20
SBL	1	1700	179	.11	106	.06
SBT	2	3400	1761	.52*	980	.29*
SBR	1	1700	556	.33	226	.13
EBL	1	1700	101	.06	624	.37*
EBT	2	3400	844	.25*	984	.29
EBR	d	1700	356	.21	120	.07
WBL	1	1700	212	.12*	410	.24
WBT	2	3400	671	.20	1060	.31*
WBR	d	1700	35	.02	183	.11
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 1.01 1.20

192 . California Av. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	279	.08*	885	.26*
NBT	0	0	0		1	
NBR	1	1700	161	.09	817	.48
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	2	3400	1099	.32*	1083	.32
EBR	1	1700	996	.59	624	.37
WBL	2	3400	864	.25*	126	.04
WBT	2	3400	1191	.35	1365	.40*
WBR	0	0	0		0	
Right Turn Adjustment		EBR		.21*	NBR	.16*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .91 .87

193 . MacArthur Blvd. NB at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	18	.01*	11	.01*
NBT	0	0	0		0	
NBR	1	1700	327	.19	254	.15
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1793	.35*	1501	.29*
EBR	d	1700	157	.09	119	.07
WBL	2	3400	573	.17*	1284	.38*
WBT	2	3400	902	.27	951	.28
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.05*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .63 .73

194 . MacArthur Blvd. SB at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	91	.05*	122	.07*
NBT	0	0	0		0	
NBR	1	1700	674	.40	477	.28
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	3	5100	1276	.26*	1213	.24*
EBR	0	0	68		20	
WBL	2	3400	102	.03*	290	.09*
WBT	3	5100	999	.20	868	.17
WBR	0	0	0		0	
Right Turn Adjustment		NBR		.33*	NBR	.14*
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .72 .59

216 . California Av. at Campus Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	255	.15*	334	.20*
NBT	1	1700	162	.10	316	.19
NBR	1	1700	134	.08	170	.10
SBL	1	1700	128	.08	146	.09
SBT	1	1700	214	.13*	341	.20*
SBR	1	1700	78	.05	43	.03
EBL	1	1700	40	.02*	97	.06
EBT	2	3400	271	.11	724	.32*
EBR	0	0	118		359	
WBL	1	1700	150	.09	160	.09*
WBT	2	3400	732	.27*	552	.18
WBR	0	0	190		48	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .62 .86

229 . Culver Dr. at Alton Pkwy.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	138	.04*	263	.08
NBT	3	5100	1094	.21	2063	.40*
NBR	1	1700	314	.18	428	.25
SBL	2	3400	253	.07	368	.11*
SBT	3	5100	1911	.37*	1288	.25
SBR	f		336		357	
EBL	2	3400	177	.05*	417	.12
EBT	2	3400	624	.18	964	.28*
EBR	1	1700	201	.12	240	.14
WBL	2	3400	287	.08	332	.10*
WBT	2	3400	1005	.30*	770	.23
WBR	1	1700	269	.16	320	.19
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .81 .94

230 . Culver Dr. at Main St.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	91	.03*	153	.05
NBT	3	5100	1229	.24	2154	.42*
NBR	1	1700	149	.09	364	.21
SBL	2	3400	73	.02	180	.05*
SBT	3	5100	1991	.39*	1454	.29
SBR	f		327		204	
EBL	2	3400	171	.05	546	.16*
EBT	2	3400	149	.04*	428	.13
EBR	f		169		228	
WBL	2	3400	530	.16*	160	.05
WBT	2	3400	332	.10	94	.03*
WBR	1	1700	130	.08	65	.04
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .67 .71

232 . Culver Dr. at I-405 NB Ramps

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1265	.25	2428	.48*
NBR	f		790		320	
SBL	0	0	0		0	
SBT	3	5100	1605	.31*	1459	.29
SBR	f		1060		510	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	985	.29*	821	.24*
WBT	0	0	0		0	
WBR	1	1700	315	.19	592	.35
Right Turn Adjustment					WBR	.11*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.88

233 . Culver Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1417	.28	1581	.31
NBR	f		484		1045	
SBL	0	0	0		0	
SBT	3	5100	2174	.43*	1805	.35*
SBR	f		403		402	
EBL	1.5		498	(.16)*	1191	.35*
EBT	0	5100	0	.16	0	
EBR	1.5		324		485	.29
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.75

234 . Culver Dr. at Michelson Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	231	.07*	414	.12
NBT	3	5100	1249	.25	1687	.34*
NBR	0	0	21		29	
SBL	2	3400	239	.07	454	.13*
SBT	3	5100	1537	.30*	1371	.27
SBR	1	1700	723	.43	495	.29
EBL	2	3400	400	.12	763	.22*
EBT	1	1700	235	.14*	351	.21
EBR	1	1700	234	.14	266	.16
WBL	1	1700	118	.07*	121	.07
WBT	2	3400	191	.06	207	.06*
WBR	1	1700	301	.18	223	.13
Right Turn Adjustment			SBR	.02*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.65		.80

235 . Culver Dr. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	57	.03*	67	.04*
NBT	4	6800	1092	.16	1512	.22
NBR	2	3400	796	.23	969	.29
SBL	1	1700	35	.02	74	.04
SBT	3	5100	1332	.26*	1173	.23*
SBR	d	1700	339	.20	184	.11
EBL	2	3400	113	.03	327	.10
EBT	3	5100	831	.16*	1650	.32*
EBR	d	1700	69	.04	50	.03
WBL	2	3400	1101	.32*	869	.26*
WBT	3	5100	1886	.38	990	.21
WBR	0	0	46		73	
Clearance Interval				.05*		.05*
Note: Assumes Right-Turn Overlap for NBR						
TOTAL CAPACITY UTILIZATION				.82		.90

236 . Culver Dr. at Harvard Av.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	80	.05*	47	.03*
NBT	3	5100	1562	.31	1617	.32
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	3	5100	1784	.50*	1547	.42*
SBR	0	0	762		573	
EBL	2	3400	442	.13*	793	.23*
EBT	0	0	0		0	
EBR	1	1700	140	.08	153	.09
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.73		.73

237 . Culver Dr. at Campus Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	98	.06*	111	.07*
NBT	3	5100	785	.15	858	.17
NBR	d	1700	147	.09	111	.07
SBL	2	3400	457	.13	498	.15
SBT	2	3400	856	.25*	1007	.30*
SBR	1	1700	498	.29	335	.20
EBL	2	3400	192	.06*	399	.12
EBT	2	3400	328	.11	471	.18*
EBR	0	0	30		130	
WBL	1	1700	196	.12	63	.04*
WBT	2	3400	748	.22*	264	.08
WBR	1	1700	497	.29	283	.17
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.64		.64

238 . Culver Dr. at Bonita Cyn. Rd.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	451	.13*	219	.06*
NBT	2	3400	907	.27	905	.27
NBR	1	1700	237	.14	307	.18
SBL	1	1700	24	.01	43	.03
SBT	2	3400	811	.24*	902	.27*
SBR	1	1700	98	.06	62	.04
EBL	1	1700	42	.02	67	.04
EBT	2	3400	30	.01*	120	.04*
EBR	1	1700	188	.11	371	.22
WBL	2	3400	378	.11*	207	.06*
WBT	1	1700	106	.09	39	.04
WBR	0	0	46		28	
Right Turn Adjustment					EBR	.13*
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.54		.61

239 . Bonita Cyn. Rd. at Newport Coast Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	536	.16*	939	.28*
NBR	1	1700	544	.32	562	.33
SBL	2	3400	213	.06*	298	.09*
SBT	2	3400	677	.20	619	.18
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	828	.24*	531	.16*
WBT	0	0	0		0	
WBR	1	1700	222	.13	191	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.51		.58

240 . Bonita Cyn. Rd. at SR-73 NB Ramps

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	2	3400	955	.28*	1479	.44*
NBR	1	1700	111	.07	51	.03
SBL	2	3400	409	.12*	240	.07*
SBT	2	3400	1017	.30	862	.25
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	383	.11*	121	.04*
WBT	0	0	0		0	
WBR	1	1700	55	.03	46	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.56		.60

268 . W. Yale Loop at Alton Pkwy.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	170	.10*	166	.10*
NBT	2	3400	238	.07	229	.07
NBR	d	1700	183	.11	225	.13
SBL	1	1700	60	.04	50	.03
SBT	2	3400	132	.04*	153	.05*
SBR	d	1700	98	.06	137	.08
EBL	1	1700	140	.08*	93	.05
EBT	2	3400	921	.27	1410	.41*
EBR	d	1700	117	.07	202	.12
WBL	1	1700	101	.06	216	.13*
WBT	2	3400	1016	.30*	1080	.32
WBR	d	1700	83	.05	58	.03
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.57		.74

271 . E. Yale Lp. at Alton Pkwy.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	165	.10	105	.06*
NBT	2	3400	327	.10*	187	.06
NBR	d	1700	549	.32	249	.15
SBL	2	3400	186	.05*	186	.05
SBT	2	3400	130	.04	163	.05*
SBR	d	1700	164	.10	113	.07
EBL	1	1700	182	.11*	275	.16
EBT	2	3400	833	.30	1206	.39*
EBR	0	0	185		131	
WBL	2	3400	248	.07	446	.13*
WBT	2	3400	957	.28*	992	.29
WBR	d	1700	126	.07	168	.10
Right Turn Adjustment		NBR		.15*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.74		.68

272 . W. Yale Lp. at Main St.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	755	.44*	246	.14*
NBT	2	3400	326	.10	229	.07
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	200	.06*	270	.08*
SBR	d	1700	295	.17	104	.06
EBL	2	3400	94	.03*	381	.11*
EBT	0	0	0		0	
EBR	2	3400	330	.10	630	.19
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment		SBR		.09*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.67		.38

273 . Yale Av. at Michelson Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	14	(.01)*	45	(.03)*
NBT	1	1700	185	.12	122	.10
NBR	d	1700	102	.06	73	.04
SBL	0	0	233		140	
SBT	1	1700	284	.30*	161	.18*
SBR	d	1700	163	.10	148	.09
EBL	1	1700	162	.10	179	.11*
EBT	1	1700	284	.17*	207	.12
EBR	d	1700	51	.03	24	.01
WBL	1	1700	135	.08*	35	.02
WBT	1	1700	233	.14	266	.16*
WBR	d	1700	23	.01	189	.11
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.61		.53

275 . Yale Av. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	112	.07*	54	.03*
SBT	0	0	0		0	
SBR	1	1700	321	.19	140	.08
EBL	1	1700	132	.08*	191	.11
EBT	2	3400	1388	.41	2276	.67*
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	2509	.74*	1870	.55
WBR	d	1700	18	.01	79	.05
Right Turn Adjustment		SBR		.06*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				1.00		.75

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	62	.04*	62	.04*
NBT	1	1700	80	.05	39	.02
NBR	1	1700	710	.42	644	.38
SBL	1	1700	21	.01	9	.01
SBT	1	1700	65	.06*	49	.04*
SBR	0	0	45		22	
EBL	1	1700	21	.01*	28	.02
EBT	2	3400	1408	.41	2237	.66*
EBR	d	1700	75	.04	64	.04
WBL	2	3400	470	.14	607	.18*
WBT	2	3400	2343	.69*	1796	.53
WBR	d	1700	18	.01	33	.02
Right Turn Adjustment			NBR	.08*	NBR	.13*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .93 1.10

277 . Turtle Rock Dr. at Campus Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	506	.30*	223	.13*
NBT	1	1700	144	.08	38	.02
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	116	.03*	48	.01*
SBR	1	1700	504	.30	301	.18
EBL	2	3400	316	.09*	495	.15*
EBT	0	0	0		0	
EBR	1	1700	374	.22	344	.20
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Right Turn Adjustment			SBR	.20*	SBR	.06*
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for EBR

TOTAL CAPACITY UTILIZATION .67 .40

278 . Ridgeline Dr. at Turtle Rock Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	17		6	
NBT	1	1700	68	.07*	27	.02*
NBR	0	0	34		7	
SBL	1	1700	182	.11*	327	.19*
SBT	1	1700	23	.01	62	.04
SBR	1	1700	264	.16	161	.09
EBL	0	0	197	(.12)*	114	
EBT	1	1700	86	.17	106	.13*
EBR	d	1700	8	.00	10	.01
WBL	1	1700	9	.01	18	.01*
WBT	1	1700	222	.13*	63	.04
WBR	d	1700	379	.22	219	.13
Right Turn Adjustment			WBR	.01*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .49 .40

279 . Sunnyhill at Turtle Rock Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	97	.06*	102	.06*
NBT	0	0	0		0	
NBR	1	1700	107	.06	178	.10
SBL	0	0	0		0	
SBT	0	0	0		0	
SBR	0	0	0		0	
EBL	0	0	0		0	
EBT	1	1700	323	.19*	142	.08
EBR	1	1700	126	.07	78	.05
WBL	0	0	114	(.07)*	112	
WBT	1	1700	213	.19	178	.17*
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .37 .28

291 . Jeffrey Rd. at Alton Pkwy.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	2	3400	419	.12*	590	.17*
NBT	3	5100	1197	.23	1619	.32
NBR	f		188		311	
SBL	2	3400	328	.10	476	.14
SBT	3	5100	2086	.41*	1480	.29*
SBR	d	1700	168	.10	234	.14
EBL	2	3400	232	.07	301	.09
EBT	2	3400	644	.19*	903	.27*
EBR	d	1700	606	.36	386	.23
WBL	2	3400	568	.17*	514	.15*
WBT	2	3400	843	.25	936	.28
WBR	d	1700	181	.11	200	.12
Right Turn Adjustment			EBR	.08*		
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION 1.02 .93

293 . Jeffrey Rd. at I-405 NB Ramps

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1512	.30	2230	.44*
NBR	f		400		250	
SBL	0	0	0		0	
SBT	3	5100	2080	.41*	1792	.35
SBR	f		1450		570	
EBL	0	0	0		0	
EBT	0	0	0		0	
EBR	0	0	0		0	
WBL	2	3400	1360	.40*	1108	.33*
WBT	0	0	0		0	
WBR	1	1700	158	.09	300	.18
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .86 .82

294 . University Dr. at I-405 SB Ramps

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	3	5100	1449	.28	1981	.39
NBR	f		1090		1280	
SBL	0	0	0		0	
SBT	3	5100	2988	.59*	2501	.49*
SBR	f		420		400	
EBL	2	3400	431	.13*	549	.16*
EBT	0	0	0		0	
EBR	1	1700	142	.08	139	.08
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .77 .70

295 . Michelson Dr. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	2	.00	29	.02
NBT	1	1700	1	.01*	6	.04*
NBR	0	0	8		55	
SBL	2	3400	522	.15*	484	.14*
SBT	1	1700	8	.03	6	.02
SBR	0	0	45		33	
EBL	1	1700	7	.00	35	.02
EBT	2	3400	1964	.58*	2731	.80*
EBR	d	1700	11	.01	10	.01
WBL	1	1700	31	.02*	24	.01*
WBT	3	5100	2838	.56	2178	.43
WBR	d	1700	202	.12	419	.25
Clearance Interval				.05*		.05*

TOTAL CAPACITY UTILIZATION .81 1.04

492 . Ridgeline Dr. at Concordia

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	5	.00	8	.00
NBT	2	3400	721	.21	488	.14
NBR	0	0	0		0	
SBL	0	0	0		0	
SBT	2	3400	498	.24*	504	.20*
SBR	0	0	319		172	
EBL	1.5		159	(.05)*	292	(.09)*
EBT	0	3400	0	.05	0	.09
EBR	0.5		8		6	
WBL	0	0	0		0	
WBT	0	0	0		0	
WBR	0	0	0		0	
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.34		.34

493 . Concordia at Turtle Rock Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	0	0	24		33	
SBT	1	1700	0	.01*	0	.02*
SBR	d	1700	106	.06	127	.07
EBL	1	1700	122	.07*	172	.10*
EBT	2	3400	306	.09	387	.11
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	2	3400	514	.15*	203	.06*
WBR	d	1700	38	.02	28	.02
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.28		.23

494 . Sunnyhill at Shady Canyon

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	0	0	0		0	
NBT	0	0	0		0	
NBR	0	0	0		0	
SBL	1	1700	6	.00	2	.00
SBT	0	0	0		0	
SBR	1	1700	24	.01	10	.01
EBL	1	1700	6	.00	18	.01*
EBT	2	3400	4	.00	18	.01
EBR	0	0	0		0	
WBL	0	0	0		0	
WBT	1	1700	16	.01*	10	.01*
WBR	0	0	4		2	
Right Turn Adjustment			SBR	.01*		
Clearance Interval				.05*		.05*
TOTAL CAPACITY UTILIZATION				.07		.07

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2015
Existing Validation Year: 2012
Future Analysis Year: 2015 Exist WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/3/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	19,202	18,324	18,358	Increment	34	0%	0%	-100%	0%	34	19,200
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,670	58,778	58,877	Ratio	90	0%	0%	-100%	0%	90	53,800
186	University Dr.	n/o Campus Dr.	28,507	23,625	23,785	Increment	160	1%	1%	-100%	1%	160	28,700
187	University Dr.	b/w Campus Dr.and Mesa R	32,102	28,943	29,112	Increment	169	1%	1%	-100%	1%	169	32,300
188	University Dr.	b/w Mesa Rd. and California	27,344	27,486	27,567	Ratio	81	0%	0%	-100%	0%	81	27,400
189	University Dr.	b/w MacArthur Blvd. NB and	27,344	32,639	32,699	Ratio	50	0%	0%	-100%	0%	50	27,400
220	Culver Dr.	b/w Alton Pkwy.and Main St.	45,385	46,788	46,782	Ratio	-6	0%	0%	-100%	0%	0	45,400
221	Culver Dr.	b/w Main St. and San Leand	48,713	53,847	53,866	Ratio	17	0%	0%	-100%	0%	17	48,700
222	Culver Dr.	b/w San Leandro and I-405	48,713	57,390	57,413	Ratio	20	0%	0%	-100%	0%	20	48,700
223	Culver Dr.	s/o I-405 SB Ramps	42,366	63,628	63,701	Ratio	49	0%	0%	-100%	0%	49	42,400
224	Culver Dr.	n/o Michelson Dr.	42,366	62,679	62,749	Ratio	47	0%	0%	-100%	0%	47	42,400
225	Culver Dr.	s/o Michelson Dr.	35,247	50,793	50,840	Ratio	33	0%	0%	-100%	0%	33	35,300
226	Culver Dr.	n/o University Dr.	35,247	44,755	44,805	Ratio	39	0%	0%	-100%	0%	39	35,300
227	Culver Dr.	b/w University Dr. and Harva	43,004	47,062	47,034	Ratio	-26	0%	0%	-100%	0%	0	43,000
228	Culver Dr.	s/o Harvard Av.	36,147	34,701	34,656	Increment	-45	0%	0%	-100%	0%	0	36,100
229	Culver Dr.	s/o Campus Dr.	22,200	21,345	21,385	Increment	40	0%	0%	-100%	0%	40	22,200
230	Culver Dr.	n/o Anteater	22,200	20,787	20,843	Increment	56	0%	0%	-100%	0%	56	22,300
232	Culver Dr.	s/o Anteater	19,202	30,577	30,642	Ratio	41	0%	0%	-100%	0%	41	19,200
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	22,707	26,363	26,280	Ratio	-71	0%	0%	-100%	0%	0	22,700
265	W. Yale Loop	s/o Alton Pkwy.	7,243	7,105	7,095	Increment	-10	0%	0%	-100%	0%	0	7,200
266	W. Yale Lp.	n/o Main St.	7,243	6,299	6,292	Increment	-7	0%	0%	-100%	0%	0	7,200
267	W. Yale Lp.	s/o Main St.	11,237	15,755	15,762	Ratio	5	0%	0%	-100%	0%	5	11,200
275	E. Yale Lp.	s/o Alton Pkwy.	4,887	13,373	13,360	Ratio	-5	0%	0%	-100%	0%	0	4,900
277	Yale Av.	s/o Michelson Dr.	1,044	510	514	Increment	4	0%	0%	-100%	0%	4	1,000
278	Yale Av.	n/o University Dr.	1,044	683	684	Increment	1	0%	0%	-100%	0%	1	1,000

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2015
Existing Validation Year: 2012
Future Analysis Year: 2015 Exist WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/3/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	17,167	14,503	15,566	Increment	1,063	6%	6%	-100%	6%	1,063	18,200
280	Ridgeline Dr.	n/o Turtle Rock Dr.	11,538	8,056	8,061	Increment	5	0%	0%	-100%	0%	5	11,500
281	Turtle Rock Dr.	n/o Campus Dr.	8,363	10,692	11,015	Ratio	253	3%	3%	-100%	3%	253	8,600
282	Turtle Rock Dr.	s/o Campus Dr.	3,704	8,007	8,000	Ratio	-3	0%	0%	-100%	0%	0	3,700
283	Sunnyhill	s/o Turtle Rock Dr.	6,103	1,812	1,821	Increment	9	0%	0%	-100%	0%	9	6,100
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	45,519	46,454	46,583	Ratio	126	0%	0%	-100%	0%	126	45,600
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	45,519	50,338	50,478	Ratio	127	0%	0%	-100%	0%	127	45,600
301	Michelson Dr.	n/o University Dr.	6,470	5,714	5,710	Increment	-4	0%	0%	-100%	0%	0	6,500
302	Michelson Dr.	s/o University Dr.	6,470	1,288	1,286	Increment	-2	0%	0%	-100%	0%	0	6,500
347	University Dr.	b/w I-405 SB Ramps and Mi	51,553	46,505	47,148	Increment	643	1%	1%	-100%	1%	643	52,200
784	Alton Pkwy.	e/o Culver Dr.	21,003	34,209	34,239	Ratio	18	0%	0%	-100%	0%	18	21,000
785	Alton Pkwy.	e/o W. Yale Loop	22,887	33,492	33,548	Ratio	38	0%	0%	-100%	0%	38	22,900
787	Alton Pkwy.	e/o Lake Rd.	22,887	31,794	31,845	Ratio	37	0%	0%	-100%	0%	37	22,900
789	Alton Pkwy.	e/o Creek Rd.	22,887	31,683	31,734	Ratio	37	0%	0%	-100%	0%	37	22,900
791	Alton Pkwy.	e/o E. Yale Lp.	22,887	39,494	39,491	Ratio	-2	0%	0%	-100%	0%	0	22,900
792	Alton Pkwy.	w/o Jeffrey Rd.	25,656	39,291	39,292	Ratio	1	0%	0%	-100%	0%	1	25,700
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	46,939	46,099	46,463	Increment	364	1%	1%	-100%	1%	364	47,300
828	Main St.	b/w Culver Dr.and W. Yale L	13,185	15,967	15,982	Ratio	12	0%	0%	-100%	0%	12	13,200
851	Michelson Dr.	e/o Culver Dr.	10,143	14,726	14,891	Ratio	114	1%	1%	-100%	1%	114	10,300
852	Michelson Dr.	w/o Yale Av.	10,143	9,444	9,623	Increment	179	2%	2%	-100%	2%	179	10,300
853	Michelson Dr.	e/o Yale Av.	6,470	9,517	9,704	Ratio	127	2%	2%	-100%	2%	127	6,600
854	University Dr.	w/o Michelson Dr.	44,737	40,987	41,637	Increment	650	1%	1%	-100%	1%	650	45,400
880	University Dr.	w/o Harvard Av.	28,507	23,329	23,489	Increment	160	1%	1%	-100%	1%	160	28,700
881	University Dr.	e/o Harvard Av.	22,259	24,785	24,785	Ratio	0	0%	0%	-100%	0%	0	22,300
882	University Dr.	w/o Culver Dr.	22,259	25,319	25,313	Ratio	-5	0%	0%	-100%	0%	0	22,300
883	University Dr.	e/o Culver Dr.	32,552	27,497	27,415	Increment	-82	0%	0%	-100%	0%	0	32,600
884	University Dr.	w/o Yale Av.	32,552	27,733	27,651	Increment	-82	0%	0%	-100%	0%	0	32,600
885	University Dr.	e/o Yale Av.	32,062	27,185	27,100	Increment	-85	0%	0%	-100%	0%	0	32,100

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2015
Existing Validation Year: 2012
Future Analysis Year: 2015 Exist WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/3/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	44,737	38,731	39,396	Increment	665	1%	1%	-100%	1%	665	45,400
893	Campus Dr.	b/w University Dr. and Bridg	19,528	25,207	25,277	Ratio	54	0%	0%	-100%	0%	54	19,600
894	Campus Dr.	e/o Bridge Rd.	19,528	19,009	19,128	Increment	119	1%	1%	-100%	1%	119	19,600
895	Campus Dr.	w/o Berkeley Av.	19,528	15,254	15,364	Increment	110	1%	1%	-100%	1%	110	19,600
896	Campus Dr.	e/o Berkeley Av.	19,528	12,738	12,827	Increment	89	0%	0%	-100%	0%	89	19,600
897	Campus Dr.	w/o California Av.	19,528	13,536	13,619	Increment	83	0%	0%	-100%	0%	83	19,600
898	Campus Dr.	b/w California and Culver	16,759	11,682	11,796	Increment	114	1%	1%	-100%	1%	114	16,900
899	Campus Dr.	e/o Culver Dr.	15,386	20,242	20,523	Ratio	214	1%	1%	-100%	1%	214	15,600
900	Campus Dr.	w/o Turtle Rock Dr.	15,386	17,813	18,121	Ratio	266	2%	2%	-100%	2%	266	15,700
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,823	4,502	4,496	Increment	-6	0%	0%	-100%	0%	0	6,800
902	Turtle Rock Dr.	e/o Ridgeline Dr.	8,550	8,465	8,488	Increment	23	0%	0%	-100%	0%	23	8,600
903	Turtle Rock Dr.	e/o Sunnyhill	8,550	3,354	3,376	Increment	22	0%	0%	-100%	0%	22	8,600
904	Turtle Rock Dr.	w/o Sunnyhill	3,704	2,954	2,963	Increment	9	0%	0%	-100%	0%	9	3,700
1019	University Dr.	w/o Ridgeline Dr.	32,062	27,185	27,100	Increment	-85	0%	0%	-100%	0%	0	32,100
1241	Ridgeline Dr.	s/o Turtle Rock Dr.	11,538	1,489	1,493	Increment	4	0%	0%	-100%	0%	4	11,500
1516	University Dr.	b/w MacArthur Blvd. NB and	27,344	24,973	25,032	Increment	59	0%	0%	-100%	0%	59	27,400
1560	Alton Pkwy.	w/o Creek Rd.	22,887	31,379	31,436	Ratio	42	0%	0%	-100%	0%	42	22,900
1571	University Dr.	e/o SR-73 SB Ramps		18,829	18,866	Increment	37	0%	0%	-100%	0%	0	18,900
1715	Alton Pkwy.	w/o Lake Rd.	22,887	32,449	32,507	Ratio	41	0%	0%	-100%	0%	41	22,900
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	31,416	Ratio	32	0%	0%	-100%	0%	32	20,900
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	192,022	26,831	26,746	Increment	-85	0%	0%	-100%	0%	0	192,000
2281	Culver Dr.	n/o Campus Dr.	36,147	32,386	32,353	Increment	-33	0%	0%	-100%	0%	0	36,100
2577	Ridgeline	s/o Concordia	11,538	10,173	10,184	Increment	11	0%	0%	-100%	0%	11	11,500
2578	Turtlerock	w/o Concordia	6,823	9,824	10,146	Ratio	224	3%	3%	-100%	3%	224	7,000
2580	Turtlerock	e/o Concordia	8,363	8,453	8,447	Ratio	-6	0%	0%	-100%	0%	0	8,400
2581	Sunnyhill	n/o Shady Canyon	6,103	2,465	0	Increment	-2,465	-40%	-40%	-100%	-40%	-2,465	3,600
2582	Shady Canyon	w/o Sunnyhill	7,810	3,871	3,877	Increment	6	0%	0%	-100%	0%	6	7,800
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,776	Increment	0	0%	0%	-100%	0%	0	2,000

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 10/23/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	19,024	Increment	700	4%	4%	-100%	4%	700	19,600
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	60,668	Ratio	1,733	3%	3%	-100%	3%	1,733	55,600
186	University Dr.	n/o Campus Dr.	20,635	23,625	25,910	Ratio	1,996	10%	10%	-100%	10%	1,996	22,600
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	31,375	Ratio	2,339	8%	8%	-100%	8%	2,339	30,200
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	29,714	Increment	2,228	8%	8%	-100%	8%	2,228	30,100
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	35,244	Ratio	2,222	8%	8%	-100%	8%	2,222	30,100
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	48,899	Ratio	1,971	5%	5%	-100%	5%	1,971	45,700
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	55,120	Ratio	1,152	2%	2%	-100%	2%	1,152	49,900
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	58,562	Ratio	1,069	2%	2%	-100%	2%	1,069	53,400
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	66,671	Ratio	2,515	5%	5%	-100%	5%	2,515	55,100
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	65,687	Ratio	2,524	5%	5%	-100%	5%	2,524	55,100
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	51,908	Ratio	850	2%	2%	-100%	2%	850	39,600
226	Culver Dr.	n/o University Dr.	35,332	44,755	45,721	Ratio	763	2%	2%	-100%	2%	763	36,100
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	49,191	Ratio	2,018	5%	5%	-100%	5%	2,018	46,600
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	35,831	Increment	1,130	3%	3%	-100%	3%	1,130	36,700
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	22,456	Increment	1,111	5%	5%	-100%	5%	1,111	23,000
230	Culver Dr.	n/o Anteater	21,928	20,787	21,860	Increment	1,073	5%	5%	-100%	5%	1,073	23,000
232	Culver Dr.	s/o Anteater	25,668	30,577	32,042	Ratio	1,230	5%	5%	-100%	5%	1,230	26,900
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	27,426	Ratio	762	4%	4%	-100%	4%	762	19,700
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,328	Ratio	199	3%	3%	-100%	3%	199	6,500
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,381	Increment	82	1%	1%	-100%	1%	82	6,400
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,189	Ratio	310	3%	3%	-100%	3%	310	11,500
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,180	Ratio	-64	-1%	0%	-100%	0%	0	4,400
277	Yale Av.	s/o Michelson Dr.	1,044	510	575	Increment	65	6%	6%	-100%	6%	65	1,100
278	Yale Av.	n/o University Dr.	1,044	683	781	Increment	98	9%	9%	-100%	9%	98	1,100

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 10/23/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,201	Ratio	-252	-2%	0%	-100%	0%	0	12,100
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	8,058	Increment	2	0%	0%	-100%	0%	2	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,174	Ratio	304	5%	5%	-100%	5%	304	7,000
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,114	Ratio	53	1%	1%	-100%	1%	53	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	1,887	Increment	75	1%	1%	-100%	1%	75	5,700
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	56,220	Ratio	8,688	21%	21%	-100%	21%	8,688	50,000
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	60,149	Ratio	8,055	19%	19%	-100%	19%	8,055	49,400
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,614	Increment	1,900	29%	29%	-100%	29%	1,900	8,300
302	Michelson Dr.	s/o University Dr.		1,288	1,279	Increment	-9	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	52,313	Increment	5,808	12%	12%	-100%	12%	5,808	53,000
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	37,585	Ratio	2,272	10%	10%	-100%	10%	2,272	25,300
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	36,935	Ratio	2,354	10%	10%	-100%	10%	2,354	25,300
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	35,494	Ratio	2,436	12%	12%	-100%	12%	2,436	23,400
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	35,425	Ratio	2,467	12%	12%	-100%	12%	2,467	23,400
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	42,481	Ratio	2,075	8%	8%	-100%	8%	2,075	29,500
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	42,440	Ratio	2,198	8%	8%	-100%	8%	2,198	29,600
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	55,342	Ratio	8,286	20%	20%	-100%	20%	8,286	49,600
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,319	Ratio	307	2%	2%	-100%	2%	307	14,200
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	16,808	Ratio	1,184	14%	14%	-100%	14%	1,184	9,600
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	11,704	Ratio	2,004	24%	24%	-100%	24%	2,004	10,400
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	11,979	Ratio	1,667	26%	26%	-100%	26%	1,667	8,100
854	University Dr.	w/o Michelson Dr.	41,502	40,987	44,846	Increment	3,859	9%	9%	-100%	9%	3,859	45,400
880	University Dr.	w/o Harvard Av.	20,635	23,329	25,665	Ratio	2,066	10%	10%	-100%	10%	2,066	22,700
881	University Dr.	e/o Harvard Av.	20,344	24,785	27,781	Ratio	2,459	12%	12%	-100%	12%	2,459	22,800
882	University Dr.	w/o Culver Dr.	20,344	25,319	28,240	Ratio	2,347	12%	12%	-100%	12%	2,347	22,700
883	University Dr.	e/o Culver Dr.	30,729	27,497	31,637	Increment	4,140	13%	13%	-100%	13%	4,140	34,900
884	University Dr.	w/o Yale Av.	29,548	27,733	31,955	Increment	4,222	14%	14%	-100%	14%	4,222	33,800
885	University Dr.	e/o Yale Av.	29,435	27,185	31,321	Increment	4,136	14%	14%	-100%	14%	4,136	33,600

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 10/23/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	42,714	Increment	3,983	10%	10%	-100%	10%	3,983	45,500
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	25,795	Ratio	527	2%	2%	-100%	2%	527	23,100
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	19,171	Increment	162	1%	1%	-100%	1%	162	22,700
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	15,728	Increment	474	2%	2%	-100%	2%	474	23,100
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	12,985	Increment	247	1%	1%	-100%	1%	247	19,000
897	Campus Dr.	w/o California Av.	18,775	13,536	13,866	Increment	330	2%	2%	-100%	2%	330	19,100
898	Campus Dr.	b/w California and Culver	18,775	11,682	11,488	Increment	-194	-1%	0%	-100%	0%	0	18,800
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	20,626	Ratio	331	2%	2%	-100%	2%	331	17,800
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,252	Ratio	430	2%	2%	-100%	2%	430	17,900
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,772	Increment	270	4%	4%	-100%	4%	270	7,000
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,459	Ratio	-5	0%	0%	-100%	0%	0	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,406	Increment	52	1%	1%	-100%	1%	52	7,100
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,960	Increment	6	0%	0%	-100%	0%	6	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	31,321	Increment	4,136	14%	14%	-100%	14%	4,136	33,600
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,489	Increment	0	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	26,918	Increment	1,945	0%	0%	-100%	0%	0	26,900
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	35,145	Ratio	2,513	12%	12%	-100%	12%	2,513	23,400
1571	University Dr.	e/o SR-73 SB Ramps		18,829	20,402	Increment	1,573	0%	0%	-100%	0%	0	20,400
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	36,048	Ratio	2,540	11%	11%	-100%	11%	2,540	25,400
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	35,140	Ratio	2,512	12%	12%	-100%	12%	2,512	23,400
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	27,903	Ratio	755	4%	4%	-100%	4%	755	19,600
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	33,510	Increment	1,124	3%	3%	-100%	3%	1,124	36,700
2577	Ridgeline	s/o Concordia	11,108	10,173	10,133	Increment	-40	0%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,383	Ratio	388	6%	6%	-100%	6%	388	7,200
2580	Turtlerock	e/o Concordia	6,823	8,453	8,742	Ratio	233	3%	3%	-100%	3%	233	7,100
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	0	Increment	-2,465	-41%	-41%	-100%	-41%	-2,465	3,500
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,897	Increment	26	0%	0%	-100%	0%	26	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,764	Increment	-12	-1%	0%	-100%	0%	0	2,000

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Aprvd WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/5/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	19,040	Increment	716	4%	4%	-100%	4%	716	19,600
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	60,640	Ratio	1,707	3%	3%	-100%	3%	1,707	55,600
186	University Dr.	n/o Campus Dr.	20,635	23,625	25,901	Ratio	1,988	10%	10%	-100%	10%	1,988	22,600
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	31,396	Ratio	2,360	8%	8%	-100%	8%	2,360	30,200
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	29,695	Increment	2,209	8%	8%	-100%	8%	2,209	30,000
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	35,263	Ratio	2,238	8%	8%	-100%	8%	2,238	30,100
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	48,859	Ratio	1,934	4%	4%	-100%	4%	1,934	45,600
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	55,076	Ratio	1,113	2%	2%	-100%	2%	1,113	49,900
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	58,517	Ratio	1,028	2%	2%	-100%	2%	1,028	53,400
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	66,809	Ratio	2,629	5%	5%	-100%	5%	2,629	55,200
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	65,828	Ratio	2,642	5%	5%	-100%	5%	2,642	55,200
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	51,985	Ratio	908	2%	2%	-100%	2%	908	39,600
226	Culver Dr.	n/o University Dr.	35,332	44,755	45,778	Ratio	808	2%	2%	-100%	2%	808	36,100
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	49,142	Ratio	1,972	4%	4%	-100%	4%	1,972	46,600
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	35,752	Increment	1,051	3%	3%	-100%	3%	1,051	36,600
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	22,480	Increment	1,135	5%	5%	-100%	5%	1,135	23,100
230	Culver Dr.	n/o Anteater	21,928	20,787	21,889	Increment	1,102	5%	5%	-100%	5%	1,102	23,000
232	Culver Dr.	s/o Anteater	25,668	30,577	32,081	Ratio	1,263	5%	5%	-100%	5%	1,263	26,900
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	27,549	Ratio	850	4%	4%	-100%	4%	850	19,700
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,314	Ratio	187	3%	3%	-100%	3%	187	6,500
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,379	Increment	80	1%	1%	-100%	1%	80	6,400
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,168	Ratio	295	3%	3%	-100%	3%	295	11,500
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,191	Ratio	-60	-1%	0%	-100%	0%	0	4,400
277	Yale Av.	s/o Michelson Dr.	1,044	510	572	Increment	62	6%	6%	-100%	6%	62	1,100
278	Yale Av.	n/o University Dr.	1,044	683	779	Increment	96	9%	9%	-100%	9%	96	1,100

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Aprvd WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/5/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,800	Ratio	248	2%	2%	-100%	2%	248	12,300
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	8,075	Increment	19	0%	0%	-100%	0%	19	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,316	Ratio	394	6%	6%	-100%	6%	394	7,100
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,112	Ratio	52	1%	1%	-100%	1%	52	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	1,884	Increment	72	1%	1%	-100%	1%	72	5,700
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	56,256	Ratio	8,720	21%	21%	-100%	21%	8,720	50,000
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	60,177	Ratio	8,078	20%	20%	-100%	20%	8,078	49,400
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,541	Increment	1,827	28%	28%	-100%	28%	1,827	8,300
302	Michelson Dr.	s/o University Dr.		1,288	1,279	Increment	-9	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	52,581	Increment	6,076	13%	13%	-100%	13%	6,076	53,200
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	37,577	Ratio	2,267	10%	10%	-100%	10%	2,267	25,300
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	36,930	Ratio	2,351	10%	10%	-100%	10%	2,351	25,200
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	35,484	Ratio	2,430	12%	12%	-100%	12%	2,430	23,400
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	35,415	Ratio	2,460	12%	12%	-100%	12%	2,460	23,300
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	42,446	Ratio	2,050	7%	7%	-100%	7%	2,050	29,500
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	42,402	Ratio	2,172	8%	8%	-100%	8%	2,172	29,600
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	55,562	Ratio	8,483	21%	21%	-100%	21%	8,483	49,800
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,306	Ratio	295	2%	2%	-100%	2%	295	14,200
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	16,876	Ratio	1,222	15%	15%	-100%	15%	1,222	9,600
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	11,799	Ratio	2,088	25%	25%	-100%	25%	2,088	10,500
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	12,078	Ratio	1,734	27%	27%	-100%	27%	1,734	8,200
854	University Dr.	w/o Michelson Dr.	41,502	40,987	45,196	Increment	4,209	10%	10%	-100%	10%	4,209	45,700
880	University Dr.	w/o Harvard Av.	20,635	23,329	25,654	Ratio	2,057	10%	10%	-100%	10%	2,057	22,700
881	University Dr.	e/o Harvard Av.	20,344	24,785	27,803	Ratio	2,477	12%	12%	-100%	12%	2,477	22,800
882	University Dr.	w/o Culver Dr.	20,344	25,319	28,257	Ratio	2,361	12%	12%	-100%	12%	2,361	22,700
883	University Dr.	e/o Culver Dr.	30,729	27,497	31,551	Increment	4,054	13%	13%	-100%	13%	4,054	34,800
884	University Dr.	w/o Yale Av.	29,548	27,733	31,860	Increment	4,127	14%	14%	-100%	14%	4,127	33,700
885	University Dr.	e/o Yale Av.	29,435	27,185	31,233	Increment	4,048	14%	14%	-100%	14%	4,048	33,500

Scenario: *Project:* ITAM 12-4
Existing Model RunID: 2012 *JobNumber:* CUI1301
Future Model RunID: 2017 *Analyst:* NV
Existing Validation Year: 2012 *Date:* 11/5/2015
Future Analysis Year: 2017 Aprvd WP

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	43,058	Increment	4,327	10%	10%	-100%	10%	4,327	45,800
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	25,846	Ratio	573	3%	3%	-100%	3%	573	23,200
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	19,203	Increment	194	1%	1%	-100%	1%	194	22,800
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	15,767	Increment	513	2%	2%	-100%	2%	513	23,100
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	12,991	Increment	253	1%	1%	-100%	1%	253	19,000
897	Campus Dr.	w/o California Av.	18,775	13,536	13,880	Increment	344	2%	2%	-100%	2%	344	19,100
898	Campus Dr.	b/w California and Culver	18,775	11,682	11,529	Increment	-153	-1%	0%	-100%	0%	0	18,800
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	20,734	Ratio	424	2%	2%	-100%	2%	424	17,900
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,371	Ratio	546	3%	3%	-100%	3%	546	18,000
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,776	Increment	274	4%	4%	-100%	4%	274	7,000
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,461	Ratio	-3	0%	0%	-100%	0%	0	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,408	Increment	54	1%	1%	-100%	1%	54	7,100
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,959	Increment	5	0%	0%	-100%	0%	5	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	31,233	Increment	4,048	14%	14%	-100%	14%	4,048	33,500
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,488	Increment	-1	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	26,851	Increment	1,878	0%	0%	-100%	0%	0	26,900
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	35,133	Ratio	2,505	12%	12%	-100%	12%	2,505	23,400
1571	University Dr.	e/o SR-73 SB Ramps		18,829	20,338	Increment	1,509	0%	0%	-100%	0%	0	20,300
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	36,050	Ratio	2,541	11%	11%	-100%	11%	2,541	25,400
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	35,125	Ratio	2,502	12%	12%	-100%	12%	2,502	23,400
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	28,028	Ratio	843	4%	4%	-100%	4%	843	19,700
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	33,439	Increment	1,053	3%	3%	-100%	3%	1,053	36,600
2577	Ridgeline	s/o Concordia	11,108	10,173	10,163	Increment	-10	0%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,540	Ratio	497	7%	7%	-100%	7%	497	7,300
2580	Turtlerock	e/o Concordia	6,823	8,453	8,753	Ratio	242	4%	4%	-100%	4%	242	7,100
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	0	Increment	-2,465	-41%	-41%	-100%	-41%	-2,465	3,500
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,890	Increment	19	0%	0%	-100%	0%	19	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,762	Increment	-14	-1%	0%	-100%	0%	0	2,000

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Pend NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 10/20/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	19,038	Increment	714	4%	4%	-100%	4%	714	19,600
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	60,774	Ratio	1,830	3%	3%	-100%	3%	1,830	55,700
186	University Dr.	n/o Campus Dr.	20,635	23,625	26,089	Ratio	2,152	10%	10%	-100%	10%	2,152	22,800
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	31,633	Ratio	2,587	9%	9%	-100%	9%	2,587	30,400
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	29,924	Increment	2,438	9%	9%	-100%	9%	2,438	30,300
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	35,404	Ratio	2,358	8%	8%	-100%	8%	2,358	30,200
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	48,980	Ratio	2,047	5%	5%	-100%	5%	2,047	45,700
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	55,185	Ratio	1,211	2%	2%	-100%	2%	1,211	50,000
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	58,649	Ratio	1,148	2%	2%	-100%	2%	1,148	53,500
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	66,797	Ratio	2,619	5%	5%	-100%	5%	2,619	55,200
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	65,805	Ratio	2,623	5%	5%	-100%	5%	2,623	55,200
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	51,984	Ratio	908	2%	2%	-100%	2%	908	39,600
226	Culver Dr.	n/o University Dr.	35,332	44,755	45,778	Ratio	808	2%	2%	-100%	2%	808	36,100
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	49,192	Ratio	2,019	5%	5%	-100%	5%	2,019	46,600
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	35,788	Increment	1,087	3%	3%	-100%	3%	1,087	36,600
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	22,490	Increment	1,145	5%	5%	-100%	5%	1,145	23,100
230	Culver Dr.	n/o Anteater	21,928	20,787	21,885	Increment	1,098	5%	5%	-100%	5%	1,098	23,000
232	Culver Dr.	s/o Anteater	25,668	30,577	32,054	Ratio	1,240	5%	5%	-100%	5%	1,240	26,900
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	27,571	Ratio	866	5%	5%	-100%	5%	866	19,800
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,418	Ratio	280	4%	4%	-100%	4%	280	6,600
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,457	Increment	158	2%	2%	-100%	2%	158	6,500
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,235	Ratio	342	3%	3%	-100%	3%	342	11,600
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,203	Ratio	-56	-1%	0%	-100%	0%	0	4,400
277	Yale Av.	s/o Michelson Dr.	1,044	510	579	Increment	69	7%	7%	-100%	7%	69	1,100
278	Yale Av.	n/o University Dr.	1,044	683	778	Increment	95	9%	9%	-100%	9%	95	1,100

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Pend NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 10/20/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,214	Ratio	-241	-2%	0%	-100%	0%	0	12,100
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	8,074	Increment	18	0%	0%	-100%	0%	18	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,157	Ratio	293	4%	4%	-100%	4%	293	7,000
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,105	Ratio	48	1%	1%	-100%	1%	48	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	1,892	Increment	80	1%	1%	-100%	1%	80	5,700
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	56,220	Ratio	8,688	21%	21%	-100%	21%	8,688	50,000
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	60,121	Ratio	8,032	19%	19%	-100%	19%	8,032	49,400
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,702	Increment	1,988	31%	31%	-100%	31%	1,988	8,400
302	Michelson Dr.	s/o University Dr.		1,288	1,292	Increment	4	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	52,409	Increment	5,904	13%	13%	-100%	13%	5,904	53,100
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	38,007	Ratio	2,556	11%	11%	-100%	11%	2,556	25,600
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	37,249	Ratio	2,569	11%	11%	-100%	11%	2,569	25,500
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	35,783	Ratio	2,627	13%	13%	-100%	13%	2,627	23,600
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	35,713	Ratio	2,657	13%	13%	-100%	13%	2,657	23,500
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	42,795	Ratio	2,293	8%	8%	-100%	8%	2,293	29,700
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	42,753	Ratio	2,417	9%	9%	-100%	9%	2,417	29,800
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	55,378	Ratio	8,318	20%	20%	-100%	20%	8,318	49,600
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,299	Ratio	289	2%	2%	-100%	2%	289	14,200
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	16,817	Ratio	1,189	14%	14%	-100%	14%	1,189	9,600
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	11,754	Ratio	2,048	24%	24%	-100%	24%	2,048	10,400
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	12,032	Ratio	1,703	26%	26%	-100%	26%	1,703	8,100
854	University Dr.	w/o Michelson Dr.	41,502	40,987	44,865	Increment	3,878	9%	9%	-100%	9%	3,878	45,400
880	University Dr.	w/o Harvard Av.	20,635	23,329	25,844	Ratio	2,225	11%	11%	-100%	11%	2,225	22,900
881	University Dr.	e/o Harvard Av.	20,344	24,785	27,840	Ratio	2,508	12%	12%	-100%	12%	2,508	22,900
882	University Dr.	w/o Culver Dr.	20,344	25,319	28,291	Ratio	2,388	12%	12%	-100%	12%	2,388	22,700
883	University Dr.	e/o Culver Dr.	30,729	27,497	31,622	Increment	4,125	13%	13%	-100%	13%	4,125	34,900
884	University Dr.	w/o Yale Av.	29,548	27,733	31,945	Increment	4,212	14%	14%	-100%	14%	4,212	33,800
885	University Dr.	e/o Yale Av.	29,435	27,185	31,313	Increment	4,128	14%	14%	-100%	14%	4,128	33,600

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Pend NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 10/20/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	42,733	Increment	4,002	10%	10%	-100%	10%	4,002	45,500
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	25,814	Ratio	544	2%	2%	-100%	2%	544	23,100
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	19,150	Increment	141	1%	1%	-100%	1%	141	22,700
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	15,684	Increment	430	2%	2%	-100%	2%	430	23,000
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	12,809	Increment	71	0%	0%	-100%	0%	71	18,800
897	Campus Dr.	w/o California Av.	18,775	13,536	13,702	Increment	166	1%	1%	-100%	1%	166	18,900
898	Campus Dr.	b/w California and Culver	18,775	11,682	11,297	Increment	-385	-2%	0%	-100%	0%	0	18,800
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	20,585	Ratio	295	2%	2%	-100%	2%	295	17,700
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,224	Ratio	402	2%	2%	-100%	2%	402	17,800
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,772	Increment	270	4%	4%	-100%	4%	270	7,000
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,474	Ratio	7	0%	0%	-100%	0%	7	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,426	Increment	72	1%	1%	-100%	1%	72	7,100
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,977	Increment	23	1%	1%	-100%	1%	23	4,000
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	31,313	Increment	4,128	14%	14%	-100%	14%	4,128	33,600
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,485	Increment	-4	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	26,953	Increment	1,980	0%	0%	-100%	0%	0	27,000
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	35,432	Ratio	2,704	13%	13%	-100%	13%	2,704	23,600
1571	University Dr.	e/o SR-73 SB Ramps		18,829	20,332	Increment	1,503	0%	0%	-100%	0%	0	20,300
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	36,352	Ratio	2,754	12%	12%	-100%	12%	2,754	25,700
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	35,404	Ratio	2,687	13%	13%	-100%	13%	2,687	23,600
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	28,051	Ratio	859	5%	5%	-100%	5%	859	19,800
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	33,464	Increment	1,078	3%	3%	-100%	3%	1,078	36,600
2577	Ridgeline	s/o Concordia	11,108	10,173	10,150	Increment	-23	0%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,371	Ratio	380	6%	6%	-100%	6%	380	7,200
2580	Turtlerock	e/o Concordia	6,823	8,453	8,729	Ratio	223	3%	3%	-100%	3%	223	7,000
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	0	Increment	-2,465	-41%	-41%	-100%	-41%	-2,465	3,500
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,898	Increment	27	0%	0%	-100%	0%	27	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,760	Increment	-16	-1%	0%	-100%	0%	0	2,000

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/6/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	19,078	Increment	754	4%	4%	-100%	4%	754	19,600
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	60,707	Ratio	1,769	3%	3%	-100%	3%	1,769	55,700
186	University Dr.	n/o Campus Dr.	20,635	23,625	26,084	Ratio	2,148	10%	10%	-100%	10%	2,148	22,800
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	31,553	Ratio	2,511	9%	9%	-100%	9%	2,511	30,400
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	29,830	Increment	2,344	8%	8%	-100%	8%	2,344	30,200
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	35,326	Ratio	2,292	8%	8%	-100%	8%	2,292	30,100
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	48,963	Ratio	2,031	5%	5%	-100%	5%	2,031	45,700
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	55,153	Ratio	1,182	2%	2%	-100%	2%	1,182	49,900
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	58,616	Ratio	1,118	2%	2%	-100%	2%	1,118	53,400
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	66,868	Ratio	2,678	5%	5%	-100%	5%	2,678	55,300
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	65,884	Ratio	2,689	5%	5%	-100%	5%	2,689	55,300
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	52,038	Ratio	949	2%	2%	-100%	2%	949	39,700
226	Culver Dr.	n/o University Dr.	35,332	44,755	45,819	Ratio	840	2%	2%	-100%	2%	840	36,200
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	49,128	Ratio	1,959	4%	4%	-100%	4%	1,959	46,600
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	35,730	Increment	1,029	3%	3%	-100%	3%	1,029	36,600
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	22,494	Increment	1,149	5%	5%	-100%	5%	1,149	23,100
230	Culver Dr.	n/o Anteater	21,928	20,787	21,922	Increment	1,135	5%	5%	-100%	5%	1,135	23,100
232	Culver Dr.	s/o Anteater	25,668	30,577	32,096	Ratio	1,275	5%	5%	-100%	5%	1,275	26,900
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	27,516	Ratio	826	4%	4%	-100%	4%	826	19,700
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,414	Ratio	276	4%	4%	-100%	4%	276	6,600
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,444	Increment	145	2%	2%	-100%	2%	145	6,500
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,229	Ratio	338	3%	3%	-100%	3%	338	11,600
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,190	Ratio	-61	-1%	0%	-100%	0%	0	4,400
277	Yale Av.	s/o Michelson Dr.	1,044	510	584	Increment	74	7%	7%	-100%	7%	74	1,100
278	Yale Av.	n/o University Dr.	1,044	683	784	Increment	101	10%	10%	-100%	10%	101	1,100

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/6/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,804	Ratio	251	2%	2%	-100%	2%	251	12,400
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	8,096	Increment	40	0%	0%	-100%	0%	40	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,309	Ratio	389	6%	6%	-100%	6%	389	7,100
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,095	Ratio	43	1%	1%	-100%	1%	43	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	1,893	Increment	81	1%	1%	-100%	1%	81	5,700
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	56,283	Ratio	8,744	21%	21%	-100%	21%	8,744	50,100
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	60,208	Ratio	8,103	20%	20%	-100%	20%	8,103	49,400
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,638	Increment	1,924	30%	30%	-100%	30%	1,924	8,400
302	Michelson Dr.	s/o University Dr.		1,288	1,286	Increment	-2	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	52,716	Increment	6,211	13%	13%	-100%	13%	6,211	53,400
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	38,024	Ratio	2,568	11%	11%	-100%	11%	2,568	25,600
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	37,271	Ratio	2,584	11%	11%	-100%	11%	2,584	25,500
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	35,814	Ratio	2,647	13%	13%	-100%	13%	2,647	23,600
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	35,744	Ratio	2,677	13%	13%	-100%	13%	2,677	23,600
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	42,801	Ratio	2,297	8%	8%	-100%	8%	2,297	29,700
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	42,754	Ratio	2,418	9%	9%	-100%	9%	2,418	29,800
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	55,677	Ratio	8,586	21%	21%	-100%	21%	8,586	49,900
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,294	Ratio	285	2%	2%	-100%	2%	285	14,200
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	16,861	Ratio	1,214	14%	14%	-100%	14%	1,214	9,600
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	11,813	Ratio	2,100	25%	25%	-100%	25%	2,100	10,500
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	12,099	Ratio	1,748	27%	27%	-100%	27%	1,748	8,200
854	University Dr.	w/o Michelson Dr.	41,502	40,987	45,242	Increment	4,255	10%	10%	-100%	10%	4,255	45,800
880	University Dr.	w/o Harvard Av.	20,635	23,329	25,842	Ratio	2,223	11%	11%	-100%	11%	2,223	22,900
881	University Dr.	e/o Harvard Av.	20,344	24,785	27,851	Ratio	2,517	12%	12%	-100%	12%	2,517	22,900
882	University Dr.	w/o Culver Dr.	20,344	25,319	28,302	Ratio	2,397	12%	12%	-100%	12%	2,397	22,700
883	University Dr.	e/o Culver Dr.	30,729	27,497	31,541	Increment	4,044	13%	13%	-100%	13%	4,044	34,800
884	University Dr.	w/o Yale Av.	29,548	27,733	31,868	Increment	4,135	14%	14%	-100%	14%	4,135	33,700
885	University Dr.	e/o Yale Av.	29,435	27,185	31,230	Increment	4,045	14%	14%	-100%	14%	4,045	33,500

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2017
Existing Validation Year: 2012
Future Analysis Year: 2017 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/6/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	43,108	Increment	4,377	11%	11%	-100%	11%	4,377	45,900
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	25,807	Ratio	538	2%	2%	-100%	2%	538	23,100
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	19,155	Increment	146	1%	1%	-100%	1%	146	22,700
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	15,703	Increment	449	2%	2%	-100%	2%	449	23,000
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	12,890	Increment	152	1%	1%	-100%	1%	152	18,900
897	Campus Dr.	w/o California Av.	18,775	13,536	13,795	Increment	259	1%	1%	-100%	1%	259	19,000
898	Campus Dr.	b/w California and Culver	18,775	11,682	11,410	Increment	-272	-1%	0%	-100%	0%	0	18,800
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	20,688	Ratio	384	2%	2%	-100%	2%	384	17,800
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,332	Ratio	508	3%	3%	-100%	3%	508	17,900
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,782	Increment	280	4%	4%	-100%	4%	280	7,000
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,459	Ratio	-5	0%	0%	-100%	0%	0	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,416	Increment	62	1%	1%	-100%	1%	62	7,100
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,972	Increment	18	0%	0%	-100%	0%	18	4,000
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	31,230	Increment	4,045	14%	14%	-100%	14%	4,045	33,500
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,490	Increment	1	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	26,812	Increment	1,839	0%	0%	-100%	0%	0	26,800
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	35,460	Ratio	2,723	13%	13%	-100%	13%	2,723	23,700
1571	University Dr.	e/o SR-73 SB Ramps		18,829	20,182	Increment	1,353	0%	0%	-100%	0%	0	20,200
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	36,371	Ratio	2,768	12%	12%	-100%	12%	2,768	25,700
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	35,434	Ratio	2,707	13%	13%	-100%	13%	2,707	23,600
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	27,995	Ratio	820	4%	4%	-100%	4%	820	19,700
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	33,410	Increment	1,024	3%	3%	-100%	3%	1,024	36,600
2577	Ridgeline	s/o Concordia	11,108	10,173	10,180	Increment	7	0%	0%	-100%	0%	7	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,531	Ratio	491	7%	7%	-100%	7%	491	7,300
2580	Turtlerock	e/o Concordia	6,823	8,453	8,739	Ratio	231	3%	3%	-100%	3%	231	7,100
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	0	Increment	-2,465	-41%	-41%	-100%	-41%	-2,465	3,500
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,900	Increment	29	0%	0%	-100%	0%	29	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,760	Increment	-16	-1%	0%	-100%	0%	0	2,000

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,295	Increment	-1,029	-5%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,301	Ratio	5,982	11%	11%	-100%	11%	5,982	59,900
186	University Dr.	n/o Campus Dr.	20,635	23,625	26,423	Ratio	2,444	12%	12%	-100%	12%	2,444	23,100
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	30,818	Ratio	1,804	6%	6%	-100%	6%	1,804	29,600
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	28,665	Increment	1,179	4%	4%	-100%	4%	1,179	29,000
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	42,336	Ratio	8,271	30%	30%	-100%	30%	8,271	36,100
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	52,505	Ratio	5,338	12%	12%	-100%	12%	5,338	49,000
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	57,096	Ratio	2,941	6%	6%	-100%	6%	2,941	51,700
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	61,622	Ratio	3,859	7%	7%	-100%	7%	3,859	56,200
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	71,988	Ratio	6,910	13%	13%	-100%	13%	6,910	59,500
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	71,095	Ratio	7,061	13%	13%	-100%	13%	7,061	59,700
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	57,729	Ratio	5,286	14%	14%	-100%	14%	5,286	44,000
226	Culver Dr.	n/o University Dr.	35,332	44,755	51,262	Ratio	5,137	15%	15%	-100%	15%	5,137	40,500
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	56,716	Ratio	9,153	21%	21%	-100%	21%	9,153	53,800
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	40,236	Increment	5,535	16%	16%	-100%	16%	5,535	41,100
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	25,499	Increment	4,154	19%	19%	-100%	19%	4,154	26,100
230	Culver Dr.	n/o Anteater	21,928	20,787	24,120	Increment	3,333	15%	15%	-100%	15%	3,333	25,300
232	Culver Dr.	s/o Anteater	25,668	30,577	35,993	Ratio	4,546	18%	18%	-100%	18%	4,546	30,200
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	32,883	Ratio	4,672	25%	25%	-100%	25%	4,672	23,600
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,840	Ratio	657	10%	10%	-100%	10%	657	7,000
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,475	Increment	176	3%	3%	-100%	3%	176	6,500
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,634	Ratio	627	6%	6%	-100%	6%	627	11,900
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,525	Ratio	50	1%	1%	-100%	1%	50	4,500
277	Yale Av.	s/o Michelson Dr.	1,044	510	727	Increment	217	21%	21%	-100%	21%	217	1,300
278	Yale Av.	n/o University Dr.	1,044	683	965	Increment	282	27%	27%	-100%	27%	282	1,300

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,007	Ratio	-414	-3%	0%	-100%	0%	0	12,100
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	7,903	Increment	-153	-1%	0%	-100%	0%	0	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	12,006	Ratio	829	12%	12%	-100%	12%	829	7,600
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,290	Ratio	139	4%	4%	-100%	4%	139	4,100
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	60,589	Ratio	12,575	30%	30%	-100%	30%	12,575	53,900
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	65,038	Ratio	12,068	29%	29%	-100%	29%	12,068	53,400
301	Michelson Dr.	n/o University Dr.	6,444	5,714	8,305	Increment	2,591	40%	40%	-100%	40%	2,591	9,000
302	Michelson Dr.	s/o University Dr.		1,288	1,275	Increment	-13	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	60,352	Increment	13,847	29%	29%	-100%	29%	13,847	61,000
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	42,106	Ratio	5,315	23%	23%	-100%	23%	5,315	28,300
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	40,950	Ratio	5,099	22%	22%	-100%	22%	5,099	28,000
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	39,348	Ratio	4,974	24%	24%	-100%	24%	4,974	25,900
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	39,304	Ratio	5,024	24%	24%	-100%	24%	5,024	25,900
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	46,120	Ratio	4,602	17%	17%	-100%	17%	4,602	32,000
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	46,075	Ratio	4,736	17%	17%	-100%	17%	4,736	32,200
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	61,776	Ratio	14,054	34%	34%	-100%	34%	14,054	55,400
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,580	Ratio	534	4%	4%	-100%	4%	534	14,400
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	14,590	Ratio	-77	-1%	0%	-100%	0%	0	8,400
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	9,749	Ratio	270	3%	3%	-100%	3%	270	8,600
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	10,299	Ratio	529	8%	8%	-100%	8%	529	7,000
854	University Dr.	w/o Michelson Dr.	41,502	40,987	51,938	Increment	10,951	26%	26%	-100%	26%	10,951	52,500
880	University Dr.	w/o Harvard Av.	20,635	23,329	26,152	Ratio	2,497	12%	12%	-100%	12%	2,497	23,100
881	University Dr.	e/o Harvard Av.	20,344	24,785	31,695	Ratio	5,672	28%	28%	-100%	28%	5,672	26,000
882	University Dr.	w/o Culver Dr.	20,344	25,319	32,207	Ratio	5,535	27%	27%	-100%	27%	5,535	25,900
883	University Dr.	e/o Culver Dr.	30,729	27,497	37,561	Increment	10,064	33%	33%	-100%	33%	10,064	40,800
884	University Dr.	w/o Yale Av.	29,548	27,733	37,766	Increment	10,033	34%	34%	-100%	34%	10,033	39,600
885	University Dr.	e/o Yale Av.	29,435	27,185	37,055	Increment	9,870	34%	34%	-100%	34%	9,870	39,300

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	49,126	Increment	10,395	25%	25%	-100%	25%	10,395	51,900
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	26,948	Ratio	1,560	7%	7%	-100%	7%	1,560	24,100
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	20,355	Increment	1,346	6%	6%	-100%	6%	1,346	23,900
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	16,993	Increment	1,739	8%	8%	-100%	8%	1,739	24,300
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	14,621	Increment	1,883	10%	10%	-100%	10%	1,883	20,700
897	Campus Dr.	w/o California Av.	18,775	13,536	15,758	Increment	2,222	12%	12%	-100%	12%	2,222	21,000
898	Campus Dr.	b/w California and Culver	18,775	11,682	13,016	Increment	1,334	7%	7%	-100%	7%	1,334	20,100
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	21,645	Ratio	1,209	7%	7%	-100%	7%	1,209	18,600
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	19,163	Ratio	1,321	8%	8%	-100%	8%	1,321	18,800
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	5,438	Increment	936	14%	14%	-100%	14%	936	7,700
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,679	Ratio	177	3%	3%	-100%	3%	177	7,200
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,352	Increment	-2	0%	0%	-100%	0%	0	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,869	Increment	-85	-2%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	37,055	Increment	9,870	34%	34%	-100%	34%	9,870	39,300
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,489	Increment	0	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	30,487	Increment	5,514	0%	0%	-100%	0%	0	30,500
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	38,993	Ratio	5,080	24%	24%	-100%	24%	5,080	26,000
1571	University Dr.	e/o SR-73 SB Ramps		18,829	21,595	Increment	2,766	0%	0%	-100%	0%	0	21,600
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	39,871	Ratio	5,238	23%	23%	-100%	23%	5,238	28,100
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	38,974	Ratio	5,065	24%	24%	-100%	24%	5,065	26,000
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,276	Ratio	4,538	24%	24%	-100%	24%	4,538	23,400
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	9,907	Increment	-266	-2%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	11,225	Ratio	973	14%	14%	-100%	14%	973	7,800
2580	Turtlerock	e/o Concordia	6,823	8,453	9,480	Ratio	829	12%	12%	-100%	12%	829	7,700
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,332	Increment	-133	-2%	0%	-100%	0%	0	6,000
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,781	Increment	-90	-1%	0%	-100%	0%	0	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,958	Increment	182	9%	9%	-100%	9%	182	2,200

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Aprvd WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,344	Increment	-980	-5%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,409	Ratio	6,081	11%	11%	-100%	11%	6,081	60,000
186	University Dr.	n/o Campus Dr.	20,635	23,625	26,359	Ratio	2,388	12%	12%	-100%	12%	2,388	23,000
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	30,798	Ratio	1,784	6%	6%	-100%	6%	1,784	29,600
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	28,670	Increment	1,184	4%	4%	-100%	4%	1,184	29,000
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	42,316	Ratio	8,254	30%	30%	-100%	30%	8,254	36,100
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	52,504	Ratio	5,337	12%	12%	-100%	12%	5,337	49,000
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	57,088	Ratio	2,934	6%	6%	-100%	6%	2,934	51,700
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	61,621	Ratio	3,858	7%	7%	-100%	7%	3,858	56,200
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	72,249	Ratio	7,125	14%	14%	-100%	14%	7,125	59,700
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	71,353	Ratio	7,278	14%	14%	-100%	14%	7,278	59,900
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	57,909	Ratio	5,423	14%	14%	-100%	14%	5,423	44,100
226	Culver Dr.	n/o University Dr.	35,332	44,755	51,454	Ratio	5,289	15%	15%	-100%	15%	5,289	40,600
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	56,791	Ratio	9,224	21%	21%	-100%	21%	9,224	53,800
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	40,207	Increment	5,506	15%	15%	-100%	15%	5,506	41,100
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	25,562	Increment	4,217	19%	19%	-100%	19%	4,217	26,100
230	Culver Dr.	n/o Anteater	21,928	20,787	24,178	Increment	3,391	15%	15%	-100%	15%	3,391	25,300
232	Culver Dr.	s/o Anteater	25,668	30,577	36,075	Ratio	4,615	18%	18%	-100%	18%	4,615	30,300
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	32,990	Ratio	4,749	25%	25%	-100%	25%	4,749	23,600
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,846	Ratio	662	10%	10%	-100%	10%	662	7,000
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,485	Increment	186	3%	3%	-100%	3%	186	6,500
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,654	Ratio	641	6%	6%	-100%	6%	641	11,900
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,503	Ratio	43	1%	1%	-100%	1%	43	4,500
277	Yale Av.	s/o Michelson Dr.	1,044	510	733	Increment	223	21%	21%	-100%	21%	223	1,300
278	Yale Av.	n/o University Dr.	1,044	683	967	Increment	284	27%	27%	-100%	27%	284	1,300

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Aprvd WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	15,026	Ratio	436	4%	4%	-100%	4%	436	12,500
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	7,906	Increment	-150	-1%	0%	-100%	0%	0	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	12,376	Ratio	1,062	16%	16%	-100%	16%	1,062	7,800
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,294	Ratio	141	4%	4%	-100%	4%	141	4,100
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	60,806	Ratio	12,768	31%	31%	-100%	31%	12,768	54,100
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	65,320	Ratio	12,300	30%	30%	-100%	30%	12,300	53,600
301	Michelson Dr.	n/o University Dr.	6,444	5,714	8,236	Increment	2,522	39%	39%	-100%	39%	2,522	9,000
302	Michelson Dr.	s/o University Dr.		1,288	1,275	Increment	-13	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	60,873	Increment	14,368	30%	30%	-100%	30%	14,368	61,500
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	42,101	Ratio	5,311	23%	23%	-100%	23%	5,311	28,300
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	40,970	Ratio	5,113	22%	22%	-100%	22%	5,113	28,000
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	39,367	Ratio	4,987	24%	24%	-100%	24%	4,987	25,900
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	39,306	Ratio	5,025	24%	24%	-100%	24%	5,025	25,900
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	46,116	Ratio	4,599	17%	17%	-100%	17%	4,599	32,000
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	46,062	Ratio	4,727	17%	17%	-100%	17%	4,727	32,200
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	62,164	Ratio	14,402	35%	35%	-100%	35%	14,402	55,700
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,593	Ratio	545	4%	4%	-100%	4%	545	14,500
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	14,704	Ratio	-13	0%	0%	-100%	0%	0	8,400
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	9,881	Ratio	387	5%	5%	-100%	5%	387	8,800
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	10,436	Ratio	622	10%	10%	-100%	10%	622	7,100
854	University Dr.	w/o Michelson Dr.	41,502	40,987	52,525	Increment	11,538	28%	28%	-100%	28%	11,538	53,000
880	University Dr.	w/o Harvard Av.	20,635	23,329	26,088	Ratio	2,440	12%	12%	-100%	12%	2,440	23,100
881	University Dr.	e/o Harvard Av.	20,344	24,785	31,658	Ratio	5,641	28%	28%	-100%	28%	5,641	26,000
882	University Dr.	w/o Culver Dr.	20,344	25,319	32,156	Ratio	5,494	27%	27%	-100%	27%	5,494	25,800
883	University Dr.	e/o Culver Dr.	30,729	27,497	37,401	Increment	9,904	32%	32%	-100%	32%	9,904	40,600
884	University Dr.	w/o Yale Av.	29,548	27,733	37,609	Increment	9,876	33%	33%	-100%	33%	9,876	39,400
885	University Dr.	e/o Yale Av.	29,435	27,185	36,895	Increment	9,710	33%	33%	-100%	33%	9,710	39,100

Scenario: *Project:* ITAM 12-4
Existing Model RunID: 2012 *JobNumber:* CUI1301
Future Model RunID: 2035 *Analyst:* NV
Existing Validation Year: 2012 *Date:* 11/2/2015
Future Analysis Year: 2035 Aprvd WP

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	49,732	Increment	11,001	27%	27%	-100%	27%	11,001	52,500
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	27,050	Ratio	1,651	7%	7%	-100%	7%	1,651	24,200
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	20,467	Increment	1,458	6%	6%	-100%	6%	1,458	24,000
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	17,118	Increment	1,864	8%	8%	-100%	8%	1,864	24,500
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	14,757	Increment	2,019	11%	11%	-100%	11%	2,019	20,800
897	Campus Dr.	w/o California Av.	18,775	13,536	15,902	Increment	2,366	13%	13%	-100%	13%	2,366	21,100
898	Campus Dr.	b/w California and Culver	18,775	11,682	13,116	Increment	1,434	8%	8%	-100%	8%	1,434	20,200
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	21,989	Ratio	1,505	9%	9%	-100%	9%	1,505	18,900
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	19,527	Ratio	1,678	10%	10%	-100%	10%	1,678	19,100
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	5,424	Increment	922	14%	14%	-100%	14%	922	7,700
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,668	Ratio	168	2%	2%	-100%	2%	168	7,200
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,348	Increment	-6	0%	0%	-100%	0%	0	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,861	Increment	-93	-2%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	36,895	Increment	9,710	33%	33%	-100%	33%	9,710	39,100
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,487	Increment	-2	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	30,510	Increment	5,537	0%	0%	-100%	0%	0	30,500
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	39,001	Ratio	5,085	24%	24%	-100%	24%	5,085	26,000
1571	University Dr.	e/o SR-73 SB Ramps		18,829	21,598	Increment	2,769	0%	0%	-100%	0%	0	21,600
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	39,890	Ratio	5,251	23%	23%	-100%	23%	5,251	28,200
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	38,973	Ratio	5,064	24%	24%	-100%	24%	5,064	26,000
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,381	Ratio	4,612	24%	24%	-100%	24%	4,612	23,500
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	9,887	Increment	-286	-3%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	11,598	Ratio	1,232	18%	18%	-100%	18%	1,232	8,100
2580	Turtlerock	e/o Concordia	6,823	8,453	9,466	Ratio	818	12%	12%	-100%	12%	818	7,600
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,334	Increment	-131	-2%	0%	-100%	0%	0	6,000
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,781	Increment	-90	-1%	0%	-100%	0%	0	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,956	Increment	180	9%	9%	-100%	9%	180	2,200

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Pend NP

Project: ITAM 12-4
JobNumber: GAR1501
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,394	Increment	-930	-5%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,358	Ratio	6,034	11%	11%	-100%	11%	6,034	59,900
186	University Dr.	n/o Campus Dr.	20,635	23,625	26,476	Ratio	2,490	12%	12%	-100%	12%	2,490	23,100
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	30,871	Ratio	1,855	7%	7%	-100%	7%	1,855	29,700
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	28,740	Increment	1,254	5%	5%	-100%	5%	1,254	29,100
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	42,421	Ratio	8,344	30%	30%	-100%	30%	8,344	36,200
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	52,675	Ratio	5,497	13%	13%	-100%	13%	5,497	49,200
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	57,133	Ratio	2,975	6%	6%	-100%	6%	2,975	51,700
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	61,651	Ratio	3,885	7%	7%	-100%	7%	3,885	56,200
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	71,870	Ratio	6,812	13%	13%	-100%	13%	6,812	59,400
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	70,969	Ratio	6,956	13%	13%	-100%	13%	6,956	59,500
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	57,610	Ratio	5,195	13%	13%	-100%	13%	5,195	43,900
226	Culver Dr.	n/o University Dr.	35,332	44,755	51,151	Ratio	5,049	14%	14%	-100%	14%	5,049	40,400
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	57,014	Ratio	9,435	21%	21%	-100%	21%	9,435	54,100
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	40,421	Increment	5,720	16%	16%	-100%	16%	5,720	41,300
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	25,581	Increment	4,236	19%	19%	-100%	19%	4,236	26,200
230	Culver Dr.	n/o Anteater	21,928	20,787	24,234	Increment	3,447	16%	16%	-100%	16%	3,447	25,400
232	Culver Dr.	s/o Anteater	25,668	30,577	36,104	Ratio	4,640	18%	18%	-100%	18%	4,640	30,300
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	33,024	Ratio	4,773	25%	25%	-100%	25%	4,773	23,700
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,910	Ratio	719	11%	11%	-100%	11%	719	7,100
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,547	Increment	248	4%	4%	-100%	4%	248	6,600
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,707	Ratio	679	6%	6%	-100%	6%	679	11,900
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,525	Ratio	50	1%	1%	-100%	1%	50	4,500
277	Yale Av.	s/o Michelson Dr.	1,044	510	728	Increment	218	21%	21%	-100%	21%	218	1,300
278	Yale Av.	n/o University Dr.	1,044	683	961	Increment	278	27%	27%	-100%	27%	278	1,300

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Pend NP

Project: ITAM 12-4
JobNumber: GAR1501
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	13,980	Ratio	-436	-4%	0%	-100%	0%	0	12,100
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	7,926	Increment	-130	-1%	0%	-100%	0%	0	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	12,016	Ratio	835	12%	12%	-100%	12%	835	7,600
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,317	Ratio	152	4%	4%	-100%	4%	152	4,100
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	61,167	Ratio	13,089	32%	32%	-100%	32%	13,089	54,400
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	65,776	Ratio	12,674	31%	31%	-100%	31%	12,674	54,000
301	Michelson Dr.	n/o University Dr.	6,444	5,714	8,410	Increment	2,696	42%	42%	-100%	42%	2,696	9,100
302	Michelson Dr.	s/o University Dr.		1,288	1,285	Increment	-3	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	61,028	Increment	14,523	31%	31%	-100%	31%	14,523	61,700
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	42,477	Ratio	5,564	24%	24%	-100%	24%	5,564	28,600
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	41,309	Ratio	5,345	23%	23%	-100%	23%	5,345	28,200
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	39,709	Ratio	5,212	25%	25%	-100%	25%	5,212	26,100
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	39,716	Ratio	5,296	25%	25%	-100%	25%	5,296	26,200
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	46,509	Ratio	4,872	18%	18%	-100%	18%	4,872	32,300
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	46,474	Ratio	5,014	18%	18%	-100%	18%	5,014	32,400
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	62,500	Ratio	14,703	36%	36%	-100%	36%	14,703	56,000
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,634	Ratio	581	4%	4%	-100%	4%	581	14,500
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	14,725	Ratio	-1	0%	0%	-100%	0%	0	8,400
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	9,889	Ratio	395	5%	5%	-100%	5%	395	8,800
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	10,439	Ratio	624	10%	10%	-100%	10%	624	7,100
854	University Dr.	w/o Michelson Dr.	41,502	40,987	52,489	Increment	11,502	28%	28%	-100%	28%	11,502	53,000
880	University Dr.	w/o Harvard Av.	20,635	23,329	26,206	Ratio	2,545	12%	12%	-100%	12%	2,545	23,200
881	University Dr.	e/o Harvard Av.	20,344	24,785	31,842	Ratio	5,793	28%	28%	-100%	28%	5,793	26,100
882	University Dr.	w/o Culver Dr.	20,344	25,319	32,339	Ratio	5,641	28%	28%	-100%	28%	5,641	26,000
883	University Dr.	e/o Culver Dr.	30,729	27,497	38,111	Increment	10,614	35%	35%	-100%	35%	10,614	41,300
884	University Dr.	w/o Yale Av.	29,548	27,733	38,316	Increment	10,583	36%	36%	-100%	36%	10,583	40,100
885	University Dr.	e/o Yale Av.	29,435	27,185	37,603	Increment	10,418	35%	35%	-100%	35%	10,418	39,900

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Pend NP

Project: ITAM 12-4
JobNumber: GAR1501
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	49,649	Increment	10,918	26%	26%	-100%	26%	10,918	52,400
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	27,047	Ratio	1,649	7%	7%	-100%	7%	1,649	24,200
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	20,337	Increment	1,328	6%	6%	-100%	6%	1,328	23,900
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	16,948	Increment	1,694	7%	7%	-100%	7%	1,694	24,300
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	14,618	Increment	1,880	10%	10%	-100%	10%	1,880	20,700
897	Campus Dr.	w/o California Av.	18,775	13,536	15,739	Increment	2,203	12%	12%	-100%	12%	2,203	21,000
898	Campus Dr.	b/w California and Culver	18,775	11,682	12,949	Increment	1,267	7%	7%	-100%	7%	1,267	20,000
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	21,680	Ratio	1,239	7%	7%	-100%	7%	1,239	18,700
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	19,194	Ratio	1,352	8%	8%	-100%	8%	1,352	18,800
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	5,406	Increment	904	13%	13%	-100%	13%	904	7,600
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,658	Ratio	160	2%	2%	-100%	2%	160	7,200
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,333	Increment	-21	0%	0%	-100%	0%	0	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,839	Increment	-115	-3%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	37,603	Increment	10,418	35%	35%	-100%	35%	10,418	39,900
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,490	Increment	1	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	30,457	Increment	5,484	0%	0%	-100%	0%	0	30,500
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	39,348	Ratio	5,317	25%	25%	-100%	25%	5,317	26,300
1571	University Dr.	e/o SR-73 SB Ramps		18,829	21,526	Increment	2,697	0%	0%	-100%	0%	0	21,500
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	40,231	Ratio	5,492	24%	24%	-100%	24%	5,492	28,400
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	39,366	Ratio	5,326	25%	25%	-100%	25%	5,326	26,200
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,400	Ratio	4,625	24%	24%	-100%	24%	4,625	23,500
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	9,890	Increment	-283	-3%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	11,239	Ratio	983	14%	14%	-100%	14%	983	7,800
2580	Turtlerock	e/o Concordia	6,823	8,453	9,480	Ratio	829	12%	12%	-100%	12%	829	7,700
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,342	Increment	-123	-2%	0%	-100%	0%	0	6,000
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,793	Increment	-78	-1%	0%	-100%	0%	0	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,970	Increment	194	10%	10%	-100%	10%	194	2,200

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,392	Increment	-932	-5%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,458	Ratio	6,126	11%	11%	-100%	11%	6,126	60,000
186	University Dr.	n/o Campus Dr.	20,635	23,625	26,491	Ratio	2,503	12%	12%	-100%	12%	2,503	23,100
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	30,945	Ratio	1,926	7%	7%	-100%	7%	1,926	29,800
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	28,774	Increment	1,288	5%	5%	-100%	5%	1,288	29,100
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	42,474	Ratio	8,389	30%	30%	-100%	30%	8,389	36,200
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	52,682	Ratio	5,503	13%	13%	-100%	13%	5,503	49,200
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	57,189	Ratio	3,025	6%	6%	-100%	6%	3,025	51,800
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	61,690	Ratio	3,921	7%	7%	-100%	7%	3,921	56,200
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	72,010	Ratio	6,928	13%	13%	-100%	13%	6,928	59,500
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	71,105	Ratio	7,070	13%	13%	-100%	13%	7,070	59,700
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	57,664	Ratio	5,236	14%	14%	-100%	14%	5,236	43,900
226	Culver Dr.	n/o University Dr.	35,332	44,755	51,201	Ratio	5,089	14%	14%	-100%	14%	5,089	40,400
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	57,070	Ratio	9,488	21%	21%	-100%	21%	9,488	54,100
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	40,394	Increment	5,693	16%	16%	-100%	16%	5,693	41,200
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	25,618	Increment	4,273	19%	19%	-100%	19%	4,273	26,200
230	Culver Dr.	n/o Anteater	21,928	20,787	24,244	Increment	3,457	16%	16%	-100%	16%	3,457	25,400
232	Culver Dr.	s/o Anteater	25,668	30,577	36,108	Ratio	4,643	18%	18%	-100%	18%	4,643	30,300
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	33,021	Ratio	4,771	25%	25%	-100%	25%	4,771	23,700
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	7,921	Ratio	729	11%	11%	-100%	11%	729	7,100
266	W. Yale Lp.	n/o Main St.	6,349	6,299	6,564	Increment	265	4%	4%	-100%	4%	265	6,600
267	W. Yale Lp.	s/o Main St.	11,237	15,755	16,719	Ratio	688	6%	6%	-100%	6%	688	11,900
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,497	Ratio	41	1%	1%	-100%	1%	41	4,500
277	Yale Av.	s/o Michelson Dr.	1,044	510	731	Increment	221	21%	21%	-100%	21%	221	1,300
278	Yale Av.	n/o University Dr.	1,044	683	965	Increment	282	27%	27%	-100%	27%	282	1,300

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,975	Ratio	394	3%	3%	-100%	3%	394	12,500
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	7,914	Increment	-142	-1%	0%	-100%	0%	0	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	12,445	Ratio	1,106	16%	16%	-100%	16%	1,106	7,800
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,296	Ratio	142	4%	4%	-100%	4%	142	4,100
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	61,121	Ratio	13,048	32%	32%	-100%	32%	13,048	54,400
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	65,810	Ratio	12,702	31%	31%	-100%	31%	12,702	54,000
301	Michelson Dr.	n/o University Dr.	6,444	5,714	8,314	Increment	2,600	40%	40%	-100%	40%	2,600	9,000
302	Michelson Dr.	s/o University Dr.		1,288	1,292	Increment	4	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	61,608	Increment	15,103	32%	32%	-100%	32%	15,103	62,300
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	42,452	Ratio	5,548	24%	24%	-100%	24%	5,548	28,600
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	41,291	Ratio	5,332	23%	23%	-100%	23%	5,332	28,200
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	39,712	Ratio	5,214	25%	25%	-100%	25%	5,214	26,100
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	39,702	Ratio	5,287	25%	25%	-100%	25%	5,287	26,200
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	46,461	Ratio	4,839	18%	18%	-100%	18%	4,839	32,300
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	46,419	Ratio	4,976	18%	18%	-100%	18%	4,976	32,400
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	62,715	Ratio	14,896	36%	36%	-100%	36%	14,896	56,200
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	16,642	Ratio	588	4%	4%	-100%	4%	588	14,500
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	14,778	Ratio	30	0%	0%	-100%	0%	30	8,400
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	9,949	Ratio	448	5%	5%	-100%	5%	448	8,800
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	10,505	Ratio	669	10%	10%	-100%	10%	669	7,100
854	University Dr.	w/o Michelson Dr.	41,502	40,987	53,150	Increment	12,163	29%	29%	-100%	29%	12,163	53,700
880	University Dr.	w/o Harvard Av.	20,635	23,329	26,220	Ratio	2,557	12%	12%	-100%	12%	2,557	23,200
881	University Dr.	e/o Harvard Av.	20,344	24,785	31,740	Ratio	5,709	28%	28%	-100%	28%	5,709	26,100
882	University Dr.	w/o Culver Dr.	20,344	25,319	32,240	Ratio	5,561	27%	27%	-100%	27%	5,561	25,900
883	University Dr.	e/o Culver Dr.	30,729	27,497	38,028	Increment	10,531	34%	34%	-100%	34%	10,531	41,300
884	University Dr.	w/o Yale Av.	29,548	27,733	38,233	Increment	10,500	36%	36%	-100%	36%	10,500	40,000
885	University Dr.	e/o Yale Av.	29,435	27,185	37,523	Increment	10,338	35%	35%	-100%	35%	10,338	39,800

Scenario:
Existing Model RunID: 2012
Future Model RunID: 2035
Existing Validation Year: 2012
Future Analysis Year: 2035 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	50,311	Increment	11,580	28%	28%	-100%	28%	11,580	53,100
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	27,165	Ratio	1,754	8%	8%	-100%	8%	1,754	24,300
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	20,484	Increment	1,475	7%	7%	-100%	7%	1,475	24,100
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	17,100	Increment	1,846	8%	8%	-100%	8%	1,846	24,400
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	14,727	Increment	1,989	11%	11%	-100%	11%	1,989	20,800
897	Campus Dr.	w/o California Av.	18,775	13,536	15,860	Increment	2,324	12%	12%	-100%	12%	2,324	21,100
898	Campus Dr.	b/w California and Culver	18,775	11,682	13,082	Increment	1,400	7%	7%	-100%	7%	1,400	20,200
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	22,056	Ratio	1,563	9%	9%	-100%	9%	1,563	19,000
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	19,589	Ratio	1,738	10%	10%	-100%	10%	1,738	19,200
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	5,432	Increment	930	14%	14%	-100%	14%	930	7,700
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,685	Ratio	182	3%	3%	-100%	3%	182	7,200
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,355	Increment	1	0%	0%	-100%	0%	1	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,863	Increment	-91	-2%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	37,523	Increment	10,338	35%	35%	-100%	35%	10,338	39,800
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,492	Increment	3	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	30,511	Increment	5,538	0%	0%	-100%	0%	0	30,500
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	39,359	Ratio	5,324	25%	25%	-100%	25%	5,324	26,300
1571	University Dr.	e/o SR-73 SB Ramps		18,829	21,536	Increment	2,707	0%	0%	-100%	0%	0	21,500
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	40,221	Ratio	5,485	24%	24%	-100%	24%	5,485	28,400
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	39,350	Ratio	5,315	25%	25%	-100%	25%	5,315	26,200
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,399	Ratio	4,625	24%	24%	-100%	24%	4,625	23,500
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	9,874	Increment	-299	-3%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	11,665	Ratio	1,279	19%	19%	-100%	19%	1,279	8,100
2580	Turtlerock	e/o Concordia	6,823	8,453	9,500	Ratio	845	12%	12%	-100%	12%	845	7,700
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,341	Increment	-124	-2%	0%	-100%	0%	0	6,000
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	3,793	Increment	-78	-1%	0%	-100%	0%	0	7,700
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,969	Increment	193	10%	10%	-100%	10%	193	2,200

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,461	Increment	-863	-5%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,293	Ratio	5,974	11%	11%	-100%	11%	5,974	59,900
186	University Dr.	n/o Campus Dr.	20,635	23,625	30,390	Ratio	5,909	29%	29%	-100%	29%	5,909	26,500
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	35,694	Ratio	6,494	23%	23%	-100%	23%	6,494	34,300
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	32,982	Increment	5,496	20%	20%	-100%	20%	5,496	33,300
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	47,170	Ratio	12,394	45%	45%	-100%	45%	12,394	40,200
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	53,682	Ratio	6,437	15%	15%	-100%	15%	6,437	50,100
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	56,875	Ratio	2,741	6%	6%	-100%	6%	2,741	51,500
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	62,088	Ratio	4,284	8%	8%	-100%	8%	4,284	56,600
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	72,168	Ratio	7,059	13%	13%	-100%	13%	7,059	59,600
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	71,228	Ratio	7,173	14%	14%	-100%	14%	7,173	59,800
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	57,075	Ratio	4,787	12%	12%	-100%	12%	4,787	43,500
226	Culver Dr.	n/o University Dr.	35,332	44,755	50,398	Ratio	4,455	13%	13%	-100%	13%	4,455	39,800
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	54,862	Ratio	7,395	17%	17%	-100%	17%	7,395	52,000
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	37,365	Increment	2,664	7%	7%	-100%	7%	2,664	38,200
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	24,326	Increment	2,981	14%	14%	-100%	14%	2,981	24,900
230	Culver Dr.	n/o Anteater	21,928	20,787	22,850	Increment	2,063	9%	9%	-100%	9%	2,063	24,000
232	Culver Dr.	s/o Anteater	25,668	30,577	36,245	Ratio	4,758	19%	19%	-100%	19%	4,758	30,400
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	32,833	Ratio	4,636	25%	25%	-100%	25%	4,636	23,500
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	8,087	Ratio	878	14%	14%	-100%	14%	878	7,200
266	W. Yale Lp.	n/o Main St.	6,349	6,299	7,148	Increment	849	13%	13%	-100%	13%	849	7,200
267	W. Yale Lp.	s/o Main St.	11,237	15,755	15,405	Ratio	-250	-2%	0%	-100%	0%	0	11,200
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,723	Ratio	116	3%	3%	-100%	3%	116	4,600
277	Yale Av.	s/o Michelson Dr.	1,044	510	4,405	Increment	3,895	373%	373%	-100%	373%	3,895	4,900
278	Yale Av.	n/o University Dr.	1,044	683	4,173	Increment	3,490	334%	334%	-100%	334%	3,490	4,500

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,472	Ratio	-26	0%	0%	-100%	0%	0	12,100
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	8,078	Increment	22	0%	0%	-100%	0%	22	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,136	Ratio	280	4%	4%	-100%	4%	280	7,000
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,175	Ratio	82	2%	2%	-100%	2%	82	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	58,991	Ratio	11,153	27%	27%	-100%	27%	11,153	52,500
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	63,397	Ratio	10,721	26%	26%	-100%	26%	10,721	52,000
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,177	Increment	1,463	23%	23%	-100%	23%	1,463	7,900
302	Michelson Dr.	s/o University Dr.		1,288	1,291	Increment	3	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	58,671	Increment	12,166	26%	26%	-100%	26%	12,166	59,300
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	39,463	Ratio	3,536	15%	15%	-100%	15%	3,536	26,600
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	38,054	Ratio	3,119	14%	14%	-100%	14%	3,119	26,000
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	36,602	Ratio	3,166	15%	15%	-100%	15%	3,166	24,100
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	36,617	Ratio	3,253	16%	16%	-100%	16%	3,253	24,100
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	43,363	Ratio	2,687	10%	10%	-100%	10%	2,687	30,100
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	43,270	Ratio	2,778	10%	10%	-100%	10%	2,778	30,200
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	60,374	Ratio	12,797	31%	31%	-100%	31%	12,797	54,100
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	14,812	Ratio	-1,006	-7%	0%	-100%	0%	0	13,900
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	12,848	Ratio	-1,068	-13%	-13%	-100%	-13%	-1,068	7,300
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	8,510	Ratio	-828	-10%	0%	-100%	0%	0	8,400
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	9,788	Ratio	183	3%	3%	-100%	3%	183	6,600
854	University Dr.	w/o Michelson Dr.	41,502	40,987	51,615	Increment	10,628	26%	26%	-100%	26%	10,628	52,100
880	University Dr.	w/o Harvard Av.	20,635	23,329	30,063	Ratio	5,956	29%	29%	-100%	29%	5,956	26,600
881	University Dr.	e/o Harvard Av.	20,344	24,785	35,653	Ratio	8,921	44%	44%	-100%	44%	8,921	29,300
882	University Dr.	w/o Culver Dr.	20,344	25,319	35,979	Ratio	8,565	42%	42%	-100%	42%	8,565	28,900
883	University Dr.	e/o Culver Dr.	30,729	27,497	40,398	Increment	12,901	42%	42%	-100%	42%	12,901	43,600
884	University Dr.	w/o Yale Av.	29,548	27,733	40,692	Increment	12,959	44%	44%	-100%	44%	12,959	42,500
885	University Dr.	e/o Yale Av.	29,435	27,185	36,631	Increment	9,446	32%	32%	-100%	32%	9,446	38,900

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Aprvd NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	48,457	Increment	9,726	23%	23%	-100%	23%	9,726	51,200
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	36,192	Ratio	9,843	44%	44%	-100%	44%	9,843	32,400
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	27,061	Increment	8,052	36%	36%	-100%	36%	8,052	30,600
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	19,588	Increment	4,334	19%	19%	-100%	19%	4,334	26,900
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	17,446	Increment	4,708	25%	25%	-100%	25%	4,708	23,500
897	Campus Dr.	w/o California Av.	18,775	13,536	18,236	Increment	4,700	25%	25%	-100%	25%	4,700	23,500
898	Campus Dr.	b/w California and Culver	18,775	11,682	14,393	Increment	2,711	14%	14%	-100%	14%	2,711	21,500
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	21,016	Ratio	667	4%	4%	-100%	4%	667	18,100
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,429	Ratio	603	3%	3%	-100%	3%	603	18,000
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,817	Increment	315	5%	5%	-100%	5%	315	7,100
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,514	Ratio	41	1%	1%	-100%	1%	41	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,353	Increment	-1	0%	0%	-100%	0%	0	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,931	Increment	-23	-1%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	36,631	Increment	9,446	32%	32%	-100%	32%	9,446	38,900
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,491	Increment	2	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	33,522	Increment	8,549	0%	0%	-100%	0%	0	33,500
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	36,232	Ratio	3,238	15%	15%	-100%	15%	3,238	24,200
1571	University Dr.	e/o SR-73 SB Ramps		18,829	24,232	Increment	5,403	0%	0%	-100%	0%	0	24,200
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	37,173	Ratio	3,334	15%	15%	-100%	15%	3,334	26,200
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	36,344	Ratio	3,313	16%	16%	-100%	16%	3,313	24,200
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,160	Ratio	4,456	24%	24%	-100%	24%	4,456	23,300
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	10,173	Increment	0	0%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,287	Ratio	322	5%	5%	-100%	5%	322	7,100
2580	Turtlerock	e/o Concordia	6,823	8,453	8,789	Ratio	271	4%	4%	-100%	4%	271	7,100
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,530	Increment	65	1%	1%	-100%	1%	65	6,100
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	4,065	Increment	194	3%	3%	-100%	3%	194	7,900
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,975	Increment	199	10%	10%	-100%	10%	199	2,200

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Aprvd WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,498	Increment	-826	-4%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,337	Ratio	6,015	11%	11%	-100%	11%	6,015	59,900
186	University Dr.	n/o Campus Dr.	20,635	23,625	30,305	Ratio	5,835	28%	28%	-100%	28%	5,835	26,500
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	35,631	Ratio	6,433	23%	23%	-100%	23%	6,433	34,300
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	32,946	Increment	5,460	20%	20%	-100%	20%	5,460	33,300
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	47,139	Ratio	12,368	44%	44%	-100%	44%	12,368	40,200
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	53,678	Ratio	6,433	15%	15%	-100%	15%	6,433	50,100
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	56,872	Ratio	2,738	6%	6%	-100%	6%	2,738	51,500
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	62,078	Ratio	4,275	8%	8%	-100%	8%	4,275	56,600
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	72,300	Ratio	7,168	14%	14%	-100%	14%	7,168	59,800
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	71,357	Ratio	7,281	14%	14%	-100%	14%	7,281	59,900
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	57,155	Ratio	4,848	13%	13%	-100%	13%	4,848	43,600
226	Culver Dr.	n/o University Dr.	35,332	44,755	50,480	Ratio	4,520	13%	13%	-100%	13%	4,520	39,900
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	54,882	Ratio	7,414	17%	17%	-100%	17%	7,414	52,000
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	37,356	Increment	2,655	7%	7%	-100%	7%	2,655	38,200
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	24,418	Increment	3,073	14%	14%	-100%	14%	3,073	25,000
230	Culver Dr.	n/o Anteater	21,928	20,787	22,932	Increment	2,145	10%	10%	-100%	10%	2,145	24,100
232	Culver Dr.	s/o Anteater	25,668	30,577	36,314	Ratio	4,816	19%	19%	-100%	19%	4,816	30,500
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	32,846	Ratio	4,646	25%	25%	-100%	25%	4,646	23,500
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	8,117	Ratio	904	14%	14%	-100%	14%	904	7,300
266	W. Yale Lp.	n/o Main St.	6,349	6,299	7,176	Increment	877	14%	14%	-100%	14%	877	7,200
267	W. Yale Lp.	s/o Main St.	11,237	15,755	15,456	Ratio	-213	-2%	0%	-100%	0%	0	11,200
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,742	Ratio	123	3%	3%	-100%	3%	123	4,600
277	Yale Av.	s/o Michelson Dr.	1,044	510	4,454	Increment	3,944	378%	378%	-100%	378%	3,944	5,000
278	Yale Av.	n/o University Dr.	1,044	683	4,200	Increment	3,517	337%	337%	-100%	337%	3,517	4,600

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Aprvd WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	15,526	Ratio	854	7%	7%	-100%	7%	854	13,000
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	8,071	Increment	15	0%	0%	-100%	0%	15	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,496	Ratio	507	8%	8%	-100%	8%	507	7,300
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,166	Ratio	78	2%	2%	-100%	2%	78	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	59,026	Ratio	11,184	27%	27%	-100%	27%	11,184	52,500
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	63,463	Ratio	10,775	26%	26%	-100%	26%	10,775	52,100
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,162	Increment	1,448	22%	22%	-100%	22%	1,448	7,900
302	Michelson Dr.	s/o University Dr.		1,288	1,290	Increment	2	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	59,261	Increment	12,756	27%	27%	-100%	27%	12,756	59,900
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	39,491	Ratio	3,555	15%	15%	-100%	15%	3,555	26,600
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	38,073	Ratio	3,132	14%	14%	-100%	14%	3,132	26,000
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	36,632	Ratio	3,186	15%	15%	-100%	15%	3,186	24,100
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	36,631	Ratio	3,262	16%	16%	-100%	16%	3,262	24,100
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	43,357	Ratio	2,683	10%	10%	-100%	10%	2,683	30,100
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	43,264	Ratio	2,774	10%	10%	-100%	10%	2,774	30,200
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	60,766	Ratio	13,148	32%	32%	-100%	32%	13,148	54,500
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	14,836	Ratio	-985	-7%	0%	-100%	0%	0	13,900
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	12,922	Ratio	-1,026	-12%	-12%	-100%	-12%	-1,026	7,300
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	8,580	Ratio	-766	-9%	0%	-100%	0%	0	8,400
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	9,971	Ratio	307	5%	5%	-100%	5%	307	6,800
854	University Dr.	w/o Michelson Dr.	41,502	40,987	52,178	Increment	11,191	27%	27%	-100%	27%	11,191	52,700
880	University Dr.	w/o Harvard Av.	20,635	23,329	29,971	Ratio	5,875	28%	28%	-100%	28%	5,875	26,500
881	University Dr.	e/o Harvard Av.	20,344	24,785	35,569	Ratio	8,852	44%	44%	-100%	44%	8,852	29,200
882	University Dr.	w/o Culver Dr.	20,344	25,319	35,894	Ratio	8,497	42%	42%	-100%	42%	8,497	28,800
883	University Dr.	e/o Culver Dr.	30,729	27,497	40,250	Increment	12,753	42%	42%	-100%	42%	12,753	43,500
884	University Dr.	w/o Yale Av.	29,548	27,733	40,519	Increment	12,786	43%	43%	-100%	43%	12,786	42,300
885	University Dr.	e/o Yale Av.	29,435	27,185	36,434	Increment	9,249	31%	31%	-100%	31%	9,249	38,700

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Aprvd WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	49,021	Increment	10,290	25%	25%	-100%	25%	10,290	51,800
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	36,284	Ratio	9,926	44%	44%	-100%	44%	9,926	32,500
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	27,204	Increment	8,195	36%	36%	-100%	36%	8,195	30,800
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	19,743	Increment	4,489	20%	20%	-100%	20%	4,489	27,100
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	17,579	Increment	4,841	26%	26%	-100%	26%	4,841	23,600
897	Campus Dr.	w/o California Av.	18,775	13,536	18,378	Increment	4,842	26%	26%	-100%	26%	4,842	23,600
898	Campus Dr.	b/w California and Culver	18,775	11,682	14,560	Increment	2,878	15%	15%	-100%	15%	2,878	21,700
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	21,323	Ratio	931	5%	5%	-100%	5%	931	18,400
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,765	Ratio	932	5%	5%	-100%	5%	932	18,400
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,836	Increment	334	5%	5%	-100%	5%	334	7,100
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,518	Ratio	44	1%	1%	-100%	1%	44	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,348	Increment	-6	0%	0%	-100%	0%	0	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,929	Increment	-25	-1%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	36,434	Increment	9,249	31%	31%	-100%	31%	9,249	38,700
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,490	Increment	1	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	33,535	Increment	8,562	0%	0%	-100%	0%	0	33,500
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	36,266	Ratio	3,261	16%	16%	-100%	16%	3,261	24,200
1571	University Dr.	e/o SR-73 SB Ramps		18,829	24,216	Increment	5,387	0%	0%	-100%	0%	0	24,200
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	37,193	Ratio	3,348	15%	15%	-100%	15%	3,348	26,200
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	36,353	Ratio	3,319	16%	16%	-100%	16%	3,319	24,200
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,172	Ratio	4,465	24%	24%	-100%	24%	4,465	23,400
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	10,162	Increment	-11	0%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,638	Ratio	565	8%	8%	-100%	8%	565	7,400
2580	Turtlerock	e/o Concordia	6,823	8,453	8,808	Ratio	287	4%	4%	-100%	4%	287	7,100
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,519	Increment	54	1%	1%	-100%	1%	54	6,100
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	4,052	Increment	181	2%	2%	-100%	2%	181	7,800
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	1,977	Increment	201	10%	10%	-100%	10%	201	2,200

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Pend NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,570	Increment	-754	-4%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,377	Ratio	6,051	11%	11%	-100%	11%	6,051	60,000
186	University Dr.	n/o Campus Dr.	20,635	23,625	30,726	Ratio	6,202	30%	30%	-100%	30%	6,202	26,800
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	35,990	Ratio	6,778	24%	24%	-100%	24%	6,778	34,600
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	33,341	Increment	5,855	21%	21%	-100%	21%	5,855	33,700
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	47,628	Ratio	12,785	46%	46%	-100%	46%	12,785	40,600
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	53,916	Ratio	6,655	15%	15%	-100%	15%	6,655	50,300
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	57,044	Ratio	2,894	6%	6%	-100%	6%	2,894	51,600
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	62,161	Ratio	4,350	8%	8%	-100%	8%	4,350	56,700
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	72,174	Ratio	7,063	13%	13%	-100%	13%	7,063	59,700
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	71,221	Ratio	7,167	14%	14%	-100%	14%	7,167	59,800
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	56,983	Ratio	4,717	12%	12%	-100%	12%	4,717	43,400
226	Culver Dr.	n/o University Dr.	35,332	44,755	50,288	Ratio	4,368	12%	12%	-100%	12%	4,368	39,700
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	54,889	Ratio	7,421	17%	17%	-100%	17%	7,421	52,000
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	37,488	Increment	2,787	8%	8%	-100%	8%	2,787	38,300
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	24,332	Increment	2,987	14%	14%	-100%	14%	2,987	24,900
230	Culver Dr.	n/o Anteater	21,928	20,787	22,886	Increment	2,099	10%	10%	-100%	10%	2,099	24,000
232	Culver Dr.	s/o Anteater	25,668	30,577	36,294	Ratio	4,799	19%	19%	-100%	19%	4,799	30,500
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	33,085	Ratio	4,817	25%	25%	-100%	25%	4,817	23,700
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	8,154	Ratio	937	15%	15%	-100%	15%	937	7,300
266	W. Yale Lp.	n/o Main St.	6,349	6,299	7,230	Increment	931	15%	15%	-100%	15%	931	7,300
267	W. Yale Lp.	s/o Main St.	11,237	15,755	15,632	Ratio	-88	-1%	0%	-100%	0%	0	11,200
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,675	Ratio	100	2%	2%	-100%	2%	100	4,500
277	Yale Av.	s/o Michelson Dr.	1,044	510	4,416	Increment	3,906	374%	374%	-100%	374%	3,906	5,000
278	Yale Av.	n/o University Dr.	1,044	683	4,185	Increment	3,502	335%	335%	-100%	335%	3,502	4,500

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Pend NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	14,245	Ratio	-215	-2%	0%	-100%	0%	0	12,100
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	7,920	Increment	-136	-1%	0%	-100%	0%	0	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,266	Ratio	362	5%	5%	-100%	5%	362	7,100
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,230	Ratio	110	3%	3%	-100%	3%	110	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	59,192	Ratio	11,332	27%	27%	-100%	27%	11,332	52,700
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	63,780	Ratio	11,035	27%	27%	-100%	27%	11,035	52,400
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,213	Increment	1,499	23%	23%	-100%	23%	1,499	7,900
302	Michelson Dr.	s/o University Dr.		1,288	1,291	Increment	3	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	58,852	Increment	12,347	26%	26%	-100%	26%	12,347	59,500
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	40,139	Ratio	3,991	17%	17%	-100%	17%	3,991	27,000
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	38,583	Ratio	3,481	15%	15%	-100%	15%	3,481	26,400
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	37,268	Ratio	3,605	17%	17%	-100%	17%	3,605	24,500
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	37,332	Ratio	3,724	18%	18%	-100%	18%	3,724	24,600
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	43,890	Ratio	3,053	11%	11%	-100%	11%	3,053	30,500
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	43,792	Ratio	3,142	11%	11%	-100%	11%	3,142	30,600
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	60,544	Ratio	12,949	31%	31%	-100%	31%	12,949	54,300
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	15,015	Ratio	-829	-6%	0%	-100%	0%	0	13,900
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	12,980	Ratio	-993	-12%	-12%	-100%	-12%	-993	7,400
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	8,613	Ratio	-737	-9%	0%	-100%	0%	0	8,400
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	9,938	Ratio	285	4%	4%	-100%	4%	285	6,700
854	University Dr.	w/o Michelson Dr.	41,502	40,987	51,758	Increment	10,771	26%	26%	-100%	26%	10,771	52,300
880	University Dr.	w/o Harvard Av.	20,635	23,329	30,387	Ratio	6,243	30%	30%	-100%	30%	6,243	26,900
881	University Dr.	e/o Harvard Av.	20,344	24,785	35,966	Ratio	9,178	45%	45%	-100%	45%	9,178	29,500
882	University Dr.	w/o Culver Dr.	20,344	25,319	36,273	Ratio	8,802	43%	43%	-100%	43%	8,802	29,100
883	University Dr.	e/o Culver Dr.	30,729	27,497	40,840	Increment	13,343	43%	43%	-100%	43%	13,343	44,100
884	University Dr.	w/o Yale Av.	29,548	27,733	41,140	Increment	13,407	45%	45%	-100%	45%	13,407	43,000
885	University Dr.	e/o Yale Av.	29,435	27,185	37,063	Increment	9,878	34%	34%	-100%	34%	9,878	39,300

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Pend NP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	48,624	Increment	9,893	24%	24%	-100%	24%	9,893	51,400
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	36,416	Ratio	10,044	44%	44%	-100%	44%	10,044	32,600
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	27,171	Increment	8,162	36%	36%	-100%	36%	8,162	30,700
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	19,683	Increment	4,429	20%	20%	-100%	20%	4,429	27,000
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	17,380	Increment	4,642	25%	25%	-100%	25%	4,642	23,400
897	Campus Dr.	w/o California Av.	18,775	13,536	18,196	Increment	4,660	25%	25%	-100%	25%	4,660	23,400
898	Campus Dr.	b/w California and Culver	18,775	11,682	14,342	Increment	2,660	14%	14%	-100%	14%	2,660	21,400
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	21,204	Ratio	829	5%	5%	-100%	5%	829	18,300
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,624	Ratio	794	5%	5%	-100%	5%	794	18,200
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,867	Increment	365	5%	5%	-100%	5%	365	7,100
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,425	Ratio	-33	0%	0%	-100%	0%	0	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,288	Increment	-66	-1%	0%	-100%	0%	0	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,882	Increment	-72	-2%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	37,063	Increment	9,878	34%	34%	-100%	34%	9,878	39,300
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,489	Increment	0	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	33,841	Increment	8,868	0%	0%	-100%	0%	0	33,800
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	36,896	Ratio	3,681	18%	18%	-100%	18%	3,681	24,600
1571	University Dr.	e/o SR-73 SB Ramps		18,829	24,364	Increment	5,535	0%	0%	-100%	0%	0	24,400
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	37,843	Ratio	3,807	17%	17%	-100%	17%	3,807	26,700
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	37,007	Ratio	3,755	18%	18%	-100%	18%	3,755	24,600
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,421	Ratio	4,640	25%	25%	-100%	25%	4,640	23,500
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	9,980	Increment	-193	-2%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,425	Ratio	417	6%	6%	-100%	6%	417	7,200
2580	Turtlerock	e/o Concordia	6,823	8,453	8,897	Ratio	358	5%	5%	-100%	5%	358	7,200
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,535	Increment	70	1%	1%	-100%	1%	70	6,100
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	4,098	Increment	227	3%	3%	-100%	3%	227	7,900
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	2,008	Increment	232	12%	12%	-100%	12%	232	2,200

Adt Refinement Summary

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
94	Bonita Cyn. Rd.	n/o Newport Coast Dr.	18,892	18,324	17,603	Increment	-721	-4%	0%	-100%	0%	0	18,900
134	Culver Dr.	b/w I-405 NB and SB Ramp	53,900	58,778	65,402	Ratio	6,074	11%	11%	-100%	11%	6,074	60,000
186	University Dr.	n/o Campus Dr.	20,635	23,625	30,579	Ratio	6,074	29%	29%	-100%	29%	6,074	26,700
187	University Dr.	b/w Campus Dr.and Mesa R	27,840	28,943	35,910	Ratio	6,701	24%	24%	-100%	24%	6,701	34,500
188	University Dr.	b/w Mesa Rd. and California	27,840	27,486	33,352	Increment	5,866	21%	21%	-100%	21%	5,866	33,700
189	University Dr.	b/w MacArthur Blvd. NB and	27,840	32,639	47,690	Ratio	12,838	46%	46%	-100%	46%	12,838	40,700
220	Culver Dr.	b/w Alton Pkwy.and Main St.	43,685	46,788	53,933	Ratio	6,671	15%	15%	-100%	15%	6,671	50,400
221	Culver Dr.	b/w Main St. and San Leand	48,743	53,847	57,026	Ratio	2,878	6%	6%	-100%	6%	2,878	51,600
222	Culver Dr.	b/w San Leandro and I-405	52,328	57,390	62,136	Ratio	4,327	8%	8%	-100%	8%	4,327	56,700
223	Culver Dr.	s/o I-405 SB Ramps	52,590	63,628	72,321	Ratio	7,185	14%	14%	-100%	14%	7,185	59,800
224	Culver Dr.	n/o Michelson Dr.	52,590	62,679	71,363	Ratio	7,286	14%	14%	-100%	14%	7,286	59,900
225	Culver Dr.	s/o Michelson Dr.	38,708	50,793	57,016	Ratio	4,742	12%	12%	-100%	12%	4,742	43,500
226	Culver Dr.	n/o University Dr.	35,332	44,755	50,329	Ratio	4,400	12%	12%	-100%	12%	4,400	39,700
227	Culver Dr.	b/w University Dr. and Harva	44,618	47,062	54,869	Ratio	7,402	17%	17%	-100%	17%	7,402	52,000
228	Culver Dr.	s/o Harvard Av.	35,554	34,701	37,327	Increment	2,626	7%	7%	-100%	7%	2,626	38,200
229	Culver Dr.	s/o Campus Dr.	21,928	21,345	24,358	Increment	3,013	14%	14%	-100%	14%	3,013	24,900
230	Culver Dr.	n/o Anteater	21,928	20,787	22,915	Increment	2,128	10%	10%	-100%	10%	2,128	24,100
232	Culver Dr.	s/o Anteater	25,668	30,577	36,324	Ratio	4,824	19%	19%	-100%	19%	4,824	30,500
233	Bonita Cyn. Rd.	s/o Newport Coast Dr.	18,892	26,363	33,088	Ratio	4,819	26%	26%	-100%	26%	4,819	23,700
265	W. Yale Loop	s/o Alton Pkwy.	6,349	7,105	8,174	Ratio	955	15%	15%	-100%	15%	955	7,300
266	W. Yale Lp.	n/o Main St.	6,349	6,299	7,247	Increment	948	15%	15%	-100%	15%	948	7,300
267	W. Yale Lp.	s/o Main St.	11,237	15,755	15,680	Ratio	-53	0%	0%	-100%	0%	0	11,200
275	E. Yale Lp.	s/o Alton Pkwy.	4,443	13,373	13,676	Ratio	101	2%	2%	-100%	2%	101	4,500
277	Yale Av.	s/o Michelson Dr.	1,044	510	4,433	Increment	3,923	376%	376%	-100%	376%	3,923	5,000
278	Yale Av.	n/o University Dr.	1,044	683	4,196	Increment	3,513	336%	336%	-100%	336%	3,513	4,600

Scenario:
Existing Model RunID: 2012
Future Model RunID: P2035
Existing Validation Year: 2012
Future Analysis Year: P2035 Pend WP

Project: ITAM 12-4
JobNumber: CUI1301
Analyst: NV
Date: 11/2/2015

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
279	Ridgeline Dr.	s/o University Dr.	12,102	14,503	15,259	Ratio	631	5%	5%	-100%	5%	631	12,700
280	Ridgeline Dr.	n/o Turtle Rock Dr.	12,102	8,056	7,894	Increment	-162	-1%	0%	-100%	0%	0	12,100
281	Turtle Rock Dr.	n/o Campus Dr.	6,743	10,692	11,654	Ratio	607	9%	9%	-100%	9%	607	7,300
282	Turtle Rock Dr.	s/o Campus Dr.	3,932	8,007	8,223	Ratio	106	3%	3%	-100%	3%	106	4,000
283	Sunnyhill	s/o Turtle Rock Dr.	5,613	1,812	0	Increment	-1,812	-32%	-32%	-100%	-32%	-1,812	3,800
299	Jeffrey Rd.	b/w Alton Pkwy.and Quailcre	41,326	46,454	59,233	Ratio	11,368	28%	28%	-100%	28%	11,368	52,700
300	Jeffrey Rd.	b/w Quailcreek and I-405 N	41,326	50,338	63,813	Ratio	11,063	27%	27%	-100%	27%	11,063	52,400
301	Michelson Dr.	n/o University Dr.	6,444	5,714	7,215	Increment	1,501	23%	23%	-100%	23%	1,501	7,900
302	Michelson Dr.	s/o University Dr.		1,288	1,294	Increment	6	0%	0%	-100%	0%	0	1,300
347	University Dr.	b/w I-405 SB Ramps and Mi	47,147	46,505	59,462	Increment	12,957	27%	27%	-100%	27%	12,957	60,100
784	Alton Pkwy.	e/o Culver Dr.	23,023	34,209	40,131	Ratio	3,986	17%	17%	-100%	17%	3,986	27,000
785	Alton Pkwy.	e/o W. Yale Loop	22,899	33,492	38,564	Ratio	3,468	15%	15%	-100%	15%	3,468	26,400
787	Alton Pkwy.	e/o Lake Rd.	20,936	31,794	37,251	Ratio	3,593	17%	17%	-100%	17%	3,593	24,500
789	Alton Pkwy.	e/o Creek Rd.	20,887	31,683	37,307	Ratio	3,708	18%	18%	-100%	18%	3,708	24,600
791	Alton Pkwy.	e/o E. Yale Lp.	27,429	39,494	43,835	Ratio	3,015	11%	11%	-100%	11%	3,015	30,400
792	Alton Pkwy.	w/o Jeffrey Rd.	27,429	39,291	43,735	Ratio	3,102	11%	11%	-100%	11%	3,102	30,500
816	Jeffrey Rd./Univers	b/w I-405 NB and SB Ramp	41,326	46,099	60,941	Ratio	13,305	32%	32%	-100%	32%	13,305	54,600
828	Main St.	b/w Culver Dr.and W. Yale L	13,908	15,967	15,037	Ratio	-810	-6%	0%	-100%	0%	0	13,900
851	Michelson Dr.	e/o Culver Dr.	8,373	14,726	13,094	Ratio	-928	-11%	-11%	-100%	-11%	-928	7,400
852	Michelson Dr.	w/o Yale Av.	8,373	9,444	8,713	Ratio	-648	-8%	0%	-100%	0%	0	8,400
853	Michelson Dr.	e/o Yale Av.	6,444	9,517	10,130	Ratio	415	6%	6%	-100%	6%	415	6,900
854	University Dr.	w/o Michelson Dr.	41,502	40,987	52,332	Increment	11,345	27%	27%	-100%	27%	11,345	52,800
880	University Dr.	w/o Harvard Av.	20,635	23,329	30,241	Ratio	6,114	30%	30%	-100%	30%	6,114	26,700
881	University Dr.	e/o Harvard Av.	20,344	24,785	35,911	Ratio	9,132	45%	45%	-100%	45%	9,132	29,500
882	University Dr.	w/o Culver Dr.	20,344	25,319	36,219	Ratio	8,758	43%	43%	-100%	43%	8,758	29,100
883	University Dr.	e/o Culver Dr.	30,729	27,497	40,719	Increment	13,222	43%	43%	-100%	43%	13,222	44,000
884	University Dr.	w/o Yale Av.	29,548	27,733	41,010	Increment	13,277	45%	45%	-100%	45%	13,277	42,800
885	University Dr.	e/o Yale Av.	29,435	27,185	36,922	Increment	9,737	33%	33%	-100%	33%	9,737	39,200

Scenario: | *Project:* ITAM 12-4
Existing Model RunID: 2012 | *JobNumber:* CUI1301
Future Model RunID: P2035 | *Analyst:* NV
Existing Validation Year: 2012 | *Date:* 11/2/2015
Future Analysis Year: P2035 Pend WP

Adt Post Location	Adt Post Location Description		Existing Count Adt	Existing Model Adt	Future Model Adt	Procedure Type	InterimRaw Growth	Interim Raw Growth %	Smooth Raw Growth %	Minimum Growth % (User Input)	Final Growth %	Final Growth	Refined Adt
886	University Dr.	e/o Ridgeline Dr.	41,502	38,731	49,198	Increment	10,467	25%	25%	-100%	25%	10,467	52,000
893	Campus Dr.	b/w University Dr. and Bridg	22,587	25,207	36,528	Ratio	10,144	45%	45%	-100%	45%	10,144	32,700
894	Campus Dr.	e/o Bridge Rd.	22,587	19,009	27,308	Increment	8,299	37%	37%	-100%	37%	8,299	30,900
895	Campus Dr.	w/o Berkeley Av.	22,587	15,254	19,833	Increment	4,579	20%	20%	-100%	20%	4,579	27,200
896	Campus Dr.	e/o Berkeley Av.	18,775	12,738	17,457	Increment	4,719	25%	25%	-100%	25%	4,719	23,500
897	Campus Dr.	w/o California Av.	18,775	13,536	18,278	Increment	4,742	25%	25%	-100%	25%	4,742	23,500
898	Campus Dr.	b/w California and Culver	18,775	11,682	14,429	Increment	2,747	15%	15%	-100%	15%	2,747	21,500
899	Campus Dr.	e/o Culver Dr.	17,436	20,242	21,536	Ratio	1,115	6%	6%	-100%	6%	1,115	18,600
900	Campus Dr.	w/o Turtle Rock Dr.	17,436	17,813	18,984	Ratio	1,146	7%	7%	-100%	7%	1,146	18,600
901	Turtle Rock Dr.	w/o Ridgeline Dr.	6,743	4,502	4,881	Increment	379	6%	6%	-100%	6%	379	7,100
902	Turtle Rock Dr.	e/o Ridgeline Dr.	7,003	8,465	8,428	Ratio	-31	0%	0%	-100%	0%	0	7,000
903	Turtle Rock Dr.	e/o Sunnyhill	7,003	3,354	3,292	Increment	-62	-1%	0%	-100%	0%	0	7,000
904	Turtle Rock Dr.	w/o Sunnyhill	3,932	2,954	2,896	Increment	-58	-1%	0%	-100%	0%	0	3,900
1019	University Dr.	w/o Ridgeline Dr.	29,435	27,185	36,922	Increment	9,737	33%	33%	-100%	33%	9,737	39,200
1241	Ridgeline Dr.	s/o Turtle Rock Dr.		1,489	1,492	Increment	3	0%	0%	-100%	0%	0	1,500
1516	University Dr.	b/w MacArthur Blvd. NB and		24,973	33,905	Increment	8,932	0%	0%	-100%	0%	0	33,900
1560	Alton Pkwy.	w/o Creek Rd.	20,936	31,379	36,879	Ratio	3,670	18%	18%	-100%	18%	3,670	24,600
1571	University Dr.	e/o SR-73 SB Ramps		18,829	24,378	Increment	5,549	0%	0%	-100%	0%	0	24,400
1715	Alton Pkwy.	w/o Lake Rd.	22,899	32,449	37,827	Ratio	3,795	17%	17%	-100%	17%	3,795	26,700
1716	Alton Pkwy.	w/o E. Yale Lp.	20,887	31,368	36,989	Ratio	3,743	18%	18%	-100%	18%	3,743	24,600
1729	Bonita Cyn. Rd.	n/o SR-73 NB Ramps	18,892	26,831	33,423	Ratio	4,641	25%	25%	-100%	25%	4,641	23,500
2281	Culver Dr.	n/o Campus Dr.	35,554	32,386	0	Increment	-32,386	-91%	-91%	-100%	-91%	-32,386	3,200
2577	Ridgeline	s/o Concordia	11,108	10,173	9,954	Increment	-219	-2%	0%	-100%	0%	0	11,100
2578	Turtlerock	w/o Concordia	6,823	9,824	10,804	Ratio	681	10%	10%	-100%	10%	681	7,500
2580	Turtlerock	e/o Concordia	6,823	8,453	8,915	Ratio	373	5%	5%	-100%	5%	373	7,200
2581	Sunnyhill	n/o Shady Canyon	6,000	2,465	2,536	Increment	71	1%	1%	-100%	1%	71	6,100
2582	Shady Canyon	w/o Sunnyhill	7,658	3,871	4,094	Increment	223	3%	3%	-100%	3%	223	7,900
2583	Shady Canyon	e/o Sunnyhill	2,000	1,776	2,004	Increment	228	11%	11%	-100%	11%	228	2,200

CIRCULATION PHASING ANALYSIS REPORT
ICU CALCULATIONS
(ROUNDED TO 3 DECIMALS)

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 14
NORTH/SOUTH: Culver Drive
EAST/WEST: University Drive

	2017 Approved Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	52	56	0.031 *	0.033
NBT	4		6,800	1,096	1,462	0.161	0.215 *
NBR	2	P	3,400	706	945	0.000	0.000
SBL	1		1,700	30	66	0.018	0.039 *
SBT	3		5,100	1,243	1,024	0.244 *	0.201
SBR	1	D	1,700	295	137	0.000	0.000
EBL	2		3,400	85	277	0.025	0.081
EBT	3		5,100	555	1,412	0.109 *	0.277 *
EBR	1	D	1,700	51	43	0.000	0.000
WBL	2		3,400	905	746	0.266 *	0.219 *
WBT	3		5,100	1,443	728	0.291	0.155
WBR	0		0	39	62	0.000	0.000
N/S Critical Movements						0.275	0.254
E/W Critical Movements						0.375	0.496
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.700	0.800
Level of Service (LOS)						B	C

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 21
NORTH/SOUTH: Jeffrey Road
EAST/WEST: Alton Parkway

	2017 Approved Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	2		3,400	456	667	0.134 *	0.196
NBT	3		5,100	978	1,644	0.192	0.322 *
NBR	1	F	1,700	186	332	0.000	0.000
SBL	2		3,400	280	402	0.082	0.118 *
SBT	3		5,100	1,931	1,231	0.379 *	0.241
SBR	1	D	1,700	158	210	0.000	0.000
EBL	2		3,400	162	278	0.048	0.082
EBT	2		3,400	545	875	0.160 *	0.257 *
EBR	1	D	1,700	554	369	0.065 *	0.000
WBL	2		3,400	540	420	0.159 *	0.124 *
WBT	2		3,400	818	823	0.241	0.242
WBR	1	D	1,700	132	158	0.000	0.000
N/S Critical Movements						0.513	0.440
E/W Critical Movements						0.319	0.381
Right Turn Critical Movement						0.065	0.000
Clearance Interval						0.050	0.050
ICU						0.947	0.871
Level of Service (LOS)						E	D

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

P:\CUI1301\TIA\xls\2017 ICU calcs.xls\App NP (12/7/2015)

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 24
NORTH/SOUTH: Michelson Drive
EAST/WEST: University Drive

	2017 Approved Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	2	27	0.001	0.016
NBT	1		1,700	1	8	0.005 *	0.037 *
NBR	0		0	7	55	0.000	0.000
SBL	2		3,400	429	493	0.126 *	0.145 *
SBT	1		1,700	8	7	0.027	0.023
SBR	0		0	38	32	0.000	0.000
EBL	1		1,700	11	39	0.006	0.023
EBT	2		3,400	1,594	2,472	0.469 *	0.727 *
EBR	1	D	1,700	10	9	0.000	0.000
WBL	1		1,700	32	24	0.019 *	0.014 *
WBT	3		5,100	2,431	1,861	0.477	0.365
WBR	1	D	1,700	327	454	0.000	0.000
N/S Critical Movements						0.131	0.182
E/W Critical Movements						0.488	0.741
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.669	0.973
Level of Service (LOS)						B	E

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 25
NORTH/SOUTH: Ridgeline Drive
EAST/WEST: University Drive

	2017 Approved Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	60	56	0.035 *	0.033 *
NBT	1		1,700	85	39	0.050	0.023
NBR	1	P	1,700	684	576	0.069 *	0.085 *
SBL	1		1,700	18	8	0.011	0.005
SBT	1		1,700	62	52	0.059 *	0.042 *
SBR	0		0	39	20	0.000	0.000
EBL	1		1,700	18	29	0.011 *	0.017
EBT	2		3,400	1,115	2,116	0.328	0.622 *
EBR	1	D	1,700	65	70	0.000	0.000
WBL	2		3,400	436	598	0.128	0.176 *
WBT	2		3,400	2,000	1,544	0.588 *	0.454
WBR	1	D	1,700	17	31	0.000	0.000
N/S Critical Movements						0.094	0.075
E/W Critical Movements						0.599	0.798
Right Turn Critical Movement						0.069	0.085
Clearance Interval						0.050	0.050
ICU						0.812	1.008
Level of Service (LOS)						D	F

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

P:\CUI1301\TIA\xls\2017 ICU calcs.xls\App NP (12/7/2015)

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 14
NORTH/SOUTH: Culver Drive
EAST/WEST: University Drive

	2017 Approved With Project						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	53	56	0.031 *	0.033
NBT	4		6,800	1,108	1,454	0.163	0.214 *
NBR	2	P	3,400	701	944	0.000	0.000
SBL	1		1,700	29	66	0.017	0.039 *
SBT	3		5,100	1,242	1,022	0.244 *	0.200
SBR	1	D	1,700	298	138	0.000	0.000
EBL	2		3,400	86	277	0.025	0.081
EBT	3		5,100	552	1,413	0.108 *	0.277 *
EBR	1	D	1,700	52	42	0.000	0.000
WBL	2		3,400	899	737	0.264 *	0.217 *
WBT	3		5,100	1,451	727	0.292	0.155
WBR	0		0	38	62	0.000	0.000
N/S Critical Movements						0.275	0.253
E/W Critical Movements						0.372	0.494
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.697	0.797
Level of Service (LOS)						B	C

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 21
NORTH/SOUTH: Jeffrey Road
EAST/WEST: Alton Parkway

	2017 Approved With Project						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	2		3,400	442	665	0.130 *	0.196
NBT	3		5,100	970	1,643	0.190	0.322 *
NBR	1	F	1,700	182	331	0.000	0.000
SBL	2		3,400	284	403	0.084	0.119 *
SBT	3		5,100	1,935	1,226	0.379 *	0.240
SBR	1	D	1,700	158	211	0.000	0.000
EBL	2		3,400	163	278	0.048	0.082
EBT	2		3,400	543	875	0.160 *	0.257 *
EBR	1	D	1,700	547	366	0.065 *	0.000
WBL	2		3,400	549	417	0.161 *	0.123 *
WBT	2		3,400	829	824	0.244	0.242
WBR	1	D	1,700	137	159	0.000	0.000
N/S Critical Movements						0.509	0.441
E/W Critical Movements						0.321	0.380
Right Turn Critical Movement						0.065	0.000
Clearance Interval						0.050	0.050
ICU						0.945	0.871
Level of Service (LOS)						E	D

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

P:\CUI1301\TIA\xls\2017 ICU calcs.xls\App WP (12/7/2015)

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 24
NORTH/SOUTH: Michelson Drive
EAST/WEST: University Drive

Move-ment	Lane		Capacity	2017 Approved With Project Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1		1,700	2	28	0.001	0.016
NBT	1		1,700	1	8	0.005 *	0.036 *
NBR	0		0	7	54	0.000	0.000
SBL	2		3,400	427	490	0.126 *	0.144 *
SBT	1		1,700	8	7	0.027	0.024
SBR	0		0	38	34	0.000	0.000
EBL	1		1,700	11	39	0.006 *	0.023
EBT	2		3,400	1,590	2,485	0.468	0.731 *
EBR	1	D	1,700	10	10	0.000	0.000
WBL	1		1,700	32	24	0.019	0.014 *
WBT	3		5,100	2,456	1,888	0.482 *	0.370
WBR	1	D	1,700	328	443	0.000	0.000
N/S Critical Movements						0.131	0.180
E/W Critical Movements						0.488	0.745
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.669	0.975
Level of Service (LOS)						B	E

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 25
NORTH/SOUTH: Ridgeline Drive
EAST/WEST: University Drive

Move-ment	Lane		Capacity	2017 Approved With Project Volume AM	Volume PM	V/C Ratio AM	V/C Ratio PM
NBL	1		1,700	59	54	0.035 *	0.032 *
NBT	1		1,700	85	39	0.050	0.023
NBR	1	P	1,700	686	582	0.067 *	0.086 *
SBL	1		1,700	21	8	0.012	0.005
SBT	1		1,700	75	52	0.070 *	0.042 *
SBR	0		0	44	20	0.000	0.000
EBL	1		1,700	18	29	0.011 *	0.017
EBT	2		3,400	1,103	2,129	0.324	0.626 *
EBR	1	D	1,700	68	69	0.000	0.000
WBL	2		3,400	467	618	0.137	0.182 *
WBT	2		3,400	1,987	1,546	0.584 *	0.455
WBR	1	D	1,700	17	32	0.000	0.000
N/S Critical Movements						0.105	0.074
E/W Critical Movements						0.595	0.808
Right Turn Critical Movement						0.067	0.086
Clearance Interval						0.050	0.050
ICU						0.817	1.018
Level of Service (LOS)						D	F

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

P:\CUI1301\TIA\xls\2017 ICU calcs.xls\App WP (12/7/2015)

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 14
NORTH/SOUTH: Culver Drive
EAST/WEST: University Drive

	2017 Pending Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	52	56	0.031 *	0.033
NBT	4		6,800	1,103	1,463	0.162	0.215 *
NBR	2	P	3,400	699	943	0.000	0.000
SBL	1		1,700	30	65	0.018	0.038 *
SBT	3		5,100	1,243	1,024	0.244 *	0.201
SBR	1	D	1,700	295	138	0.000	0.000
EBL	2		3,400	88	280	0.026	0.082
EBT	3		5,100	561	1,419	0.110 *	0.278 *
EBR	1	D	1,700	52	43	0.000	0.000
WBL	2		3,400	905	738	0.266 *	0.217 *
WBT	3		5,100	1,443	727	0.291	0.155
WBR	0		0	39	62	0.000	0.000
N/S Critical Movements						0.275	0.253
E/W Critical Movements						0.376	0.495
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.701	0.798
Level of Service (LOS)						C	C

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 21
NORTH/SOUTH: Jeffrey Road
EAST/WEST: Alton Parkway

	2017 Pending Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	2		3,400	452	668	0.133 *	0.196
NBT	3		5,100	981	1,648	0.192	0.323 *
NBR	1	F	1,700	187	330	0.000	0.000
SBL	2		3,400	284	404	0.084	0.119 *
SBT	3		5,100	1,928	1,229	0.378 *	0.241
SBR	1	D	1,700	158	212	0.000	0.000
EBL	2		3,400	166	280	0.049	0.082
EBT	2		3,400	561	876	0.165 *	0.258 *
EBR	1	D	1,700	563	368	0.066 *	0.000
WBL	2		3,400	544	423	0.160 *	0.124 *
WBT	2		3,400	822	840	0.242	0.247
WBR	1	D	1,700	134	161	0.000	0.000
N/S Critical Movements						0.511	0.442
E/W Critical Movements						0.325	0.382
Right Turn Critical Movement						0.066	0.000
Clearance Interval						0.050	0.050
ICU						0.952	0.874
Level of Service (LOS)						E	D

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

P:\CUI1301\TIA\xls\2017 ICU calcs.xls\Pend NP (12/7/2015)

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 24
NORTH/SOUTH: Michelson Drive
EAST/WEST: University Drive

	2017 Pending Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	2	28	0.001	0.016
NBT	1		1,700	1	8	0.005 *	0.037 *
NBR	0		0	7	55	0.000	0.000
SBL	2		3,400	444	502	0.131 *	0.148 *
SBT	1		1,700	10	7	0.029	0.024
SBR	0		0	40	33	0.000	0.000
EBL	1		1,700	12	40	0.007	0.024
EBT	2		3,400	1,589	2,473	0.467 *	0.727 *
EBR	1	D	1,700	13	9	0.000	0.000
WBL	1		1,700	37	24	0.022 *	0.014 *
WBT	3		5,100	2,429	1,869	0.476	0.366
WBR	1	D	1,700	327	462	0.000	0.000
N/S Critical Movements						0.136	0.185
E/W Critical Movements						0.489	0.741
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.675	0.976
Level of Service (LOS)						B	E

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 25
NORTH/SOUTH: Ridgeline Drive
EAST/WEST: University Drive

	2017 Pending Baseline						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	61	58	0.036 *	0.034 *
NBT	1		1,700	86	40	0.051	0.024
NBR	1	P	1,700	683	573	0.069 *	0.084 *
SBL	1		1,700	18	8	0.011	0.005
SBT	1		1,700	62	52	0.060 *	0.042 *
SBR	0		0	40	20	0.000	0.000
EBL	1		1,700	18	30	0.011 *	0.018
EBT	2		3,400	1,125	2,119	0.331	0.623 *
EBR	1	D	1,700	65	73	0.000	0.000
WBL	2		3,400	429	604	0.126	0.178 *
WBT	2		3,400	2,007	1,542	0.590 *	0.454
WBR	1	D	1,700	17	31	0.000	0.000
N/S Critical Movements						0.096	0.076
E/W Critical Movements						0.601	0.801
Right Turn Critical Movement						0.069	0.084
Clearance Interval						0.050	0.050
ICU						0.816	1.011
Level of Service (LOS)						D	F

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

P:\CUI1301\TIA\xls\2017 ICU calcs.xls\Pend NP (12/7/2015)

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 14
NORTH/SOUTH: Culver Drive
EAST/WEST: University Drive

	2017 Pending With Project						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	54	55	0.032 *	0.032
NBT	4		6,800	1,096	1,462	0.161	0.215 *
NBR	2	P	3,400	701	936	0.000	0.000
SBL	1		1,700	29	66	0.017	0.039 *
SBT	3		5,100	1,245	1,022	0.244 *	0.200
SBR	1	D	1,700	296	139	0.000	0.000
EBL	2		3,400	87	282	0.026	0.083
EBT	3		5,100	560	1,418	0.110 *	0.278 *
EBR	1	D	1,700	54	42	0.000	0.000
WBL	2		3,400	902	742	0.265 *	0.218 *
WBT	3		5,100	1,440	730	0.290	0.155
WBR	0		0	38	63	0.000	0.000
N/S Critical Movements						0.276	0.254
E/W Critical Movements						0.375	0.496
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.701	0.800
Level of Service (LOS)						C	C

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 21
NORTH/SOUTH: Jeffrey Road
EAST/WEST: Alton Parkway

	2017 Pending With Project						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	2		3,400	437	670	0.129 *	0.197
NBT	3		5,100	980	1,642	0.192	0.322 *
NBR	1	F	1,700	183	332	0.000	0.000
SBL	2		3,400	286	403	0.084	0.119 *
SBT	3		5,100	1,926	1,229	0.378 *	0.241
SBR	1	D	1,700	158	212	0.000	0.000
EBL	2		3,400	171	278	0.050	0.082
EBT	2		3,400	561	876	0.165 *	0.258 *
EBR	1	D	1,700	558	368	0.067 *	0.000
WBL	2		3,400	546	423	0.161 *	0.124 *
WBT	2		3,400	825	838	0.243	0.246
WBR	1	D	1,700	139	160	0.000	0.000
N/S Critical Movements						0.507	0.441
E/W Critical Movements						0.326	0.382
Right Turn Critical Movement						0.067	0.000
Clearance Interval						0.050	0.050
ICU						0.950	0.873
Level of Service (LOS)						E	D

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

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INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 24
NORTH/SOUTH: Michelson Drive
EAST/WEST: University Drive

	2017 Pending With Project						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	2	28	0.001	0.016
NBT	1		1,700	1	7	0.005 *	0.036 *
NBR	0		0	7	55	0.000	0.000
SBL	2		3,400	438	493	0.129 *	0.145 *
SBT	1		1,700	8	7	0.026	0.023
SBR	0		0	37	32	0.000	0.000
EBL	1		1,700	11	38	0.006	0.022
EBT	2		3,400	1,594	2,492	0.469 *	0.733 *
EBR	1	D	1,700	10	9	0.000	0.000
WBL	1		1,700	32	24	0.019 *	0.014 *
WBT	3		5,100	2,441	1,890	0.479	0.371
WBR	1	D	1,700	328	445	0.000	0.000
N/S Critical Movements						0.134	0.181
E/W Critical Movements						0.488	0.747
Right Turn Critical Movement						0.000	0.000
Clearance Interval						0.050	0.050
ICU						0.672	0.978
Level of Service (LOS)						B	E

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

LSA Associates, Inc.

INTERSECTION CAPACITY UTILIZATION

INTERSECTION NO.: 25
NORTH/SOUTH: Ridgeline Drive
EAST/WEST: University Drive

	2017 Pending With Project						
Move-				Volume		V/C Ratio	
ment	Lane		Capacity	AM	PM	AM	PM
NBL	1		1,700	59	54	0.035 *	0.032 *
NBT	1		1,700	84	39	0.049	0.023
NBR	1	P	1,700	686	582	0.066 *	0.086 *
SBL	1		1,700	21	8	0.012	0.005
SBT	1		1,700	75	52	0.070 *	0.042 *
SBR	0		0	44	20	0.000	0.000
EBL	1		1,700	18	29	0.011 *	0.017
EBT	2		3,400	1,121	2,129	0.330	0.626 *
EBR	1	D	1,700	69	69	0.000	0.000
WBL	2		3,400	468	618	0.138	0.182 *
WBT	2		3,400	1,987	1,546	0.584 *	0.455
WBR	1	D	1,700	17	32	0.000	0.000
N/S Critical Movements						0.105	0.074
E/W Critical Movements						0.595	0.808
Right Turn Critical Movement						0.066	0.086
Clearance Interval						0.050	0.050
ICU						0.816	1.018
Level of Service (LOS)						D	F

Notes: ICU - Intersection Capacity Utilization
V/C - Volume to Capacity Ratio
Right Turn Conditions:
P - Protected right turn movement
U - Unprotected right turn movement
D - Defacto right turn movement
N - No right turn on red
F - Free right turn lane

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APPENDIX C

TRIP GENERATION RATE INFORMATION

Concordia University Trip Generation and Trip Rates (October 2014)

Land Use	Size	Unit	ADT	AM Peak Hour			PM Peak Hour		
				In	Out	Total	In	Out	Total
Existing Trip Generation									
Concordia University	243.571	TSF	4,732	247	113	360	141	280	421
Trip Rates[1]									
Concordia University		TSF	19.43	1.02	0.46	1.48	0.58	1.15	1.73

[1] Trip rates were developed from 24-hour counts conducted at the two Concordia gates and the residential streets on Thursday, October 30, 2014. The residential street volumes were subtracted from the total gate volumes to determine the university volumes. The a.m. and p.m. peak hours for the university were identified as 8:00-9:00 a.m. and 4:30-5:30 p.m., respectively.

TSF = thousand square feet

Prepared by NDS/ATD

VOLUME

Gate (Concordia West and Concordia East) Totals

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_008

DAILY TOTALS			Out	In	Total
	0	0	3,019	3,081	6,100

AM Period	Out		In		TOTAL		PM Period	Out		In		TOTAL	
00:00	10		15		25		12:00	53		40		93	
00:15	4		9		13		12:15	66		43		109	
00:30	7		8		15		12:30	56		36		92	
00:45	4	25	10	42	14	67	12:45	42	217	38	157	80	374
01:00	6		3		9		13:00	39		26		65	
01:15	7		7		14		13:15	37		49		86	
01:30	3		5		8		13:30	40		53		93	
01:45	2	18	2	17	4	35	13:45	45	161	65	193	110	354
02:00	3		6		9		14:00	55		57		112	
02:15	1		2		3		14:15	33		35		68	
02:30	0		3		3		14:30	44		32		76	
02:45	0	4	1	12	1	16	14:45	50	182	28	152	78	334
03:00	1		1		2		15:00	53		52		105	
03:15	0		0		0		15:15	59		60		119	
03:30	0		1		1		15:30	77		40		117	
03:45	0	1	5	7	5	8	15:45	56	245	36	188	92	433
04:00	1		5		6		16:00	68		38		106	
04:15	0		1		1		16:15	57		22		79	
04:30	1		0		1		16:30	90		32		122	
04:45	3	5	3	9	6	14	16:45	88	303	67	159	155	462
05:00	2		5		7		17:00	80		55		135	
05:15	2		12		14		17:15	70		50		120	
05:30	10		12		22		17:30	42		51		93	
05:45	5	19	22	51	27	70	17:45	54	246	64	220	118	466
06:00	4		14		18		18:00	48		70		118	
06:15	7		11		18		18:15	59		68		127	
06:30	15		28		43		18:30	69		57		126	
06:45	24	50	56	109	80	159	18:45	43	219	51	246	94	465
07:00	9		42		51		19:00	45		39		84	
07:15	20		66		86		19:15	32		44		76	
07:30	32		55		87		19:30	29		42		71	
07:45	31	92	71	234	102	326	19:45	21	127	34	159	55	286
08:00	27		67		94		20:00	34		35		69	
08:15	56		64		120		20:15	51		24		75	
08:30	51		70		121		20:30	60		21		81	
08:45	44	178	86	287	130	465	20:45	50	195	23	103	73	298
09:00	38		51		89		21:00	46		25		71	
09:15	23		31		54		21:15	33		29		62	
09:30	25		22		47		21:30	39		38		77	
09:45	34	120	25	129	59	249	21:45	36	154	23	115	59	269
10:00	35		37		72		22:00	46		25		71	
10:15	54		36		90		22:15	25		13		38	
10:30	37		50		87		22:30	23		12		35	
10:45	37	163	79	202	116	365	22:45	18	112	15	65	33	177
11:00	41		59		100		23:00	10		15		25	
11:15	30		37		67		23:15	12		17		29	
11:30	37		32		69		23:30	9		13		22	
11:45	32	140	40	168	72	308	23:45	12	43	12	57	24	100
TOTALS		815		1267		**2082**	**TOTALS**		2204		1814		**4018**
SPLIT %		39.1%		60.9%		**34.1%**	**SPLIT %**		54.9%		45.1%		**65.9%**

DAILY TOTALS			Out	In	Total
	0	0	3,019	3,081	6,100

AM Peak Hour			11:45	08:00	**08:00**	**PM Peak Hour**			16:30	17:45	**16:30**
AM Pk Volume			207	287	**465**	**PM Pk Volume**			328	259	**532**
Pk Hr Factor			0.784	0.834	**0.894**	**Pk Hr Factor**			0.911	0.925	**0.858**
7 - 9 Volume	0	0	270	521	**791**	**4 - 6 Volume**	0	0	549	379	**928**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:30	16:45	**16:30**
7 - 9 Pk Volume	0	0	178	287	**465**	**4 - 6 Pk Volume**	0	0	328	223	**532**
Pk Hr Factor	0.000	0.000	0.795	0.834	**0.894**	**Pk Hr Factor**	0.000	0.000	0.911	0.832	**0.858**

Prepared by NDS/ATD

VOLUME

Residential Street (Joy, Faith, Daystar, Ascension) Totals

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_013

DAILY TOTALS	Out	In	Total
	0	0	
	683	685	1,368

AM Period	Out		In		TOTAL		PM Period	Out		In		TOTAL	
00:00	4		0		4		12:00	15		7		22	
00:15	3		0		3		12:15	13		9		22	
00:30	1		0		1		12:30	6		12		18	
00:45	0	8	0		0	8	12:45	13	47	14	42	27	89
01:00	2		0		2		13:00	11		9		20	
01:15	0		0		0		13:15	10		14		24	
01:30	0		0		0		13:30	13		17		30	
01:45	5	7	0		5	7	13:45	11	45	7	47	18	92
02:00	1		1		2		14:00	6		10		16	
02:15	0		1		1		14:15	9		7		16	
02:30	1		0		1		14:30	14		10		24	
02:45	2	4	2	4	4	8	14:45	16	45	11	38	27	83
03:00	3		0		3		15:00	15		18		33	
03:15	3		0		3		15:15	15		19		34	
03:30	1		0		1		15:30	13		12		25	
03:45	4	11	2	2	6	13	15:45	11	54	12	61	23	115
04:00	1		0		1		16:00	7		12		19	
04:15	2		2		4		16:15	12		7		19	
04:30	1		3		4		16:30	9		18		27	
04:45	1	5	1	6	2	11	16:45	15	43	14	51	29	94
05:00	3		3		6		17:00	16		10		26	
05:15	5		1		6		17:15	8		21		29	
05:30	5		1		6		17:30	9		11		20	
05:45	8	21	0	5	8	26	17:45	11	44	14	56	25	100
06:00	2		0		2		18:00	9		19		28	
06:15	3		2		5		18:15	7		19		26	
06:30	7		3		10		18:30	9		14		23	
06:45	17	29	9	14	26	43	18:45	5	30	12	64	17	94
07:00	6		9		15		19:00	5		9		14	
07:15	14		4		18		19:15	5		10		15	
07:30	11		4		15		19:30	5		8		13	
07:45	20	51	6	23	26	74	19:45	5	20	11	38	16	58
08:00	15		10		25		20:00	4		16		20	
08:15	24		11		35		20:15	6		8		14	
08:30	9		14		23		20:30	2		7		9	
08:45	17	65	5	40	22	105	20:45	5	17	8	39	13	56
09:00	9		10		19		21:00	3		7		10	
09:15	12		8		20		21:15	4		6		10	
09:30	7		3		10		21:30	3		9		12	
09:45	13	41	4	25	17	66	21:45	4	14	10	32	14	46
10:00	17		7		24		22:00	1		11		12	
10:15	7		5		12		22:15	1		6		7	
10:30	6		10		16		22:30	4		3		7	
10:45	8	38	9	31	17	69	22:45	0	6	4	24	4	30
11:00	7		7		14		23:00	0		2		2	
11:15	7		7		14		23:15	1		5		6	
11:30	15		10		25		23:30	0		0		0	
11:45	8	37	10	34	18	71	23:45	0	1	2	9	2	10
TOTALS		317		184		**501**	**TOTALS**		366		501		**867**
SPLIT %		63.3%		36.7%		**36.6%**	**SPLIT %**		42.2%		57.8%		**63.4%**

DAILY TOTALS	Out	In	Total
	0	0	
	683	685	1,368

AM Peak Hour			07:30	07:45	**07:45**	**PM Peak Hour**			14:30	17:45	**14:45**
AM Pk Volume			70	41	**109**	**PM Pk Volume**			60	66	**119**
Pk Hr Factor			0.729	0.732	**0.779**	**Pk Hr Factor**			0.938	0.868	**0.875**
7 - 9 Volume	0	0	116	63	**179**	**4 - 6 Volume**	0	0	87	107	**194**
7 - 9 Peak Hour			07:30	07:45	**07:45**	**4 - 6 Peak Hour**			16:15	16:30	**16:30**
7 - 9 Pk Volume	0	0	70	41	**109**	**4 - 6 Pk Volume**	0	0	52	63	**111**
Pk Hr Factor	0.000	0.000	0.729	0.732	**0.779**	**Pk Hr Factor**	0.000	0.000	0.813	0.750	**0.957**

Prepared by NDS/ATD

VOLUME

Concordia University Totals

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_013

DAILY TOTALS			Out	In	Total
	0	0	2,336	2,396	4,732

AM Period	Out		In		TOTAL		PM Period	Out		In		TOTAL	
00:00	6		15		21		12:00	38		33		71	
00:15	1		9		10		12:15	53		34		87	
00:30	6		8		14		12:30	50		24		74	
00:45	4	17	10	42	14	59	12:45	29	170	24	115	53	285
01:00	4		3		7		13:00	28		17		45	
01:15	7		7		14		13:15	27		35		62	
01:30	3		5		8		13:30	27		36		63	
01:45	-3	11	2	17	-1	28	13:45	34	116	58	146	92	262
02:00	2		5		7		14:00	49		47		96	
02:15	1		1		2		14:15	24		28		52	
02:30	-1		3		2		14:30	30		22		52	
02:45	-2		-1	8	-3	8	14:45	34	137	17	114	51	251
03:00	-2		1		-1		15:00	38		34		72	
03:15	-3		0		-3		15:15	44		41		85	
03:30	-1		1		0		15:30	64		28		92	
03:45	-4		3	5	-1		15:45	45	191	24	127	69	318
04:00	0		5		5		16:00	61		26		87	
04:15	-2		-1		-3		16:15	45		15		60	
04:30	0		-3		-3		16:30	81		14		95	
04:45	2		2	3	4	3	16:45	73	260	53	108	126	368
05:00	-1		2		1		17:00	64		45		109	
05:15	-3		11		8		17:15	62		29		91	
05:30	5		11		16		17:30	33		40		73	
05:45	-3		22	46	19	44	17:45	43	202	50	164	93	366
06:00	2		14		16		18:00	39		51		90	
06:15	4		9		13		18:15	52		49		101	
06:30	8		25		33		18:30	60		43		103	
06:45	7	21	47	95	54	116	18:45	38	189	39	182	77	371
07:00	3		33		36		19:00	40		30		70	
07:15	6		62		68		19:15	27		34		61	
07:30	21		51		72		19:30	24		34		58	
07:45	11	41	65	211	76	252	19:45	16	107	23	121	39	228
08:00	12		57		69		20:00	30		19		49	
08:15	32		53		85		20:15	45		16		61	
08:30	42		56		98		20:30	58		14		72	
08:45	27	113	81	247	108	360	20:45	45	178	15	64	60	242
09:00	29		41		70		21:00	43		18		61	
09:15	11		23		34		21:15	29		23		52	
09:30	18		19		37		21:30	36		29		65	
09:45	21	79	21	104	42	183	21:45	32	140	13	83	45	223
10:00	18		30		48		22:00	45		14		59	
10:15	47		31		78		22:15	24		7		31	
10:30	31		40		71		22:30	19		9		28	
10:45	29	125	70	171	99	296	22:45	18	106	11	41	29	147
11:00	34		52		86		23:00	10		13		23	
11:15	23		30		53		23:15	11		12		23	
11:30	22		22		44		23:30	9		13		22	
11:45	24	103	30	134	54	237	23:45	12	42	10	48	22	90
TOTALS		510		1083		**1586**	**TOTALS**		1838		1313		**3151**
SPLIT %		32.2%		68.3%		**33.5%**	**SPLIT %**		58.3%		41.7%		**66.5%**

DAILY TOTALS			Out	In	Total
	0	0	2,336	2,396	4,732

AM Peak Hour			11:45	08:00	**08:15**	**PM Peak Hour**			16:30	17:45	**16:30**
AM Pk Volume			165	247	**361**	**PM Pk Volume**			280	193	**421**
Pk Hr Factor			0.778	0.762	**0.836**	**Pk Hr Factor**			0.864	0.946	**0.835**
7 - 9 Volume	0	0	154	458	**612**	**4 - 6 Volume**	0	0	462	272	**734**
7 - 9 Peak Hour			08:00	08:00	**08:00**	**4 - 6 Peak Hour**			16:30	16:45	**16:30**
7 - 9 Pk Volume	0	0	113	247	**360**	**4 - 6 Pk Volume**	0	0	280	167	**421**
Pk Hr Factor	0.000	0.000	0.673	0.762	**0.833**	**Pk Hr Factor**	0.000	0.000	0.864	0.788	**0.835**

APPENDIX D

EXISTING TRAFFIC COUNTS

OCTOBER 2014 COUNTS

ITM Peak Hour Summary

Prepared by:

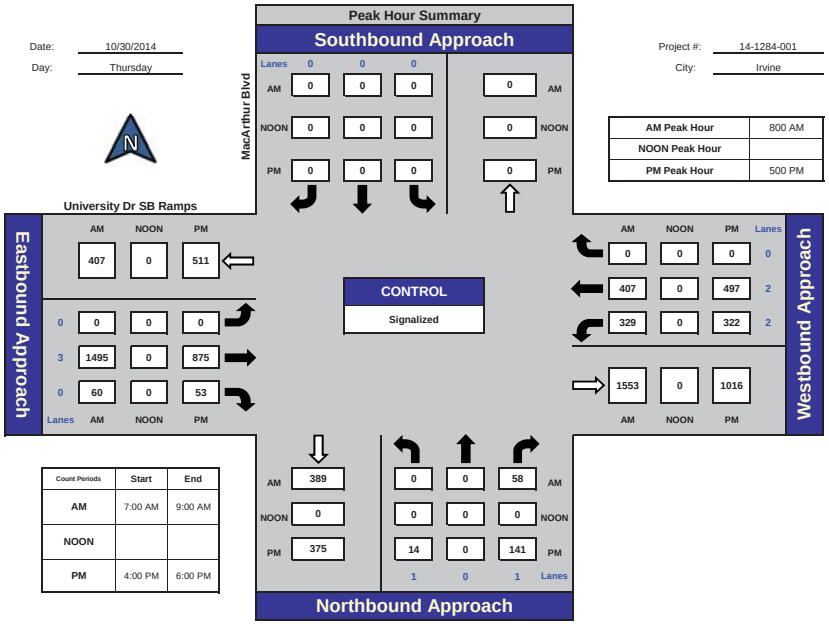
National Data & Surveying Services

MacArthur Blvd and University Dr SB Ramps , Irvine

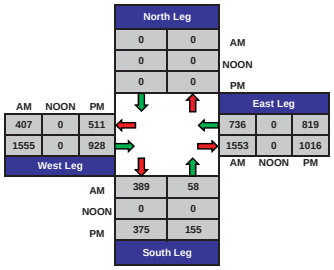
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-001
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

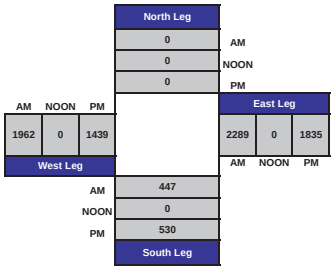
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

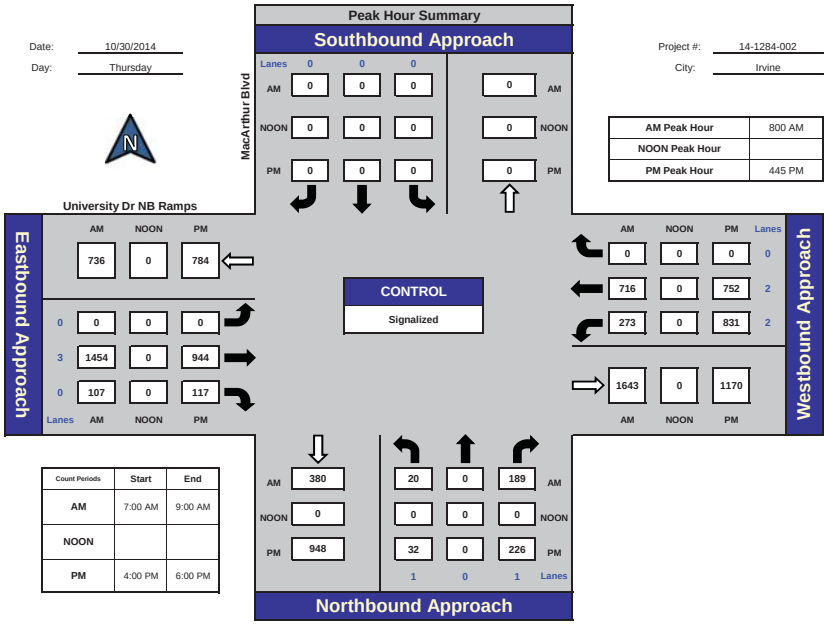
National Data & Surveying Services

MacArthur Blvd and University Dr NB Ramps , Irvine

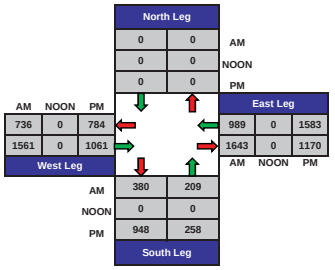
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-002
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

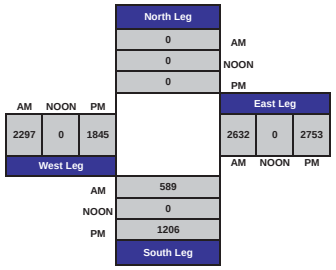
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

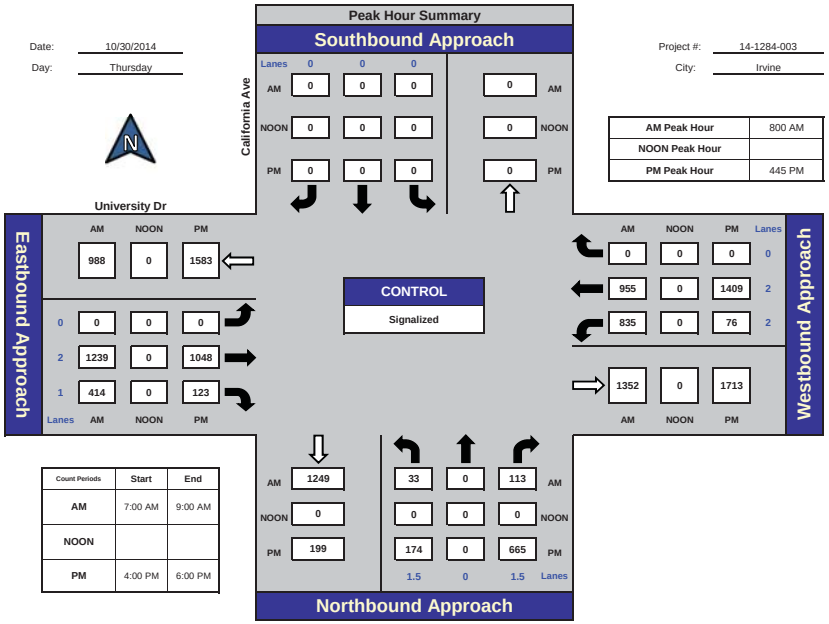
National Data & Surveying Services

California Ave and University Dr , Irvine

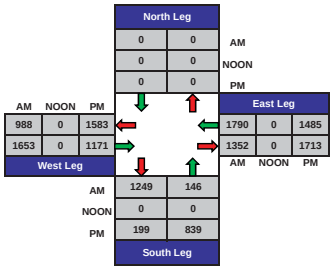
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-003
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	445 PM

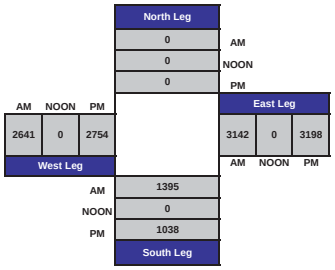
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

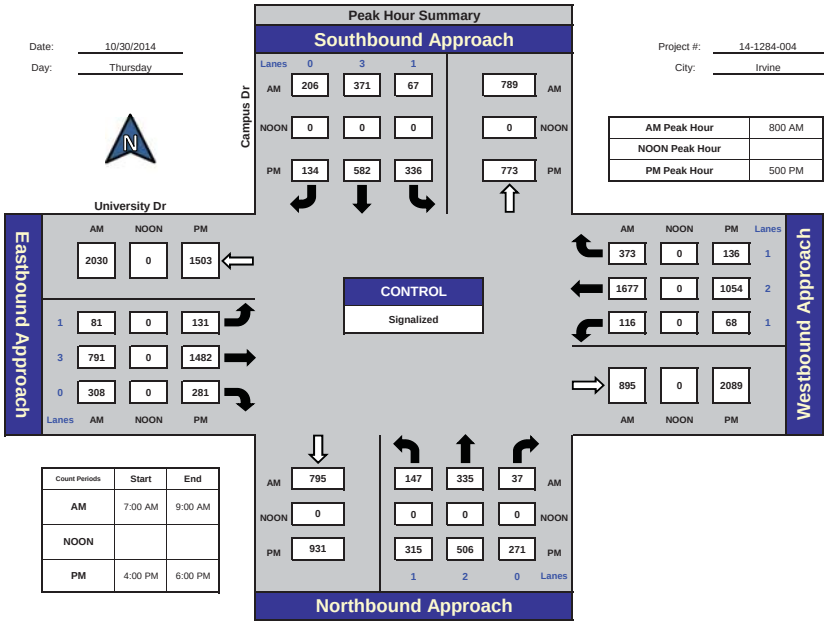
National Data & Surveying Services

Campus Dr and University Dr , Irvine

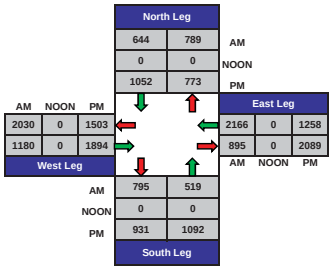
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-004
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

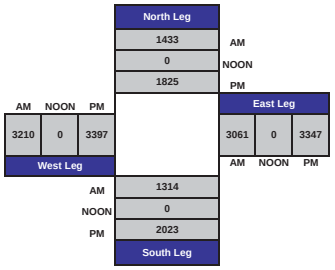
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Harvard Ave and University Dr , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-005
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Harvard Ave)

Lanes	0	2	1		
AM	453	562	32	465	AM
NOON	0	0	0	0	NOON
PM	259	492	84	1180	PM

Eastbound Approach (University Dr)

Lanes	AM	NOON	PM
	2076	0	1232
1	113	0	454
3	787	0	1575
0	34	0	54

Westbound Approach

AM	NOON	PM	Lanes
78	0	80	0
1561	0	898	3
62	0	103	1
875	0	1837	

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	658	62	274	56
NOON	0	0	0	0
PM	649	75	646	178
		1	2	0 (Lanes)

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	1047	1701	658	2076
NOON	0	0	0	0
PM	835	1081	649	1232
	465	1837	392	934
	AM	AM	AM	AM
	NOON	NOON	NOON	NOON
	PM	PM	PM	PM

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	1512	2576	1050	3010
NOON	0	0	0	0
PM	2015	2918	1548	3315

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Campus Dr and California Ave , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-006
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Campus Dr)

Lanes	1	1	1		
AM	40	129	121	340	AM
NOON	0	0	0	0	NOON
PM	46	211	118	434	PM

Eastbound Approach (California Ave)

Lanes	AM	NOON	PM
	760	0	702
1	33	0	129
2	165	0	640
0	72	0	208

Westbound Approach

AM	NOON	PM	Lanes
144	0	62	0
606	0	453	2
101	0	125	1
337	0	867	

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	302	114	163	51
NOON	0	0	0	0
PM	544	203	243	109
		1	1.5	0.5 (Lanes)

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	290	851	302	760
NOON	0	0	0	0
PM	375	640	544	702
	340	867	328	270
	AM	AM	AM	AM
	NOON	NOON	NOON	NOON
	PM	PM	PM	PM

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	630	1188	630	1030
NOON	0	0	0	0
PM	809	1507	1099	1679

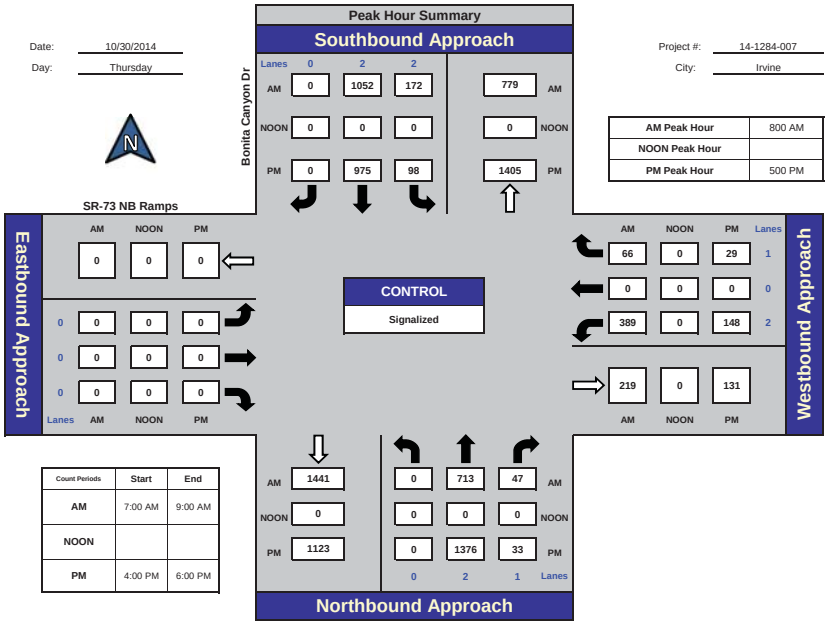
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Bonita Canyon Dr and SR-73 NB Ramps , Irvine

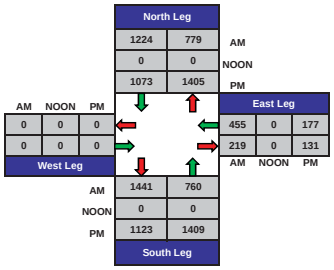
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-007
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

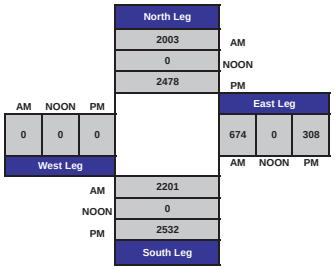


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



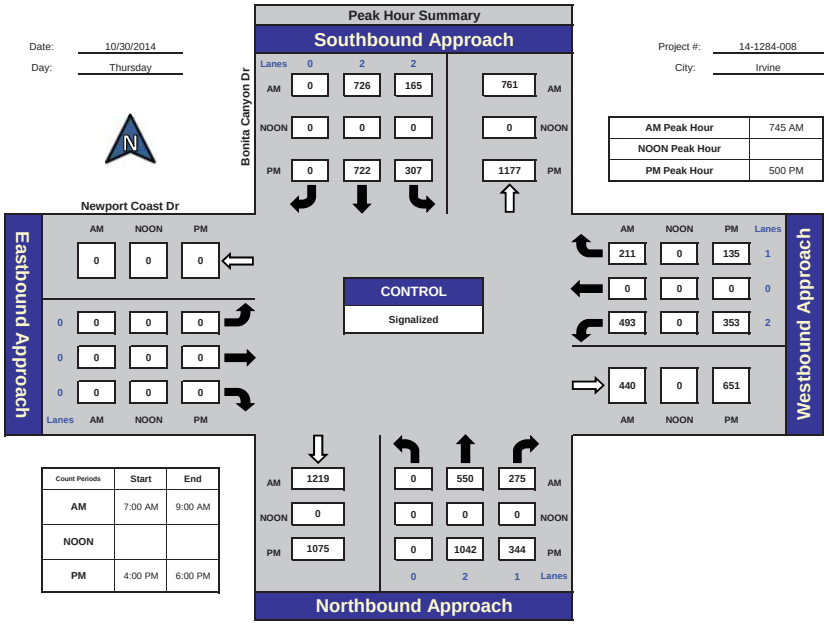
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Bonita Canyon Dr and Newport Coast Dr , Irvine

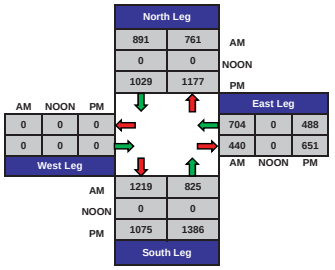
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-008
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

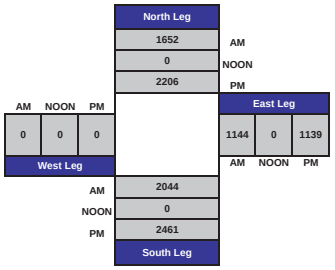


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Culver Dr and Alton Pkwy , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-009
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Culver Dr)

Lanes	1	3	2		
AM	316	1965	135	1260	AM
NOON	0	0	0	0	NOON
PM	258	1194	256	2609	PM

Eastbound Approach (Alton Pkwy)

Lanes	AM	NOON	PM
	1167	0	1082
2	139	0	340
2	353	0	784
1	207	0	233

Westbound Approach

AM	NOON	PM	Lanes
191	0	270	1
687	0	612	2
314	0	230	2
716	0	1396	

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	2486	164	930	228
NOON	0	0	0	0
PM	1657	212	1999	356
Lanes		2	3	1

Total Ins & Outs

	North Leg		East Leg			West Leg		
	AM	NOON	PM	AM	NOON	PM	AM	NOON	PM
AM	2416	1260	1167	0	1082	1192	0	1112
NOON	0	0	699	0	1357	716	0	1396
PM	1708	2609						
	South Leg							
AM	2486	1322						
NOON	0	0						
PM	1657	2567						

Total Volume Per Leg

	North Leg	East Leg			West Leg		
		AM	NOON	PM	AM	NOON	PM
AM	3676	1908	0	2508	1866	0	2439
NOON	0						
PM	4317						
	South Leg						
AM	3808						
NOON	0						
PM	4224						

Culver Dr and Main St , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-010
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Culver Dr)

Lanes	1	3	2		
AM	315	2070	99	1319	AM
NOON	0	0	0	0	NOON
PM	106	1380	177	2564	PM

Eastbound Approach (Main St)

Lanes	AM	NOON	PM
	795	0	361
2	108	0	482
2	153	0	427
1	179	0	321

Westbound Approach

AM	NOON	PM	Lanes
100	0	55	1
364	0	99	2
529	0	173	2
416	0	1057	

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	2778	116	1111	164
NOON	0	0	0	0
PM	1874	156	2027	453
Lanes		2	3	1

Total Ins & Outs

	North Leg		East Leg			West Leg		
	AM	NOON	PM	AM	NOON	PM	AM	NOON	PM
AM	2484	1319	795	0	361	993	0	327
NOON	0	0	440	0	1230	416	0	1057
PM	1663	2564						
	South Leg							
AM	2778	1391						
NOON	0	0						
PM	1874	2636						

Total Volume Per Leg

	North Leg	East Leg			West Leg		
		AM	NOON	PM	AM	NOON	PM
AM	3803	1409	0	1384	1235	0	1591
NOON	0						
PM	4227						
	South Leg						
AM	4169						
NOON	0						
PM	4510						

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Culver Dr and I-405 NB Ramps , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-011
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach

Lanes	1	3	0		
AM	1186	1894	0	1515	AM
NOON	0	0	0	0	NOON
PM	402	1541	0	2951	PM

Culver Dr

I-405 NB Ramps

Eastbound Approach

Lanes	AM	NOON	PM
	1186	0	402
0	0	0	0
0	0	0	0
0	0	0	0

CONTROL: Signalized

Westbound Approach

AM	NOON	PM	Lanes
136	0	370	1
0	0	0	0
548	0	444	2
734	0	310	

Northbound Approach

AM	2442	0 / 1379 / 734	AM
NOON	0	0 / 0 / 0	NOON
PM	1985	0 / 2581 / 310	PM
		0 / 3 / 1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	3080	1515	AM
NOON	0	0	NOON
PM	1943	2951	PM

West Leg AM	West Leg NOON	West Leg PM		East Leg AM	East Leg NOON	East Leg PM
1186	0	402		684	0	814
0	0	0		734	0	310

	South Leg
AM	2442 / 2113
NOON	0 / 0
PM	1985 / 2891

Total Volume Per Leg

	North Leg
AM	4595
NOON	0
PM	4894

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
1186	0	402	1418	0	1124

	South Leg
AM	4555
NOON	0
PM	4876

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Culver Dr and I-405 SB Ramps , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-012
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach

Lanes	1	3	0		
AM	405	2037	0	2111	AM
NOON	0	0	0	0	NOON
PM	396	1592	0	2896	PM

Culver Dr

I-405 SB Ramps

Eastbound Approach

Lanes	AM	NOON	PM
	405	0	396
1.5	685	0	1052
0	0	0	0
1.5	449	0	503

CONTROL: Signalized

Westbound Approach

AM	NOON	PM	Lanes
0	0	6	0
0	0	0	0
0	0	0	0
429	0	944	

Northbound Approach

AM	2486	0 / 1426 / 429	AM
NOON	0	0 / 0 / 0	NOON
PM	2095	0 / 1838 / 944	PM
		0 / 3 / 1	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	2442	2111	AM
NOON	0	0	NOON
PM	1988	2896	PM

West Leg AM	West Leg NOON	West Leg PM		East Leg AM	East Leg NOON	East Leg PM
405	0	396		0	0	6
1134	0	1555		429	0	944

	South Leg
AM	2486 / 1855
NOON	0 / 0
PM	2095 / 2782

Total Volume Per Leg

	North Leg
AM	4553
NOON	0
PM	4884

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
1539	0	1951	429	0	950

	South Leg
AM	4341
NOON	0
PM	4877

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Culver Dr and Michelson Dr , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-013
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Culver Dr)

	Lanes	1	3	2		
AM		764	1437	284	1726	AM
NOON		0	0	0	0	NOON
PM		312	1209	581	2762	PM

Eastbound Approach (Michelson Dr)

	AM	NOON	PM	Lanes
	1198	0	724	
	244	0	773	2
	121	0	422	1
	146	0	236	1
Lanes	AM	NOON	PM	

Westbound Approach

AM	NOON	PM	Lanes
303	0	335	1
202	0	182	2
103	0	141	1
429	0	1053	
AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

AM	1686	232	1179	24	AM
NOON	0	0	0	0	NOON
PM	1586	230	1654	50	PM
		1	3	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	2485	1726	AM
NOON	0	0	NOON
PM	2102	2762	PM

	West Leg			East Leg		
AM	1198	0	724	608	0	658
NOON	511	0	1431	429	0	1053
PM	AM	NOON	PM	AM	NOON	PM

	South Leg	
AM	1686	1435
NOON	0	0
PM	1586	1934

Total Volume Per Leg

	North Leg	
AM	4211	AM
NOON	0	NOON
PM	4864	PM

	West Leg			East Leg		
AM	1709	0	2155	1037	0	1711
NOON	AM	NOON	PM	AM	NOON	PM
PM						

	South Leg
AM	3121
NOON	0
PM	3520

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Culver Dr and University Dr , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-014
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Culver Dr)

	Lanes	0	3	1		
AM		315	1154	70	1302	AM
NOON		0	0	0	0	NOON
PM		185	1086	48	1949	PM

Eastbound Approach (University Dr)

	AM	NOON	PM	Lanes
	1784	0	1080	
	82	0	405	2
	682	0	1288	3
	73	0	132	0
Lanes	AM	NOON	PM	

Westbound Approach

AM	NOON	PM	Lanes
78	0	81	0
1402	0	820	3
744	0	593	2
1404	0	2033	
AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

AM	1971	67	1142	652	AM
NOON	0	0	0	0	NOON
PM	1811	75	1463	697	PM
		1	3	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
AM	1539	1302	AM
NOON	0	0	NOON
PM	1319	1949	PM

	West Leg			East Leg		
AM	1784	0	1080	2224	0	1494
NOON	837	0	1825	1404	0	2033
PM	AM	NOON	PM	AM	NOON	PM

	South Leg	
AM	1971	1861
NOON	0	0
PM	1811	2235

Total Volume Per Leg

	North Leg	
AM	2841	AM
NOON	0	NOON
PM	3268	PM

	West Leg			East Leg		
AM	2621	0	2905	3628	0	3527
NOON	AM	NOON	PM	AM	NOON	PM
PM						

	South Leg
AM	3832
NOON	0
PM	4046

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Culver Dr and Harvard Ave , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-015
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Culver Dr)

	Lanes	0	3	0		
AM		386	1599	0	1855	AM
NOON		0	0	0	0	NOON
PM		399	1418	0	2242	PM

Eastbound Approach (Harvard Ave)

	Lanes	AM	NOON	PM
		473	0	502
	2	292	0	639
	0	0	0	0
	1	118	0	162
	Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

Northbound Approach

AM	1717	87	1563	0 AM
NOON	0	0	0	0 NOON
PM	1580	103	1603	0 PM
		1	3	0 Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1985	1855	AM
	0	0	NOON
	1817	2242	PM

West Leg			East Leg			
AM	NOON	PM				
473	0	502	0	0	0	AM
410	0	801	0	0	0	NOON
			AM	NOON	PM	

	South Leg	
AM	1717	1650
NOON	0	0
PM	1580	1706

Total Volume Per Leg

	North Leg	
	3840	AM
	0	NOON
	4059	PM

West Leg			East Leg			
AM	NOON	PM				
883	0	1303	0	0	0	
			AM	NOON	PM	

	South Leg	
AM	3367	
NOON	0	
PM	3286	

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Culver Dr and Campus Dr , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-016
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Culver Dr)

	Lanes	1	2	2		
AM		320	790	353	1365	AM
NOON		0	0	0	0	NOON
PM		301	842	376	1595	PM

Eastbound Approach (Campus Dr)

	Lanes	AM	NOON	PM
		839	0	601
	2	99	0	365
	2	220	0	397
	0	26	0	100
	Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	508	0	281	1
	451	0	221	2
	177	0	88	1
	698	0	894	
	AM	NOON	PM	

Northbound Approach

AM	993	68	758	125 AM
NOON	0	0	0	0 NOON
PM	1030	79	949	121 PM
		1	3	0 Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	1463	1365	AM
	0	0	NOON
	1519	1595	PM

West Leg			East Leg			
AM	NOON	PM				
839	0	601	1136	0	590	
345	0	862	698	0	894	
			AM	NOON	PM	

	South Leg	
AM	993	951
NOON	0	0
PM	1030	1149

Total Volume Per Leg

	North Leg	
	2828	AM
	0	NOON
	3114	PM

West Leg			East Leg			
AM	NOON	PM				
1184	0	1463	1834	0	1484	
			AM	NOON	PM	

	South Leg	
AM	1944	
NOON	0	
PM	2179	

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Culver Dr and Shady Canyon Dr , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-017
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Culver Dr)

Lanes	1	2	1		
AM	60	834	41	960	AM
NOON	0	0	0	0	NOON
PM	52	860	55	1107	PM

Eastbound Approach (Shady Canyon Dr)

	AM	NOON	PM
	370	0	219
1	33	0	59
2	37	0	118
1	145	0	193
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	83	0	36	0.5
	81	0	37	0.5
	386	0	190	2
	333	0	555	
	AM	NOON	PM	

Northbound Approach

AM	1365	229	844	255
NOON	0	0	0	0
PM	1243	130	1012	382
		2	2	1

Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	935	0	967
	960	0	1107
East Leg	550	0	263
	333	0	555
West Leg	370	0	219
	215	0	370
South Leg	1365	0	1243
	1328	0	1524

Total Volume Per Leg

	AM	NOON	PM
North Leg	1895	0	2074
East Leg	883	0	818
West Leg	585	0	589
South Leg	2693	0	2767

W Yale Loop and Alton Pkwy , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-018
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (W Yale Loop)

Lanes	0	3	1		
AM	112	143	48	379	AM
NOON	0	0	0	0	NOON
PM	113	107	51	352	PM

Eastbound Approach (Alton Pkwy)

	AM	NOON	PM
	1142	0	1106
1	88	0	83
2	561	0	1117
0	88	0	191
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	85	0	79	0
	873	0	882	2
	137	0	128	1
	828	0	1397	
	AM	NOON	PM	

Northbound Approach

AM	368	157	206	219
NOON	0	0	0	0
PM	426	111	190	229
		1	2	0

Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	303	0	271
	379	0	352
East Leg	1095	0	1089
	828	0	1397
West Leg	1142	0	1106
	737	0	1391
South Leg	368	0	426
	582	0	530

Total Volume Per Leg

	AM	NOON	PM
North Leg	682	0	623
East Leg	1923	0	2486
West Leg	1879	0	2497
South Leg	950	0	956

ITM Peak Hour Summary

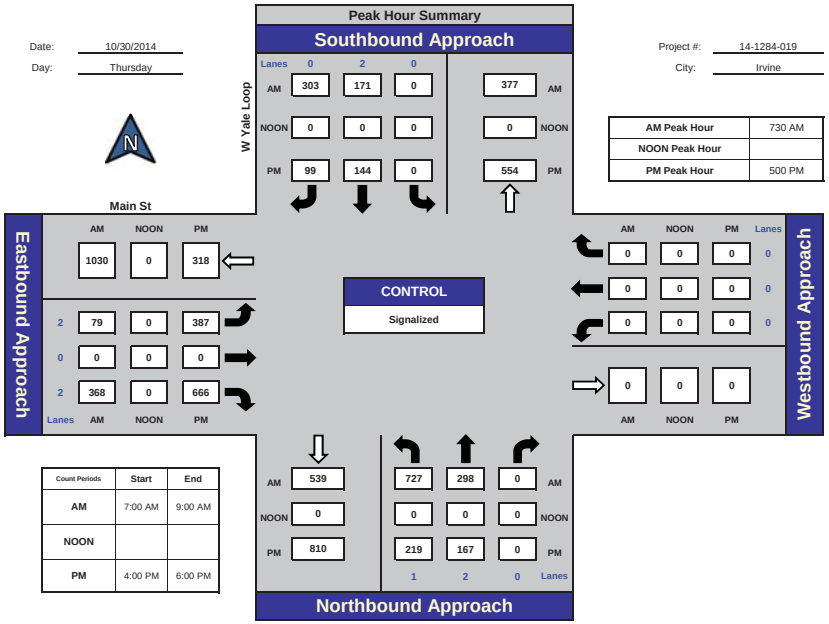
Prepared by:

National Data & Surveying Services

W Yale Loop and Main St , Irvine

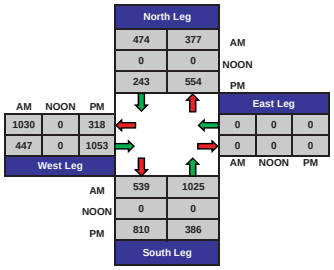
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-019
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

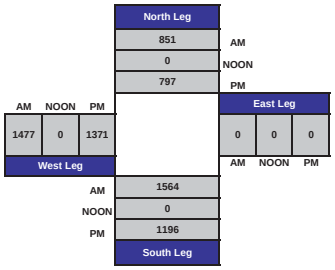


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

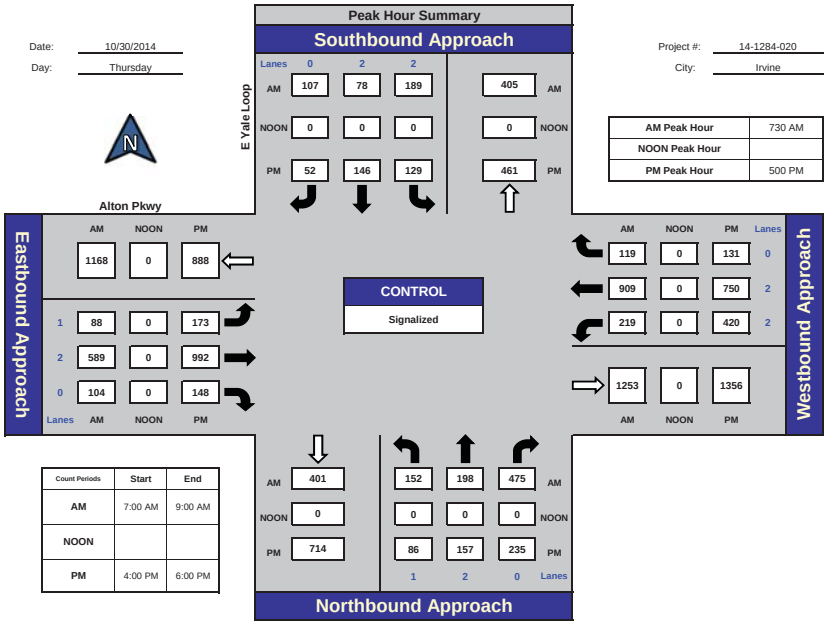
Prepared by:

National Data & Surveying Services

E Yale Loop and Alton Pkwy , Irvine

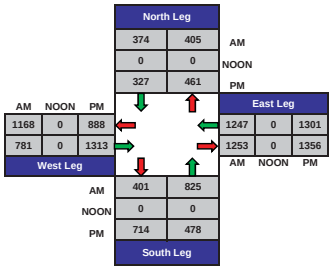
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-020
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

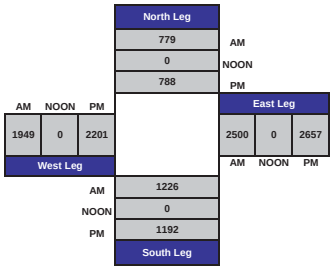


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Jeffrey Rd and Alton Pkwy , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-021
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Jeffrey Rd)

Lanes	0	3	2		
AM	120	1699	213	1022	AM
NOON	0	0	0	0	NOON
PM	200	1161	390	1666	PM

Eastbound Approach (Alton Pkwy)

Lanes	AM	NOON	PM
	1230	0	1350
2	154	0	255
2	604	0	841
0	524	0	302

Westbound Approach

AM	NOON	PM	Lanes
111	0	120	0
831	0	667	2
532	0	368	2
1038	0	1525	

Northbound Approach

AM	2755	279 757 221	AM
NOON	0	0 0 0	NOON
PM	1831	483 1291 294	PM
		2 3 1	Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	2032 1022	1474 0 1155	2755 1257	1230 0 1350
NOON	0 0	1038 0 1525	0 0	1282 0 1398
PM	1751 1666	AM NOON PM	1831 2068	AM NOON PM

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	3054	2512 0 2680	4012	2512 0 2748
NOON	0	AM NOON PM	0	AM NOON PM
PM	3417		3899	

Jeffrey Rd and I-405 NB Ramps , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-022
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Jeffrey Rd)

Lanes	1	3	0		
AM	1436	1564	0	1260	AM
NOON	0	0	0	0	NOON
PM	557	1287	0	2118	PM

Eastbound Approach (I-405 NB Ramps)

Lanes	AM	NOON	PM
	1436	0	557
0	0	0	0
0	0	0	0
0	0	0	0

Westbound Approach

AM	NOON	PM	Lanes
104	0	409	1
0	0	0	0
1294	0	1112	2
252	0	95	

Northbound Approach

AM	2858	0 1156 252	AM
NOON	0	0 0 0	NOON
PM	2399	0 1709 95	PM
		0 3 1	Lanes

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg	East Leg	South Leg	West Leg
AM	3000 1260	1398 0 1521	2858 1408	1436 0 557
NOON	0 0	252 0 95	0 0	0 0 0
PM	1844 2118	AM NOON PM	2399 1804	AM NOON PM

Total Volume Per Leg

	North Leg	East Leg	South Leg	West Leg
AM	4260	1650 0 1616	4266	1436 0 557
NOON	0	AM NOON PM	0	AM NOON PM
PM	3962		4203	

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

University Dr and I-405 SB Ramps , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-023
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (University Dr)

Lanes	1	3	0		
AM	263	2592	0	1399	AM
NOON	0	0	0	0	NOON
PM	240	2182	0	1810	PM

Eastbound Approach (I-405 SB Ramps)

Lanes	AM	NOON	PM
	263	0	240
2	272	0	402
0	0	0	0
1	74	0	46

Westbound Approach

Lanes	AM	NOON	PM
	0	0	0
0	0	0	0
0	0	0	0
	1202	0	1230

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	2666	0	1127	1202
NOON	0	0	0	0
PM	2228	0	1408	1230
Lanes		0	3	1

Total Ins & Outs

	AM	NOON	PM
North Leg	2855	0	2422
	1399	0	1810
West Leg	263	0	240
	346	0	448
East Leg	0	0	0
	1202	0	1230
South Leg	2666	0	2228
	2329	0	2638

Total Volume Per Leg

	AM	NOON	PM
North Leg	4254	0	4232
West Leg	609	0	688
East Leg	1202	0	1230
South Leg	4995	0	4866

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

University Dr and Michelson Dr , Irvine

Date: 10/30/2014
Day: Thursday
Project #: 14-1284-024
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (University Dr)

Lanes	0	3	1		
AM	166	2462	37	2276	AM
NOON	0	0	0	0	NOON
PM	322	1852	23	2641	PM

Eastbound Approach (Michelson Dr)

Lanes	AM	NOON	PM
	184	0	351
2	308	0	577
1	5	0	10
0	26	0	35

Westbound Approach

Lanes	AM	NOON	PM
0	2	0	106
1	0	0	11
1	3	0	45
	57	0	62

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Northbound Approach

AM	2491	18	1966	15
NOON	0	0	0	0
PM	1932	18	1958	29
Lanes		1	2	0

Total Ins & Outs

	AM	NOON	PM
North Leg	2665	0	2197
	2276	0	2641
West Leg	184	0	351
	339	0	622
East Leg	5	0	162
	57	0	62
South Leg	2491	0	1932
	1999	0	2005

Total Volume Per Leg

	AM	NOON	PM
North Leg	4941	0	4838
West Leg	523	0	973
East Leg	62	0	224
South Leg	4490	0	3937

ITM Peak Hour Summary

Prepared by:

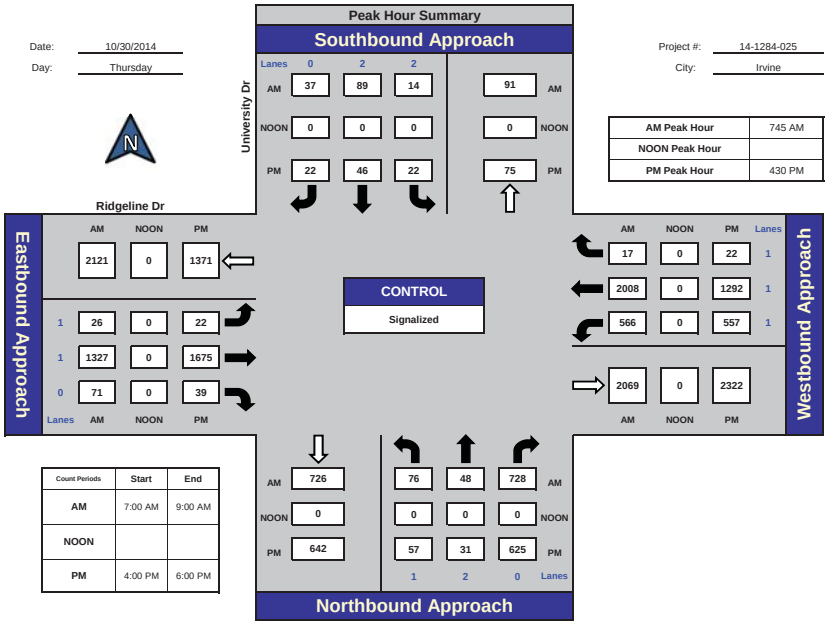
National Data & Surveying Services

University Dr and Ridgeline Dr , Irvine

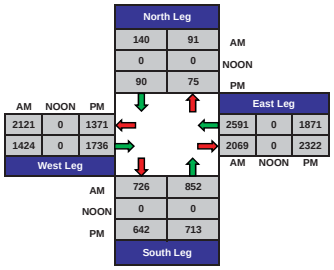
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-025
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

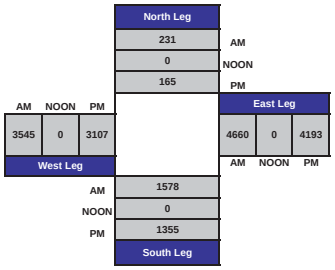
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

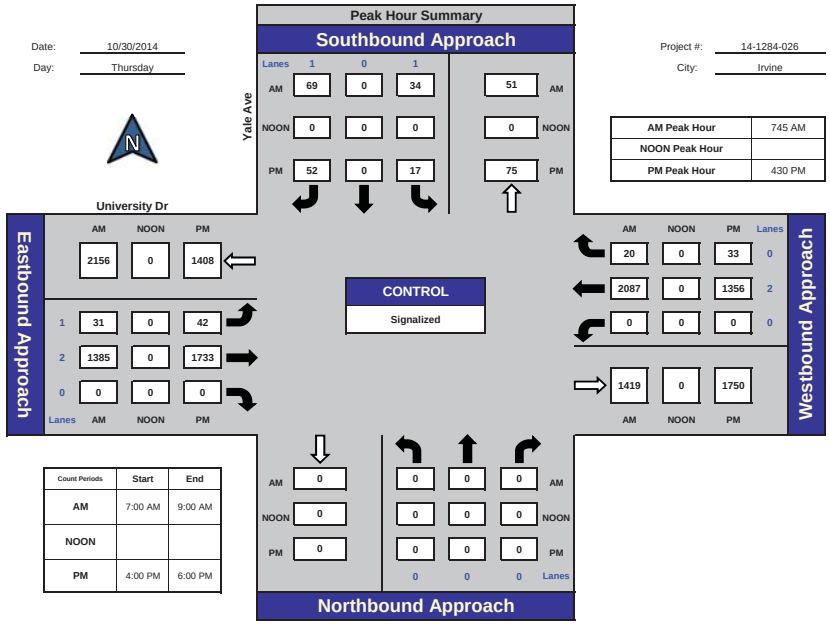
National Data & Surveying Services

Yale Ave and University Dr , Irvine

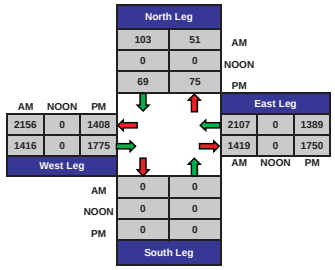
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-026
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

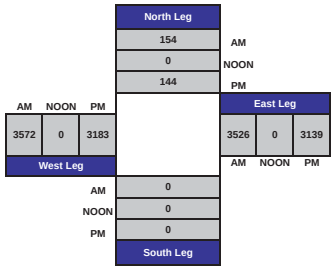
Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM



Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

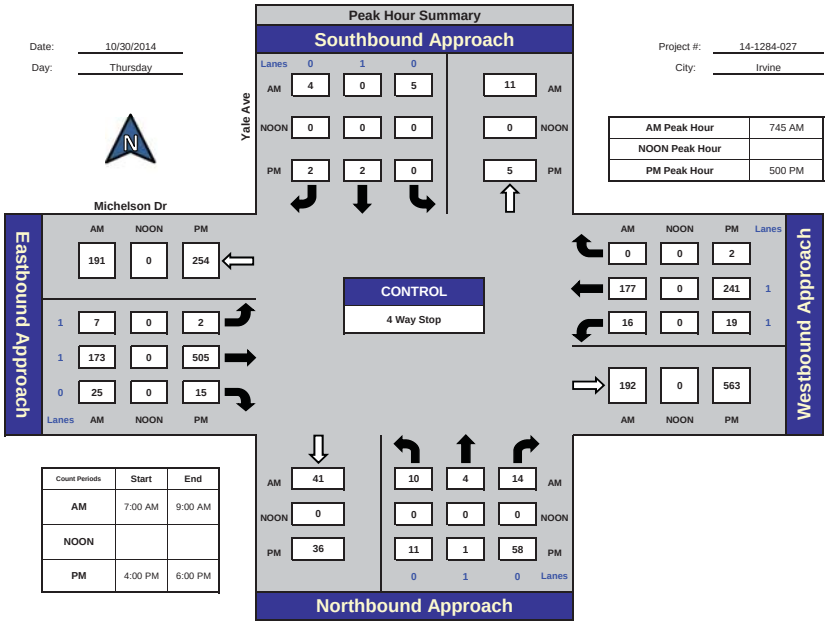
Prepared by:

National Data & Surveying Services

Yale Ave and Michelson Dr , Irvine

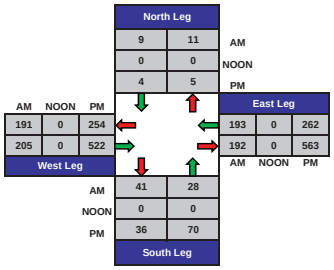
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-027
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

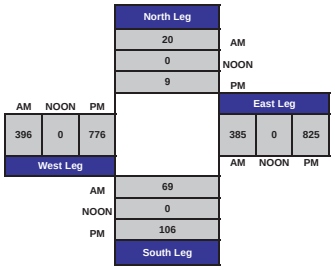


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



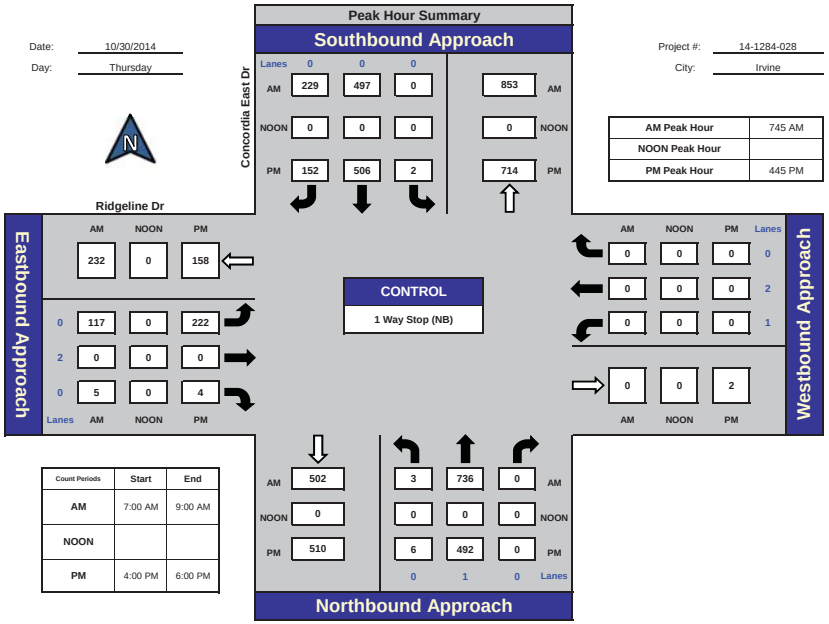
Total Volume Per Leg



Concordia East Dr and Ridgeline Dr , Irvine

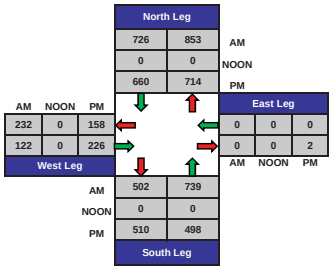
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-028
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

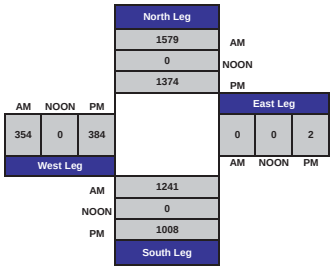


Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Turtle Rock Dr and Ridgeline Dr , Irvine

Date: 10/30/2014
Day: Thursday

Project #: 14-1284-029
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Turtle Rock Dr)

Lanes	0	1	1		
AM	287	19	248	679	AM
NOON	0	0	0	0	NOON
PM	132	30	282	499	PM

Eastbound Approach (Ridgeline Dr)

	AM	NOON	PM	Lanes
	403	0	189	
	229	0	176	1
	87	0	80	1
	9	0	11	1
Lanes	AM	NOON	PM	

Westbound Approach

	AM	NOON	PM	Lanes
	398	0	297	0
	112	0	52	1
	11	0	20	1
	363	0	376	
	AM	NOON	PM	

CONTROL: 4 Way Stop

Northbound Approach

AM	39	4	52	28
NOON	0	0	0	0
PM	61	5	26	14
		1	2	0 (Lanes)

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	554	679	AM
	0	0	NOON
	444	499	PM

West Leg			East Leg		
AM	NOON	PM			
403	0	189	521	0	369
325	0	267	363	0	376
			AM	NOON	PM

South Leg		
AM	39	84
NOON	0	0
PM	61	45

Total Volume Per Leg

	North Leg	
	1233	AM
	0	NOON
	943	PM

West Leg			East Leg		
AM	NOON	PM			
728	0	456	884	0	745
			AM	NOON	PM

South Leg	
AM	123
NOON	0
PM	106

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Turtle Rock Dr and Sunnyhill , Irvine

Date: 10/30/2014
Day: Thursday

Project #: 14-1284-030
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Turtle Rock Dr)

Lanes	0	1	1		
AM	0	206	202	410	AM
NOON	0	0	0	0	NOON
PM	0	128	125	339	PM

Eastbound Approach (Sunnyhill)

	AM	NOON	PM
	0	0	0
0	0	0	0
0	0	0	0
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	154	0	264	1
	0	0	0	0
	160	0	137	1
	434	0	205	
	AM	NOON	PM	

CONTROL: 3 Way Stop

Northbound Approach

AM	366	0	256	232
NOON	0	0	0	0
PM	265	0	75	80
		0	1	1 (Lanes)

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	408	410	AM
	0	0	NOON
	253	339	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	0	314	0	401
0	0	0	434	0	205
			AM	NOON	PM

South Leg		
AM	366	488
NOON	0	0
PM	265	155

Total Volume Per Leg

	North Leg	
	818	AM
	0	NOON
	592	PM

West Leg			East Leg		
AM	NOON	PM			
0	0	0	748	0	606
			AM	NOON	PM

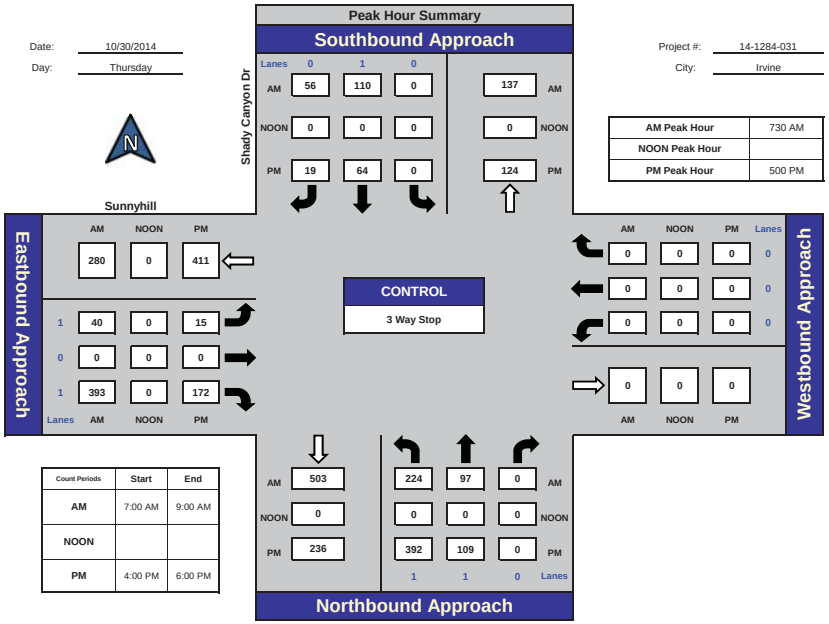
South Leg	
AM	854
NOON	0
PM	420

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Shady Canyon Dr and Sunnyhill , Irvine

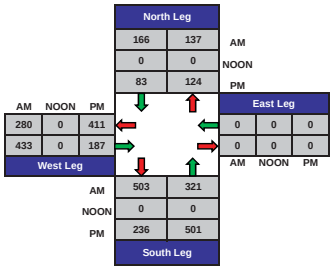
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-031
City: Irvine



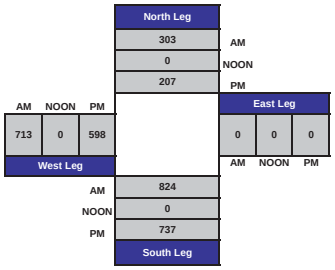
AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg

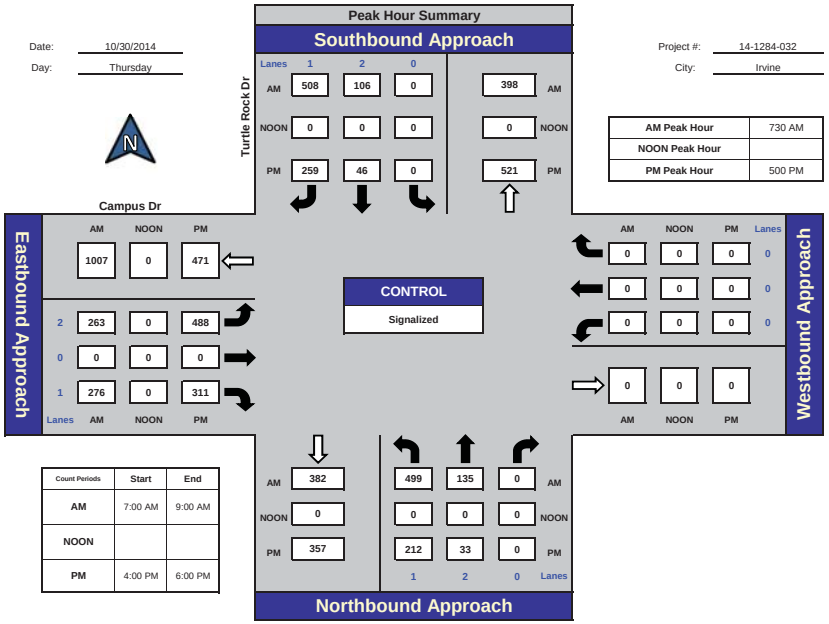


ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Turtle Rock Dr and Campus Dr , Irvine

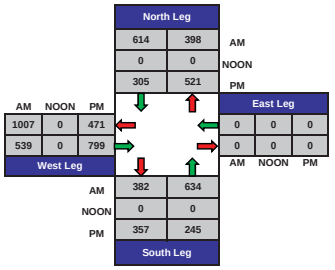
Date: 10/30/2014
Day: Thursday
Project #: 14-1284-032
City: Irvine



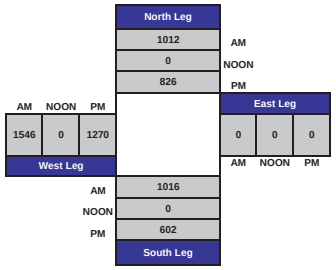
AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

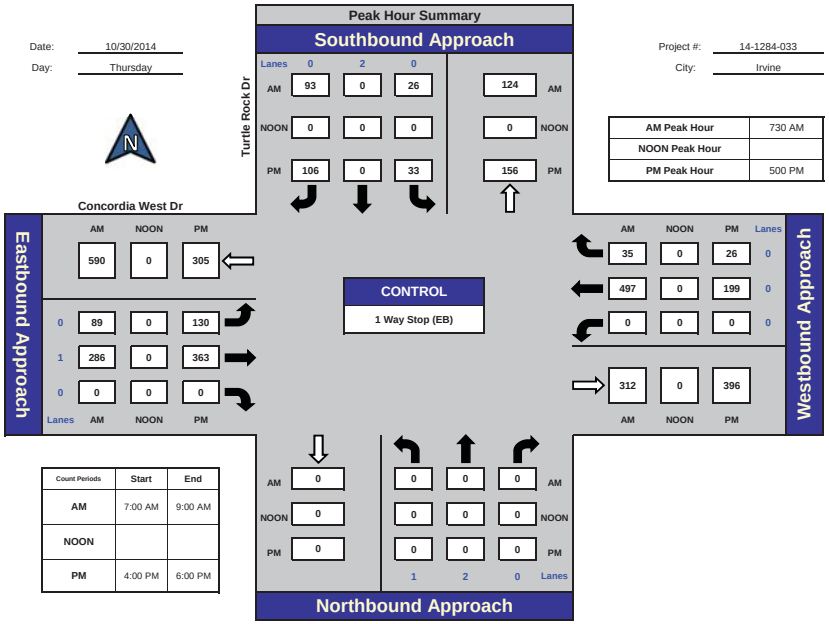
Turtle Rock Dr and Concordia West Dr , Irvine

Date: 10/30/2014

Day: Thursday

Project #: 14-1284-033

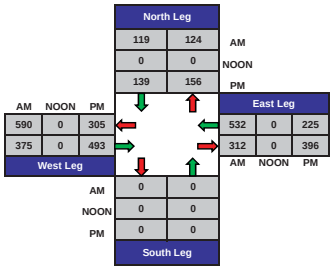
City: Irvine



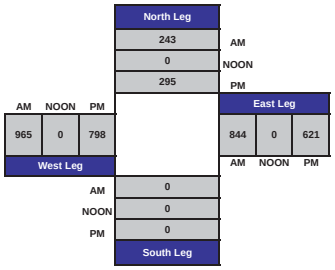
AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



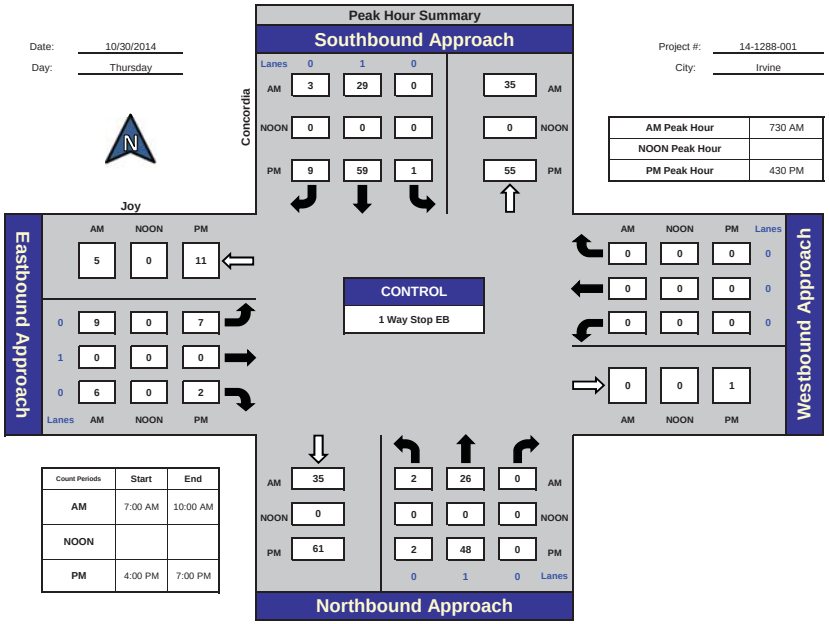
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia and Joy , Irvine

Date: 10/30/2014
Day: Thursday

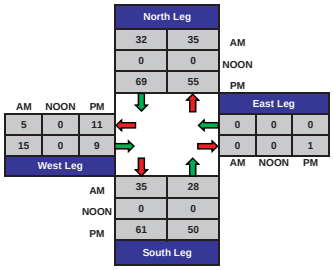
Project #: 14-1288-001
City: Irvine



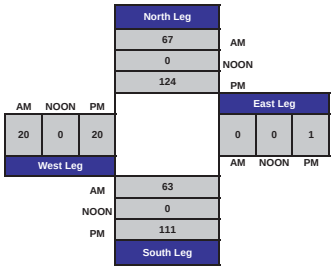
AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



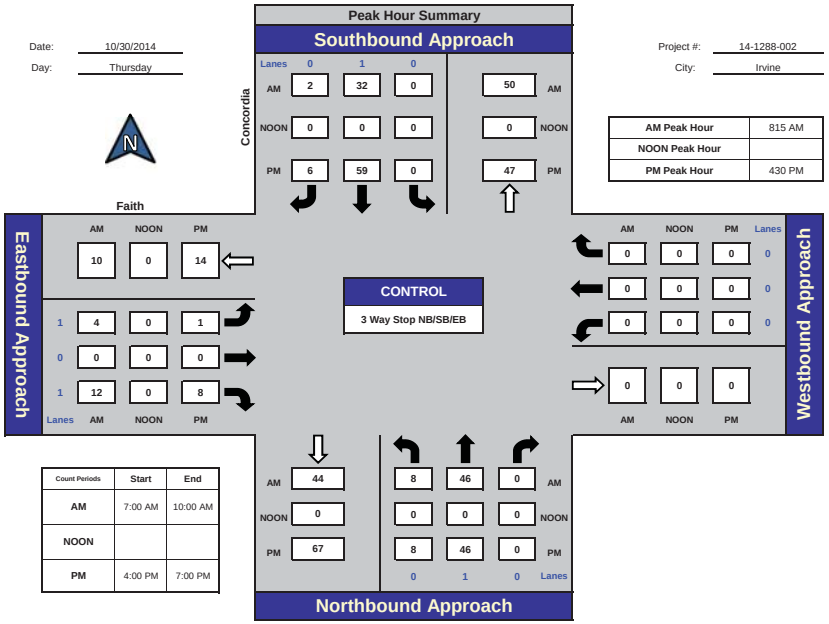
ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia and Faith , Irvine

Date: 10/30/2014
Day: Thursday

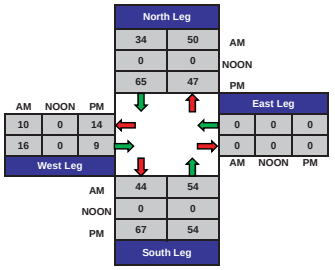
Project #: 14-1288-002
City: Irvine



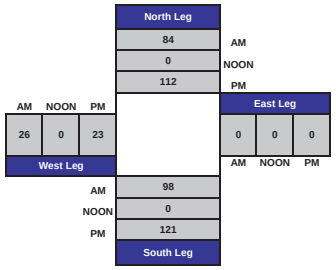
AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia and Daystar , Irvine

Date: 10/30/2014
Day: Thursday

Project #: 14-1288-003
City: Irvine

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Concordia)

Lanes	0	1	0		
AM	2	44	0	54	AM
NOON	0	0	0	0	NOON
PM	3	66	0	57	PM

Eastbound Approach (Daystar)

	AM	NOON	PM	Lanes
	8	0	6	
	2	0	2	0
	0	0	0	1
	9	0	3	0
Lanes	AM	NOON	PM	

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

CONTROL
1 Way Stop EB

Northbound Approach

AM	53	6	52	0 AM
NOON	0	0	0	0 NOON
PM	69	3	55	0 PM
		0	1	0 Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	46	54	AM
	0	0	NOON
	69	57	PM

West Leg			East Leg		
AM	NOON	PM			
8	0	6	0	0	0
11	0	5	0	0	0
			AM	NOON	PM

	South Leg	
AM	53	58
NOON	0	0
PM	69	58

Total Volume Per Leg

	North Leg	
	100	AM
	0	NOON
	126	PM

West Leg			East Leg		
AM	NOON	PM			
19	0	11	0	0	0
			AM	NOON	PM

	South Leg
AM	111
NOON	0
PM	127

Ascension and Concordia , Irvine

Date: 10/30/2014
Day: Thursday

Project #: 14-1288-004
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Ascension)

Lanes	0	0	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Eastbound Approach (Concordia)

	AM	NOON	PM	Lanes
	238	0	131	
	0	0	0	0
	122	0	243	1
	9	0	6	0
Lanes	AM	NOON	PM	

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	222	0	129	1
	8	0	25	0
	140	0	264	
	AM	NOON	PM	

CONTROL
1 Way Stop NB

Northbound Approach

AM	17	16	0	18 AM
NOON	0	0	0	0 NOON
PM	31	2	0	21 PM
		0	1	0 Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	0	0	AM
	0	0	NOON
	0	0	PM

West Leg			East Leg		
AM	NOON	PM			
238	0	131	230	0	154
131	0	249	140	0	264
			AM	NOON	PM

	South Leg	
AM	17	34
NOON	0	0
PM	31	23

Total Volume Per Leg

	North Leg	
	0	AM
	0	NOON
	0	PM

West Leg			East Leg		
AM	NOON	PM			
369	0	380	370	0	418
			AM	NOON	PM

	South Leg
AM	51
NOON	0
PM	54

Prepared by NDS/ATD

VOLUME

University Dr Bet. MacArthur Blvd & California Ave

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_001

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,059	13,285	27,344

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			25	10	35	12:00			214	189	403
00:15			18	9	27	12:15			196	186	382
00:30			9	8	17	12:30			192	184	376
00:45			12	64 9 36	21 100	12:45			189	791 216 775	405 1566
01:00			12	7	19	13:00			170	180	350
01:15			18	6	24	13:15			153	193	346
01:30			9	2	11	13:30			192	172	364
01:45			11	50 7 22	18 72	13:45			173	688 208 753	381 1441
02:00			10	5	15	14:00			175	213	388
02:15			8	4	12	14:15			191	177	368
02:30			2	3	5	14:30			168	180	348
02:45			5	25 6 18	11 43	14:45			170	704 209 779	379 1483
03:00			2	3	5	15:00			249	205	454
03:15			3	3	6	15:15			204	192	396
03:30			7	5	12	15:30			188	234	422
03:45			4	16 3 14	7 30	15:45			215	856 219 850	434 1706
04:00			2	0	2	16:00			298	296	594
04:15			4	5	9	16:15			267	266	533
04:30			8	1	9	16:30			305	305	610
04:45			28	42 20 26	48 68	16:45			333	1203 340 1207	673 2410
05:00			21	29	50	17:00			305	400	705
05:15			21	19	40	17:15			280	414	694
05:30			38	55	93	17:30			254	433	687
05:45			56	136 95 198	151 334	17:45			297	1136 350 1597	647 2733
06:00			47	63	110	18:00			240	309	549
06:15			77	56	133	18:15			242	271	513
06:30			120	103	223	18:30			245	235	480
06:45			144	388 110 332	254 720	18:45			221	948 203 1018	424 1966
07:00			191	126	317	19:00			172	170	342
07:15			274	184	458	19:15			159	151	310
07:30			383	233	616	19:30			149	127	276
07:45			388	1236 258 801	646 2037	19:45			111	591 126 574	237 1165
08:00			410	264	674	20:00			109	113	222
08:15			365	245	610	20:15			107	102	209
08:30			422	244	666	20:30			88	88	176
08:45			457	1654 244 997	701 2651	20:45			105	409 102 405	207 814
09:00			331	208	539	21:00			90	151	241
09:15			298	175	473	21:15			85	97	182
09:30			228	166	394	21:30			94	92	186
09:45			201	1058 193 742	394 1800	21:45			86	355 79 419	165 774
10:00			155	150	305	22:00			82	112	194
10:15			195	163	358	22:15			58	69	127
10:30			209	148	357	22:30			45	52	97
10:45			183	742 182 643	365 1385	22:45			39	224 55 288	94 512
11:00			152	160	312	23:00			47	27	74
11:15			150	180	330	23:15			26	25	51
11:30			178	176	354	23:30			16	26	42
11:45			153	633 183 699	336 1332	23:45			21	110 14 92	35 202
TOTALS				6044	4528 10572	TOTALS				8015	8757 16772
SPLIT %				57.2%	42.8% 38.7%	SPLIT %				47.8%	52.2% 61.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,059	13,285	27,344

AM Peak Hour			08:00	07:45	08:00	PM Peak Hour			16:30	17:00	16:45
AM Pk Volume			1654	1011	2651	PM Pk Volume			1223	1597	2759
Pk Hr Factor			0.905	0.957	0.945	Pk Hr Factor			0.918	0.922	0.978
7 - 9 Volume	0	0	2890	1798	4688	4 - 6 Volume	0	0	2339	2804	5143
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour			16:30	17:00	16:45
7 - 9 Pk Volume	0	0	1654	1011	2651	4 - 6 Pk Volume	0	0	1223	1597	2759
Pk Hr Factor	0.000	0.000	0.905	0.957	0.945	Pk Hr Factor	0.000	0.000	0.918	0.922	0.978

Prepared by NDS/ATD

VOLUME

University Dr Bet. California Ave & Campus Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_002

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,810	16,292	32,102

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			28	31	59	12:00			161	288	449
00:15			25	20	45	12:15			169	235	404
00:30			21	10	31	12:30			194	214	408
00:45			16	90 15 76	31 166	12:45			231	755 230 967	461 1722
01:00			21	12	33	13:00			205	178	383
01:15			14	18	32	13:15			241	166	407
01:30			14	11	25	13:30			190	209	399
01:45			5	54 14 55	19 109	13:45			229	865 204 757	433 1622
02:00			6	9	15	14:00			221	205	426
02:15			8	9	17	14:15			186	212	398
02:30			6	5	11	14:30			171	200	371
02:45			11	31 6 29	17 60	14:45			184	762 218 835	402 1597
03:00			4	2	6	15:00			219	300	519
03:15			3	3	6	15:15			193	265	458
03:30			5	6	11	15:30			269	278	547
03:45			5	17 3 14	8 31	15:45			331	1012 285 1128	616 2140
04:00			2	2	4	16:00			407	302	709
04:15			6	2	8	16:15			362	260	622
04:30			6	4	10	16:30			460	310	770
04:45			18	32 13 21	31 53	16:45			433	1662 328 1200	761 2862
05:00			23	15	38	17:00			462	340	802
05:15			20	12	32	17:15			405	387	792
05:30			46	27	73	17:30			389	408	797
05:45			91	180 34 88	125 268	17:45			431	1687 355 1490	786 3177
06:00			67	39	106	18:00			315	418	733
06:15			69	48	117	18:15			263	381	644
06:30			110	104	214	18:30			240	354	594
06:45			174	420 119 310	293 730	18:45			224	1042 304 1457	528 2499
07:00			140	184	324	19:00			164	286	450
07:15			195	292	487	19:15			154	232	386
07:30			338	361	699	19:30			130	202	332
07:45			313	986 473 1310	786 2296	19:45			117	565 161 881	278 1446
08:00			348	430	778	20:00			119	147	266
08:15			294	435	729	20:15			108	148	256
08:30			347	440	787	20:30			119	120	239
08:45			356	1345 502 1807	858 3152	20:45			120	466 138 553	258 1019
09:00			386	230	616	21:00			159	98	257
09:15			346	299	645	21:15			129	99	228
09:30			295	207	502	21:30			136	99	235
09:45			287	1314 206 942	493 2256	21:45			126	550 102 398	228 948
10:00			234	147	381	22:00			118	90	208
10:15			189	195	384	22:15			103	59	162
10:30			179	211	390	22:30			76	50	126
10:45			199	801 201 754	400 1555	22:45			55	352 36 235	91 587
11:00			184	174	358	23:00			69	52	121
11:15			161	197	358	23:15			37	36	73
11:30			161	242	403	23:30			31	20	51
11:45			154	660 240 853	394 1513	23:45			25	162 24 132	49 294
TOTALS				5930	6259 12189	TOTALS				9880	10033 19913
SPLIT %				48.7%	51.3% 38.0%	SPLIT %				49.6%	50.4% 62.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	15,810	16,292	32,102

AM Peak Hour			08:30	08:00	08:00	PM Peak Hour			16:30	17:15	17:00
AM Pk Volume			1435	1807	3152	PM Pk Volume			1760	1568	3177
Pk Hr Factor			0.929	0.900	0.918	Pk Hr Factor			0.952	0.938	0.990
7 - 9 Volume	0	0	2331	3117	5448	4 - 6 Volume	0	0	3349	2690	6039
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	17:00	17:00
7 - 9 Pk Volume	0	0	1345	1807	3152	4 - 6 Pk Volume	0	0	1760	1490	3177
Pk Hr Factor	0.000	0.000	0.945	0.900	0.918	Pk Hr Factor	0.000	0.000	0.952	0.913	0.990

Prepared by NDS/ATD

VOLUME

University Dr Bet. Campus Dr & Harvard Ave

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_003

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,898	13,609	28,507

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			23	3	26	12:00			223	158	381
00:15			21	7	28	12:15			196	132	328
00:30			9	7	16	12:30			193	165	358
00:45			7 60	5 22	12 82	12:45			190 802	187 642	377 1444
01:00			7	9	16	13:00			199	173	372
01:15			16	5	21	13:15			184	182	366
01:30			8	5	13	13:30			171	181	352
01:45			7 38	2 21	9 59	13:45			210 764	187 723	397 1487
02:00			8	1	9	14:00			240	164	404
02:15			6	4	10	14:15			202	133	335
02:30			6	1	7	14:30			209	127	336
02:45			5 25	5 11	10 36	14:45			201 852	148 572	349 1424
03:00			2	0	2	15:00			296	193	489
03:15			2	2	4	15:15			271	155	426
03:30			9	2	11	15:30			398	170	568
03:45			2 15	2 6	4 21	15:45			319 1284	171 689	490 1973
04:00			2	4	6	16:00			383	223	606
04:15			3	7	10	16:15			386	206	592
04:30			8	7	15	16:30			412	236	648
04:45			5 18	19 37	24 55	16:45			434 1615	258 923	692 2538
05:00			6	19	25	17:00			529	288	817
05:15			11	26	37	17:15			558	332	890
05:30			5	44	49	17:30			515	332	847
05:45			13 35	89 178	102 213	17:45			485 2087	304 1256	789 3343
06:00			27	74	101	18:00			404	279	683
06:15			27	84	111	18:15			417	206	623
06:30			53	125	178	18:30			474	189	663
06:45			77 184	167 450	244 634	18:45			376 1671	167 841	543 2512
07:00			80	193	273	19:00			317	114	431
07:15			115	301	416	19:15			209	100	309
07:30			218	411	629	19:30			165	78	243
07:45			241 654	518 1423	759 2077	19:45			173 864	77 369	250 1233
08:00			242	480	722	20:00			169	47	216
08:15			225	555	780	20:15			152	55	207
08:30			208	538	746	20:30			111	66	177
08:45			211 886	583 2156	794 3042	20:45			104 536	56 224	160 760
09:00			170	381	551	21:00			133	68	201
09:15			180	383	563	21:15			119	37	156
09:30			147	305	452	21:30			66	61	127
09:45			126 623	258 1327	384 1950	21:45			70 388	35 201	105 589
10:00			150	213	363	22:00			71	43	114
10:15			145	173	318	22:15			56	44	100
10:30			148	198	346	22:30			40	18	58
10:45			138 581	183 767	321 1348	22:45			35 202	26 131	61 333
11:00			143	164	307	23:00			39	30	69
11:15			140	135	275	23:15			35	12	47
11:30			160	148	308	23:30			24	15	39
11:45			149 592	129 576	278 1168	23:45			24 122	7 64	31 186
TOTALS			3711	6974	10685	TOTALS			11187	6635	17822
SPLIT %			34.7%	65.3%	37.5%	SPLIT %			62.8%	37.2%	62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	14,898	13,609	28,507

AM Peak Hour			07:30	08:00	08:00	PM Peak Hour			17:00	17:00	17:00
AM Pk Volume			926	2156	3042	PM Pk Volume			2087	1256	3343
Pk Hr Factor			0.957	0.925	0.958	Pk Hr Factor			0.935	0.946	0.939
7 - 9 Volume	0	0	1540	3579	5119	4 - 6 Volume	0	0	3702	2179	5881
7 - 9 Peak Hour			07:30	08:00	08:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	926	2156	3042	4 - 6 Pk Volume	0	0	2087	1256	3343
Pk Hr Factor	0.000	0.000	0.957	0.925	0.958	Pk Hr Factor	0.000	0.000	0.935	0.946	0.939

Prepared by NDS/ATD

VOLUME

University Dr Bet. Harvard Ave & Culver Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,391	10,868	22,259

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			19	4	23	12:00			160	117	277
00:15			18	5	23	12:15			144	124	268
00:30			10	8	18	12:30			140	110	250
00:45			10 57	5 22	15 79	12:45			119 563	148 499	267 1062
01:00			8	5	13	13:00			149	125	274
01:15			9	4	13	13:15			132	130	262
01:30			7	4	11	13:30			125	114	239
01:45			5 29	1 14	6 43	13:45			141 547	138 507	279 1054
02:00			4	3	7	14:00			182	112	294
02:15			3	2	5	14:15			182	85	267
02:30			8	3	11	14:30			155	103	258
02:45			8 23	6 14	14 37	14:45			152 671	149 449	301 1120
03:00			0	1	1	15:00			211	137	348
03:15			1	3	4	15:15			185	135	320
03:30			8	2	10	15:30			254	108	362
03:45			1 10	2 8	3 18	15:45			202 852	134 514	336 1366
04:00			1	2	3	16:00			346	166	512
04:15			1	6	7	16:15			322	193	515
04:30			5	6	11	16:30			368	186	554
04:45			2 9	14 28	16 37	16:45			348 1384	239 784	587 2168
05:00			6	17	23	17:00			488	238	726
05:15			7	34	41	17:15			479	272	751
05:30			3	34	37	17:30			459	275	734
05:45			6 22	67 152	73 174	17:45			414 1840	295 1080	709 2920
06:00			24	58	82	18:00			274	214	488
06:15			24	60	84	18:15			304	179	483
06:30			33	91	124	18:30			299	152	451
06:45			43 124	124 333	167 457	18:45			225 1102	121 666	346 1768
07:00			61	171	232	19:00			165	92	257
07:15			114	250	364	19:15			132	89	221
07:30			197	335	532	19:30			114	68	182
07:45			233 605	385 1141	618 1746	19:45			107 518	68 317	175 835
08:00			235	365	600	20:00			95	44	139
08:15			216	473	689	20:15			102	49	151
08:30			181	457	638	20:30			91	45	136
08:45			189 821	507 1802	696 2623	20:45			94 382	50 188	144 570
09:00			104	308	412	21:00			103	63	166
09:15			99	271	370	21:15			101	39	140
09:30			102	233	335	21:30			103	43	146
09:45			70 375	192 1004	262 1379	21:45			76 383	31 176	107 559
10:00			83	142	225	22:00			79	32	111
10:15			85	150	235	22:15			47	41	88
10:30			88	144	232	22:30			27	16	43
10:45			95 351	141 577	236 928	22:45			34 187	20 109	54 296
11:00			94	124	218	23:00			33	21	54
11:15			104	112	216	23:15			30	10	40
11:30			132	108	240	23:30			17	17	34
11:45			102 432	83 427	185 859	23:45			24 104	9 57	33 161
TOTALS			2858	5522	8380	TOTALS			8533	5346	13879
SPLIT %			34.1%	65.9%	37.6%	SPLIT %			61.5%	38.5%	62.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	11,391	10,868	22,259

AM Peak Hour			07:30	08:00	08:00	PM Peak Hour			17:00	17:00	17:00
AM Pk Volume			881	1802	2623	PM Pk Volume			1840	1080	2920
Pk Hr Factor			0.937	0.889	0.942	Pk Hr Factor			0.943	0.915	0.972
7 - 9 Volume	0	0	1426	2943	4369	4 - 6 Volume	0	0	3224	1864	5088
7 - 9 Peak Hour			07:30	08:00	08:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	881	1802	2623	4 - 6 Pk Volume	0	0	1840	1080	2920
Pk Hr Factor	0.000	0.000	0.937	0.889	0.942	Pk Hr Factor	0.000	0.000	0.943	0.915	0.972

Prepared by NDS/ATD

VOLUME

University Dr Bet. Culver Dr & Yale Ave

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,604	15,948	32,552

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			32	15	47	12:00			226	209	435
00:15			28	18	46	12:15			201	180	381
00:30			23	13	36	12:30			196	182	378
00:45			23	106 9 55	32 161	12:45			203 826	213 784	416 1610
01:00			17	10	27	13:00			217	180	397
01:15			17	9	26	13:15			176	185	361
01:30			10	6	16	13:30			194	175	369
01:45			9	53 2 27	11 80	13:45			245 832	188 728	433 1560
02:00			9	9	18	14:00			250	188	438
02:15			7	1	8	14:15			270	169	439
02:30			9	4	13	14:30			217	186	403
02:45			11	36 7 21	18 57	14:45			229 966	274 817	503 1783
03:00			6	0	6	15:00			250	296	546
03:15			4	3	7	15:15			306	221	527
03:30			10	3	13	15:30			377	186	563
03:45			10	30 4 10	14 40	15:45			335 1268	219 922	554 2190
04:00			4	9	13	16:00			448	277	725
04:15			6	1	7	16:15			428	241	669
04:30			4	8	12	16:30			465	289	754
04:45			4	18 13 31	17 49	16:45			441 1782	319 1126	760 2908
05:00			10	20	30	17:00			453	311	764
05:15			13	37	50	17:15			470	401	871
05:30			16	58	74	17:30			376	392	768
05:45			19	58 80 195	99 253	17:45			389 1688	337 1441	726 3129
06:00			28	67	95	18:00			408	301	709
06:15			31	90	121	18:15			414	296	710
06:30			64	127	191	18:30			422	249	671
06:45			127	250 219 503	346 753	18:45			356 1600	202 1048	558 2648
07:00			129	244	373	19:00			240	175	415
07:15			173	342	515	19:15			201	138	339
07:30			304	510	814	19:30			225	131	356
07:45			348	954 495 1591	843 2545	19:45			174 840	117 561	291 1401
08:00			372	541	913	20:00			191	115	306
08:15			350	577	927	20:15			147	93	240
08:30			331	530	861	20:30			160	94	254
08:45			283	1336 574 2222	857 3558	20:45			178 676	106 408	284 1084
09:00			211	452	663	21:00			175	107	282
09:15			192	345	537	21:15			166	82	248
09:30			196	304	500	21:30			148	80	228
09:45			184	783 246 1347	430 2130	21:45			126 615	64 333	190 948
10:00			184	181	365	22:00			145	53	198
10:15			178	254	432	22:15			90	53	143
10:30			130	216	346	22:30			70	35	105
10:45			163	655 205 856	368 1511	22:45			62 367	30 171	92 538
11:00			174	190	364	23:00			64	25	89
11:15			157	164	321	23:15			45	19	64
11:30			190	153	343	23:30			37	23	60
11:45			161	682 157 664	318 1346	23:45			37 183	20 87	57 270
TOTALS				4961	7522 12483	TOTALS				11643	8426 20069
SPLIT %				39.7%	60.3% 38.3%	SPLIT %				58.0%	42.0% 61.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,604	15,948	32,552

AM Peak Hour			07:45	08:00	08:00	PM Peak Hour			16:30	17:00	16:45
AM Pk Volume			1401	2222	3558	PM Pk Volume			1829	1441	3163
Pk Hr Factor			0.942	0.963	0.960	Pk Hr Factor			0.973	0.898	0.908
7 - 9 Volume	0	0	2290	3813	6103	4 - 6 Volume	0	0	3470	2567	6037
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:30	17:00	16:45
7 - 9 Pk Volume	0	0	1401	2222	3558	4 - 6 Pk Volume	0	0	1829	1441	3163
Pk Hr Factor	0.000	0.000	0.942	0.963	0.960	Pk Hr Factor	0.000	0.000	0.973	0.898	0.908

Prepared by NDS/ATD

VOLUME

University Dr Bet. Yale Ave & Ridgeline Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,233	15,829	32,062

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			38	10	48	12:00			222	197	419
00:15			19	22	41	12:15			218	172	390
00:30			21	16	37	12:30			172	187	359
00:45			19	97 12 60	31 157	12:45			230 842	212 768	442 1610
01:00			19	6	25	13:00			204	179	383
01:15			14	7	21	13:15			179	185	364
01:30			13	6	19	13:30			182	178	360
01:45			6	52 3 22	9 74	13:45			233 798	179 721	412 1519
02:00			9	8	17	14:00			267	188	455
02:15			7	2	9	14:15			258	165	423
02:30			8	5	13	14:30			198	187	385
02:45			12	36 7 22	19 58	14:45			228 951	264 804	492 1755
03:00			5	0	5	15:00			274	263	537
03:15			4	3	7	15:15			296	213	509
03:30			11	3	14	15:30			363	187	550
03:45			10	30 5 11	15 41	15:45			320 1253	225 888	545 2141
04:00			4	9	13	16:00			434	261	695
04:15			7	1	8	16:15			447	251	698
04:30			5	9	14	16:30			468	327	795
04:45			5	21 12 31	17 52	16:45			413 1762	315 1154	728 2916
05:00			10	21	31	17:00			465	345	810
05:15			16	38	54	17:15			388	404	792
05:30			18	59	77	17:30			370	389	759
05:45			17	61 73 191	90 252	17:45			383 1606	329 1467	712 3073
06:00			29	69	98	18:00			328	300	628
06:15			34	90	124	18:15			329	279	608
06:30			65	139	204	18:30			346	240	586
06:45			124	252 211 509	335 761	18:45			368 1371	204 1023	572 2394
07:00			121	272	393	19:00			261	178	439
07:15			181	394	575	19:15			225	141	366
07:30			300	515	815	19:30			224	130	354
07:45			354	956 485 1666	839 2622	19:45			174 884	107 556	281 1440
08:00			351	525	876	20:00			177	120	297
08:15			360	518	878	20:15			146	96	242
08:30			356	588	944	20:30			160	90	250
08:45			266	1333 500 2131	766 3464	20:45			155 638	101 407	256 1045
09:00			222	465	687	21:00			179	112	291
09:15			192	349	541	21:15			151	83	234
09:30			210	280	490	21:30			137	78	215
09:45			185	809 247 1341	432 2150	21:45			127 594	68 341	195 935
10:00			174	181	355	22:00			135	51	186
10:15			181	207	388	22:15			92	51	143
10:30			146	203	349	22:30			65	36	101
10:45			160	661 220 811	380 1472	22:45			56 348	32 170	88 518
11:00			182	176	358	23:00			65	26	91
11:15			160	163	323	23:15			47	19	66
11:30			170	148	318	23:30			36	19	55
11:45			185	697 165 652	350 1349	23:45			33 181	19 83	52 264
TOTALS				5005	7447 12452	TOTALS				11228	8382 19610
SPLIT %				40.2%	59.8% 38.8%	SPLIT %				57.3%	42.7% 61.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	16,233	15,829	32,062

AM Peak Hour			07:45	08:00	07:45	PM Peak Hour			16:15	17:00	16:30
AM Pk Volume			1421	2131	3537	PM Pk Volume			1793	1467	3125
Pk Hr Factor			0.987	0.906	0.937	Pk Hr Factor			0.958	0.908	0.965
7 - 9 Volume	0	0	2289	3797	6086	4 - 6 Volume	0	0	3368	2621	5989
7 - 9 Peak Hour			07:45	08:00	07:45	4 - 6 Peak Hour			16:15	17:00	16:30
7 - 9 Pk Volume	0	0	1421	2131	3537	4 - 6 Pk Volume	0	0	1793	1467	3125
Pk Hr Factor	0.000	0.000	0.987	0.906	0.937	Pk Hr Factor	0.000	0.000	0.958	0.908	0.965

Prepared by NDS/ATD

VOLUME

University Dr Bet. Ridgeline Dr & Michelson Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,111	21,626	44,737

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			44	25	69	12:00			293	278	571
00:15			28	35	63	12:15			332	267	599
00:30			19	19	38	12:30			277	264	541
00:45			24 115	22 101	46 216	12:45			308 1210	307 1116	615 2326
01:00			23	15	38	13:00			289	270	559
01:15			15	11	26	13:15			273	281	554
01:30			14	12	26	13:30			317	272	589
01:45			7 59	6 44	13 103	13:45			333 1212	286 1109	619 2321
02:00			12	13	25	14:00			366	290	656
02:15			9	7	16	14:15			363	264	627
02:30			7	6	13	14:30			318	270	588
02:45			11 39	9 35	20 74	14:45			317 1364	345 1169	662 2533
03:00			8	1	9	15:00			370	331	701
03:15			3	4	7	15:15			462	330	792
03:30			10	4	14	15:30			479	262	741
03:45			12 33	7 16	19 49	15:45			423 1734	335 1258	758 2992
04:00			5	11	16	16:00			557	358	915
04:15			7	3	10	16:15			553	345	898
04:30			11	10	21	16:30			613	405	1018
04:45			15 38	20 44	35 82	16:45			574 2297	445 1553	1019 3850
05:00			19	24	43	17:00			586	475	1061
05:15			30	47	77	17:15			546	542	1088
05:30			50	69	119	17:30			527	500	1027
05:45			49 148	90 230	139 378	17:45			509 2168	463 1980	972 4148
06:00			59	86	145	18:00			472	376	848
06:15			61	99	160	18:15			492	395	887
06:30			98	184	282	18:30			498	362	860
06:45			179 397	282 651	461 1048	18:45			497 1959	297 1430	794 3389
07:00			224	317	541	19:00			374	275	649
07:15			302	544	846	19:15			286	264	550
07:30			464	604	1068	19:30			272	236	508
07:45			494 1484	627 2092	1121 3576	19:45			199 1131	202 977	401 2108
08:00			510	683	1193	20:00			212	210	422
08:15			518	610	1128	20:15			226	158	384
08:30			548	672	1220	20:30			201	157	358
08:45			419 1995	595 2560	1014 4555	20:45			195 834	150 675	345 1509
09:00			349	504	853	21:00			224	186	410
09:15			314	386	700	21:15			195	157	352
09:30			327	331	658	21:30			185	148	333
09:45			281 1271	303 1524	584 2795	21:45			160 764	105 596	265 1360
10:00			303	237	540	22:00			185	112	297
10:15			282	260	542	22:15			123	91	214
10:30			252	250	502	22:30			84	79	163
10:45			246 1083	308 1055	554 2138	22:45			80 472	55 337	135 809
11:00			280	251	531	23:00			75	52	127
11:15			267	206	473	23:15			57	44	101
11:30			269	224	493	23:30			41	34	75
11:45			267 1083	232 913	499 1996	23:45			48 221	31 161	79 382
TOTALS			7745	9265	17010	TOTALS			15366	12361	27727
SPLIT %			45.5%	54.5%	38.0%	SPLIT %			55.4%	44.6%	62.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	23,111	21,626	44,737

AM Peak Hour			07:45	07:45	07:45	PM Peak Hour			16:15	17:00	16:45
AM Pk Volume			2070	2592	4662	PM Pk Volume			2326	1980	4195
Pk Hr Factor			0.944	0.949	0.955	Pk Hr Factor			0.949	0.913	0.964
7 - 9 Volume	0	0	3479	4652	8131	4 - 6 Volume	0	0	4465	3533	7998
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			16:15	17:00	16:45
7 - 9 Pk Volume	0	0	2070	2592	4662	4 - 6 Pk Volume	0	0	2326	1980	4195
Pk Hr Factor	0.000	0.000	0.944	0.949	0.955	Pk Hr Factor	0.000	0.000	0.949	0.913	0.964

Prepared by NDS/ATD

VOLUME

University Dr Bet. Michelson Dr & I-405 SB Ramps

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	27,016	24,537	51,553

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			40	27	67	12:00			342	334	676
00:15			31	33	64	12:15			366	288	654
00:30			22	15	37	12:30			325	330	655
00:45			23 116	16 91	39 207	12:45			389 1422	338 1290	727 2712
01:00			24	18	42	13:00			356	305	661
01:15			16	14	30	13:15			328	322	650
01:30			15	12	27	13:30			369	319	688
01:45			9 64	5 49	14 113	13:45			390 1443	318 1264	708 2707
02:00			12	14	26	14:00			396	330	726
02:15			9	7	16	14:15			420	310	730
02:30			9	7	16	14:30			406	327	733
02:45			16 46	12 40	28 86	14:45			380 1602	449 1416	829 3018
03:00			8	1	9	15:00			426	395	821
03:15			3	4	7	15:15			562	345	907
03:30			11	6	17	15:30			536	305	841
03:45			11 33	9 20	20 53	15:45			496 2020	365 1410	861 3430
04:00			8	11	19	16:00			602	407	1009
04:15			9	5	14	16:15			636	409	1045
04:30			13	16	29	16:30			640	481	1121
04:45			21 51	34 66	55 117	16:45			672 2550	500 1797	1172 4347
05:00			23	34	57	17:00			650	572	1222
05:15			41	62	103	17:15			670	596	1266
05:30			64	77	141	17:30			649	558	1207
05:45			65 193	103 276	168 469	17:45			672 2641	488 2214	1160 4855
06:00			61	105	166	18:00			628	409	1037
06:15			85	121	206	18:15			616	454	1070
06:30			125	221	346	18:30			596	406	1002
06:45			199 470	316 763	515 1233	18:45			637 2477	347 1616	984 4093
07:00			246	358	604	19:00			455	325	780
07:15			361	577	938	19:15			348	296	644
07:30			501	629	1130	19:30			308	284	592
07:45			616 1724	636 2200	1252 3924	19:45			262 1373	224 1129	486 2502
08:00			560	744	1304	20:00			249	237	486
08:15			586	638	1224	20:15			253	199	452
08:30			560	656	1216	20:30			233	187	420
08:45			487 2193	639 2677	1126 4870	20:45			222 957	189 812	411 1769
09:00			412	502	914	21:00			251	208	459
09:15			353	456	809	21:15			217	182	399
09:30			375	365	740	21:30			196	159	355
09:45			315 1455	341 1664	656 3119	21:45			181 845	142 691	323 1536
10:00			349	321	670	22:00			203	138	341
10:15			361	328	689	22:15			146	102	248
10:30			299	320	619	22:30			91	91	182
10:45			315 1324	350 1319	665 2643	22:45			93 533	75 406	168 939
11:00			293	295	588	23:00			76	68	144
11:15			318	246	564	23:15			63	56	119
11:30			297	301	598	23:30			49	43	92
11:45			342 1250	285 1127	627 2377	23:45			46 234	33 200	79 434
TOTALS			8919	10292	19211	TOTALS			18097	14245	32342
SPLIT %			46.4%	53.6%	37.3%	SPLIT %			56.0%	44.0%	62.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	27,016	24,537	51,553

AM Peak Hour			07:45	08:00	07:45	PM Peak Hour			16:45	16:45	16:45
AM Pk Volume			2322	2677	4996	PM Pk Volume			2641	2226	4867
Pk Hr Factor			0.942	0.900	0.958	Pk Hr Factor			0.983	0.934	0.961
7 - 9 Volume	0	0	3917	4877	8794	4 - 6 Volume	0	0	5191	4011	9202
7 - 9 Peak Hour			07:45	08:00	07:45	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	2322	2677	4996	4 - 6 Pk Volume	0	0	2641	2226	4867
Pk Hr Factor	0.000	0.000	0.942	0.900	0.958	Pk Hr Factor	0.000	0.000	0.983	0.934	0.961

Prepared by NDS/ATD

VOLUME

Jeffrey Rd Bet. I-405 SB Ramps & I-405 NB Ramps

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_009

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,992	25,947	46,939

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			40	27	67	12:00			349	346	695
00:15			37	39	76	12:15			323	306	629
00:30			35	26	61	12:30			292	321	613
00:45			24	136 18 110	42 246	12:45			295	1259 343 1316	638 2575
01:00			18	13	31	13:00			300	325	625
01:15			20	11	31	13:15			303	337	640
01:30			9	17	26	13:30			326	320	646
01:45			12	59 24 65	36 124	13:45			348	1277 337 1319	685 2596
02:00			4	14	18	14:00			317	331	648
02:15			5	5	10	14:15			315	309	624
02:30			18	11	29	14:30			323	355	678
02:45			9	36 10 40	19 76	14:45			313	1268 481 1476	794 2744
03:00			10	8	18	15:00			352	428	780
03:15			4	8	12	15:15			381	367	748
03:30			13	12	25	15:30			342	354	696
03:45			7	34 12 40	19 74	15:45			353	1428 422 1571	775 2999
04:00			7	10	17	16:00			398	485	883
04:15			8	6	14	16:15			387	458	845
04:30			10	21	31	16:30			452	535	987
04:45			23	48 27 64	50 112	16:45			432	1669 519 1997	951 3666
05:00			25	30	55	17:00			441	624	1065
05:15			42	57	99	17:15			461	641	1102
05:30			63	75	138	17:30			467	603	1070
05:45			65	195 95 257	160 452	17:45			437	1806 553 2421	990 4227
06:00			87	104	191	18:00			461	437	898
06:15			110	131	241	18:15			442	508	950
06:30			132	218	350	18:30			459	429	888
06:45			163	492 329 782	492 1274	18:45			481	1843 354 1728	835 3571
07:00			215	352	567	19:00			388	346	734
07:15			275	593	868	19:15			318	299	617
07:30			300	650	950	19:30			287	306	593
07:45			368	1158 699 2294	1067 3452	19:45			242	1235 222 1173	464 2408
08:00			372	758	1130	20:00			243	237	480
08:15			325	713	1038	20:15			233	190	423
08:30			341	685	1026	20:30			239	180	419
08:45			290	1328 689 2845	979 4173	20:45			233	948 173 780	406 1728
09:00			289	534	823	21:00			232	204	436
09:15			297	459	756	21:15			204	193	397
09:30			267	397	664	21:30			183	179	362
09:45			253	1106 369 1759	622 2865	21:45			218	837 144 720	362 1557
10:00			232	336	568	22:00			181	131	312
10:15			251	348	599	22:15			136	95	231
10:30			265	368	633	22:30			111	87	198
10:45			268	1016 364 1416	632 2432	22:45			67	495 73 386	140 881
11:00			257	301	558	23:00			80	59	139
11:15			283	271	554	23:15			63	48	111
11:30			251	324	575	23:30			46	45	91
11:45			293	1084 306 1202	599 2286	23:45			46	235 34 186	80 421
TOTALS				6692	10874 17566	TOTALS				14300	15073 29373
SPLIT %				38.1%	61.9% 37.4%	SPLIT %				48.7%	51.3% 62.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	20,992	25,947	46,939

AM Peak Hour			07:45	07:45	07:45	PM Peak Hour			18:00	17:00	17:00
AM Pk Volume			1406	2855	4261	PM Pk Volume			1843	2421	4227
Pk Hr Factor			0.945	0.942	0.943	Pk Hr Factor			0.958	0.944	0.959
7 - 9 Volume	0	0	2486	5139	7625	4 - 6 Volume	0	0	3475	4418	7893
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	1406	2855	4261	4 - 6 Pk Volume	0	0	1806	2421	4227
Pk Hr Factor	0.000	0.000	0.945	0.942	0.943	Pk Hr Factor	0.000	0.000	0.967	0.944	0.959

Prepared by NDS/ATD

VOLUME

Jeffrey Rd Bet. I-405 NB Ramps & Alton Pkwy

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_010

DAILY TOTALS	NB	SB	EB	WB	Total
	21,626	23,893	0	0	45,519

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	37	35			72	12:00	343	317			660
00:15	37	28			65	12:15	352	294			646
00:30	44	23			67	12:30	289	301			590
00:45	21 139	14 100			35 239	12:45	302 1286	317 1229			619 2515
01:00	29	23			52	13:00	280	273			553
01:15	24	7			31	13:15	321	299			620
01:30	17	11			28	13:30	317	306			623
01:45	16 86	9 50			25 136	13:45	366 1284	276 1154			642 2438
02:00	16	9			25	14:00	320	305			625
02:15	8	11			19	14:15	342	289			631
02:30	16	11			27	14:30	306	318			624
02:45	13 53	6 37			19 90	14:45	333 1301	348 1260			681 2561
03:00	10	7			17	15:00	355	370			725
03:15	5	8			13	15:15	409	347			756
03:30	12	9			21	15:30	365	307			672
03:45	4 31	13 37			17 68	15:45	364 1493	339 1363			703 2856
04:00	8	10			18	16:00	447	389			836
04:15	13	17			30	16:15	404	336			740
04:30	6	32			38	16:30	507	422			929
04:45	27 54	40 99			67 153	16:45	496 1854	440 1587			936 3441
05:00	21	48			69	17:00	544	477			1021
05:15	32	67			99	17:15	531	489			1020
05:30	52	86			138	17:30	544	429			973
05:45	62 167	100 301			162 468	17:45	516 2135	453 1848			969 3983
06:00	56	108			164	18:00	449	371			820
06:15	103	158			261	18:15	454	389			843
06:30	116	198			314	18:30	492	334			826
06:45	162 437	254 718			416 1155	18:45	510 1905	332 1426			842 3331
07:00	201	399			600	19:00	391	342			733
07:15	243	576			819	19:15	350	281			631
07:30	284	742			1026	19:30	296	269			565
07:45	317 1045	706 2423			1023 3468	19:45	263 1300	211 1103			474 2403
08:00	344	778			1122	20:00	243	214			457
08:15	301	747			1048	20:15	244	198			442
08:30	302	758			1060	20:30	216	208			424
08:45	285 1232	702 2985			987 4217	20:45	209 912	161 781			370 1693
09:00	277	503			780	21:00	224	222			446
09:15	292	402			694	21:15	220	193			413
09:30	249	379			628	21:30	195	192			387
09:45	259 1077	359 1643			618 2720	21:45	190 829	139 746			329 1575
10:00	213	307			520	22:00	186	155			341
10:15	240	293			533	22:15	173	118			291
10:30	284	349			633	22:30	134	80			214
10:45	291 1028	343 1292			634 2320	22:45	105 598	75 428			180 1026
11:00	247	289			536	23:00	91	50			141
11:15	295	256			551	23:15	75	50			125
11:30	267	273			540	23:30	64	56			120
11:45	285 1094	275 1093			560 2187	23:45	56 286	34 190			90 476
TOTALS	6443	10778			17221	TOTALS	15183	13115			28298
SPLIT %	37.4%	62.6%			37.8%	SPLIT %	53.7%	46.3%			62.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	21,626	23,893	0	0	45,519

AM Peak Hour	11:45	07:45			07:45	PM Peak Hour	17:00	17:00			17:00
AM Pk Volume	1269	2989			4253	PM Pk Volume	2135	1848			3983
Pk Hr Factor	0.901	0.960			0.948	Pk Hr Factor	0.981	0.945			0.975
7 - 9 Volume	2277	5408	0	0	7685	4 - 6 Volume	3989	3435	0	0	7424
7 - 9 Peak Hour	07:45	07:45			07:45	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	1264	2989	0	0	4253	4 - 6 Pk Volume	2135	1848	0	0	3983
Pk Hr Factor	0.919	0.960	0.000	0.000	0.948	Pk Hr Factor	0.981	0.945	0.000	0.000	0.975

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. Alton Pkwy & Main St

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_011

DAILY TOTALS	NB	SB	EB	WB	Total
	22,810	22,575	0	0	45,385

AM Period	NB		SB		EB		WB		TOTAL	
00:00	45		37						82	
00:15	41		59						100	
00:30	22		27						49	
00:45	33	141	17	140					50	281
01:00	19		17						36	
01:15	10		14						24	
01:30	17		14						31	
01:45	23	69	4	49					27	118
02:00	6		8						14	
02:15	5		11						16	
02:30	10		4						14	
02:45	6	27	10	33					16	60
03:00	9		7						16	
03:15	8		6						14	
03:30	8		10						18	
03:45	11	36	10	33					21	69
04:00	6		11						17	
04:15	8		8						16	
04:30	11		22						33	
04:45	23	48	30	71					53	119
05:00	21		33						54	
05:15	29		49						78	
05:30	46		89						135	
05:45	76	172	73	244					149	416
06:00	45		80						125	
06:15	91		134						225	
06:30	101		137						238	
06:45	145	382	245	596					390	978
07:00	170		248						418	
07:15	196		327						523	
07:30	212		506						718	
07:45	308	886	504	1585					812	2471
08:00	286		561						847	
08:15	290		566						856	
08:30	294		557						851	
08:45	317	1187	497	2181					814	3368
09:00	319		430						749	
09:15	280		323						603	
09:30	279		361						640	
09:45	262	1140	309	1423					571	2563
10:00	249		302						551	
10:15	250		261						511	
10:30	243		322						565	
10:45	267	1009	318	1203					585	2212
11:00	289		300						589	
11:15	309		281						590	
11:30	331		285						616	
11:45	346	1275	350	1216					696	2491
TOTALS		6372		8774						15146
SPLIT %		42.1%		57.9%						33.4%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	316		302						618	
12:15	366		345						711	
12:30	328		334						662	
12:45	339	1349	415	1396					754	2745
13:00	351		340						691	
13:15	357		350						707	
13:30	373		377						750	
13:45	355	1436	315	1382					670	2818
14:00	354		326						680	
14:15	362		375						737	
14:30	361		360						721	
14:45	404	1481	324	1385					728	2866
15:00	384		310						694	
15:15	472		361						833	
15:30	459		358						817	
15:45	498	1813	314	1343					812	3156
16:00	485		315						800	
16:15	512		306						818	
16:30	519		350						869	
16:45	531	2047	335	1306					866	3353
17:00	544		358						902	
17:15	561		358						919	
17:30	542		402						944	
17:45	516	2163	385	1503					901	3666
18:00	537		386						923	
18:15	519		375						894	
18:30	518		386						904	
18:45	447	2021	394	1541					841	3562
19:00	499		351						850	
19:15	410		298						708	
19:30	369		299						668	
19:45	277	1555	286	1234					563	2789
20:00	281		267						548	
20:15	253		253						506	
20:30	248		254						502	
20:45	211	993	236	1010					447	2003
21:00	242		225						467	
21:15	206		244						450	
21:30	207		204						411	
21:45	195	850	208	881					403	1731
22:00	163		171						334	
22:15	139		151						290	
22:30	95		131						226	
22:45	91	488	107	560					198	1048
23:00	86		82						168	
23:15	66		58						124	
23:30	45		50						95	
23:45	45	242	70	260					115	502
TOTALS		16438		13801						30239
SPLIT %		54.4%		45.6%						66.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	22,810	22,575	0	0	45,385

AM Peak Hour	11:30	07:45				08:00	PM Peak Hour	16:45	17:30				17:15
AM Pk Volume	1359	2188				3368	PM Pk Volume	2178	1548				3687
Pk Hr Factor	0.928	0.966				0.984	Pk Hr Factor	0.971	0.963				0.976
7 - 9 Volume	2073	3766	0	0		5839	4 - 6 Volume	4210	2809	0	0		7019
7 - 9 Peak Hour	08:00	07:45				08:00	4 - 6 Peak Hour	16:45	17:00				17:00
7 - 9 Pk Volume	1187	2188	0	0		3368	4 - 6 Pk Volume	2178	1503	0	0		3666
Pk Hr Factor	0.936	0.966	0.000	0.000		0.984	Pk Hr Factor	0.971	0.935	0.000	0.000		0.971

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. Main St & I-405 NB Ramps

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_012

DAILY TOTALS	NB	SB	EB	WB	Total
	24,548	24,165	0	0	48,713

AM Period	NB		SB		EB		WB		TOTAL	
00:00	81		40						121	
00:15	61		35						96	
00:30	30		15						45	
00:45	22	194	12	102					34	296
01:00	27		9						36	
01:15	32		15						47	
01:30	21		11						32	
01:45	30	110	7	42					37	152
02:00	13		20						33	
02:15	15		8						23	
02:30	18		14						32	
02:45	13	59	6	48					19	107
03:00	7		7						14	
03:15	6		3						9	
03:30	10		7						17	
03:45	13	36	10	27					23	63
04:00	8		13						21	
04:15	7		18						25	
04:30	10		28						38	
04:45	34	59	43	102					77	161
05:00	30		62						92	
05:15	30		84						114	
05:30	64		121						185	
05:45	56	180	98	365					154	545
06:00	73		127						200	
06:15	101		186						287	
06:30	106		220						326	
06:45	151	431	318	851					469	1282
07:00	142		393						535	
07:15	215		492						707	
07:30	234		575						809	
07:45	308	899	564	2024					872	2923
08:00	324		600						924	
08:15	324		597						921	
08:30	358		638						996	
08:45	309	1315	588	2423					897	3738
09:00	298		439						737	
09:15	293		462						755	
09:30	270		421						691	
09:45	305	1166	387	1709					692	2875
10:00	256		319						575	
10:15	253		318						571	
10:30	295		380						675	
10:45	299	1103	326	1343					625	2446
11:00	295		318						613	
11:15	336		315						651	
11:30	368		302						670	
11:45	412	1411	351	1286					763	2697
TOTALS		6963		10322						17285
SPLIT %		40.3%		59.7%						35.5%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	384		335						719	
12:15	407		348						755	
12:30	355		353						708	
12:45	372	1518	394	1430					766	2948
13:00	420		391						811	
13:15	409		400						809	
13:30	392		356						748	
13:45	408	1629	345	1492					753	3121
14:00	352		378						730	
14:15	361		376						737	
14:30	429		382						811	
14:45	452	1594	396	1532					848	3126
15:00	521		330						851	
15:15	443		369						812	
15:30	481		327						808	
15:45	434	1879	357	1383					791	3262
16:00	478		327						805	
16:15	498		319						817	
16:30	556		357						913	
16:45	555	2087	375	1378					930	3465
17:00	550		416						966	
17:15	547		386						933	
17:30	574		418						992	
17:45	582	2253	402	1622					984	3875
18:00	567		367						934	
18:15	603		358						961	
18:30	535		358						893	
18:45	520	2225	344	1427					864	3652
19:00	443		331						774	
19:15	378		326						704	
19:30	328		307						635	
19:45	352	1501	264	1228					616	2729
20:00	283		268						551	
20:15	281		228						509	
20:30	245		241						486	
20:45	289	1098	190	927					479	2025
21:00	241		225						466	
21:15	260		196						456	
21:30	227		189						416	
21:45	215	943	166	776					381	1719
22:00	210		158						368	
22:15	156		90						246	
22:30	118		96						214	
22:45	101	585	93	437					194	1022
23:00	91		76						167	
23:15	61		57						118	
23:30	68		44						112	
23:45	53	273	34	211					87	484
TOTALS		17585		13843						31428
SPLIT %		56.0%		44.0%						64.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	24,548	24,165	0	0	48,713

AM Peak Hour	11:30	08:00				08:00	PM Peak Hour	17:30	17:00				17:00
AM Pk Volume	1571	2423				3738	PM Pk Volume	2326	1622				3875
Pk Hr Factor	0.953	0.949				0.938	Pk Hr Factor	0.964	0.970				0.977
7 - 9 Volume	2214	4447	0	0		6661	4 - 6 Volume	4340	3000	0	0		7340
7 - 9 Peak Hour	08:00	08:00				08:00	4 - 6 Peak Hour	17:00	17:00				17:00
7 - 9 Pk Volume	1315	2423	0	0		3738	4 - 6 Pk Volume	2253	1622	0	0		3875
Pk Hr Factor	0.918	0.949	0.000	0.000		0.938	Pk Hr Factor	0.968	0.970	0.000	0.000		0.977

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. I-405 NB Ramps & I-405 SB Ramps

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_013

DAILY TOTALS	NB	SB	EB	WB	Total
	30,529	23,141	0	0	53,670

AM Period	NB		SB		EB		WB		TOTAL	PM Period	NB		SB		EB		WB		TOTAL
00:00	70		36						106	12:00	449		349						798
00:15	77		56						133	12:15	450		339						789
00:30	50		30						80	12:30	464		336						800
00:45	62	259	23	145					85 404	12:45	431	1794	378	1402					809 3196
01:00	32		27						59	13:00	441		326						767
01:15	26		13						39	13:15	454		334						788
01:30	33		16						49	13:30	441		352						793
01:45	43	134	11	67					54 201	13:45	456	1792	328	1340					784 3132
02:00	25		10						35	14:00	422		320						742
02:15	18		11						29	14:15	487		347						834
02:30	15		8						23	14:30	505		327						832
02:45	19	77	14	43					33 120	14:45	546	1960	369	1363					915 3323
03:00	15		9						24	15:00	566		339						905
03:15	12		9						21	15:15	624		383						1007
03:30	20		8						28	15:30	604		315						919
03:45	17	64	10	36					27 100	15:45	592	2386	323	1360					915 3746
04:00	22		9						31	16:00	564		330						894
04:15	16		10						26	16:15	560		345						905
04:30	21		21						42	16:30	562		384						946
04:45	26	85	27	67					53 152	16:45	620	2306	394	1453					1014 3759
05:00	36		34						70	17:00	620		422						1042
05:15	59		64						123	17:15	683		413						1096
05:30	70		75						145	17:30	657		469						1126
05:45	104	269	84	257					188 526	17:45	610	2570	451	1755					1061 4325
06:00	94		118						212	18:00	620		436						1056
06:15	125		175						300	18:15	586		382						968
06:30	168		205						373	18:30	628		410						1038
06:45	226	613	269	767					495 1380	18:45	580	2414	400	1628					980 4042
07:00	289		282						571	19:00	559		352						911
07:15	343		336						679	19:15	548		312						860
07:30	370		518						888	19:30	391		304						695
07:45	451	1453	483	1619					934 3072	19:45	402	1900	264	1232					666 3132
08:00	444		606						1050	20:00	383		229						612
08:15	474		559						1033	20:15	373		259						632
08:30	494		524						1018	20:30	337		225						562
08:45	497	1909	522	2211					1019 4120	20:45	321	1414	220	933					541 2347
09:00	403		444						847	21:00	376		222						598
09:15	399		409						808	21:15	361		194						555
09:30	372		377						749	21:30	291		161						452
09:45	370	1544	323	1553					693 3097	21:45	301	1329	189	766					490 2095
10:00	311		312						623	22:00	268		163						431
10:15	348		299						647	22:15	227		142						369
10:30	322		312						634	22:30	177		105						282
10:45	363	1344	297	1220					660 2564	22:45	158	830	104	514					262 1344
11:00	359		279						638	23:00	158		87						245
11:15	428		275						703	23:15	124		59						183
11:30	428		296						724	23:30	102		58						160
11:45	395	1610	297	1147					692 2757	23:45	89	473	59	263					148 736
TOTALS		9361		9132					18493	TOTALS		21168		14009					35177
SPLIT %		50.6%		49.4%					34.5%	SPLIT %		60.2%		39.8%					65.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	30,529	23,141	0	0	53,670

AM Peak Hour	08:00	08:00			08:00	PM Peak Hour	16:45	17:15		17:15
AM Pk Volume	1909	2211			4120	PM Pk Volume	2580	1769		4339
Pk Hr Factor	0.960	0.912			0.981	Pk Hr Factor	0.944	0.943		0.963
7 - 9 Volume	3362	3830	0	0	7192	4 - 6 Volume	4876	3208	0	8084
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:45	17:00		17:00
7 - 9 Pk Volume	1909	2211	0	0	4120	4 - 6 Pk Volume	2580	1755	0	4325
Pk Hr Factor	0.960	0.912	0.000	0.000	0.981	Pk Hr Factor	0.944	0.936	0.000	0.960

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. I-405 SB Ramps & Michelson Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_014

DAILY TOTALS	NB	SB	EB	WB	Total
	20,326	22,040	0	0	42,366

AM Period	NB		SB		EB		WB		TOTAL	PM Period	NB		SB		EB		WB		TOTAL
00:00	48		41						89	12:00	333		336						669
00:15	55		52						107	12:15	282		336						618
00:30	39		43						82	12:30	330		332						662
00:45	43	185	37	173					80 358	12:45	290	1235	383	1387					673 2622
01:00	22		35						57	13:00	302		323						625
01:15	24		23						47	13:15	312		348						660
01:30	26		23						49	13:30	302		320						622
01:45	27	99	21	102					48 201	13:45	310	1226	321	1312					631 2538
02:00	22		17						39	14:00	292		325						617
02:15	12		18						30	14:15	332		384						716
02:30	18		16						34	14:30	297		336						633
02:45	15	67	14	65					29 132	14:45	327	1248	412	1457					739 2705
03:00	15		8						23	15:00	372		387						759
03:15	9		10						19	15:15	385		413						798
03:30	13		12						25	15:30	391		354						745
03:45	12	49	11	41					23 90	15:45	381	1529	335	1489					716 3018
04:00	13		15						28	16:00	345		343						688
04:15	10		12						22	16:15	340		332						672
04:30	11		15						26	16:30	364		382						746
04:45	17	51	30	72					47 123	16:45	382	1431	392	1449					774 2880
05:00	28		27						55	17:00	410		397						807
05:15	42		47						89	17:15	442		367						809
05:30	51		69						120	17:30	463		412						875
05:45	60	181	106	249					166 430	17:45	437	1752	410	1586					847 3338
06:00	75		94						169	18:00	459		397						856
06:15	84		132						216	18:15	430		379						809
06:30	113		192						305	18:30	412		374						786
06:45	165	437	241	659					406 1096	18:45	381	1682	439	1589					820 3271
07:00	160		235						395	19:00	328		380						708
07:15	188		282						470	19:15	305		359						664
07:30	254		371						625	19:30	259		345						604
07:45	306	908	340	1228					646 2136	19:45	259	1151	274	1358					533 2509
08:00	293		444						737	20:00	274		238						512
08:15	318		430						748	20:15	227		252						479
08:30	335		378						713	20:30	217		198						415
08:45	323	1269	437	1689					760 2958	20:45	200	918	199	887					399 1805
09:00	254		374						628	21:00	254		204						458
09:15	261		371						632	21:15	232		208						440
09:30	267		277						544	21:30	228		178						406
09:45	244	1026	290	1312					534 2338	21:45	230	944	170	760					400 1704
10:00	210		289						499	22:00	192		150						342
10:15	232		300						532	22:15	170		134						304
10:30	222		318						540	22:30	117		120						237
10:45	251	915	277	1184					528 2099	22:45	117	596	111	515					228 1111
11:00	231		276						507	23:00	104		76						180
11:15	283		290						573	23:15	103		59						162
11:30	284		321						605	23:30	72		74						146
11:45	278	1076	318	1205					596 2281	23:45	72	351	63	272					135 623
TOTALS		6263		7979					14242	TOTALS		14063		14061					28124
SPLIT %		44.0%		56.0%					33.6%	SPLIT %		50.0%		50.0%					66.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	20,326	22,040	0	0	42,366

AM Peak Hour	08:00	08:00			08:00	PM Peak Hour	17:15	17:30		17:15
AM Pk Volume	1269	1689			2958	PM Pk Volume	1801	1598		3387
Pk Hr Factor	0.947	0.951			0.973	Pk Hr Factor	0.972	0.970		0.968
7 - 9 Volume	2177	2917	0	0	5094	4 - 6 Volume	3183	3035	0	6218
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	17:00	17:00		17:00
7 - 9 Pk Volume	1269	1689	0	0	2958	4 - 6 Pk Volume	1752	1586	0	3338
Pk Hr Factor	0.947	0.951	0.000	0.000	0.973	Pk Hr Factor	0.946	0.962	0.000	0.954

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. Michelson Dr & University Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_015

DAILY TOTALS	NB	SB	EB	WB	Total
	17,771	17,476	0	0	35,247

AM Period	NB		SB		EB		WB		TOTAL	
00:00	54		38						92	
00:15	57		44						101	
00:30	41		33						74	
00:45	38	190	35	150					73	340
01:00	34		24						58	
01:15	21		21						42	
01:30	37		21						58	
01:45	25	117	18	84					43	201
02:00	21		14						35	
02:15	14		16						30	
02:30	20		12						32	
02:45	12	67	13	55					25	122
03:00	11		7						18	
03:15	3		10						13	
03:30	8		8						16	
03:45	9	31	9	34					18	65
04:00	7		7						14	
04:15	9		10						19	
04:30	5		9						14	
04:45	17	38	19	45					36	83
05:00	22		18						40	
05:15	25		28						53	
05:30	36		39						75	
05:45	39	122	66	151					105	273
06:00	49		62						111	
06:15	56		74						130	
06:30	86		134						220	
06:45	147	338	215	485					362	823
07:00	126		142						268	
07:15	126		229						355	
07:30	201		352						553	
07:45	251	704	307	1030					558	1734
08:00	251		379						630	
08:15	289		387						676	
08:30	300		306						606	
08:45	276	1116	316	1388					592	2504
09:00	220		323						543	
09:15	209		301						510	
09:30	228		242						470	
09:45	175	832	254	1120					429	1952
10:00	236		215						451	
10:15	177		231						408	
10:30	204		250						454	
10:45	206	823	224	920					430	1743
11:00	237		229						466	
11:15	213		213						426	
11:30	216		241						457	
11:45	254	920	241	924					495	1844
TOTALS		5298		6386						11684
SPLIT %		45.3%		54.7%						33.1%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	265		233						498	
12:15	275		291						566	
12:30	285		250						535	
12:45	274	1099	289	1063					563	2162
13:00	272		245						517	
13:15	215		271						486	
13:30	263		274						537	
13:45	240	990	234	1024					474	2014
14:00	310		272						582	
14:15	268		226						494	
14:30	256		281						537	
14:45	252	1086	339	1118					591	2204
15:00	315		321						636	
15:15	394		314						708	
15:30	424		280						704	
15:45	335	1468	221	1136					556	2604
16:00	282		240						522	
16:15	322		271						593	
16:30	314		313						627	
16:45	319	1237	325	1149					644	2386
17:00	375		288						663	
17:15	424		278						702	
17:30	413		309						722	
17:45	440	1652	309	1184					749	2836
18:00	439		330						769	
18:15	408		303						711	
18:30	369		276						645	
18:45	297	1513	352	1261					649	2774
19:00	249		309						558	
19:15	253		275						528	
19:30	197		235						432	
19:45	216	915	217	1036					433	1951
20:00	220		176						396	
20:15	197		203						400	
20:30	183		191						374	
20:45	232	832	182	752					414	1584
21:00	240		167						407	
21:15	223		172						395	
21:30	189		132						321	
21:45	209	861	141	612					350	1473
22:00	167		151						318	
22:15	121		133						254	
22:30	118		103						221	
22:45	94	500	96	483					190	983
23:00	90		96						186	
23:15	91		60						151	
23:30	70		73						143	
23:45	69	320	43	272					112	592
TOTALS		12473		11090						23563
SPLIT %		52.9%		47.1%						66.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	17,771	17,476	0	0	35,247

AM Peak Hour	08:00	07:30			08:00
AM Pk Volume	1116	1425			2504
Pk Hr Factor	0.930	0.921			0.926
7 - 9 Volume	1820	2418	0	0	4238
7 - 9 Peak Hour	08:00	07:30			08:00
7 - 9 Pk Volume	1116	1425	0	0	2504
Pk Hr Factor	0.930	0.921	0.000	0.000	0.926

PM Peak Hour	17:15	18:00			17:30
PM Pk Volume	1716	1261			2951
Pk Hr Factor	0.975	0.896			0.959
4 - 6 Volume	2889	2333	0	0	5222
4 - 6 Peak Hour	17:00	16:30			17:00
4 - 6 Pk Volume	1652	1204	0	0	2836
Pk Hr Factor	0.939	0.926	0.000	0.000	0.947

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. University Dr & Harvard Ave

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_016

DAILY TOTALS	NB	SB	EB	WB	Total
	21,470	21,534	0	0	43,004

AM Period	NB		SB		EB		WB		TOTAL	
00:00	69		43						112	
00:15	61		56						117	
00:30	52		37						89	
00:45	47	229	34	170					81	399
01:00	43		27						70	
01:15	33		24						57	
01:30	41		29						70	
01:45	27	144	18	98					45	242
02:00	26		14						40	
02:15	15		14						29	
02:30	21		15						36	
02:45	12	74	13	56					25	130
03:00	15		6						21	
03:15	9		9						18	
03:30	9		9						18	
03:45	17	50	9	33					26	83
04:00	9		13						22	
04:15	11		9						20	
04:30	7		8						15	
04:45	20	47	18	48					38	95
05:00	28		27						55	
05:15	45		29						74	
05:30	44		43						87	
05:45	46	163	80	179					126	342
06:00	64		68						132	
06:15	63		96						159	
06:30	121		154						275	
06:45	234	482	319	637					553	1119
07:00	195		201						396	
07:15	195		286						481	
07:30	283		450						733	
07:45	320	993	441	1378					761	2371
08:00	387		495						882	
08:15	332		505						837	
08:30	309		379						688	
08:45	291	1319	401	1780					692	3099
09:00	266		381						647	
09:15	288		397						685	
09:30	312		289						601	
09:45	277	1143	297	1364					574	2507
10:00	298		243						541	
10:15	239		276						515	
10:30	220		320						540	
10:45	296	1053	297	1136					593	2189
11:00	280		248						528	
11:15	280		258						538	
11:30	253		263						516	
11:45	282	1095	309	1078					591	2173
TOTALS		6792		7957						14749
SPLIT %		46.1%		53.9%						34.3%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	322		292						614	
12:15	319		312						631	
12:30	313		299						612	
12:45	349	1303	338	1241					687	2544
13:00	308		294						602	
13:15	272		310						582	
13:30	343		330						673	
13:45	315	1238	287	1221					602	2459
14:00	372		290						662	
14:15	349		278						627	
14:30	316		315						631	
14:45	314	1351	396	1279					710	2630
15:00	403		424						827	
15:15	476		412						888	
15:30	477		327						804	
15:45	405	1761	316	1479					721	3240
16:00	377		337						714	
16:15	388		321						709	
16:30	364		369						733	
16:45	395	1524	424	1451					819	2975
17:00	439		384						823	
17:15	376		375						751	
17:30	345		426						771	
17:45	357	1517	430	1615					787	3132
18:00	357		422						779	
18:15	379		418						797	
18:30	421		373						794	
18:45	364	1521	422	1635					786	3156
19:00	308		366						674	
19:15	296		305						601	
19:30	289		288						577	
19:45	279	1172	255	1214					534	2386
20:00	321		196						517	
20:15	229		256						485	
20:30	284		202						486	
20:45	283	1117	211	865					494	1982
21:00	309		235						544	
21:15	298		197						495	
21:30	264		143						407	
21:45	231	1102	158	733					389	1835
22:00	211		160						371	
22:15	163		143						306	
22:30	154		114						268	
22:45	132	660	106	523					238	1183
23:00	123		104						227	
23:15	113		61						174	
23:30	91		80						171	
23:45	85	412	76	321					161	733
TOTALS		14678		13577						28255
SPLIT %		51.9%		48.1%						65.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	21,470	21,534	0	0	43,004

AM Peak Hour	07:45	07:30			07:30
AM Pk Volume	1348	1891			3213
Pk Hr Factor	0.871	0.936			0.911
7 - 9 Volume	2312	3158	0	0	5470
7 - 9 Peak Hour	07:45	07:30			07:30
7 - 9 Pk Volume	1348	1891	0	0	3213
Pk Hr Factor	0.871	0.936	0.000	0.000	0.911

PM Peak Hour	15:00	17:30			15:00
PM Pk Volume	1761	1696			3240
Pk Hr Factor	0.923	0.986			0.912
4 - 6 Volume	3041	3066	0	0	6107
4 - 6 Peak Hour	16:15	17:00			16:45
4 - 6 Pk Volume	1586	1615	0	0	3164
Pk Hr Factor	0.903	0.939	0.000	0.000	0.961

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. Harvard Ave & Campus Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_017

DAILY TOTALS	NB	SB	EB	WB	Total
	17,780	18,367	0	0	36,147

AM Period	NB		SB		EB		WB		TOTAL	
00:00	51		42						93	
00:15	30		55						85	
00:30	44		37						81	
00:45	29	154	19	153					48	307
01:00	25		32						57	
01:15	29		33						62	
01:30	18		21						39	
01:45	16	88	13	99					29	187
02:00	17		14						31	
02:15	11		10						21	
02:30	12		14						26	
02:45	11	51	7	45					18	96
03:00	6		3						9	
03:15	5		9						14	
03:30	7		3						10	
03:45	8	26	7	22					15	48
04:00	4		10						14	
04:15	10		6						16	
04:30	6		9						15	
04:45	15	35	9	34					24	69
05:00	17		19						36	
05:15	40		24						64	
05:30	31		28						59	
05:45	40	128	61	132					101	260
06:00	57		45						102	
06:15	52		76						128	
06:30	108		123						231	
06:45	218	435	310	554					528	989
07:00	163		173						336	
07:15	149		253						402	
07:30	251		389						640	
07:45	297	860	345	1160					642	2020
08:00	371		447						818	
08:15	408		505						913	
08:30	397		310						707	
08:45	301	1477	319	1581					620	3058
09:00	206		320						526	
09:15	258		301						559	
09:30	238		252						490	
09:45	227	929	219	1092					446	2021
10:00	235		179						414	
10:15	202		199						401	
10:30	172		234						406	
10:45	246	855	242	854					488	1709
11:00	220		196						416	
11:15	231		204						435	
11:30	193		224						417	
11:45	226	870	260	884					486	1754
TOTALS		5908		6610						12518
SPLIT %		47.2%		52.8%						34.6%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	274		234						508	
12:15	246		255						501	
12:30	263		262						525	
12:45	282	1065	279	1030					561	2095
13:00	243		279						522	
13:15	216		275						491	
13:30	270		259						529	
13:45	246	975	230	1043					476	2018
14:00	254		261						515	
14:15	258		272						530	
14:30	254		264						518	
14:45	243	1009	371	1168					614	2177
15:00	374		369						743	
15:15	516		351						867	
15:30	441		282						723	
15:45	340	1671	268	1270					608	2941
16:00	292		315						607	
16:15	347		280						627	
16:30	308		334						642	
16:45	346	1293	360	1289					706	2582
17:00	419		337						756	
17:15	379		343						722	
17:30	364		397						761	
17:45	378	1540	396	1473					774	3013
18:00	349		388						737	
18:15	300		372						672	
18:30	316		335						651	
18:45	269	1234	374	1469					643	2703
19:00	206		321						527	
19:15	236		265						501	
19:30	197		248						445	
19:45	209	848	210	1044					419	1892
20:00	218		180						398	
20:15	172		197						369	
20:30	182		179						361	
20:45	215	787	189	745					404	1532
21:00	222		164						386	
21:15	213		150						363	
21:30	176		136						312	
21:45	160	771	125	575					285	1346
22:00	138		127						265	
22:15	103		112						215	
22:30	106		89						195	
22:45	92	439	84	412					176	851
23:00	74		72						146	
23:15	58		52						110	
23:30	57		65						122	
23:45	51	240	50	239					101	479
TOTALS		11872		11757						23629
SPLIT %		50.2%		49.8%						65.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	17,780	18,367	0	0	36,147

AM Peak Hour	08:00	07:30				07:45	PM Peak Hour	15:00	17:30				17:00
AM Pk Volume	1477	1686				3080	PM Pk Volume	1671	1553				3013
Pk Hr Factor	0.905	0.835				0.843	Pk Hr Factor	0.810	0.978				0.973
7 - 9 Volume	2337	2741	0	0		5078	4 - 6 Volume	2833	2762	0	0		5595
7 - 9 Peak Hour	08:00	07:30				07:45	4 - 6 Peak Hour	17:00	17:00				17:00
7 - 9 Pk Volume	1477	1686	0	0		3080	4 - 6 Pk Volume	1540	1473	0	0		3013
Pk Hr Factor	0.905	0.835	0.000	0.000		0.843	Pk Hr Factor	0.919	0.928	0.000	0.000		0.973

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. Campus Dr & Shady Canyon Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_018

DAILY TOTALS	NB	SB	EB	WB	Total
	11,333	10,867	0	0	22,200

AM Period	NB		SB		EB		WB		TOTAL	
00:00	30		28						58	
00:15	15		29						44	
00:30	25		16						41	
00:45	13	83	19	92					32	175
01:00	14		12						26	
01:15	9		15						24	
01:30	6		14						20	
01:45	5	34	19	60					24	94
02:00	8		5						13	
02:15	6		4						10	
02:30	4		11						15	
02:45	4	22	6	26					10	48
03:00	5		3						8	
03:15	3		4						7	
03:30	3		2						5	
03:45	3	14	3	12					6	26
04:00	2		3						5	
04:15	4		3						7	
04:30	4		6						10	
04:45	11	21	8	20					19	41
05:00	10		12						22	
05:15	17		17						34	
05:30	14		20						34	
05:45	20	61	50	99					70	160
06:00	29		25						54	
06:15	31		54						85	
06:30	58		56						114	
06:45	89	207	123	258					212	465
07:00	79		128						207	
07:15	108		155						263	
07:30	192		225						417	
07:45	193	572	198	706					391	1278
08:00	224		229						453	
08:15	249		229						478	
08:30	234		217						451	
08:45	209	916	212	887					421	1803
09:00	159		187						346	
09:15	170		196						366	
09:30	143		161						304	
09:45	147	619	145	689					292	1308
10:00	153		111						264	
10:15	102		122						224	
10:30	122		133						255	
10:45	150	527	141	507					291	1034
11:00	150		108						258	
11:15	137		144						281	
11:30	135		124						259	
11:45	160	582	130	506					290	1088
TOTALS		3658		3862						7520
SPLIT %		48.6%		51.4%						33.9%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	177		150						327	
12:15	148		134						282	
12:30	182		156						338	
12:45	146	653	159	599					305	1252
13:00	153		127						280	
13:15	161		151						312	
13:30	134		137						271	
13:45	133	581	147	562					280	1143
14:00	149		166						315	
14:15	150		144						294	
14:30	163		142						305	
14:45	181	643	174	626					355	1269
15:00	240		210						450	
15:15	292		180						472	
15:30	286		186						472	
15:45	215	1033	190	766					405	1799
16:00	207		220						427	
16:15	245		191						436	
16:30	219		195						414	
16:45	249	920	243	849					492	1769
17:00	279		233						512	
17:15	287		245						532	
17:30	268		264						532	
17:45	266	1100	230	972					496	2072
18:00	255		224						479	
18:15	229		227						456	
18:30	213		220						433	
18:45	171	868	225	896					396	1764
19:00	137		164						301	
19:15	141		153						294	
19:30	147		143						290	
19:45	126	551	121	581					247	1132
20:00	124		112						236	
20:15	121		117						238	
20:30	110		91						201	
20:45	125	480	99	419					224	899
21:00	103		82						185	
21:15	112		71						183	
21:30	107		90						197	
21:45	100	422	93	336					193	758
22:00	74		76						150	
22:15	83		73						156	
22:30	79		57						136	
22:45	54	290	42	248					96	538
23:00	39		48						87	
23:15	35		43						78	
23:30	34		30						64	
23:45	26	134	30	151					56	285
TOTALS		7675		7005						14680
SPLIT %		52.3%		47.7%						66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	11,333	10,867	0	0	22,200

AM Peak Hour	08:00	08:00				08:00	PM Peak Hour	17:00	16:45				17:00
AM Pk Volume	916	887				1803	PM Pk Volume	1100	985				2072
Pk Hr Factor	0.920	0.968				0.943	Pk Hr Factor	0.958	0.933				0.974
7 - 9 Volume	1488	1593	0	0		3081	4 - 6 Volume	2020	1821	0	0		3841
7 - 9 Peak Hour	08:00	08:00				08:00	4 - 6 Peak Hour	17:00	16:45				17:00
7 - 9 Pk Volume	916	887	0	0		1803	4 - 6 Pk Volume	1100	985	0	0		2072
Pk Hr Factor	0.920	0.968	0.000	0.000		0.943	Pk Hr Factor	0.958	0.933	0.000	0.000		0.974

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. Shady Canyon Dr & Newport Coast Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_019

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,047	10,155	19,202

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			12		13		25		12:00			143		146		289	
00:15			6		8		14		12:15			137		143		280	
00:30			3		8		11		12:30			123		148		271	
00:45			11	32	9	38	20	70	12:45			121	524	167	604	288	1128
01:00			5		2		7		13:00			107		136		243	
01:15			2		3		5		13:15			114		146		260	
01:30			1		4		5		13:30			145		133		278	
01:45			3	11	4	13	7	24	13:45			117	483	136	551	253	1034
02:00			1		1		2		14:00			116		150		266	
02:15			4		3		7		14:15			167		123		290	
02:30			2		7		9		14:30			174		126		300	
02:45			3	10	1	12	4	22	14:45			181	638	148	547	329	1185
03:00			0		1		1		15:00			196		161		357	
03:15			1		2		3		15:15			213		200		413	
03:30			1		1		2		15:30			174		211		385	
03:45			0	2	3	7	3	9	15:45			203	786	191	763	394	1549
04:00			1		4		5		16:00			188		186		374	
04:15			1		4		5		16:15			215		172		387	
04:30			4		5		9		16:30			173		222		395	
04:45			3	9	6	19	9	28	16:45			247	823	193	773	440	1596
05:00			7		11		18		17:00			240		242		482	
05:15			10		14		24		17:15			317		232		549	
05:30			7		16		23		17:30			270		242		512	
05:45			13	37	35	76	48	113	17:45			267	1094	240	956	507	2050
06:00			17		24		41		18:00			225		245		470	
06:15			26		50		76		18:15			233		206		439	
06:30			35		68		103		18:30			153		177		330	
06:45			27	105	104	246	131	351	18:45			154	765	173	801	327	1566
07:00			48		133		181		19:00			111		158		269	
07:15			70		128		198		19:15			122		128		250	
07:30			123		201		324		19:30			115		118		233	
07:45			121	362	212	674	333	1036	19:45			97	445	102	506	199	951
08:00			129		207		336		20:00			77		120		197	
08:15			145		235		380		20:15			100		73		173	
08:30			154		232		386		20:30			81		75		156	
08:45			172	600	225	899	397	1499	20:45			98	356	75	343	173	699
09:00			126		192		318		21:00			83		46		129	
09:15			102		201		303		21:15			83		75		158	
09:30			86		192		278		21:30			61		65		126	
09:45			116	430	161	746	277	1176	21:45			83	310	52	238	135	548
10:00			93		130		223		22:00			60		34		94	
10:15			98		134		232		22:15			55		49		104	
10:30			137		145		282		22:30			41		37		78	
10:45			118	446	150	559	268	1005	22:45			32	188	29	149	61	337
11:00			113		125		238		23:00			26		29		55	
11:15			114		140		254		23:15			21		20		41	
11:30			128		141		269		23:30			16		21		37	
11:45			153	508	150	556	303	1064	23:45			20	83	9	79	29	162
TOTALS				2552		3845		6397	TOTALS				6495		6310		12805
SPLIT %				39.9%		60.1%		33.3%	SPLIT %				50.7%		49.3%		66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,047	10,155	19,202

AM Peak Hour			08:00	08:00	08:00	PM Peak Hour	17:00	17:15	17:00
AM Pk Volume			600	899	1499	PM Pk Volume	1094	959	2050
Pk Hr Factor			0.872	0.956	0.944	Pk Hr Factor	0.863	0.979	0.934
7 - 9 Volume	0	0	962	1573	2535	4 - 6 Volume	0	0	1917	1729	3646
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	600	899	1499	4 - 6 Pk Volume	0	0	1094	956	2050
Pk Hr Factor	0.000	0.000	0.872	0.956	0.944	Pk Hr Factor	0.000	0.000	0.863	0.988	0.934

Prepared by NDS/ATD

VOLUME

Culver Dr Bet. Newport Coast Dr & SR-73 NB Ramps

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_020

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,882	11,825	22,707

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			12		10		22		12:00			160		160		320	
00:15			5		9		14		12:15			120		144		264	
00:30			7		6		13		12:30			170		179		349	
00:45			3	27	4	29	7	56	12:45			137	587	200	683	337	1270
01:00			3		4		7		13:00			155		183		338	
01:15			3		4		7		13:15			158		166		324	
01:30			4		6		10		13:30			166		178		344	
01:45			3	13	5	19	8	32	13:45			143	622	198	725	341	1347
02:00			4		3		7		14:00			149		170		319	
02:15			4		1		5		14:15			154		182		336	
02:30			3		0		3		14:30			151		187		338	
02:45			1	12	1	5	2	17	14:45			174	628	201	740	375	1368
03:00			2		5		7		15:00			193		198		391	
03:15			2		1		3		15:15			239		212		451	
03:30			2		1		3		15:30			210		266		476	
03:45			1	7	3	10	4	17	15:45			217	859	246	922	463	1781
04:00			1		3		4		16:00			220		194		414	
04:15			2		7		9		16:15			243		227		470	
04:30			4		9		13		16:30			240		234		474	
04:45			9	16	17	36	26	52	16:45			281	984	228	883	509	1867
05:00			12		21		33		17:00			293		278		571	
05:15			20		34		54		17:15			365		231		596	
05:30			41		33		74		17:30			305		224		529	
05:45			44	117	54	142	98	259	17:45			295	1258	196	929	491	2187
06:00			39		71		110		18:00			271		219		490	
06:15			52		71		123		18:15			291		154		445	
06:30			76		94		170		18:30			229		181		410	
06:45			129	296	145	381	274	677	18:45			190	981	153	707	343	1688
07:00			101		171		272		19:00			153		137		290	
07:15			158		212		370		19:15			121		110		231	
07:30			158		230		388		19:30			124		119		243	
07:45			195	612	238	851	433	1463	19:45			100	498	76	442	176	940
08:00			213		303		516		20:00			118		98		216	
08:15			193		320		513		20:15			92		83		175	
08:30			207		300		507		20:30			85		109		194	
08:45			201	814	306	1229	507	2043	20:45			81	376	122	412	203	788
09:00			180		240		420		21:00			91		76		167	
09:15			163		207		370		21:15			90		66		156	
09:30			153		234		387		21:30			73		47		120	
09:45			129	625	191	872	320	1497	21:45			73	327	48	237	121	564
10:00			127		144		271		22:00			54		46		100	
10:15			132		185		317		22:15			36		36		72	
10:30			115		168		283		22:30			26		36		62	
10:45			129	503	163	660	292	1163	22:45			28	144	31	149	59	293
11:00			121		158		279		23:00			21		23		44	
11:15			146		157		303		23:15			24		31		55	
11:30			126		183		309		23:30			15		21		36	
11:45			111	504	178	676	289	1180	23:45			12	72	11	86	23	158
TOTALS				3546		4910		8456	TOTALS				7336		6915		14251
SPLIT %				41.9%		58.1%		37.2%	SPLIT %				51.5%		48.5%		62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,882	11,825	22,707

AM Peak Hour			08:00	08:00	08:00	PM Peak Hour	17:00	16:30	16:45
AM Pk Volume			814	1229	2043	PM Pk Volume	1258	971	2205
Pk Hr Factor			0.955	0.960	0.990	Pk Hr Factor	0.862	0.873	0.925
7 - 9 Volume	0	0	1426	2080	3506	4 - 6 Volume	0	0	2242	1812	4054
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			17:00	16:30	16:45
7 - 9 Pk Volume	0	0	814	1229	2043	4 - 6 Pk Volume	0	0	1258	971	2205
Pk Hr Factor	0.000	0.000	0.955	0.960	0.990	Pk Hr Factor	0.000	0.000	0.862	0.873	0.925

Prepared by NDS/ATD

VOLUME

Ridgeline Dr Bet. University Dr & Concordia East

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_021

DAILY TOTALS	NB	SB	EB	WB	Total
	9,019	8,148	0	0	17,167

AM Period	NB		SB		EB		WB		TOTAL	
00:00	5		4						9	
00:15	8		10						18	
00:30	5		12						17	
00:45	8	26	7	33					15	59
01:00	10		10						20	
01:15	8		5						13	
01:30	4		8						12	
01:45	2	24	4	27					6	51
02:00	5		8						13	
02:15	4		6						10	
02:30	0		3						3	
02:45	1	10	4	21					5	31
03:00	1		2						3	
03:15	0		3						3	
03:30	2		3						5	
03:45	3	6	5	13					8	19
04:00	2		6						8	
04:15	0		3						3	
04:30	5		0						5	
04:45	9	16	7	16					16	32
05:00	10		4						14	
05:15	19		14						33	
05:30	32		15						47	
05:45	30	91	30	63					60	154
06:00	33		22						55	
06:15	33		22						55	
06:30	47		68						115	
06:45	85	198	107	219					192	417
07:00	109		88						197	
07:15	139		176						315	
07:30	180		150						330	
07:45	194	622	205	619					399	1241
08:00	205		234						439	
08:15	224		144						368	
08:30	233		143						376	
08:45	207	869	124	645					331	1514
09:00	176		119						295	
09:15	129		81						210	
09:30	153		81						234	
09:45	144	602	86	367					230	969
10:00	185		97						282	
10:15	176		103						279	
10:30	126		79						205	
10:45	113	600	133	412					246	1012
11:00	129		100						229	
11:15	132		108						240	
11:30	132		93						225	
11:45	120	513	95	396					215	909
TOTALS		3577		2831						6408
SPLIT %		55.8%		44.2%						37.3%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	114		113						227	
12:15	136		118						254	
12:30	130		107						237	
12:45	113	493	106	444					219	937
13:00	107		117						224	
13:15	104		115						219	
13:30	164		119						283	
13:45	137	512	133	484					270	996
14:00	132		138						270	
14:15	151		127						278	
14:30	165		102						267	
14:45	165	613	135	502					300	1115
15:00	215		197						412	
15:15	222		166						388	
15:30	173		121						294	
15:45	149	759	141	625					290	1384
16:00	156		125						281	
16:15	153		130						283	
16:30	167		129						296	
16:45	198	674	171	555					369	1229
17:00	145		165						310	
17:15	190		158						348	
17:30	190		164						354	
17:45	175	700	174	661					349	1361
18:00	162		146						308	
18:15	168		152						320	
18:30	165		162						327	
18:45	128	623	142	602					270	1225
19:00	109		129						238	
19:15	77		142						219	
19:30	77		125						202	
19:45	52	315	115	511					167	826
20:00	72		115						187	
20:15	83		85						168	
20:30	81		80						161	
20:45	65	301	75	355					140	656
21:00	71		86						157	
21:15	59		73						132	
21:30	58		79						137	
21:45	57	245	59	297					116	542
22:00	59		70						129	
22:15	35		45						80	
22:30	31		50						81	
22:45	21	146	24	189					45	335
23:00	12		34						46	
23:15	18		27						45	
23:30	12		16						28	
23:45	19	61	15	92					34	153
TOTALS		5442		5317						10759
SPLIT %		50.6%		49.4%						62.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	9,019	8,148	0	0	17,167

AM Peak Hour	08:00	07:15				07:45	PM Peak Hour	14:45	17:00				14:45
AM Pk Volume	869	765				1582	PM Pk Volume	775	661				1394
Pk Hr Factor	0.932	0.817				0.901	Pk Hr Factor	0.873	0.950				0.846
7 - 9 Volume	1491	1264	0	0		2755	4 - 6 Volume	1374	1216	0	0		2590
7 - 9 Peak Hour	08:00	07:15				07:45	4 - 6 Peak Hour	16:45	17:00				16:45
7 - 9 Pk Volume	869	765	0	0		1582	4 - 6 Pk Volume	723	661	0	0		1381
Pk Hr Factor	0.932	0.817	0.000	0.000		0.901	Pk Hr Factor	0.913	0.950	0.000	0.000		0.936

Prepared by NDS/ATD

VOLUME

Ridgeline Dr Bet. Concordia East & Turtle Rock Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_022

DAILY TOTALS	NB	SB	EB	WB	Total
	6,116	5,422	0	0	11,538

AM Period	NB		SB		EB		WB		TOTAL	
00:00	6		9						15	
00:15	4		2						6	
00:30	0		6						6	
00:45	3	13	2	19					5	32
01:00	5		5						10	
01:15	0		2						2	
01:30	1		5						6	
01:45	0	6	3	15					3	21
02:00	3		4						7	
02:15	1		3						4	
02:30	0		1						1	
02:45	1	5	2	10					3	15
03:00	0		1						1	
03:15	0		2						2	
03:30	2		2						4	
03:45	4	6	1	6					5	12
04:00	0		1						1	
04:15	0		1						1	
04:30	4		1						5	
04:45	6	10	4	7					10	17
05:00	8		1						9	
05:15	19		2						21	
05:30	21		3						24	
05:45	22	70	7	13					29	83
06:00	32		8						40	
06:15	22		12						34	
06:30	35		33						68	
06:45	66	155	58	111					124	266
07:00	81		45						126	
07:15	106		74						180	
07:30	144		109						253	
07:45	167	498	83	311					250	809
08:00	174		133						307	
08:15	167		128						295	
08:30	174		68						242	
08:45	148	663	57	386					205	1049
09:00	141		78						219	
09:15	103		52						155	
09:30	122		58						180	
09:45	112	478	61	249					173	727
10:00	149		66						215	
10:15	119		69						188	
10:30	89		42						131	
10:45	73	430	66	243					139	673
11:00	98		48						146	
11:15	99		71						170	
11:30	94		71						165	
11:45	79	370	62	252					141	622
TOTALS		2704		1622						4326
SPLIT %		62.5%		37.5%						37.5%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	71		78						149	
12:15	84		76						160	
12:30	70		67						137	
12:45	76	301	75	296					151	597
13:00	80		102						182	
13:15	77		84						161	
13:30	122		77						199	
13:45	91	370	87	350					178	720
14:00	88		96						184	
14:15	111		93						204	
14:30	115		75						190	
14:45	134	448	103	367					237	815
15:00	166		148						314	
15:15	150		127						277	
15:30	109		90						199	
15:45	89	514	100	465					189	979
16:00	91		99						190	
16:15	92		106						198	
16:30	93		97						190	
16:45	111	387	100	402					211	789
17:00	78		111						189	
17:15	119		117						236	
17:30	142		113						255	
17:45	124	463	109	450					233	913
18:00	115		94						209	
18:15	111		112						223	
18:30	112		115						227	
18:45	86	424	107	428					193	852
19:00	67		102						169	
19:15	49		102						151	
19:30	46		91						137	
19:45	35	197	85	380					120	577
20:00	41		79						120	
20:15	37		57						94	
20:30	26		64						90	
20:45	23	127	59	259					82	386
21:00	30		72						102	
21:15	24		56						80	
21:30	27		53						80	
21:45	19	100	44	225					63	325
22:00	21		50						71	
22:15	13		30						43	
22:30	11		38						49	
22:45	10	55	14	132					24	187
23:00	8		21						29	
23:15	6		15						21	
23:30	4		8						12	
23:45	8	26	2	46					10	72
TOTALS		3412		3800						7212
SPLIT %		47.3%		52.7%						62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,116	5,422	0	0	11,538

AM Peak Hour	07:45	07:30				07:30	PM Peak Hour	14:30	14:45				14:45
AM Pk Volume	682	453				1105	PM Pk Volume	565	468				1027
Pk Hr Factor	0.980	0.852				0.900	Pk Hr Factor	0.851	0.791				0.818
7 - 9 Volume	1161	697	0	0		1858	4 - 6 Volume	850	852	0	0		1702
7 - 9 Peak Hour	07:45	07:30				07:30	4 - 6 Peak Hour	17:00	17:00				17:00
7 - 9 Pk Volume	682	453	0	0		1105	4 - 6 Pk Volume	463	450	0	0		913
Pk Hr Factor	0.980	0.852	0.000	0.000		0.900	Pk Hr Factor	0.815	0.962	0.000	0.000		0.895

Prepared by NDS/ATD

VOLUME

Turtle Rock Dr Bet. Campus Dr & Concordia West

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_023

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,264	4,099	8,363

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			9	7	16	12:00			62	59	121
00:15			8	4	12	12:15			50	54	104
00:30			11	6	17	12:30			50	73	123
00:45			3	31 3 20	6 51	12:45			66	228 64 250	130 478
01:00			3	4	7	13:00			58	76	134
01:15			2	1	3	13:15			61	68	129
01:30			1	1	2	13:30			101	68	169
01:45			0	6 0 6	0 12	13:45			75	295 46 258	121 553
02:00			1	1	2	14:00			54	50	104
02:15			1	1	2	14:15			62	42	104
02:30			4	4	8	14:30			50	53	103
02:45			1	7 1 7	2 14	14:45			71	237 89 234	160 471
03:00			0	1	1	15:00			151	108	259
03:15			0	0	0	15:15			122	62	184
03:30			1	0	1	15:30			92	80	172
03:45			1	2 0 1	1 3	15:45			74	439 65 315	139 754
04:00			0	3	3	16:00			69	54	123
04:15			0	2	2	16:15			59	46	105
04:30			0	4	4	16:30			74	73	147
04:45			2	2 2 11	4 13	16:45			99	301 69 242	168 543
05:00			3	8	11	17:00			112	84	196
05:15			4	8	12	17:15			106	84	190
05:30			1	10	11	17:30			127	70	197
05:45			4	12 9 35	13 47	17:45			120	465 72 310	192 775
06:00			8	9	17	18:00			107	73	180
06:15			6	18	24	18:15			87	60	147
06:30			16	39	55	18:30			98	72	170
06:45			45	75 105 171	150 246	18:45			71	363 45 250	116 613
07:00			32	46	78	19:00			65	50	115
07:15			30	70	100	19:15			51	46	97
07:30			76	113	189	19:30			60	31	91
07:45			86	224 111 340	197 564	19:45			44	220 33 160	77 380
08:00			76	158	234	20:00			42	30	72
08:15			135	203	338	20:15			41	34	75
08:30			86	94	180	20:30			27	33	60
08:45			68	365 58 513	126 878	20:45			42	152 30 127	72 279
09:00			59	78	137	21:00			56	29	85
09:15			45	70	115	21:15			43	27	70
09:30			38	58	96	21:30			38	25	63
09:45			45	187 54 260	99 447	21:45			27	164 14 95	41 259
10:00			59	56	115	22:00			25	17	42
10:15			47	54	101	22:15			14	14	28
10:30			40	43	83	22:30			18	16	34
10:45			45	191 59 212	104 403	22:45			13	70 16 63	29 133
11:00			43	53	96	23:00			18	11	29
11:15			45	40	85	23:15			13	9	22
11:30			44	52	96	23:30			11	9	20
11:45			46	178 42 187	88 365	23:45			8	50 3 32	11 82
TOTALS				1280	1763 3043	TOTALS				2984	2336 5320
SPLIT %				42.1%	57.9% 36.4%	SPLIT %				56.1%	43.9% 63.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,264	4,099	8,363

AM Peak Hour			07:45	07:30	07:30	PM Peak Hour			17:00	14:45	14:45
AM Pk Volume			383	585	958	PM Pk Volume			465	339	775
Pk Hr Factor			0.709	0.720	0.709	Pk Hr Factor			0.915	0.785	0.748
7 - 9 Volume	0	0	589	853	1442	4 - 6 Volume	0	0	766	552	1318
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			17:00	16:30	17:00
7 - 9 Pk Volume	0	0	383	585	958	4 - 6 Pk Volume	0	0	465	310	775
Pk Hr Factor	0.000	0.000	0.709	0.720	0.709	Pk Hr Factor	0.000	0.000	0.915	0.923	0.984

Prepared by NDS/ATD

VOLUME

Turtle Rock Dr Bet. Concordia West & Ridgeline Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_024

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,519	3,320	6,839

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			6	2	8	12:00			57	46	103
00:15			4	2	6	12:15			38	48	86
00:30			3	0	3	12:30			49	60	109
00:45			4	17 2 6	6 23	12:45			58	202 44 198	102 400
01:00			1	1	2	13:00			51	53	104
01:15			1	1	2	13:15			50	61	111
01:30			2	4	6	13:30			86	61	147
01:45			3	7 1 7	4 14	13:45			54	241 37 212	91 453
02:00			0	2	2	14:00			45	38	83
02:15			1	1	2	14:15			54	39	93
02:30			2	1	3	14:30			43	46	89
02:45			1	4 1 5	2 9	14:45			66	208 70 193	136 401
03:00			0	1	1	15:00			133	93	226
03:15			0	0	0	15:15			107	56	163
03:30			1	0	1	15:30			79	65	144
03:45			0	1 0 1	0 2	15:45			71	390 50 264	121 654
04:00			0	3	3	16:00			64	36	100
04:15			0	2	2	16:15			46	41	87
04:30			0	4	4	16:30			58	54	112
04:45			2	2 1 10	3 12	16:45			85	253 46 177	131 430
05:00			1	7	8	17:00			90	55	145
05:15			4	5	9	17:15			94	66	160
05:30			1	9	10	17:30			100	46	146
05:45			2	8 9 30	11 38	17:45			96	380 58 225	154 605
06:00			7	7	14	18:00			90	55	145
06:15			4	16	20	18:15			67	46	113
06:30			15	39	54	18:30			83	57	140
06:45			37	63 96 158	133 221	18:45			61	301 34 192	95 493
07:00			27	44	71	19:00			55	39	94
07:15			21	70	91	19:15			46	32	78
07:30			62	91	153	19:30			47	29	76
07:45			76	186 100 305	176 491	19:45			36	184 23 123	59 307
08:00			60	151	211	20:00			35	22	57
08:15			116	187	303	20:15			37	24	61
08:30			66	78	144	20:30			26	21	47
08:45			40	282 50 466	90 748	20:45			31	129 18 85	49 214
09:00			46	60	106	21:00			48	21	69
09:15			37	49	86	21:15			34	23	57
09:30			35	48	83	21:30			25	21	46
09:45			39	157 42 199	81 356	21:45			20	127 13 78	33 205
10:00			56	48	104	22:00			17	8	25
10:15			39	40	79	22:15			11	8	19
10:30			29	35	64	22:30			17	10	27
10:45			33	157 51 174	84 331	22:45			10	55 11 37	21 92
11:00			30	40	70	23:00			13	6	19
11:15			39	32	71	23:15			7	5	12
11:30			29	46	75	23:30			5	6	11
11:45			36	134 37 155	73 289	23:45			6	31 3 20	9 51
TOTALS				1018	1516 2534	TOTALS				2501	1804 4305
SPLIT %				40.2%	59.8% 37.1%	SPLIT %				58.1%	41.9% 62.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,519	3,320	6,839

AM Peak Hour			07:45	07:30	07:30	PM Peak Hour			15:00	14:45	14:45
AM Pk Volume			318	529	843	PM Pk Volume			390	284	669
Pk Hr Factor			0.685	0.707	0.696	Pk Hr Factor			0.733	0.763	0.740
7 - 9 Volume	0	0	468	771	1239	4 - 6 Volume	0	0	633	402	1035
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	318	529	843	4 - 6 Pk Volume	0	0	380	225	605
Pk Hr Factor	0.000	0.000	0.685	0.707	0.696	Pk Hr Factor	0.000	0.000	0.950	0.852	0.945

Prepared by NDS/ATD

VOLUME

Turtle Rock Dr Bet. Ridgeline Dr & Sunnyhill

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_025

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,065	4,485	8,550

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			7	4	11	12:00			51	47	98
00:15			4	2	6	12:15			44	64	108
00:30			1	1	2	12:30			65	51	116
00:45			4	16 2 9	6 25	12:45			57	217 47 209	104 426
01:00			3	3	6	13:00			65	56	121
01:15			1	1	2	13:15			50	72	122
01:30			2	0	2	13:30			54	65	119
01:45			0	6 0 4	0 10	13:45			72	241 53 246	125 487
02:00			1	1	2	14:00			79	53	132
02:15			1	1	2	14:15			63	85	148
02:30			0	0	0	14:30			80	92	172
02:45			2	4 1 3	3 7	14:45			80	302 110 340	190 642
03:00			0	0	0	15:00			98	107	205
03:15			1	0	1	15:15			95	98	193
03:30			0	2	2	15:30			74	75	149
03:45			1	2 1 3	2 5	15:45			83	350 83 363	166 713
04:00			1	0	1	16:00			82	76	158
04:15			0	1	1	16:15			73	72	145
04:30			3	5	8	16:30			78	81	159
04:45			2	6 3 9	5 15	16:45			89	322 75 304	164 626
05:00			1	6	7	17:00			82	59	141
05:15			1	10	11	17:15			91	94	185
05:30			4	14	18	17:30			98	108	206
05:45			6	12 18 48	24 60	17:45			94	365 96 357	190 722
06:00			7	15	22	18:00			74	92	166
06:15			9	14	23	18:15			89	80	169
06:30			14	26	40	18:30			64	77	141
06:45			25	55 52 107	77 162	18:45			85	312 62 311	147 623
07:00			35	57	92	19:00			60	61	121
07:15			39	82	121	19:15			79	49	128
07:30			80	99	179	19:30			57	31	88
07:45			91	245 112 350	203 595	19:45			67	263 43 184	110 447
08:00			133	139	272	20:00			55	34	89
08:15			64	163	227	20:15			42	37	79
08:30			57	105	162	20:30			32	23	55
08:45			46	300 88 495	134 795	20:45			36	165 24 118	60 283
09:00			59	96	155	21:00			50	30	80
09:15			47	63	110	21:15			49	32	81
09:30			50	84	134	21:30			41	17	58
09:45			55	211 54 297	109 508	21:45			29	169 20 99	49 268
10:00			49	104	153	22:00			43	22	65
10:15			43	69	112	22:15			31	12	43
10:30			39	59	98	22:30			19	5	24
10:45			36	167 54 286	90 453	22:45			11	104 5 44	16 148
11:00			43	69	112	23:00			11	10	21
11:15			50	63	113	23:15			12	11	23
11:30			58	70	128	23:30			4	5	9
11:45			52	203 67 269	119 472	23:45			1	28 4 30	5 58
TOTALS				1227	1880 3107	TOTALS				2838	2605 5443
SPLIT %				39.5%	60.5% 36.3%	SPLIT %				52.1%	47.9% 63.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	4,065	4,485	8,550

AM Peak Hour			07:30	07:45	07:30	PM Peak Hour			17:00	14:30	14:30
AM Pk Volume			368	519	881	PM Pk Volume			365	407	760
Pk Hr Factor			0.692	0.796	0.810	Pk Hr Factor			0.931	0.925	0.927
7 - 9 Volume	0	0	545	845	1390	4 - 6 Volume	0	0	687	661	1348
7 - 9 Peak Hour			07:30	07:45	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	368	519	881	4 - 6 Pk Volume	0	0	365	357	722
Pk Hr Factor	0.000	0.000	0.692	0.796	0.810	Pk Hr Factor	0.000	0.000	0.931	0.826	0.876

Prepared by NDS/ATD

VOLUME

Turtle Rock Dr Bet. Sunnyhill & Campus Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_026

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,892	1,812	3,704

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			1	3	4	12:00			29	20	49
00:15			1	1	2	12:15			25	28	53
00:30			2	1	3	12:30			23	26	49
00:45			1	5 2 7	3 12	12:45			24	101 27 101	51 202
01:00			1	1	2	13:00			37	36	73
01:15			1	0	1	13:15			32	34	66
01:30			0	2	2	13:30			46	19	65
01:45			1	3 0 3	1 6	13:45			29	144 22 111	51 255
02:00			0	1	1	14:00			47	27	74
02:15			0	0	0	14:15			37	44	81
02:30			0	0	0	14:30			40	26	66
02:45			0	0 1	0 1	14:45			39	163 55 152	94 315
03:00			0	0	0	15:00			47	61	108
03:15			0	0	0	15:15			37	38	75
03:30			1	0	1	15:30			30	33	63
03:45			0	1 0	0 1	15:45			28	142 26 158	54 300
04:00			0	0	0	16:00			28	30	58
04:15			1	0	1	16:15			31	35	66
04:30			0	1	1	16:30			37	42	79
04:45			0	1 3 4	3 5	16:45			32	128 41 148	73 276
05:00			0	3	3	17:00			27	33	60
05:15			4	2	6	17:15			37	34	71
05:30			2	2	4	17:30			31	32	63
05:45			3	9 8 15	11 24	17:45			41	136 35 134	76 270
06:00			3	3	6	18:00			33	35	68
06:15			4	3	7	18:15			41	20	61
06:30			6	14	20	18:30			29	29	58
06:45			15	28 16 36	31 64	18:45			26	129 33 117	59 246
07:00			19	15	34	19:00			21	21	42
07:15			20	12	32	19:15			27	12	39
07:30			29	61	90	19:30			25	22	47
07:45			77	145 40 128	117 273	19:45			26	99 21 76	47 175
08:00			73	64	137	20:00			18	17	35
08:15			51	72	123	20:15			19	12	31
08:30			33	31	64	20:30			16	15	31
08:45			23	180 18 185	41 365	20:45			13	66 11 55	24 121
09:00			23	29	52	21:00			15	12	27
09:15			32	21	53	21:15			9	8	17
09:30			26	26	52	21:30			19	14	33
09:45			28	109 27 103	55 212	21:45			7	50 5 39	12 89
10:00			30	21	51	22:00			12	14	26
10:15			26	17	43	22:15			9	8	17
10:30			17	27	44	22:30			2	5	7
10:45			27	100 30 95	57 195	22:45			9	32 5 32	14 64
11:00			23	22	45	23:00			5	7	12
11:15			25	21	46	23:15			4	4	8
11:30			33	30	63	23:30			8	3	11
11:45			22	103 21 94	43 197	23:45			1	18 4 18	5 36
TOTALS				684	671 1355	TOTALS				1208	1141 2349
SPLIT %				50.5%	49.5% 36.6%	SPLIT %				51.4%	48.6% 63.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,892	1,812	3,704

AM Peak Hour			07:45	07:30	07:30	PM Peak Hour			14:00	14:45	14:15
AM Pk Volume			234	237	467	PM Pk Volume			163	187	349
Pk Hr Factor			0.760	0.823	0.852	Pk Hr Factor			0.867	0.766	0.808
7 - 9 Volume	0	0	325	313	638	4 - 6 Volume	0	0	264	282	546
7 - 9 Peak Hour			07:45	07:30	07:30	4 - 6 Peak Hour			17:00	16:15	16:30
7 - 9 Pk Volume	0	0	234	237	467	4 - 6 Pk Volume	0	0	136	151	283
Pk Hr Factor	0.000	0.000	0.760	0.823	0.852	Pk Hr Factor	0.000	0.000	0.829	0.899	0.896

Prepared by NDS/ATD

VOLUME

Sunnyhill Bet. Turtle Rock Dr & Shady Canyon Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_027

DAILY TOTALS	NB	SB	EB	WB	Total
	3,213	2,890	0	0	6,103

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	5			7	12:00	42	35			77
00:15	2	1			3	12:15	34	37			71
00:30	0	0			0	12:30	38	54			92
00:45	2 6	0 6			2 12	12:45	33 147	41 167			74 314
01:00	3	0			3	13:00	42	33			75
01:15	0	0			0	13:15	35	32			67
01:30	0	0			0	13:30	33	48			81
01:45	0 3	0			0 3	13:45	45 155	37 150			82 305
02:00	0	0			0	14:00	56	37			93
02:15	0	0			0	14:15	49	50			99
02:30	0	0			0	14:30	62	53			115
02:45	0	1 1			1 1	14:45	68 235	66 206			134 441
03:00	0	0			0	15:00	71	76			147
03:15	1	0			1	15:15	97	69			166
03:30	0	0			0	15:30	60	55			115
03:45	1 2	0			1 2	15:45	74 302	60 260			134 562
04:00	0	0			0	16:00	67	58			125
04:15	0	0			0	16:15	76	46			122
04:30	2	1			3	16:30	58	54			112
04:45	2 4	2 3			4 7	16:45	63 264	51 209			114 473
05:00	0	2			2	17:00	69	44			113
05:15	6	2			8	17:15	112	57			169
05:30	5	7			12	17:30	121	58			179
05:45	8 19	12 23			20 42	17:45	97 399	46 205			143 604
06:00	4	6			10	18:00	97	49			146
06:15	1	13			14	18:15	67	53			120
06:30	8	12			20	18:30	71	30			101
06:45	17 30	37 68			54 98	18:45	79 314	43 175			122 489
07:00	21	32			53	19:00	52	36			88
07:15	22	42			64	19:15	31	37			68
07:30	72	74			146	19:30	35	22			57
07:45	63 178	111 259			174 437	19:45	39 157	29 124			68 281
08:00	109	121			230	20:00	26	16			42
08:15	59	122			181	20:15	30	22			52
08:30	60	71			131	20:30	20	15			35
08:45	39 267	63 377			102 644	20:45	26 102	15 68			41 170
09:00	50	59			109	21:00	25	23			48
09:15	35	44			79	21:15	25	21			46
09:30	48	60			108	21:30	24	17			41
09:45	33 166	47 210			80 376	21:45	16 90	12 73			28 163
10:00	48	43			91	22:00	18	4			22
10:15	41	41			82	22:15	12	7			19
10:30	45	35			80	22:30	6	6			12
10:45	22 156	25 144			47 300	22:45	5 41	4 21			9 62
11:00	42	27			69	23:00	6	4			10
11:15	43	32			75	23:15	7	3			10
11:30	36	37			73	23:30	3	4			7
11:45	37 158	34 130			71 288	23:45	2 18	0 11			2 29
TOTALS	989	1221			2210	TOTALS	2224	1669			3893
SPLIT %	44.8%	55.2%			36.2%	SPLIT %	57.1%	42.9%			63.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	3,213	2,890	0	0	6,103

AM Peak Hour	07:30	07:30			07:30	PM Peak Hour	17:15	14:45			17:15
AM Pk Volume	303	428			731	PM Pk Volume	427	266			637
Pk Hr Factor	0.695	0.877			0.795	Pk Hr Factor	0.882	0.875			0.890
7 - 9 Volume	445	636	0	0	1081	4 - 6 Volume	663	414	0	0	1077
7 - 9 Peak Hour	07:30	07:30			07:30	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	303	428	0	0	731	4 - 6 Pk Volume	399	210	0	0	604
Pk Hr Factor	0.695	0.877	0.000	0.000	0.795	Pk Hr Factor	0.824	0.905	0.000	0.000	0.844

Prepared by NDS/ATD

VOLUME

Shady Canyon Dr Bet. Sunnyhill & Culver Dr

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_028

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,645	4,165	7,810

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			1	5	6	12:00			48	65	113
00:15			0	2	2	12:15			49	52	101
00:30			0	3	3	12:30			41	56	97
00:45			0 1	4 14	4 15	12:45			47 185	48 221	95 406
01:00			1	1	2	13:00			63	52	115
01:15			0	1	1	13:15			68	57	125
01:30			1	1	2	13:30			78	78	156
01:45			0 2	3 6	3 8	13:45			57 266	107 294	164 560
02:00			1	0	1	14:00			66	57	123
02:15			0	0	0	14:15			54	55	109
02:30			0	0	0	14:30			54	66	120
02:45			0 1	0	0 1	14:45			82 256	81 259	163 515
03:00			0	0	0	15:00			58	72	130
03:15			1	1	2	15:15			66	88	154
03:30			4	0	4	15:30			77	93	170
03:45			0 5	0 1	0 6	15:45			63 264	97 350	160 614
04:00			0	0	0	16:00			56	94	150
04:15			2	0	2	16:15			66	101	167
04:30			1	0	1	16:30			66	78	144
04:45			4 7	1 1	5 8	16:45			65 253	116 389	181 642
05:00			3	0	3	17:00			72	128	200
05:15			5	5	10	17:15			74	157	231
05:30			8	8	16	17:30			48	129	177
05:45			13 29	8 21	21 50	17:45			51 245	121 535	172 780
06:00			14	11	25	18:00			45	128	173
06:15			19	15	34	18:15			43	87	130
06:30			33	12	45	18:30			40	76	116
06:45			49 115	25 63	74 178	18:45			40 168	58 349	98 517
07:00			52	39	91	19:00			35	75	110
07:15			79	38	117	19:15			34	68	102
07:30			108	65	173	19:30			21	55	76
07:45			155 394	72 214	227 608	19:45			21 111	49 247	70 358
08:00			171	80	251	20:00			25	41	66
08:15			157	82	239	20:15			14	22	36
08:30			106	97	203	20:30			12	29	41
08:45			85 519	66 325	151 844	20:45			8 59	31 123	39 182
09:00			68	42	110	21:00			12	32	44
09:15			77	44	121	21:15			13	29	42
09:30			67	58	125	21:30			10	28	38
09:45			68 280	47 191	115 471	21:45			4 39	22 111	26 150
10:00			56	47	103	22:00			5	13	18
10:15			55	52	107	22:15			8	12	20
10:30			58	45	103	22:30			2	12	14
10:45			55 224	57 201	112 425	22:45			3 18	9 46	12 64
11:00			45	30	75	23:00			3	4	7
11:15			50	55	105	23:15			4	10	14
11:30			61	39	100	23:30			1	6	7
11:45			40 196	56 180	96 376	23:45			0 8	4 24	4 32
TOTALS			1773	1217	2990	TOTALS			1872	2948	4820
SPLIT %			59.3%	40.7%	38.3%	SPLIT %			38.8%	61.2%	61.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,645	4,165	7,810

AM Peak Hour			07:30	07:45	07:45	PM Peak Hour			14:45	17:00	16:45
AM Pk Volume			591	331	920	PM Pk Volume			283	535	789
Pk Hr Factor			0.864	0.853	0.916	Pk Hr Factor			0.863	0.852	0.854
7 - 9 Volume	0	0	913	539	1452	4 - 6 Volume	0	0	498	924	1422
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			16:30	17:00	16:45
7 - 9 Pk Volume	0	0	591	331	920	4 - 6 Pk Volume	0	0	277	535	789
Pk Hr Factor	0.000	0.000	0.864	0.853	0.916	Pk Hr Factor	0.000	0.000	0.936	0.852	0.854

Prepared by NDS/ATD

VOLUME

Campus Dr Bet. University Dr & California Ave

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_029

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,352	10,176	19,528

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			45	30	75	12:00			186	176	362
00:15			34	28	62	12:15			133	162	295
00:30			23	26	49	12:30			169	150	319
00:45			30	132 22 106	52 238	12:45			142	630 164 652	306 1282
01:00			14	25	39	13:00			157	179	336
01:15			12	18	30	13:15			139	120	259
01:30			11	12	23	13:30			132	169	301
01:45			3	40 6 61	9 101	13:45			128	556 169 637	297 1193
02:00			11	8	19	14:00			160	193	353
02:15			12	7	19	14:15			137	130	267
02:30			8	9	17	14:30			121	158	279
02:45			5	36 3 27	8 63	14:45			135	553 186 667	321 1220
03:00			7	5	12	15:00			165	162	327
03:15			3	4	7	15:15			136	165	301
03:30			1	3	4	15:30			150	150	300
03:45			1	12 4 16	5 28	15:45			160	611 178 655	338 1266
04:00			4	2	6	16:00			152	173	325
04:15			4	5	9	16:15			181	168	349
04:30			4	6	10	16:30			201	178	379
04:45			4	16 7 20	11 36	16:45			174	708 186 705	360 1413
05:00			6	11	17	17:00			234	181	415
05:15			3	17	20	17:15			209	188	397
05:30			10	24	34	17:30			243	205	448
05:45			9	28 25 77	34 105	17:45			205	891 219 793	424 1684
06:00			9	22	31	18:00			237	251	488
06:15			14	32	46	18:15			202	177	379
06:30			10	40	50	18:30			222	202	424
06:45			20	53 57 151	77 204	18:45			174	835 167 797	341 1632
07:00			27	53	80	19:00			174	189	363
07:15			44	72	116	19:15			148	158	306
07:30			76	125	201	19:30			179	153	332
07:45			84	231 161 411	245 642	19:45			139	640 138 638	277 1278
08:00			63	190	253	20:00			163	143	306
08:15			54	160	214	20:15			140	115	255
08:30			77	159	236	20:30			108	125	233
08:45			106	300 162 671	268 971	20:45			125	536 108 491	233 1027
09:00			89	130	219	21:00			136	130	266
09:15			96	142	238	21:15			151	111	262
09:30			101	136	237	21:30			101	106	207
09:45			106	392 143 551	249 943	21:45			139	527 96 443	235 970
10:00			104	130	234	22:00			109	105	214
10:15			95	106	201	22:15			112	95	207
10:30			109	139	248	22:30			93	65	158
10:45			131	439 149 524	280 963	22:45			73	387 55 320	128 707
11:00			128	115	243	23:00			82	63	145
11:15			120	136	256	23:15			72	46	118
11:30			123	148	271	23:30			61	50	111
11:45			153	524 160 559	313 1083	23:45			60	275 45 204	105 479
TOTALS				2203	3174 5377	TOTALS				7149	7002 14151
SPLIT %				41.0%	59.0% 27.5%	SPLIT %				50.5%	49.5% 72.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	9,352	10,176	19,528

AM Peak Hour			11:45	08:00	11:45	PM Peak Hour			17:15	17:15	17:15
AM Pk Volume			641	671	1289	PM Pk Volume			894	863	1757
Pk Hr Factor			0.862	0.883	0.890	Pk Hr Factor			0.920	0.860	0.900
7 - 9 Volume	0	0	531	1082	1613	4 - 6 Volume	0	0	1599	1498	3097
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	300	671	971	4 - 6 Pk Volume	0	0	891	793	1684
Pk Hr Factor	0.000	0.000	0.708	0.883	0.906	Pk Hr Factor	0.000	0.000	0.917	0.905	0.940

Prepared by NDS/ATD

VOLUME

Campus Dr Bet. California Ave & Culver Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_030

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,217	8,542	16,759

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			39	25	64	12:00			127	139	266
00:15			28	28	56	12:15			100	117	217
00:30			23	20	43	12:30			122	131	253
00:45			34	124 14 87	48 211	12:45			115	464 181 568	296 1032
01:00			18	14	32	13:00			135	104	239
01:15			25	19	44	13:15			128	141	269
01:30			15	7	22	13:30			119	145	264
01:45			9	67 5 45	14 112	13:45			114	496 140 530	254 1026
02:00			11	10	21	14:00			169	111	280
02:15			6	5	11	14:15			117	125	242
02:30			9	2	11	14:30			118	110	228
02:45			9	35 2 19	11 54	14:45			119	523 115 461	234 984
03:00			4	3	7	15:00			147	175	322
03:15			2	0	2	15:15			149	229	378
03:30			3	3	6	15:30			177	140	317
03:45			5	14 1 7	6 21	15:45			134	607 115 659	249 1266
04:00			1	7	8	16:00			147	120	267
04:15			1	1	2	16:15			140	128	268
04:30			0	2	2	16:30			144	142	286
04:45			1	3 3 13	4 16	16:45			157	588 160 550	317 1138
05:00			3	11	14	17:00			213	132	345
05:15			8	9	17	17:15			230	136	366
05:30			8	11	19	17:30			195	163	358
05:45			7	26 16 47	23 73	17:45			196	834 164 595	360 1429
06:00			11	17	28	18:00			185	177	362
06:15			9	24	33	18:15			189	169	358
06:30			23	31	54	18:30			224	146	370
06:45			55	98 64 136	119 234	18:45			183	781 119 611	302 1392
07:00			37	46	83	19:00			124	115	239
07:15			56	73	129	19:15			133	116	249
07:30			112	158	270	19:30			144	109	253
07:45			69	274 219 496	288 770	19:45			147	548 109 449	256 997
08:00			88	167	255	20:00			135	93	228
08:15			110	214	324	20:15			103	90	193
08:30			63	183	246	20:30			122	88	210
08:45			66	327 156 720	222 1047	20:45			118	478 99 370	217 848
09:00			51	200	251	21:00			127	77	204
09:15			67	159	226	21:15			118	78	196
09:30			94	123	217	21:30			131	69	200
09:45			68	280 120 602	188 882	21:45			131	507 53 277	184 784
10:00			75	93	168	22:00			91	64	155
10:15			59	112	171	22:15			69	70	139
10:30			67	117	184	22:30			49	35	84
10:45			72	273 120 442	192 715	22:45			69	278 50 219	119 497
11:00			102	120	222	23:00			60	44	104
11:15			97	103	200	23:15			58	37	95
11:30			84	145	229	23:30			42	38	80
11:45			106	389 125 493	231 882	23:45			43	203 27 146	70 349
TOTALS				1910	3107 5017	TOTALS				6307	5435 11742
SPLIT %				38.1%	61.9% 29.9%	SPLIT %				53.7%	46.3% 70.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	8,217	8,542	16,759

AM Peak Hour			11:45	07:45	07:30	PM Peak Hour			17:00	17:30	17:45
AM Pk Volume			455	783	1137	PM Pk Volume			834	673	1450
Pk Hr Factor			0.896	0.894	0.877	Pk Hr Factor			0.907	0.951	0.980
7 - 9 Volume	0	0	601	1216	1817	4 - 6 Volume	0	0	1422	1145	2567
7 - 9 Peak Hour			07:30	07:45	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	379	783	1137	4 - 6 Pk Volume	0	0	834	595	1429
Pk Hr Factor	0.000	0.000	0.846	0.894	0.877	Pk Hr Factor	0.000	0.000	0.907	0.907	0.976

Prepared by NDS/ATD

VOLUME

Campus Dr Bet. Culver Dr & Turtle Rock Dr

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_031

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,593	7,793	15,386

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			15	6	21	12:00			105	115	220
00:15			9	13	22	12:15			134	162	296
00:30			14	6	20	12:30			88	128	216
00:45			10	3	13	12:45			114	105	219
01:00			3	2	5	13:00			188	91	279
01:15			8	5	13	13:15			159	100	259
01:30			3	1	4	13:30			121	243	364
01:45			4	0	4	13:45			108	115	223
02:00			1	3	4	14:00			102	129	231
02:15			2	3	5	14:15			107	199	306
02:30			1	2	3	14:30			175	273	448
02:45			0	0	0	14:45			163	200	363
03:00			3	2	5	15:00			123	117	240
03:15			1	1	2	15:15			126	130	256
03:30			3	4	7	15:30			151	149	300
03:45			2	2	4	15:45			132	150	282
04:00			1	2	3	16:00			141	113	254
04:15			0	4	4	16:15			122	132	254
04:30			4	7	11	16:30			170	105	275
04:45			0	5	5	16:45			177	610	322
05:00			5	13	18	17:00			166	135	301
05:15			9	19	28	17:15			211	118	329
05:30			6	15	21	17:30			198	133	331
05:45			8	25	33	17:45			179	754	293
06:00			13	39	52	18:00			161	82	243
06:15			16	45	61	18:15			142	89	231
06:30			19	52	71	18:30			175	83	258
06:45			44	77	121	18:45			139	617	221
07:00			47	84	131	19:00			134	69	203
07:15			82	147	229	19:15			117	86	203
07:30			192	260	452	19:30			107	83	190
07:45			158	270	428	19:45			116	474	170
08:00			128	329	457	20:00			109	41	150
08:15			137	192	329	20:15			106	54	160
08:30			89	185	274	20:30			92	30	122
08:45			82	436	170	20:45			73	380	30
09:00			97	138	235	21:00			73	38	111
09:15			70	149	219	21:15			83	32	115
09:30			84	138	222	21:30			74	22	96
09:45			80	331	135	21:45			72	302	20
10:00			71	115	186	22:00			59	26	85
10:15			70	114	184	22:15			33	23	56
10:30			88	103	191	22:30			38	14	52
10:45			78	307	86	22:45			32	162	18
11:00			96	91	187	23:00			24	14	38
11:15			79	105	184	23:15			23	11	34
11:30			75	86	161	23:30			11	20	31
11:45			112	362	95	23:45			21	79	14
TOTALS				2119	3357	5476	TOTALS			5474	4436	9910
SPLIT %				38.7%	61.3%	35.6%	SPLIT %			55.2%	44.8%	64.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,593	7,793	15,386

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour			17:00	14:00	14:15
AM Pk Volume			615	1051	1666	PM Pk Volume			754	801	1357
Pk Hr Factor			0.801	0.799	0.911	Pk Hr Factor			0.893	0.734	0.757
7 - 9 Volume	0	0	915	1637	2552	4 - 6 Volume	0	0	1364	995	2359
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	615	1051	1666	4 - 6 Pk Volume	0	0	754	531	1283
Pk Hr Factor	0.000	0.000	0.801	0.799	0.911	Pk Hr Factor	0.000	0.000	0.893	0.916	0.969

Prepared by NDS/ATD

VOLUME

Harvard Ave Bet. University Dr & Culver Dr

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_032

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,720	5,814	12,534

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			18	7	25	12:00			110	58	168
00:15			20	12	32	12:15			86	81	167
00:30			11	12	23	12:30			85	82	167
00:45			19	10	29	12:45			114	88	202
01:00			10	7	17	13:00			130	86	216
01:15			12	7	19	13:15			115	58	173
01:30			9	3	12	13:30			90	84	174
01:45			12	9	21	13:45			101	98	199
02:00			4	6	10	14:00			139	72	211
02:15			3	6	9	14:15			95	77	172
02:30			1	3	4	14:30			126	117	243
02:45			3	5	8	14:45			93	108	201
03:00			9	2	11	15:00			121	90	211
03:15			1	6	7	15:15			101	83	184
03:30			0	3	3	15:30			122	92	214
03:45			0	1	1	15:45			108	83	191
04:00			0	2	2	16:00			144	78	222
04:15			1	3	4	16:15			118	83	201
04:30			2	3	5	16:30			121	77	198
04:45			8	7	15	16:45			163	107	270
05:00			4	8	12	17:00			180	100	280
05:15			2	13	15	17:15			184	124	308
05:30			14	20	34	17:30			142	146	288
05:45			8	20	28	17:45			156	141	297
06:00			17	14	31	18:00			178	101	279
06:15			15	25	40	18:15			141	114	255
06:30			21	28	49	18:30			129	98	227
06:45			34	42	76	18:45			136	108	244
07:00			38	51	89	19:00			106	75	181
07:15			58	56	114	19:15			135	74	209
07:30			129	94	223	19:30			106	68	174
07:45			137	149	286	19:45			104	53	157
08:00			62	164	226	20:00			79	59	138
08:15			57	92	149	20:15			99	51	150
08:30			57	117	174	20:30			107	49	156
08:45			58	122	180	20:45			87	60	147
09:00			71	99	170	21:00			85	51	136
09:15			57	117	174	21:15			78	38	116
09:30			52	110	162	21:30			74	41	115
09:45			66	120	186	21:45			72	40	112
10:00			64	73	137	22:00			78	49	127
10:15			59	84	143	22:15			54	38	92
10:30			57	97	154	22:30			48	33	81
10:45			65	113	178	22:45			48	29	77
11:00			89	71	160	23:00			49	31	80
11:15			80	77	157	23:15			48	20	68
11:30			76	84	160	23:30			42	30	72
11:45			72	98	170	23:45			31	19	50
TOTALS				1662	2272	3934	TOTALS			5058	3542	8600
SPLIT %				42.2%	57.8%	31.4%	SPLIT %			58.8%	41.2%	68.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	6,720	5,814	12,534

AM Peak Hour			07:15	07:45	07:30	PM Peak Hour			16:45	17:15	17:00
AM Pk Volume			386	522	884	PM Pk Volume			669	512	1173
Pk Hr Factor			0.704	0.796	0.773	Pk Hr Factor			0.909	0.877	0.952
7 - 9 Volume	0	0	596	845	1441	4 - 6 Volume	0	0	1208	856	2064
7 - 9 Peak Hour			07:15	07:45	07:30	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	386	522	884	4 - 6 Pk Volume	0	0	669	511	1173
Pk Hr Factor	0.000	0.000	0.704	0.796	0.773	Pk Hr Factor	0.000	0.000	0.909	0.875	0.952

Prepared by NDS/ATD

VOLUME

Michelson Dr Bet. Culver Dr & Yale Ave

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_033

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,607	4,536	10,143

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			14	5	19	12:00			72	63	135
00:15			7	8	15	12:15			85	59	144
00:30			11	6	17	12:30			66	62	128
00:45			5	37 3 22	8 59	12:45			105	328 58 242	163 570
01:00			4	2	6	13:00			104	80	184
01:15			5	2	7	13:15			94	61	155
01:30			1	3	4	13:30			115	94	209
01:45			2	12 0 7	2 19	13:45			65	378 89 324	154 702
02:00			5	0	5	14:00			74	60	134
02:15			1	1	2	14:15			74	68	142
02:30			1	2	3	14:30			89	54	143
02:45			2	9 0 3	2 12	14:45			127	364 70 252	197 616
03:00			2	2	4	15:00			104	98	202
03:15			2	1	3	15:15			91	102	193
03:30			2	2	4	15:30			86	70	156
03:45			1	7 0 5	1 12	15:45			89	370 58 328	147 698
04:00			1	0	1	16:00			120	69	189
04:15			2	4	6	16:15			127	66	193
04:30			3	3	6	16:30			144	65	209
04:45			2	8 2 9	4 17	16:45			141	532 70 270	211 802
05:00			6	4	10	17:00			169	88	257
05:15			5	14	19	17:15			168	82	250
05:30			4	10	14	17:30			180	83	263
05:45			5	20 16 44	21 64	17:45			193	710 91 344	284 1054
06:00			10	19	29	18:00			164	103	267
06:15			15	31	46	18:15			149	58	207
06:30			15	38	53	18:30			127	49	176
06:45			27	67 41 129	68 196	18:45			119	559 73 283	192 842
07:00			30	61	91	19:00			101	54	155
07:15			42	72	114	19:15			66	50	116
07:30			54	101	155	19:30			71	40	111
07:45			93	219 122 356	215 575	19:45			67	305 43 187	110 492
08:00			77	140	217	20:00			59	39	98
08:15			51	104	155	20:15			66	35	101
08:30			62	96	158	20:30			43	30	73
08:45			90	280 111 451	201 731	20:45			51	219 38 142	89 361
09:00			99	115	214	21:00			51	43	94
09:15			73	135	208	21:15			53	28	81
09:30			59	81	140	21:30			43	25	68
09:45			48	279 82 413	130 692	21:45			36	183 21 117	57 300
10:00			64	50	114	22:00			49	25	74
10:15			51	58	109	22:15			42	19	61
10:30			69	73	142	22:30			31	14	45
10:45			45	229 62 243	107 472	22:45			18	140 12 70	30 210
11:00			54	57	111	23:00			26	8	34
11:15			76	66	142	23:15			16	9	25
11:30			66	63	129	23:30			15	7	22
11:45			90	286 78 264	168 550	23:45			9	66 7 31	16 97
TOTALS				1453	1946 3399	TOTALS				4154	2590 6744
SPLIT %				42.7%	57.3% 33.5%	SPLIT %				61.6%	38.4% 66.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	5,607	4,536	10,143

AM Peak Hour			08:30	07:30	08:30	PM Peak Hour			17:00	17:15	17:15
AM Pk Volume			324	467	781	PM Pk Volume			710	359	1064
Pk Hr Factor			0.818	0.834	0.912	Pk Hr Factor			0.920	0.871	0.937
7 - 9 Volume	0	0	499	807	1306	4 - 6 Volume	0	0	1242	614	1856
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	283	467	745	4 - 6 Pk Volume	0	0	710	344	1054
Pk Hr Factor	0.000	0.000	0.761	0.834	0.858	Pk Hr Factor	0.000	0.000	0.920	0.945	0.928

Prepared by NDS/ATD

VOLUME

Michelson Dr Bet. Yale Ave & University Dr

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_034

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,560	2,910	6,470

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			4	9	13	12:00			46	41	87
00:15			5	8	13	12:15			63	37	100
00:30			3	5	8	12:30			46	44	90
00:45			2	14 4 26	6 40	12:45			53	208 43 165	96 373
01:00			3	1	4	13:00			47	51	98
01:15			2	3	5	13:15			47	47	94
01:30			2	2	4	13:30			57	47	104
01:45			0	7 2 8	2 15	13:45			56	207 28 173	84 380
02:00			1	4	5	14:00			52	37	89
02:15			1	0	1	14:15			51	54	105
02:30			0	4	4	14:30			57	60	117
02:45			2	4 1 9	3 13	14:45			56	216 75 226	131 442
03:00			2	3	5	15:00			111	73	184
03:15			2	0	2	15:15			73	55	128
03:30			3	3	6	15:30			54	42	96
03:45			1	8 0 6	1 14	15:45			57	295 55 225	112 520
04:00			0	3	3	16:00			62	54	116
04:15			3	0	3	16:15			64	54	118
04:30			2	3	5	16:30			87	60	147
04:45			5	10 0 6	5 16	16:45			85	298 55 223	140 521
05:00			4	5	9	17:00			102	66	168
05:15			11	5	16	17:15			110	78	188
05:30			11	0	11	17:30			115	63	178
05:45			9	35 3 13	12 48	17:45			108	435 58 265	166 700
06:00			10	7	17	18:00			96	58	154
06:15			10	6	16	18:15			89	48	137
06:30			14	9	23	18:30			68	43	111
06:45			25	59 21 43	46 102	18:45			75	328 47 196	122 524
07:00			29	25	54	19:00			52	37	89
07:15			33	34	67	19:15			38	53	91
07:30			64	44	108	19:30			32	43	75
07:45			64	190 58 161	122 351	19:45			34	156 30 163	64 319
08:00			59	45	104	20:00			24	26	50
08:15			59	40	99	20:15			19	32	51
08:30			59	38	97	20:30			17	33	50
08:45			62	239 64 187	126 426	20:45			13	73 15 106	28 179
09:00			77	89	166	21:00			28	32	60
09:15			101	81	182	21:15			18	22	40
09:30			57	34	91	21:30			17	25	42
09:45			55	290 25 229	80 519	21:45			10	73 28 107	38 180
10:00			44	36	80	22:00			19	9	28
10:15			43	43	86	22:15			8	12	20
10:30			35	33	68	22:30			10	13	23
10:45			40	162 41 153	81 315	22:45			6	43 9 43	15 86
11:00			46	30	76	23:00			7	9	16
11:15			35	32	67	23:15			5	7	12
11:30			60	37	97	23:30			7	7	14
11:45			45	186 47 146	92 332	23:45			5	24 8 31	13 55
TOTALS				1204	987 2191	TOTALS				2356	1923 4279
SPLIT %				55.0%	45.0% 33.9%	SPLIT %				55.1%	44.9% 66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	3,560	2,910	6,470

AM Peak Hour			08:30	08:30	08:30	PM Peak Hour			17:00	17:00	17:00
AM Pk Volume			299	272	571	PM Pk Volume			435	265	700
Pk Hr Factor			0.740	0.764	0.784	Pk Hr Factor			0.946	0.849	0.931
7 - 9 Volume	0	0	429	348	777	4 - 6 Volume	0	0	733	488	1221
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	246	187	433	4 - 6 Pk Volume	0	0	435	265	700
Pk Hr Factor	0.000	0.000	0.961	0.806	0.887	Pk Hr Factor	0.000	0.000	0.946	0.849	0.931

Prepared by NDS/ATD

VOLUME

Alton Pkwy Bet. Culver Dr & W Yale Loop

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_035

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,427	10,576	21,003

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			20		9		29		12:00			145		113		258	
00:15			16		11		27		12:15			119		120		239	
00:30			14		6		20		12:30			137		157		294	
00:45			6	56	8	34	14	90	12:45			182	583	180	570	362	1153
01:00			3		6		9		13:00			180		202		382	
01:15			13		4		17		13:15			160		151		311	
01:30			8		4		12		13:30			158		171		329	
01:45			12	36	2	16	14	52	13:45			152	650	162	686	314	1336
02:00			8		3		11		14:00			113		167		280	
02:15			3		2		5		14:15			144		141		285	
02:30			10		8		18		14:30			151		129		280	
02:45			8	29	3	16	11	45	14:45			132	540	144	581	276	1121
03:00			3		7		10		15:00			175		180		355	
03:15			1		6		7		15:15			227		234		461	
03:30			4		2		6		15:30			240		220		460	
03:45			8	16	10	25	18	41	15:45			215	857	206	840	421	1697
04:00			5		3		8		16:00			223		189		412	
04:15			7		4		11		16:15			268		199		467	
04:30			9		8		17		16:30			300		254		554	
04:45			4	25	7	22	11	47	16:45			328	1119	262	904	590	2023
05:00			10		9		19		17:00			305		271		576	
05:15			4		16		20		17:15			328		272		600	
05:30			12		17		29		17:30			318		260		578	
05:45			22	48	30	72	52	120	17:45			309	1260	253	1056	562	2316
06:00			20		33		53		18:00			291		229		520	
06:15			39		37		76		18:15			290		192		482	
06:30			49		76		125		18:30			306		177		483	
06:45			85	193	170	316	255	509	18:45			227	1114	127	725	354	1839
07:00			75		122		197		19:00			158		140		298	
07:15			83		126		209		19:15			110		104		214	
07:30			175		318		493		19:30			106		118		224	
07:45			256	589	335	901	591	1490	19:45			100	474	91	453	191	927
08:00			223		262		485		20:00			84		54		138	
08:15			159		264		423		20:15			74		53		127	
08:30			167		229		396		20:30			92		59		151	
08:45			156	705	254	1009	410	1714	20:45			83	333	69	235	152	568
09:00			115		215		330		21:00			69		51		120	
09:15			115		163		278		21:15			75		76		151	
09:30			97		144		241		21:30			58		66		124	
09:45			106	433	146	668	252	1101	21:45			57	259	37	230	94	489
10:00			83		107		190		22:00			61		50		111	
10:15			85		126		211		22:15			47		33		80	
10:30			105		123		228		22:30			41		25		66	
10:45			118	391	123	479	241	870	22:45			25	174	19	127	44	301
11:00			105		106		211		23:00			26		17		43	
11:15			108		163		271		23:15			9		10		29	
11:30			129		146		275		23:30			25		13		38	
11:45			131	473	137	552	268	1025	23:45			10	70	9	59	19	129
TOTALS				2994		4110		7104	TOTALS				7433		6466		13899
SPLIT %				42.1%		57.9%		33.8%	SPLIT %				53.5%		46.5%		66.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,427	10,576	21,003

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour	16:45	16:45	16:45
AM Pk Volume			813	1179	1992	PM Pk Volume	1279	1065	2344
Pk Hr Factor			0.794	0.880	0.843	Pk Hr Factor	0.975	0.979	0.977
7 - 9 Volume	0	0	1294	1910	3204	4 - 6 Volume	0	0	2379	1960	4339
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:45	16:45	16:45
7 - 9 Pk Volume	0	0	813	1179	1992	4 - 6 Pk Volume	0	0	1279	1065	2344
Pk Hr Factor	0.000	0.000	0.794	0.880	0.843	Pk Hr Factor	0.000	0.000	0.975	0.979	0.977

Prepared by NDS/ATD

VOLUME

Alton Pkwy Bet. W Yale Loop & E Yale Loop

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_036

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,975	11,912	22,887

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			24		12		36		12:00			158		171		329	
00:15			18		7		25		12:15			138		149		287	
00:30			14		7		21		12:30			144		230		374	
00:45			7	63	7	33	14	96	12:45			163	603	217	767	380	1370
01:00			4		8		12		13:00			171		206		377	
01:15			14		4		18		13:15			173		172		345	
01:30			6		4		10		13:30			185		161		346	
01:45			6	30	4	20	10	50	13:45			168	697	200	739	368	1436
02:00			7		2		9		14:00			142		185		327	
02:15			6		1		7		14:15			129		214		343	
02:30			11		10		21		14:30			186		160		346	
02:45			10	34	6	19	16	53	14:45			139	596	188	747	327	1343
03:00			1		4		5		15:00			238		167		405	
03:15			1		3		4		15:15			232		242		474	
03:30			6		3		9		15:30			204		269		473	
03:45			3	11	11	21	14	32	15:45			210	884	234	912	444	1796
04:00			4		4		8		16:00			249		221		470	
04:15			5		5		10		16:15			269		213		482	
04:30			7		7		14		16:30			314		249		563	
04:45			6	22	12	28	18	50	16:45			313	1145	278	961	591	2106
05:00			10		18		28		17:00			308		310		618	
05:15			8		17		25		17:15			346		281		627	
05:30			13		39		52		17:30			337		287		624	
05:45			23	54	35	109	58	163	17:45			343	1334	259	1137	602	2471
06:00			18		34		52		18:00			324		236		560	
06:15			36		56		92		18:15			310		230		540	
06:30			52		63		115		18:30			310		203		513	
06:45			81	187	161	314	242	501	18:45			248	1192	165	834	413	2026
07:00			61		130		191		19:00			176		155		331	
07:15			117		134		251		19:15			144		140		284	
07:30			187		240		427		19:30			118		140		258	
07:45			219	584	329	833	548	1417	19:45			131	569	125	560	256	1129
08:00			150		323		473		20:00			105		83		188	
08:15			161		273		434		20:15			88		91		179	
08:30			170		284		454		20:30			89		73		162	
08:45			168	649	255	1135	423	1784	20:45			87	369	62	309	149	678
09:00			108		233		341		21:00			90		63		153	
09:15			125		165		290		21:15			68		86		154	
09:30			112		158		270		21:30			59		74		133	
09:45			115	460	165	721	280	1181	21:45			67	284	40	263	107	547
10:00			92		126		218		22:00			75		53		128	
10:15			98		139		237		22:15			49		42		91	
10:30			99		143		242		22:30			36		24		60	
10:45			108	397	141	549	249	946	22:45			31	191	19	138	50	329
11:00			125		157		282		23:00			26		23		49	
11:15			107		172		279		23:15			15		14		29	
11:30			159		214		373		23:30			23		20		43	
11:45			151	542	156	699	307	1241	23:45			14	78	7	64	21	142
TOTALS				3033		4481		7514	TOTALS				7942		7431		15373
SPLIT %				40.4%		59.6%		32.8%	SPLIT %				51.7%		48.3%		67.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	10,975	11,912	22,887

AM Peak Hour			07:30	07:45	07:45	PM Peak Hour	17:15	16:45	17:00
AM Pk Volume			717	1209	1909	PM Pk Volume	1350	1156	2471
Pk Hr Factor			0.818	0.919	0.871	Pk Hr Factor	0.975	0.932	0.985
7 - 9 Volume	0	0	1233	1968	3201	4 - 6 Volume	0	0	2479	2098	4577
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			17:00	16:45	17:00
7 - 9 Pk Volume	0	0	717	1209	1909	4 - 6 Pk Volume	0	0	1334	1156	2471
Pk Hr Factor	0.000	0.000	0.818	0.919	0.871	Pk Hr Factor	0.000	0.000	0.964	0.932	0.985

Prepared by NDS/ATD

VOLUME

Alton Pkwy Bet. E Yale Loop & Jeffrey Rd

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_037

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,268	13,388	25,656

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					25		15		40		12:00					159		195		354	
00:15					21		20		41		12:15					167		234		401	
00:30					15		10		25		12:30					170		210		380	
00:45					6	67	12	57	18	124	12:45					194	690	237	876	431	1566
01:00					5		10		15		13:00					195		240		435	
01:15					14		6		20		13:15					199		195		394	
01:30					9		3		12		13:30					218		193		411	
01:45					9	37	3	22	12	59	13:45					196	808	213	841	409	1649
02:00					6		4		10		14:00					156		210		366	
02:15					3		5		8		14:15					176		195		371	
02:30					9		9		18		14:30					190		190		380	
02:45					8	26	6	24	14	50	14:45					165	687	207	802	372	1489
03:00					4		6		10		15:00					178		236		414	
03:15					2		4		6		15:15					216		290		506	
03:30					8		4		12		15:30					236		225		461	
03:45					5	19	5	19	10	38	15:45					249	879	264	1015	513	1894
04:00					5		6		11		16:00					226		243		469	
04:15					8		4		12		16:15					272		268		540	
04:30					12		10		22		16:30					265		271		536	
04:45					10	35	12	32	22	67	16:45					307	1070	305	1087	612	2157
05:00					16		10		26		17:00					308		316		624	
05:15					29		16		45		17:15					312		315		627	
05:30					34		21		55		17:30					282		312		594	
05:45					40	119	21	68	61	187	17:45					301	1203	307	1250	608	2453
06:00					49		51		100		18:00					268		286		554	
06:15					70		67		137		18:15					278		260		538	
06:30					101		71		172		18:30					266		235		501	
06:45					141	361	139	328	280	689	18:45					282	1094	198	979	480	2073
07:00					178		128		306		19:00					173		213		386	
07:15					149		158		307		19:15					147		198		345	
07:30					225		294		519		19:30					138		154		292	
07:45					282	834	317	897	599	1731	19:45					120	578	158	723	278	1301
08:00					250		309		559		20:00					97		111		208	
08:15					186		275		461		20:15					103		99		202	
08:30					218		270		488		20:30					81		78		159	
08:45					229	883	245	1099	474	1982	20:45					84	365	104	392	188	757
09:00					184		209		393		21:00					76		107		183	
09:15					218		185		403		21:15					119		114		233	
09:30					169		188		357		21:30					76		103		179	
09:45					169	740	149	731	318	1471	21:45					71	342	83	407	154	749
10:00					130		147		277		22:00					76		66		142	
10:15					136		147		283		22:15					39		63		102	
10:30					158		138		296		22:30					37		65		102	
10:45					146	570	162	594	308	1164	22:45					25	177	36	230	61	407
11:00					142		171		313		23:00					25		52		77	
11:15					140		197		337		23:15					21		38		59	
11:30					170		184		354		23:30					31		20		51	
11:45					144	596	213	765	357	1361	23:45					11	88	40	150	51	238
TOTALS						4287		4636		8923	TOTALS						7981		8752		16733
SPLIT %						48.0%		52.0%		34.8%	SPLIT %						47.7%		52.3%		65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	12,268	13,388	25,656

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour		16:45	17:00	16:45
AM Pk Volume			943	1195	2138	PM Pk Volume		1209	1250	2457
Pk Hr Factor			0.836	0.942	0.892	Pk Hr Factor		0.969	0.989	0.980
7 - 9 Volume	0	0	1717	1996	3713	4 - 6 Volume	0	2273	2337	4610
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour		16:45	17:00	16:45
7 - 9 Pk Volume	0	0	943	1195	2138	4 - 6 Pk Volume	0	1209	1250	2457
Pk Hr Factor	0.000	0.000	0.836	0.942	0.892	Pk Hr Factor	0.000	0.969	0.989	0.980

Prepared by NDS/ATD

VOLUME

Main St Bet. Culver Dr & W Yale Loop

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_038

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,564	5,621	13,185

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					19		5		24		12:00					107		66		173	
00:15					11		7		18		12:15					97		78		175	
00:30					12		6		18		12:30					88		71		159	
00:45					5	47	2	20	7	67	12:45					80	372	83	298	163	670
01:00					10		1		11		13:00					124		64		188	
01:15					7		1		8		13:15					105		66		171	
01:30					7		3		10		13:30					101		66		167	
01:45					13	37	3	8	16	45	13:45					104	434	91	287	195	721
02:00					1		3		4		14:00					86		61		147	
02:15					2		2		4		14:15					115		65		180	
02:30					5		2		7		14:30					144		66		210	
02:45					5	13	2	9	7	22	14:45					185	530	149	341	334	871
03:00					5		4		9		15:00					121		83		204	
03:15					2		0		2		15:15					120		73		193	
03:30					1		2		3		15:30					103		75		178	
03:45					3	11	5	11	8	22	15:45					123	467	65	296	188	763
04:00					3		5		8		16:00					129		62		191	
04:15					1		5		6		16:15					141		59		200	
04:30					0		12		12		16:30					147		62		209	
04:45					1	5	12	34	13	39	16:45					194	611	70	253	264	864
05:00					0		16		16		17:00					217		75		292	
05:15					4		28		32		17:15					243		75		318	
05:30					6		33		39		17:30					227		79		306	
05:45					9	19	39	116	48	135	17:45					285	972	82	311	367	1283
06:00					17		50		67		18:00					283		67		350	
06:15					17		64		81		18:15					264		59		323	
06:30					15		86		101		18:30					199		65		264	
06:45					60	109	139	339	199	448	18:45					186	932	67	258	253	1190
07:00					38		150		188		19:00					146		53		199	
07:15					67		176		243		19:15					131		51		182	
07:30					107		255		362		19:30					119		47		166	
07:45					146	358	250	831	396	1189	19:45					124	520	53	204	177	724
08:00					83		225		308		20:00					109		29		138	
08:15					75		203		278		20:15					93		36		129	
08:30					52		188		240		20:30					98		29		127	
08:45					68	278	130	746	198	1024	20:45					93	393	30	124	123	517
09:00					58		103		161		21:00					99		32		131	
09:15					70		108		178		21:15					98		30		128	
09:30					51		99		150		21:30					67		24		91	
09:45					55	234	84	394	139	628	21:45					73	337	13	99	86	436
10:00					64		71		135		22:00					79		18		97	
10:15					55		75		130		22:15					53		10		63	
10:30					67		88		155		22:30					44		13		57	
10:45					77	263	61	295	138	558	22:45					44	220	15	56	59	276
11:00					58		68		126		23:00					39		11		50	
11:15					71		59		130		23:15					19		8		27	
11:30					83		66		149		23:30					24		5		29	
11:45					87	299	68	261	155	560	23:45					21	103	6	30	27	133
TOTALS						1673		3064		4737	TOTALS						5891		2557		8448
SPLIT %						35.3%		64.7%		35.9%	SPLIT %						69.7%		30.3%		64.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	7,564	5,621	13,185

AM Peak Hour			07:30	07:30	07:30	PM Peak Hour		17:30	14:45	17:30
AM Pk Volume			411	933	1344	PM Pk Volume		1059	380	1346
Pk Hr Factor			0.704	0.915	0.848	Pk Hr Factor		0.929	0.638	0.917
7 - 9 Volume	0	0	636	1577	2213	4 - 6 Volume	0	1583	564	2147
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour		17:00	17:00	17:00
7 - 9 Pk Volume	0	0	411	933	1344	4 - 6 Pk Volume	0	972	311	1283
Pk Hr Factor	0.000	0.000	0.704	0.915	0.848	Pk Hr Factor	0.000	0.853	0.948	0.874

Prepared by NDS/ATD

VOLUME

Yale Loop Bet. Alton Pkwy & Main St

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_039

DAILY TOTALS	NB	SB	EB	WB	Total
	4,051	3,192	0	0	7,243

AM Period	NB		SB		EB		WB		TOTAL	
00:00	2		1						3	
00:15	3		7						10	
00:30	6		3						9	
00:45	0	11	3	14					3	25
01:00	3		4						7	
01:15	3		0						3	
01:30	0		0						0	
01:45	6	12	1	5					7	17
02:00	1		2						3	
02:15	2		1						3	
02:30	0		0						0	
02:45	2	5	2	5					4	10
03:00	0		0						0	
03:15	0		0						0	
03:30	2		0						2	
03:45	2	4	2	2					4	6
04:00	1		2						3	
04:15	2		2						4	
04:30	0		3						3	
04:45	2	5	8	15					10	20
05:00	3		7						10	
05:15	4		8						12	
05:30	9		9						18	
05:45	11	27	14	38					25	65
06:00	8		8						16	
06:15	22		13						35	
06:30	18		25						43	
06:45	42	90	44	90					86	180
07:00	34		47						81	
07:15	45		57						102	
07:30	85		107						192	
07:45	112	276	122	333					234	609
08:00	71		94						165	
08:15	66		83						149	
08:30	45		79						124	
08:45	52	234	52	308					104	542
09:00	41		53						94	
09:15	48		47						95	
09:30	39		44						83	
09:45	50	178	40	184					90	362
10:00	40		26						66	
10:15	41		28						69	
10:30	34		42						76	
10:45	41	156	25	121					66	277
11:00	52		29						81	
11:15	38		30						68	
11:30	54		50						104	
11:45	47	191	43	152					90	343
TOTALS		1189		1267						2456
SPLIT %		48.4%		51.6%						33.9%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	54		42						96	
12:15	51		40						91	
12:30	59		41						100	
12:45	44	208	49	172					93	380
13:00	58		40						98	
13:15	58		55						113	
13:30	43		49						92	
13:45	75	234	56	200					131	434
14:00	45		40						85	
14:15	50		44						94	
14:30	54		53						107	
14:45	103	252	46	183					149	435
15:00	81		50						131	
15:15	72		55						127	
15:30	54		71						125	
15:45	94	301	56	232					150	533
16:00	64		42						106	
16:15	86		47						133	
16:30	84		65						149	
16:45	103	337	49	203					152	540
17:00	129		64						193	
17:15	117		55						172	
17:30	106		55						161	
17:45	156	508	73	247					229	755
18:00	139		51						190	
18:15	145		56						201	
18:30	99		62						161	
18:45	84	467	56	225					140	692
19:00	63		58						121	
19:15	57		37						94	
19:30	51		45						96	
19:45	44	215	50	190					94	405
20:00	40		27						67	
20:15	31		38						69	
20:30	35		31						66	
20:45	23	129	24	120					47	249
21:00	27		25						52	
21:15	37		25						62	
21:30	21		22						43	
21:45	14	99	13	85					27	184
22:00	32		17						49	
22:15	19		14						33	
22:30	16		7						23	
22:45	21	88	9	47					30	135
23:00	9		7						16	
23:15	4		6						10	
23:30	5		5						10	
23:45	6	24	3	21					9	45
TOTALS		2862		1925						4787
SPLIT %		59.8%		40.2%						66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	4,051	3,192	0	0	7,243

AM Peak Hour	07:30	07:30			07:30
AM Pk Volume	334	406			740
Pk Hr Factor	0.746	0.832			0.791
7 - 9 Volume	510	641	0	0	1151
7 - 9 Peak Hour	07:30	07:30			07:30
7 - 9 Pk Volume	334	406	0	0	740
Pk Hr Factor	0.746	0.832	0.000	0.000	0.791

PM Peak Hour	17:30	17:00			17:30
PM Pk Volume	546	247			781
Pk Hr Factor	0.875	0.846			0.853
4 - 6 Volume	845	450	0	0	1295
4 - 6 Peak Hour	17:00	17:00			17:00
4 - 6 Pk Volume	508	247	0	0	755
Pk Hr Factor	0.814	0.846	0.000	0.000	0.824

Prepared by NDS/ATD

VOLUME

Yale Loop Bet. Main St & Alton Pkwy

Day: Wednesday
Date: 11/5/2014

City: Irvine
Project #: CA14_1285_040

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,796	2,091	4,887

AM Period	NB		SB		EB		WB		TOTAL	
00:00					5		4		9	
00:15					5		1		6	
00:30					2		1		3	
00:45					3	15	0	6	3	21
01:00					3		2		5	
01:15					3		0		3	
01:30					5		2		7	
01:45					3	14	1	5	4	19
02:00					0		2		2	
02:15					0		0		0	
02:30					2		0		2	
02:45					0	2	1	3	1	5
03:00					2		2		4	
03:15					1		0		1	
03:30					1		2		3	
03:45					1	5	1	5	2	10
04:00					1		2		3	
04:15					1		2		3	
04:30					0		1		1	
04:45					0	2	4	9	4	11
05:00					3		6		9	
05:15					3		6		9	
05:30					5		6		11	
05:45					1	12	11	29	12	41
06:00					3		11		14	
06:15					10		12		22	
06:30					10		13		23	
06:45					25	48	28	64	53	112
07:00					25		39		64	
07:15					28		36		64	
07:30					34		51		85	
07:45					100	187	49	175	149	362
08:00					61		72		133	
08:15					34		69		103	
08:30					30		58		88	
08:45					26	151	40	239	66	390
09:00					31		24		55	
09:15					25		36		61	
09:30					22		36		58	
09:45					30	108	30	126	60	234
10:00					27		20		47	
10:15					19		23		42	
10:30					26		26		52	
10:45					20	92	24	93	44	185
11:00					25		28		53	
11:15					30		25		55	
11:30					30		36		66	
11:45					28	113	27	116	55	229
TOTALS						749		870		1619
SPLIT %						46.3%		53.7%		33.1%

PM Period	NB		SB		EB		WB		TOTAL	
12:00					28		30		58	
12:15					41		31		72	
12:30					35		30		65	
12:45					36	140	29	120	65	260
13:00					40		22		62	
13:15					42		54		96	
13:30					37		48		85	
13:45					44	163	28	152	72	315
14:00					29		21		50	
14:15					39		25		64	
14:30					49		22		71	
14:45					64	181	41	109	105	290
15:00					39		32		71	
15:15					42		31		73	
15:30					47		27		74	
15:45					63	191	40	130	103	321
16:00					37		36		73	
16:15					55		25		80	
16:30					52		40		92	
16:45					73	217	28	129	101	346
17:00					66		33		99	
17:15					76		42		118	
17:30					84		44		128	
17:45					82	308	29	148	111	456
18:00					100		31		131	
18:15					82		42		124	
18:30					75		24		99	
18:45					67	324	34	131	101	455
19:00					57		29		86	
19:15					57		26		83	
19:30					40		40		80	
19:45					46	200	22	117	68	317
20:00					32		17		49	
20:15					33		18		51	
20:30					27		14		41	
20:45					36	128	9	58	45	186
21:00					28		20		48	
21:15					24		30		54	
21:30					21		20		41	
21:45					23	96	10	80	33	176
22:00					23		8		31	
22:15					12		8		20	
22:30					10		6		16	
22:45					16	61	9	31	25	92
23:00					11		6		17	
23:15					10		4		14	
23:30					12		4		16	
23:45					5	38	2	16	7	54
TOTALS						2047		1221		3268
SPLIT %						62.6%		37.4%		66.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,796	2,091	4,887

AM Peak Hour			07:30	07:45	07:45
AM Pk Volume			229	248	473
Pk Hr Factor			0.573	0.861	0.794
7 - 9 Volume	0	0	338	414	752
7 - 9 Peak Hour			07:30	07:45	07:45
7 - 9 Pk Volume	0	0	229	248	473
Pk Hr Factor	0.000	0.000	0.573	0.861	0.794

PM Peak Hour			17:30	12:45	17:30
PM Pk Volume			348	153	494
Pk Hr Factor			0.870	0.708	0.943
4 - 6 Volume	0	0	525	277	802
4 - 6 Peak Hour			17:00	17:00	17:00
4 - 6 Pk Volume	0	0	308	148	456
Pk Hr Factor	0.000	0.000	0.917	0.841	0.891

Prepared by NDS/ATD

VOLUME

Concordia W/O Daystar

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_001

DAILY TOTALS	NB	SB	EB	WB	Total
	720	689	0	0	1,409

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	5	2			7	12:00	6	15			21
00:15	3	1			4	12:15	4	13			17
00:30	3	2			5	12:30	5	11			16
00:45	6	17	0	5	6 22	12:45	12	27	14	53	26 80
01:00	0	0			0	13:00	9	17			26
01:15	3	0			3	13:15	14	13			27
01:30	2	1			3	13:30	14	9			23
01:45	1	6	0	1	1 7	13:45	22	59	9	48	31 107
02:00	2	1			3	14:00	12	11			23
02:15	0	0			0	14:15	7	5			12
02:30	1	0			1	14:30	7	6			13
02:45	0	3	0	1	0 4	14:45	8	34	18	40	26 74
03:00	0	0			0	15:00	14	15			29
03:15	0	0			0	15:15	22	13			35
03:30	0	0			0	15:30	9	14			23
03:45	1	1	0		1 1	15:45	5	50	12	54	17 104
04:00	0	0			0	16:00	9	13			22
04:15	0	0			0	16:15	6	10			16
04:30	0	1			1	16:30	8	13			21
04:45	0	1	2		1 2	16:45	15	38	21	57	36 95
05:00	2	1			3	17:00	17	19			36
05:15	0	1			1	17:15	19	16			35
05:30	0	0			0	17:30	13	9			22
05:45	1	3	1	3	2 6	17:45	16	65	8	52	24 117
06:00	2	1			3	18:00	20	14			34
06:15	1	1			2	18:15	25	10			35
06:30	1	3			4	18:30	12	18			30
06:45	9	13	9	14	18 27	18:45	14	71	8	50	22 121
07:00	5	0			5	19:00	13	8			21
07:15	6	5			11	19:15	6	10			16
07:30	15	19			34	19:30	10	3			13
07:45	10	36	10	34	20 70	19:45	7	36	6	27	13 63
08:00	14	11			25	20:00	9	6			15
08:15	9	19			28	20:15	3	9			12
08:30	19	10			29	20:30	3	8			11
08:45	17	59	10	50	27 109	20:45	9	24	10	33	19 57
09:00	13	14			27	21:00	7	9			16
09:15	4	8			12	21:15	10	3			13
09:30	4	3			7	21:30	11	8			19
09:45	3	24	10	35	13 59	21:45	8	36	3	23	11 59
10:00	10	8			18	22:00	7	8			15
10:15	8	15			23	22:15	3	8			11
10:30	10	7			17	22:30	2	5			7
10:45	13	41	6	36	19 77	22:45	4	16	7	28	11 44
11:00	13	11			24	23:00	6	6			12
11:15	3	7			10	23:15	6	3			9
11:30	13	7			20	23:30	6	2			8
11:45	12	41	6	31	18 72	23:45	2	20	1	12	3 32
TOTALS	244		212		456	TOTALS	476		477		953
SPLIT %	53.5%		46.5%		32.4%	SPLIT %	49.9%		50.1%		67.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	720	689	0	0	1,409

AM Peak Hour	08:00	07:30			08:15	PM Peak Hour	17:30	16:30			16:45
AM Pk Volume	59	59			111	PM Pk Volume	74	69			129
Pk Hr Factor	0.776	0.776			0.957	Pk Hr Factor	0.740	0.821			0.896
7 - 9 Volume	95	84	0	0	179	4 - 6 Volume	103	109	0	0	212
7 - 9 Peak Hour	08:00	07:30			08:00	4 - 6 Peak Hour	17:00	16:30			16:45
7 - 9 Pk Volume	59	59	0	0	109	4 - 6 Pk Volume	65	69	0	0	129
Pk Hr Factor	0.776	0.776	0.000	0.000	0.940	Pk Hr Factor	0.855	0.821	0.000	0.000	0.896

Prepared by NDS/ATD

VOLUME

Concordia Bet. Faith & Parking Lot A

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_002

DAILY TOTALS	NB	SB	EB	WB	Total
	601	569	0	0	1,170

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	3			5	12:00	4	12			16
00:15	2	1			3	12:15	6	9			15
00:30	3	2			5	12:30	3	11			14
00:45	6	13	0	6	6 19	12:45	11	24	12	44	23 68
01:00	0	0			0	13:00	9	16			25
01:15	3	0			3	13:15	9	8			17
01:30	2	1			3	13:30	11	6			17
01:45	1	6	0	1	1 7	13:45	17	46	8	38	25 84
02:00	1	0			1	14:00	10	9			19
02:15	0	0			0	14:15	7	4			11
02:30	1	0			1	14:30	7	4			11
02:45	0	2	0		0 2	14:45	6	30	14	31	20 61
03:00	0	0			0	15:00	10	12			22
03:15	0	0			0	15:15	17	13			30
03:30	0	0			0	15:30	7	13			20
03:45	0	0			0	15:45	4	38	9	47	13 85
04:00	0	0			0	16:00	8	13			21
04:15	0	0			0	16:15	6	7			13
04:30	0	1			1	16:30	6	12			18
04:45	0	0	1		0 1	16:45	13	33	23	55	36 88
05:00	1	1			2	17:00	16	16			32
05:15	0	0			0	17:15	15	14			29
05:30	0	0			0	17:30	10	9			19
05:45	2	3	1	2	3 5	17:45	12	53	5	44	17 97
06:00	1	0			1	18:00	15	16			31
06:15	1	1			2	18:15	20	9			29
06:30	2	2			4	18:30	5	17			22
06:45	10	14	4	7	14 21	18:45	12	52	7	49	19 101
07:00	4	0			4	19:00	10	10			20
07:15	6	3			9	19:15	5	8			13
07:30	11	13			24	19:30	7	3			10
07:45	9	30	6	22	15 52	19:45	7	29	6	27	13 56
08:00	15	7			22	20:00	5	5			10
08:15	4	14			18	20:15	3	9			12
08:30	13	6			19	20:30	3	7			10
08:45	19	51	3	30	22 81	20:45	7	18	10	31	17 49
09:00	14	12			26	21:00	3	7			10
09:15	4	3			7	21:15	8	6			14
09:30	5	3			8	21:30	8	6			14
09:45	4	27	8	26	12 53	21:45	7	26	3	22	10 48
10:00	11	5			16	22:00	6	2			8
10:15	9	14			23	22:15	4	8			12
10:30	9	4			13	22:30	2	3			5
10:45	12	41	3	26	15 67	22:45	4	16	5	18	9 34
11:00	9	10			19	23:00	5	6			11
11:15	4	7			11	23:15	5	5			10
11:30	11	8			19	23:30	4	2			6
11:45	10	34	3	28	13 62	23:45	1	15	1	14	2 29
TOTALS	221		149		370	TOTALS	380		420		800
SPLIT %	59.7%		40.3%		31.6%	SPLIT %	47.5%		52.5%		68.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	601	569	0	0	1,170

AM Peak Hour	08:00	07:30			08:15	PM Peak Hour	17:30	16:30			16:45
AM Pk Volume	51	40			85	PM Pk Volume	57	65			116
Pk Hr Factor	0.671	0.714			0.817	Pk Hr Factor	0.713	0.707			0.806
7 - 9 Volume	81	52	0	0	133	4 - 6 Volume	86	99	0	0	185
7 - 9 Peak Hour	08:00	07:30			08:00	4 - 6 Peak Hour	16:45	16:30			16:45
7 - 9 Pk Volume	51	40	0	0	81	4 - 6 Pk Volume	54	65	0	0	116
Pk Hr Factor	0.671	0.714	0.000	0.000	0.920	Pk Hr Factor	0.844	0.707	0.000	0.000	0.806

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot B South & Joy

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_003

DAILY TOTALS	NB	SB	EB	WB	Total
	589	521	0	0	1,110

AM Period	NB	SB	EB	WB	TOTAL
00:00	2	4			6
00:15	4	1			5
00:30	3	2			5
00:45	5	14	0	7	5 21
01:00	1	0			1
01:15	3	0			3
01:30	2	1			3
01:45	1	7	0	1	1 8
02:00	1	1			2
02:15	1	0			1
02:30	1	0			1
02:45	0	3	0	1	0 4
03:00	0	0			0
03:15	0	0			0
03:30	0	0			0
03:45	0	0			0
04:00	0	0			0
04:15	0	0			0
04:30	0	1			1
04:45	0	0	1		0 1
05:00	0	2			2
05:15	1	2			3
05:30	0	0			0
05:45	0	1	1	5	1 6
06:00	1	0			1
06:15	1	1			2
06:30	2	3			5
06:45	5	9	6	10	11 19
07:00	3	2			5
07:15	3	5			8
07:30	5	12			17
07:45	10	21	6	25	16 46
08:00	10	6			16
08:15	2	13			15
08:30	8	5			13
08:45	10	30	3	27	13 57
09:00	9	10			19
09:15	2	3			5
09:30	6	4			10
09:45	3	20	3	20	6 40
10:00	9	5			14
10:15	4	7			11
10:30	3	5			8
10:45	10	26	5	22	15 48
11:00	6	9			15
11:15	3	9			12
11:30	6	7			13
11:45	11	26	3	28	14 54
TOTALS	157	147			304
SPLIT %	51.6%	48.4%			27.4%

PM Period	NB	SB	EB	WB	TOTAL
12:00	7	8			15
12:15	11	10			21
12:30	4	5			9
12:45	13	35	10	33	23 68
13:00	12	13			25
13:15	8	6			14
13:30	11	10			21
13:45	15	46	8	37	23 83
14:00	8	11			19
14:15	8	4			12
14:30	6	4			10
14:45	9	31	13	32	22 63
15:00	11	7			18
15:15	14	5			19
15:30	4	9			13
15:45	6	35	7	28	13 63
16:00	6	9			15
16:15	6	2			8
16:30	17	11			28
16:45	12	41	20	42	32 83
17:00	8	18			26
17:15	12	14			26
17:30	5	7			12
17:45	14	39	7	46	21 85
18:00	12	17			29
18:15	12	16			28
18:30	14	16			30
18:45	11	49	5	54	16 103
19:00	17	11			28
19:15	8	16			24
19:30	7	7			14
19:45	8	40	10	44	18 84
20:00	15	7			22
20:15	13	7			20
20:30	8	4			12
20:45	6	42	6	24	12 66
21:00	5	2			7
21:15	9	2			11
21:30	7	6			13
21:45	17	38	3	13	20 51
22:00	10	0			10
22:15	4	6			10
22:30	2	1			3
22:45	4	20	4	11	8 31
23:00	6	6			12
23:15	4	2			6
23:30	5	1			6
23:45	1	16	1	10	2 26
TOTALS	432	374			806
SPLIT %	53.6%	46.4%			72.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	589	521	0	0	1,110

AM Peak Hour	11:30	07:30			07:30
AM Pk Volume	35	37			64
Pk Hr Factor	0.795	0.712			0.941
7 - 9 Volume	51	52	0	0	103
7 - 9 Peak Hour	07:45	07:30			07:30
7 - 9 Pk Volume	30	37	0	0	64
Pk Hr Factor	0.750	0.712	0.000	0.000	0.941

PM Peak Hour	18:15	16:30			16:30
PM Pk Volume	54	63			112
Pk Hr Factor	0.794	0.788			0.875
4 - 6 Volume	80	88	0	0	168
4 - 6 Peak Hour	16:30	16:30			16:30
4 - 6 Pk Volume	49	63	0	0	112
Pk Hr Factor	0.721	0.788	0.000	0.000	0.875

Prepared by NDS/ATD

VOLUME

Concordia Bet. Joy & Parking Lot B North

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_004

DAILY TOTALS	NB	SB	EB	WB	Total
	641	566	0	0	1,207

AM Period	NB	SB	EB	WB	TOTAL
00:00	4	1			5
00:15	4	1			5
00:30	4	2			6
00:45	5	17	0	4	5 21
01:00	1	0			1
01:15	3	0			3
01:30	2	1			3
01:45	1	7	0	1	1 8
02:00	1	1			2
02:15	1	0			1
02:30	1	0			1
02:45	0	3	0	1	0 4
03:00	0	0			0
03:15	0	0			0
03:30	0	0			0
03:45	0	0			0
04:00	0	0			0
04:15	0	0			0
04:30	0	1			1
04:45	0	0	1		0 1
05:00	0	0			0
05:15	1	2			3
05:30	2	0			2
05:45	1	4	2	4	3 8
06:00	1	0			1
06:15	2	1			3
06:30	4	7			11
06:45	7	14	7	15	14 29
07:00	4	2			6
07:15	6	8			14
07:30	8	11			19
07:45	11	29	3	24	14 53
08:00	11	8			19
08:15	4	13			17
08:30	11	5			16
08:45	10	36	4	30	14 66
09:00	6	9			15
09:15	4	5			9
09:30	6	1			7
09:45	5	21	3	18	8 39
10:00	11	7			18
10:15	6	9			15
10:30	5	6			11
10:45	12	34	8	30	20 64
11:00	5	10			15
11:15	3	10			13
11:30	7	8			15
11:45	11	26	7	35	18 61
TOTALS	191	163			354
SPLIT %	54.0%	46.0%			29.3%

PM Period	NB	SB	EB	WB	TOTAL
12:00	6	9			15
12:15	10	12			22
12:30	5	6			11
12:45	15	36	9	36	24 72
13:00	10	12			22
13:15	8	6			14
13:30	10	8			18
13:45	16	44	8	34	24 78
14:00	8	10			18
14:15	10	4			14
14:30	5	5			10
14:45	9	32	12	31	21 63
15:00	14	6			20
15:15	17	7			24
15:30	4	11			15
15:45	8	43	8	32	16 75
16:00	5	10			15
16:15	7	4			11
16:30	16	12			28
16:45	15	43	23	49	38 92
17:00	11	20			31
17:15	13	16			29
17:30	6	7			13
17:45	15	45	10	53	25 98
18:00	11	19			30
18:15	13	17			30
18:30	15	16			31
18:45	10	49	4	56	14 105
19:00	20	11			31
19:15	8	19			27
19:30	6	8			14
19:45	8	42	10	48	18 90
20:00	18	10			28
20:15	13	6			19
20:30	8	3			11
20:45	6	45	7	26	13 71
21:00	5	3			8
21:15	10	2			12
21:30	7	8			15
21:45	17	39	4	17	21 56
22:00	8	0			8
22:15	2	6			8
22:30	1	1			2
22:45	5	16	4	11	9 27
23:00	6	6			12
23:15	4	2			6
23:30	5	1			6
23:45	1	16	1	10	2 26
TOTALS	450	403			853
SPLIT %	52.8%	47.2%			70.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	641	566	0	0	1,207

AM Peak Hour	07:45	10:45			11:30
AM Pk Volume	37	36			70
Pk Hr Factor	0.841	0.900			0.795
7 - 9 Volume	65	54	0	0	119
7 - 9 Peak Hour	07:45	07:30			07:30
7 - 9 Pk Volume	37	35	0	0	69
Pk Hr Factor	0.841	0.673	0.000	0.000	0.908

PM Peak Hour	18:15	16:30			16:30
PM Pk Volume	58	71			126
Pk Hr Factor	0.725	0.772			0.829
4 - 6 Volume	88	102	0	0	190
4 - 6 Peak Hour	16:30	16:30			16:30
4 - 6 Pk Volume	55	71	0	0	126
Pk Hr Factor	0.859	0.772	0.000	0.000	0.829

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot B North & Parking Lot C

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,182	1,102	2,284

AM Period	NB	SB	EB		WB		TOTAL	PM Period	NB	SB	EB		WB		TOTAL
00:00			7		0		7	12:00			20		14		34
00:15			2		1		3	12:15			25		16		41
00:30			2		2		4	12:30			13		16		29
00:45			5	16	0	3	5 19	12:45			18	76	10	56	28 132
01:00			2		1		3	13:00			13		18		31
01:15			2		0		2	13:15			18		20		38
01:30			1		1		2	13:30			15		14		29
01:45			0	5	0	2	0 7	13:45			26	72	29	81	55 153
02:00			1		0		1	14:00			20		19		39
02:15			0		0		0	14:15			14		13		27
02:30			1		0		1	14:30			13		9		22
02:45			0	2	0		0 2	14:45			19	66	16	57	35 123
03:00			0		1		1	15:00			19		15		34
03:15			0		0		0	15:15			23		16		39
03:30			0		0		0	15:30			22		23		45
03:45			0		0	1	0 1	15:45			15	79	15	69	30 148
04:00			0		0		0	16:00			15		12		27
04:15			0		0		0	16:15			26		9		35
04:30			0		1		1	16:30			36		11		47
04:45			0		0	1	0 1	16:45			39	116	20	52	59 168
05:00			1		1		2	17:00			28		27		55
05:15			2		7		9	17:15			29		22		51
05:30			2		5		7	17:30			9		11		20
05:45			2	7	7	20	9 27	17:45			26	92	25	85	51 177
06:00			1		2		3	18:00			22		19		41
06:15			2		5		7	18:15			23		18		41
06:30			6		17		23	18:30			17		22		39
06:45			3	12	29	53	32 65	18:45			12	74	9	68	21 142
07:00			5		22		27	19:00			22		15		37
07:15			5		39		44	19:15			9		16		25
07:30			7		18		25	19:30			9		8		17
07:45			9	26	24	103	33 129	19:45			8	48	11	50	19 98
08:00			12		23		35	20:00			16		10		26
08:15			35		29		64	20:15			16		10		26
08:30			31		26		57	20:30			15		3		18
08:45			23	101	36	114	59 215	20:45			26	73	8	31	34 104
09:00			12		24		36	21:00			19		5		24
09:15			7		16		23	21:15			19		6		25
09:30			16		10		26	21:30			13		8		21
09:45			9	44	11	61	20 105	21:45			21	72	5	24	26 96
10:00			18		15		33	22:00			26		1		27
10:15			17		20		37	22:15			12		4		16
10:30			16		19		35	22:30			6		0		6
10:45			22	73	37	91	59 164	22:45			6	50	2	7	8 57
11:00			20		23		43	23:00			8		4		12
11:15			10		12		22	23:15			4		1		5
11:30			11		13		24	23:30			6		2		8
11:45			14	55	15	63	29 118	23:45			5	23	3	10	8 33
TOTALS				341		512	853	TOTALS				841		590	1431
SPLIT %				40.0%		60.0%	37.3%	SPLIT %				58.8%		41.2%	62.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,182	1,102	2,284

AM Peak Hour			08:00	08:15	08:15	PM Peak Hour			16:30	17:00	16:30
AM Pk Volume			101	115	216	PM Pk Volume			132	85	212
Pk Hr Factor			0.721	0.799	0.844	Pk Hr Factor			0.846	0.787	0.898
7 - 9 Volume	0	0	127	217	344	4 - 6 Volume	0	0	208	137	345
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	101	114	215	4 - 6 Pk Volume	0	0	132	85	212
Pk Hr Factor	0.000	0.000	0.721	0.792	0.840	Pk Hr Factor	0.000	0.000	0.846	0.787	0.898

Prepared by NDS/ATD

VOLUME

Concordia W/O Parking Lot E

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,443	1,510	2,953

AM Period	NB	SB	EB		WB		TOTAL	PM Period	NB	SB	EB		WB		TOTAL
00:00			1		5		6	12:00			16		33		49
00:15			0		1		1	12:15			32		40		72
00:30			0		2		2	12:30			24		26		50
00:45			0	1	4	12	4 13	12:45			19	91	11	110	30 201
01:00			2		0		2	13:00			11		21		32
01:15			1		0		1	13:15			15		12		27
01:30			0		0		0	13:30			27		13		40
01:45			0	3	1	1	1 4	13:45			28	81	33	79	61 160
02:00			0		0		0	14:00			19		63		82
02:15			0		0		0	14:15			16		17		33
02:30			0		0		0	14:30			20		28		48
02:45			0		1	1	1 1	14:45			23	78	34	142	57 220
03:00			0		0		0	15:00			13		49		62
03:15			1		0		1	15:15			20		20		40
03:30			0		0		0	15:30			13		24		37
03:45			0	1	0		0 1	15:45			11	57	24	117	35 174
04:00			1		0		1	16:00			17		21		38
04:15			0		0		0	16:15			24		41		65
04:30			1		0		1	16:30			21		55		76
04:45			2	4	0		2 4	16:45			21	83	35	152	56 235
05:00			0		1		1	17:00			17		34		51
05:15			3		0		3	17:15			27		25		52
05:30			7		1		8	17:30			25		17		42
05:45			6	16	0	2	6 18	17:45			20	89	17	93	37 182
06:00			8		0		8	18:00			29		21		50
06:15			17		4		21	18:15			32		18		50
06:30			11		8		19	18:30			30		33		63
06:45			8	44	7	19	15 63	18:45			20	111	16	88	36 199
07:00			28		7		35	19:00			22		13		35
07:15			61		2		63	19:15			34		18		52
07:30			47		6		53	19:30			8		13		21
07:45			40	176	21	36	61 212	19:45			4	68	31	75	35 143
08:00			42		14		56	20:00			7		44		51
08:15			30		16		46	20:15			6		17		23
08:30			34		17		51	20:30			6		26		32
08:45			53	159	15	62	68 221	20:45			3	22	27	114	30 136
09:00			42		12		54	21:00			18		50		68
09:15			22		13		35	21:15			10		29		39
09:30			12		15		27	21:30			3		10		13
09:45			20	96	13	53	33 149	21:45			8	39	5	94	13 133
10:00			23		13		36	22:00			2		32		34
10:15			12		37		49	22:15			4		23		27
10:30			30		26		56	22:30			2		5		7
10:45			35	100	18	94	53 194	22:45			4	12	4	64	8 76
11:00			43		24		67	23:00			2		9		11
11:15			20		10		30	23:15			3		2		5
11:30			20		17		37	23:30			2		6		8
11:45			21	104	22	73	43 177	23:45			1	8	12	29	13 37
TOTALS				704		353	1057	TOTALS				739		1157	1896
SPLIT %				66.6%		33.4%	35.8%	SPLIT %				39.0%		61.0%	64.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,443	1,510	2,953

AM Peak Hour			07:15	11:45	07:15	PM Peak Hour			17:45	16:15	16:15
AM Pk Volume			190	121	233	PM Pk Volume			111	165	248
Pk Hr Factor			0.779	0.756	0.925	Pk Hr Factor			0.867	0.750	0.816
7 - 9 Volume	0	0	335	98	433	4 - 6 Volume	0	0	172	245	417
7 - 9 Peak Hour			07:15	07:45	07:15	4 - 6 Peak Hour			16:45	16:15	16:15
7 - 9 Pk Volume	0	0	190	68	233	4 - 6 Pk Volume	0	0	90	165	248
Pk Hr Factor	0.000	0.000	0.779	0.810	0.925	Pk Hr Factor	0.000	0.000	0.833	0.750	0.816

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot H & Ascension

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,289	2,179	4,468

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			11	5	16	12:00			37	31	68
00:15			4	7	11	12:15			47	33	80
00:30			5	4	9	12:30			43	24	67
00:45			3	23	5	21	8	44	12:45			36	163	25	113	61	276
01:00			7	3	10	13:00			19	20	39
01:15			6	2	8	13:15			26	31	57
01:30			1	3	4	13:30			34	34	68
01:45			2	16	1	9	3	25	13:45			37	116	40	125	77	241
02:00			3	4	7	14:00			44	37	81
02:15			1	1	2	14:15			29	25	54
02:30			1	2	3	14:30			31	22	53
02:45			0	5	1	8	1	13	14:45			36	140	26	110	62	250
03:00			1	2	3	15:00			35	33	68
03:15			0	0	0	15:15			56	30	86
03:30			0	1	1	15:30			57	28	85
03:45			0	1	4	7	4	8	15:45			43	191	25	116	68	307
04:00			1	4	5	16:00			48	16	64
04:15			0	3	3	16:15			51	13	64
04:30			0	0	0	16:30			71	24	95
04:45			2	3	3	10	5	13	16:45			74	244	45	98	119	342
05:00			1	3	4	17:00			51	34	85
05:15			2	15	17	17:15			52	25	77
05:30			11	13	24	17:30			36	28	64
05:45			5	19	21	52	26	71	17:45			40	179	49	136	89	315
06:00			4	14	18	18:00			42	41	83
06:15			6	11	17	18:15			45	43	88
06:30			12	29	41	18:30			54	32	86
06:45			8	30	50	104	58	134	18:45			29	170	33	149	62	319
07:00			5	37	42	19:00			35	21	56
07:15			8	68	76	19:15			21	31	52
07:30			15	44	59	19:30			26	31	57
07:45			16	44	58	207	74	251	19:45			13	95	23	106	36	201
08:00			16	57	73	20:00			32	20	52
08:15			40	63	103	20:15			42	14	56
08:30			44	52	96	20:30			53	12	65
08:45			32	132	63	235	95	367	20:45			47	174	14	60	61	234
09:00			18	40	58	21:00			33	15	48
09:15			16	22	38	21:15			27	19	46
09:30			21	16	37	21:30			30	23	53
09:45			23	78	20	98	43	176	21:45			40	130	12	69	52	199
10:00			30	30	60	22:00			34	13	47
10:15			36	35	71	22:15			19	10	29
10:30			33	31	64	22:30			16	8	24
10:45			30	129	62	158	92	287	22:45			11	80	9	40	20	120
11:00			27	41	68	23:00			6	9	15
11:15			19	29	48	23:15			8	8	16
11:30			23	17	40	23:30			8	6	14
11:45			25	94	28	115	53	209	23:45			11	33	10	33	21	66
TOTALS				574		1024		1598	TOTALS				1715		1155		2870
SPLIT %				35.9%		64.1%		35.8%	SPLIT %				59.8%		40.2%		64.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,289	2,179	4,468

AM Peak Hour			11:45	08:00	08:00	PM Peak Hour			16:30	17:45	16:30
AM Pk Volume			152	235	367	PM Pk Volume			248	165	376
Pk Hr Factor			0.809	0.933	0.891	Pk Hr Factor			0.838	0.842	0.790
7 - 9 Volume	0	0	176	442	618	4 - 6 Volume	0	0	423	234	657
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	132	235	367	4 - 6 Pk Volume	0	0	248	136	376
Pk Hr Factor	0.000	0.000	0.750	0.933	0.891	Pk Hr Factor	0.000	0.000	0.838	0.694	0.790

Prepared by NDS/ATD

VOLUME

Concordia W/O Ridgeline Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,330	2,361	4,691

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			8	10	18	12:00			38	34	72
00:15			3	6	9	12:15			53	39	92
00:30			5	5	10	12:30			45	31	76
00:45			4	20	4	25	8	45	12:45			28	164	26	130	54	294
01:00			6	3	9	13:00			22	17	39
01:15			7	4	11	13:15			24	35	59
01:30			2	3	5	13:30			31	39	70
01:45			2	17	1	11	3	28	13:45			36	113	43	134	79	247
02:00			2	4	6	14:00			44	45	89
02:15			1	2	3	14:15			28	28	56
02:30			0	2	2	14:30			38	25	63
02:45			0	3	1	9	1	12	14:45			32	142	20	118	52	260
03:00			1	1	2	15:00			38	38	76
03:15			0	0	0	15:15			46	38	84
03:30			0	1	1	15:30			63	31	94
03:45			0	1	4	6	4	7	15:45			44	191	31	138	75	329
04:00			1	5	6	16:00			55	29	84
04:15			0	1	1	16:15			47	16	63
04:30			0	0	0	16:30			77	24	101
04:45			2	3	3	9	5	12	16:45			67	246	52	121	119	367
05:00			1	3	4	17:00			61	38	99
05:15			1	12	13	17:15			54	31	85
05:30			10	12	22	17:30			33	38	71
05:45			4	16	21	48	25	64	17:45			46	194	48	155	94	349
06:00			3	12	15	18:00			34	50	84
06:15			6	10	16	18:15			49	43	92
06:30			12	27	39	18:30			51	45	96
06:45			15	36	47	96	62	132	18:45			35	169	37	175	72	344
07:00			9	37	46	19:00			37	26	63
07:15			15	60	75	19:15			22	38	60
07:30			13	40	53	19:30			26	32	58
07:45			21	58	61	198	82	256	19:45			15	100	27	123	42	223
08:00			16	53	69	20:00			28	26	54
08:15			37	55	92	20:15			42	21	63
08:30			41	51	92	20:30			52	18	70
08:45			34	128	69	228	103	356	20:45			40	162	14	79	54	241
09:00			24	38	62	21:00			37	18	55
09:15			15	27	42	21:15			30	19	49
09:30			22	18	40	21:30			31	27	58
09:45			24	85	22	105	46	190	21:45			33	131	15	79	48	210
10:00			27	27	54	22:00			38	18	56
10:15			39	28	67	22:15			17	10	27
10:30			30	40	70	22:30			18	10	28
10:45			31	127	66	161	97	288	22:45			11	84	11	49	22	133
11:00			30	46	76	23:00			4	9	13
11:15			23	34	57	23:15			9	11	20
11:30			30	19	49	23:30			7	7	14
11:45			26	109	28	127	54	236	23:45			11	31	10	37	21	68
TOTALS				603		1023		1626	TOTALS				1727		1338		3065
SPLIT %				37.1%		62.9%		34.7%	SPLIT %				56.3%		43.7%		65.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,330	2,361	4,691

AM Peak Hour			11:45	08:00	08:00	PM Peak Hour			16:30	17:45	16:30
AM Pk Volume			162	228	356	PM Pk Volume			259	186	404
Pk Hr Factor			0.764	0.826	0.864	Pk Hr Factor			0.841	0.930	0.849
7 - 9 Volume	0	0	186	426	612	4 - 6 Volume	0	0	440	276	716
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:45	16:30
7 - 9 Pk Volume	0	0	128	228	356	4 - 6 Pk Volume	0	0	259	159	404
Pk Hr Factor	0.000	0.000	0.780	0.826	0.864	Pk Hr Factor	0.000	0.000	0.841	0.764	0.849

Prepared by NDS/ATD

VOLUME

Internal Dr Aisle S/O Concordia

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_009

DAILY TOTALS	NB	SB	EB	WB	Total
	929	942	0	0	1,871

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	4	7			11	12:00	12	15			27
00:15	3	6			9	12:15	14	9			23
00:30	10	8			18	12:30	17	8			25
00:45	5 22	5 26			10 48	12:45	5 48	10 42			15 90
01:00	7	6			13	13:00	11	7			18
01:15	5	4			9	13:15	15	13			28
01:30	1	3			4	13:30	12	9			21
01:45	4 17	2 15			6 32	13:45	11 49	12 41			23 90
02:00	4	4			8	14:00	17	13			30
02:15	0	1			1	14:15	10	10			20
02:30	1	3			4	14:30	11	12			23
02:45	2 7	1 9			3 16	14:45	12 50	10 45			22 95
03:00	2	1			3	15:00	13	17			30
03:15	1	0			1	15:15	19	17			36
03:30	0	1			1	15:30	22	8			30
03:45	0 3	3 5			3 8	15:45	17 71	8 50			25 121
04:00	1	4			5	16:00	18	13			31
04:15	0	1			1	16:15	8	9			17
04:30	0	1			1	16:30	15	15			30
04:45	2 3	1 7			3 10	16:45	30 71	30 67			60 138
05:00	2	1			3	17:00	20	19			39
05:15	1	4			5	17:15	9	7			16
05:30	5	7			12	17:30	17	9			26
05:45	1 9	8 20			9 29	17:45	14 60	18 53			32 113
06:00	0	3			3	18:00	19	26			45
06:15	2	1			3	18:15	22	27			49
06:30	7	6			13	18:30	38	26			64
06:45	4 13	9 19			13 32	18:45	21 100	26 105			47 205
07:00	2	2			4	19:00	13	10			23
07:15	5	4			9	19:15	14	16			30
07:30	7	10			17	19:30	16	18			34
07:45	9 23	7 23			16 46	19:45	9 52	17 61			26 113
08:00	3	11			14	20:00	16	12			28
08:15	10	13			23	20:15	24	15			39
08:30	12	10			22	20:30	15	11			26
08:45	9 34	15 49			24 83	20:45	7 62	9 47			16 109
09:00	7	9			16	21:00	8	12			20
09:15	8	5			13	21:15	9	12			21
09:30	5	7			12	21:30	12	20			32
09:45	10 30	9 30			19 60	21:45	18 47	12 56			30 103
10:00	8	10			18	22:00	8	13			21
10:15	14	11			25	22:15	11	11			22
10:30	16	14			30	22:30	10	9			19
10:45	9 47	14 49			23 96	22:45	11 40	14 47			25 87
11:00	13	13			26	23:00	11	12			23
11:15	7	16			23	23:15	10	8			18
11:30	8	3			11	23:30	7	8			15
11:45	7 35	9 41			16 76	23:45	8 36	7 35			15 71
TOTALS	243	293			536	TOTALS	686	649			1335
SPLIT %	45.3%	54.7%			28.6%	SPLIT %	51.4%	48.6%			71.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	929	942	0	0	1,871

AM Peak Hour	10:15	10:30			10:15	PM Peak Hour	18:00	18:00			18:00
AM Pk Volume	52	57			104	PM Pk Volume	100	105			205
Pk Hr Factor	0.813	0.891			0.867	Pk Hr Factor	0.658	0.972			0.801
7 - 9 Volume	57	72	0	0	129	4 - 6 Volume	131	120	0	0	251
7 - 9 Peak Hour	07:45	08:00			08:00	4 - 6 Peak Hour	16:45	16:15			16:15
7 - 9 Pk Volume	34	49	0	0	83	4 - 6 Pk Volume	76	73	0	0	146
Pk Hr Factor	0.708	0.817	0.000	0.000	0.865	Pk Hr Factor	0.633	0.608	0.000	0.000	0.608

Prepared by NDS/ATD

VOLUME

Joy W/O Concordia

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	109	106	215

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			2	2	4
00:15			0	0	0	12:15			0	4	4
00:30			1	0	1	12:30			1	0	1
00:45			0 1	0	0 1	12:45			4 7	1 7	5 14
01:00			0	0	0	13:00			2	3	5
01:15			0	0	0	13:15			3	1	4
01:30			0	0	0	13:30			3	2	5
01:45			0	0	0	13:45			1 9	0 6	1 15
02:00			0	0	0	14:00			1	1	2
02:15			0	0	0	14:15			1	1	2
02:30			0	0	0	14:30			2	3	5
02:45			0	0	0	14:45			0 4	0 5	0 9
03:00			0	0	0	15:00			4	0	4
03:15			0	0	0	15:15			3	2	5
03:30			0	0	0	15:30			0	2	2
03:45			0	0	0	15:45			3 10	1 5	4 15
04:00			0	0	0	16:00			1	3	4
04:15			0	0	0	16:15			2	3	5
04:30			0	0	0	16:30			0	2	2
04:45			0	0	0	16:45			5 8	5 13	10 21
05:00			1	0	1	17:00			3	2	5
05:15			0	0	0	17:15			1	2	3
05:30			2	0	2	17:30			2	1	3
05:45			0 3	0	0 3	17:45			0 6	3 8	3 14
06:00			0	0	0	18:00			1	2	3
06:15			1	0	1	18:15			0	2	2
06:30			0	1	1	18:30			2	1	3
06:45			1 2	0 1	1 3	18:45			2 5	1 6	3 11
07:00			1	0	1	19:00			3	1	4
07:15			3	1	4	19:15			0	2	2
07:30			3	0	3	19:30			0	2	2
07:45			4 11	1 2	5 13	19:45			0 3	1 6	1 9
08:00			1	3	4	20:00			3	3	6
08:15			3	1	4	20:15			1	0	1
08:30			4	2	6	20:30			1	0	1
08:45			2 10	2 8	4 18	20:45			0 5	1 4	1 9
09:00			1	3	4	21:00			0	1	1
09:15			3	1	4	21:15			1	0	1
09:30			1	1	2	21:30			1	3	4
09:45			4 9	1 6	5 15	21:45			2 4	3 7	5 11
10:00			4	3	7	22:00			0	2	2
10:15			1	2	3	22:15			1	3	4
10:30			1	1	2	22:30			0	0	0
10:45			3 9	2 8	5 17	22:45			0 1	0 5	0 6
11:00			0	1	1	23:00			0	0	0
11:15			0	2	2	23:15			0	0	0
11:30			1	1	2	23:30			0	0	0
11:45			1 2	5 9	6 11	23:45			0	0	0
TOTALS			47	34	81	TOTALS			62	72	134
SPLIT %			58.0%	42.0%	37.7%	SPLIT %			46.3%	53.7%	62.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	109	106	215

AM Peak Hour			07:45	11:30	07:45	PM Peak Hour			12:45	16:00	16:15
AM Pk Volume			12	12	19	PM Pk Volume			12	13	22
Pk Hr Factor			0.750	0.600	0.792	Pk Hr Factor			0.750	0.650	0.550
7 - 9 Volume	0	0	21	10	31	4 - 6 Volume	0	0	14	21	35
7 - 9 Peak Hour			07:45	08:00	07:45	4 - 6 Peak Hour			16:45	16:00	16:15
7 - 9 Pk Volume	0	0	12	8	19	4 - 6 Pk Volume	0	0	11	13	22
Pk Hr Factor	0.000	0.000	0.750	0.667	0.792	Pk Hr Factor	0.000	0.000	0.550	0.650	0.550

Prepared by NDS/ATD

VOLUME

Faith W/O Concordia

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	148	145	293

AM Period	NB	SB	EB		WB		TOTAL	PM Period	NB	SB	EB		WB		TOTAL
00:00			0		0		0	12:00			4		2		6
00:15			0		0		0	12:15			4		0		4
00:30			0		0		0	12:30			1		1		2
00:45			0		0		0	12:45			3	12	1	4	4 16
01:00			0		0		0	13:00			1		1		2
01:15			0		0		0	13:15			3		1		4
01:30			0		0		0	13:30			3		2		5
01:45			0		0		0	13:45			1	8	2	6	3 14
02:00			1		1		2	14:00			2		3		5
02:15			0		0		0	14:15			2		0		2
02:30			0		0		0	14:30			4		2		6
02:45			0	1	0	1	0 2	14:45			4	12	4	9	8 21
03:00			0		0		0	15:00			3		4		7
03:15			0		0		0	15:15			2		8		10
03:30			0		0		0	15:30			1		2		3
03:45			0		1	1	1 1	15:45			1	7	2	16	3 23
04:00			0		0		0	16:00			0		0		0
04:15			0		0		0	16:15			5		1		6
04:30			0		0		0	16:30			3		4		7
04:45			0		0		0	16:45			2	10	4	9	6 19
05:00			0		1		1	17:00			3		3		6
05:15			1		0		1	17:15			3		4		7
05:30			0		0		0	17:30			1		3		4
05:45			1	2	0	1	1 3	17:45			5	12	4	14	9 26
06:00			0		0		0	18:00			1		5		6
06:15			0		1		1	18:15			2		5		7
06:30			1		0		1	18:30			2		3		5
06:45			6	7	1	2	7 9	18:45			1	6	2	15	3 21
07:00			0		2		2	19:00			0		3		3
07:15			3		1		4	19:15			3		2		5
07:30			5		2		7	19:30			1		1		2
07:45			4	12	0	5	4 17	19:45			0	4	1	7	1 11
08:00			4		2		6	20:00			0		4		4
08:15			3		4		7	20:15			1		1		2
08:30			1		2		3	20:30			1		2		3
08:45			5	13	1	9	6 22	20:45			2	4	3	10	5 14
09:00			5		1		6	21:00			2		4		6
09:15			5		0		5	21:15			2		3		5
09:30			2		0		2	21:30			2		1		3
09:45			2	14	0	1	2 15	21:45			2	8	4	12	6 20
10:00			4		1		5	22:00			0		2		2
10:15			2		1		3	22:15			0		2		2
10:30			1		2		3	22:30			0		0		0
10:45			1	8	1	5	2 13	22:45			0		0	4	0 4
11:00			2		2		4	23:00			0		1		1
11:15			0		2		2	23:15			0		1		1
11:30			3		4		7	23:30			0		0		0
11:45			3	8	4	12	7 20	23:45			0		0	2	0 2
TOTALS				65		37	102	TOTALS				83		108	191
SPLIT %				63.7%		36.3%	34.8%	SPLIT %				43.5%		56.5%	65.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	148	145	293

AM Peak Hour			08:45		11:00		07:30	PM Peak Hour			14:15		14:30		14:30
AM Pk Volume			17		12		24	PM Pk Volume			13		18		31
Pk Hr Factor			0.850		0.750		0.857	Pk Hr Factor			0.813		0.563		0.775
7 - 9 Volume	0	0	25		14		39	4 - 6 Volume	0	0	22		23		45
7 - 9 Peak Hour			07:15		08:00		07:30	4 - 6 Peak Hour			16:15		16:30		16:30
7 - 9 Pk Volume	0	0	16		9		24	4 - 6 Pk Volume	0	0	13		15		26
Pk Hr Factor	0.000	0.000	0.800		0.563		0.857	Pk Hr Factor	0.000	0.000	0.650		0.938		0.929

Prepared by NDS/ATD

VOLUME

Daystar W/O Concordia

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	59	66	125

AM Period	NB	SB	EB		WB		TOTAL	PM Period	NB	SB	EB		WB		TOTAL
00:00			0		0		0	12:00			1		1		2
00:15			0		0		0	12:15			1		0		1
00:30			0		0		0	12:30			0		3		3
00:45			0		0		0	12:45			1	3	2	6	3 9
01:00			0		0		0	13:00			1		1		2
01:15			0		0		0	13:15			1		4		5
01:30			0		0		0	13:30			0		1		1
01:45			0		0		0	13:45			2	4	0	6	2 10
02:00			0		0		0	14:00			0		2		2
02:15			0		0		0	14:15			1		0		1
02:30			0		0		0	14:30			1		0		1
02:45			0		0		0	14:45			1	3	2	4	3 7
03:00			0		0		0	15:00			2		0		2
03:15			0		0		0	15:15			1		0		1
03:30			0		0		0	15:30			2		1		3
03:45			0		0		0	15:45			2	7	1	2	3 9
04:00			0		0		0	16:00			0		1		1
04:15			0		0		0	16:15			0		0		0
04:30			0		0		0	16:30			2		2		4
04:45			1	1	0		1 1	16:45			0	2	0	3	0 5
05:00			1		1		2	17:00			2		2		4
05:15			0		0		0	17:15			1		2		3
05:30			0		0		0	17:30			0		2		2
05:45			1	2	0	1	1 3	17:45			1	4	1	7	2 11
06:00			1		0		1	18:00			0		0		0
06:15			0		0		0	18:15			2		2		4
06:30			1		0		1	18:30			0		3		3
06:45			2	4	2	2	4 6	18:45			0	2	1	6	1 8
07:00			1		0		1	19:00			0		1		1
07:15			0		0		0	19:15			0		1		1
07:30			0		0		0	19:30			0		1		1
07:45			1	2	0		1 2	19:45			1	1	1	4	2 5
08:00			1		1		2	20:00			0		0		0
08:15			4		1		5	20:15			0		2		2
08:30			1		3		4	20:30			0		1		1
08:45			2	8	1	6	3 14	20:45			0		0	3	0 3
09:00			1		1		2	21:00			0		0		0
09:15			1		1		2	21:15			1		2		3
09:30			0		0		0	21:30			0		1		1
09:45			2	4	0	2	2 6	21:45			0	1	1	4	1 5
10:00			3		0		3	22:00			0		2		2
10:15			1		1		2	22:15			0		0		0
10:30			2		1		3	22:30			1		0		1
10:45			1	7	0	2	1 9	22:45			0	1	2	4	2 5
11:00			1		1		2	23:00			0		0		0
11:15			0		1		1	23:15			0		0		0
11:30			1		2		3	23:30			0		0		0
11:45			1	3	0	4	1 7	23:45			0		0		0
TOTALS				31		17	48	TOTALS				28		49	77
SPLIT %				64.6%		35.4%	38.4%	SPLIT %				36.4%		63.6%	61.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	59	66	125

AM Peak Hour			08:00		08:00		08:00	PM Peak Hour			15:00		12:30		12:30
AM Pk Volume			8		6		14	PM Pk Volume			7		10		13
Pk Hr Factor			0.500		0.500		0.700	Pk Hr Factor			0.875		0.625		0.650
7 - 9 Volume	0	0	10		6		16	4 - 6 Volume	0	0	6		10		16
7 - 9 Peak Hour			08:00		08:00		08:00	4 - 6 Peak Hour			16:30		17:00		16:30
7 - 9 Pk Volume	0	0	8		6		14	4 - 6 Pk Volume	0	0	5		7		11
Pk Hr Factor	0.000	0.000	0.500		0.500		0.700	Pk Hr Factor	0.000	0.000	0.625		0.875		0.688

Prepared by NDS/ATD

VOLUME

Ascension S/O Concordia

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_013

DAILY TOTALS	NB	SB	EB	WB	Total
	367	368	0	0	735

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	4	0			4	12:00	8	2			10
00:15	3	0			3	12:15	8	5			13
00:30	0	0			0	12:30	4	8			12
00:45	0	7 0			0 7	12:45	5	25 10	25		15 50
01:00	2	0			2	13:00	7	4			11
01:15	0	0			0	13:15	3	8			11
01:30	0	0			0	13:30	7	12			19
01:45	5	7 0			5 7	13:45	7	24 5	29		12 53
02:00	0	0			0	14:00	3	4			7
02:15	0	1			1	14:15	5	6			11
02:30	1	0			1	14:30	7	5			12
02:45	2	3 2	3		4 6	14:45	11	26 5	20		16 46
03:00	3	0			3	15:00	6	14			20
03:15	3	0			3	15:15	9	9			18
03:30	1	0			1	15:30	10	7			17
03:45	4	11 1	1		5 12	15:45	5	30 8	38		13 68
04:00	1	0			1	16:00	6	8			14
04:15	2	2			4	16:15	5	3			8
04:30	1	3			4	16:30	4	10			14
04:45	0	4 1	6		1 10	16:45	8	23 5	26		13 49
05:00	1	1			2	17:00	8	3			11
05:15	4	1			5	17:15	3	13			16
05:30	3	1			4	17:30	6	5			11
05:45	6	14 0	3		6 17	17:45	5	22 6	27		11 49
06:00	1	0			1	18:00	7	12			19
06:15	2	1			3	18:15	3	10			13
06:30	5	2			7	18:30	5	7			12
06:45	8	16 6	9		14 25	18:45	2	17 8	37		10 54
07:00	4	7			11	19:00	2	4			6
07:15	8	2			10	19:15	2	5			7
07:30	3	2			5	19:30	4	4			8
07:45	11	26 5	16		16 42	19:45	4	12 8	21		12 33
08:00	9	4			13	20:00	1	9			10
08:15	14	5			19	20:15	4	5			9
08:30	3	7			10	20:30	0	4			4
08:45	8	34 1	17		9 51	20:45	3	8 4	22		7 30
09:00	2	5			7	21:00	1	2			3
09:15	3	6			9	21:15	0	1			1
09:30	4	2			6	21:30	0	4			4
09:45	5	14 3	16		8 30	21:45	0	1 2	9		2 10
10:00	6	3			9	22:00	1	5			6
10:15	3	1			4	22:15	0	1			1
10:30	2	6			8	22:30	3	3			6
10:45	3	14 6	16		9 30	22:45	0	4 2	11		2 15
11:00	4	3			7	23:00	0	1			1
11:15	7	2			9	23:15	1	4			5
11:30	10	3			13	23:30	0	0			0
11:45	3	24 1	9		4 33	23:45	0	1 2	7		2 8
TOTALS	174	96			270	TOTALS	193	272			465
SPLIT %	64.4%	35.6%			36.7%	SPLIT %	41.5%	58.5%			63.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	367	368	0	0	735

AM Peak Hour	07:30	07:45			07:45	PM Peak Hour	14:45	15:00			14:45
AM Pk Volume	37	21			58	PM Pk Volume	36	38			71
Pk Hr Factor	0.661	0.750			0.763	Pk Hr Factor	0.818	0.679			0.888
7 - 9 Volume	60	33	0	0	93	4 - 6 Volume	45	53	0	0	98
7 - 9 Peak Hour	07:30	07:45			07:45	4 - 6 Peak Hour	16:15	16:30			16:30
7 - 9 Pk Volume	37	21	0	0	58	4 - 6 Pk Volume	25	31	0	0	54
Pk Hr Factor	0.661	0.750	0.000	0.000	0.763	Pk Hr Factor	0.781	0.596	0.000	0.000	0.844

Prepared by National Data & Surveying Services

QUEUING

Location: Inbound at Ridgeline
City: Irvine

Day: Thursday
Date: 10/30/2014

TIME	QUEUE		TIME	QUEUE		Queue Spills onto Ridgeline	
	GUEST	STUDENT/ RESIDENT		GUEST	STUDENT/ RESIDENT	Exact Time Start	Exact Time End
7:00 AM	3	0	4:00 PM	1	0		
7:05 AM	5	1	4:05 PM	2	0		
7:10 AM	1	0	4:10 PM	0	0		
7:15 AM	2	0	4:15 PM	3	0		
7:20 AM	2	1	4:20 PM	1	0		
7:25 AM	0	1	4:25 PM	2	1		
7:30 AM	1	1	4:30 PM	2	1		
7:35 AM	2	0	4:35 PM	1	0		
7:40 AM	2	0	4:40 PM	0	0		
7:45 AM	0	0	4:45 PM	2	1		
7:50 AM	0	0	4:50 PM	3	0		
7:55 AM	2	2	4:55 PM	4	0		
8:00 AM	0	1	5:00 PM	3	1		
8:05 AM	3	1	5:05 PM	3	0		
8:10 AM	2	0	5:10 PM	3	0		
8:15 AM	1	0	5:15 PM	2	0		
8:20 AM	1	2	5:20 PM	2	0		
8:25 AM	0	0	5:25 PM	1	0		
8:30 AM	4	0	5:30 PM	1	0		
8:35 AM	0	1	5:35 PM	1	1		
8:40 AM	1	1	5:40 PM	0	1		
8:45 AM	1	1	5:45 PM	2	1		
8:50 AM	2	1	5:50 PM	3	1		
8:55 AM	3	0	5:55 PM	3	0		
9:00 AM	1	1	6:00 PM	2	1		
9:05 AM	2	0	6:05 PM	4	0		
9:10 AM	1	0	6:10 PM	3	1		
9:15 AM	0	1	6:15 PM	1	2		
9:20 AM	1	0	6:20 PM	2	1		
9:25 AM	1	0	6:25 PM	0	0		
9:30 AM	1	1	6:30 PM	1	0		
9:35 AM	0	0	6:35 PM	0	0		
9:40 AM	0	1	6:40 PM	4	0		
9:45 AM	1	0	6:45 PM	1	0		
9:50 AM	0	7	6:50 PM	2	0		
9:55 AM	0	0	6:55 PM	2	0		
10:00 AM	4	0	7:00 PM	1	0		

Prepared by National Data & Surveying Services

QUEUING

Location: Outbound Concordia
City: Irvine

Day: Thursday
Date: 10/30/2014

Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack	
Exact Time Start	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**
7:01:58	7:02:00	7:50:19	7:50:25	8:23:49	8:23:54	8:45:41	8:45:49	9:05:20	9:05:27	9:39:21	9:38:28
7:02:35	7:02:48	7:51:00	7:51:09	8:24:57	8:25:09	8:46:29	8:46:35	9:06:07	9:06:13	9:40:21	9:40:28
7:06:09	7:06:11	7:52:32	7:52:39	8:25:17	8:26:06	8:47:26	8:47:33	9:06:39	9:06:44	9:41:53	9:42:00
7:06:35	7:06:39	7:52:55	7:53:01	8:26:16	8:26:25	8:48:36	8:48:43	9:06:49	9:06:55	9:42:08	9:42:15
7:07:07	7:07:09	7:53:25	7:53:31	8:26:29	8:26:33	8:50:13	8:50:21	9:07:28	9:07:34	9:44:11	9:44:17
7:08:28	7:08:36	7:53:40	7:53:50	8:26:49	8:27:03	8:50:44	8:50:49	9:07:39	9:07:45	9:44:31	9:44:37
7:08:42	7:08:49	7:56:33	7:56:42	8:27:21	8:27:43	8:51:03	8:51:09	9:08:28	9:08:34	9:45:06	9:45:13
7:15:01	7:15:15	7:57:00	7:56:08	8:28:09	8:28:22	8:51:31	8:51:44	9:09:07	9:09:15	9:45:19	9:45:27
7:17:10	7:17:13	7:57:15	7:57:22	8:28:40	8:28:51	8:51:47	8:51:50	9:09:47	9:09:58	9:46:07	9:46:15
7:17:24	7:17:28	7:58:01	7:58:08	8:28:53	8:28:59	8:51:56	8:52:03	9:10:08	9:10:15	9:46:46	9:46:52
7:19:59	7:20:04	7:58:32	7:58:40	8:29:03	8:29:11	8:52:31	8:52:36	9:10:45	9:10:52	9:48:28	9:48:37
7:20:30	7:20:34	7:59:55	8:01:00	8:30:39	8:30:46	8:53:15	8:53:27	9:14:30	9:14:41	9:49:13	9:49:20
7:20:46	7:20:50	8:01:03	8:01:10	8:31:37	8:31:50	8:53:33	8:53:38	9:17:10	9:17:17	9:49:36	9:49:42
7:21:00	7:21:12	8:01:34	8:01:42	8:31:53	8:31:59	8:53:47	8:53:54	9:20:44	9:20:51	9:50:04	9:50:11
7:22:30	7:22:35	8:02:17	8:02:24	8:32:16	8:32:22	8:54:43	8:54:49	9:21:17	9:21:24	9:50:29	9:50:35
7:23:13	7:23:15	8:03:38	8:03:45	8:32:50	8:32:58	8:55:07	8:55:12	9:21:48	9:21:55	9:51:05	9:51:11
7:24:24	7:24:27	8:04:06	8:04:13	8:33:23	8:33:32	8:55:22	8:55:29	9:24:11	9:24:25	9:52:06	9:52:14
7:26:47	7:26:50	8:05:36	8:05:41	8:33:38	8:33:44	8:55:49	8:55:58	9:24:46	9:24:52	9:54:36	9:54:42
7:27:49	7:27:56	8:05:47	8:05:53	8:33:49	8:33:56	8:57:19	8:57:26	9:25:28	9:25:37	9:55:07	9:55:14
7:28:55	7:29:01	8:06:13	8:06:21	8:34:53	8:35:00	8:57:49	8:57:56	9:26:36	9:26:43	9:55:48	9:55:54
7:29:53	7:30:01	8:06:28	8:06:35	8:35:06	8:35:12	8:58:03	8:58:11	9:27:21	9:27:34	9:57:23	9:57:37
7:30:48	7:30:55	8:07:03	8:07:09	8:35:18	8:35:43	8:58:31	8:58:38	9:28:36	9:28:43	9:57:57	9:58:03
7:31:41	7:31:47	8:07:33	8:07:40	8:36:00	8:36:09	8:58:48	8:58:55	9:29:37	9:29:46	9:58:21	9:58:28
7:32:34	7:32:42	8:09:39	8:09:47	8:36:14	8:36:21	8:59:01	8:59:08	9:29:50	9:29:59	9:59:40	9:59:47
7:33:33	7:33:40	8:12:08	8:12:15	8:36:44	8:36:51	8:59:22	8:59:29	9:30:10	9:30:17		
7:34:20	7:34:28	8:13:21	8:13:30	8:37:03	8:37:11	8:59:37	8:59:41	9:30:35	9:30:42		
7:38:26	7:38:36	8:13:49	8:13:55	8:37:20	8:37:42	8:59:47	8:59:53	9:31:49	9:31:56		
7:38:51	7:38:59	8:14:45	8:14:55	8:38:03	8:38:11	9:00:51	9:00:58	9:33:09	9:33:17		
7:40:38	7:40:46	8:16:28	8:16:36	8:40:12	8:40:19	9:01:00	9:00:08	9:33:41	9:33:48		
7:41:12	7:41:20	8:16:43	8:16:49	8:40:57	8:41:05	9:01:19	9:01:24	9:34:13	9:34:18		
7:43:15	7:43:28	8:16:58	8:17:07	8:42:40	8:42:46	9:01:29	9:01:35	9:34:40	9:34:48		
7:44:00	7:44:11	8:17:36	8:17:44	8:43:03	8:43:10	9:01:47	9:01:53	9:36:03	9:36:11		
7:44:43	7:44:51	8:19:27	8:19:33	8:43:13	8:43:28	9:02:55	9:03:02	9:37:06	9:37:14		
7:45:23	7:45:31	8:20:26	8:20:31	8:43:35	8:43:42	9:03:09	9:03:15	9:37:16	9:37:23		
7:46:40	7:46:46	8:20:50	8:20:54	8:43:50	8:43:55	9:03:34	9:03:41	9:38:09	9:38:19		
7:46:58	7:47:03	8:21:23	8:21:26	8:44:12	8:44:18	9:03:44	9:03:52	9:38:46	9:38:52		
7:47:38	7:47:44	8:23:33	8:23:43	8:45:22	8:45:30	9:04:34	9:04:41	9:39:00	9:39:06		

Prepared by National Data & Surveying Services

QUEUING

Location: Outbound Concordia
City: Irvine

Day: Thursday
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Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack		Queue reaches the Guard Shack	
Exact Time Start	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**	**Exact Time Start**	**Exact Time End**
4:01:13	4:01:19	4:18:13	4:18:20	4:31:31	4:31:38	4:42:22	4:42:31	4:56:21	4:56:30	5:09:36	5:09:41
4:01:24	4:01:35	4:18:22	4:18:29	4:31:49	4:31:53	4:42:48	4:43:01	4:56:34	4:56:41	5:09:52	5:10:07
4:02:00	4:02:09	4:18:35	4:18:41	4:31:59	4:32:03	4:43:24	4:43:27	4:57:26	4:57:45	5:10:20	5:10:33
4:02:20	4:02:25	4:19:07	4:19:14	4:32:25	4:32:32	4:43:30	4:43:37	4:57:58	4:58:01	5:10:44	5:11:00
4:02:41	4:02:48	4:20:07	4:20:13	4:32:57	4:33:05	4:43:44	4:43:49	4:58:05	4:58:12	5:11:01	5:11:09
4:02:59	4:03:02	4:20:17	4:20:28	4:33:01	4:33:13	4:43:51	4:44:00	4:58:36	4:58:39	5:11:20	5:11:27
4:03:11	4:03:25	4:20:33	4:20:37	4:33:16	4:33:21	4:44:10	4:44:18	4:58:39	4:58:53	5:11:30	5:11:37
4:04:10	4:04:17	4:20:43	4:20:52	4:33:27	4:33:34	4:44:21	4:44:28	4:59:00	4:59:06	5:12:06	5:12:13
4:04:48	4:04:55	4:20:56	4:21:02	4:33:50	4:33:56	4:44:36	4:44:41	4:59:17	4:59:24	5:12:16	5:12:28
4:05:01	4:05:10	4:21:09	4:21:14	4:34:06	4:34:19	4:44:53	4:45:05	4:59:35	4:59:43	5:12:20	5:13:27
4:05:27	4:05:33	4:21:39	4:21:46	4:34:29	4:34:38	4:45:07	4:45:18	4:59:44	4:59:51	5:13:53	5:14:03
4:05:39	4:05:46	4:22:13	4:22:28	4:34:40	4:34:47	4:45:59	4:46:10	5:00:00	5:00:08	5:14:27	5:14:34
4:06:14	4:06:21	4:22:30	4:22:36	4:34:49	4:34:56	4:46:22	4:46:28	5:00:15	5:00:19	5:14:36	5:14:42
4:06:33	4:06:45	4:22:55	4:23:02	4:34:56	4:35:05	4:46:39	4:46:45	5:00:25	5:00:29	5:14:47	5:14:53
4:06:50	4:06:58	4:23:07	4:23:11	4:35:21	4:35:27	4:46:53	4:47:00	5:00:37	5:00:41	5:14:59	5:15:12
4:07:10	4:07:15	4:23:22	4:23:30	4:35:35	4:35:40	4:47:03	4:47:12	5:00:46	5:00:57	5:15:17	5:15:24
4:07:30	4:07:38	4:23:49	4:23:55	4:35:47	4:35:54	4:47:13	4:47:23	5:01:03	5:01:00	5:15:42	5:15:50
4:08:09	4:08:16	4:24:06	4:23:12	4:35:54	4:36:00	4:47:44	4:47:55	5:01:19	5:01:27	5:16:19	5:16:26
4:08:19	4:08:27	4:24:30	4:24:37	4:36:45	4:36:55	4:48:15	4:48:36	5:02:07	5:02:14	5:16:40	5:16:48
4:08:31	4:08:37	4:25:10	4:25:20	4:36:58	4:37:04	4:48:49	4:49:00	5:02:24	5:02:30	5:17:03	5:17:09
4:08:57	4:09:04	4:25:31	4:25:37	4:37:09	4:37:18	4:49:04	4:49:12	5:03:08	5:03:13	5:17:23	5:17:30
4:10:30	4:10:38	4:25:45	4:25:51	4:37:33	4:37:42	4:49:14	4:49:38	5:03:21	5:03:32	5:17:40	5:17:47
4:10:43	4:10:50	4:26:13	4:26:20	4:37:49	4:38:00	4:49:46	4:49:51	5:03:38	5:03:47	5:18:02	5:18:11
4:10:52	4:10:58	4:26:22	4:26:28	4:38:10	4:38:16	4:50:13	4:50:18	5:03:51	5:03:59	5:18:16	5:18:22
4:11:00	4:11:05	4:27:09	4:27:16	4:38:31	4:38:37	4:50:35	4:50:46	5:04:09	5:04:17	5:18:32	5:18:38
4:11:13	4:11:17	4:27:17	4:27:24	4:38:39	4:38:45	4:50:01	4:50:07	5:04:19	5:04:35	5:19:00	5:19:06
4:11:20	4:11:26	4:27:53	4:27:59	4:38:49	4:38:57	4:51:34	4:51:41	5:04:44	5:04:51	5:19:08	5:19:16
4:11:38	4:11:51	4:28:01	4:28:08	4:39:27	4:39:35	4:53:15	4:53:20	5:05:17	5:05:22	5:19:39	5:19:51
4:12:30	4:12:39	4:28:47	4:28:53	4:39:57	4:40:03	4:53:48	4:53:55	5:05:25	5:05:32	5:20:43	5:20:49
4:12:59	4:13:11	4:29:15	4:29:22	4:40:05	4:40:10	4:53:56	4:54:01	5:05:48	5:05:53	5:20:57	5:21:04
4:14:20	4:14:35	4:29:23	4:29:32	4:40:20	4:40:32	4:54:04	4:54:07	5:06:06	5:06:13	5:21:16	5:21:22
4:14:39	4:14:52	4:29:40	4:29:45	4:40:51	4:40:58	4:54:14	4:54:19	5:06:51	5:06:57	5:21:30	5:21:35
4:15:06	4:15:13	4:30:32	4:30:40	4:41:03	4:41:14	4:54:21	4:54:26	5:07:09	5:07:15	5:22:50	5:22:57
4:16:00	4:16:06	4:30:42	4:30:49	4:41:20	4:41:27	4:54:44	4:54:51	5:07:46	5:07:53	5:23:21	5:23:27
4:16:39	4:16:43	4:30:51	4:30:55	4:41:46	4:41:54	4:55:07	4:55:19	5:07:58	5:08:04	5:23:33	5:23:38
4:17:10	4:17:15	4:30:59	4:31:06	4:41:56	4:42:05	4:55:32	4:55:59	5:08:11	5:08:17	5:23:50	5:24:00
4:17:52	4:17:57	4:31:08	4:31:15	4:42:09	4:42:15	4:55:07	4:56:14	5:08:51	5:08:59	5:24:02	5:24:06

Queue reaches the Guard Shack	
Exact Time Start	Exact Time End
5:24:40	5:24:26
5:25:10	5:25:23
5:25:30	5:25:37
5:25:51	5:26:00
5:26:16	5:26:21
5:26:37	5:26:47
5:26:49	5:26:57
5:27:06	5:27:20
5:27:30	5:27:40
5:27:58	5:28:05
5:28:23	5:28:29
5:29:03	5:29:09
5:29:26	5:29:32
5:29:39	5:29:48
5:30:02	5:30:09
5:30:47	5:30:52
5:30:59	5:31:06
5:30:13	5:31:19
5:31:46	5:31:52
5:32:04	5:32:10
5:32:43	5:32:49
5:33:26	5:33:34
5:33:37	5:33:45
5:33:55	5:34:00
5:34:34	5:34:40
5:36:02	5:36:09
5:36:35	5:36:46
5:37:02	5:37:08
5:37:14	5:37:23
5:37:25	5:37:35
5:37:51	5:37:58
5:38:15	5:38:22
5:38:27	5:38:32
5:39:11	5:39:17
5:39:28	5:39:34
5:39:39	5:39:45
5:40:02	5:40:08

Queue reaches the Guard Shack	
Exact Time Start	Exact Time End
5:40:24	5:40:30
5:41:03	5:41:09
5:41:42	5:41:54
5:43:04	5:43:10
5:43:19	5:43:25
5:43:58	5:44:04
5:44:21	5:44:28
5:44:35	5:44:42
5:45:41	5:45:47
5:45:49	5:45:59
5:46:13	5:46:29
5:47:04	5:47:10
5:47:22	5:47:28
5:48:04	5:48:10
5:48:49	5:48:55
5:49:27	5:49:33
5:49:45	5:49:53
5:49:54	5:50:03
5:50:10	5:50:20
5:50:22	5:50:28
5:50:34	5:50:39
5:50:41	5:50:48
5:50:51	5:50:58
5:51:12	5:51:18
5:51:47	5:51:57
5:52:19	5:52:25
5:52:31	5:52:37
5:52:59	5:53:05
5:53:29	5:53:35
5:53:46	5:53:52
5:54:22	5:54:30
5:54:35	5:54:40
5:54:58	5:55:05
5:55:18	5:55:25
5:55:26	5:55:39
5:56:33	5:56:38
5:56:58	5:57:11

Queue reaches the Guard Shack	
Exact Time Start	Exact Time End
5:57:16	5:57:29
5:57:45	5:57:50
5:58:33	5:58:40
5:58:59	5:59:06
5:59:20	5:59:26
5:59:38	5:59:46
6:01:53	6:02:00
6:02:10	6:02:18
6:02:29	6:02:44
6:02:45	6:02:58
6:03:14	6:03:31
6:03:54	6:04:02
6:04:05	6:04:11
6:04:30	6:04:37
6:05:31	6:05:40
6:06:02	6:06:12
6:06:14	6:06:22
6:07:33	6:07:39
6:08:04	6:08:10
6:08:38	6:08:44
6:08:46	6:08:53
6:09:45	6:09:57
6:10:40	6:10:47
6:10:51	6:10:57
6:11:49	6:11:56
6:12:04	6:12:09
6:12:31	6:12:36
6:13:33	6:13:43
6:13:54	6:14:00
6:14:17	6:14:24
6:14:36	6:14:42
6:15:29	6:15:35
6:15:45	6:15:58
6:16:11	6:16:19
6:16:27	6:16:33
6:16:35	6:16:46
6:17:05	6:17:10

Queue reaches the Guard Shack	
Exact Time Start	Exact Time End
6:17:24	6:17:30
6:17:35	6:17:47
6:17:52	6:17:59
6:18:05	6:18:15
6:18:18	6:18:26
6:19:00	6:19:07
6:19:12	6:19:18
6:19:28	6:19:34
6:19:37	6:19:44
6:20:05	6:20:13
6:20:27	6:20:32
6:20:38	6:20:45
6:20:59	6:21:05
6:22:17	6:22:21
6:22:27	6:22:33
6:23:28	6:23:34
6:23:39	6:23:44
6:24:07	6:24:22
6:25:23	6:25:31
6:25:34	6:25:43
6:25:48	6:25:58
6:26:31	6:26:37
6:28:27	6:28:36
6:28:54	6:29:00
6:29:57	6:30:10
6:30:27	6:30:33
6:30:37	6:30:42
6:32:25	6:32:30
6:32:04	6:33:10
6:33:17	6:33:27
6:33:39	6:33:43
6:34:19	6:34:25
6:34:59	6:35:07
6:35:39	6:35:45
6:35:55	6:36:00
6:36:02	6:36:09
6:36:17	6:36:27

Queue reaches the Guard Shack	
Exact Time Start	Exact Time End
6:36:30	6:36:33
6:36:41	6:36:47
6:37:04	6:37:13
6:37:15	6:37:21
6:37:50	6:37:55
6:38:05	6:38:12
6:38:16	6:38:28
6:38:31	6:38:35
6:38:54	6:39:00
6:39:31	6:39:37
6:39:51	6:39:58
6:40:08	6:40:13
6:40:25	6:40:35
6:40:38	6:40:46
6:40:49	6:41:00
6:41:04	6:41:17
6:41:25	6:41:35
6:41:44	6:41:50
6:42:20	6:42:26
6:43:13	6:43:19
6:43:30	6:43:37
6:43:47	6:43:57
6:44:17	6:44:24
6:44:35	6:44:42
6:44:44	6:44:50
6:44:57	6:45:09
6:45:30	6:45:37
6:45:52	6:45:58
6:46:10	6:46:15
6:46:33	6:46:43
6:46:52	6:46:58
6:47:13	6:47:24
6:07:33	6:47:40
6:48:23	6:48:31
6:48:55	6:49:00
6:49:21	6:49:25
6:49:41	6:49:50

Queue reaches the Guard Shack	
Exact Time Start	Exact Time End
6:50:37	6:50:42
6:51:29	6:51:35
6:51:39	6:51:44
6:52:17	6:52:36
6:52:46	6:52:51
6:54:00	6:54:06
6:54:14	6:54:09
6:55:26	6:55:32
6:55:50	6:55:56
6:57:17	6:57:23
6:57:47	6:57:52
6:57:56	6:58:06
6:59:15	6:59:22
6:59:30	6:59:37
6:59:49	6:59:59

Prepared by National Data & Surveying Services

QUEUING

Location: Inbound at Turtle Rock
City: Irvine

Day: Thursday
Date: 10/30/2014

TIME	QUEUE	
	GUEST	STUDENT / RESIDENT
7:00 AM	0	0
7:05 AM	0	0
7:10 AM	0	0
7:15 AM	0	0
7:20 AM	0	0
7:25 AM	0	0
7:30 AM	0	0
7:35 AM	0	0
7:40 AM	0	0
7:45 AM	0	0
7:50 AM	0	0
7:55 AM	0	0
8:00 AM	0	0
8:05 AM	0	0
8:10 AM	0	0
8:15 AM	0	0
8:20 AM	0	0
8:25 AM	0	0
8:30 AM	0	0
8:35 AM	0	0
8:40 AM	0	0
8:45 AM	0	0
8:50 AM	0	0
8:55 AM	0	0
9:00 AM	0	0
9:05 AM	2	0
9:10 AM	0	0
9:15 AM	0	0
9:20 AM	0	0
9:25 AM	0	0
9:30 AM	0	0
9:35 AM	0	0
9:40 AM	0	0
9:45 AM	0	0
9:50 AM	0	0
9:55 AM	0	0
10:00 AM	0	0

TIME	QUEUE	
	GUEST	STUDENT / RESIDENT
4:00 PM	0	0
4:05 PM	2	0
4:10 PM	0	0
4:15 PM	0	0
4:20 PM	0	0
4:25 PM	0	0
4:30 PM	0	0
4:35 PM	0	0
4:40 PM	0	0
4:45 PM	0	0
4:50 PM	0	0
4:55 PM	0	0
5:00 PM	0	0
5:05 PM	0	0
5:10 PM	0	0
5:15 PM	0	0
5:20 PM	0	0
5:25 PM	0	0
5:30 PM	0	0
5:35 PM	0	0
5:40 PM	0	0
5:45 PM	0	0
5:50 PM	0	0
5:55 PM	0	0
6:00 PM	0	0
6:05 PM	0	0
6:10 PM	0	0
6:15 PM	3	0
6:20 PM	0	0
6:25 PM	3	0
6:30 PM	0	0
6:35 PM	0	0
6:40 PM	0	0
6:45 PM	3	0
6:50 PM	0	0
6:55 PM	0	0
7:00 PM	0	0

APRIL 2015 COUNTS

ITM Peak Hour Summary

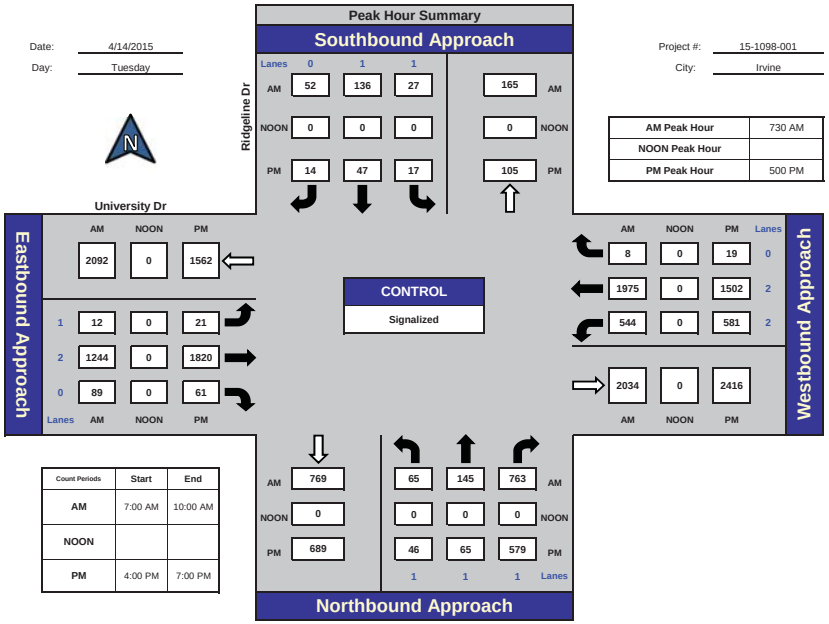
Prepared by:

National Data & Surveying Services

Ridgeline Dr and University Dr , Irvine

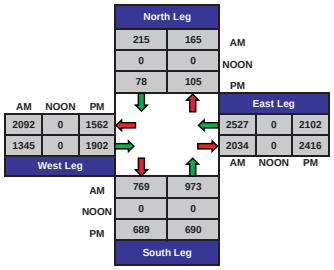
Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-001
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

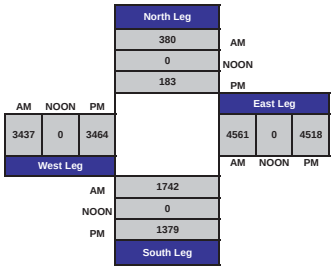


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

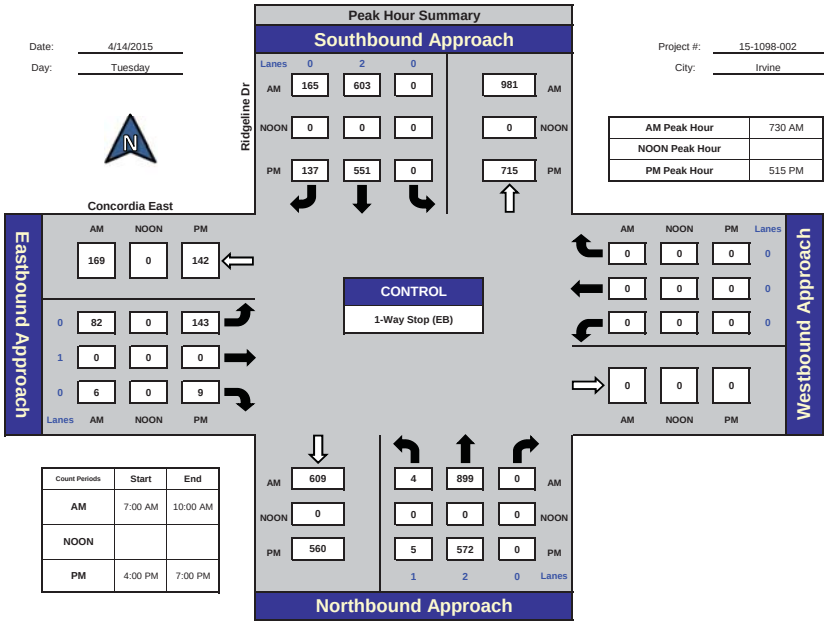
Prepared by:

National Data & Surveying Services

Ridgeline Dr and Concordia East , Irvine

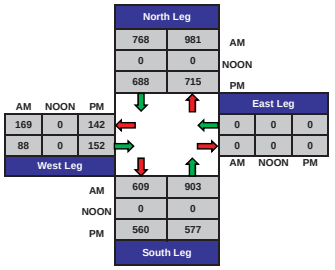
Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-002
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM

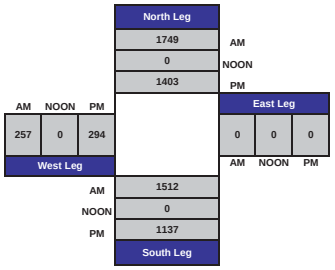


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ascension and Concordia East , Irvine

Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-003
City: Irvine

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Ascension)

Lanes	0	0	0		1	
AM	0	0	0		1	AM
NOON	0	0	0		0	NOON
PM	0	0	0		0	PM

Eastbound Approach (Concordia East)

	AM	NOON	PM	
	220	0	115	
0	1	0	0	
1	63	0	183	
0	6	0	4	
Lanes	AM	NOON	PM	

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
217	0	109	1
13	0	21	0
85	0	197	
AM	NOON	PM	

CONTROL: 1-Way Stop (NB)

Northbound Approach

AM	19	3 0 22	AM
NOON	0	0 0 0	NOON
PM	25	6 0 14	PM
		0 1 0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	0
	1	0	0
West Leg	220	0	115
	70	0	187
East Leg	230	0	130
	85	0	197
South Leg	19	0	25
	25	0	20

Total Volume Per Leg

	AM	NOON	PM
North Leg	1	0	0
West Leg	290	0	302
East Leg	315	0	327
South Leg	44	0	45

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Parking Lot E Dorm Rd and Concordia East , Irvine

Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-004
City: Irvine

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach (Parking Lot E Dorm Rd)

Lanes	0	1	0		
AM	2	1	7	29	AM
NOON	0	0	0	0	NOON
PM	5	3	23	17	PM

Eastbound Approach (Concordia East)

	AM	NOON	PM	
	173	0	79	
0	4	0	5	
1	46	0	121	
0	6	0	18	
Lanes	AM	NOON	PM	

Westbound Approach

AM	NOON	PM	Lanes
24	0	11	0
166	0	57	1
27	0	39	0
75	0	177	
AM	NOON	PM	

CONTROL: 4-Way Stop

Northbound Approach

AM	34	5 1 22	AM
NOON	0	0 0 0	NOON
PM	60	17 1 33	PM
		0 1 0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	10	0	31
	29	0	17
West Leg	173	0	79
	56	0	144
East Leg	217	0	107
	75	0	177
South Leg	34	0	60
	28	0	51

Total Volume Per Leg

	AM	NOON	PM
North Leg	39	0	48
West Leg	229	0	223
East Leg	292	0	284
South Leg	62	0	111

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Joy , Irvine

Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-005
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0	
AM	6	31	0	38 AM
NOON	0	0	0	0 NOON
PM	7	19	1	52 PM

Eastbound Approach (Joy)

	AM	NOON	PM
	6	0	12
0	12	0	2
1	0	0	0
0	2	0	2
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	1	
	AM	NOON	PM	

Northbound Approach

AM	33	0	26 0 AM
NOON	0	0	0 0 NOON
PM	21	5	50 0 PM
		0	1 0 Lanes

CONTROL
1-Way Stop (EB)

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	37	0	27
	38	0	52
West Leg	6	0	12
	14	0	4
East Leg	0	0	0
	0	0	1
South Leg	33	0	21
	26	0	55

Total Volume Per Leg

	AM	NOON	PM
North Leg	75	0	79
West Leg	20	0	16
East Leg	0	0	1
South Leg	59	0	76

Concordia West and Faith , Irvine

Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-006
City: Irvine

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0	
AM	0	35	0	44 AM
NOON	0	0	0	0 NOON
PM	2	54	0	52 PM

Eastbound Approach (Faith)

	AM	NOON	PM
	7	0	8
1	3	0	2
0	0	0	0
1	17	0	5
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

Northbound Approach

AM	52	7	41 0 AM
NOON	0	0	0 0 NOON
PM	59	6	50 0 PM
		0	1 0 Lanes

CONTROL
3-Way Stop (NB/SB/EB)

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	35	0	56
	44	0	52
West Leg	7	0	8
	20	0	7
East Leg	0	0	0
	0	0	0
South Leg	52	0	59
	48	0	56

Total Volume Per Leg

	AM	NOON	PM
North Leg	79	0	108
West Leg	27	0	15
East Leg	0	0	0
South Leg	100	0	115

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Daystar , Irvine

Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-007
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	52	0	46	AM
NOON	0	0	0	0	NOON
PM	3	51	0	61	PM

Eastbound Approach (Daystar)

Lanes	AM	NOON	PM
	2	0	6
0	1	0	2
1	0	0	0
0	9	0	3

Westbound Approach

Lanes	AM	NOON	PM
	0	0	0
0	0	0	0
0	0	0	0
	0	0	0

CONTROL: 1- Way Stop (EB)

Northbound Approach

AM	61	2	45	0
NOON	0	0	0	0
PM	54	3	59	0
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	52	46	AM
	0	0	NOON
	54	61	PM

West Leg			East Leg		
AM	NOON	PM			
2	0	6	0	0	0
10	0	5	0	0	0
			AM	NOON	PM

	South Leg	
AM	61	47
NOON	0	0
PM	54	62

Total Volume Per Leg

	North Leg	
	98	AM
	0	NOON
	115	PM

West Leg			East Leg		
AM	NOON	PM			
12	0	11	0	0	0
			AM	NOON	PM

	South Leg	
AM	108	
NOON	0	
PM	116	

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Turtle Rock Dr , Irvine

Date: 4/14/2015
Day: Tuesday
Project #: 15-1098-008
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	89	0	27	126	AM
NOON	0	0	0	0	NOON
PM	107	0	30	154	PM

Eastbound Approach (Turtle Rock Dr)

Lanes	AM	NOON	PM
	596	0	304
1	92	0	119
2	298	0	314
0	0	0	0

Westbound Approach

Lanes	AM	NOON	PM
	34	0	35
2	507	0	197
	0	0	0
	325	0	344

CONTROL: 1-Way Stop (SB)

Northbound Approach

AM	0	0	0	0
NOON	0	0	0	0
PM	0	0	0	0
Lanes		0	0	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	116	126	AM
	0	0	NOON
	137	154	PM

West Leg			East Leg		
AM	NOON	PM			
596	0	304	541	0	232
390	0	433	325	0	344
			AM	NOON	PM

	South Leg	
AM	0	0
NOON	0	0
PM	0	0

Total Volume Per Leg

	North Leg	
	242	AM
	0	NOON
	291	PM

West Leg			East Leg		
AM	NOON	PM			
986	0	737	866	0	576
			AM	NOON	PM

	South Leg	
AM	0	
NOON	0	
PM	0	

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and University Dr , Irvine

Date: 4/15/2015
Day: Wednesday
Project #: 15-1098-001
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

	Lanes	0	1	1		
AM		37	113	21	88	AM
NOON		0	0	0	0	NOON
PM		23	65	5	84	PM

Eastbound Approach (University Dr)

	AM	NOON	PM
	2016	0	1635
1	17	0	22
2	1263	0	1901
0	89	0	60
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	13	0	19	0
	1919	0	1559	2
	605	0	568	2
	2037	0	2520	
	AM	NOON	PM	

CONTROL: Signalized

Northbound Approach

AM	807	60	58	753 AM
NOON	0	0	0	0 NOON
PM	693	53	43	614 PM
		1	1	1 Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	171	88	AM
	0	0	NOON
	93	84	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
2016	0	1635	2537	0	2146
1369	0	1983	2037	0	2520

	South Leg	
AM	807	871
NOON	0	0
PM	693	710

Total Volume Per Leg

	North Leg	
AM	259	
NOON	0	
PM	177	

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
3385	0	3618	4574	0	4666

	South Leg
AM	1678
NOON	0
PM	1403

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and Concordia East , Irvine

Date: 4/15/2015
Day: Wednesday
Project #: 15-1098-002
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

	Lanes	0	2	0		
AM		213	597	0	876	AM
NOON		0	0	0	0	NOON
PM		154	543	0	712	PM

Eastbound Approach (Concordia East)

	AM	NOON	PM
	219	0	156
0	78	0	180
1	0	0	0
0	5	0	1
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

CONTROL: 1-Way Stop (EB)

Northbound Approach

AM	602	6	798	0 AM
NOON	0	0	0	0 NOON
PM	544	2	532	0 PM
		1	2	0 Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
	810	876	AM
	0	0	NOON
	697	712	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
219	0	156	0	0	0
83	0	181	0	0	0

	South Leg	
AM	602	804
NOON	0	0
PM	544	534

Total Volume Per Leg

	North Leg	
AM	1686	
NOON	0	
PM	1409	

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
302	0	337	0	0	0

	South Leg
AM	1406
NOON	0
PM	1078

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ascension and Concordia East , Irvine

Date: 4/15/2015
Day: Wednesday

Project #: 15-1098-003
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	400 PM

Peak Hour Summary

Southbound Approach

Lanes	0	0	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM

Ascension

Concordia East

Eastbound Approach

	AM	NOON	PM
	230	0	139
0	0	0	0
1	51	0	185
0	7	0	4
Lanes	AM	NOON	PM

CONTROL

1-Way Stop (NB)

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	209	0	135	1
	10	0	14	0
	83	0	205	
	AM	NOON	PM	

Northbound Approach

AM	17	21	0	32	AM
NOON	0	0	0	0	NOON
PM	18	4	0	20	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	0
	0	0	0
East Leg	219	0	149
	83	0	205
West Leg	230	0	139
	58	0	189
South Leg	17	0	18
	53	0	24

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	0
East Leg	302	0	354
West Leg	288	0	328
South Leg	70	0	42

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Parking Lot E Dorm Rd and Concordia East , Irvine

Date: 4/15/2015
Day: Wednesday

Project #: 15-1098-004
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach

Lanes	0	1	0		
AM	3	3	9	25	AM
NOON	0	0	0	0	NOON
PM	4	5	22	15	PM

Parking Lot E Dorm Rd

Concordia East

Eastbound Approach

	AM	NOON	PM
	203	0	100
0	4	0	6
1	53	0	120
0	4	0	16
Lanes	AM	NOON	PM

CONTROL

4-Way Stop

Westbound Approach

	AM	NOON	PM	Lanes
	15	0	6	0
	183	0	85	1
	24	0	42	0
	70	0	190	
	AM	NOON	PM	

Northbound Approach

AM	31	17	6	8	AM
NOON	0	0	0	0	NOON
PM	63	11	3	48	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	15	0	31
	25	0	15
East Leg	222	0	133
	70	0	190
West Leg	203	0	100
	61	0	142
South Leg	31	0	63
	31	0	62

Total Volume Per Leg

	AM	NOON	PM
North Leg	40	0	46
East Leg	292	0	323
West Leg	264	0	242
South Leg	62	0	125

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Joy , Irvine

Date: 4/15/2015
Day: Wednesday
Project #: 15-1098-005
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	2	36	1	34	AM
NOON	0	0	0	0	NOON
PM	5	32	0	76	PM

Eastbound Approach (Joy)

	AM	NOON	PM	Lanes
	3	0	8	
	8	0	5	0
	0	0	0	1
	5	0	1	0

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	1	0	0	

Northbound Approach

AM	41	1	26	0
NOON	0	0	0	0
PM	33	3	71	0
Lanes		0	1	0

CONTROL: 1-Way Stop (EB)

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	39	0	37
	34	0	76
West Leg	3	0	8
	13	0	6
East Leg	0	0	0
	1	0	0
South Leg	41	0	33
	27	0	74

Total Volume Per Leg

	AM	NOON	PM
North Leg	73	0	113
West Leg	16	0	14
East Leg	1	0	0
South Leg	68	0	107

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Faith , Irvine

Date: 4/15/2015
Day: Wednesday
Project #: 15-1098-006
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	38	1	48	AM
NOON	0	0	0	0	NOON
PM	2	38	1	60	PM

Eastbound Approach (Faith)

	AM	NOON	PM	Lanes
	7	0	14	
	2	0	5	1
	0	0	0	0
	22	0	10	1

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	1	0	1	

Northbound Approach

AM	60	7	46	0
NOON	0	0	0	0
PM	48	12	55	0
Lanes		0	1	0

CONTROL: 3-Way Stop (NB/SB/EB)

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	39	0	41
	48	0	60
West Leg	7	0	14
	24	0	15
East Leg	0	0	0
	1	0	1
South Leg	60	0	48
	53	0	67

Total Volume Per Leg

	AM	NOON	PM
North Leg	87	0	101
West Leg	31	0	29
East Leg	1	0	1
South Leg	113	0	115

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Daystar , Irvine

Date: 4/15/2015
Day: Wednesday
Project #: 15-1098-007
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	60	0	52	AM
NOON	0	0	0	0	NOON
PM	3	51	0	63	PM

Eastbound Approach (Daystar)

	AM	NOON	PM	Lanes
	4	0	6	
	3	0	1	0
	0	0	0	1
	12	0	1	0
Lanes	AM	NOON	PM	

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

CONTROL
1- Way Stop (EB)

Northbound Approach

AM	72	4	49	0	AM
NOON	0	0	0	0	NOON
PM	52	3	62	0	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	60	0	54
	52	0	63
West Leg	4	0	6
	15	0	2
East Leg	0	0	0
	0	0	0
South Leg	72	0	52
	53	0	65

Total Volume Per Leg

	AM	NOON	PM
North Leg	112	0	117
West Leg	19	0	8
East Leg	0	0	0
South Leg	125	0	117

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Turtle Rock Dr , Irvine

Date: 4/15/2015
Day: Wednesday
Project #: 15-1098-008
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	107	0	24	137	AM
NOON	0	0	0	0	NOON
PM	95	0	31	142	PM

Eastbound Approach (Turtle Rock Dr)

	AM	NOON	PM
	674	0	340
1	105	0	115
2	334	0	345
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	32	0	27	0
	567	0	245	2
	0	0	0	0
	358	0	376	
	AM	NOON	PM	

CONTROL
1-Way Stop (SB)

Northbound Approach

AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	0	0	0	0	PM
		0	0	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	131	0	126
	137	0	142
West Leg	674	0	340
	439	0	460
East Leg	599	0	272
	358	0	376
South Leg	0	0	0
	0	0	0

Total Volume Per Leg

	AM	NOON	PM
North Leg	268	0	268
West Leg	1113	0	800
East Leg	957	0	648
South Leg	0	0	0

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and University Dr , Irvine

Date: 4/16/2015
Day: Thursday
Project #: 15-1098-001
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

Lanes	0	1	1		
AM	24	125	21	159	AM
NOON	0	0	0	0	NOON
PM	12	54	8	87	PM

Eastbound Approach (University Dr)

Lanes	AM	NOON	PM
	2000	0	1818
1	13	0	39
2	1303	0	1879
0	94	0	71

Westbound Approach

Lanes	AM	NOON	PM
0	5	0	24
2	1910	0	1765
2	504	0	539
	2022	0	2440

Northbound Approach

Lanes	1	1	1	
AM	66	141	698	AM
NOON	0	0	0	NOON
PM	41	24	553	PM
	723	0	664	

CONTROL: Signalized

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
AM	170	159	AM
NOON	0	0	NOON
PM	74	87	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
2000	0	1818		2419	0	2328
1410	0	1989		2022	0	2440

	South Leg	
AM	723	905
NOON	0	0
PM	664	618

Total Volume Per Leg

	North Leg	
AM	329	AM
NOON	0	NOON
PM	161	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
3410	0	3807	4441	0	4768

	South Leg
AM	1628
NOON	0
PM	1282

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and Concordia East , Irvine

Date: 4/16/2015
Day: Thursday
Project #: 15-1098-002
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

Lanes	0	2	0		
AM	171	593	0	903	AM
NOON	0	0	0	0	NOON
PM	159	506	0	619	PM

Eastbound Approach (Concordia East)

Lanes	AM	NOON	PM
	177	0	163
0	76	0	129
1	0	0	0
0	4	0	1

Westbound Approach

Lanes	AM	NOON	PM
0	0	0	0
0	0	0	0
0	0	0	0
	0	0	0

Northbound Approach

Lanes	1	2	0	
AM	6	827	0	AM
NOON	0	0	0	NOON
PM	4	490	0	PM
	597	0	507	

CONTROL: 1-Way Stop (EB)

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
AM	764	903	AM
NOON	0	0	NOON
PM	665	619	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
177	0	163		0	0	0
80	0	130		0	0	0

	South Leg	
AM	597	833
NOON	0	0
PM	507	494

Total Volume Per Leg

	North Leg	
AM	1667	AM
NOON	0	NOON
PM	1284	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
257	0	293	0	0	0

	South Leg
AM	1430
NOON	0
PM	1001

ITM Peak Hour Summary

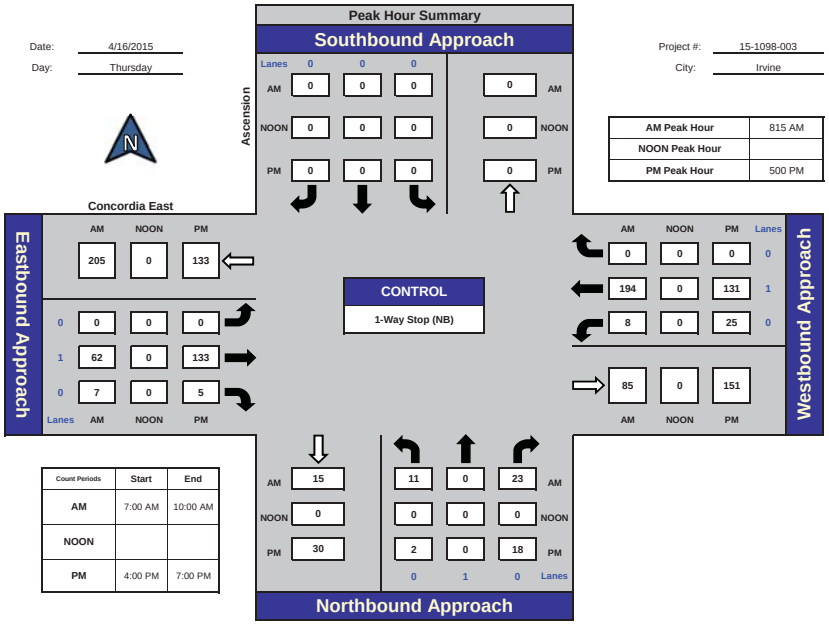
Prepared by:

National Data & Surveying Services

Ascension and Concordia East , Irvine

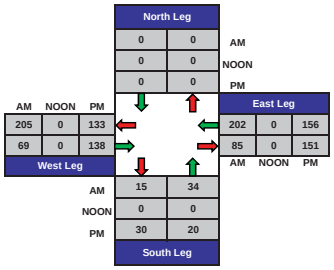
Date: 4/16/2015
Day: Thursday
Project #: 15-1098-003
City: Irvine

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	500 PM

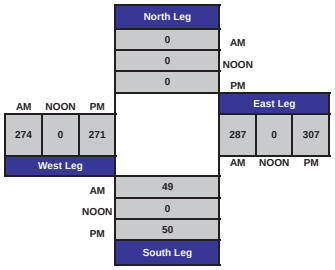


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

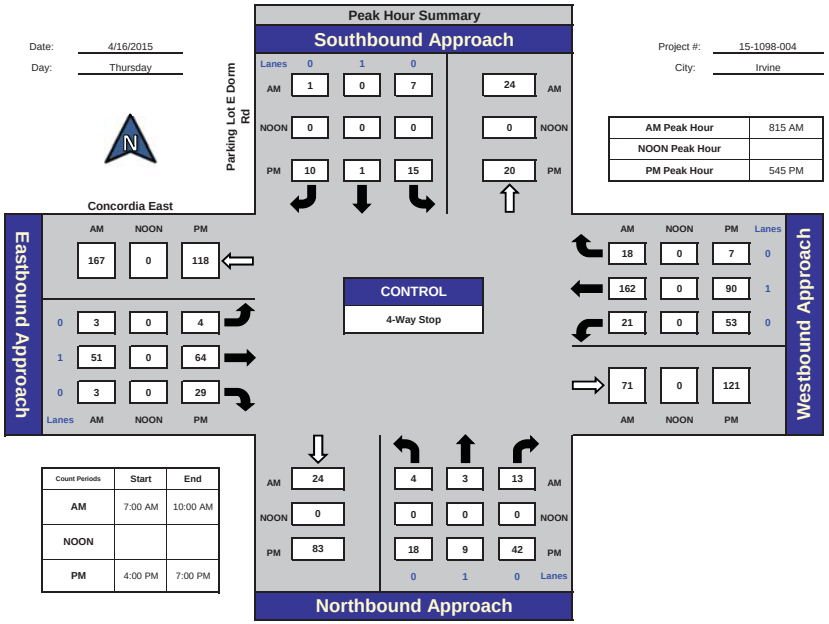
Prepared by:

National Data & Surveying Services

Parking Lot E Dorm Rd and Concordia East , Irvine

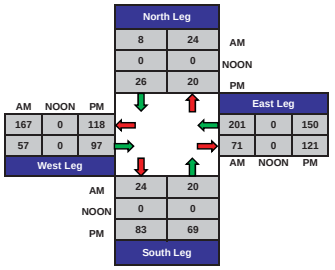
Date: 4/16/2015
Day: Thursday
Project #: 15-1098-004
City: Irvine

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	545 PM

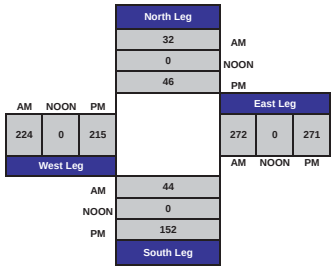


Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Joy , Irvine

Date: 4/16/2015
Day: Thursday
Project #: 15-1098-005
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	545 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	4	30	0	33	AM
NOON	0	0	0	0	NOON
PM	4	30	0	43	PM

Eastbound Approach (Joy)

Lanes	AM	NOON	PM
	5	0	9
0	13	0	2
1	0	0	0
0	3	0	0

Westbound Approach

Lanes	AM	NOON	PM
0	0	0	0
0	0	0	0
0	0	0	0
	0	0	0

CONTROL
1-Way Stop (EB)

Northbound Approach

AM	33	1	20	0	AM
NOON	0	0	0	0	NOON
PM	30	5	41	0	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg			East Leg			South Leg		
AM	34	33	AM	0	0	0	33	21	AM
NOON	0	0	NOON	0	0	0	0	0	NOON
PM	34	43	PM	0	0	0	30	46	PM
	AM	NOON	PM	AM	NOON	PM			
West Leg	5	0	9						
	16	0	2						

Total Volume Per Leg

	North Leg		East Leg			South Leg	
AM	67	AM	0	0	0	54	AM
NOON	0	NOON				0	NOON
PM	77	PM				76	PM
			AM	NOON	PM		
West Leg	21	0	11				

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Faith , Irvine

Date: 4/16/2015
Day: Thursday
Project #: 15-1098-006
City: Irvine

AM Peak Hour	800 AM
NOON Peak Hour	
PM Peak Hour	430 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	1	27	0	56	AM
NOON	0	0	0	0	NOON
PM	2	51	0	38	PM

Eastbound Approach (Faith)

Lanes	AM	NOON	PM
	12	0	16
1	1	0	0
0	0	0	0
1	24	0	5

Westbound Approach

Lanes	AM	NOON	PM
0	0	0	0
0	0	0	0
0	0	0	0
	0	0	0

CONTROL
3-Way Stop (NB/SB/EB)

Northbound Approach

AM	51	11	55	0	AM
NOON	0	0	0	0	NOON
PM	56	14	38	0	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg			East Leg			South Leg		
AM	28	56	AM	0	0	0	51	66	AM
NOON	0	0	NOON	0	0	0	0	0	NOON
PM	53	38	PM	0	0	0	56	52	PM
	AM	NOON	PM	AM	NOON	PM			
West Leg	12	0	16						
	25	0	5						

Total Volume Per Leg

	North Leg		East Leg			South Leg	
AM	84	AM	0	0	0	117	AM
NOON	0	NOON				0	NOON
PM	91	PM				108	PM
			AM	NOON	PM		
West Leg	37	0	21				

ITM Peak Hour Summary

Prepared by:

NDS

National Data & Surveying Services

Concordia West and Daystar , Irvine

Peak Hour Summary

Date:	4/16/2015
Day:	Thursday
Project #:	15-1098-007
City:	Irvine

AM Peak Hour	815 AM
NOON Peak Hour	
PM Peak Hour	430 PM

North: Concordia West; West: Daystar

CONTROL: 1- Way Stop (EB)

Southbound Approach

	Right	Thru	Left	Exit (North Leg)
Lanes	0	1	0	
AM	0	48	0	68
NOON	0	0	0	0
PM	2	54	0	52

Eastbound Approach

	Lanes	AM	NOON	PM
Exit (West Leg)		6	0	4
Left	0	1	0	0
Thru	1	0	0	0
Right	0	9	0	3

Westbound Approach

	AM	NOON	PM	Lanes
Left	0	0	0	0
Thru	0	0	0	0
Right	0	0	0	0
Exit (East Leg)	0	0	0	

Northbound Approach

	Exit (South Leg)	Left	Thru	Right
AM	57	6	67	0
NOON	0	0	0	0
PM	57	2	52	0
Lanes		0	1	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

Leg	Period	In	Out
North Leg	AM	48	68
North Leg	NOON	0	0
North Leg	PM	56	52
South Leg	AM	57	73
South Leg	NOON	0	0
South Leg	PM	57	54

Leg	AM	NOON	PM
West Leg (Out)	6	0	4
West Leg (In)	10	0	3
East Leg (In)	0	0	0
East Leg (Out)	0	0	0

Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	116	0	108
West Leg	16	0	7
East Leg	0	0	0
South Leg	130	0	111

ITM Peak Hour Summary

Prepared by:

NDS

National Data & Surveying Services

Concordia West and Turtle Rock Dr , Irvine

Peak Hour Summary

Date:	4/16/2015
Day:	Thursday
Project #:	15-1098-008
City:	Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	500 PM

North: Concordia West; West: Turtle Rock Dr

CONTROL: 1-Way Stop (SB)

Southbound Approach

	Right	Thru	Left	Exit (North Leg)
Lanes	0	1	0	
AM	104	0	28	149
NOON	0	0	0	0
PM	85	0	32	134

Eastbound Approach

	Lanes	AM	NOON	PM
Exit (West Leg)		597	0	260
Left	1	109	0	111
Thru	2	318	0	257
Right	0	0	0	0

Westbound Approach

	AM	NOON	PM	Lanes
Left	40	0	23	0
Thru	493	0	175	2
Right	0	0	0	0
Exit (East Leg)	346	0	289	

Northbound Approach

	Exit (South Leg)	Left	Thru	Right
AM	0	0	0	0
NOON	0	0	0	0
PM	0	0	0	0
Lanes		0	0	0

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

Leg	Period	In	Out
North Leg	AM	132	149
North Leg	NOON	0	0
North Leg	PM	117	134
South Leg	AM	0	0
South Leg	NOON	0	0
South Leg	PM	0	0

Leg	AM	NOON	PM
West Leg (Out)	597	0	260
West Leg (In)	427	0	368
East Leg (In)	533	0	198
East Leg (Out)	346	0	289

Total Volume Per Leg

Leg	AM	NOON	PM
North Leg	281	0	251
West Leg	1024	0	628
East Leg	879	0	487
South Leg	0	0	0

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Ridgeline Dr and University Dr , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-001
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	600 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

Lanes	0	1	1		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	9	25	13		54	PM

Eastbound Approach (University Dr)

Lanes	AM	NOON	PM
	0	0	580
1	0	0	15
2	0	0	619
0	0	0	66

CONTROL: Signalized

Westbound Approach

AM	NOON	PM	Lanes
0	0	21	0
0	0	539	2
0	0	587	2
0	0	1050	

Northbound Approach

AM	0		
NOON	0		
PM	678		
		1	Lanes
AM	0	0	0
NOON	0	0	0
PM	32	18	418

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	47
	0	0	54
East Leg	0	0	1147
	0	0	1050
West Leg	0	0	580
	0	0	700
South Leg	0	0	678
	0	0	468

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	101
East Leg	0	0	2197
West Leg	0	0	1280
South Leg	0	0	1146

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Ridgeline Dr and Concordia East , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-002
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	615 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

Lanes	0	2	0		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	314	389	0		486	PM

Eastbound Approach (Concordia East)

Lanes	AM	NOON	PM
	0	0	331
0	0	0	147
1	0	0	0
0	0	0	3

CONTROL: 1-Way Stop (EB)

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	

Northbound Approach

AM	0		
NOON	0		
PM	392		
		1	Lanes
AM	0	0	0
NOON	0	0	0
PM	17	339	0

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	703
	0	0	486
East Leg	0	0	0
	0	0	0
West Leg	0	0	331
	0	0	150
South Leg	0	0	392
	0	0	356

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	1189
East Leg	0	0	0
West Leg	0	0	481
South Leg	0	0	748

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ascension and Concordia East , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-003
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	630 PM

Southbound Approach — Ascension

Lanes	0	0	0		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	0	0	0		0	PM

Eastbound Approach — Concordia East

	AM	NOON	PM
	0	0	282
0	0	0	0
1	0	0	185
0	0	0	11
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	275	1
	0	0	17	0
	0	0	202	
	AM	NOON	PM	

CONTROL: 1-Way Stop (NB)

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Northbound Approach

AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	28	7	0	17 PM
		0	1	0 Lanes

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	0
	0	0	0
	0	0	0
East Leg AM	0	0	282
East Leg NOON	0	0	196
West Leg AM	0	0	292
West Leg NOON	0	0	202
	AM	NOON	PM
	0	0	
	0	0	
South Leg	28	24	

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	0
West Leg	0	0	478
East Leg	0	0	494
South Leg	0	0	52

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Parking Lot E Dorm Rd and Concordia East , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-004
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	630 PM

Southbound Approach — Parking Lot E Dorm Rd

Lanes	0	1	0		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	14	2	69		71	PM

Eastbound Approach — Concordia East

	AM	NOON	PM
	0	0	221
0	0	0	8
1	0	0	80
0	0	0	18
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	58	0
	0	0	169	1
	0	0	37	0
	0	0	190	
	AM	NOON	PM	

CONTROL: 4-Way Stop

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Northbound Approach

AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	57	38	5	41 PM
		0	1	0 Lanes

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	0
	0	0	0
	85	71	0
East Leg AM	0	0	221
East Leg NOON	0	0	106
West Leg AM	0	0	264
West Leg NOON	0	0	190
	AM	NOON	PM
	0	0	
	0	0	
South Leg	57	84	

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	0
West Leg	0	0	327
East Leg	0	0	454
South Leg	0	0	141

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Concordia West and Joy , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-005
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	600 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	7	94	0	82	PM

Eastbound Approach (Joy)

	AM	NOON	PM
	0	0	9
0	0	0	5
1	0	0	0
0	0	0	3
Lanes	AM	NOON	PM

CONTROL: 1-Way Stop (EB)

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

Northbound Approach

AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	97	2	77	0 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	101
	0	0	82
West Leg	0	0	9
	0	0	8
East Leg	0	0	0
	0	0	0
South Leg	0	0	97
	0	0	79

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	183
West Leg	0	0	17
East Leg	0	0	0
South Leg	0	0	176

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Concordia West and Faith , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-006
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	900 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	2	245	0	14	PM

Eastbound Approach (Faith)

	AM	NOON	PM
	0	0	7
1	0	0	0
0	0	0	0
1	0	0	5
Lanes	AM	NOON	PM

CONTROL: 3-Way Stop (NB/SB/EB)

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

Northbound Approach

AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	250	5	14	0 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	247
	0	0	14
West Leg	0	0	7
	0	0	5
East Leg	0	0	0
	0	0	0
South Leg	0	0	250
	0	0	19

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	261
West Leg	0	0	12
East Leg	0	0	0
South Leg	0	0	269

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Concordia West and Daystar , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-007
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	900 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	2	245	2	19	PM

Eastbound Approach (Daystar)

	AM	NOON	PM
	0	0	4
0	0	0	0
1	0	0	0
0	0	0	2
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	2	
	AM	NOON	PM	

CONTROL
1- Way Stop (EB)

Northbound Approach

AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	247	2	19	0 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	249
	0	0	19
West Leg	0	0	4
	0	0	2
East Leg	0	0	0
	0	0	2
South Leg	0	0	247
	0	0	21

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	268
West Leg	0	0	6
East Leg	0	0	2
South Leg	0	0	268

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Concordia West and Turtle Rock Dr , Irvine

Date: 4/18/2015
Day: Saturday
Project #: 15-1098-008
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	900 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	218	0	43	29	PM

Eastbound Approach (Turtle Rock Dr)

	AM	NOON	PM
	0	0	299
1	0	0	25
2	0	0	111
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	4	0
	0	0	81	2
	0	0	0	0
	0	0	154	
	AM	NOON	PM	

CONTROL
1-Way Stop (SB)

Northbound Approach

AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	0	0	0	0 PM
		0	0	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	6:00 PM	10:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	261
	0	0	29
West Leg	0	0	299
	0	0	136
East Leg	0	0	85
	0	0	154
South Leg	0	0	0
	0	0	0

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	290
West Leg	0	0	435
East Leg	0	0	239
South Leg	0	0	0

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and University Dr , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-001
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	200 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

Lanes	0	1	1		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	11	22	14		54	PM

Eastbound Approach (University Dr)

Lanes	AM	NOON	PM
	0	0	603
1	0	0	13
2	0	0	664
0	0	0	52

Westbound Approach

AM	NOON	PM	Lanes
0	0	26	0
0	0	553	2
0	0	490	2
0	0	1077	

CONTROL: Signalized

Northbound Approach

AM	0	0	0
NOON	0	0	0
PM	564	39	15
Lanes		1	1

AM	0	0	0
NOON	0	0	0
PM	399		
Lanes	1		

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	47
	0	0	54
East Leg	0	0	1069
	0	0	1077
South Leg	0	0	564
	0	0	453
West Leg	0	0	603
	0	0	729

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	101
East Leg	0	0	2146
South Leg	0	0	1017
West Leg	0	0	1332

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and Concordia East , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-002
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	200 PM

Peak Hour Summary

Southbound Approach (Ridgeline Dr)

Lanes	0	2	0		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	221	341	1		448	PM

Eastbound Approach (Concordia East)

Lanes	AM	NOON	PM
	0	0	230
0	0	0	104
1	0	0	0
0	0	0	3

Westbound Approach

AM	NOON	PM	Lanes
0	0	0	0
0	0	0	0
0	0	0	0
0	0	1	

CONTROL: 1-Way Stop (EB)

Northbound Approach

AM	0	0	0
NOON	0	0	0
PM	344	9	344
Lanes		1	2

AM	0	0	0
NOON	0	0	0
PM	0		
Lanes	0		

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	563
	0	0	448
East Leg	0	0	0
	0	0	1
South Leg	0	0	344
	0	0	353
West Leg	0	0	230
	0	0	107

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	1011
East Leg	0	0	1
South Leg	0	0	697
West Leg	0	0	337

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Ascension and Concordia East , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-003
City: Irvine

Peak Hour Summary

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	200 PM

Southbound Approach — Ascension

Lanes	0	0	0		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	0	0	0		2	PM

Eastbound Approach — Concordia East

	AM	NOON	PM	Lanes
	0	0	210	
	0	0	2	0
	0	0	90	1
	0	0	4	0
Lanes	AM	NOON	PM	

CONTROL: 1-Way Stop (NB)

Westbound Approach

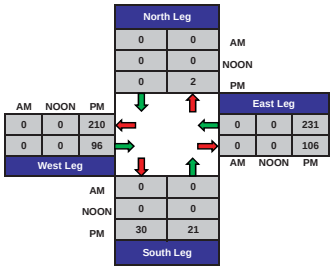
	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	205	1
	0	0	26	0
	0	0	106	
	AM	NOON	PM	

Northbound Approach

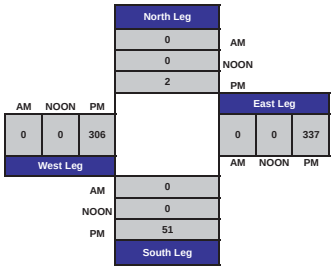
AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	30	5	0	16 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Parking Lot E Dorm Rd and Concordia East , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-004
City: Irvine

Peak Hour Summary

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	200 PM

Southbound Approach — Parking Lot E Dorm Rd

Lanes	0	1	0		0	
AM	0	0	0		0	AM
NOON	0	0	0		0	NOON
PM	2	2	3		7	PM

Eastbound Approach — Concordia East

	AM	NOON	PM
	0	0	190
	0	0	3
	0	0	52
	0	0	17
Lanes	AM	NOON	PM

CONTROL: 4-Way Stop

Westbound Approach

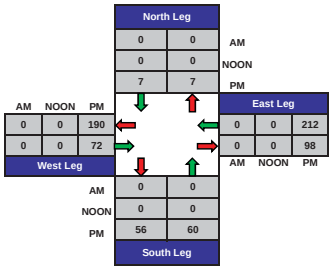
	AM	NOON	PM	Lanes
	0	0	4	0
	0	0	171	1
	0	0	37	0
	0	0	98	
	AM	NOON	PM	

Northbound Approach

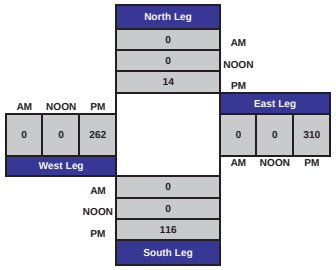
AM	0	0	0	0 AM
NOON	0	0	0	0 NOON
PM	56	17	0	43 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs



Total Volume Per Leg



ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Joy , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-005
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	200 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	6	25	6	35	PM

Eastbound Approach (Joy)

	AM	NOON	PM
	0	0	10
0	0	0	4
1	0	0	0
0	0	0	1
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	6	
	AM	NOON	PM	

CONTROL
1-Way Stop (EB)

Northbound Approach

AM	0	0	0	AM
NOON	0	0	0	NOON
PM	26	4	31	0 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	37
	0	0	35
West Leg	0	0	10
	0	0	5
East Leg	0	0	0
	0	0	6
South Leg	0	0	26
	0	0	35

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	72
West Leg	0	0	15
East Leg	0	0	6
South Leg	0	0	61

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Faith , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-006
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	200 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	2	21	0	55	PM

Eastbound Approach (Faith)

	AM	NOON	PM
	0	0	7
1	0	0	6
0	0	0	0
1	0	0	10
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

CONTROL
3-Way Stop (NB/SB/EB)

Northbound Approach

AM	0	0	0	AM
NOON	0	0	0	NOON
PM	31	5	49	0 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	23
	0	0	55
West Leg	0	0	7
	0	0	16
East Leg	0	0	0
	0	0	0
South Leg	0	0	31
	0	0	54

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	78
West Leg	0	0	23
East Leg	0	0	0
South Leg	0	0	85

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Daystar , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-007
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	200 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	4	27	0	53	PM

Eastbound Approach (Daystar)

	AM	NOON	PM
	0	0	7
0	0	0	4
1	0	0	0
0	0	0	3
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	0
	0	0	0	0
	0	0	0	
	AM	NOON	PM	

CONTROL
1- Way Stop (EB)

Northbound Approach

AM	0	0	0	AM
NOON	0	0	0	NOON
PM	30	3	49	0 PM
		0	1	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	31
	0	0	53
West Leg	0	0	7
	0	0	7
East Leg	0	0	0
	0	0	0
South Leg	0	0	30
	0	0	52

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	84
West Leg	0	0	14
East Leg	0	0	0
South Leg	0	0	82

ITM Peak Hour Summary

Prepared by:
NDS
National Data & Surveying Services

Concordia West and Turtle Rock Dr , Irvine

Date: 4/19/2015
Day: Sunday
Project #: 15-1098-008
City: Irvine

AM Peak Hour	
NOON Peak Hour	
PM Peak Hour	215 PM

Peak Hour Summary

Southbound Approach (Concordia West)

Lanes	0	1	0		
AM	0	0	0	0	AM
NOON	0	0	0	0	NOON
PM	36	0	2	56	PM

Eastbound Approach (Turtle Rock Dr)

	AM	NOON	PM
	0	0	164
1	0	0	44
2	0	0	177
0	0	0	0
Lanes	AM	NOON	PM

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	12	0
	0	0	128	2
	0	0	0	0
	0	0	179	
	AM	NOON	PM	

CONTROL
1-Way Stop (SB)

Northbound Approach

AM	0	0	0	AM
NOON	0	0	0	NOON
PM	0	0	0	0 PM
		0	0	0 Lanes

Count Periods	Start	End
AM		
NOON		
PM	2:00 PM	4:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	0	0	38
	0	0	56
West Leg	0	0	164
	0	0	221
East Leg	0	0	140
	0	0	179
South Leg	0	0	0
	0	0	0

Total Volume Per Leg

	AM	NOON	PM
North Leg	0	0	94
West Leg	0	0	385
East Leg	0	0	319
South Leg	0	0	0

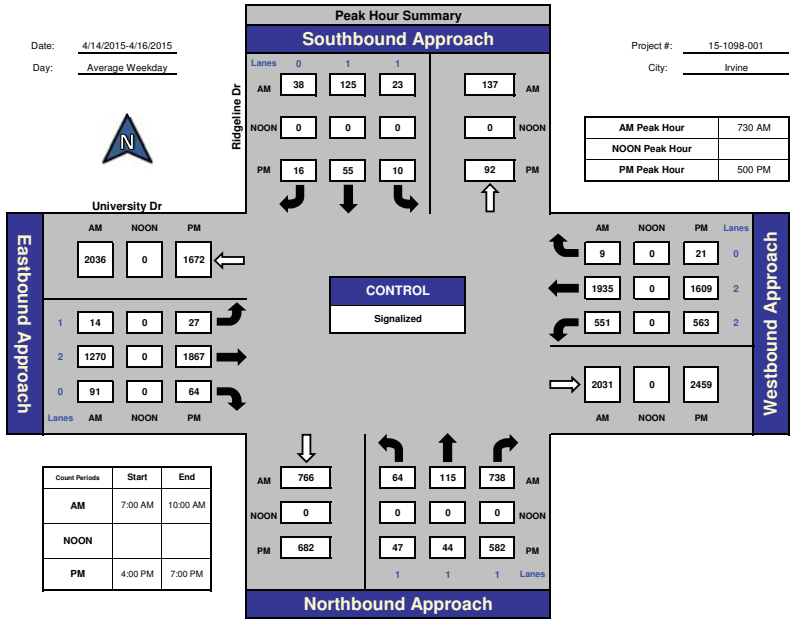
ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and University Dr , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-001
City: Irvine



AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	500 PM

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
AM	185.3333	137.3333	AM
NOON	0	0	NOON
PM	81.66667	92	PM

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
2036	0	1672	2494	0	2192
1375	0	1958	2031	0	2459

	South Leg	
AM	766.3333	916.3333
NOON	0	0
PM	682	672.6667

Total Volume Per Leg

	North Leg	
AM	322.6666667	AM
NOON	0	NOON
PM	173.6666667	PM

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
3411	0	3630	4525	0	4651

	South Leg	
AM	1682.666667	
NOON	0	
PM	1354.666667	

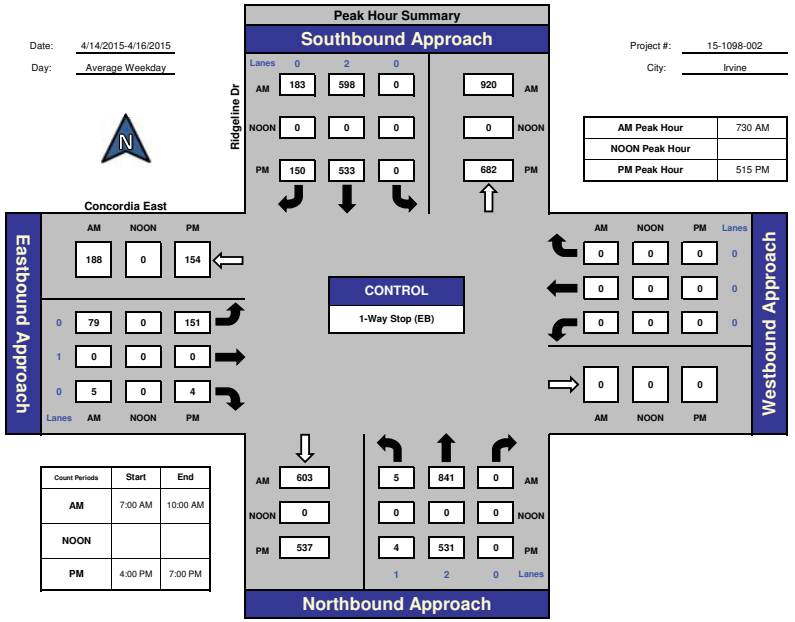
ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ridgeline Dr and Concordia East , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-002
City: Irvine



AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM

Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	North Leg		
AM	780.6667	920	AM
NOON	0	0	NOON
PM	683.3333	682	PM

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
188.3	0	153.7	0	0	0
83.67	0	154.3	0	0	0

	South Leg	
AM	602.6667	846.6667
NOON	0	0
PM	537	535

Total Volume Per Leg

	North Leg	
AM	1700.666667	AM
NOON	0	NOON
PM	1365.333333	PM

West Leg AM	West Leg NOON	West Leg PM	East Leg AM	East Leg NOON	East Leg PM
272	0	308	0	0	0

	South Leg	
AM	1449.333333	
NOON	0	
PM	1072	

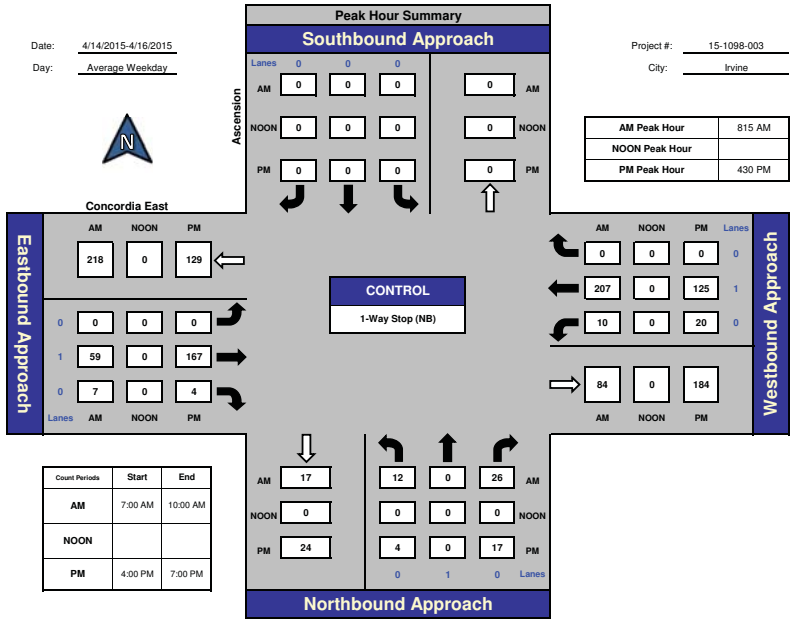
ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Ascension and Concordia East , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-003
City: Irvine



Total Ins & Outs

	North Leg		
	AM	NOON	PM
AM	0	0.333333	
NOON	0	0	
PM	0	0	

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
218.3	0	129	217	0	145
65.67	0	171.3	84.33	0	184.3

	South Leg	
	AM	NOON
AM	17	37.33333
NOON	0	0
PM	24.33333	21.33333

Total Volume Per Leg

	North Leg		
	AM	NOON	PM
AM	0.333333333		
NOON	0		
PM	0		

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
284	0	300.3	301.3	0	329.3

	South Leg	
	AM	NOON
AM	54.33333333	
NOON	0	
PM	45.66666667	

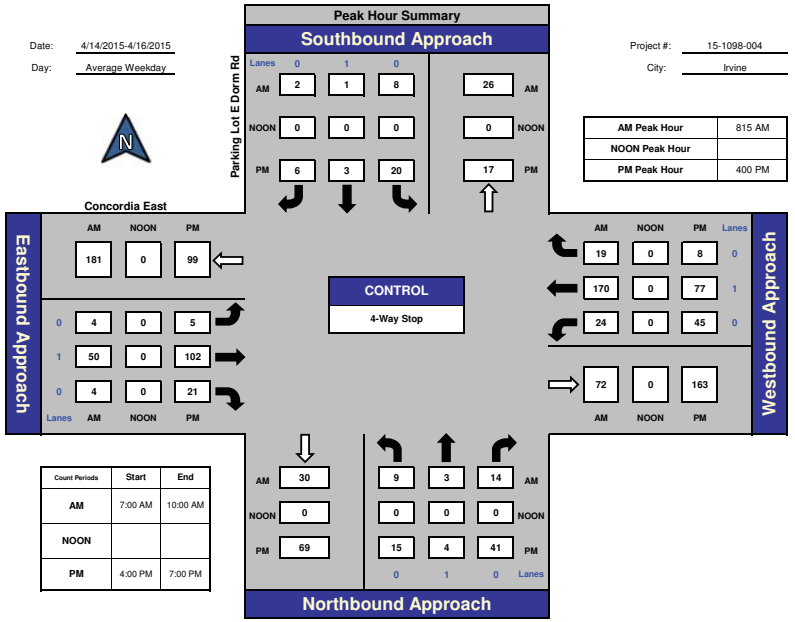
ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Parking Lot E Dorm Rd and Concordia East , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-004
City: Irvine



Total Ins & Outs

	North Leg		
	AM	NOON	PM
AM	11	26	
NOON	0	0	
PM	29.33333	17.33333	

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
181	0	99	213.3	0	130
58	0	127.7	72	0	162.7

	South Leg	
	AM	NOON
AM	29.66667	26.33333
NOON	0	0
PM	68.66667	60.66667

Total Volume Per Leg

	North Leg		
	AM	NOON	PM
AM	37		
NOON	0		
PM	46.66666667		

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
239	0	226.7	285.3	0	292.7

	South Leg	
	AM	NOON
AM	56	
NOON	0	
PM	129.3333333	

ITM Peak Hour Summary

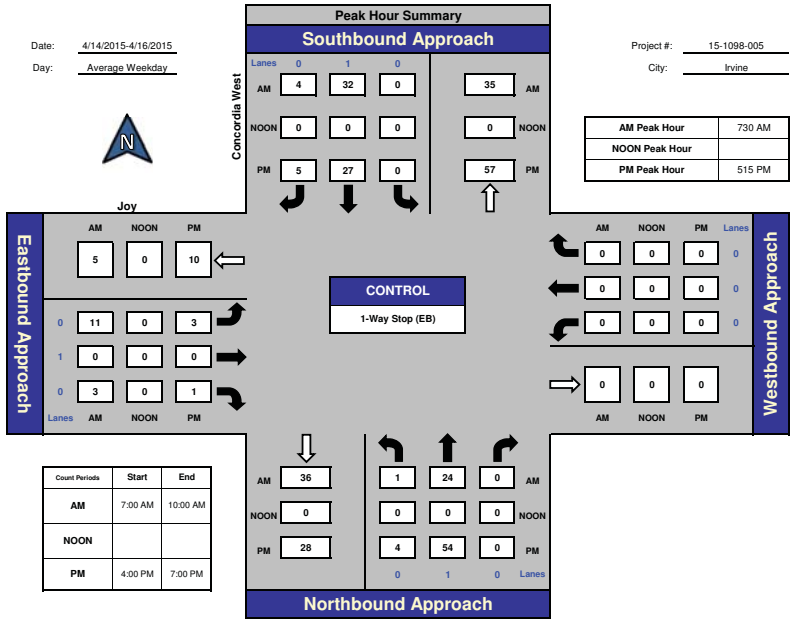
Prepared by:

National Data & Surveying Services

Concordia West and Joy , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-005
City: Irvine

AM Peak Hour	730 AM
NOON Peak Hour	
PM Peak Hour	515 PM



Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	36.66667	0	32.66667
	35	0	57
West Leg AM	4.667	0	9.667
West Leg NOON	14.33	0	4
West Leg PM	35.66667	0	28
East Leg AM	0	0.333	
East Leg NOON	0	0	
East Leg PM	0	0.333	
South Leg	24.66667	0	58.33333

Total Volume Per Leg

	AM	NOON	PM
North Leg	71.66666667	0	89.66666667
West Leg	19	0	13.67
East Leg	0.333	0	0.333
South Leg	60.33333333	0	86.33333333

ITM Peak Hour Summary

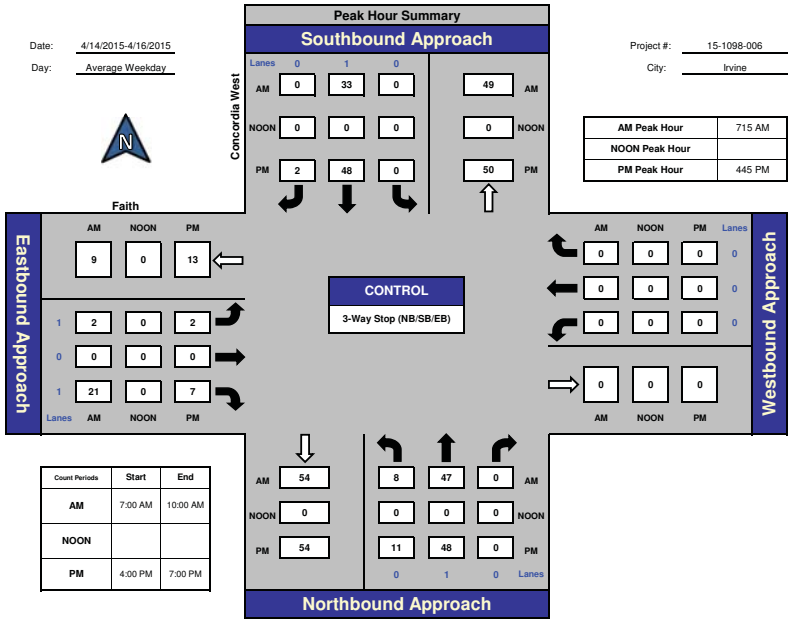
Prepared by:

National Data & Surveying Services

Concordia West and Faith , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-006
City: Irvine

AM Peak Hour	715 AM
NOON Peak Hour	
PM Peak Hour	445 PM



Count Periods	Start	End
AM	7:00 AM	10:00 AM
NOON		
PM	4:00 PM	7:00 PM

Total Ins & Outs

	AM	NOON	PM
North Leg	34	0	50
	49.33333	0	50
West Leg AM	8.667	0	12.67
West Leg NOON	23	0	9
West Leg PM	54.33333	0	54.33333
East Leg AM	0	0.333	
East Leg NOON	0	0	
East Leg PM	0	0.333	
South Leg	55.66667	0	58.33333

Total Volume Per Leg

	AM	NOON	PM
North Leg	83.33333333	0	100
West Leg	31.67	0	21.67
East Leg	0.333	0	0.333
South Leg	110	0	112.6666667

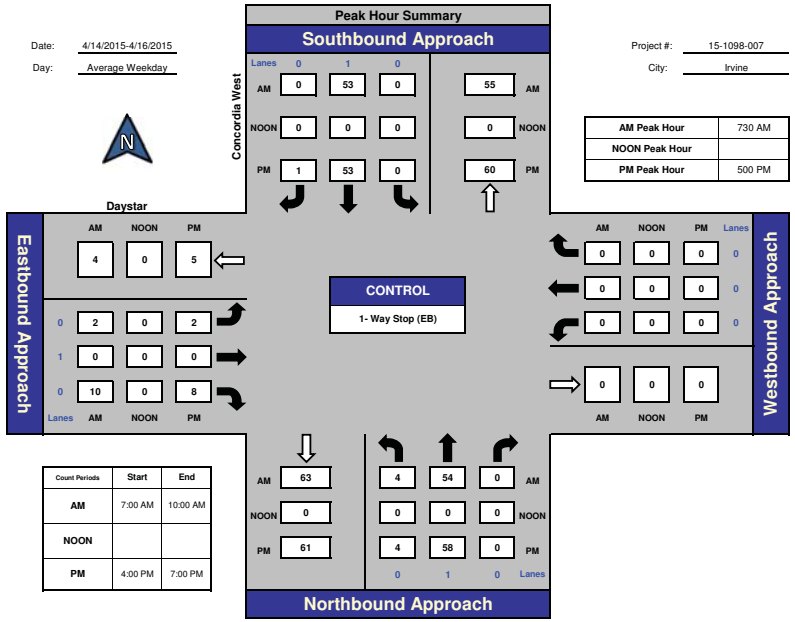
ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Concordia West and Daystar , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-007
City: Irvine



Total Ins & Outs

	AM	NOON	PM
North Leg	53.33333	55.33333	AM
	0	0	NOON
	54	60.33333	PM
West Leg AM	4	0	5.333
West Leg NOON	11.67	0	10
West Leg PM			
East Leg AM	0	0	0
East Leg NOON	0	0	0
East Leg PM			
South Leg AM	63.33333	57.66667	
South Leg NOON	0	0	
South Leg PM	61	62.66667	

Total Volume Per Leg

	AM	NOON	PM
North Leg	108.6666667	0	114.3333333
West Leg	15.67	0	15.33
East Leg	0	0	0
South Leg	121	0	123.6666667

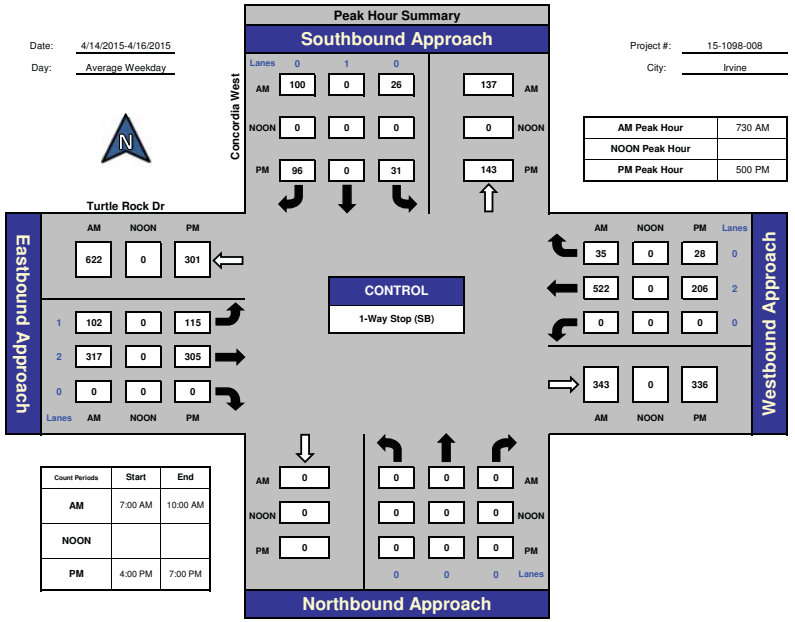
ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Concordia West and Turtle Rock Dr , Irvine

Date: 4/14/2015-4/16/2015
Day: Average Weekday
Project #: 15-1098-008
City: Irvine



Total Ins & Outs

	AM	NOON	PM
North Leg	126.3333	137.3333	AM
	0	0	NOON
	126.6667	143.3333	PM
West Leg AM	622.3	0	301.3
West Leg NOON	418.7	0	420.3
West Leg PM			
East Leg AM	557.7	0	234
East Leg NOON	343	0	336.3
East Leg PM			
South Leg AM	0	0	
South Leg NOON	0	0	
South Leg PM	0	0	

Total Volume Per Leg

	AM	NOON	PM
North Leg	263.6666667	0	270
West Leg	1041	0	721.7
East Leg	900.7	0	570.3
South Leg	0	0	0

Prepared by NDS/ATD

VOLUME

Concordia S/O Daystar

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_001

DAILY TOTALS	NB	SB	EB	WB	Total
	735	687	0	0	1,422

AM Period	NB	SB	EB	WB	TOTAL
00:00	0	1			1
00:15	2	1			3
00:30	2	3			5
00:45	2	6	0	5	2 11
01:00	1	1			2
01:15	1	4			5
01:30	3	1			4
01:45	0	5	0	6	0 11
02:00	1	1			2
02:15	0	0			0
02:30	1	0			1
02:45	0	2	0	1	0 3
03:00	1	1			2
03:15	0	0			0
03:30	0	0			0
03:45	0	1	0	1	0 2
04:00	0	0			0
04:15	0	1			1
04:30	0	1			1
04:45	0	1	3		1 3
05:00	0	2			2
05:15	1	2			3
05:30	0	1			1
05:45	0	1	0	5	0 6
06:00	0	3			3
06:15	4	1			5
06:30	2	0			2
06:45	4	10	5	9	9 19
07:00	8	4			12
07:15	11	3			14
07:30	11	28			39
07:45	18	48	16	51	34 99
08:00	9	10			19
08:15	9	7			16
08:30	15	6			21
08:45	25	58	12	35	37 93
09:00	12	11			23
09:15	4	7			11
09:30	8	5			13
09:45	4	28	9	32	13 60
10:00	11	9			20
10:15	13	16			29
10:30	10	16			26
10:45	18	52	7	48	25 100
11:00	13	4			17
11:15	1	10			11
11:30	6	7			13
11:45	11	31	10	31	21 62
TOTALS		242		227	469
SPLIT %		51.6%		48.4%	33.0%

PM Period	NB	SB	EB	WB	TOTAL
12:00	9	14			23
12:15	8	5			13
12:30	10	16			26
12:45	11	38	8	43	19 81
13:00	6	3			9
13:15	8	9			17
13:30	6	11			17
13:45	16	36	11	34	27 70
14:00	10	11			21
14:15	8	14			22
14:30	15	10			25
14:45	15	48	10	45	25 93
15:00	12	7			19
15:15	11	8			19
15:30	6	21			27
15:45	8	37	10	46	18 83
16:00	9	13			22
16:15	10	15			25
16:30	7	11			18
16:45	13	39	12	51	25 90
17:00	15	18			33
17:15	14	16			30
17:30	14	12			26
17:45	19	62	9	55	28 117
18:00	14	6			20
18:15	11	11			22
18:30	16	6			22
18:45	19	60	17	40	36 100
19:00	23	7			30
19:15	15	22			37
19:30	12	5			17
19:45	14	64	5	39	19 103
20:00	10	11			21
20:15	8	12			20
20:30	9	6			15
20:45	8	35	11	40	19 75
21:00	9	5			14
21:15	7	7			14
21:30	5	4			9
21:45	7	28	8	24	15 52
22:00	9	11			20
22:15	12	2			14
22:30	6	4			10
22:45	4	31	5	22	9 53
23:00	8	5			13
23:15	4	7			11
23:30	1	8			9
23:45	2	15	1	21	3 36
TOTALS		493		460	953
SPLIT %		51.7%		48.3%	67.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	735	687	0	0	1,422

AM Peak Hour	08:15	07:30			07:30
AM Pk Volume	61	61			108
Pk Hr Factor	0.610	0.545			0.692
7 - 9 Volume	106	86	0	0	192
7 - 9 Peak Hour	08:00	07:30			07:30
7 - 9 Pk Volume	58	61	0	0	108
Pk Hr Factor	0.580	0.545	0.000	0.000	0.692

PM Peak Hour	18:30	15:30			18:30
PM Pk Volume	73	59			125
Pk Hr Factor	0.793	0.702			0.845
4 - 6 Volume	101	106	0	0	207
4 - 6 Peak Hour	17:00	16:45			17:00
4 - 6 Pk Volume	62	58	0	0	117
Pk Hr Factor	0.816	0.806	0.000	0.000	0.886

Prepared by NDS/ATD

VOLUME

Concordia S/O Daystar

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_001

DAILY TOTALS	NB	SB	EB	WB	Total
	647	628	0	0	1,275

AM Period	NB	SB	EB	WB	TOTAL
00:00	2	2			4
00:15	3	2			5
00:30	3	2			5
00:45	2	10	1	7	3 17
01:00	2	0			2
01:15	0	0			0
01:30	0	1			1
01:45	1	3	1	2	2 5
02:00	1	1			2
02:15	1	0			1
02:30	1	0			1
02:45	0	3	0	1	0 4
03:00	0	1			1
03:15	1	0			1
03:30	0	0			0
03:45	0	1	0	1	0 2
04:00	0	0			0
04:15	0	0			0
04:30	1	0			1
04:45	0	1	2	2	2 3
05:00	0	1			1
05:15	0	2			2
05:30	1	0			1
05:45	0	1	2	5	2 6
06:00	0	2			2
06:15	2	1			3
06:30	3	4			7
06:45	3	8	0	7	3 15
07:00	2	3			5
07:15	9	4			13
07:30	5	30			35
07:45	25	41	24	61	49 102
08:00	12	9			21
08:15	11	9			20
08:30	6	4			10
08:45	9	38	8	30	17 68
09:00	13	3			16
09:15	16	9			25
09:30	6	9			15
09:45	6	41	4	25	10 66
10:00	5	9			14
10:15	10	9			19
10:30	8	12			20
10:45	5	28	14	44	19 72
11:00	9	7			16
11:15	3	7			10
11:30	16	10			26
11:45	10	38	4	28	14 66
TOTALS		213		213	426
SPLIT %		50.0%		50.0%	33.4%

PM Period	NB	SB	EB	WB	TOTAL
12:00	15	12			27
12:15	6	16			22
12:30	7	9			16
12:45	13	41	5	42	18 83
13:00	15	12			27
13:15	9	8			17
13:30	14	7			21
13:45	10	48	9	36	19 84
14:00	2	15			17
14:15	6	11			17
14:30	16	12			28
14:45	9	33	10	48	19 81
15:00	14	11			25
15:15	7	8			15
15:30	13	11			24
15:45	8	42	10	40	18 82
16:00	5	10			15
16:15	6	13			19
16:30	10	9			19
16:45	14	35	11	43	25 78
17:00	18	15			33
17:15	14	13			27
17:30	17	11			28
17:45	21	70	6	45	27 115
18:00	6	10			16
18:15	13	6			19
18:30	11	12			23
18:45	15	45	16	44	31 89
19:00	12	18			30
19:15	14	13			27
19:30	8	2			10
19:45	8	42	6	39	14 81
20:00	8	11			19
20:15	7	9			16
20:30	8	10			18
20:45	2	25	7	37	9 62
21:00	9	3			12
21:15	12	4			16
21:30	4	6			10
21:45	3	28	3	16	6 44
22:00	3	7			10
22:15	4	2			6
22:30	2	3			5
22:45	3	12	3	15	6 27
23:00	0	2			2
23:15	4	3			7
23:30	3	1			4
23:45	6	13	4	10	10 23
TOTALS		434		415	849
SPLIT %		51.1%		48.9%	66.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	647	628	0	0	1,275

AM Peak Hour	07:45	07:30			07:30
AM Pk Volume	54	72			125
Pk Hr Factor	0.540	0.600			0.638
7 - 9 Volume	79	91	0	0	170
7 - 9 Peak Hour	07:45	07:30			07:30
7 - 9 Pk Volume	54	72	0	0	125
Pk Hr Factor	0.540	0.600	0.000	0.000	0.638

PM Peak Hour	17:00	18:30			17:00
PM Pk Volume	70	59			115
Pk Hr Factor	0.833	0.819			0.871
4 - 6 Volume	105	88	0	0	193
4 - 6 Peak Hour	17:00	16:45			17:00
4 - 6 Pk Volume	70	50	0	0	115
Pk Hr Factor	0.833	0.833	0.000	0.000	0.871

Prepared by NDS/ATD

VOLUME

Concordia S/O Daystar

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_001

DAILY TOTALS	NB	SB	EB	WB	Total
	671	636	0	0	1,307

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	2			4	12:00	11	14			25
00:15	3	0			3	12:15	7	8			15
00:30	5	0			5	12:30	11	17			28
00:45	0 10	1 3			1 13	12:45	10 39	12 51			22 90
01:00	0	0			0	13:00	14	8			22
01:15	2	0			2	13:15	7	13			20
01:30	0	1			1	13:30	7	6			13
01:45	0 2	0 1			0 3	13:45	14 42	6 33			20 75
02:00	2	1			3	14:00	18	10			28
02:15	0	0			0	14:15	11	14			25
02:30	0	0			0	14:30	7	13			20
02:45	0 2	0 1			0 3	14:45	5 41	13 50			18 91
03:00	0	1			1	15:00	17	12			29
03:15	1	0			1	15:15	6	11			17
03:30	0	0			0	15:30	6	9			15
03:45	0 1	0 1			0 2	15:45	9 38	10 42			19 80
04:00	0	0			0	16:00	5	10			15
04:15	0	0			0	16:15	6	8			14
04:30	1	0			1	16:30	8	18			26
04:45	0 1	1 1			1 2	16:45	16 35	14 50			30 85
05:00	0	2			2	17:00	13	16			29
05:15	0	1			1	17:15	17	9			26
05:30	0	0			0	17:30	8	8			16
05:45	1 1	1 4			2 5	17:45	10 48	11 44			21 92
06:00	0	2			2	18:00	14	6			20
06:15	4	2			6	18:15	17	12			29
06:30	2	2			4	18:30	9	9			18
06:45	5 11	8 14			13 25	18:45	20 60	10 37			30 97
07:00	6	2			8	19:00	17	13			30
07:15	10	7			17	19:15	14	13			27
07:30	13	17			30	19:30	10	7			17
07:45	7 36	6 32			13 68	19:45	9 50	5 38			14 88
08:00	8	11			19	20:00	6	7			13
08:15	16	25			41	20:15	9	10			19
08:30	22	11			33	20:30	6	7			13
08:45	27 73	13 60			40 133	20:45	6 27	7 31			13 58
09:00	11	7			18	21:00	8	4			12
09:15	7	5			12	21:15	4	6			10
09:30	4	7			11	21:30	3	6			9
09:45	6 28	5 24			11 52	21:45	5 20	5 21			10 41
10:00	5	5			10	22:00	12	6			18
10:15	8	15			23	22:15	1	3			4
10:30	8	11			19	22:30	4	5			9
10:45	8 29	5 36			13 65	22:45	4 21	2 16			6 37
11:00	14	8			22	23:00	8	3			11
11:15	9	4			13	23:15	5	7			12
11:30	8	7			15	23:30	4	2			6
11:45	8 39	11 30			19 69	23:45	0 17	4 16			4 33
TOTALS	233	207			440	TOTALS	438	429			867
SPLIT %	53.0%	47.0%			33.7%	SPLIT %	50.5%	49.5%			66.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	671	636	0	0	1,307

AM Peak Hour	08:15	08:00			08:00	PM Peak Hour	18:15	16:30			16:30
AM Pk Volume	76	60			133	PM Pk Volume	63	57			111
Pk Hr Factor	0.704	0.600			0.811	Pk Hr Factor	0.788	0.792			0.925
7 - 9 Volume	109	92	0	0	201	4 - 6 Volume	83	94	0	0	177
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:30	16:30			16:30
7 - 9 Pk Volume	73	60	0	0	133	4 - 6 Pk Volume	54	57	0	0	111
Pk Hr Factor	0.676	0.600	0.000	0.000	0.811	Pk Hr Factor	0.794	0.792	0.000	0.000	0.925

Prepared by NDS/ATD

VOLUME

Concordia S/O Daystar

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_001

DAILY TOTALS	NB	SB	EB	WB	Total
	507	796	0	0	1,303

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	5	2			7	12:00	10	12			22
00:15	4	4			8	12:15	5	5			10
00:30	3	1			4	12:30	7	9			16
00:45	4 16	4 11			8 27	12:45	9 31	5 31			14 62
01:00	6	1			7	13:00	10	14			24
01:15	1	1			2	13:15	7	8			15
01:30	1	0			1	13:30	7	3			10
01:45	0 8	2 4			2 12	13:45	6 30	8 33			14 63
02:00	0	1			1	14:00	7	7			14
02:15	1	0			1	14:15	7	8			15
02:30	0	0			0	14:30	7	4			11
02:45	0 1	1 2			1 3	14:45	8 29	4 23			12 52
03:00	0	0			0	15:00	9	17			26
03:15	0	0			0	15:15	7	9			16
03:30	1	1			2	15:30	11	8			19
03:45	0 1	0 1			0 2	15:45	16 43	5 39			21 82
04:00	0	0			0	16:00	8	21			29
04:15	0	0			0	16:15	10	11			21
04:30	0	0			0	16:30	11	10			21
04:45	0	0			0	16:45	17 46	6 48			23 94
05:00	0	0			0	17:00	16	3			19
05:15	0	1			1	17:15	17	24			41
05:30	1	0			1	17:30	15	32			47
05:45	0 1	0 1			0 2	17:45	10 58	25 84			35 142
06:00	0	0			0	18:00	8	17			25
06:15	1	1			2	18:15	13	12			25
06:30	0	1			1	18:30	20	13			33
06:45	0 1	1 3			1 4	18:45	22 63	8 50			30 113
07:00	0	2			2	19:00	26	18			44
07:15	1	5			6	19:15	10	20			30
07:30	2	2			4	19:30	5	9			14
07:45	1 4	6 15			7 19	19:45	2 43	9 56			11 99
08:00	2	2			4	20:00	13	6			19
08:15	2	2			4	20:15	4	12			16
08:30	7	5			12	20:30	6	16			22
08:45	4 15	2 11			6 26	20:45	9 32	9 43			18 75
09:00	3	2			5	21:00	1	14			15
09:15	5	1			6	21:15	8	100			108
09:30	7	4			11	21:30	8	119			127
09:45	6 21	8 15			14 36	21:45	4 21	14 247			18 268
10:00	2	6			8	22:00	0	4			4
10:15	6	8			14	22:15	0	2			2
10:30	2	5			7	22:30	0	4			4
10:45	6 16	10 29			16 45	22:45	0	3 13			3 13
11:00	14	3			17	23:00	0	2			2
11:15	4	8			12	23:15	0	5			5
11:30	4	10			14	23:30	0	4			4
11:45	5 27	4 25			9 52	23:45	0	1 12			1 12
TOTALS	111	117			228	TOTALS	396	679			1075
SPLIT %	48.7%	51.3%			17.5%	SPLIT %	36.8%	63.2%			82.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	507	796	0	0	1,303

AM Peak Hour	10:15	11:15			10:45	PM Peak Hour	18:15	21:00			20:45
AM Pk Volume	28	34			59	PM Pk Volume	81	247			268
Pk Hr Factor	0.500	0.708			0.868	Pk Hr Factor	0.779	0.519			0.528
7 - 9 Volume	19	26	0	0	45	4 - 6 Volume	104	132	0	0	236
7 - 9 Peak Hour	08:00	07:00			07:45	4 - 6 Peak Hour	16:45	17:00			17:00
7 - 9 Pk Volume	15	15	0	0	27	4 - 6 Pk Volume	65	84	0	0	142
Pk Hr Factor	0.536	0.625	0.000	0.000	0.563	Pk Hr Factor	0.956	0.656	0.000	0.000	0.755

Prepared by NDS/ATD

VOLUME

Concordia S/O Daystar

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_001

DAILY TOTALS	NB	SB	EB	WB	Total
	466	447	0	0	913

AM Period	NB		SB		EB		WB		TOTAL	
00:00	4		0						4	
00:15	4		0						4	
00:30	2		1						3	
00:45	1	11	2	3					3	14
01:00	2		0						2	
01:15	1		0						1	
01:30	0		1						1	
01:45	0	3	1	2					1	5
02:00	1		0						1	
02:15	0		0						0	
02:30	2		1						3	
02:45	0	3	0	1					0	4
03:00	0		1						1	
03:15	0		1						1	
03:30	1		0						1	
03:45	1	2	0	2					1	4
04:00	0		0						0	
04:15	0		0						0	
04:30	0		0						0	
04:45	2	2	1	1					3	3
05:00	2		1						3	
05:15	0		0						0	
05:30	0		1						1	
05:45	0	2	0	2					0	4
06:00	1		1						2	
06:15	2		2						4	
06:30	1		1						2	
06:45	1	5	0	4					1	9
07:00	0		1						1	
07:15	1		1						2	
07:30	1		3						4	
07:45	0	2	5	10					5	12
08:00	0		3						3	
08:15	0		4						4	
08:30	2		2						4	
08:45	3	5	5	14					8	19
09:00	0		2						2	
09:15	0		4						4	
09:30	1		9						10	
09:45	0	1	6	21					6	22
10:00	4		7						11	
10:15	2		5						7	
10:30	5		5						10	
10:45	3	14	3	20					6	34
11:00	7		8						15	
11:15	8		1						9	
11:30	4		10						14	
11:45	3	22	1	20					4	42
TOTALS	72		100						172	
SPLIT %	41.9%		58.1%						18.8%	

PM Period	NB		SB		EB		WB		TOTAL	
12:00	5		3						8	
12:15	11		6						17	
12:30	8		8						16	
12:45	14	38	10	27					24	65
13:00	9		14						23	
13:15	12		12						24	
13:30	16		11						27	
13:45	22	59	4	41					26	100
14:00	9		7						16	
14:15	17		8						25	
14:30	18		10						28	
14:45	8	52	5	30					13	82
15:00	8		5						13	
15:15	12		9						21	
15:30	8		7						15	
15:45	9	37	8	29					17	66
16:00	15		6						21	
16:15	7		11						18	
16:30	6		5						11	
16:45	5	33	19	41					24	74
17:00	5		21						26	
17:15	3		10						13	
17:30	6		14						20	
17:45	16	30	14	59					30	89
18:00	5		11						16	
18:15	8		3						11	
18:30	6		5						11	
18:45	10	29	4	23					14	52
19:00	7		9						16	
19:15	11		4						15	
19:30	7		6						13	
19:45	8	33	4	23					12	56
20:00	12		5						17	
20:15	5		18						23	
20:30	9		7						16	
20:45	3	29	8	38					11	67
21:00	9		7						16	
21:15	10		3						13	
21:30	1		5						6	
21:45	4	24	6	21					10	45
22:00	5		3						8	
22:15	1		3						4	
22:30	6		1						7	
22:45	6	18	2	9					8	27
23:00	1		1						2	
23:15	4		2						6	
23:30	4		0						4	
23:45	3	12	3	6					6	18
TOTALS	394		347						741	
SPLIT %	53.2%		46.8%						81.2%	

DAILY TOTALS	NB	SB	EB	WB	Total
	466	447	0	0	913

AM Peak Hour	11:45	09:30			11:45	PM Peak Hour	13:45	16:45			13:00
AM Pk Volume	27	27			45	PM Pk Volume	66	64			100
Pk Hr Factor	0.614	0.750			0.662	Pk Hr Factor	0.750	0.762			0.926
7 - 9 Volume	7	24	0	0	31	4 - 6 Volume	63	100	0	0	163
7 - 9 Peak Hour	08:00	07:30			08:00	4 - 6 Peak Hour	16:00	16:45			17:00
7 - 9 Pk Volume	5	15	0	0	19	4 - 6 Pk Volume	33	64	0	0	89
Pk Hr Factor	0.417	0.750	0.000	0.000	0.594	Pk Hr Factor	0.550	0.762	0.000	0.000	0.742

Prepared by NDS/ATD

VOLUME

Concordia Bet Faith & Parking Lot A

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_002

DAILY TOTALS	NB	SB	EB	WB	Total
	619	578	0	0	1,197

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	1			1	12:00	7	14			21
00:15	1	1			2	12:15	11	5			16
00:30	2	3			5	12:30	12	19			31
00:45	2 5	1 6			3 11	12:45	10 40	7 45			17 85
01:00	0	1			1	13:00	5	4			9
01:15	1	4			5	13:15	7	7			14
01:30	2	1			3	13:30	2	8			10
01:45	1 4	0 6			1 10	13:45	12 26	12 31			24 57
02:00	1	1			2	14:00	8	10			18
02:15	0	0			0	14:15	9	14			23
02:30	0	0			0	14:30	13	6			19
02:45	0 1	0 1			0 2	14:45	15 45	10 40			25 85
03:00	0	1			1	15:00	9	5			14
03:15	1	0			1	15:15	6	7			13
03:30	0	0			0	15:30	6	22			28
03:45	0 1	0 1			0 2	15:45	8 29	8 42			16 71
04:00	0	0			0	16:00	8	8			16
04:15	0	0			0	16:15	9	12			21
04:30	0	1			1	16:30	6	12			18
04:45	0	0 1			0 1	16:45	11 34	12 44			23 78
05:00	0	0			0	17:00	12	17			29
05:15	1	0			1	17:15	16	15			31
05:30	0	0			0	17:30	13	12			25
05:45	0 1	0			0 1	17:45	15 56	6 50			21 106
06:00	0	2			2	18:00	12	6			18
06:15	2	1			3	18:15	8	12			20
06:30	3	0			3	18:30	14	7			21
06:45	2 7	3 6			5 13	18:45	16 50	19 44			35 94
07:00	7	1			8	19:00	16	3			19
07:15	13	4			17	19:15	11	20			31
07:30	8	18			26	19:30	10	5			15
07:45	14 42	10 33			24 75	19:45	12 49	7 35			19 84
08:00	9	3			12	20:00	7	9			16
08:15	9	1			10	20:15	5	12			17
08:30	11	4			15	20:30	4	9			13
08:45	23 52	8 16			31 68	20:45	11 27	7 37			18 64
09:00	11	3			14	21:00	4	7			11
09:15	4	2			6	21:15	4	9			13
09:30	7	3			10	21:30	5	3			8
09:45	4 26	5 13			9 39	21:45	6 19	3 22			9 41
10:00	8	8			16	22:00	10	8			18
10:15	12	12			24	22:15	2	12			14
10:30	10	10			20	22:30	1	6			7
10:45	15 45	7 37			22 82	22:45	5 18	5 31			10 49
11:00	12	4			16	23:00	4	8			12
11:15	2	6			8	23:15	6	4			10
11:30	5	4			9	23:30	8	1			9
11:45	5 24	8 22			13 46	23:45	0 18	2 15			2 33
TOTALS	208	142			350	TOTALS	411	436			847
SPLIT %	59.4%	40.6%			29.2%	SPLIT %	48.5%	51.5%			70.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	619	578	0	0	1,197

AM Peak Hour	08:15	11:45			10:00	PM Peak Hour	18:30	16:30			16:45
AM Pk Volume	54	46			82	PM Pk Volume	57	56			108
Pk Hr Factor	0.587	0.605			0.854	Pk Hr Factor	0.891	0.824			0.871
7 - 9 Volume	94	49	0	0	143	4 - 6 Volume	90	94	0	0	184
7 - 9 Peak Hour	08:00	07:15			07:15	4 - 6 Peak Hour	17:00	16:30			16:45
7 - 9 Pk Volume	52	35	0	0	79	4 - 6 Pk Volume	56	56	0	0	108
Pk Hr Factor	0.565	0.486	0.000	0.000	0.760	Pk Hr Factor	0.875	0.824	0.000	0.000	0.871

Prepared by NDS/ATD

VOLUME

Concordia Bet Faith & Parking Lot A

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_002

DAILY TOTALS	NB	SB	EB	WB	Total
	555	531	0	0	1,086

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	2			4	12:00	12	12			24
00:15	3	1			4	12:15	7	12			19
00:30	1	2			3	12:30	4	8			12
00:45	1 7	1 6			2 13	12:45	14 37	5 37			19 74
01:00	2	0			2	13:00	12	12			24
01:15	0	2			2	13:15	6	10			16
01:30	1	2			3	13:30	11	5			16
01:45	1 4	0 4			1 8	13:45	8 37	5 32			13 69
02:00	1	1			2	14:00	2	12			14
02:15	0	0			0	14:15	7	9			16
02:30	0	1			1	14:30	11	7			18
02:45	1 2	0 2			1 4	14:45	10 30	9 37			19 67
03:00	1	0			1	15:00	11	12			23
03:15	0	0			0	15:15	7	9			16
03:30	0	0			0	15:30	12	10			22
03:45	0 1	0			0 1	15:45	8 38	9 40			17 78
04:00	0	0			0	16:00	5	12			17
04:15	0	0			0	16:15	4	10			14
04:30	0	1			1	16:30	9	10			19
04:45	0	0 1			0 1	16:45	12 30	10 42			22 72
05:00	0	0			0	17:00	14	13			27
05:15	0	0			0	17:15	11	13			24
05:30	1	0			1	17:30	16	9			25
05:45	0 1	1 1			1 2	17:45	20 61	6 41			26 102
06:00	0	1			1	18:00	4	12			16
06:15	1	0			1	18:15	9	5			14
06:30	2	2			4	18:30	10	11			21
06:45	2 5	0 3			2 8	18:45	10 33	14 42			24 75
07:00	3	3			6	19:00	9	12			21
07:15	8	3			11	19:15	11	14			25
07:30	5	20			25	19:30	3	2			5
07:45	18 34	13 39			31 73	19:45	8 31	7 35			15 66
08:00	14	3			17	20:00	6	11			17
08:15	12	3			15	20:15	6	8			14
08:30	6	2			8	20:30	8	9			17
08:45	8 40	3 11			11 51	20:45	3 23	8 36			11 59
09:00	11	3			14	21:00	7	3			10
09:15	14	6			20	21:15	8	4			12
09:30	9	5			14	21:30	2	6			8
09:45	5 39	3 17			8 56	21:45	4 21	3 16			7 37
10:00	4	9			13	22:00	3	6			9
10:15	11	8			19	22:15	3	2			5
10:30	9	11			20	22:30	1	2			3
10:45	6 30	12 40			18 70	22:45	2 9	4 14			6 23
11:00	7	8			15	23:00	0	3			3
11:15	3	7			10	23:15	4	3			7
11:30	13	5			18	23:30	3	1			4
11:45	9 32	4 24			13 56	23:45	3 10	4 11			7 21
TOTALS	195	148			343	TOTALS	360	383			743
SPLIT %	56.9%	43.1%			31.6%	SPLIT %	48.5%	51.5%			68.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	555	531	0	0	1,086

AM Peak Hour	07:45	10:00			07:30	PM Peak Hour	17:00	18:30			17:00
AM Pk Volume	50	40			88	PM Pk Volume	61	51			102
Pk Hr Factor	0.694	0.833			0.710	Pk Hr Factor	0.763	0.911			0.944
7 - 9 Volume	74	50	0	0	124	4 - 6 Volume	91	83	0	0	174
7 - 9 Peak Hour	07:45	07:00			07:30	4 - 6 Peak Hour	17:00	16:30			17:00
7 - 9 Pk Volume	50	39	0	0	88	4 - 6 Pk Volume	61	46	0	0	102
Pk Hr Factor	0.694	0.488	0.000	0.000	0.710	Pk Hr Factor	0.763	0.885	0.000	0.000	0.944

Prepared by NDS/ATD

VOLUME

Concordia Bet Faith & Parking Lot A

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_002

DAILY TOTALS	NB	SB	EB	WB	Total
	545	515	0	0	1,060

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	1			3	12:00	10	10			20
00:15	3	0			3	12:15	7	10			17
00:30	4	0			4	12:30	9	15			24
00:45	0 9	1 2			1 11	12:45	11 37	17 52			28 89
01:00	0	0			0	13:00	9	8			17
01:15	3	1			4	13:15	8	9			17
01:30	0	1			1	13:30	5	2			7
01:45	0 3	0 2			0 5	13:45	10 32	6 25			16 57
02:00	2	1			3	14:00	13	9			22
02:15	0	0			0	14:15	8	11			19
02:30	0	0			0	14:30	5	10			15
02:45	0 2	0 1			0 3	14:45	5 31	8 38			13 69
03:00	0	1			1	15:00	11	9			20
03:15	1	0			1	15:15	8	7			15
03:30	0	0			0	15:30	3	11			14
03:45	0 1	0 1			0 2	15:45	7 29	6 33			13 62
04:00	0	0			0	16:00	4	9			13
04:15	0	0			0	16:15	9	8			17
04:30	0	0			0	16:30	5	17			22
04:45	0	0			0	16:45	13 31	11 45			24 76
05:00	0	1			1	17:00	8	17			25
05:15	0	0			0	17:15	12	8			20
05:30	0	0			0	17:30	5	7			12
05:45	0	1 2			1 2	17:45	9 34	9 41			18 75
06:00	0	1			1	18:00	10	6			16
06:15	3	0			3	18:15	15	12			27
06:30	2	1			3	18:30	11	11			22
06:45	4 9	5 7			9 16	18:45	16 52	10 39			26 91
07:00	6	2			8	19:00	12	10			22
07:15	9	3			12	19:15	8	12			20
07:30	9	13			22	19:30	6	5			11
07:45	7 31	4 22			11 53	19:45	7 33	4 31			11 64
08:00	8	5			13	20:00	3	8			11
08:15	10	13			23	20:15	7	8			15
08:30	13	5			18	20:30	5	8			13
08:45	25 56	5 28			30 84	20:45	3 18	7 31			10 49
09:00	12	2			14	21:00	7	3			10
09:15	5	0			5	21:15	3	7			10
09:30	2	4			6	21:30	5	7			12
09:45	7 26	2 8			9 34	21:45	5 20	7 24			12 44
10:00	5	3			8	22:00	9	6			15
10:15	9	14			23	22:15	1	3			4
10:30	9	9			18	22:30	4	5			9
10:45	8 31	4 30			12 61	22:45	3 17	2 16			5 33
11:00	13	4			17	23:00	4	4			8
11:15	7	3			10	23:15	3	7			10
11:30	5	2			7	23:30	4	4			8
11:45	7 32	8 17			15 49	23:45	0 11	5 20			5 31
TOTALS	200	120			320	TOTALS	345	395			740
SPLIT %	62.5%	37.5%			30.2%	SPLIT %	46.6%	53.4%			69.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	545	515	0	0	1,060

AM Peak Hour	08:15	11:45			08:15	PM Peak Hour	18:15	16:15			18:15
AM Pk Volume	60	43			85	PM Pk Volume	54	53			97
Pk Hr Factor	0.600	0.717			0.708	Pk Hr Factor	0.844	0.779			0.898
7 - 9 Volume	87	50	0	0	137	4 - 6 Volume	65	86	0	0	151
7 - 9 Peak Hour	08:00	07:30			08:00	4 - 6 Peak Hour	16:30	16:15			16:30
7 - 9 Pk Volume	56	35	0	0	84	4 - 6 Pk Volume	38	53	0	0	91
Pk Hr Factor	0.560	0.673	0.000	0.000	0.700	Pk Hr Factor	0.731	0.779	0.000	0.000	0.910

Prepared by NDS/ATD

VOLUME

Concordia Bet Faith & Parking Lot A

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_002

DAILY TOTALS	NB	SB	EB	WB	Total
	461	705	0	0	1,166

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	0			2	12:00	6	10			16
00:15	4	3			7	12:15	4	3			7
00:30	2	2			4	12:30	8	11			19
00:45	4 12	2 7			6 19	12:45	8 26	4 28			12 54
01:00	4	0			4	13:00	5	5			10
01:15	1	1			2	13:15	5	5			10
01:30	1	0			1	13:30	2	4			6
01:45	0 6	1 2			1 8	13:45	8 20	9 23			17 43
02:00	0	1			1	14:00	11	8			19
02:15	1	0			1	14:15	5	5			10
02:30	0	0			0	14:30	4	3			7
02:45	0 1	1 2			1 3	14:45	7 27	5 21			12 48
03:00	0	0			0	15:00	7	14			21
03:15	0	0			0	15:15	5	11			16
03:30	0	0			0	15:30	7	9			16
03:45	0	0			0	15:45	12 31	4 38			16 69
04:00	0	0			0	16:00	8	16			24
04:15	0	0			0	16:15	11	8			19
04:30	0	0			0	16:30	11	7			18
04:45	0	0			0	16:45	15 45	6 37			21 82
05:00	0	0			0	17:00	12	2			14
05:15	0	0			0	17:15	17	23			40
05:30	0	0			0	17:30	17	32			49
05:45	0	0			0	17:45	6 52	24 81			30 133
06:00	0	0			0	18:00	10	16			26
06:15	1	0			1	18:15	12	12			24
06:30	1	0			1	18:30	11	10			21
06:45	0 2	0			0 2	18:45	23 56	9 47			32 103
07:00	0	1			1	19:00	21	16			37
07:15	1	2			3	19:15	9	19			28
07:30	2	2			4	19:30	3	7			10
07:45	2 5	3 8			5 13	19:45	4 37	9 51			13 88
08:00	1	1			2	20:00	8	6			14
08:15	3	2			5	20:15	2	11			13
08:30	6	1			7	20:30	7	14			21
08:45	3 13	1 5			4 18	20:45	8 25	7 38			15 63
09:00	3	0			3	21:00	1	15			16
09:15	4	1			5	21:15	4	99			103
09:30	9	1			10	21:30	5	116			121
09:45	4 20	4 6			8 26	21:45	4 14	17 247			21 261
10:00	2	5			7	22:00	4	5			9
10:15	6	4			10	22:15	5	1			6
10:30	2	4			6	22:30	5	3			8
10:45	4 14	6 19			10 33	22:45	3 17	2 11			5 28
11:00	10	3			13	23:00	1	1			2
11:15	7	7			14	23:15	7	5			12
11:30	3	9			12	23:30	1	1			2
11:45	5 25	8 27			13 52	23:45	4 13	0 7			4 20
TOTALS	98	76			174	TOTALS	363	629			992
SPLIT %	56.3%	43.7%			14.9%	SPLIT %	36.6%	63.4%			85.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	461	705	0	0	1,166

AM Peak Hour	11:00	11:15			11:15	PM Peak Hour	18:15	21:00			21:00
AM Pk Volume	25	34			55	PM Pk Volume	67	247			261
Pk Hr Factor	0.625	0.850			0.859	Pk Hr Factor	0.728	0.532			0.539
7 - 9 Volume	18	13	0	0	31	4 - 6 Volume	97	118	0	0	215
7 - 9 Peak Hour	08:00	07:00			07:45	4 - 6 Peak Hour	16:45	17:00			17:00
7 - 9 Pk Volume	13	8	0	0	19	4 - 6 Pk Volume	61	81	0	0	133
Pk Hr Factor	0.542	0.667	0.000	0.000	0.679	Pk Hr Factor	0.897	0.633	0.000	0.000	0.679

Prepared by NDS/ATD

VOLUME

Concordia Bet Faith & Parking Lot A

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_002

DAILY TOTALS	NB	SB	EB	WB	Total
	380	345	0	0	725

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	0			2	12:00	2	4			6
00:15	2	0			2	12:15	9	3			12
00:30	3	0			3	12:30	3	6			9
00:45	1	8 0			1 8	12:45	9	23 5	18		14 41
01:00	2	1			3	13:00	6	7			13
01:15	1	0			1	13:15	9	11			20
01:30	1	1			2	13:30	10	7			17
01:45	0	4 0	2		0 6	13:45	19	44 5	30		24 74
02:00	1	0			1	14:00	13	6			19
02:15	0	0			0	14:15	19	7			26
02:30	1	1			2	14:30	16	7			23
02:45	0	2 0	1		0 3	14:45	7	55 3	23		10 78
03:00	0	1			1	15:00	6	5			11
03:15	0	1			1	15:15	11	5			16
03:30	1	0			1	15:30	6	5			11
03:45	2	3 0	2		2 5	15:45	3	26 5	20		8 46
04:00	0	0			0	16:00	7	4			11
04:15	0	0			0	16:15	4	7			11
04:30	1	1			2	16:30	7	5			12
04:45	0	1 0	1		0 2	16:45	3	21 17	33		20 54
05:00	0	0			0	17:00	4	25			29
05:15	0	0			0	17:15	2	14			16
05:30	0	1			1	17:30	3	14			17
05:45	0	1	2		1 2	17:45	13	22 13	66		26 88
06:00	0	0			0	18:00	3	9			12
06:15	2	1			3	18:15	7	2			9
06:30	0	1			1	18:30	5	3			8
06:45	1	3 0	2		1 5	18:45	9	24 3	17		12 41
07:00	0	0			0	19:00	9	4			13
07:15	0	0			0	19:15	9	4			13
07:30	4	1			5	19:30	4	5			9
07:45	0	4 1	2		1 6	19:45	6	28 3	16		9 44
08:00	0	3			3	20:00	11	4			15
08:15	2	1			3	20:15	4	13			17
08:30	2	0			2	20:30	8	7			15
08:45	2	6 5	9		7 15	20:45	2	25 6	30		8 55
09:00	2	1			3	21:00	6	6			12
09:15	2	3			5	21:15	7	3			10
09:30	1	2			3	21:30	2	4			6
09:45	0	5 4	10		4 15	21:45	5	20 7	20		12 40
10:00	3	4			7	22:00	4	5			9
10:15	1	4			5	22:15	1	3			4
10:30	2	3			5	22:30	4	1			5
10:45	6	12 1	12		7 24	22:45	8	17 1	10		9 27
11:00	5	4			9	23:00	0	2			2
11:15	7	1			8	23:15	3	2			5
11:30	4	5			9	23:30	2	0			2
11:45	3	19 3	13		6 32	23:45	3	8 2	6		5 14
TOTALS	67	56			123	TOTALS	313	289			602
SPLIT %	54.5%	45.5%			17.0%	SPLIT %	52.0%	48.0%			83.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	380	345	0	0	725

AM Peak Hour	10:45	11:45			10:45	PM Peak Hour	13:45	16:45			13:45
AM Pk Volume	22	16			33	PM Pk Volume	67	70			92
Pk Hr Factor	0.786	0.667			0.917	Pk Hr Factor	0.882	0.700			0.885
7 - 9 Volume	10	11	0	0	21	4 - 6 Volume	43	99	0	0	142
7 - 9 Peak Hour	07:30	08:00			08:00	4 - 6 Peak Hour	17:00	16:45			17:00
7 - 9 Pk Volume	6	9	0	0	15	4 - 6 Pk Volume	22	70	0	0	88
Pk Hr Factor	0.375	0.450	0.000	0.000	0.536	Pk Hr Factor	0.423	0.700	0.000	0.000	0.759

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot B (South) & Joy

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_003

DAILY TOTALS	NB	SB	EB	WB	Total
	473	436	0	0	909

AM Period	NB		SB		EB		WB		TOTAL
00:00	0		1						1
00:15	1		1						2
00:30	1		3						4
00:45	2	4	1	6					3 10
01:00	0		2						2
01:15	1		3						4
01:30	1		1						2
01:45	1	3	0	6					1 9
02:00	1		1						2
02:15	0		0						0
02:30	0		0						0
02:45	0	1	0	1					0 2
03:00	0		1						1
03:15	1		0						1
03:30	0		0						0
03:45	0	1	0	1					0 2
04:00	0		0						0
04:15	1		0						1
04:30	0		1						1
04:45	1	2	0	1					1 3
05:00	0		0						0
05:15	0		0						0
05:30	0		0						0
05:45	0		0						0
06:00	0		2						2
06:15	0		1						1
06:30	3		1						4
06:45	1	4	3	7					4 11
07:00	3		2						5
07:15	6		2						8
07:30	3		20						23
07:45	10	22	10	34					20 56
08:00	8		2						10
08:15	5		1						6
08:30	2		5						7
08:45	1	16	4	12					5 28
09:00	3		2						5
09:15	2		4						6
09:30	5		3						8
09:45	1	11	4	13					5 24
10:00	7		3						10
10:15	6		8						14
10:30	2		7						9
10:45	7	22	12	30					19 52
11:00	4		10						14
11:15	5		2						7
11:30	4		7						11
11:45	6	19	3	22					9 41
TOTALS	105		133						238
SPLIT %	44.1%		55.9%						26.2%

PM Period	NB		SB		EB		WB		TOTAL
12:00	8		10						18
12:15	11		6						17
12:30	15		9						24
12:45	9	43	10	35					19 78
13:00	5		5						10
13:15	6		5						11
13:30	4		13						17
13:45	10	25	10	33					20 58
14:00	8		9						17
14:15	10		10						20
14:30	11		3						14
14:45	14	43	6	28					20 71
15:00	10		4						14
15:15	8		4						12
15:30	4		10						14
15:45	7	29	5	23					12 52
16:00	8		8						16
16:15	6		8						14
16:30	5		6						11
16:45	5	24	9	31					14 55
17:00	6		8						14
17:15	14		7						21
17:30	17		5						22
17:45	13	50	4	24					17 74
18:00	11		5						16
18:15	4		10						14
18:30	11		5						16
18:45	10	36	20	40					30 76
19:00	8		6						14
19:15	11		5						16
19:30	9		5						14
19:45	8	36	7	23					15 59
20:00	9		6						15
20:15	5		9						14
20:30	3		6						9
20:45	9	26	5	26					14 52
21:00	4		4						8
21:15	5		4						9
21:30	5		3						8
21:45	4	18	1	12					5 30
22:00	13		1						14
22:15	3		6						9
22:30	0		6						6
22:45	4	20	3	16					7 36
23:00	3		7						10
23:15	7		4						11
23:30	8		0						8
23:45	0	18	1	12					1 30
TOTALS	368		303						671
SPLIT %	54.8%		45.2%						73.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	473	436	0	0	909

AM Peak Hour	11:45	10:15			11:45
AM Pk Volume	40	37			68
Pk Hr Factor	0.667	0.771			0.708
7 - 9 Volume	38	46	0	0	84
7 - 9 Peak Hour	07:15	07:00			07:15
7 - 9 Pk Volume	27	34	0	0	61
Pk Hr Factor	0.675	0.425	0.000	0.000	0.663

PM Peak Hour	17:15	13:30			12:00
PM Pk Volume	55	42			78
Pk Hr Factor	0.809	0.808			0.813
4 - 6 Volume	74	55	0	0	129
4 - 6 Peak Hour	17:00	16:00			17:00
4 - 6 Pk Volume	50	31	0	0	74
Pk Hr Factor	0.735	0.861	0.000	0.000	0.841

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot B (South) & Joy

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_003

DAILY TOTALS	NB	SB	EB	WB	Total
	508	480	0	0	988

AM Period	NB		SB		EB		WB		TOTAL
00:00	2		0						2
00:15	3		3						6
00:30	3		1						4
00:45	1	9	1	5					2 14
01:00	2		0						2
01:15	0		1						1
01:30	0		1						1
01:45	1	3	0	2					1 5
02:00	1		0						1
02:15	0		0						0
02:30	0		0						0
02:45	0	1	0						0 1
03:00	0		1						1
03:15	1		0						1
03:30	0		0						0
03:45	0	1	0	1					0 2
04:00	0		0						0
04:15	0		0						0
04:30	0		2						2
04:45	1	1	0	2					1 3
05:00	0		0						0
05:15	0		0						0
05:30	1		0						1
05:45	0	1	1	1					1 2
06:00	0		1						1
06:15	0		0						0
06:30	1		2						3
06:45	2	3	0	3					2 6
07:00	2		5						7
07:15	3		2						5
07:30	0		20						20
07:45	13	18	14	41					27 59
08:00	9		4						13
08:15	5		3						8
08:30	2		1						3
08:45	0	16	3	11					3 27
09:00	5		6						11
09:15	2		9						11
09:30	7		6						13
09:45	4	18	1	22					5 40
10:00	0		4						4
10:15	7		10						17
10:30	4		11						15
10:45	5	16	8	33					13 49
11:00	6		10						16
11:15	2		14						16
11:30	11		9						20
11:45	6	25	15	48					21 73
TOTALS	112		169						281
SPLIT %	39.9%		60.1%						28.4%

PM Period	NB		SB		EB		WB		TOTAL
12:00	8		8						16
12:15	5		6						11
12:30	5		3						8
12:45	6	24	6	23					12 47
13:00	11		10						21
13:15	2		11						13
13:30	10		8						18
13:45	5	28	5	34					10 62
14:00	12		10						22
14:15	6		15						21
14:30	15		7						22
14:45	11	44	13	45					24 89
15:00	11		12						23
15:15	10		7						17
15:30	11		8						19
15:45	6	38	7	34					13 72
16:00	4		10						14
16:15	4		9						13
16:30	7		4						11
16:45	13	28	8	31					21 59
17:00	12		10						22
17:15	15		12						27
17:30	27		6						33
17:45	16	70	8	36					24 106
18:00	16		7						23
18:15	11		5						16
18:30	12		4						16
18:45	15	54	9	25					24 79
19:00	8		10						18
19:15	10		9						19
19:30	4		2						6
19:45	8	30	6	27					14 57
20:00	6		9						15
20:15	15		7						22
20:30	8		5						13
20:45	3	32	8	29					11 61
21:00	9		4						13
21:15	8		2						10
21:30	3		3						6
21:45	4	24	2	11					6 35
22:00	2		3						5
22:15	3		0						3
22:30	4		2						6
22:45	2	11	3	8					5 19
23:00	1		1						2
23:15	4		3						7
23:30	4		1						5
23:45	4	13	3	8					7 21
TOTALS	396		311						707
SPLIT %	56.0%		44.0%						71.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	508	480	0	0	988

AM Peak Hour	11:30	11:00			11:00
AM Pk Volume	30	48			73
Pk Hr Factor	0.682	0.800			0.869
7 - 9 Volume	34	52	0	0	86
7 - 9 Peak Hour	07:45	07:00			07:30
7 - 9 Pk Volume	29	41	0	0	68
Pk Hr Factor	0.558	0.513	0.000	0.000	0.630

PM Peak Hour	17:15	14:15			17:15
PM Pk Volume	74	47			107
Pk Hr Factor	0.685	0.783			0.811
4 - 6 Volume	98	67	0	0	165
4 - 6 Peak Hour	17:00	16:45			17:00
4 - 6 Pk Volume	70	36	0	0	106
Pk Hr Factor	0.648	0.750	0.000	0.000	0.803

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot B (South) & Joy

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_003

DAILY TOTALS	NB	SB	EB	WB	Total
	445	414	0	0	859

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	1		1						2		12:00	8		6						14	
00:15	3		0						3		12:15	9		10						19	
00:30	4		1						5		12:30	16		11						27	
00:45	0	8	0	2					0	10	12:45	5	38	12	39					17	77
01:00	0		0						0		13:00	5		10						15	
01:15	2		1						3		13:15	7		6						13	
01:30	0		0						0		13:30	5		2						7	
01:45	0	2	0	1					0	3	13:45	14	31	8	26					22	57
02:00	2		1						3		14:00	14		5						19	
02:15	0		0						0		14:15	7		8						15	
02:30	0		0						0		14:30	9		7						16	
02:45	0	2	0	1					0	3	14:45	4	34	8	28					12	62
03:00	0		1						1		15:00	10		9						19	
03:15	1		0						1		15:15	8		4						12	
03:30	0		0						0		15:30	3		7						10	
03:45	0	1	0	1					0	2	15:45	6	27	6	26					12	53
04:00	0		0						0		16:00	3		5						8	
04:15	0		0						0		16:15	9		7						16	
04:30	0		0						0		16:30	5		10						15	
04:45	1	1	0						1	1	16:45	8	25	6	28					14	53
05:00	0		1						1		17:00	6		15						21	
05:15	0		0						0		17:15	7		4						11	
05:30	0		0						0		17:30	4		7						11	
05:45	0		1	2					1	2	17:45	19	36	5	31					24	67
06:00	0		1						1		18:00	3		6						9	
06:15	1		1						2		18:15	12		10						22	
06:30	1		0						1		18:30	12		9						21	
06:45	3	5	7	9					10	14	18:45	9	36	10	35					19	71
07:00	5		2						7		19:00	8		12						20	
07:15	4		4						8		19:15	17		3						20	
07:30	5		13						18		19:30	8		3						11	
07:45	4	18	2	21					6	39	19:45	8	41	2	20					10	61
08:00	4		7						11		20:00	5		6						11	
08:15	8		11						19		20:15	7		5						12	
08:30	5		6						11		20:30	5		7						12	
08:45	8	25	4	28					12	53	20:45	2	19	5	23					7	42
09:00	3		5						8		21:00	7		2						9	
09:15	2		0						2		21:15	1		4						5	
09:30	1		5						6		21:30	3		6						9	
09:45	5	11	1	11					6	22	21:45	5	16	5	17					10	33
10:00	4		3						7		22:00	6		3						9	
10:15	8		6						14		22:15	0		3						3	
10:30	6		5						11		22:30	2		4						6	
10:45	5	23	5	19					10	42	22:45	2	10	2	12					4	22
11:00	7		8						15		23:00	4		2						6	
11:15	3		3						6		23:15	5		6						11	
11:30	6		3						9		23:30	5		3						8	
11:45	6	22	4	18					10	40	23:45	0	14	5	16					5	30
TOTALS	118		113						231		TOTALS	327		301						628	
SPLIT %	51.1%		48.9%						26.9%		SPLIT %	52.1%		47.9%						73.1%	

DAILY TOTALS	NB	SB	EB	WB	Total
	445	414	0	0	859

AM Peak Hour	11:45	07:30			11:45	PM Peak Hour	17:45	12:15		18:15
AM Pk Volume	39	33			70	PM Pk Volume	46	43		82
Pk Hr Factor	0.609	0.635			0.648	Pk Hr Factor	0.605	0.896		0.932
7 - 9 Volume	43	49	0	0	92	4 - 6 Volume	61	59	0	0	120
7 - 9 Peak Hour	08:00	07:30			07:30	4 - 6 Peak Hour	17:00	16:15			17:00
7 - 9 Pk Volume	25	33	0	0	54	4 - 6 Pk Volume	36	38	0	0	67
Pk Hr Factor	0.781	0.635	0.000	0.000	0.711	Pk Hr Factor	0.474	0.633	0.000	0.000	0.698

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot B (South) & Joy

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_003

DAILY TOTALS	NB	SB	EB	WB	Total
	547	650	0	0	1,197

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00	3		2						5		12:00	7		14						21	
00:15	4		1						5		12:15	3		11						14	
00:30	2		2						4		12:30	3		17						20	
00:45	4	13	2	7					6	20	12:45	9	22	11	53					20	75
01:00	3		0						3		13:00	8		10						18	
01:15	2		1						3		13:15	8		13						21	
01:30	1		0						1		13:30	2		8						10	
01:45	1	7	1	2					2	9	13:45	6	24	14	45					20	69
02:00	0		2						2		14:00	11		11						22	
02:15	1		0						1		14:15	10		10						20	
02:30	0		0						0		14:30	5		5						10	
02:45	0	1	1	3					1	4	14:45	7	33	10	36					17	69
03:00	0		0						0		15:00	24		8						32	
03:15	0		0						0		15:15	10		16						26	
03:30	0		0						0		15:30	9		26						35	
03:45	0		0						0		15:45	6	49	7	57					13	106
04:00	0		0						0		16:00	8		9						17	
04:15	0		0						0		16:15	10		5						15	
04:30	0		0						0		16:30	13		11						24	
04:45	1	1	0						1	1	16:45	8	39	8	33					16	72
05:00	0		0						0		17:00	8		2						10	
05:15	1		0						1		17:15	19		26						45	
05:30	0		0						0		17:30	15		28						43	
05:45	0	1	1	1					1	2	17:45	5	47	33	89					38	136
06:00	0		0						0		18:00	27		24						51	
06:15	0		2						2		18:15	11		41						52	
06:30	1		1						2		18:30	16		19						35	
06:45	1	2	4	7					5	9	18:45	25	79	13	97					38	176
07:00	2		2						4		19:00	28		13						41	
07:15	0		3						3		19:15	10		7						17	
07:30	3		2						5		19:30	5		6						11	
07:45	2	7	10	17					12	24	19:45	11	54	5	31					16	85
08:00	0		12						12		20:00	8		4						12	
08:15	3		4						7		20:15	13		5						18	
08:30	4		2						6		20:30	11		8						19	
08:45	2	9	2	20					4	29	20:45	11	43	3	20					14	63
09:00	5		3						8		21:00	5		3						8	
09:15	3		1						4		21:15	6		6						12	
09:30	6		2						8		21:30	7		5						12	
09:45	1	15	6	12					7	27	21:45	18	36	7	21					25	57
10:00	3		9						12		22:00	5		2						7	
10:15	4		2						6		22:15	6		0						6	
10:30	3		8						11		22:30	5		3						8	
10:45	2	12	16	35					18	47	22:45	2	18	2	7					4	25
11:00	9		11						20		23:00	1		2						3	
11:15	5		14						19		23:15	6		4						10	
11:30	3		10						13		23:30	0		1						1	
11:45	6	23	14	49					20	72	23:45	5	12	1	8					6	20
TOTALS	91		153						244		TOTALS	456		497						953	
SPLIT %	37.3%		62.7%						20.4%		SPLIT %	47.8%		52.2%						79.6%	

DAILY TOTALS	NB	SB	EB	WB	Total
	547	650	0	0	1,197

AM Peak Hour	11:00	11:45			11:45	PM Peak Hour	18:15	17:30		17:30
AM Pk Volume	23	56			75	PM Pk Volume	80	126		184
Pk Hr Factor	0.639	0.824			0.893	Pk Hr Factor	0.714	0.768		0.885
7 - 9 Volume	16	37	0	0	53	4 - 6 Volume	86	122	0	0	208
7 - 9 Peak Hour	07:45	07:30			07:45	4 - 6 Peak Hour	16:45	17:00			17:00
7 - 9 Pk Volume	9	28	0	0	37	4 - 6 Pk Volume	50	89	0	0	136
Pk Hr Factor	0.563	0.583	0.000	0.000	0.771	Pk Hr Factor	0.658	0.674	0.000	0.000	0.756

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot B (South) & Joy

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_003

DAILY TOTALS	NB	SB	EB	WB	Total
	325	304	0	0	629

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	1	0			1	12:00	2	5			7
00:15	2	0			2	12:15	9	4			13
00:30	2	0			2	12:30	3	6			9
00:45	1	6	0		1	6	12:45	6	20	7	22	13	42
01:00	2	1			3	13:00	7	8			15
01:15	1	0			1	13:15	9	11			20
01:30	0	1			1	13:30	4	6			10
01:45	1	4	0	2	1	6	13:45	15	35	9	34	24	69
02:00	1	0			1	14:00	10	7			17
02:15	0	0			0	14:15	11	5			16
02:30	1	1			2	14:30	9	8			17
02:45	0	2	0	1	0	3	14:45	5	35	6	26	11	61
03:00	0	1			1	15:00	4	7			11
03:15	0	1			1	15:15	12	3			15
03:30	1	0			1	15:30	6	7			13
03:45	2	3	0	2	2	5	15:45	3	25	5	22	8	47
04:00	0	0			0	16:00	4	2			6
04:15	0	0			0	16:15	5	7			12
04:30	1	0			1	16:30	2	8			10
04:45	0	1	0		0	1	16:45	4	15	7	24	11	39
05:00	0	0			0	17:00	4	12			16
05:15	0	1			1	17:15	3	9			12
05:30	0	1			1	17:30	2	6			8
05:45	0	0	2		0	2	17:45	7	16	7	34	14	50
06:00	1	1			2	18:00	4	6			10
06:15	2	1			3	18:15	6	2			8
06:30	0	2			2	18:30	5	3			8
06:45	0	3	0	4	0	7	18:45	9	24	3	14	12	38
07:00	1	0			1	19:00	9	2			11
07:15	0	0			0	19:15	8	3			11
07:30	5	1			6	19:30	4	4			8
07:45	0	6	1	2	1	8	19:45	3	24	2	11	5	35
08:00	0	4			4	20:00	8	3			11
08:15	3	2			5	20:15	3	9			12
08:30	1	1			2	20:30	9	6			15
08:45	3	7	5	12	8	19	20:45	1	21	4	22	5	43
09:00	3	1			4	21:00	6	4			10
09:15	2	3			5	21:15	7	3			10
09:30	1	2			3	21:30	2	3			5
09:45	0	6	4	10	4	16	21:45	3	18	5	15	8	33
10:00	3	4			7	22:00	4	4			8
10:15	1	4			5	22:15	1	2			3
10:30	1	4			5	22:30	3	1			4
10:45	5	10	1	13	6	23	22:45	11	19	1	8	12	27
11:00	4	4			8	23:00	1	0			1
11:15	6	2			8	23:15	2	2			4
11:30	4	8			12	23:30	4	0			4
11:45	1	15	6	20	7	35	23:45	3	10	2	4	5	14
TOTALS	63	68			131	TOTALS	262	236			498
SPLIT %	48.1%	51.9%			20.8%	SPLIT %	52.6%	47.4%			79.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	325	304	0	0	629

AM Peak Hour	10:45	11:30			11:30	PM Peak Hour	13:45	16:30			13:45
AM Pk Volume	19	23			39	PM Pk Volume	45	36			74
Pk Hr Factor	0.792	0.719			0.750	Pk Hr Factor	0.750	0.750			0.771
7 - 9 Volume	13	14	0	0	27	4 - 6 Volume	31	58	0	0	89
7 - 9 Peak Hour	07:30	08:00			08:00	4 - 6 Peak Hour	17:00	16:30			17:00
7 - 9 Pk Volume	8	12	0	0	19	4 - 6 Pk Volume	16	36	0	0	50
Pk Hr Factor	0.400	0.600	0.000	0.000	0.594	Pk Hr Factor	0.571	0.750	0.000	0.000	0.781

Prepared by NDS/ATD

VOLUME

Concordia Bet Joy & Parking Lot B (North)

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	511	485	996

AM Period	NB	SB	EB	WB	TOTAL
00:00			0	1	1
00:15			1	1	2
00:30			1	3	4
00:45			2	4 1 6	3 10
01:00			0	2	2
01:15			1	3	4
01:30			1	1	2
01:45			1	3 0 6	1 9
02:00			1	1	2
02:15			0	0	0
02:30			0	0	0
02:45			0	1 0 1	0 2
03:00			0	1	1
03:15			1	0	1
03:30			0	0	0
03:45			0	1 0 1	0 2
04:00			0	0	0
04:15			0	0	0
04:30			0	0	0
04:45			0	0	0
05:00			0	0	0
05:15			0	0	0
05:30			0	0	0
05:45			0	0	0
06:00			1	1	2
06:15			1	1	2
06:30			2	1	3
06:45			2	6 3 6	5 12
07:00			3	3	6
07:15			8	2	10
07:30			3	21	24
07:45			14	28 9 35	23 63
08:00			12	4	16
08:15			9	3	12
08:30			2	6	8
08:45			3	26 7 20	10 46
09:00			6	2	8
09:15			2	5	7
09:30			6	4	10
09:45			2	16 4 15	6 31
10:00			5	3	8
10:15			8	8	16
10:30			5	8	13
10:45			7	25 12 31	19 56
11:00			4	9	13
11:15			8	3	11
11:30			3	7	10
11:45			6	21 3 22	9 43
TOTALS			131	143	274
SPLIT %			47.8%	52.2%	27.5%

PM Period	NB	SB	EB	WB	TOTAL
12:00			8	10	18
12:15			11	8	19
12:30			14	9	23
12:45			8	41 11 38	19 79
13:00			7	6	13
13:15			6	7	13
13:30			5	14	19
13:45			13	31 11 38	24 69
14:00			7	10	17
14:15			11	10	21
14:30			11	3	14
14:45			15	44 5 28	20 72
15:00			11	7	18
15:15			8	5	13
15:30			4	11	15
15:45			8	31 5 28	13 59
16:00			10	9	19
16:15			6	8	14
16:30			5	7	12
16:45			6	27 10 34	16 61
17:00			6	9	15
17:15			15	10	25
17:30			16	6	22
17:45			13	50 5 30	18 80
18:00			9	6	15
18:15			4	9	13
18:30			11	5	16
18:45			10	34 21 41	31 75
19:00			11	10	21
19:15			11	5	16
19:30			10	6	16
19:45			7	39 9 30	16 69
20:00			9	8	17
20:15			6	8	14
20:30			3	9	12
20:45			10	28 6 31	16 59
21:00			1	3	4
21:15			5	4	9
21:30			5	4	9
21:45			6	17 2 13	8 30
22:00			12	2	14
22:15			4	6	10
22:30			0	6	6
22:45			4	20 4 18	8 38
23:00			3	7	10
23:15			7	4	11
23:30			8	0	8
23:45			0	18 2 13	2 31
TOTALS			380	342	722
SPLIT %			52.6%	47.4%	72.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	511	485	996

AM Peak Hour			11:45	07:30	07:30	PM Peak Hour		17:15	13:30	18:30
AM Pk Volume			39	37	75	PM Pk Volume		53	45	84
Pk Hr Factor			0.696	0.440	0.781	Pk Hr Factor		0.828	0.804	0.677
7 - 9 Volume	0	0	54	55	109	4 - 6 Volume	0	77	64	141
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour		17:00	16:30	17:00
7 - 9 Pk Volume	0	0	38	37	75	4 - 6 Pk Volume	0	50	36	80
Pk Hr Factor	0.000	0.000	0.679	0.440	0.781	Pk Hr Factor	0.000	0.781	0.900	0.800

Prepared by NDS/ATD

VOLUME

Concordia Bet Joy & Parking Lot B (North)

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	549	522	1,071

AM Period	NB	SB	EB	WB	TOTAL
00:00			2	0	2
00:15			3	3	6
00:30			3	2	5
00:45			2	10 1 6	3 16
01:00			2	0	2
01:15			0	1	1
01:30			0	1	1
01:45			1	3 0 2	1 5
02:00			1	0	1
02:15			0	0	0
02:30			0	0	0
02:45			0	1 0	0 1
03:00			0	1	1
03:15			1	0	1
03:30			0	0	0
03:45			0	1 0 1	0 2
04:00			0	0	0
04:15			0	0	0
04:30			0	0	0
04:45			0	0	0
05:00			0	0	0
05:15			1	0	1
05:30			1	0	1
05:45			1	3 1 1	2 4
06:00			0	0	0
06:15			1	0	1
06:30			1	3	4
06:45			2	4 0 3	2 7
07:00			2	5	7
07:15			5	2	7
07:30			1	19	20
07:45			16	24 13 39	29 63
08:00			11	3	14
08:15			7	4	11
08:30			4	1	5
08:45			2	24 3 11	5 35
09:00			7	6	13
09:15			5	14	19
09:30			9	6	15
09:45			3	24 1 27	4 51
10:00			1	4	5
10:15			8	8	16
10:30			3	11	14
10:45			5	17 10 33	15 50
11:00			6	12	18
11:15			3	14	17
11:30			12	9	21
11:45			6	27 16 51	22 78
TOTALS			138	174	312
SPLIT %			44.2%	55.8%	29.1%

PM Period	NB	SB	EB	WB	TOTAL
12:00			8	9	17
12:15			4	8	12
12:30			5	3	8
12:45			7	24 6 26	13 50
13:00			10	9	19
13:15			3	10	13
13:30			8	9	17
13:45			7	28 5 33	12 61
14:00			15	12	27
14:15			5	15	20
14:30			16	9	25
14:45			14	50 13 49	27 99
15:00			12	11	23
15:15			10	7	17
15:30			10	9	19
15:45			7	39 10 37	17 76
16:00			6	11	17
16:15			4	9	13
16:30			7	5	12
16:45			14	31 12 37	26 68
17:00			12	11	23
17:15			16	13	29
17:30			25	7	32
17:45			18	71 11 42	29 113
18:00			17	6	23
18:15			10	7	17
18:30			12	4	16
18:45			17	56 15 32	32 88
19:00			8	10	18
19:15			13	7	20
19:30			3	3	6
19:45			8	32 7 27	15 59
20:00			6	10	16
20:15			16	8	24
20:30			8	6	14
20:45			3	33 9 33	12 66
21:00			9	5	14
21:15			7	3	10
21:30			3	4	7
21:45			4	23 2 14	6 37
22:00			2	3	5
22:15			3	0	3
22:30			4	2	6
22:45			2	11 4 9	6 20
23:00			1	1	2
23:15			4	3	7
23:30			4	2	6
23:45			4	13 3 9	7 22
TOTALS			411	348	759
SPLIT %			54.2%	45.8%	70.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	549	522	1,071

AM Peak Hour			07:45	11:00	11:00	PM Peak Hour		17:15	14:00	17:00
AM Pk Volume			38	51	78	PM Pk Volume		76	49	113
Pk Hr Factor			0.594	0.797	0.886	Pk Hr Factor		0.760	0.817	0.883
7 - 9 Volume	0	0	48	50	98	4 - 6 Volume	0	102	79	181
7 - 9 Peak Hour			07:45	07:00	07:30	4 - 6 Peak Hour		17:00	16:45	17:00
7 - 9 Pk Volume	0	0	38	39	74	4 - 6 Pk Volume	0	71	43	113
Pk Hr Factor	0.000	0.000	0.594	0.513	0.638	Pk Hr Factor	0.000	0.710	0.827	0.883

Prepared by NDS/ATD

VOLUME

Concordia Bet Joy & Parking Lot B (North)

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	485	456	941

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			1	2	3	12:00			8	8	16
00:15			3	0	3	12:15			9	12	21
00:30			4	1	5	12:30			16	11	27
00:45			0 8	1 4	1 12	12:45			6 39	12 43	18 82
01:00			0	0	0	13:00			5	11	16
01:15			2	1	3	13:15			6	6	12
01:30			0	0	0	13:30			8	2	10
01:45			0 2	0 1	0 3	13:45			15 34	8 27	23 61
02:00			2	1	3	14:00			13	5	18
02:15			0	0	0	14:15			7	9	16
02:30			0	0	0	14:30			9	10	19
02:45			0 2	1 2	1 4	14:45			7 36	8 32	15 68
03:00			1	1	2	15:00			12	12	24
03:15			1	0	1	15:15			10	4	14
03:30			0	0	0	15:30			3	9	12
03:45			0 2	0 1	0 3	15:45			6 31	8 33	14 64
04:00			0	0	0	16:00			3	6	9
04:15			0	0	0	16:15			9	8	17
04:30			0	0	0	16:30			5	12	17
04:45			0	0	0	16:45			9 26	6 32	15 58
05:00			0	0	0	17:00			6	17	23
05:15			0	0	0	17:15			7	6	13
05:30			0	0	0	17:30			6	8	14
05:45			0	1 1	1 1	17:45			18 37	8 39	26 76
06:00			1	0	1	18:00			3	6	9
06:15			2	1	3	18:15			10	11	21
06:30			2	0	2	18:30			12	9	21
06:45			3 8	7 8	10 16	18:45			9 34	10 36	19 70
07:00			5	1	6	19:00			11	12	23
07:15			7	4	11	19:15			17	3	20
07:30			8	11	19	19:30			8	2	10
07:45			6 26	2 18	8 44	19:45			8 44	2 19	10 63
08:00			9	8	17	20:00			7	6	13
08:15			10	13	23	20:15			8	6	14
08:30			6	6	12	20:30			4	7	11
08:45			8 33	3 30	11 63	20:45			4 23	5 24	9 47
09:00			3	6	9	21:00			6	5	11
09:15			2	0	2	21:15			2	6	8
09:30			1	6	7	21:30			3	7	10
09:45			7 13	0 12	7 25	21:45			5 16	5 23	10 39
10:00			4	5	9	22:00			6	3	9
10:15			9	6	15	22:15			0	3	3
10:30			6	5	11	22:30			1	4	5
10:45			6 25	5 21	11 46	22:45			2 9	2 12	4 21
11:00			6	10	16	23:00			4	2	6
11:15			3	3	6	23:15			5	6	11
11:30			7	3	10	23:30			5	2	7
11:45			6 22	5 21	11 43	23:45			1 15	7 17	8 32
TOTALS			141	119	260	TOTALS			344	337	681
SPLIT %			54.2%	45.8%	27.6%	SPLIT %			50.5%	49.5%	72.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	485	456	941

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			18:30	12:15	18:15
AM Pk Volume			39	36	75	PM Pk Volume			49	46	84
Pk Hr Factor			0.609	0.750	0.694	Pk Hr Factor			0.721	0.958	0.913
7 - 9 Volume	0	0	59	48	107	4 - 6 Volume	0	0	63	71	134
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			17:00	16:15	17:00
7 - 9 Pk Volume	0	0	33	34	67	4 - 6 Pk Volume	0	0	37	43	76
Pk Hr Factor	0.000	0.000	0.825	0.654	0.728	Pk Hr Factor	0.000	0.000	0.514	0.632	0.731

Prepared by NDS/ATD

VOLUME

Concordia Bet Joy & Parking Lot B (North)

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	585	694	1,279

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			2	1	3	12:00			8	15	23
00:15			4	3	7	12:15			5	14	19
00:30			3	2	5	12:30			5	17	22
00:45			3 12	2 8	5 20	12:45			10 28	14 60	24 88
01:00			2	0	2	13:00			12	12	24
01:15			2	1	3	13:15			9	13	22
01:30			1	0	1	13:30			2	8	10
01:45			1 6	2 3	3 9	13:45			5 28	15 48	20 76
02:00			0	2	2	14:00			11	12	23
02:15			1	1	2	14:15			10	10	20
02:30			0	0	0	14:30			6	8	14
02:45			0 1	1 4	1 5	14:45			9 36	11 41	20 77
03:00			0	0	0	15:00			25	9	34
03:15			0	0	0	15:15			11	16	27
03:30			1	0	1	15:30			10	28	38
03:45			0 1	0	0 1	15:45			5 51	9 62	14 113
04:00			0	0	0	16:00			10	11	21
04:15			0	0	0	16:15			9	7	16
04:30			0	0	0	16:30			11	11	22
04:45			1 1	0	1 1	16:45			6 36	11 40	17 76
05:00			1	0	1	17:00			7	2	9
05:15			0	0	0	17:15			16	26	42
05:30			0	0	0	17:30			14	29	43
05:45			0 1	0	0 1	17:45			4 41	32 89	36 130
06:00			0	0	0	18:00			27	24	51
06:15			0	2	2	18:15			10	41	51
06:30			1	1	2	18:30			17	20	37
06:45			1 2	5 8	6 10	18:45			28 82	16 101	44 183
07:00			2	2	4	19:00			30	12	42
07:15			0	1	1	19:15			14	8	22
07:30			4	2	6	19:30			7	9	16
07:45			3 9	9 14	12 23	19:45			12 63	5 34	17 97
08:00			0	12	12	20:00			11	3	14
08:15			3	4	7	20:15			15	4	19
08:30			4	1	5	20:30			13	8	21
08:45			4 11	2 19	6 30	20:45			8 47	3 18	11 65
09:00			4	4	8	21:00			6	3	9
09:15			6	2	8	21:15			6	5	11
09:30			8	3	11	21:30			7	6	13
09:45			3 21	9 18	12 39	21:45			18 37	7 21	25 58
10:00			3	8	11	22:00			4	3	7
10:15			6	3	9	22:15			6	1	7
10:30			4	10	14	22:30			5	3	8
10:45			2 15	16 37	18 52	22:45			2 17	2 9	4 26
11:00			9	12	21	23:00			1	3	4
11:15			7	14	21	23:15			6	6	12
11:30			4	10	14	23:30			0	1	1
11:45			8 28	14 50	22 78	23:45			4 11	0 10	4 21
TOTALS			108	161	269	TOTALS			477	533	1010
SPLIT %			40.1%	59.9%	21.0%	SPLIT %			47.2%	52.8%	79.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	585	694	1,279

AM Peak Hour			11:00	11:45	11:45	PM Peak Hour			18:30	17:30	18:00
AM Pk Volume			28	60	86	PM Pk Volume			89	126	183
Pk Hr Factor			0.778	0.882	0.935	Pk Hr Factor			0.742	0.768	0.897
7 - 9 Volume	0	0	20	33	53	4 - 6 Volume	0	0	77	129	206
7 - 9 Peak Hour			08:00	07:30	07:30	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	11	27	37	4 - 6 Pk Volume	0	0	43	89	130
Pk Hr Factor	0.000	0.000	0.688	0.563	0.771	Pk Hr Factor	0.000	0.000	0.672	0.695	0.756

Prepared by NDS/ATD

VOLUME

Concordia Bet Joy & Parking Lot B (North)

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_004

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	364	357	721

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			1		0		1		12:00			2		7		9	
00:15			3		0		3		12:15			10		5		15	
00:30			2		0		2		12:30			3		6		9	
00:45			1	7	0		1	7	12:45			8	23	8	26	16	49
01:00			3		2		5		13:00			4		8		12	
01:15			2		1		3		13:15			9		10		19	
01:30			1		1		2		13:30			6		6		12	
01:45			1	7	0	4	1	11	13:45			16	35	12	36	28	71
02:00			1		0		1		14:00			13		12		25	
02:15			0		0		0		14:15			10		6		16	
02:30			1		1		2		14:30			11		9		20	
02:45			0	2	0	1	0	3	14:45			7	41	10	37	17	78
03:00			0		1		1		15:00			6		9		15	
03:15			0		1		1		15:15			12		5		17	
03:30			1		0		1		15:30			8		10		18	
03:45			2	3	0	2	2	5	15:45			6	32	6	30	12	62
04:00			0		0		0		16:00			5		3		8	
04:15			0		0		0		16:15			5		9		14	
04:30			1		0		1		16:30			3		9		12	
04:45			0	1	1	1	1	2	16:45			5	18	9	30	14	48
05:00			0		0		0		17:00			6		13		19	
05:15			0		1		1		17:15			3		10		13	
05:30			0		1		1		17:30			4		9		13	
05:45			0		0	2	0	2	17:45			7	20	7	39	14	59
06:00			1		0		1		18:00			5		8		13	
06:15			2		1		3		18:15			6		2		8	
06:30			1		1		2		18:30			5		3		8	
06:45			0	4	0	2	0	6	18:45			9	25	5	18	14	43
07:00			1		0		1		19:00			6		3		9	
07:15			0		1		1		19:15			8		6		14	
07:30			4		1		5		19:30			5		5		10	
07:45			0	5	1	3	1	8	19:45			3	22	2	16	5	38
08:00			0		3		3		20:00			8		4		12	
08:15			4		2		6		20:15			4		9		13	
08:30			1		1		2		20:30			10		6		16	
08:45			3	8	5	11	8	19	20:45			1	23	3	22	4	45
09:00			5		1		6		21:00			6		4		10	
09:15			2		3		5		21:15			9		3		12	
09:30			1		2		3		21:30			2		4		6	
09:45			0	8	4	10	4	18	21:45			3	20	5	16	8	36
10:00			2		3		5		22:00			4		4		8	
10:15			4		7		11		22:15			1		2		3	
10:30			3		5		8		22:30			2		2		4	
10:45			6	15	0	15	6	30	22:45			11	18	2	10	13	28
11:00			3		4		7		23:00			1		0		1	
11:15			7		2		9		23:15			2		2		4	
11:30			5		10		15		23:30			4		0		4	
11:45			2	17	6	22	8	39	23:45			3	10	2	4	5	14
TOTALS				77		73		150	TOTALS				287		284		571
SPLIT %				51.3%		48.7%		20.8%	SPLIT %				50.3%		49.7%		79.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	364	357	721

AM Peak Hour			10:45	11:30	11:30	PM Peak Hour			13:45	16:30	13:45
AM Pk Volume			21	28	47	PM Pk Volume			50	41	89
Pk Hr Factor			0.750	0.700	0.783	Pk Hr Factor			0.781	0.788	0.795
7 - 9 Volume	0	0	13	14	27	4 - 6 Volume	0	0	38	69	107
7 - 9 Peak Hour			07:30	08:00	08:00	4 - 6 Peak Hour			17:00	16:30	16:15
7 - 9 Pk Volume	0	0	8	11	19	4 - 6 Pk Volume	0	0	20	41	59
Pk Hr Factor	0.000	0.000	0.500	0.550	0.594	Pk Hr Factor	0.000	0.000	0.714	0.788	0.776

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot B (North) & Parking Lot C

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1095_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,371	1,364	2,735

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	3	3	12:00			24	23	47
00:15			4	2	6	12:15			33	32	65
00:30			1	2	3	12:30			43	25	68
00:45			2 7	1 8	3 15	12:45			21 121	24 104	45 225
01:00			0	2	2	13:00			15	9	24
01:15			1	3	4	13:15			17	16	33
01:30			2	1	3	13:30			16	24	40
01:45			1 4	0 6	1 10	13:45			43 91	30 79	73 170
02:00			1	1	2	14:00			29	23	52
02:15			0	0	0	14:15			24	14	38
02:30			0	0	0	14:30			19	9	28
02:45			0 1	0 1	0 2	14:45			23 95	14 60	37 155
03:00			0	1	1	15:00			24	18	42
03:15			1	0	1	15:15			43	19	62
03:30			0	0	0	15:30			29	21	50
03:45			0 1	0 1	0 2	15:45			11 107	13 71	24 178
04:00			0	1	1	16:00			23	9	32
04:15			0	0	0	16:15			22	19	41
04:30			0	0	0	16:30			29	20	49
04:45			0	1 2	1 2	16:45			26 100	28 76	54 176
05:00			0	0	0	17:00			21	17	38
05:15			1	2	3	17:15			20	17	37
05:30			0	0	0	17:30			21	20	41
05:45			0 1	1 3	1 4	17:45			29 91	22 76	51 167
06:00			1	6	7	18:00			18	22	40
06:15			1	10	11	18:15			11	30	41
06:30			2	5	7	18:30			29	24	53
06:45			4 8	8 29	12 37	18:45			17 75	44 120	61 195
07:00			3	18	21	19:00			23	38	61
07:15			7	48	55	19:15			17	18	35
07:30			8	38	46	19:30			14	9	23
07:45			14 32	20 124	34 156	19:45			11 65	10 75	21 140
08:00			15	22	37	20:00			19	11	30
08:15			15	18	33	20:15			19	15	34
08:30			11	22	33	20:30			14	12	26
08:45			11 52	67 129	78 181	20:45			34 86	15 53	49 139
09:00			15	41	56	21:00			20	6	26
09:15			15	18	33	21:15			35	10	45
09:30			14	13	27	21:30			13	6	19
09:45			8 52	12 84	20 136	21:45			16 84	6 28	22 112
10:00			17	12	29	22:00			65	3	68
10:15			38	27	65	22:15			21	8	29
10:30			19	31	50	22:30			7	7	14
10:45			26 100	50 120	76 220	22:45			12 105	3 21	15 126
11:00			26	40	66	23:00			8	10	18
11:15			13	11	24	23:15			11	3	14
11:30			12	12	24	23:30			11	3	14
11:45			10 61	12 75	22 136	23:45			2 32	3 19	5 51
TOTALS			319	582	901	TOTALS			1052	782	1834
SPLIT %			35.4%	64.6%	32.9%	SPLIT %			57.4%	42.6%	67.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,371	1,364	2,735

AM Peak Hour			11:45	08:15	10:15	PM Peak Hour			21:15	18:15	12:00
AM Pk Volume			110	148	257	PM Pk Volume			129	136	225
Pk Hr Factor			0.640	0.552	0.845	Pk Hr Factor			0.496	0.773	0.827
7 - 9 Volume	0	0	84	253	337	4 - 6 Volume	0	0	191	152	343
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:00	16:15	16:15
7 - 9 Pk Volume	0	0	55	129	181	4 - 6 Pk Volume	0	0	100	84	182
Pk Hr Factor	0.000	0.000	0.917	0.481	0.580	Pk Hr Factor	0.000	0.000	0.862	0.750	0.843

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot B (North) & Parking Lot C

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1095_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,413	1,368	2,781

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			6	1	7	12:00			35	29	64
00:15			4	2	6	12:15			14	19	33
00:30			3	3	6	12:30			18	18	36
00:45			2 15	1 7	3 22	12:45			18 85	27 93	45 178
01:00			2	0	2	13:00			38	23	61
01:15			0	2	2	13:15			14	21	35
01:30			0	0	0	13:30			15	18	33
01:45			3 5	0 2	3 7	13:45			27 94	25 87	52 181
02:00			2	1	3	14:00			55	20	75
02:15			0	0	0	14:15			18	17	35
02:30			0	0	0	14:30			23	15	38
02:45			0 2	0 1	0 3	14:45			25 121	22 74	47 195
03:00			0	2	2	15:00			39	20	59
03:15			1	0	1	15:15			18	9	27
03:30			0	0	0	15:30			27	13	40
03:45			0 1	0 2	0 3	15:45			18 102	18 60	36 162
04:00			0	0	0	16:00			22	23	45
04:15			0	0	0	16:15			19	25	44
04:30			0	1	1	16:30			29	17	46
04:45			1 1	0 1	1 2	16:45			28 98	31 96	59 194
05:00			0	0	0	17:00			20	20	40
05:15			1	1	2	17:15			30	23	53
05:30			1	1	2	17:30			39	24	63
05:45			2 4	6 8	8 12	17:45			35 124	24 91	59 215
06:00			0	10	10	18:00			28	19	47
06:15			1	4	5	18:15			28	28	56
06:30			2	5	7	18:30			18	14	32
06:45			3 6	13 32	16 38	18:45			34 108	27 88	61 196
07:00			2	16	18	19:00			28	18	46
07:15			8	43	51	19:15			30	9	39
07:30			4	33	37	19:30			9	8	17
07:45			17 31	29 121	46 152	19:45			20 87	12 47	32 134
08:00			12	23	35	20:00			29	17	46
08:15			21	72	93	20:15			35	11	46
08:30			16	38	54	20:30			24	8	32
08:45			7 56	17 150	24 206	20:45			13 101	10 46	23 147
09:00			13	26	39	21:00			15	6	21
09:15			35	44	79	21:15			14	6	20
09:30			22	21	43	21:30			21	10	31
09:45			7 77	8 99	15 176	21:45			23 73	5 27	28 100
10:00			9	14	23	22:00			12	7	19
10:15			35	28	63	22:15			12	2	14
10:30			18	29	47	22:30			15	5	20
10:45			15 77	22 93	37 170	22:45			5 44	3 17	8 61
11:00			22	32	54	23:00			4	2	6
11:15			10	21	31	23:15			9	4	13
11:30			23	25	48	23:30			5	3	8
11:45			18 73	37 115	55 188	23:45			10 28	2 11	12 39
TOTALS			348	631	979	TOTALS			1065	737	1802
SPLIT %			35.5%	64.5%	35.2%	SPLIT %			59.1%	40.9%	64.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,413	1,368	2,781

AM Peak Hour			10:15	07:45	07:45	PM Peak Hour			17:15	16:45	17:30
AM Pk Volume			90	162	228	PM Pk Volume			132	98	225
Pk Hr Factor			0.643	0.563	0.613	Pk Hr Factor			0.846	0.790	0.893
7 - 9 Volume	0	0	87	271	358	4 - 6 Volume	0	0	222	187	409
7 - 9 Peak Hour			07:45	07:45	07:45	4 - 6 Peak Hour			17:00	16:45	16:45
7 - 9 Pk Volume	0	0	66	162	228	4 - 6 Pk Volume	0	0	124	98	215
Pk Hr Factor	0.000	0.000	0.786	0.563	0.613	Pk Hr Factor	0.000	0.000	0.795	0.790	0.853

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot B (North) & Parking Lot C

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1095_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,258	1,248	2,506

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			2	3	5	12:00			27	29	56
00:15			4	0	4	12:15			27	37	64
00:30			5	1	6	12:30			47	22	69
00:45			1 12	1 5	2 17	12:45			11 112	26 114	37 226
01:00			0	1	1	13:00			18	25	43
01:15			1	0	1	13:15			16	13	29
01:30			0	0	0	13:30			23	10	33
01:45			0 1	0 1	0 2	13:45			41 98	23 71	64 169
02:00			2	1	3	14:00			26	22	48
02:15			0	0	0	14:15			27	15	42
02:30			0	0	0	14:30			21	20	41
02:45			0 2	1 2	1 4	14:45			15 89	14 71	29 160
03:00			1	1	2	15:00			24	18	42
03:15			1	0	1	15:15			39	12	51
03:30			0	0	0	15:30			31	14	45
03:45			0 2	0 1	0 3	15:45			22 116	17 61	39 177
04:00			0	1	1	16:00			11	11	22
04:15			0	0	0	16:15			23	12	35
04:30			0	1	1	16:30			14	22	36
04:45			0	0 2	0 2	16:45			28 76	21 66	49 142
05:00			0	1	1	17:00			19	23	42
05:15			0	0	0	17:15			22	17	39
05:30			0	0	0	17:30			14	14	28
05:45			0	4 5	4 5	17:45			21 76	27 81	48 157
06:00			2	10	12	18:00			14	32	46
06:15			2	4	6	18:15			15	28	43
06:30			2	2	4	18:30			30	22	52
06:45			4 10	8 24	12 34	18:45			16 75	21 103	37 178
07:00			5	19	24	19:00			17	17	34
07:15			8	38	46	19:15			30	4	34
07:30			10	29	39	19:30			25	7	32
07:45			7 30	24 110	31 140	19:45			21 93	3 31	24 124
08:00			13	15	28	20:00			14	11	25
08:15			14	37	51	20:15			16	9	25
08:30			8	38	46	20:30			35	9	44
08:45			27 62	46 136	73 198	20:45			20 85	12 41	32 126
09:00			10	34	44	21:00			16	9	25
09:15			5	10	15	21:15			20	10	30
09:30			5	22	27	21:30			19	14	33
09:45			10 30	12 78	22 108	21:45			14 69	8 41	22 110
10:00			16	19	35	22:00			16	6	22
10:15			30	18	48	22:15			16	4	20
10:30			26	24	50	22:30			10	5	15
10:45			14 86	46 107	60 193	22:45			7 49	3 18	10 67
11:00			12	27	39	23:00			13	7	20
11:15			9	13	22	23:15			11	7	18
11:30			12	5	17	23:30			9	3	12
11:45			15 48	12 57	27 105	23:45			4 37	5 22	9 59
TOTALS			283	528	811	TOTALS			975	720	1695
SPLIT %			34.9%	65.1%	32.4%	SPLIT %			57.5%	42.5%	67.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,258	1,248	2,506

AM Peak Hour			11:45	08:15	11:45	PM Peak Hour			13:30	12:00	12:00
AM Pk Volume			116	155	216	PM Pk Volume			117	114	226
Pk Hr Factor			0.617	0.842	0.783	Pk Hr Factor			0.713	0.770	0.819
7 - 9 Volume	0	0	92	246	338	4 - 6 Volume	0	0	152	147	299
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:30	16:30
7 - 9 Pk Volume	0	0	62	136	198	4 - 6 Pk Volume	0	0	84	83	166
Pk Hr Factor	0.000	0.000	0.574	0.739	0.678	Pk Hr Factor	0.000	0.000	0.750	0.902	0.847

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot B (North) & Parking Lot C

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1095_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	842	1,077	1,919

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			3	2	5	12:00			9	21	30
00:15			4	3	7	12:15			9	17	26
00:30			4	3	7	12:30			9	16	25
00:45			4 15	2 10	6 25	12:45			21 48	15 69	36 117
01:00			2	0	2	13:00			18	14	32
01:15			2	1	3	13:15			13	16	29
01:30			1	1	2	13:30			7	13	20
01:45			1 6	2 4	3 10	13:45			15 53	19 62	34 115
02:00			0	2	2	14:00			26	17	43
02:15			1	1	2	14:15			19	14	33
02:30			0	0	0	14:30			11	10	21
02:45			1 2	1 4	2 6	14:45			13 69	14 55	27 124
03:00			0	0	0	15:00			32	13	45
03:15			0	0	0	15:15			15	25	40
03:30			1	0	1	15:30			13	25	38
03:45			0 1	2 2	2 3	15:45			6 66	12 75	18 141
04:00			0	0	0	16:00			13	13	26
04:15			0	0	0	16:15			15	8	23
04:30			0	0	0	16:30			17	16	33
04:45			1 1	0	1 1	16:45			11 56	17 54	28 110
05:00			1	0	1	17:00			16	6	22
05:15			0	1	1	17:15			19	35	54
05:30			1	1	2	17:30			19	34	53
05:45			0 2	1 3	1 5	17:45			5 59	44 119	49 178
06:00			0	0	0	18:00			25	35	60
06:15			0	2	2	18:15			9	73	82
06:30			2	3	5	18:30			23	43	66
06:45			1 3	3 8	4 11	18:45			27 84	44 195	71 279
07:00			3	3	6	19:00			20	46	66
07:15			1	8	9	19:15			19	35	54
07:30			4	5	9	19:30			14	11	25
07:45			3 11	10 26	13 37	19:45			19 72	10 102	29 174
08:00			1	14	15	20:00			15	6	21
08:15			6	11	17	20:15			15	6	21
08:30			3	8	11	20:30			13	9	22
08:45			9 19	25 58	34 77	20:45			10 53	4 25	14 78
09:00			6	19	25	21:00			8	6	14
09:15			7	6	13	21:15			22	8	30
09:30			8	9	17	21:30			18	5	23
09:45			2 23	10 44	12 67	21:45			38 86	11 30	49 116
10:00			10	11	21	22:00			17	3	20
10:15			11	5	16	22:15			7	3	10
10:30			6	14	20	22:30			5	3	8
10:45			3 30	18 48	21 78	22:45			3 32	2 11	5 43
11:00			11	16	27	23:00			2	4	6
11:15			9	18	27	23:15			7	5	12
11:30			7	11	18	23:30			1	2	3
11:45			10 37	17 62	27 99	23:45			4 14	0 11	4 25
TOTALS			150	269	419	TOTALS			692	808	1500
SPLIT %			35.8%	64.2%	21.8%	SPLIT %			46.1%	53.9%	78.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	842	1,077	1,919

AM Peak Hour			11:00	11:45	11:45	PM Peak Hour			21:15	18:15	18:15
AM Pk Volume			37	71	108	PM Pk Volume			95	206	285
Pk Hr Factor			0.841	0.845	0.900	Pk Hr Factor			0.625	0.705	0.869
7 - 9 Volume	0	0	30	84	114	4 - 6 Volume	0	0	115	173	288
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	19	58	77	4 - 6 Pk Volume	0	0	65	119	178
Pk Hr Factor	0.000	0.000	0.528	0.580	0.566	Pk Hr Factor	0.000	0.000	0.855	0.676	0.824

Prepared by NDS/ATD

VOLUME

Concordia Bet. Parking Lot B (North) & Parking Lot C

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1095_005

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	753	738	1,491

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			2		1		3		12:00			3		18		21	
00:15			4		2		6		12:15			21		15		36	
00:30			2		0		2		12:30			7		15		22	
00:45			1	9	1	4	2	13	12:45			10	41	16	64	26	105
01:00			3		2		5		13:00			10		18		28	
01:15			1		2		3		13:15			9		21		30	
01:30			1		0		1		13:30			8		23		31	
01:45			0	5	0	4	0	9	13:45			25	52	52	114	77	166
02:00			1		0		1		14:00			21		36		57	
02:15			0		0		0		14:15			19		32		51	
02:30			1		1		2		14:30			16		50		66	
02:45			0	2	0	1	0	3	14:45			9	65	43	161	52	226
03:00			0		1		1		15:00			15		20		35	
03:15			0		1		1		15:15			14		9		23	
03:30			1		0		1		15:30			10		13		23	
03:45			2	3	0	2	2	5	15:45			8	47	9	51	17	98
04:00			0		0		0		16:00			12		7		19	
04:15			0		0		0		16:15			29		8		37	
04:30			1		0		1		16:30			9		9		18	
04:45			0	1	1	1	1	2	16:45			53	103	9	33	62	136
05:00			0		0		0		17:00			85		16		101	
05:15			0		1		1		17:15			36		14		50	
05:30			1		7		8		17:30			27		9		36	
05:45			1	2	2	10	3	12	17:45			13	161	26	65	39	226
06:00			2		0		2		18:00			18		12		30	
06:15			2		1		3		18:15			8		2		10	
06:30			3		2		5		18:30			8		8		16	
06:45			0	7	0	3	0	10	18:45			10	44	6	28	16	72
07:00			2		0		2		19:00			14		5		19	
07:15			0		2		2		19:15			7		7		14	
07:30			5		2		7		19:30			6		9		15	
07:45			0	7	0	4	0	11	19:45			7	34	5	26	12	60
08:00			0		5		5		20:00			12		7		19	
08:15			5		2		7		20:15			11		9		20	
08:30			2		3		5		20:30			12		8		20	
08:45			4	11	7	17	11	28	20:45			4	39	3	27	7	66
09:00			5		1		6		21:00			9		6		15	
09:15			3		5		8		21:15			13		3		16	
09:30			1		5		6		21:30			6		6		12	
09:45			2	11	6	17	8	28	21:45			10	38	4	19	14	57
10:00			3		3		6		22:00			7		5		12	
10:15			5		10		15		22:15			1		3		4	
10:30			4		6		10		22:30			2		2		4	
10:45			8	20	2	21	10	41	22:45			11	21	3	13	14	34
11:00			2		7		9		23:00			1		1		2	
11:15			7		10		17		23:15			4		2		6	
11:30			4		13		17		23:30			4		0		4	
11:45			5	18	17	47	22	65	23:45			3	12	3	6	6	18
TOTALS				96		131		227	TOTALS				657		607		1264
SPLIT %				42.3%		57.7%		15.2%	SPLIT %				52.0%		48.0%		84.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	753	738	1,491

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour	16:45	13:45	13:45
AM Pk Volume			36	65	101	PM Pk Volume	201	170	251
Pk Hr Factor			0.429	0.903	0.701	Pk Hr Factor	0.591	0.817	0.815
7 - 9 Volume	0	0	18	21	39	4 - 6 Volume	0	0	264	98	362
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	16:45
7 - 9 Pk Volume	0	0	11	17	28	4 - 6 Pk Volume	0	0	201	65	249
Pk Hr Factor	0.000	0.000	0.550	0.607	0.636	Pk Hr Factor	0.000	0.000	0.591	0.625	0.616

Prepared by NDS/ATD

VOLUME

Concordia W/O Parking Lot E

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,595	1,586	3,181

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	3	3	12:00			26	23	49
00:15			4	2	6	12:15			33	29	62
00:30			2	2	4	12:30			46	31	77
00:45			2	8 1 8	3 16	12:45			24 129	24 107	48 236
01:00			0	2	2	13:00			16	12	28
01:15			1	3	4	13:15			21	15	36
01:30			2	1	3	13:30			18	28	46
01:45			1	4 0 6	1 10	13:45			44 99	30 85	74 184
02:00			1	0	1	14:00			27	19	46
02:15			0	0	0	14:15			27	17	44
02:30			0	0	0	14:30			26	12	38
02:45			0	1 0	0 1	14:45			31 111	19 67	50 178
03:00			0	1	1	15:00			24	22	46
03:15			0	0	0	15:15			45	18	63
03:30			0	0	0	15:30			34	19	53
03:45			0	0 1	0 1	15:45			14 117	13 72	27 189
04:00			0	1	1	16:00			27	10	37
04:15			0	0	0	16:15			29	19	48
04:30			0	0	0	16:30			49	22	71
04:45			0	1 2	1 2	16:45			39 144	29 80	68 224
05:00			0	1	1	17:00			18	16	34
05:15			0	4	4	17:15			27	23	50
05:30			0	0	0	17:30			22	21	43
05:45			0	3 8	3 8	17:45			32 99	24 84	56 183
06:00			0	20	20	18:00			24	22	46
06:15			2	11	13	18:15			13	34	47
06:30			1	7	8	18:30			30	25	55
06:45			4	7 13 51	17 58	18:45			17 84	51 132	68 216
07:00			3	36	39	19:00			23	47	70
07:15			9	56	65	19:15			20	31	51
07:30			9	51	60	19:30			16	12	28
07:45			12	33 33 176	45 209	19:45			18 77	13 103	31 180
08:00			16	36	52	20:00			23	14	37
08:15			17	26	43	20:15			28	15	43
08:30			9	25	34	20:30			17	11	28
08:45			13	55 75 162	88 217	20:45			39 107	16 56	55 163
09:00			17	47	64	21:00			21	7	28
09:15			19	20	39	21:15			46	9	55
09:30			18	14	32	21:30			13	6	19
09:45			8	62 14 95	22 157	21:45			20 100	6 28	26 128
10:00			19	15	34	22:00			92	4	96
10:15			41	32	73	22:15			24	8	32
10:30			27	33	60	22:30			6	8	14
10:45			22	109 55 135	77 244	22:45			13 135	4 24	17 159
11:00			33	41	74	23:00			11	9	20
11:15			19	14	33	23:15			12	3	15
11:30			13	14	27	23:30			12	2	14
11:45			12	77 19 88	31 165	23:45			2 37	2 16	4 53
TOTALS				356 732	1088	TOTALS				1239 854	2093
SPLIT %				32.7% 67.3%	34.2%	SPLIT %				59.2% 40.8%	65.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,595	1,586	3,181

AM Peak Hour			10:15	07:00	10:15	PM Peak Hour			21:15	18:15	18:30
AM Pk Volume			123	176	284	PM Pk Volume			171	157	244
Pk Hr Factor			0.750	0.786	0.922	Pk Hr Factor			0.465	0.770	0.871
7 - 9 Volume	0	0	88	338	426	4 - 6 Volume	0	0	243	164	407
7 - 9 Peak Hour			08:00	07:00	07:15	4 - 6 Peak Hour			16:00	16:30	16:00
7 - 9 Pk Volume	0	0	55	176	222	4 - 6 Pk Volume	0	0	144	90	224
Pk Hr Factor	0.000	0.000	0.809	0.786	0.854	Pk Hr Factor	0.000	0.000	0.735	0.776	0.789

Prepared by NDS/ATD

VOLUME

Concordia W/O Parking Lot E

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,623	1,587	3,210

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			7	1	8	12:00			34	29	63
00:15			5	3	8	12:15			21	20	41
00:30			3	2	5	12:30			16	11	27
00:45			3	18 2 8	5 26	12:45			21 92	31 91	52 183
01:00			2	1	3	13:00			45	27	72
01:15			0	1	1	13:15			17	20	37
01:30			0	0	0	13:30			15	23	38
01:45			3	5 0 2	3 7	13:45			27 104	28 98	55 202
02:00			2	0	2	14:00			56	18	74
02:15			0	0	0	14:15			21	19	40
02:30			0	0	0	14:30			30	15	45
02:45			0	2 0	0 2	14:45			33 140	24 76	57 216
03:00			0	2	2	15:00			46	26	72
03:15			0	0	0	15:15			23	14	37
03:30			0	0	0	15:30			34	8	42
03:45			0	0 2	0 2	15:45			19 122	20 68	39 190
04:00			0	0	0	16:00			30	25	55
04:15			0	0	0	16:15			25	25	50
04:30			0	1	1	16:30			52	23	75
04:45			1	1 0 1	1 2	16:45			28 135	29 102	57 237
05:00			1	4	5	17:00			28	23	51
05:15			1	4	5	17:15			34	26	60
05:30			1	1	2	17:30			40	29	69
05:45			3	6 8 17	11 23	17:45			33 135	30 108	63 243
06:00			0	14	14	18:00			36	18	54
06:15			2	7	9	18:15			30	24	54
06:30			1	9	10	18:30			22	22	44
06:45			2	5 24 54	26 59	18:45			38 126	43 107	81 233
07:00			3	25	28	19:00			35	19	54
07:15			8	54	62	19:15			32	13	45
07:30			4	45	49	19:30			13	9	22
07:45			13	28 44 168	57 196	19:45			22 102	13 54	35 156
08:00			10	40	50	20:00			34	21	55
08:15			21	80	101	20:15			36	18	54
08:30			17	39	56	20:30			40	6	46
08:45			12	60 22 181	34 241	20:45			30 140	9 54	39 194
09:00			8	31	39	21:00			26	7	33
09:15			34	44	78	21:15			16	7	23
09:30			23	22	45	21:30			24	13	37
09:45			8	73 12 109	20 182	21:45			24 90	5 32	29 122
10:00			9	14	23	22:00			14	4	18
10:15			35	25	60	22:15			13	3	16
10:30			16	28	44	22:30			15	6	21
10:45			18	78 28 95	46 173	22:45			4 46	4 17	8 63
11:00			23	34	57	23:00			6	1	7
11:15			17	22	39	23:15			7	4	11
11:30			22	30	52	23:30			7	2	9
11:45			23	85 48 134	71 219	23:45			10 30	2 9	12 39
TOTALS				361 771	1132	TOTALS				1262 816	2078
SPLIT %				31.9% 68.1%	35.3%	SPLIT %				60.7% 39.3%	64.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,623	1,587	3,210

AM Peak Hour			11:30	07:30	07:45	PM Peak Hour			17:15	17:00	17:15
AM Pk Volume			100	209	264	PM Pk Volume			143	108	246
Pk Hr Factor			0.735	0.653	0.653	Pk Hr Factor			0.894	0.900	0.891
7 - 9 Volume	0	0	88	349	437	4 - 6 Volume	0	0	270	210	480
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour			16:30	17:00	16:30
7 - 9 Pk Volume	0	0	61	209	264	4 - 6 Pk Volume	0	0	142	108	243
Pk Hr Factor	0.000	0.000	0.726	0.653	0.653	Pk Hr Factor	0.000	0.000	0.683	0.900	0.810

Prepared by NDS/ATD

VOLUME

Concordia W/O Parking Lot E

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,469	1,448	2,917

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	3	3	12:00			32	29	61
00:15			4	0	4	12:15			27	42	69
00:30			5	1	6	12:30			54	25	79
00:45			1 10	1 5	2 15	12:45			21 134	29 125	50 259
01:00			0	2	2	13:00			16	22	38
01:15			0	0	0	13:15			19	13	32
01:30			0	0	0	13:30			23	14	37
01:45			0	0 2	0 2	13:45			44 102	21 70	65 172
02:00			2	0	2	14:00			29	23	52
02:15			1	0	1	14:15			30	14	44
02:30			0	0	0	14:30			29	23	52
02:45			0 3	1 1	1 4	14:45			22 110	14 74	36 184
03:00			1	1	2	15:00			29	25	54
03:15			0	0	0	15:15			43	13	56
03:30			0	0	0	15:30			39	14	53
03:45			0 1	0 1	0 2	15:45			29 140	20 72	49 212
04:00			0	2	2	16:00			15	8	23
04:15			0	0	0	16:15			30	18	48
04:30			0	1	1	16:30			30	22	52
04:45			0	0 3	0 3	16:45			31 106	23 71	54 177
05:00			0	1	1	17:00			24	23	47
05:15			0	3	3	17:15			26	24	50
05:30			1	2	3	17:30			20	13	33
05:45			0 1	5 11	5 12	17:45			26 96	30 90	56 186
06:00			2	17	19	18:00			20	31	51
06:15			3	7	10	18:15			20	29	49
06:30			1	2	3	18:30			31	28	59
06:45			4 10	13 39	17 49	18:45			16 87	29 117	45 204
07:00			5	27	32	19:00			28	22	50
07:15			7	58	65	19:15			37	6	43
07:30			9	39	48	19:30			26	8	34
07:45			6 27	42 166	48 193	19:45			24 115	4 40	28 155
08:00			17	30	47	20:00			18	14	32
08:15			14	43	57	20:15			22	14	36
08:30			8	38	46	20:30			46	12	58
08:45			26 65	47 158	73 223	20:45			31 117	12 52	43 169
09:00			9	39	48	21:00			19	13	32
09:15			10	9	19	21:15			23	12	35
09:30			7	21	28	21:30			21	11	32
09:45			10 36	19 88	29 124	21:45			14 77	7 43	21 120
10:00			15	18	33	22:00			15	6	21
10:15			35	19	54	22:15			16	5	21
10:30			26	29	55	22:30			12	3	15
10:45			18 94	47 113	65 207	22:45			7 50	4 18	11 68
11:00			12	32	44	23:00			11	5	16
11:15			11	13	24	23:15			11	6	17
11:30			13	8	21	23:30			9	3	12
11:45			16 52	18 71	34 123	23:45			5 36	4 18	9 54
TOTALS			299	658	957	TOTALS			1170	790	1960
SPLIT %			31.2%	68.8%	32.8%	SPLIT %			59.7%	40.3%	67.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,469	1,448	2,917

AM Peak Hour			11:45	07:15	11:45	PM Peak Hour			15:00	12:00	12:00
AM Pk Volume			129	169	243	PM Pk Volume			140	125	259
Pk Hr Factor			0.597	0.728	0.769	Pk Hr Factor			0.814	0.744	0.820
7 - 9 Volume	0	0	92	324	416	4 - 6 Volume	0	0	202	161	363
7 - 9 Peak Hour			08:00	07:15	08:00	4 - 6 Peak Hour			16:15	16:30	16:30
7 - 9 Pk Volume	0	0	65	169	223	4 - 6 Pk Volume	0	0	115	92	203
Pk Hr Factor	0.000	0.000	0.625	0.728	0.764	Pk Hr Factor	0.000	0.000	0.927	0.958	0.940

Prepared by NDS/ATD

VOLUME

Concordia W/O Parking Lot E

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,043	1,245	2,288

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			2	2	4	12:00			12	25	37
00:15			5	4	9	12:15			8	15	23
00:30			5	3	8	12:30			11	17	28
00:45			4 16	2 11	6 27	12:45			21 52	15 72	36 124
01:00			2	0	2	13:00			22	16	38
01:15			2	1	3	13:15			16	15	31
01:30			1	1	2	13:30			7	12	19
01:45			2 7	3 5	5 12	13:45			15 60	20 63	35 123
02:00			0	1	1	14:00			28	17	45
02:15			2	1	3	14:15			20	16	36
02:30			0	1	1	14:30			20	15	35
02:45			1 3	1 4	2 7	14:45			16 84	17 65	33 149
03:00			1	1	2	15:00			34	14	48
03:15			0	0	0	15:15			18	25	43
03:30			0	0	0	15:30			16	26	42
03:45			1 2	1 2	2 4	15:45			7 75	16 81	23 156
04:00			0	0	0	16:00			12	13	25
04:15			0	1	1	16:15			16	11	27
04:30			0	0	0	16:30			21	20	41
04:45			1 1	0 1	1 2	16:45			14 63	18 62	32 125
05:00			1	1	2	17:00			17	54	71
05:15			0	2	2	17:15			25	38	63
05:30			0	0	0	17:30			21	36	57
05:45			2 3	1 4	3 7	17:45			6 69	46 174	52 243
06:00			0	2	2	18:00			23	39	62
06:15			1	4	5	18:15			11	71	82
06:30			3	4	7	18:30			19	59	78
06:45			1 5	3 13	4 18	18:45			25 78	47 216	72 294
07:00			2	5	7	19:00			30	52	82
07:15			2	10	12	19:15			32	35	67
07:30			7	5	12	19:30			18	14	32
07:45			4 15	10 30	14 45	19:45			23 103	11 112	34 215
08:00			1	14	15	20:00			24	6	30
08:15			4	14	18	20:15			28	7	35
08:30			7	12	19	20:30			21	13	34
08:45			10 22	30 70	40 92	20:45			12 85	3 29	15 114
09:00			2	19	21	21:00			13	6	19
09:15			9	8	17	21:15			57	7	64
09:30			11	11	22	21:30			33	4	37
09:45			2 24	15 53	17 77	21:45			39 142	7 24	46 166
10:00			13	15	28	22:00			24	8	32
10:15			11	13	24	22:15			9	3	12
10:30			7	16	23	22:30			8	3	11
10:45			4 35	21 65	25 100	22:45			3 44	3 17	6 61
11:00			11	16	27	23:00			2	3	5
11:15			8	17	25	23:15			6	5	11
11:30			8	11	19	23:30			2	2	4
11:45			11 38	18 62	29 100	23:45			7 17	0 10	7 27
TOTALS			171	320	491	TOTALS			872	925	1797
SPLIT %			34.8%	65.2%	21.5%	SPLIT %			48.5%	51.5%	78.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,043	1,245	2,288

AM Peak Hour			11:45	08:15	11:45	PM Peak Hour			21:15	18:15	18:15
AM Pk Volume			42	75	117	PM Pk Volume			153	229	314
Pk Hr Factor			0.875	0.625	0.791	Pk Hr Factor			0.671	0.806	0.957
7 - 9 Volume	0	0	37	100	137	4 - 6 Volume	0	0	132	236	368
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	17:00	17:00
7 - 9 Pk Volume	0	0	22	70	92	4 - 6 Pk Volume	0	0	77	174	243
Pk Hr Factor	0.000	0.000	0.550	0.583	0.575	Pk Hr Factor	0.000	0.000	0.770	0.806	0.856

Prepared by NDS/ATD

VOLUME

Concordia W/O Parking Lot E

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_006

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	847	826	1,673

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			2		1		3		12:00			4		17		21	
00:15			3		0		3		12:15			18		15		33	
00:30			3		0		3		12:30			11		15		26	
00:45			3	11	1	2	4	13	12:45			10	43	18	65	28	108
01:00			3		2		5		13:00			8		17		25	
01:15			1		2		3		13:15			11		23		34	
01:30			1		0		1		13:30			8		30		38	
01:45			0	5	0	4	0	9	13:45			25	52	70	140	95	192
02:00			1		0		1		14:00			24		42		66	
02:15			0		0		0		14:15			18		41		59	
02:30			0		1		1		14:30			20		61		81	
02:45			1	2	0	1	1	3	14:45			10	72	46	190	56	262
03:00			0		2		2		15:00			14		25		39	
03:15			0		1		1		15:15			14		9		23	
03:30			1		0		1		15:30			12		12		24	
03:45			2	3	0	3	2	6	15:45			9	49	11	57	20	106
04:00			0		0		0		16:00			15		8		23	
04:15			0		0		0		16:15			39		9		48	
04:30			0		0		0		16:30			11		7		18	
04:45			0		1	1	1	1	16:45			57	122	10	34	67	156
05:00			0		0		0		17:00			110		13		123	
05:15			0		2		2		17:15			43		12		55	
05:30			0		5		5		17:30			32		11		43	
05:45			0		3	10	3	10	17:45			15	200	27	63	42	263
06:00			1		2		3		18:00			22		14		36	
06:15			1		0		1		18:15			9		4		13	
06:30			2		2		4		18:30			8		7		15	
06:45			1	5	3	7	4	12	18:45			12	51	9	34	21	85
07:00			2		1		3		19:00			14		4		18	
07:15			0		2		2		19:15			5		6		11	
07:30			6		2		8		19:30			7		10		17	
07:45			0	8	0	5	0	13	19:45			10	36	7	27	17	63
08:00			0		7		7		20:00			13		7		20	
08:15			6		3		9		20:15			17		11		28	
08:30			2		3		5		20:30			13		8		21	
08:45			3	11	7	20	10	31	20:45			4	47	6	32	10	79
09:00			5		1		6		21:00			12		6		18	
09:15			3		5		8		21:15			14		4		18	
09:30			2		4		6		21:30			5		8		13	
09:45			1	11	8	18	9	29	21:45			11	42	6	24	17	66
10:00			4		4		8		22:00			10		5		15	
10:15			5		11		16		22:15			1		3		4	
10:30			4		6		10		22:30			2		1		3	
10:45			9	22	3	24	12	46	22:45			11	24	3	12	14	36
11:00			2		6		8		23:00			0		0		0	
11:15			7		11		18		23:15			5		2		7	
11:30			2		13		15		23:30			5		0		5	
11:45			6	17	18	48	24	65	23:45			4	14	3	5	7	19
TOTALS				95		143		238	TOTALS				752		683		1435
SPLIT %				39.9%		60.1%		14.2%	SPLIT %				52.4%		47.6%		85.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	847	826	1,673

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:45	13:45	13:45
AM Pk Volume			39	65	104	PM Pk Volume			242	214	301
Pk Hr Factor			0.542	0.903	0.788	Pk Hr Factor			0.550	0.764	0.792
7 - 9 Volume	0	0	19	25	44	4 - 6 Volume	0	0	322	97	419
7 - 9 Peak Hour			07:30	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	16:45
7 - 9 Pk Volume	0	0	12	20	31	4 - 6 Pk Volume	0	0	242	63	288
Pk Hr Factor	0.000	0.000	0.500	0.714	0.775	Pk Hr Factor	0.000	0.000	0.550	0.583	0.585

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot H & Ascension

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,053	2,062	4,115

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			3	5	8	12:00			32	27	59
00:15			5	8	13	12:15			32	42	74
00:30			3	3	6	12:30			53	33	86
00:45			3	3	6	12:45			36	28	64
01:00			0	2	2	13:00			23	14	37
01:15			2	5	7	13:15			22	16	38
01:30			1	0	1	13:30			30	30	60
01:45			0	2	2	13:45			54	39	93
02:00			1	1	2	14:00			50	28	78
02:15			0	0	0	14:15			35	21	56
02:30			0	0	0	14:30			39	15	54
02:45			0	1	0	14:45			39	33	72
03:00			0	2	2	15:00			35	28	63
03:15			0	0	0	15:15			51	27	78
03:30			0	0	0	15:30			57	15	72
03:45			1	1	2	15:45			31	17	48
04:00			0	6	6	16:00			38	15	53
04:15			1	0	1	16:15			34	17	51
04:30			0	2	2	16:30			63	29	92
04:45			0	1	2	16:45			52	42	94
05:00			0	1	1	17:00			32	22	54
05:15			1	4	5	17:15			40	22	62
05:30			1	5	6	17:30			29	33	62
05:45			1	3	7	17:45			39	33	72
06:00			2	18	20	18:00			42	31	73
06:15			4	17	21	18:15			20	33	53
06:30			2	14	16	18:30			35	35	70
06:45			6	14	21	18:45			25	50	75
07:00			5	41	46	19:00			39	49	88
07:15			12	58	70	19:15			30	42	72
07:30			12	53	65	19:30			19	14	33
07:45			19	48	42	19:45			14	102	17
08:00			18	40	58	20:00			24	13	37
08:15			20	41	61	20:15			31	19	50
08:30			14	35	49	20:30			21	21	42
08:45			17	69	82	20:45			49	125	32
09:00			19	63	82	21:00			37	19	56
09:15			12	24	36	21:15			55	18	73
09:30			20	17	37	21:30			24	16	40
09:45			9	60	24	21:45			21	137	14
10:00			23	21	44	22:00			87	11	98
10:15			50	36	86	22:15			28	18	46
10:30			39	41	80	22:30			9	13	22
10:45			24	136	70	22:45			16	140	12
11:00			27	45	72	23:00			9	9	18
11:15			23	21	44	23:15			14	4	18
11:30			21	17	38	23:30			9	8	17
11:45			21	92	27	23:45			7	39	11
TOTALS				442	927	1369	TOTALS				1611	1135	2746
SPLIT %				32.3%	67.7%	33.3%	SPLIT %				58.7%	41.3%	66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,053	2,062	4,115

AM Peak Hour			10:15	08:15	10:15	PM Peak Hour			16:00	18:30	18:30
AM Pk Volume			140	221	332	PM Pk Volume			187	176	305
Pk Hr Factor			0.700	0.674	0.883	Pk Hr Factor			0.742	0.880	0.866
7 - 9 Volume	0	0	117	392	509	4 - 6 Volume	0	0	327	213	540
7 - 9 Peak Hour			07:45	08:00	08:00	4 - 6 Peak Hour			16:00	16:45	16:30
7 - 9 Pk Volume	0	0	71	198	267	4 - 6 Pk Volume	0	0	187	119	302
Pk Hr Factor	0.000	0.000	0.888	0.604	0.674	Pk Hr Factor	0.000	0.000	0.742	0.708	0.803

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot H & Ascension

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,097	2,066	4,163

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			10	5	15	12:00			46	36	82
00:15			3	8	11	12:15			28	21	49
00:30			3	2	5	12:30			29	19	48
00:45			3	5	8	12:45			26	41	67
01:00			2	1	3	13:00			43	33	76
01:15			1	3	4	13:15			21	26	47
01:30			1	1	2	13:30			19	29	48
01:45			4	1	5	13:45			30	31	61
02:00			2	2	4	14:00			69	25	94
02:15			1	0	1	14:15			43	21	64
02:30			1	1	2	14:30			41	19	60
02:45			0	3	0	14:45			39	23	62
03:00			0	2	2	15:00			57	27	84
03:15			0	1	1	15:15			37	20	57
03:30			0	0	0	15:30			57	17	74
03:45			0	3	3	15:45			28	23	51
04:00			1	4	5	16:00			46	30	76
04:15			0	0	0	16:15			34	38	72
04:30			0	2	2	16:30			66	30	96
04:45			1	2	0	16:45			43	41	84
05:00			0	3	3	17:00			42	28	70
05:15			1	4	5	17:15			39	31	70
05:30			2	2	4	17:30			49	39	88
05:45			4	7	15	17:45			45	37	82
06:00			2	18	20	18:00			42	27	69
06:15			5	11	16	18:15			37	34	71
06:30			6	15	21	18:30			25	30	55
06:45			3	16	29	18:45			50	52	102
07:00			5	31	36	19:00			48	22	70
07:15			8	59	67	19:15			36	21	57
07:30			8	49	57	19:30			19	13	32
07:45			13	34	44	19:45			28	131	19
08:00			12	51	63	20:00			40	25	65
08:15			25	86	111	20:15			41	24	65
08:30			19	45	64	20:30			48	14	62
08:45			16	72	34	20:45			41	170	19
09:00			8	52	60	21:00			39	14	53
09:15			42	51	93	21:15			18	16	34
09:30			25	28	53	21:30			32	22	54
09:45			13	88	14	21:45			29	118	12
10:00			15	22	37	22:00			22	7	29
10:15			40	26	66	22:15			13	13	26
10:30			29	33	62	22:30			19	17	36
10:45			17	101	32	22:45			14	68	10
11:00			28	44	72	23:00			7	8	15
11:15			19	30	49	23:15			14	7	21
11:30			26	32	58	23:30			7	8	15
11:45			20	93	43	23:45			7	35	3
TOTALS				444	944	1388	TOTALS				1653	1122	2775
SPLIT %				32.0%	68.0%	33.3%	SPLIT %				59.6%	40.4%	66.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,097	2,066	4,163

AM Peak Hour			11:45	07:30	07:45	PM Peak Hour			14:00	18:00	16:00
AM Pk Volume			123	230	295	PM Pk Volume			192	143	328
Pk Hr Factor			0.668	0.669	0.664	Pk Hr Factor			0.696	0.688	0.854
7 - 9 Volume	0	0	106	399	505	4 - 6 Volume	0	0	364	274	638
7 - 9 Peak Hour			08:00	07:30	07:45	4 - 6 Peak Hour			16:30	16:00	16:00
7 - 9 Pk Volume	0	0	72	230	295	4 - 6 Pk Volume	0	0	190	139	328
Pk Hr Factor	0.000	0.000	0.720	0.669	0.664	Pk Hr Factor	0.000	0.000	0.720	0.848	0.854

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot H & Ascension

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,951	1,926	3,877

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			5	4	9	12:00			35	37	72
00:15			5	3	8	12:15			32	50	82
00:30			4	7	11	12:30			63	27	90
00:45			2 16	5 19	7 35	12:45			25 155	36 150	61 305
01:00			1	3	4	13:00			31	24	55
01:15			1	1	2	13:15			33	14	47
01:30			1	0	1	13:30			24	22	46
01:45			0 3	0 4	0 7	13:45			55 143	32 92	87 235
02:00			2	0	2	14:00			34	30	64
02:15			0	0	0	14:15			42	17	59
02:30			1	1	2	14:30			46	20	66
02:45			0 3	1 2	1 5	14:45			32 154	15 82	47 236
03:00			1	3	4	15:00			33	25	58
03:15			0	0	0	15:15			50	15	65
03:30			1	1	2	15:30			62	14	76
03:45			0 2	3 7	3 9	15:45			33 178	23 77	56 255
04:00			0	4	4	16:00			32	13	45
04:15			0	1	1	16:15			41	19	60
04:30			0	3	3	16:30			41	22	63
04:45			1 1	0 8	1 9	16:45			31 145	23 77	54 222
05:00			0	2	2	17:00			43	37	80
05:15			1	3	4	17:15			36	34	70
05:30			0	4	4	17:30			30	20	50
05:45			1 2	11 20	12 22	17:45			29 138	42 133	71 271
06:00			2	19	21	18:00			27	43	70
06:15			4	15	19	18:15			27	31	58
06:30			2	6	8	18:30			38	37	75
06:45			9 17	18 58	27 75	18:45			34 126	35 146	69 272
07:00			5	32	37	19:00			39	30	69
07:15			7	61	68	19:15			40	21	61
07:30			9	41	50	19:30			31	9	40
07:45			17 38	44 178	61 216	19:45			39 149	15 75	54 224
08:00			16	38	54	20:00			31	26	57
08:15			18	52	70	20:15			36	16	52
08:30			9	48	57	20:30			53	16	69
08:45			29 72	56 194	85 266	20:45			40 160	26 84	66 244
09:00			13	49	62	21:00			23	21	44
09:15			9	16	25	21:15			23	20	43
09:30			10	30	40	21:30			28	24	52
09:45			14 46	28 123	42 169	21:45			20 94	18 83	38 177
10:00			18	25	43	22:00			13	12	25
10:15			38	22	60	22:15			24	12	36
10:30			35	35	70	22:30			16	12	28
10:45			25 116	61 143	86 259	22:45			5 58	6 42	11 100
11:00			17	41	58	23:00			14	11	25
11:15			18	14	32	23:15			17	8	25
11:30			18	16	34	23:30			11	9	20
11:45			33 86	26 97	59 183	23:45			7 49	4 32	11 81
TOTALS			402	853	1255	TOTALS			1549	1073	2622
SPLIT %			32.0%	68.0%	32.4%	SPLIT %			59.1%	40.9%	67.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,951	1,926	3,877

AM Peak Hour			11:45	08:15	11:45	PM Peak Hour			15:00	17:45	12:00
AM Pk Volume			163	205	303	PM Pk Volume			178	153	305
Pk Hr Factor			0.647	0.915	0.842	Pk Hr Factor			0.718	0.890	0.847
7 - 9 Volume	0	0	110	372	482	4 - 6 Volume	0	0	283	210	493
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	17:00	17:00
7 - 9 Pk Volume	0	0	72	194	266	4 - 6 Pk Volume	0	0	156	133	271
Pk Hr Factor	0.000	0.000	0.621	0.866	0.782	Pk Hr Factor	0.000	0.000	0.907	0.792	0.847

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot H & Ascension

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,855	2,093	3,948

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			4	4	8	12:00			18	30	48
00:15			3	9	12	12:15			18	24	42
00:30			5	8	13	12:30			18	20	38
00:45			5 17	8 29	13 46	12:45			21 75	26 100	47 175
01:00			4	3	7	13:00			26	28	54
01:15			1	5	6	13:15			18	24	42
01:30			1	3	4	13:30			16	20	36
01:45			0 6	9 20	9 26	13:45			26 86	28 100	54 186
02:00			4	2	6	14:00			34	29	63
02:15			0	6	6	14:15			26	21	47
02:30			3	2	5	14:30			22	25	47
02:45			1 8	2 12	3 20	14:45			29 111	18 93	47 204
03:00			2	2	4	15:00			45	26	71
03:15			1	2	3	15:15			26	29	55
03:30			2	3	5	15:30			24	35	59
03:45			1 6	2 9	3 15	15:45			10 105	43 133	53 238
04:00			0	1	1	16:00			20	56	76
04:15			0	0	0	16:15			28	56	84
04:30			0	1	1	16:30			29	79	108
04:45			0	1 3	1 3	16:45			44 121	102 293	146 414
05:00			1	1	2	17:00			37	70	107
05:15			0	2	2	17:15			26	50	76
05:30			3	2	5	17:30			29	41	70
05:45			4 8	3 8	7 16	17:45			17 109	56 217	73 326
06:00			0	3	3	18:00			30	56	86
06:15			4	6	10	18:15			20	81	101
06:30			5	8	13	18:30			30	82	112
06:45			4 13	7 24	11 37	18:45			28 108	69 288	97 396
07:00			4	10	14	19:00			66	79	145
07:15			9	12	21	19:15			72	47	119
07:30			18	10	28	19:30			56	24	80
07:45			8 39	12 44	20 83	19:45			43 237	13 163	56 400
08:00			1	14	15	20:00			37	12	49
08:15			7	21	28	20:15			69	11	80
08:30			18	18	36	20:30			33	26	59
08:45			23 49	33 86	56 135	20:45			28 167	11 60	39 227
09:00			8	19	27	21:00			31	22	53
09:15			18	11	29	21:15			107	16	123
09:30			18	14	32	21:30			89	16	105
09:45			12 56	17 61	29 117	21:45			49 276	9 63	58 339
10:00			21	20	41	22:00			28	20	48
10:15			14	17	31	22:15			20	15	35
10:30			21	24	45	22:30			16	15	31
10:45			11 67	22 83	33 150	22:45			10 74	9 59	19 133
11:00			14	26	40	23:00			12	20	32
11:15			14	20	34	23:15			11	10	21
11:30			22	18	40	23:30			9	14	23
11:45			28 78	26 90	54 168	23:45			7 39	11 55	18 94
TOTALS			347	469	816	TOTALS			1508	1624	3132
SPLIT %			42.5%	57.5%	20.7%	SPLIT %			48.1%	51.9%	79.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,855	2,093	3,948

AM Peak Hour			11:30	11:45	11:30	PM Peak Hour			21:00	18:15	18:30
AM Pk Volume			86	100	184	PM Pk Volume			276	311	473
Pk Hr Factor			0.768	0.833	0.852	Pk Hr Factor			0.645	0.948	0.816
7 - 9 Volume	0	0	88	130	218	4 - 6 Volume	0	0	230	510	740
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	49	86	135	4 - 6 Pk Volume	0	0	138	307	445
Pk Hr Factor	0.000	0.000	0.533	0.652	0.603	Pk Hr Factor	0.000	0.000	0.784	0.752	0.762

Prepared by NDS/ATD

VOLUME

Concordia Bet Parking Lot H & Ascension

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_007

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,333	1,385	2,718

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			7		6		13		12:00			10		31		41	
00:15			4		8		12		12:15			30		29		59	
00:30			7		6		13		12:30			23		20		43	
00:45			4	22	3	23	7	45	12:45			20	83	24	104	44	187
01:00			8		10		18		13:00			18		22		40	
01:15			6		9		15		13:15			19		26		45	
01:30			4		5		9		13:30			19		32		51	
01:45			3	21	2	26	5	47	13:45			27	83	76	156	103	239
02:00			2		3		5		14:00			30		45		75	
02:15			2		4		6		14:15			21		45		66	
02:30			4		4		8		14:30			23		64		87	
02:45			2	10	2	13	4	23	14:45			22	96	58	212	80	308
03:00			1		4		5		15:00			20		35		55	
03:15			0		0		0		15:15			13		16		29	
03:30			0		1		1		15:30			23		23		46	
03:45			2	3	1	6	3	9	15:45			21	77	20	94	41	171
04:00			0		0		0		16:00			16		18		34	
04:15			0		0		0		16:15			47		20		67	
04:30			0		0		0		16:30			20		18		38	
04:45			1	1	3	3	4	4	16:45			59	142	17	73	76	215
05:00			0		1		1		17:00			114		16		130	
05:15			1		2		3		17:15			54		10		64	
05:30			0		4		4		17:30			43		17		60	
05:45			1	2	1	8	2	10	17:45			19	230	36	79	55	309
06:00			3		4		7		18:00			32		20		52	
06:15			1		2		3		18:15			17		20		37	
06:30			1		0		1		18:30			15		15		30	
06:45			4	9	2	8	6	17	18:45			18	82	16	71	34	153
07:00			6		2		8		19:00			20		9		29	
07:15			3		5		8		19:15			13		21		34	
07:30			12		4		16		19:30			19		22		41	
07:45			5	26	0	11	5	37	19:45			15	67	18	70	33	137
08:00			5		7		12		20:00			15		17		32	
08:15			14		10		24		20:15			33		30		63	
08:30			10		18		28		20:30			22		13		35	
08:45			14	43	10	45	24	88	20:45			12	82	19	79	31	161
09:00			16		3		19		21:00			18		26		44	
09:15			13		2		15		21:15			18		17		35	
09:30			5		7		12		21:30			11		25		36	
09:45			8	42	11	23	19	65	21:45			10	57	19	87	29	144
10:00			11		11		22		22:00			11		13		24	
10:15			15		13		28		22:15			12		13		25	
10:30			11		14		25		22:30			7		9		16	
10:45			23	60	9	47	32	107	22:45			8	38	17	52	25	90
11:00			9		6		15		23:00			6		6		12	
11:15			11		20		31		23:15			4		7		11	
11:30			11		19		30		23:30			5		3		8	
11:45			6	37	31	76	37	113	23:45			5	20	3	19	8	39
TOTALS				276		289		565	TOTALS				1057		1096		2153
SPLIT %				48.8%		51.2%		20.8%	SPLIT %				49.1%		50.9%		79.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,333	1,385	2,718

AM Peak Hour			11:45	11:45	11:45	PM Peak Hour			16:45	13:45	13:45
AM Pk Volume			69	111	180	PM Pk Volume			270	230	331
Pk Hr Factor			0.575	0.895	0.763	Pk Hr Factor			0.592	0.757	0.803
7 - 9 Volume	0	0	69	56	125	4 - 6 Volume	0	0	372	152	524
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	16:45
7 - 9 Pk Volume	0	0	43	45	88	4 - 6 Pk Volume	0	0	270	79	330
Pk Hr Factor	0.000	0.000	0.768	0.625	0.786	Pk Hr Factor	0.000	0.000	0.592	0.549	0.635

Prepared by NDS/ATD

VOLUME

Concordia W/O Ridgeline Dr

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,026	2,481	4,507

AM Period	NB	SB	EB	WB	TOTAL
00:00			7	3	10
00:15			9	7	16
00:30			4	3	7
00:45			3	3	6
01:00			1	0	1
01:15			5	2	7
01:30			3	1	4
01:45			0	0	0
02:00			1	0	1
02:15			0	0	0
02:30			0	0	0
02:45			0	0	0
03:00			1	0	1
03:15			0	0	0
03:30			0	0	0
03:45			1	1	2
04:00			6	0	6
04:15			1	1	2
04:30			2	0	2
04:45			1	0	1
05:00			1	0	1
05:15			4	1	5
05:30			7	1	8
05:45			6	1	7
06:00			21	2	23
06:15			14	8	22
06:30			16	8	24
06:45			22	13	35
07:00			11	39	50
07:15			15	63	78
07:30			22	36	58
07:45			22	42	64
08:00			24	45	69
08:15			20	46	66
08:30			18	39	57
08:45			21	79	100
09:00			26	62	88
09:15			16	26	42
09:30			26	20	46
09:45			18	26	44
10:00			27	27	54
10:15			40	49	89
10:30			37	53	90
10:45			73	30	103
11:00			49	31	80
11:15			30	30	60
11:30			19	27	46
11:45			32	23	55
TOTALS			682	848	1530
SPLIT %			44.6%	55.4%	33.9%

PM Period	NB	SB	EB	WB	TOTAL
12:00			28	32	60
12:15			52	31	83
12:30			38	62	100
12:45			30	40	70
13:00			17	25	42
13:15			25	24	49
13:30			30	39	69
13:45			41	54	95
14:00			30	54	84
14:15			27	33	60
14:30			20	43	63
14:45			31	40	71
15:00			36	32	68
15:15			32	59	91
15:30			18	57	75
15:45			17	36	53
16:00			39	16	55
16:15			36	23	59
16:30			60	35	95
16:45			58	41	99
17:00			36	29	65
17:15			42	26	68
17:30			28	35	63
17:45			36	45	81
18:00			46	36	82
18:15			21	38	59
18:30			34	43	77
18:45			29	51	80
19:00			59	44	103
19:15			39	33	72
19:30			18	20	38
19:45			20	15	35
20:00			19	27	46
20:15			22	30	52
20:30			28	20	48
20:45			32	49	81
21:00			18	35	53
21:15			23	54	77
21:30			20	26	46
21:45			14	20	34
22:00			19	89	108
22:15			16	28	44
22:30			13	10	23
22:45			13	17	30
23:00			10	9	19
23:15			4	14	18
23:30			8	6	14
23:45			12	8	20
TOTALS			1344	1633	2977
SPLIT %			45.1%	54.9%	66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,026	2,481	4,507

AM Peak Hour	10:15	08:15	10:15	
AM Pk Volume	199	226	362	
Pk Hr Factor	0.682	0.715	0.879	
7 - 9 Volume	153	389	542	
7 - 9 Peak Hour	07:30	08:00	08:00	
7 - 9 Pk Volume	88	209	292	
Pk Hr Factor	0.917	0.661	0.730	

PM Peak Hour	16:30	21:15	18:30	
PM Pk Volume	196	189	332	
Pk Hr Factor	0.817	0.531	0.806	
4 - 6 Volume	335	250	585	
4 - 6 Peak Hour	16:30	17:00	16:30	
4 - 6 Pk Volume	196	135	327	
Pk Hr Factor	0.817	0.750	0.826	

Prepared by NDS/ATD

VOLUME

Concordia W/O Ridgeline Dr

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,265	2,247	4,512

AM Period	NB	SB	EB	WB	TOTAL
00:00			10	5	15
00:15			1	8	9
00:30			4	3	7
00:45			3	4	7
01:00			1	0	1
01:15			1	2	3
01:30			1	1	2
01:45			2	0	2
02:00			1	2	3
02:15			1	1	2
02:30			1	1	2
02:45			0	4	0
03:00			0	1	1
03:15			0	1	1
03:30			0	0	0
03:45			0	2	2
04:00			1	3	4
04:15			0	0	0
04:30			0	1	1
04:45			1	4	1
05:00			0	3	3
05:15			1	4	5
05:30			2	2	4
05:45			3	15	18
06:00			3	17	20
06:15			5	11	16
06:30			10	15	25
06:45			5	28	33
07:00			10	28	38
07:15			12	60	72
07:30			20	35	55
07:45			21	42	63
08:00			14	56	70
08:15			28	86	114
08:30			21	46	67
08:45			20	35	55
09:00			12	54	66
09:15			48	52	100
09:30			35	33	68
09:45			15	16	31
10:00			19	22	41
10:15			43	34	77
10:30			26	29	55
10:45			19	31	50
11:00			29	46	75
11:15			26	29	55
11:30			26	38	64
11:45			25	45	70
TOTALS			526	947	1473
SPLIT %			35.7%	64.3%	32.6%

PM Period	NB	SB	EB	WB	TOTAL
12:00			50	45	95
12:15			30	21	51
12:30			32	28	60
12:45			29	51	80
13:00			46	29	75
13:15			25	31	56
13:30			22	26	48
13:45			38	42	80
14:00			68	28	96
14:15			49	23	72
14:30			39	20	59
14:45			36	28	64
15:00			61	35	96
15:15			45	24	69
15:30			57	24	81
15:45			24	29	53
16:00			51	27	78
16:15			40	41	81
16:30			73	33	106
16:45			42	43	85
17:00			43	35	78
17:15			39	31	70
17:30			53	44	97
17:45			45	47	92
18:00			44	34	78
18:15			41	40	81
18:30			26	39	65
18:45			54	55	109
19:00			50	28	78
19:15			37	18	55
19:30			18	16	34
19:45			33	20	53
20:00			40	28	68
20:15			43	29	72
20:30			48	21	69
20:45			40	21	61
21:00			40	16	56
21:15			19	23	42
21:30			27	25	52
21:45			34	16	50
22:00			23	11	34
22:15			14	14	28
22:30			20	20	40
22:45			14	12	26
23:00			7	9	16
23:15			15	8	23
23:30			8	7	15
23:45			7	5	12
TOTALS			1739	1300	3039
SPLIT %			57.2%	42.8%	67.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,265	2,247	4,512

AM Peak Hour	11:45	07:45	07:45	
AM Pk Volume	137	230	314	
Pk Hr Factor	0.685	0.669	0.689	
7 - 9 Volume	146	388	534	
7 - 9 Peak Hour	07:45	07:45	07:45	
7 - 9 Pk Volume	84	230	314	
Pk Hr Factor	0.750	0.669	0.689	

PM Peak Hour	16:00	18:00	16:00	
PM Pk Volume	206	168	350	
Pk Hr Factor	0.705	0.764	0.825	
4 - 6 Volume	386	301	687	
4 - 6 Peak Hour	16:00	17:00	16:00	
4 - 6 Pk Volume	206	157	350	
Pk Hr Factor	0.705	0.835	0.825	

Prepared by NDS/ATD

VOLUME

Concordia W/O Ridgeline Dr

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,149	2,123	4,272

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			5	4	9	12:00			40	41	81
00:15			5	4	9	12:15			36	52	88
00:30			4	8	12	12:30			71	31	102
00:45			2 16	3 19	5 35	12:45			28 175	39 163	67 338
01:00			0	3	3	13:00			34	27	61
01:15			1	1	2	13:15			36	19	55
01:30			2	0	2	13:30			33	23	56
01:45			0 3	0 4	0 7	13:45			59 162	36 105	95 267
02:00			0	0	0	14:00			34	32	66
02:15			0	0	0	14:15			49	22	71
02:30			0	1	1	14:30			46	20	66
02:45			0	3 4	3 4	14:45			36 165	20 94	56 259
03:00			1	1	2	15:00			38	29	67
03:15			0	0	0	15:15			45	23	68
03:30			1	1	2	15:30			72	20	92
03:45			0 2	3 5	3 7	15:45			31 186	27 99	58 285
04:00			0	4	4	16:00			34	19	53
04:15			0	2	2	16:15			40	29	69
04:30			0	2	2	16:30			40	18	58
04:45			1 1	0 8	1 9	16:45			34 148	27 93	61 241
05:00			1	3	4	17:00			49	39	88
05:15			1	2	3	17:15			40	40	80
05:30			1	4	5	17:30			34	30	64
05:45			2 5	10 19	12 24	17:45			24 147	45 154	69 301
06:00			2	20	22	18:00			32	48	80
06:15			6	15	21	18:15			27	40	67
06:30			10	6	16	18:30			36	37	73
06:45			12 30	14 55	26 85	18:45			39 134	47 172	86 306
07:00			8	33	41	19:00			42	31	73
07:15			12	60	72	19:15			38	23	61
07:30			14	35	49	19:30			38	15	53
07:45			28 62	49 177	77 239	19:45			40 158	24 93	64 251
08:00			19	38	57	20:00			32	25	57
08:15			19	55	74	20:15			36	21	57
08:30			13	44	57	20:30			54	21	75
08:45			35 86	61 198	96 284	20:45			42 164	32 99	74 263
09:00			12	46	58	21:00			25	24	49
09:15			16	20	36	21:15			25	25	50
09:30			12	31	43	21:30			28	23	51
09:45			23 63	30 127	53 190	21:45			22 100	18 90	40 190
10:00			23	27	50	22:00			14	15	29
10:15			39	23	62	22:15			26	16	42
10:30			40	37	77	22:30			17	12	29
10:45			30 132	62 149	92 281	22:45			4 61	6 49	10 110
11:00			21	42	63	23:00			16	16	32
11:15			19	16	35	23:15			17	7	24
11:30			24	21	45	23:30			9	9	18
11:45			36 100	30 109	66 209	23:45			7 49	6 38	13 87
TOTALS			500	874	1374	TOTALS			1649	1249	2898
SPLIT %			36.4%	63.6%	32.2%	SPLIT %			56.9%	43.1%	67.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,149	2,123	4,272

AM Peak Hour			11:45	08:15	11:45	PM Peak Hour			14:45	18:00	12:00
AM Pk Volume			183	206	337	PM Pk Volume			191	172	338
Pk Hr Factor			0.644	0.844	0.826	Pk Hr Factor			0.663	0.896	0.828
7 - 9 Volume	0	0	148	375	523	4 - 6 Volume	0	0	295	247	542
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	17:00	17:00
7 - 9 Pk Volume	0	0	86	198	284	4 - 6 Pk Volume	0	0	163	154	301
Pk Hr Factor	0.000	0.000	0.614	0.811	0.740	Pk Hr Factor	0.000	0.000	0.832	0.856	0.855

Prepared by NDS/ATD

VOLUME

Concordia W/O Ridgeline Dr

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,081	2,322	4,403

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			6	5	11	12:00			29	38	67
00:15			4	9	13	12:15			25	27	52
00:30			4	10	14	12:30			25	25	50
00:45			6 20	9 33	15 53	12:45			29 108	31 121	60 229
01:00			6	4	10	13:00			31	33	64
01:15			1	6	7	13:15			20	30	50
01:30			2	3	5	13:30			18	26	44
01:45			2 11	12 25	14 36	13:45			21 90	29 118	50 208
02:00			6	2	8	14:00			37	31	68
02:15			0	7	7	14:15			29	28	57
02:30			3	2	5	14:30			30	31	61
02:45			1 10	2 13	3 23	14:45			31 127	25 115	56 242
03:00			2	2	4	15:00			44	31	75
03:15			2	2	4	15:15			28	32	60
03:30			1	3	4	15:30			29	39	68
03:45			2 7	3 10	5 17	15:45			15 116	50 152	65 268
04:00			0	1	1	16:00			21	53	74
04:15			0	0	0	16:15			33	61	94
04:30			0	1	1	16:30			34	84	118
04:45			0	1 3	1 3	16:45			50 138	105 303	155 441
05:00			1	2	3	17:00			40	74	114
05:15			0	2	2	17:15			24	53	77
05:30			4	1	5	17:30			35	44	79
05:45			4 9	3 8	7 17	17:45			22 121	64 235	86 356
06:00			0	2	2	18:00			35	58	93
06:15			5	7	12	18:15			28	85	113
06:30			6	9	15	18:30			28	85	113
06:45			5 16	7 25	12 41	18:45			24 115	75 303	99 418
07:00			5	10	15	19:00			70	79	149
07:15			10	14	24	19:15			80	55	135
07:30			24	11	35	19:30			57	28	85
07:45			8 47	12 47	20 94	19:45			46 253	12 174	58 427
08:00			6	19	25	20:00			38	16	54
08:15			9	22	31	20:15			69	16	85
08:30			22	22	44	20:30			34	23	57
08:45			31 68	36 99	67 167	20:45			27 168	14 69	41 237
09:00			17	23	40	21:00			30	19	49
09:15			16	11	27	21:15			109	23	132
09:30			26	15	41	21:30			91	15	106
09:45			15 74	19 68	34 142	21:45			45 275	17 74	62 349
10:00			22	22	44	22:00			33	26	59
10:15			18	22	40	22:15			30	21	51
10:30			27	24	51	22:30			17	17	34
10:45			16 83	23 91	39 174	22:45			10 90	15 79	25 169
11:00			15	31	46	23:00			15	18	33
11:15			22	21	43	23:15			11	11	22
11:30			28	23	51	23:30			7	14	21
11:45			27 92	27 102	54 194	23:45			10 43	12 55	22 98
TOTALS			437	524	961	TOTALS			1644	1798	3442
SPLIT %			45.5%	54.5%	21.8%	SPLIT %			47.8%	52.2%	78.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,081	2,322	4,403

AM Peak Hour			11:30	11:45	11:30	PM Peak Hour			21:15	16:15	18:30
AM Pk Volume			109	117	224	PM Pk Volume			278	324	496
Pk Hr Factor			0.940	0.770	0.836	Pk Hr Factor			0.638	0.771	0.832
7 - 9 Volume	0	0	115	146	261	4 - 6 Volume	0	0	259	538	797
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:15	16:15	16:15
7 - 9 Pk Volume	0	0	68	99	167	4 - 6 Pk Volume	0	0	157	324	481
Pk Hr Factor	0.000	0.000	0.548	0.688	0.623	Pk Hr Factor	0.000	0.000	0.785	0.771	0.776

Prepared by NDS/ATD

VOLUME

Concordia W/O Ridgeline Dr

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,523	1,583	3,106

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			9		7		16		12:00			10		34		44	
00:15			4		11		15		12:15			34		41		75	
00:30			8		7		15		12:30			27		20		47	
00:45			2	23	3	28	5	51	12:45			24	95	30	125	54	220
01:00			9		13		22		13:00			25		28		53	
01:15			7		9		16		13:15			19		28		47	
01:30			4		6		10		13:30			23		41		64	
01:45			3	23	3	31	6	54	13:45			32	99	71	168	103	267
02:00			1		3		4		14:00			31		47		78	
02:15			2		4		6		14:15			22		54		76	
02:30			5		6		11		14:30			27		62		89	
02:45			2	10	1	14	3	24	14:45			27	107	67	230	94	337
03:00			1		4		5		15:00			26		41		67	
03:15			0		0		0		15:15			19		20		39	
03:30			0		1		1		15:30			23		29		52	
03:45			2	3	1	6	3	9	15:45			18	86	22	112	40	198
04:00			0		0		0		16:00			27		25		52	
04:15			0		1		1		16:15			47		28		75	
04:30			0		0		0		16:30			23		22		45	
04:45			1	1	3	4	4	5	16:45			54	151	17	92	71	243
05:00			0		1		1		17:00			123		19		142	
05:15			1		2		3		17:15			62		17		79	
05:30			0		4		4		17:30			44		20		64	
05:45			1	2	0	7	1	9	17:45			26	255	40	96	66	351
06:00			1		2		3		18:00			32		22		54	
06:15			1		0		1		18:15			20		25		45	
06:30			4		2		6		18:30			16		16		32	
06:45			4	10	4	8	8	18	18:45			20	88	19	82	39	170
07:00			6		2		8		19:00			20		12		32	
07:15			3		5		8		19:15			14		22		36	
07:30			8		1		9		19:30			20		26		46	
07:45			10	27	2	10	12	37	19:45			18	72	23	83	41	155
08:00			8		6		14		20:00			17		20		37	
08:15			16		11		27		20:15			32		34		66	
08:30			15		19		34		20:30			26		15		41	
08:45			16	55	9	45	25	100	20:45			10	85	22	91	32	176
09:00			18		4		22		21:00			22		26		48	
09:15			22		4		26		21:15			21		18		39	
09:30			8		7		15		21:30			11		26		37	
09:45			12	60	12	27	24	87	21:45			11	65	20	90	31	155
10:00			16		12		28		22:00			11		17		28	
10:15			20		14		34		22:15			14		14		28	
10:30			17		16		33		22:30			8		12		20	
10:45			31	84	14	56	45	140	22:45			9	42	16	59	25	101
11:00			13		8		21		23:00			7		11		18	
11:15			19		24		43		23:15			5		6		11	
11:30			13		21		34		23:30			6		4		10	
11:45			12	57	41	94	53	151	23:45			5	23	4	25	9	48
TOTALS				355		330		685	TOTALS				1168		1253		2421
SPLIT %				51.8%		48.2%		22.1%	SPLIT %				48.2%		51.8%		77.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	1,523	1,583	3,106

AM Peak Hour			10:00	11:30	11:45	PM Peak Hour			16:45	13:45	16:45
AM Pk Volume			84	137	219	PM Pk Volume			283	234	356
Pk Hr Factor			0.677	0.835	0.730	Pk Hr Factor			0.575	0.824	0.627
7 - 9 Volume	0	0	82	55	137	4 - 6 Volume	0	0	406	188	594
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:45	17:00	16:45
7 - 9 Pk Volume	0	0	55	45	100	4 - 6 Pk Volume	0	0	283	96	356
Pk Hr Factor	0.000	0.000	0.859	0.592	0.735	Pk Hr Factor	0.000	0.000	0.575	0.600	0.627

Prepared by NDS/ATD

VOLUME

Internal Dr Aisle S/O Concordia

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_009

DAILY TOTALS	NB	SB	EB	WB	Total
	860	855	0	0	1,715

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	5	4			9	12:00	9	8			17
00:15	2	5			7	12:15	5	15			20
00:30	5	3			8	12:30	24	16			40
00:45	4 16	4 16			8 32	12:45	12 50	6 45			18 95
01:00	2	1			3	13:00	11	8			19
01:15	5	5			10	13:15	7	12			19
01:30	1	0			1	13:30	10	7			17
01:45	1 9	2 8			3 17	13:45	10 38	16 43			26 81
02:00	0	0			0	14:00	19	6			25
02:15	0	0			0	14:15	10	16			26
02:30	0	0			0	14:30	20	8			28
02:45	0	0			0	14:45	11 60	18 48			29 108
03:00	1	1			2	15:00	19	13			32
03:15	0	0			0	15:15	15	16			31
03:30	0	0			0	15:30	18	4			22
03:45	1 2	1 2			2 4	15:45	18 70	9 42			27 112
04:00	0	5			5	16:00	11	15			26
04:15	0	0			0	16:15	15	16			31
04:30	0	2			2	16:30	13	12			25
04:45	0	1 8			1 8	16:45	12 51	17 60			29 111
05:00	0	0			0	17:00	12	10			22
05:15	0	0			0	17:15	17	8			25
05:30	1	5			6	17:30	10	14			24
05:45	1 2	4 9			5 11	17:45	15 54	11 43			26 97
06:00	4	3			7	18:00	17	18			35
06:15	2	6			8	18:15	17	8			25
06:30	2	8			10	18:30	9	14			23
06:45	5 13	8 25			13 38	18:45	18 61	14 54			32 115
07:00	5	4			9	19:00	18	8			26
07:15	5	3			8	19:15	13	17			30
07:30	8	2			10	19:30	12	14			26
07:45	6 24	7 16			13 40	19:45	7 50	16 55			23 105
08:00	5	5			10	20:00	21	16			37
08:15	5	8			13	20:15	12	12			24
08:30	5	9			14	20:30	10	14			24
08:45	11 26	8 30			19 56	20:45	23 66	25 67			48 133
09:00	7	9			16	21:00	21	19			40
09:15	6	8			14	21:15	18	14			32
09:30	5	7			12	21:30	15	17			32
09:45	6 24	10 34			16 58	21:45	9 63	11 61			20 124
10:00	5	9			14	22:00	7	13			20
10:15	16	13			29	22:15	24	18			42
10:30	19	20			39	22:30	13	9			22
10:45	9 49	19 61			28 110	22:45	9 53	12 52			21 105
11:00	16	18			34	23:00	9	8			17
11:15	11	9			20	23:15	6	4			10
11:30	12	6			18	23:30	12	15			27
11:45	4 43	7 40			11 83	23:45	9 36	9 36			18 72
TOTALS	208	249			457	TOTALS	652	606			1258
SPLIT %	45.5%	54.5%			26.6%	SPLIT %	51.8%	48.2%			73.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	860	855	0	0	1,715

AM Peak Hour	10:15	10:15			10:15	PM Peak Hour	20:45	20:45			20:45
AM Pk Volume	60	70			130	PM Pk Volume	77	75			152
Pk Hr Factor	0.789	0.875			0.833	Pk Hr Factor	0.837	0.750			0.792
7 - 9 Volume	50	46	0	0	96	4 - 6 Volume	105	103	0	0	208
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:30	16:00			16:00
7 - 9 Pk Volume	26	30	0	0	56	4 - 6 Pk Volume	54	60	0	0	111
Pk Hr Factor	0.591	0.833	0.000	0.000	0.737	Pk Hr Factor	0.794	0.882	0.000	0.000	0.895

Prepared by NDS/ATD

VOLUME

Internal Dr Aisle S/O Concordia

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_009

DAILY TOTALS	NB	SB	EB	WB	Total
	882	887	0	0	1,769

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	9	6			15	12:00	17	16			33
00:15	9	13			22	12:15	10	9			19
00:30	4	4			8	12:30	15	10			25
00:45	6 28	4 27			10 55	12:45	12 54	7 42			19 96
01:00	2	4			6	13:00	10	21			31
01:15	2	2			4	13:15	14	15			29
01:30	3	2			5	13:30	14	15			29
01:45	0 7	0 8			0 15	13:45	20 58	16 67			36 125
02:00	2	2			4	14:00	16	12			28
02:15	1	0			1	14:15	18	5			23
02:30	0	0			0	14:30	11	10			21
02:45	0 3	0 2			0 5	14:45	10 55	9 36			19 91
03:00	1	1			2	15:00	9	8			17
03:15	0	0			0	15:15	6	10			16
03:30	0	0			0	15:30	22	14			36
03:45	0 1	3 4			3 5	15:45	13 50	10 42			23 92
04:00	0	4			4	16:00	14	8			22
04:15	0	0			0	16:15	13	18			31
04:30	0	1			1	16:30	11	10			21
04:45	0	0 5			0 5	16:45	15 53	23 59			38 112
05:00	1	1			2	17:00	22	15			37
05:15	0	0			0	17:15	14	15			29
05:30	1	2			3	17:30	13	10			23
05:45	4 6	11 14			15 20	17:45	14 63	15 55			29 118
06:00	8	9			17	18:00	19	18			37
06:15	3	3			6	18:15	16	18			34
06:30	3	5			8	18:30	9	18			27
06:45	3 17	5 22			8 39	18:45	18 62	16 70			34 132
07:00	1	3			4	19:00	15	10			25
07:15	2	4			6	19:15	14	18			32
07:30	5	4			9	19:30	10	11			21
07:45	8 16	5 16			13 32	19:45	13 52	14 53			27 105
08:00	7	7			14	20:00	16	18			34
08:15	12	14			26	20:15	16	16			32
08:30	4	5			9	20:30	13	13			26
08:45	5 28	6 32			11 60	20:45	20 65	18 65			38 130
09:00	5	14			19	21:00	17	19			36
09:15	10	9			19	21:15	18	19			37
09:30	10	5			15	21:30	14	13			27
09:45	11 36	6 34			17 70	21:45	10 59	12 63			22 122
10:00	9	14			23	22:00	12	10			22
10:15	9	9			18	22:15	9	12			21
10:30	14	9			23	22:30	21	18			39
10:45	11 43	12 44			23 87	22:45	10 52	9 49			19 101
11:00	6	8			14	23:00	9	11			20
11:15	10	17			27	23:15	14	6			20
11:30	10	9			19	23:30	6	8			14
11:45	11 37	8 42			19 79	23:45	8 37	11 36			19 73
TOTALS	222	250			472	TOTALS	660	637			1297
SPLIT %	47.0%	53.0%			26.7%	SPLIT %	50.9%	49.1%			73.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	882	887	0	0	1,769

AM Peak Hour	11:45	11:15			11:15	PM Peak Hour	20:45	18:00			20:45
AM Pk Volume	53	50			98	PM Pk Volume	69	70			138
Pk Hr Factor	0.779	0.735			0.742	Pk Hr Factor	0.863	0.972			0.908
7 - 9 Volume	44	48	0	0	92	4 - 6 Volume	116	114	0	0	230
7 - 9 Peak Hour	07:30	08:00			07:30	4 - 6 Peak Hour	16:45	16:15			16:15
7 - 9 Pk Volume	32	32	0	0	62	4 - 6 Pk Volume	64	66	0	0	127
Pk Hr Factor	0.667	0.571	0.000	0.000	0.596	Pk Hr Factor	0.727	0.717	0.000	0.000	0.836

Prepared by NDS/ATD

VOLUME

Internal Dr Aisle S/O Concordia

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_009

DAILY TOTALS	NB	SB	EB	WB	Total
	862	849	0	0	1,711

AM Period	NB		SB		EB		WB		TOTAL	
00:00	6		3						9	
00:15	4		4						8	
00:30	7		3						10	
00:45	3	20	5	15					8	35
01:00	3		3						6	
01:15	3		2						5	
01:30	0		1						1	
01:45	1	7	0	6					1	13
02:00	0		0						0	
02:15	0		0						0	
02:30	1		1						2	
02:45	0	1	1	2					1	3
03:00	3		2						5	
03:15	0		0						0	
03:30	1		1						2	
03:45	1	5	3	6					4	11
04:00	1		3						4	
04:15	0		1						1	
04:30	0		2						2	
04:45	1	2	0	6					1	8
05:00	0		1						1	
05:15	0		0						0	
05:30	1		4						5	
05:45	2	3	6	11					8	14
06:00	3		5						8	
06:15	3		8						11	
06:30	3		6						9	
06:45	7	16	6	25					13	41
07:00	3		5						8	
07:15	2		4						6	
07:30	7		4						11	
07:45	9	21	4	17					13	38
08:00	3		6						9	
08:15	7		5						12	
08:30	1		5						6	
08:45	6	17	6	22					12	39
09:00	6		8						14	
09:15	1		7						8	
09:30	7		5						12	
09:45	7	21	9	29					16	50
10:00	7		7						14	
10:15	9		5						14	
10:30	11		5						16	
10:45	8	35	13	30					21	65
11:00	5		10						15	
11:15	10		7						17	
11:30	5		9						14	
11:45	13	33	9	35					22	68
TOTALS		181		204						385
SPLIT %		47.0%		53.0%						22.5%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	10		15						25	
12:15	18		16						34	
12:30	17		15						32	
12:45	7	52	13	59					20	111
13:00	16		11						27	
13:15	9		5						14	
13:30	7		10						17	
13:45	18	50	13	39					31	89
14:00	14		16						30	
14:15	15		14						29	
14:30	23		12						35	
14:45	15	67	8	50					23	117
15:00	13		12						25	
15:15	12		12						24	
15:30	18		8						26	
15:45	9	52	10	42					19	94
16:00	15		6						21	
16:15	15		11						26	
16:30	11		10						21	
16:45	8	49	12	39					20	88
17:00	20		14						34	
17:15	17		20						37	
17:30	14		14						28	
17:45	10	61	23	71					33	132
18:00	19		17						36	
18:15	16		18						34	
18:30	24		25						49	
18:45	19	78	15	75					34	153
19:00	20		22						42	
19:15	16		22						38	
19:30	14		11						25	
19:45	14	64	14	69					28	133
20:00	23		19						42	
20:15	14		13						27	
20:30	11		14						25	
20:45	11	59	15	61					26	120
21:00	21		20						41	
21:15	11		11						22	
21:30	15		17						32	
21:45	13	60	14	62					27	122
22:00	15		11						26	
22:15	10		10						20	
22:30	18		15						33	
22:45	5	48	9	45					14	93
23:00	15		12						27	
23:15	15		8						23	
23:30	6		10						16	
23:45	5	41	3	33					8	74
TOTALS		681		645						1326
SPLIT %		51.4%		48.6%						77.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	862	849	0	0	1,711

AM Peak Hour	11:45	11:45			11:45
AM Pk Volume	58	55			113
Pk Hr Factor	0.806	0.859			0.831
7 - 9 Volume	38	39	0	0	77
7 - 9 Peak Hour	07:30	08:00			07:30
7 - 9 Pk Volume	26	22	0	0	45
Pk Hr Factor	0.722	0.917	0.000	0.000	0.865

PM Peak Hour	18:15	18:30			18:30
PM Pk Volume	79	84			163
Pk Hr Factor	0.823	0.840			0.832
4 - 6 Volume	110	110	0	0	220
4 - 6 Peak Hour	17:00	17:00			17:00
4 - 6 Pk Volume	61	71	0	0	132
Pk Hr Factor	0.763	0.772	0.000	0.000	0.892

Prepared by NDS/ATD

VOLUME

Internal Dr Aisle S/O Concordia

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_009

DAILY TOTALS	NB	SB	EB	WB	Total
	1,032	1,055	0	0	2,087

AM Period	NB		SB		EB		WB		TOTAL	
00:00	4		3						7	
00:15	7		10						17	
00:30	6		8						14	
00:45	6	23	11	32					17	55
01:00	4		5						9	
01:15	3		6						9	
01:30	3		3						6	
01:45	4	14	11	25					15	39
02:00	7		3						10	
02:15	1		7						8	
02:30	4		2						6	
02:45	3	15	2	14					5	29
03:00	3		3						6	
03:15	1		2						3	
03:30	2		3						5	
03:45	1	7	1	9					2	16
04:00	1		2						3	
04:15	0		0						0	
04:30	0		1						1	
04:45	1	2	2	5					3	7
05:00	1		1						2	
05:15	1		1						2	
05:30	2		2						4	
05:45	2	6	3	7					5	13
06:00	0		1						1	
06:15	2		3						5	
06:30	4		6						10	
06:45	4	10	4	14					8	24
07:00	3		6						9	
07:15	9		3						12	
07:30	8		8						16	
07:45	7	27	4	21					11	48
08:00	5		5						10	
08:15	4		8						12	
08:30	16		8						24	
08:45	16	41	11	32					27	73
09:00	8		2						10	
09:15	11		5						16	
09:30	12		10						22	
09:45	8	39	6	23					14	62
10:00	11		9						20	
10:15	10		14						24	
10:30	15		10						25	
10:45	10	46	5	38					15	84
11:00	8		16						24	
11:15	8		12						20	
11:30	17		11						28	
11:45	24	57	16	55					40	112
TOTALS		287		275						562
SPLIT %		51.1%		48.9%						26.9%

PM Period	NB		SB		EB		WB		TOTAL	
12:00	14		16						30	
12:15	15		15						30	
12:30	13		9						22	
12:45	6	48	16	56					22	104
13:00	15		23						38	
13:15	12		18						30	
13:30	13		11						24	
13:45	14	54	15	67					29	121
14:00	11		18						29	
14:15	13		15						28	
14:30	10		19						29	
14:45	15	49	12	64					27	113
15:00	12		13						25	
15:15	16		13						29	
15:30	11		13						24	
15:45	13	52	15	54					28	106
16:00	16		23						39	
16:15	28		23						51	
16:30	25		23						48	
16:45	41	110	24	93					65	203
17:00	27		22						49	
17:15	13		26						39	
17:30	21		19						40	
17:45	16	77	14	81					30	158
18:00	17		24						41	
18:15	15		13						28	
18:30	22		13						35	
18:45	10	64	15	65					25	129
19:00	13		20						33	
19:15	10		8						18	
19:30	11		11						22	
19:45	17	51	8	47					25	98
20:00	5		15						20	
20:15	17		7						24	
20:30	14		21						35	
20:45	12	48	13	56					25	104
21:00	18		21						39	
21:15	22		15						37	
21:30	28		20						48	
21:45	15	83	14	70					29	153
22:00	16		24						40	
22:15	20		20						40	
22:30	13		15						28	
22:45	13	62	10	69					23	131
23:00	13		16						29	
23:15	12		12						24	
23:30	12		15						27	
23:45	10	47	15	58					25	105
TOTALS		745		780						1525
SPLIT %		48.9%		51.1%						73.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	1,032	1,055	0	0	2,087

AM Peak Hour	11:30	11:30			11:30
AM Pk Volume	70	58			128
Pk Hr Factor	0.729	0.906			0.800
7 - 9 Volume	68	53	0	0	121
7 - 9 Peak Hour	08:00	08:00			08:00
7 - 9 Pk Volume	41	32	0	0	73
Pk Hr Factor	0.641	0.727	0.000	0.000	0.676

PM Peak Hour	16:15	16:30			16:15
PM Pk Volume	121	95			213
Pk Hr Factor	0.738	0.913			0.819
4 - 6 Volume	187	174	0	0	361
4 - 6 Peak Hour	16:15	16:30			16:15
4 - 6 Pk Volume	121	95	0	0	213
Pk Hr Factor	0.738	0.913	0.000	0.000	0.819

Prepared by NDS/ATD

VOLUME

Internal Dr Aisle S/O Concordia

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_009

DAILY TOTALS	NB	SB	EB	WB	Total
	930	966	0	0	1,896

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	8	8			16	12:00	5	17			22
00:15	7	10			17	12:15	18	20			38
00:30	11	7			18	12:30	17	16			33
00:45	2	28 2	27		4 55	12:45	13	53 10	63		23 116
01:00	10	10			20	13:00	19	12			31
01:15	5	10			15	13:15	13	10			23
01:30	9	6			15	13:30	15	10			25
01:45	5	29 2	28		7 57	13:45	17	64 25	57		42 121
02:00	1	4			5	14:00	19	16			35
02:15	2	4			6	14:15	12	12			24
02:30	6	5			11	14:30	17	14			31
02:45	2	11 2	15		4 26	14:45	12	60 14	56		26 116
03:00	3	3			6	15:00	10	15			25
03:15	0	0			0	15:15	9	15			24
03:30	0	1			1	15:30	21	17			38
03:45	2	5 1	5		3 10	15:45	14	54 12	59		26 113
04:00	1	0			1	16:00	7	13			20
04:15	1	0			1	16:15	11	12			23
04:30	0	1			1	16:30	8	13			21
04:45	1	3 2	3		3 6	16:45	12	38 12	50		24 88
05:00	3	2			5	17:00	13	19			32
05:15	1	0			1	17:15	24	15			39
05:30	1	0			1	17:30	13	19			32
05:45	3	8 0	2		3 10	17:45	7	57 13	66		20 123
06:00	1	0			1	18:00	17	16			33
06:15	0	1			1	18:15	17	25			42
06:30	3	0			3	18:30	14	19			33
06:45	4	8 4	5		8 13	18:45	18	66 17	77		35 143
07:00	3	2			5	19:00	12	19			31
07:15	3	2			5	19:15	14	20			34
07:30	4	1			5	19:30	20	20			40
07:45	2	12 0	5		2 17	19:45	16	62 15	74		31 136
08:00	5	3			8	20:00	12	25			37
08:15	8	7			15	20:15	23	23			46
08:30	8	14			22	20:30	18	16			34
08:45	12	33 7	31		19 64	20:45	17	70 18	82		35 152
09:00	13	4			17	21:00	20	25			45
09:15	5	8			13	21:15	20	25			45
09:30	6	5			11	21:30	18	21			39
09:45	8	32 4	21		12 53	21:45	16	74 17	88		33 162
10:00	8	9			17	22:00	23	18			41
10:15	14	5			19	22:15	19	11			30
10:30	8	8			16	22:30	8	8			16
10:45	10	40 7	29		17 69	22:45	9	59 16	53		25 112
11:00	5	2			7	23:00	11	4			15
11:15	10	16			26	23:15	10	10			20
11:30	11	9			20	23:30	3	5			8
11:45	7	33 17	44		24 77	23:45	7	31 7	26		14 57
TOTALS	242	215			457	TOTALS	688	751			1439
SPLIT %	53.0%	47.0%			24.1%	SPLIT %	47.8%	52.2%			75.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	930	966	0	0	1,896

AM Peak Hour	11:45	11:45			11:45	PM Peak Hour	20:15	20:45			20:45
AM Pk Volume	47	70			117	PM Pk Volume	78	89			164
Pk Hr Factor	0.653	0.875			0.770	Pk Hr Factor	0.848	0.890			0.911
7 - 9 Volume	45	36	0	0	81	4 - 6 Volume	95	116	0	0	211
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:45	17:00			16:45
7 - 9 Pk Volume	33	31	0	0	64	4 - 6 Pk Volume	62	66	0	0	127
Pk Hr Factor	0.688	0.554	0.000	0.000	0.727	Pk Hr Factor	0.646	0.868	0.000	0.000	0.814

Prepared by NDS/ATD

VOLUME

Joy W/o Concordia

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	83	95	178

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			0	0	0
00:15			0	0	0	12:15			0	2	2
00:30			0	0	0	12:30			0	1	1
00:45			0	0	0	12:45			0	2 5	2 5
01:00			0	0	0	13:00			3	2	5
01:15			0	0	0	13:15			0	2	2
01:30			0	0	0	13:30			2	2	4
01:45			0	0	0	13:45			3 8	1 7	4 15
02:00			0	0	0	14:00			0	2	2
02:15			0	0	0	14:15			2	1	3
02:30			0	0	0	14:30			1	1	2
02:45			0	0	0	14:45			3 6	1 5	4 11
03:00			0	0	0	15:00			1	3	4
03:15			0	0	0	15:15			0	2	2
03:30			0	0	0	15:30			0	1	1
03:45			0	0	0	15:45			2 3	1 7	3 10
04:00			0	0	0	16:00			2	1	3
04:15			0	1	1	16:15			1	1	2
04:30			1	0	1	16:30			0	1	1
04:45			0 1	1 2	1 3	16:45			2 5	2 5	4 10
05:00			0	0	0	17:00			1	2	3
05:15			0	0	0	17:15			2	4	6
05:30			0	0	0	17:30			0	2	2
05:45			0	0	0	17:45			0 3	1 9	1 12
06:00			2	0	2	18:00			2	5	7
06:15			1	0	1	18:15			1	0	1
06:30			0	1	1	18:30			2	2	4
06:45			1 4	0 1	1 5	18:45			1 6	2 9	3 15
07:00			0	1	1	19:00			2	3	5
07:15			3	1	4	19:15			1	1	2
07:30			0	1	1	19:30			0	0	0
07:45			5 8	0 3	5 11	19:45			0 3	3 7	3 10
08:00			5	3	8	20:00			0	2	2
08:15			4	2	6	20:15			4	2	6
08:30			0	1	1	20:30			0	3	3
08:45			1 10	2 8	3 18	20:45			1 5	1 8	2 13
09:00			4	1	5	21:00			2	4	6
09:15			0	1	1	21:15			1	1	2
09:30			0	0	0	21:30			0	1	1
09:45			1 5	0 2	1 7	21:45			2 5	1 7	3 12
10:00			0	2	2	22:00			0	2	2
10:15			2	0	2	22:15			1	0	1
10:30			2	0	2	22:30			0	0	0
10:45			0 4	0 2	0 6	22:45			0 1	1 3	1 4
11:00			2	1	3	23:00			0	0	0
11:15			3	1	4	23:15			0	0	0
11:30			1	2	3	23:30			0	0	0
11:45			0 6	0 4	0 10	23:45			0	1 1	1 1
TOTALS			38	22	60	TOTALS			45	73	118
SPLIT %			63.3%	36.7%	33.7%	SPLIT %			38.1%	61.9%	66.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	83	95	178

AM Peak Hour			07:30	08:00	07:30	PM Peak Hour			13:00	17:15	20:15
AM Pk Volume			14	8	20	PM Pk Volume			8	12	17
Pk Hr Factor			0.700	0.667	0.625	Pk Hr Factor			0.667	0.600	0.708
7 - 9 Volume	0	0	18	11	29	4 - 6 Volume	0	0	8	14	22
7 - 9 Peak Hour			07:30	08:00	07:30	4 - 6 Peak Hour			16:00	16:45	16:45
7 - 9 Pk Volume	0	0	14	8	20	4 - 6 Pk Volume	0	0	5	10	15
Pk Hr Factor	0.000	0.000	0.700	0.667	0.625	Pk Hr Factor	0.000	0.000	0.625	0.625	0.625

Prepared by NDS/ATD

VOLUME

Joy W/o Concordia

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	92	93	185

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			1	2	3
00:15			0	0	0	12:15			0	3	3
00:30			0	1	1	12:30			0	0	0
00:45			1 1	0 1	1 2	12:45			1 2	0 5	1 7
01:00			0	0	0	13:00			1	1	2
01:15			0	0	0	13:15			2	0	2
01:30			0	0	0	13:30			0	3	3
01:45			0	0	0	13:45			2 5	0 4	2 9
02:00			0	0	0	14:00			4	3	7
02:15			0	0	0	14:15			0	1	1
02:30			0	0	0	14:30			1	2	3
02:45			0	0	0	14:45			4 9	1 7	5 16
03:00			0	0	0	15:00			3	1	4
03:15			0	0	0	15:15			1	1	2
03:30			0	0	0	15:30			0	2	2
03:45			0	0	0	15:45			1 5	3 7	4 12
04:00			0	0	0	16:00			4	3	7
04:15			0	0	0	16:15			0	0	0
04:30			2	0	2	16:30			1	2	3
04:45			0 2	1 1	1 3	16:45			1 6	4 9	5 15
05:00			0	0	0	17:00			1	2	3
05:15			1	0	1	17:15			1	1	2
05:30			0	0	0	17:30			0	3	3
05:45			1 2	0	1 2	17:45			3 5	4 10	7 15
06:00			1	0	1	18:00			2	0	2
06:15			1	0	1	18:15			1	4	5
06:30			0	1	1	18:30			0	0	0
06:45			0 2	0 1	0 3	18:45			3 6	7 11	10 17
07:00			1	1	2	19:00			0	0	0
07:15			2	0	2	19:15			7	2	9
07:30			3	1	4	19:30			0	2	2
07:45			4 10	0 2	4 12	19:45			0 7	1 5	1 12
08:00			3	0	3	20:00			1	2	3
08:15			3	2	5	20:15			1	1	2
08:30			2	0	2	20:30			0	1	1
08:45			2 10	0 2	2 12	20:45			0 2	1 5	1 7
09:00			2	0	2	21:00			0	1	1
09:15			3	5	8	21:15			0	2	2
09:30			2	0	2	21:30			0	1	1
09:45			0 7	1 6	1 13	21:45			0	0 4	0 4
10:00			1	0	1	22:00			0	0	0
10:15			3	0	3	22:15			0	0	0
10:30			1	2	3	22:30			0	0	0
10:45			1 6	3 5	4 11	22:45			0	1 1	1 1
11:00			0	2	2	23:00			0	0	0
11:15			2	1	3	23:15			0	0	0
11:30			2	1	3	23:30			1	2	3
11:45			0 4	1 5	1 9	23:45			0 1	0 2	0 3
TOTALS			44	23	67	TOTALS			48	70	118
SPLIT %			65.7%	34.3%	36.2%	SPLIT %			40.7%	59.3%	63.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	92	93	185

AM Peak Hour			07:30	10:30	07:30	PM Peak Hour			18:30	17:30	18:45
AM Pk Volume			13	8	16	PM Pk Volume			10	11	21
Pk Hr Factor			0.813	0.667	0.800	Pk Hr Factor			0.357	0.688	0.525
7 - 9 Volume	0	0	20	4	24	4 - 6 Volume	0	0	11	19	30
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:00	16:45	16:00
7 - 9 Pk Volume	0	0	13	3	16	4 - 6 Pk Volume	0	0	6	10	15
Pk Hr Factor	0.000	0.000	0.813	0.375	0.800	Pk Hr Factor	0.000	0.000	0.375	0.625	0.536

Prepared by NDS/ATD

VOLUME

Joy W/o Concordia

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	83	85	168

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	1	1	12:00			1	3	4
00:15			0	0	0	12:15			0	2	2
00:30			0	0	0	12:30			2	2	4
00:45			0	1 2	1 2	12:45			1 4	0 7	1 11
01:00			0	0	0	13:00			0	1	1
01:15			0	0	0	13:15			0	1	1
01:30			0	0	0	13:30			4	1	5
01:45			0	0	0	13:45			1 5	0 3	1 8
02:00			0	0	0	14:00			0	1	1
02:15			0	0	0	14:15			0	1	1
02:30			0	0	0	14:30			0	3	3
02:45			0	1 1	1 1	14:45			3 3	0 5	3 8
03:00			1	0	1	15:00			2	3	5
03:15			0	0	0	15:15			2	0	2
03:30			0	0	0	15:30			0	2	2
03:45			0 1	0	0 1	15:45			1 5	3 8	4 13
04:00			0	0	0	16:00			1	2	3
04:15			0	0	0	16:15			0	1	1
04:30			0	0	0	16:30			0	2	2
04:45			0	1 1	1 1	16:45			1 2	0 5	1 7
05:00			1	0	1	17:00			0	2	2
05:15			0	0	0	17:15			1	3	4
05:30			0	0	0	17:30			2	1	3
05:45			0 1	0	0 1	17:45			1 4	5 11	6 15
06:00			2	0	2	18:00			0	0	0
06:15			1	0	1	18:15			0	3	3
06:30			1	0	1	18:30			1	1	2
06:45			0 4	0	0 4	18:45			0 1	0 4	0 5
07:00			1	0	1	19:00			4	1	5
07:15			3	0	3	19:15			2	2	4
07:30			5	0	5	19:30			3	2	5
07:45			2 11	0	2 11	19:45			2 11	2 7	4 18
08:00			5	1	6	20:00			2	0	2
08:15			4	4	8	20:15			2	2	4
08:30			1	0	1	20:30			0	1	1
08:45			1 11	0 5	1 16	20:45			2 6	0 3	2 9
09:00			0	1	1	21:00			0	4	4
09:15			1	1	2	21:15			1	2	3
09:30			0	1	1	21:30			0	1	1
09:45			3 4	0 3	3 7	21:45			2 3	2 9	4 12
10:00			2	4	6	22:00			0	0	0
10:15			1	0	1	22:15			0	0	0
10:30			0	0	0	22:30			0	1	1
10:45			1 4	0 4	1 8	22:45			0	0 1	0 1
11:00			0	3	3	23:00			0	0	0
11:15			0	0	0	23:15			0	0	0
11:30			1	0	1	23:30			1	0	1
11:45			0 1	1 4	1 5	23:45			1 2	2 2	3 4
TOTALS			37	20	57	TOTALS			46	65	111
SPLIT %			64.9%	35.1%	33.9%	SPLIT %			41.4%	58.6%	66.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	83	85	168

AM Peak Hour			07:30	11:45	07:30	PM Peak Hour			19:00	17:00	19:00
AM Pk Volume			16	8	21	PM Pk Volume			11	11	18
Pk Hr Factor			0.800	0.667	0.656	Pk Hr Factor			0.688	0.550	0.900
7 - 9 Volume	0	0	22	5	27	4 - 6 Volume	0	0	6	16	22
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:45	17:00	17:00
7 - 9 Pk Volume	0	0	16	5	21	4 - 6 Pk Volume	0	0	4	11	15
Pk Hr Factor	0.000	0.000	0.800	0.313	0.656	Pk Hr Factor	0.000	0.000	0.500	0.550	0.625

Prepared by NDS/ATD

VOLUME

Joy W/o Concordia

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	100	107	207

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			2	2	4	12:00			1	1	2
00:15			0	2	2	12:15			2	3	5
00:30			1	0	1	12:30			2	0	2
00:45			0 3	1 5	1 8	12:45			1 6	3 7	4 13
01:00			0	1	1	13:00			4	2	6
01:15			0	0	0	13:15			2	1	3
01:30			0	0	0	13:30			0	0	0
01:45			0	1 2	1 2	13:45			0 6	2 5	2 11
02:00			0	0	0	14:00			1	2	3
02:15			0	1	1	14:15			1	1	2
02:30			0	0	0	14:30			1	3	4
02:45			0	0 1	0 1	14:45			3 6	2 8	5 14
03:00			0	0	0	15:00			3	3	6
03:15			0	0	0	15:15			2	1	3
03:30			1	0	1	15:30			2	3	5
03:45			0 1	0	0 1	15:45			1 8	4 11	5 19
04:00			0	0	0	16:00			3	4	7
04:15			0	0	0	16:15			2	5	7
04:30			0	0	0	16:30			0	2	2
04:45			0	0	0	16:45			0 5	5 16	5 21
05:00			1	0	1	17:00			0	1	1
05:15			0	1	1	17:15			1	4	5
05:30			0	0	0	17:30			2	4	6
05:45			1 2	0 1	1 3	17:45			2 5	2 11	4 16
06:00			0	0	0	18:00			2	2	4
06:15			0	0	0	18:15			0	1	1
06:30			0	0	0	18:30			3	3	6
06:45			0	1 1	1 1	18:45			3 8	3 9	6 17
07:00			0	0	0	19:00			3	0	3
07:15			2	0	2	19:15			4	1	5
07:30			2	1	3	19:30			2	3	5
07:45			2 6	0 1	2 7	19:45			1 10	0 4	1 14
08:00			0	0	0	20:00			4	0	4
08:15			0	0	0	20:15			3	0	3
08:30			1	0	1	20:30			4	2	6
08:45			2 3	0	2 3	20:45			0 11	3 5	3 16
09:00			0	2	2	21:00			1	0	1
09:15			3	1	4	21:15			1	0	1
09:30			1	0	1	21:30			0	1	1
09:45			1 5	2 5	3 10	21:45			1 3	1 2	2 5
10:00			1	0	1	22:00			0	2	2
10:15			1	0	1	22:15			0	1	1
10:30			1	2	3	22:30			0	0	0
10:45			2 5	2 4	4 9	22:45			0	0 3	0 3
11:00			0	1	1	23:00			0	1	1
11:15			2	0	2	23:15			0	2	2
11:30			2	1	3	23:30			0	0	0
11:45			2 6	0 2	2 8	23:45			1 1	1 4	2 5
TOTALS			31	22	53	TOTALS			69	85	154
SPLIT %			58.5%	41.5%	25.6%	SPLIT %			44.8%	55.2%	74.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	100	107	207

AM Peak Hour			11:15		11:30	PM Peak Hour			18:30	15:30	15:30
AM Pk Volume			7	5	12	PM Pk Volume			13	16	24
Pk Hr Factor			0.875	0.625	0.600	Pk Hr Factor			0.813	0.800	0.857
7 - 9 Volume	0	0	9	1	10	4 - 6 Volume	0	0	10	27	37
7 - 9 Peak Hour			07:00	07:00	07:00	4 - 6 Peak Hour			16:00	16:00	16:00
7 - 9 Pk Volume	0	0	6	1	7	4 - 6 Pk Volume	0	0	5	16	21
Pk Hr Factor	0.000	0.000	0.750	0.250	0.583	Pk Hr Factor	0.000	0.000	0.417	0.800	0.750

Prepared by NDS/ATD

VOLUME

Joy W/o Concordia

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_010

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	70	84	154

AM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0
00:15			1	0	1
00:30			0	0	0
00:45			0	0	0
01:00			1	1	2
01:15			0	0	0
01:30			1	0	1
01:45			0	0	0
02:00			0	0	0
02:15			0	0	0
02:30			0	0	0
02:45			0	0	0
03:00			0	0	0
03:15			0	0	0
03:30			0	0	0
03:45			0	0	0
04:00			0	0	0
04:15			0	0	0
04:30			0	0	0
04:45			0	1	1
05:00			0	0	0
05:15			0	0	0
05:30			0	0	0
05:45			0	0	0
06:00			1	0	1
06:15			0	0	0
06:30			2	0	2
06:45			0	0	0
07:00			0	0	0
07:15			0	1	1
07:30			0	1	1
07:45			0	0	0
08:00			1	0	1
08:15			1	0	1
08:30			0	0	0
08:45			1	1	2
09:00			2	0	2
09:15			0	0	0
09:30			0	0	0
09:45			0	0	0
10:00			1	1	2
10:15			2	2	4
10:30			2	1	3
10:45			3	1	4
11:00			0	1	1
11:15			1	0	1
11:30			1	2	3
11:45			1	0	1
TOTALS			22	13	35
SPLIT %			62.9%	37.1%	22.7%

PM Period	NB	SB	EB	WB	TOTAL
12:00			0	2	2
12:15			2	2	4
12:30			0	0	0
12:45			3	2	5
13:00			0	3	3
13:15			4	3	7
13:30			4	2	6
13:45			4	6	10
14:00			1	3	4
14:15			1	3	4
14:30			2	1	3
14:45			1	3	4
15:00			2	2	4
15:15			2	4	6
15:30			2	3	5
15:45			2	0	2
16:00			1	1	2
16:15			2	4	6
16:30			1	1	2
16:45			1	2	3
17:00			2	1	3
17:15			0	1	1
17:30			2	3	5
17:45			0	0	0
18:00			1	2	3
18:15			1	1	2
18:30			0	0	0
18:45			0	2	2
19:00			0	4	4
19:15			1	4	5
19:30			1	1	2
19:45			0	0	0
20:00			0	1	1
20:15			1	0	1
20:30			1	0	1
20:45			1	0	1
21:00			0	0	0
21:15			2	0	2
21:30			0	1	1
21:45			0	0	0
22:00			0	0	0
22:15			0	0	0
22:30			0	2	2
22:45			0	1	1
23:00			0	0	0
23:15			0	0	0
23:30			0	0	0
23:45			0	0	0
TOTALS			48	71	119
SPLIT %			40.3%	59.7%	77.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	70	84	154

AM Peak Hour			10:00	11:30	10:00	PM Peak Hour			13:15	13:00	13:15
AM Pk Volume			8	6	13	PM Pk Volume			13	14	27
Pk Hr Factor			0.667	0.750	0.813	Pk Hr Factor			0.813	0.583	0.675
7 - 9 Volume	0	0	3	3	6	4 - 6 Volume	0	0	9	13	22
7 - 9 Peak Hour			08:00	07:00	08:00	4 - 6 Peak Hour			16:15	16:00	16:15
7 - 9 Pk Volume	0	0	3	2	4	4 - 6 Pk Volume	0	0	6	8	14
Pk Hr Factor	0.000	0.000	0.750	0.500	0.500	Pk Hr Factor	0.000	0.000	0.750	0.500	0.583

Prepared by NDS/ATD

VOLUME

Faith W/o Concordia

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	166	151	317

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			1	6	7
00:15			0	1	1	12:15			1	0	1
00:30			0	0	0	12:30			1	0	1
00:45			0	1	1	12:45			1	4	0	6	1	10
01:00			0	0	0	13:00			2	2	4
01:15			0	0	0	13:15			2	2	4
01:30			0	0	0	13:30			3	4	7
01:45			0	0	0	13:45			2	9	5	13	7	22
02:00			0	0	0	14:00			3	4	7
02:15			0	0	0	14:15			4	3	7
02:30			0	1	1	14:30			4	3	7
02:45			0	0	1	0	1	14:45			2	13	2	12	4	25
03:00			0	0	0	15:00			3	3	6
03:15			0	0	0	15:15			3	3	6
03:30			0	0	0	15:30			0	3	3
03:45			0	0	0	15:45			1	7	0	9	1	16
04:00			0	0	0	16:00			3	1	4
04:15			1	0	1	16:15			3	2	5
04:30			0	0	0	16:30			2	3	5
04:45			1	2	0	1	2	16:45			0	8	2	8	2	16
05:00			0	0	0	17:00			1	3	4
05:15			2	0	2	17:15			3	1	4
05:30			1	0	1	17:30			3	2	5
05:45			0	3	0	0	3	17:45			1	8	1	7	2	15
06:00			1	0	1	18:00			1	3	4
06:15			0	1	1	18:15			1	3	4
06:30			0	0	0	18:30			0	3	3
06:45			2	3	1	2	3	5	18:45			3	5	6	15	9	20
07:00			3	2	5	19:00			3	6	9
07:15			2	0	2	19:15			2	6	8
07:30			10	2	12	19:30			1	1	2
07:45			1	16	4	8	5	24	19:45			1	7	5	18	6	25
08:00			7	1	8	20:00			1	2	3
08:15			4	1	5	20:15			2	6	8
08:30			2	1	3	20:30			1	1	2
08:45			6	19	4	7	10	26	20:45			3	7	4	13	7	20
09:00			5	0	5	21:00			3	0	3
09:15			4	0	4	21:15			0	4	4
09:30			3	2	5	21:30			4	0	4
09:45			4	16	1	3	5	19	21:45			5	12	2	6	7	18
10:00			2	2	4	22:00			3	3	6
10:15			3	1	4	22:15			0	0	0
10:30			5	1	6	22:30			0	2	2
10:45			1	11	3	7	4	18	22:45			0	3	0	5	0	8
11:00			1	2	3	23:00			1	2	3
11:15			3	0	3	23:15			0	0	0
11:30			4	1	5	23:30			0	0	0
11:45			4	12	4	7	8	19	23:45			0	1	0	2	0	3
TOTALS				82		37		119	TOTALS				84		114		198
SPLIT %				68.9%		31.1%		37.5%	SPLIT %				42.4%		57.6%		62.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	166	151	317

AM Peak Hour			07:30	11:15	07:30	PM Peak Hour			13:45	18:30	18:30
AM Pk Volume			22	11	30	PM Pk Volume			13	21	29
Pk Hr Factor			0.550	0.458	0.625	Pk Hr Factor			0.813	0.875	0.806
7 - 9 Volume	0	0	35	15	50	4 - 6 Volume	0	0	16	15	31
7 - 9 Peak Hour			07:30	07:00	07:30	4 - 6 Peak Hour			16:00	16:15	16:00
7 - 9 Pk Volume	0	0	22	8	30	4 - 6 Pk Volume	0	0	8	10	16
Pk Hr Factor	0.000	0.000	0.550	0.500	0.625	Pk Hr Factor	0.000	0.000	0.667	0.833	0.800

Prepared by NDS/ATD

VOLUME

Faith W/o Concordia

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	158	160	318

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			2	6	8
00:15			0	0	0	12:15			5	2	7
00:30			0	0	0	12:30			1	4	5
00:45			0	0	0	12:45			2	10	2	14	4	24
01:00			0	0	0	13:00			1	4	5
01:15			0	0	0	13:15			0	5	5
01:30			0	0	0	13:30			4	5	9
01:45			0	0	0	13:45			3	8	2	16	5	24
02:00			0	0	0	14:00			3	0	3
02:15			0	1	1	14:15			4	1	5
02:30			0	1	1	14:30			5	6	11
02:45			0	0	2	0	2	14:45			4	16	2	9	6	25
03:00			0	0	0	15:00			2	5	7
03:15			0	0	0	15:15			2	2	4
03:30			0	0	0	15:30			3	2	5
03:45			0	0	0	15:45			1	8	1	10	2	18
04:00			0	0	0	16:00			0	2	2
04:15			0	0	0	16:15			3	3	6
04:30			0	0	0	16:30			1	4	5
04:45			0	0	0	16:45			3	7	5	14	8	21
05:00			0	0	0	17:00			6	6	12
05:15			2	0	2	17:15			2	4	6
05:30			0	0	0	17:30			4	1	5
05:45			1	3	0	1	3	17:45			3	15	3	14	6	29
06:00			1	0	1	18:00			0	1	1
06:15			1	1	2	18:15			3	4	7
06:30			2	1	3	18:30			1	3	4
06:45			0	4	1	3	1	7	18:45			1	5	4	12	5	17
07:00			0	0	0	19:00			5	3	8
07:15			1	0	1	19:15			1	4	5
07:30			10	1	11	19:30			0	4	4
07:45			6	17	5	6	11	23	19:45			1	7	3	14	4	21
08:00			5	1	6	20:00			0	4	4
08:15			3	0	3	20:15			4	4	8
08:30			2	1	3	20:30			2	0	2
08:45			4	14	1	3	5	17	20:45			1	7	1	9	2	16
09:00			1	1	2	21:00			0	3	3
09:15			2	0	2	21:15			1	6	7
09:30			6	1	7	21:30			1	3	4
09:45			0	9	0	2	0	11	21:45			1	3	1	13	2	16
10:00			1	2	3	22:00			1	0	1
10:15			4	1	5	22:15			0	1	1
10:30			4	2	6	22:30			0	0	0
10:45			4	13	1	6	5	19	22:45			0	1	1	2	1	3
11:00			1	3	4	23:00			0	1	1
11:15			2	1	3	23:15			0	0	0
11:30			6	2	8	23:30			0	0	0
11:45			2	11	4	10	6	21	23:45			0	0	1	0	1
TOTALS				71		32		103	TOTALS				87		128		215
SPLIT %				68.9%		31.1%		32.4%	SPLIT %				40.5%		59.5%		67.6%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	158	160	318

AM Peak Hour			07:30	11:45	07:30	PM Peak Hour			14:00	16:30	16:15
AM Pk Volume			24	16	31	PM Pk Volume			16	19	31
Pk Hr Factor			0.600	0.667	0.705	Pk Hr Factor			0.800	0.792	0.646
7 - 9 Volume	0	0	31	9	40	4 - 6 Volume	0	0	22	28	50
7 - 9 Peak Hour			07:30	07:15	07:30	4 - 6 Peak Hour			16:45	16:30	16:15
7 - 9 Pk Volume	0	0	24	7	31	4 - 6 Pk Volume	0	0	15	19	31
Pk Hr Factor	0.000	0.000	0.600	0.350	0.705	Pk Hr Factor	0.000	0.000	0.625	0.792	0.646

Prepared by NDS/ATD

VOLUME

Faith W/o Concordia

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	169	161	330

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			1	0	1	12:00			3	1	4
00:15			0	0	0	12:15			2	1	3
00:30			0	0	0	12:30			3	2	5
00:45			0	0	0	12:45			0	7	7
01:00			0	0	0	13:00			0	1	1
01:15			0	0	0	13:15			5	2	7
01:30			0	0	0	13:30			4	1	5
01:45			0	0	0	13:45			2	5	7
02:00			0	0	0	14:00			1	3	4
02:15			0	0	0	14:15			3	2	5
02:30			0	0	0	14:30			4	5	9
02:45			0	0	0	14:45			9	2	11
03:00			0	0	0	15:00			3	3	6
03:15			0	0	0	15:15			3	0	3
03:30			0	0	0	15:30			0	3	3
03:45			1	0	1	15:45			3	3	6
04:00			0	0	0	16:00			1	1	2
04:15			0	0	0	16:15			2	1	3
04:30			0	1	1	16:30			1	2	3
04:45			1	0	1	16:45			1	2	3
05:00			0	0	0	17:00			1	6	7
05:15			1	0	1	17:15			2	6	8
05:30			0	0	0	17:30			1	2	3
05:45			0	1	1	17:45			2	2	4
06:00			1	0	1	18:00			0	3	3
06:15			1	1	2	18:15			0	2	2
06:30			1	0	1	18:30			3	2	5
06:45			2	1	3	18:45			3	6	9
07:00			1	2	3	19:00			2	3	5
07:15			2	0	2	19:15			1	3	4
07:30			6	2	8	19:30			2	3	5
07:45			1	4	5	19:45			2	7	9
08:00			7	1	8	20:00			0	2	2
08:15			7	3	10	20:15			2	3	5
08:30			3	5	8	20:30			2	2	4
08:45			8	3	11	20:45			1	3	4
09:00			6	0	6	21:00			1	1	2
09:15			2	0	2	21:15			1	4	5
09:30			3	4	7	21:30			3	1	4
09:45			4	1	5	21:45			1	3	4
10:00			3	2	5	22:00			1	4	5
10:15			5	1	6	22:15			0	0	0
10:30			4	1	5	22:30			1	1	2
10:45			3	2	5	22:45			0	0	0
11:00			4	2	6	23:00			0	2	2
11:15			1	2	3	23:15			0	1	1
11:30			3	3	6	23:30			0	2	2
11:45			5	3	8	23:45			0	0	0
TOTALS			87	45	132	TOTALS			82	116	198
SPLIT %			65.9%	34.1%	40.0%	SPLIT %			41.4%	58.6%	60.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	169	161	330

AM Peak Hour			08:00	07:45	08:00	PM Peak Hour			14:15	16:30	14:15
AM Pk Volume			25	13	37	PM Pk Volume			19	16	31
Pk Hr Factor			0.781	0.650	0.841	Pk Hr Factor			0.528	0.667	0.705
7 - 9 Volume	0	0	35	20	55	4 - 6 Volume	0	0	11	22	33
7 - 9 Peak Hour			08:00	07:45	08:00	4 - 6 Peak Hour			17:00	16:30	17:00
7 - 9 Pk Volume	0	0	25	13	37	4 - 6 Pk Volume	0	0	6	16	22
Pk Hr Factor	0.000	0.000	0.781	0.650	0.841	Pk Hr Factor	0.000	0.000	0.750	0.667	0.688

Prepared by NDS/ATD

VOLUME

Faith W/o Concordia

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	159	159	318

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			1	3	4	12:00			1	3	4
00:15			1	0	1	12:15			1	1	2
00:30			0	2	2	12:30			2	3	5
00:45			2	0	2	12:45			3	5	8
01:00			1	2	3	13:00			6	6	12
01:15			0	0	0	13:15			2	2	4
01:30			0	0	0	13:30			0	4	4
01:45			1	0	1	13:45			3	2	5
02:00			0	0	0	14:00			6	3	9
02:15			0	0	0	14:15			5	5	10
02:30			0	0	0	14:30			0	3	3
02:45			0	0	0	14:45			3	1	4
03:00			0	0	0	15:00			4	3	7
03:15			0	0	0	15:15			2	4	6
03:30			1	1	2	15:30			1	2	3
03:45			0	0	0	15:45			2	6	8
04:00			0	0	0	16:00			5	0	5
04:15			0	0	0	16:15			6	1	7
04:30			0	0	0	16:30			3	0	3
04:45			0	0	0	16:45			2	4	6
05:00			0	0	0	17:00			1	2	3
05:15			1	0	1	17:15			6	4	10
05:30			0	1	1	17:30			2	1	3
05:45			0	0	0	17:45			1	4	5
06:00			0	0	0	18:00			3	0	3
06:15			1	0	1	18:15			1	1	2
06:30			1	0	1	18:30			4	7	11
06:45			1	0	1	18:45			1	2	3
07:00			1	0	1	19:00			3	8	11
07:15			2	0	2	19:15			3	3	6
07:30			0	0	0	19:30			1	2	3
07:45			4	0	4	19:45			1	8	9
08:00			1	1	2	20:00			1	6	7
08:15			0	2	2	20:15			1	0	1
08:30			3	1	4	20:30			1	2	3
08:45			2	6	8	20:45			3	6	9
09:00			1	0	1	21:00			2	2	4
09:15			2	3	5	21:15			1	4	5
09:30			4	1	5	21:30			2	0	2
09:45			2	9	11	21:45			0	5	5
10:00			1	2	3	22:00			0	0	0
10:15			7	1	8	22:15			0	0	0
10:30			0	0	0	22:30			0	0	0
10:45			7	15	22	22:45			2	2	4
11:00			1	5	6	23:00			1	1	2
11:15			5	2	7	23:15			1	4	5
11:30			3	3	6	23:30			1	1	2
11:45			2	11	13	23:45			0	3	3
TOTALS			59	43	102	TOTALS			100	116	216
SPLIT %			57.8%	42.2%	32.1%	SPLIT %			46.3%	53.7%	67.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	159	159	318

AM Peak Hour			10:45	11:00	10:45	PM Peak Hour			15:45	18:30	18:30
AM Pk Volume			16	15	29	PM Pk Volume			16	20	31
Pk Hr Factor			0.571	0.750	0.725	Pk Hr Factor			0.667	0.625	0.705
7 - 9 Volume	0	0	13	6	19	4 - 6 Volume	0	0	26	16	42
7 - 9 Peak Hour			07:45	08:00	07:45	4 - 6 Peak Hour			16:00	16:45	16:30
7 - 9 Pk Volume	0	0	8	6	12	4 - 6 Pk Volume	0	0	16	11	22
Pk Hr Factor	0.000	0.000	0.500	0.750	0.750	Pk Hr Factor	0.000	0.000	0.667	0.688	0.550

Prepared by NDS/ATD

VOLUME

Faith W/o Concordia

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_011

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	149	137	286

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		2		2		12:00			1		3		4	
00:15			0		1		1		12:15			4		2		6	
00:30			1		0		1		12:30			2		5		7	
00:45			2	3	0	3	2	6	12:45			9	16	8	18	17	34
01:00			0		1		1		13:00			7		4		11	
01:15			0		0		0		13:15			3		2		5	
01:30			1		0		1		13:30			3		5		8	
01:45			0	1	0	1	0	2	13:45			2	15	3	14	5	29
02:00			0		0		0		14:00			4		2		6	
02:15			0		0		0		14:15			5		1		6	
02:30			0		1		1		14:30			3		3		6	
02:45			0		0	1	0	1	14:45			4	16	1	7	5	23
03:00			0		0		0		15:00			1		3		4	
03:15			0		0		0		15:15			3		3		6	
03:30			0		0		0		15:30			3		5		8	
03:45			0		0		0		15:45			4	11	7	18	11	29
04:00			0		0		0		16:00			2		6		8	
04:15			0		0		0		16:15			3		5		8	
04:30			0		0		0		16:30			4		1		5	
04:45			1	1	0		1	1	16:45			1	10	3	15	4	25
05:00			0		0		0		17:00			3		5		8	
05:15			0		0		0		17:15			1		3		4	
05:30			0		0		0		17:30			1		4		5	
05:45			0		0		0		17:45			4	9	2	14	6	23
06:00			0		0		0		18:00			2		3		5	
06:15			0		0		0		18:15			1		1		2	
06:30			0		1		1		18:30			2		1		3	
06:45			0		0	1	0	1	18:45			2	7	0	5	2	12
07:00			1		0		1		19:00			6		2		8	
07:15			1		0		1		19:15			1		3		4	
07:30			3		0		3		19:30			3		1		4	
07:45			3	8	0		3	8	19:45			1	11	1	7	2	18
08:00			0		0		0		20:00			0		2		2	
08:15			4		1		5		20:15			2		4		6	
08:30			2		0		2		20:30			2		3		5	
08:45			1	7	2	3	3	10	20:45			2	6	2	11	4	17
09:00			2		0		2		21:00			2		4		6	
09:15			2		0		2		21:15			0		1		1	
09:30			5		0		5		21:30			0		0		0	
09:45			1	10	0		1	10	21:45			0	2	0	5	0	7
10:00			2		1		3		22:00			0		2		2	
10:15			2		2		4		22:15			0		0		0	
10:30			1		3		4		22:30			0		0		0	
10:45			2	7	0	6	2	13	22:45			1	1	0	2	1	3
11:00			4		1		5		23:00			0		1		1	
11:15			0		1		1		23:15			0		0		0	
11:30			3		1		4		23:30			0		1		1	
11:45			0	7	1	4	1	11	23:45			1	1	0	2	1	3
TOTALS				44		19	63		TOTALS				105		118	223	
SPLIT %				69.8%		30.2%	22.0%		SPLIT %				47.1%		52.9%	78.0%	

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	149	137	286

AM Peak Hour			07:30	11:45	11:45	PM Peak Hour			12:15	15:30	12:15
AM Pk Volume			10	11	18	PM Pk Volume			22	23	41
Pk Hr Factor			0.625	0.550	0.643	Pk Hr Factor			0.611	0.821	0.603
7 - 9 Volume	0	0	15	3	18	4 - 6 Volume	0	0	19	29	48
7 - 9 Peak Hour			07:30	08:00	07:30	4 - 6 Peak Hour			16:15	16:00	16:00
7 - 9 Pk Volume	0	0	10	3	11	4 - 6 Pk Volume	0	0	11	15	25
Pk Hr Factor	0.000	0.000	0.625	0.375	0.550	Pk Hr Factor	0.000	0.000	0.688	0.625	0.781

Prepared by NDS/ATD

VOLUME

Daystar W/o Concordia

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	68	69	137

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			2	2	4
00:15			0	0	0	12:15			2	0	2
00:30			0	0	0	12:30			1	2	3
00:45			0	0	0	12:45			0 5	1 5	1 10
01:00			0	1	1	13:00			0	0	0
01:15			0	0	0	13:15			2	1	3
01:30			0	0	0	13:30			3	3	6
01:45			0	0 1	0 1	13:45			0 5	2 6	2 11
02:00			0	0	0	14:00			2	1	3
02:15			0	0	0	14:15			1	1	2
02:30			0	0	0	14:30			1	1	2
02:45			0	0	0	14:45			1 5	1 4	2 9
03:00			0	0	0	15:00			0	1	1
03:15			0	0	0	15:15			0	1	1
03:30			0	0	0	15:30			2	1	3
03:45			0	0	0	15:45			2 4	1 4	3 8
04:00			0	0	0	16:00			1	0	1
04:15			0	0	0	16:15			1	0	1
04:30			0	0	0	16:30			1	1	2
04:45			0	1 1	1 1	16:45			0 3	1 2	1 5
05:00			1	0	1	17:00			1	1	2
05:15			0	0	0	17:15			2	1	3
05:30			0	0	0	17:30			0	1	1
05:45			0 1	0	0 1	17:45			2 5	3 6	5 11
06:00			0	0	0	18:00			0	1	1
06:15			1	0	1	18:15			0	2	2
06:30			0	0	0	18:30			2	1	3
06:45			1 2	0	1 2	18:45			1 3	2 6	3 9
07:00			2	1	3	19:00			2	0	2
07:15			0	1	1	19:15			0	0	0
07:30			1	0	1	19:30			0	1	1
07:45			4 7	1 3	5 10	19:45			0 2	1 2	1 4
08:00			2	0	2	20:00			1	1	2
08:15			3	1	4	20:15			1	1	2
08:30			0	2	2	20:30			0	1	1
08:45			0 5	1 4	1 9	20:45			1 3	0 3	1 6
09:00			3	0	3	21:00			0	2	2
09:15			1	1	2	21:15			0	1	1
09:30			1	1	2	21:30			0	1	1
09:45			1 6	0 2	1 8	21:45			0	0 4	0 4
10:00			1	2	3	22:00			0	3	3
10:15			2	1	3	22:15			1	1	2
10:30			1	0	1	22:30			1	2	3
10:45			1 5	1 4	2 9	22:45			0 2	0 6	0 8
11:00			0	1	1	23:00			0	0	0
11:15			2	0	2	23:15			0	0	0
11:30			0	2	2	23:30			0	1	1
11:45			3 5	2 5	5 10	23:45			0	0 1	0 1
TOTALS			31	20	51	TOTALS			37	49	86
SPLIT %			60.8%	39.2%	37.2%	SPLIT %			43.0%	57.0%	62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	68	69	137

AM Peak Hour			07:30	11:15	11:45	PM Peak Hour			13:15	13:15	13:15
AM Pk Volume			10	6	14	PM Pk Volume			7	7	14
Pk Hr Factor			0.625	0.750	0.700	Pk Hr Factor			0.583	0.583	0.583
7 - 9 Volume	0	0	12	7	19	4 - 6 Volume	0	0	8	8	16
7 - 9 Peak Hour			07:30	07:45	07:45	4 - 6 Peak Hour			17:00	17:00	17:00
7 - 9 Pk Volume	0	0	10	4	13	4 - 6 Pk Volume	0	0	5	6	11
Pk Hr Factor	0.000	0.000	0.625	0.500	0.650	Pk Hr Factor	0.000	0.000	0.625	0.500	0.550

Prepared by NDS/ATD

VOLUME

Daystar W/o Concordia

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	60	54	114

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			2	0	2
00:15			0	0	0	12:15			0	0	0
00:30			0	0	0	12:30			1	0	1
00:45			0	0	0	12:45			1 4	0	1 4
01:00			0	0	0	13:00			1	0	1
01:15			0	0	0	13:15			0	0	0
01:30			0	0	0	13:30			0	0	0
01:45			0	0	0	13:45			1 2	0	1 2
02:00			0	0	0	14:00			0	0	0
02:15			0	0	0	14:15			0	0	0
02:30			0	0	0	14:30			2	2	4
02:45			0	0	0	14:45			1 3	1 3	2 6
03:00			0	0	0	15:00			0	1	1
03:15			0	0	0	15:15			0	1	1
03:30			0	0	0	15:30			2	2	4
03:45			0	0	0	15:45			2 4	1 5	3 9
04:00			0	0	0	16:00			1	0	1
04:15			0	0	0	16:15			2	0	2
04:30			0	0	0	16:30			0	0	0
04:45			1 1	1 1	2 2	16:45			1 4	2 2	3 6
05:00			1	0	1	17:00			1	1	2
05:15			0	0	0	17:15			0	2	2
05:30			0	0	0	17:30			0	1	1
05:45			0 1	0	0 1	17:45			1 2	1 5	2 7
06:00			0	0	0	18:00			0	2	2
06:15			0	0	0	18:15			0	2	2
06:30			0	0	0	18:30			2	1	3
06:45			0	0	0	18:45			2 4	1 6	3 10
07:00			1	0	1	19:00			2	1	3
07:15			0	0	0	19:15			1	3	4
07:30			1	0	1	19:30			0	2	2
07:45			6 8	3 3	9 11	19:45			1 4	0 6	1 10
08:00			3	0	3	20:00			2	0	2
08:15			5	1	6	20:15			1	1	2
08:30			1	0	1	20:30			1	2	3
08:45			2 11	1 2	3 13	20:45			0 4	0 3	0 7
09:00			1	3	4	21:00			0	0	0
09:15			1	1	2	21:15			0	0	0
09:30			1	0	1	21:30			0	0	0
09:45			1 4	1 5	2 9	21:45			0	1 1	1 1
10:00			1	0	1	22:00			1	1	2
10:15			0	1	1	22:15			0	0	0
10:30			0	0	0	22:30			0	1	1
10:45			0 1	0 1	0 2	22:45			0 1	2 4	2 5
11:00			0	1	1	23:00			0	0	0
11:15			0	2	2	23:15			0	0	0
11:30			2	2	4	23:30			0	0	0
11:45			0 2	0 5	0 7	23:45			0	2 2	2 2
TOTALS			28	17	45	TOTALS			32	37	69
SPLIT %			62.2%	37.8%	39.5%	SPLIT %			46.4%	53.6%	60.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	60	54	114

AM Peak Hour			07:30	08:15	07:30	PM Peak Hour			15:30	18:45	18:30
AM Pk Volume			15	5	19	PM Pk Volume			7	7	13
Pk Hr Factor			0.625	0.417	0.528	Pk Hr Factor			0.875	0.583	0.813
7 - 9 Volume	0	0	19	5	24	4 - 6 Volume	0	0	6	7	13
7 - 9 Peak Hour			07:30	07:30	07:30	4 - 6 Peak Hour			16:00	16:45	16:45
7 - 9 Pk Volume	0	0	15	4	19	4 - 6 Pk Volume	0	0	4	6	8
Pk Hr Factor	0.000	0.000	0.625	0.333	0.528	Pk Hr Factor	0.000	0.000	0.500	0.750	0.667

Prepared by NDS/ATD

VOLUME

Daystar W/o Concordia

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	67	71	138

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	1	1	12:00			2	1	3
00:15			0	0	0	12:15			1	3	4
00:30			0	0	0	12:30			1	0	1
00:45			0	0 1	0 1	12:45			1 5	1 5	2 10
01:00			0	0	0	13:00			1	5	6
01:15			0	0	0	13:15			1	1	2
01:30			0	0	0	13:30			1	2	3
01:45			0	0	0	13:45			1 4	1 9	2 13
02:00			0	0	0	14:00			1	1	2
02:15			0	0	0	14:15			0	0	0
02:30			0	0	0	14:30			1	1	2
02:45			0	0	0	14:45			2 4	4 6	6 10
03:00			0	0	0	15:00			0	0	0
03:15			0	0	0	15:15			1	0	1
03:30			0	0	0	15:30			0	1	1
03:45			0	0	0	15:45			1 2	0 1	1 3
04:00			0	0	0	16:00			0	0	0
04:15			0	0	0	16:15			3	1	4
04:30			0	0	0	16:30			0	1	1
04:45			1 1	1 1	2 2	16:45			1 4	1 3	2 7
05:00			1	0	1	17:00			0	0	0
05:15			0	0	0	17:15			2	2	4
05:30			0	0	0	17:30			1	2	3
05:45			0 1	0	0 1	17:45			1 4	1 5	2 9
06:00			0	0	0	18:00			0	2	2
06:15			1	0	1	18:15			1	2	3
06:30			0	0	0	18:30			0	0	0
06:45			1 2	0	1 2	18:45			2 3	2 6	4 9
07:00			1	0	1	19:00			0	0	0
07:15			1	0	1	19:15			0	4	4
07:30			0	1	1	19:30			0	1	1
07:45			3 5	0 1	3 6	19:45			1 1	1 6	2 7
08:00			1	1	2	20:00			1	1	2
08:15			5	2	7	20:15			0	0	0
08:30			3	2	5	20:30			0	2	2
08:45			2 11	1 6	3 17	20:45			0 1	1 4	1 5
09:00			0	1	1	21:00			1	1	2
09:15			3	2	5	21:15			1	1	2
09:30			2	0	2	21:30			0	0	0
09:45			1 6	0 3	1 9	21:45			1 3	1 3	2 6
10:00			1	0	1	22:00			1	1	2
10:15			0	1	1	22:15			0	0	0
10:30			1	0	1	22:30			0	0	0
10:45			0 2	0 1	0 3	22:45			0 1	1 2	1 3
11:00			3	1	4	23:00			0	3	3
11:15			1	0	1	23:15			0	1	1
11:30			1	2	3	23:30			0	0	0
11:45			2 7	0 3	2 10	23:45			0	1 5	1 5
TOTALS			35	16	51	TOTALS			32	55	87
SPLIT %			68.6%	31.4%	37.0%	SPLIT %			36.8%	63.2%	63.0%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	67	71	138

AM Peak Hour			07:45	08:00	07:45	PM Peak Hour			12:00	12:15	12:15
AM Pk Volume			12	6	17	PM Pk Volume			5	9	13
Pk Hr Factor			0.600	0.750	0.607	Pk Hr Factor			0.625	0.450	0.542
7 - 9 Volume	0	0	16	7	23	4 - 6 Volume	0	0	8	8	16
7 - 9 Peak Hour			07:45	08:00	07:45	4 - 6 Peak Hour			16:00	16:45	16:45
7 - 9 Pk Volume	0	0	12	6	17	4 - 6 Pk Volume	0	0	4	5	9
Pk Hr Factor	0.000	0.000	0.600	0.750	0.607	Pk Hr Factor	0.000	0.000	0.333	0.625	0.563

Prepared by NDS/ATD

VOLUME

Daystar W/o Concordia

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	66	67	133

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00			0	0	0	12:00			1	1	2
00:15			0	0	0	12:15			1	0	1
00:30			0	0	0	12:30			0	1	1
00:45			0	0	0	12:45			2 4	0 2	2 6
01:00			0	0	0	13:00			5	1	6
01:15			0	0	0	13:15			2	1	3
01:30			0	0	0	13:30			0	2	2
01:45			0	0	0	13:45			1 8	1 5	2 13
02:00			0	0	0	14:00			2	1	3
02:15			0	0	0	14:15			2	0	2
02:30			0	0	0	14:30			0	0	0
02:45			0	0	0	14:45			1 5	4 5	5 10
03:00			0	0	0	15:00			0	1	1
03:15			0	0	0	15:15			0	1	1
03:30			0	0	0	15:30			1	3	4
03:45			0	0	0	15:45			0 1	1 6	1 7
04:00			0	0	0	16:00			1	1	2
04:15			0	0	0	16:15			0	0	0
04:30			0	0	0	16:30			1	2	3
04:45			0	0	0	16:45			1 3	1 4	2 7
05:00			0	0	0	17:00			1	1	2
05:15			1	1	2	17:15			1	2	3
05:30			0	0	0	17:30			1	2	3
05:45			0 1	0 1	0 2	17:45			0 3	0 5	0 8
06:00			0	0	0	18:00			0	1	1
06:15			0	0	0	18:15			1	2	3
06:30			1	0	1	18:30			1	3	4
06:45			0 1	0	0 1	18:45			1 3	0 6	1 9
07:00			0	0	0	19:00			3	2	5
07:15			1	0	1	19:15			0	0	0
07:30			0	0	0	19:30			2	2	4
07:45			1 2	1 1	2 3	19:45			0 5	1 5	1 10
08:00			0	0	0	20:00			1	1	2
08:15			2	1	3	20:15			0	1	1
08:30			1	0	1	20:30			3	0	3
08:45			1 4	1 2	2 6	20:45			0 4	1 3	1 7
09:00			2	1	3	21:00			0	0	0
09:15			0	0	0	21:15			0	1	1
09:30			3	1	4	21:30			2	2	4
09:45			3 8	2 4	5 12	21:45			0 2	1 4	1 6
10:00			2	0	2	22:00			1	2	3
10:15			0	1	1	22:15			1	1	2
10:30			1	0	1	22:30			1	1	2
10:45			1 4	3 4	4 8	22:45			0 3	0 4	0 7
11:00			1	1	2	23:00			0	0	0
11:15			2	1	3	23:15			0	1	1
11:30			0	0	0	23:30			2	1	3
11:45			0 3	1 3	1 6	23:45			0 2	1 3	1 5
TOTALS			23	15	38	TOTALS			43	52	95
SPLIT %			60.5%	39.5%	28.6%	SPLIT %			45.3%	54.7%	71.4%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	66	67	133

AM Peak Hour			09:00	10:15	09:00	PM Peak Hour			12:30	14:45	12:45
AM Pk Volume			8	5	12	PM Pk Volume			9	9	13
Pk Hr Factor			0.667	0.417	0.600	Pk Hr Factor			0.450	0.563	0.542
7 - 9 Volume	0	0	6	3	9	4 - 6 Volume	0	0	6	9	15
7 - 9 Peak Hour			07:45	07:30	07:45	4 - 6 Peak Hour			16:30	16:30	16:30
7 - 9 Pk Volume	0	0	4	2	6	4 - 6 Pk Volume	0	0	4	6	10
Pk Hr Factor	0.000	0.000	0.500	0.500	0.500	Pk Hr Factor	0.000	0.000	1.000	0.750	0.833

Prepared by NDS/ATD

VOLUME

Daystar W/o Concordia

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_012

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	69	69	138

AM Period	NB	SB	EB		WB		TOTAL		PM Period	NB	SB	EB		WB		TOTAL	
00:00			0		0		0		12:00			1		3		4	
00:15			0		1		1		12:15			1		1		2	
00:30			0		0		0		12:30			0		0		0	
00:45			0		0	1	0	1	12:45			0	2	3	7	3	9
01:00			0		0		0		13:00			2		1		3	
01:15			0		0		0		13:15			1		4		5	
01:30			0		0		0		13:30			3		3		6	
01:45			0		0		0		13:45			0	6	2	10	2	16
02:00			0		0		0		14:00			2		1		3	
02:15			0		0		0		14:15			1		2		3	
02:30			0		0		0		14:30			3		2		5	
02:45			0		0		0		14:45			1	7	2	7	3	14
03:00			0		0		0		15:00			0		0		0	
03:15			0		0		0		15:15			4		2		6	
03:30			0		0		0		15:30			4		2		6	
03:45			0		0		0		15:45			1	9	1	5	2	14
04:00			0		0		0		16:00			2		3		5	
04:15			0		0		0		16:15			2		0		2	
04:30			0		0		0		16:30			2		4		6	
04:45			1	1	3	3	4	4	16:45			0	6	0	7	0	13
05:00			1		2		3		17:00			0		1		1	
05:15			0		0		0		17:15			0		1		1	
05:30			0		0		0		17:30			3		2		5	
05:45			0	1	0	2	0	3	17:45			0	3	2	6	2	9
06:00			0		0		0		18:00			2		1		3	
06:15			1		0		1		18:15			0		0		0	
06:30			1		1		2		18:30			0		0		0	
06:45			0	2	0	1	0	3	18:45			0	2	0	1	0	3
07:00			0		0		0		19:00			1		0		1	
07:15			0		0		0		19:15			1		1		2	
07:30			1		0		1		19:30			2		6		8	
07:45			0	1	0		0	1	19:45			1	5	1	8	2	13
08:00			0		0		0		20:00			2		1		3	
08:15			2		0		2		20:15			4		1		5	
08:30			0		0		0		20:30			0		2		2	
08:45			0	2	0		0	2	20:45			1	7	0	4	1	11
09:00			1		0		1		21:00			0		1		1	
09:15			1		0		1		21:15			0		1		1	
09:30			2		0		2		21:30			1		0		1	
09:45			1	5	0		1	5	21:45			0	1	0	2	0	3
10:00			2		1		3		22:00			0		0		0	
10:15			0		0		0		22:15			1		0		1	
10:30			1		0		1		22:30			0		1		1	
10:45			2	5	0	1	2	6	22:45			0	1	0	1	0	2
11:00			0		1		1		23:00			0		0		0	
11:15			0		0		0		23:15			0		0		0	
11:30			2		0		2		23:30			0		0		0	
11:45			1	3	2	3	3	6	23:45			0		0		0	
TOTALS				20		11		31	TOTALS				49		58		107
SPLIT %				64.5%		35.5%		22.5%	SPLIT %				45.8%		54.2%		77.5%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	69	69	138

AM Peak Hour			09:15	11:30	11:30	PM Peak Hour	15:15	12:45	15:15
AM Pk Volume			6	6	11	PM Pk Volume	11	11	19
Pk Hr Factor			0.750	0.500	0.688	Pk Hr Factor	0.688	0.688	0.792
7 - 9 Volume	0	0	3	0	3	4 - 6 Volume	0	0	9	13	22
7 - 9 Peak Hour			07:30		07:30	4 - 6 Peak Hour	16:00	16:00	16:00
7 - 9 Pk Volume	0	0	3	0	3	4 - 6 Pk Volume	0	0	6	7	13
Pk Hr Factor	0.000	0.000	0.375	0.000	0.375	Pk Hr Factor	0.000	0.000	0.750	0.438	0.542

Prepared by NDS/ATD

VOLUME

Ascension S/o Concordia

Day: Tuesday
Date: 4/14/2015

City: Irvine
Project #: CA15_1097_013

DAILY TOTALS	NB	SB	EB	WB	Total
	364	365	0	0	729

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	2			2	12:00	4	5			9
00:15	2	1			3	12:15	6	8			14
00:30	0	1			1	12:30	6	8			14
00:45	0 2	0 4			0 6	12:45	4 20	3 24			7 44
01:00	1	0			1	13:00	5	6			11
01:15	1	0			1	13:15	6	9			15
01:30	0	1			1	13:30	10	6			16
01:45	0 2	0 1			0 3	13:45	10 31	10 31			20 62
02:00	0	0			0	14:00	5	4			9
02:15	0	0			0	14:15	4	8			12
02:30	0	0			0	14:30	5	8			13
02:45	0	0			0	14:45	6 20	4 24			10 44
03:00	0	0			0	15:00	3	7			10
03:15	0	0			0	15:15	9	7			16
03:30	0	0			0	15:30	0	6			6
03:45	0	0			0	15:45	6 18	3 23			9 41
04:00	2	1			3	16:00	5	6			11
04:15	0	0			0	16:15	2	5			7
04:30	0	1			1	16:30	3	8			11
04:45	1 3	0 2			1 5	16:45	5 15	2 21			7 36
05:00	0	0			0	17:00	5	7			12
05:15	0	0			0	17:15	7	8			15
05:30	0	0			0	17:30	1	5			6
05:45	0	0			0	17:45	4 17	15 35			19 52
06:00	0	0			0	18:00	4	8			12
06:15	4	0			4	18:15	4	8			12
06:30	6	1			7	18:30	2	7			9
06:45	9 19	2 3			11 22	18:45	7 17	7 30			14 47
07:00	8	4			12	19:00	7	7			14
07:15	11	3			14	19:15	6	8			14
07:30	22	1			23	19:30	1	2			3
07:45	11 52	8 16			19 68	19:45	3 17	3 20			6 37
08:00	8	6			14	20:00	2	6			8
08:15	6	8			14	20:15	4	5			9
08:30	6	5			11	20:30	1	8			9
08:45	4 24	3 22			7 46	20:45	1 8	2 21			3 29
09:00	9	3			12	21:00	0	2			2
09:15	3	3			6	21:15	1	5			6
09:30	10	7			17	21:30	1	6			7
09:45	10 32	2 15			12 47	21:45	2 4	4 17			6 21
10:00	8	5			13	22:00	2	4			6
10:15	8	5			13	22:15	2	4			6
10:30	10	4			14	22:30	1	0			1
10:45	9 35	8 22			17 57	22:45	1 6	0 8			1 14
11:00	4	6			10	23:00	3	3			6
11:15	6	8			14	23:15	1	1			2
11:30	5	2			7	23:30	0	1			1
11:45	3 18	4 20			7 38	23:45	0 4	1 6			1 10
TOTALS	187	105			292	TOTALS	177	260			437
SPLIT %	64.0%	36.0%			40.1%	SPLIT %	40.5%	59.5%			59.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	364	365	0	0	729

AM Peak Hour	07:00	07:45			07:15	PM Peak Hour	13:00	17:45			13:00
AM Pk Volume	52	27			70	PM Pk Volume	31	38			62
Pk Hr Factor	0.591	0.844			0.761	Pk Hr Factor	0.775	0.633			0.775
7 - 9 Volume	76	38	0	0	114	4 - 6 Volume	32	56	0	0	88
7 - 9 Peak Hour	07:00	07:45			07:15	4 - 6 Peak Hour	16:30	17:00			17:00
7 - 9 Pk Volume	52	27	0	0	70	4 - 6 Pk Volume	20	35	0	0	52
Pk Hr Factor	0.591	0.844	0.000	0.000	0.761	Pk Hr Factor	0.714	0.583	0.000	0.000	0.684

Prepared by NDS/ATD

VOLUME

Ascension S/o Concordia

Day: Wednesday
Date: 4/15/2015

City: Irvine
Project #: CA15_1097_013

DAILY TOTALS	NB	SB	EB	WB	Total
	337	335	0	0	672

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	0	0			0	12:00	7	12			19
00:15	0	0			0	12:15	3	4			7
00:30	1	2			3	12:30	2	2			4
00:45	1 2	0 2			1 4	12:45	7 19	7 25			14 44
01:00	0	0			0	13:00	4	2			6
01:15	1	0			1	13:15	4	6			10
01:30	0	0			0	13:30	7	3			10
01:45	0 1	1 1			1 2	13:45	11 26	14 25			25 51
02:00	0	0			0	14:00	3	4			7
02:15	0	1			1	14:15	6	5			11
02:30	0	0			0	14:30	7	10			17
02:45	0	0 1			0 1	14:45	8 24	7 26			15 50
03:00	0	0			0	15:00	5	7			12
03:15	0	0			0	15:15	7	10			17
03:30	0	0			0	15:30	4	9			13
03:45	0	0			0	15:45	3 19	7 33			10 52
04:00	0	0			0	16:00	5	4			9
04:15	0	0			0	16:15	8	3			11
04:30	1	1			2	16:30	7	4			11
04:45	1 2	1 2			2 4	16:45	4 24	7 18			11 42
05:00	0	0			0	17:00	7	13			20
05:15	0	0			0	17:15	4	5			9
05:30	0	0			0	17:30	5	7			12
05:45	0	0			0	17:45	3 19	13 38			16 57
06:00	0	0			0	18:00	4	7			11
06:15	1	0			1	18:15	6	10			16
06:30	6	0			6	18:30	3	7			10
06:45	3 10	0			3 10	18:45	2 15	5 29			7 44
07:00	6	1			7	19:00	5	11			16
07:15	8	2			10	19:15	5	2			7
07:30	24	1			25	19:30	3	4			7
07:45	19 57	9 13			28 70	19:45	5 18	2 19			7 37
08:00	4	4			8	20:00	2	6			8
08:15	6	3			9	20:15	4	7			11
08:30	3	3			6	20:30	0	6			6
08:45	5 18	1 11			6 29	20:45	3 9	6 25			9 34
09:00	6	3			9	21:00	3	3			6
09:15	7	3			10	21:15	2	6			8
09:30	12	9			21	21:30	0	7			7
09:45	7 32	3 18			10 50	21:45	2 7	3 19			5 26
10:00	5	1			6	22:00	0	4			4
10:15	2	1			3	22:15	0	1			1
10:30	5	6			11	22:30	2	3			5
10:45	2 14	0 8			2 22	22:45	0 2	2 10			2 12
11:00	5	2			7	23:00	0	0			0
11:15	6	0			6	23:15	1	2			3
11:30	3	7			10	23:30	0	0			0
11:45	4 18	1 10			5 28	23:45	0 1	0 2			0 3
TOTALS	154	66			220	TOTALS	183	269			452
SPLIT %	70.0%	30.0%			32.7%	SPLIT %	40.5%	59.5%			67.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	337	335	0	0	672

AM Peak Hour	07:00	11:30			07:15	PM Peak Hour	13:30	17:00			14:30
AM Pk Volume	57	24			71	PM Pk Volume	27	38			61
Pk Hr Factor	0.594	0.500			0.634	Pk Hr Factor	0.614	0.731			0.897
7 - 9 Volume	75	24	0	0	99	4 - 6 Volume	43	56	0	0	99
7 - 9 Peak Hour	07:00	07:45			07:15	4 - 6 Peak Hour	16:15	17:00			17:00
7 - 9 Pk Volume	57	19	0	0	71	4 - 6 Pk Volume	26	38	0	0	57
Pk Hr Factor	0.594	0.528	0.000	0.000	0.634	Pk Hr Factor	0.813	0.731	0.000	0.000	0.713

Prepared by NDS/ATD

VOLUME

Ascension S/o Concordia

Day: Thursday
Date: 4/16/2015

City: Irvine
Project #: CA15_1097_013

DAILY TOTALS	NB	SB	EB	WB	Total
	334	348	0	0	682

AM Period	NB		SB		EB		WB		TOTAL
00:00	0		0						0
00:15	0		1						1
00:30	0		0						0
00:45	0		0	1					0 1
01:00	0		0						0
01:15	0		0						0
01:30	0		0						0
01:45	0		0						0
02:00	0		0						0
02:15	0		0						0
02:30	0		0						0
02:45	0		0						0
03:00	0		0						0
03:15	0		0						0
03:30	0		0						0
03:45	0		0						0
04:00	0		0						0
04:15	0		0						0
04:30	1		1						2
04:45	0	1	0	1					0 2
05:00	1		0						1
05:15	0		0						0
05:30	1		1						2
05:45	2	4	0	1					2 5
06:00	1		1						2
06:15	3		0						3
06:30	8		0						8
06:45	10	22	3	4					13 26
07:00	5		3						8
07:15	9		2						11
07:30	17		5						22
07:45	10	41	4	14					14 55
08:00	7		7						14
08:15	14		9						23
08:30	7		3						10
08:45	8	36	2	21					10 57
09:00	5		1						6
09:15	6		2						8
09:30	6		3						9
09:45	3	20	2	8					5 28
10:00	5		3						8
10:15	4		0						4
10:30	4		7						11
10:45	5	18	2	12					7 30
11:00	9		6						15
11:15	1		6						7
11:30	5		5						10
11:45	6	21	3	20					9 41
TOTALS	163		82						245
SPLIT %	66.5%		33.5%						35.9%

PM Period	NB		SB		EB		WB		TOTAL
12:00	10		5						15
12:15	6		7						13
12:30	8		5						13
12:45	5	29	5	22					10 51
13:00	4		4						8
13:15	5		8						13
13:30	8		4						12
13:45	7	24	8	24					15 48
14:00	4		5						9
14:15	6		6						12
14:30	7		8						15
14:45	6	23	8	27					14 50
15:00	9		8						17
15:15	4		12						16
15:30	4		5						9
15:45	1	18	7	32					8 50
16:00	4		9						13
16:15	5		13						18
16:30	6		5						11
16:45	3	18	2	29					5 47
17:00	9		5						14
17:15	5		7						12
17:30	4		11						15
17:45	2	20	7	30					9 50
18:00	3		6						9
18:15	1		12						13
18:30	4		6						10
18:45	5	13	12	36					17 49
19:00	4		5						9
19:15	1		2						3
19:30	3		6						9
19:45	3	11	6	19					9 30
20:00	1		3						4
20:15	1		6						7
20:30	1		3						4
20:45	3	6	11	23					14 29
21:00	3		4						7
21:15	2		3						5
21:30	1		2						3
21:45	1	7	1	10					2 17
22:00	0		3						3
22:15	0		1						1
22:30	0		1						1
22:45	0		0	5					0 5
23:00	2		5						7
23:15	0		1						1
23:30	0		3						3
23:45	0	2	0	9					0 11
TOTALS	171		266						437
SPLIT %	39.1%		60.9%						64.1%

DAILY TOTALS	NB	SB	EB	WB	Total
	334	348	0	0	682

AM Peak Hour	07:30	07:30			07:30
AM Pk Volume	48	25			73
Pk Hr Factor	0.706	0.694			0.793
7 - 9 Volume	77	35	0	0	112
7 - 9 Peak Hour	07:30	07:30			07:30
7 - 9 Pk Volume	48	25	0	0	73
Pk Hr Factor	0.706	0.694	0.000	0.000	0.793

PM Peak Hour	12:00	14:30			14:30
PM Pk Volume	29	36			62
Pk Hr Factor	0.725	0.750			0.912
4 - 6 Volume	38	59	0	0	97
4 - 6 Peak Hour	16:15	17:00			17:00
4 - 6 Pk Volume	23	30	0	0	50
Pk Hr Factor	0.639	0.682	0.000	0.000	0.833

Prepared by NDS/ATD

VOLUME

Ascension S/o Concordia

Day: Saturday
Date: 4/18/2015

City: Irvine
Project #: CA15_1097_013

DAILY TOTALS	NB	SB	EB	WB	Total
	308	301	0	0	609

AM Period	NB		SB		EB		WB		TOTAL
00:00	3		1						4
00:15	1		1						2
00:30	0		3						3
00:45	0	4	1	6					1 10
01:00	0		1						1
01:15	1		1						2
01:30	0		0						0
01:45	2	3	3	5					5 8
02:00	1		0						1
02:15	0		1						1
02:30	0		0						0
02:45	0	1	0	1					0 2
03:00	0		0						0
03:15	1		0						1
03:30	0		0						0
03:45	0	1	1	1					1 2
04:00	0		0						0
04:15	0		0						0
04:30	0		0						0
04:45	0		0						0
05:00	0		1						1
05:15	1		0						1
05:30	1		0						1
05:45	1	3	1	2					2 5
06:00	0		0						0
06:15	1		0						1
06:30	0		0						0
06:45	2	3	0						2 3
07:00	2		0						2
07:15	1		1						2
07:30	6		1						7
07:45	3	12	1	3					4 15
08:00	2		2						4
08:15	5		1						6
08:30	5		4						9
08:45	8	20	4	11					12 31
09:00	5		3						8
09:15	3		3						6
09:30	9		3						12
09:45	3	20	2	11					5 31
10:00	5		4						9
10:15	1		3						4
10:30	11		4						15
10:45	3	20	1	12					4 32
11:00	4		7						11
11:15	7		0						7
11:30	6		4						10
11:45	1	18	3	14					4 32
TOTALS	105		66						171
SPLIT %	61.4%		38.6%						28.1%

PM Period	NB		SB		EB		WB		TOTAL
12:00	7		7						14
12:15	8		4						12
12:30	8		5						13
12:45	8	31	6	22					14 53
13:00	7		7						14
13:15	1		6						7
13:30	2		5						7
13:45	2	12	5	23					7 35
14:00	5		7						12
14:15	5		5						10
14:30	7		8						15
14:45	6	23	12	32					18 55
15:00	4		8						12
15:15	5		6						11
15:30	6		7						13
15:45	4	19	1	22					5 41
16:00	5		3						8
16:15	2		5						7
16:30	6		2						8
16:45	7	20	8	18					15 38
17:00	8		6						14
17:15	1		3						4
17:30	4		5						9
17:45	5	18	6	20					11 38
18:00	9		8						17
18:15	8		4						12
18:30	3		7						10
18:45	3	23	9	28					12 51
19:00	7		4						11
19:15	6		8						14
19:30	1		3						4
19:45	4	18	2	17					6 35
20:00	3		6						9
20:15	1		1						2
20:30	4		5						9
20:45	1	9	4	16					5 25
21:00	2		1						3
21:15	1		4						5
21:30	4		3						7
21:45	0	7	6	14					6 21
22:00	8		6						14
22:15	7		6						13
22:30	3		3						6
22:45	2	20	4	19					6 39
23:00	1		1						2
23:15	0		0						0
23:30	0		1						1
23:45	2	3	2	4					4 7
TOTALS	203		235						438
SPLIT %	46.3%		53.7%						71.9%

DAILY TOTALS	NB	SB	EB	WB	Total
	308	301	0	0	609

AM Peak Hour	08:45	11:45			11:45
AM Pk Volume	25	19			43
Pk Hr Factor	0.694	0.679			0.768
7 - 9 Volume	32	14	0	0	46
7 - 9 Peak Hour	08:00	08:00			08:00
7 - 9 Pk Volume	20	11	0	0	31
Pk Hr Factor	0.625	0.688	0.000	0.000	0.646

PM Peak Hour	12:00	14:30			14:30
PM Pk Volume	31	34			56
Pk Hr Factor	0.969	0.708			0.778
4 - 6 Volume	38	38	0	0	76
4 - 6 Peak Hour	16:15	16:45			16:15
4 - 6 Pk Volume	23	22	0	0	44
Pk Hr Factor	0.719	0.688	0.000	0.000	0.733

Prepared by NDS/ATD

VOLUME

Ascension S/o Concordia

Day: Sunday
Date: 4/19/2015

City: Irvine
Project #: CA15_1097_013

DAILY TOTALS	NB	SB	EB	WB	Total
	269	271	0	0	540

AM Period	NB	SB	EB	WB	TOTAL	PM Period	NB	SB	EB	WB	TOTAL
00:00	2	1			3	12:00	1	4			5
00:15	1	1			2	12:15	4	12			16
00:30	0	2			2	12:30	6	4			10
00:45	0	1			1	12:45	4	5			9
	3	5			8		15	25			40
01:00	1	1			2	13:00	5	5			10
01:15	1	1			2	13:15	4	6			10
01:30	0	1			1	13:30	4	0			4
01:45	0	1			1	13:45	4	2			6
	2	4			6		17	13			30
02:00	0	0			0	14:00	1	5			6
02:15	0	0			0	14:15	5	9			14
02:30	1	1			2	14:30	8	5			13
02:45	0	0			0	14:45	7	11			18
	1	1			2		21	30			51
03:00	0	0			0	15:00	12	11			23
03:15	0	0			0	15:15	6	4			10
03:30	0	0			0	15:30	3	9			12
03:45	0	0			0	15:45	2	8			10
	0	0			0		23	32			55
04:00	0	0			0	16:00	6	4			10
04:15	0	1			1	16:15	4	10			14
04:30	0	0			0	16:30	5	6			11
04:45	1	1			2	16:45	8	3			11
	1	2			3		23	23			46
05:00	0	0			0	17:00	4	6			10
05:15	0	0			0	17:15	6	8			14
05:30	0	0			0	17:30	2	2			4
05:45	0	0			0	17:45	11	6			17
	0	0			0		23	22			45
06:00	0	0			0	18:00	1	5			6
06:15	0	0			0	18:15	4	6			10
06:30	1	1			2	18:30	3	3			6
06:45	0	0			0	18:45	3	4			7
	1	1			2		11	18			29
07:00	1	1			2	19:00	2	3			5
07:15	0	0			0	19:15	1	4			5
07:30	3	0			3	19:30	1	4			5
07:45	2	1			3	19:45	3	4			7
	6	2			8		7	15			22
08:00	7	1			8	20:00	2	3			5
08:15	4	1			5	20:15	1	2			3
08:30	4	2			6	20:30	3	2			5
08:45	4	2			6	20:45	0	3			3
	19	6			25		6	10			16
09:00	3	1			4	21:00	2	1			3
09:15	8	2			10	21:15	1	2			3
09:30	4	2			6	21:30	2	0			2
09:45	5	2			7	21:45	1	3			4
	20	7			27		6	6			12
10:00	6	1			7	22:00	1	5			6
10:15	9	4			13	22:15	5	1			6
10:30	4	3			7	22:30	1	3			4
10:45	8	5			13	22:45	1	1			2
	27	13			40		8	10			18
11:00	7	1			8	23:00	1	4			5
11:15	10	8			18	23:15	1	0			1
11:30	4	4			8	23:30	1	0			1
11:45	5	9			14	23:45	0	0			0
	26	22			48		3	4			7
TOTALS	106	63			169	TOTALS	163	208			371
SPLIT %	62.7%	37.3%			31.3%	SPLIT %	43.9%	56.1%			68.7%

DAILY TOTALS	NB	SB	EB	WB	Total
	269	271	0	0	540

AM Peak Hour	10:30	11:30			11:00	PM Peak Hour	14:30	14:15			14:15
AM Pk Volume	29	29			48	PM Pk Volume	33	36			68
Pk Hr Factor	0.725	0.604			0.667	Pk Hr Factor	0.688	0.818			0.739
7 - 9 Volume	25	8	0	0	33	4 - 6 Volume	46	45	0	0	91
7 - 9 Peak Hour	08:00	08:00			08:00	4 - 6 Peak Hour	16:00	16:15			16:00
7 - 9 Pk Volume	19	6	0	0	25	4 - 6 Pk Volume	23	25	0	0	46
Pk Hr Factor	0.679	0.750	0.000	0.000	0.781	Pk Hr Factor	0.719	0.625	0.000	0.000	0.821

Prepared by National Data & Surveying Services

MAX QUEUE STUDY

Location: Turtle Rock (West Gate)
City: Irvine

TIME	TUESDAY, APRIL 14, 2015				WEDNESDAY, APRIL 15, 2015				THURSDAY, APRIL 16, 2015				SATURDAY, APRIL 18, 2015				SUNDAY, APRIL 19,3015			
	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus
	Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0								
7:05 AM	0	0	0	0	1	0	0	0	1	0	0	1								
7:10 AM	0	0	0	0	1	0	0	1	1	0	0	1								
7:15 AM	0	0	0	0	0	0	0	1	1	0	0	1								
7:20 AM	0	0	0	0	1	0	0	1	1	0	0	1								
7:25 AM	0	0	0	0	2	0	0	1	1	0	0	1								
7:30 AM	0	0	0	0	1	0	0	1	1	0	0	1								
7:35 AM	0	1	0	0	1	0	0	2	1	0	0	1								
7:40 AM	0	0	0	0	0	0	0	2	1	0	0	2								
7:45 AM	0	0	0	0	1	0	0	1	1	2	0	1								
7:50 AM	0	0	0	0	1	0	0	2	0	0	0	1								
7:55 AM	0	1	0	0	1	3	0	1	0	0	0	1								
8:00 AM	0	0	0	0	2	0	0	1	1	0	0	1								
8:05 AM	0	0	0	0	1	0	0	1	0	0	0	1								
8:10 AM	0	1	0	0	1	0	0	1	0	0	0	1								
8:15 AM	0	0	0	0	1	0	0	1	1	0	0	1								
8:20 AM	0	0	0	0	0	0	0	1	1	0	0	2								
8:25 AM	0	0	0	0	1	0	0	1	1	0	0	1								
8:30 AM	0	0	0	0	0	0	0	0	2	0	0	1								
8:35 AM	1	0	0	0	0	0	0	1	1	0	0	1								
8:40 AM	0	0	0	0	0	0	0	1	1	0	0	2								
8:45 AM	0	0	0	0	0	0	0	1	1	0	0	2								
8:50 AM	0	0	0	0	2	0	0	1	2	0	0	1								
8:55 AM	0	0	0	0	2	0	0	1	1	0	0	1								
9:00 AM	0	0	0	0	2	0	0	0	1	0	0	1								
9:05 AM	0	0	0	0	0	0	0	0	2	0	0	1								
9:10 AM	0	0	0	0	1	0	0	1	1	0	0	1								
9:15 AM	0	0	0	0	2	0	0	1	1	0	0	0								
9:20 AM	0	0	0	0	1	0	0	1	1	2	0	1								
9:25 AM	0	0	0	0	1	0	0	1	1	0	0	0								
9:30 AM	1	0	0	0	0	0	0	2	2	0	0	1								
9:35 AM	0	0	0	0	0	0	0	1	0	0	0	1								
9:40 AM	0	0	0	0	1	0	0	1	1	0	0	1								
9:45 AM	0	0	0	0	1	0	0	1	2	0	0	1								
9:50 AM	0	0	0	0	0	0	0	1	0	0	0	0								
9:55 AM	0	0	0	0	1	0	0	0	1	0	0	1								
2:00 PM																	3	1	1	0
2:05 PM																	1	1	1	0
2:10 PM																	1	1	1	0
2:15 PM																	0	0	0	0
2:20 PM																	3	1	2	0
2:25 PM																	2	0	1	0
2:30 PM																	1	1	1	1
2:35 PM																	1	1	1	1
2:40 PM																	1	0	1	0
2:45 PM																	1	2	2	0
2:50 PM																	0	0	0	0
2:55 PM																	1	1	1	0
3:00 PM																	1	0	1	0
3:05 PM																	1	0	1	0
3:10 PM																	1	1	1	1
3:15 PM																	0	0	0	0
3:20 PM																	0	2	0	0
3:25 PM																	0	1	0	0
3:30 PM																	0	0	0	0
3:35 PM																	2	0	2	0
3:40 PM																	1	0	1	0
3:45 PM																	0	0	0	0
3:50 PM																	0	1	0	0
3:55 PM																	2	2	0	0

Prepared by National Data & Surveying Services

MAX QUEUE STUDY

Location: Turtle Rock (West Gate)
City: Irvine

TIME	TUESDAY, APRIL 14, 2015				WEDNESDAY, APRIL 15, 2015				THURSDAY, APRIL 16, 2015				SATURDAY, APRIL 18, 2015				SUNDAY, APRIL 19,3015			
	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus	INBOUND QUEUE Guard Shack & Beyond			OUTBOUND Gate to Campus
	Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined		Guest	Student/ Resident	Combined	
4:00 PM	1	0	0	0	1	0	0	1	1	0	0	1								
4:05 PM	1	0	0	0	1	0	0	2	1	0	0	1								
4:10 PM	1	0	0	0	1	0	0	1	0	0	0	2								
4:15 PM	1	0	0	0	1	0	0	1	1	0	0	1								
4:20 PM	1	0	0	0	0	0	0	1	0	0	0	1								
4:25 PM	1	0	0	0	1	0	0	2	0	0	0	1								
4:30 PM	0	0	0	0	1	0	0	1	2	0	0	2								
4:35 PM	1	0	0	0	1	0	0	2	1	0	0	1								
4:40 PM	1	0	0	0	0	0	0	1	0	0	0	1								
4:45 PM	2	0	0	0	1	2	0	1	1	0	0	1								
4:50 PM	1	0	0	0	2	0	0	1	2	0	0	2								
4:55 PM	1	0	0	0	1	0	0	2	2	0	0	1								
5:00 PM	2	0	0	0	1	0	0	2	1	0	0	1								
5:05 PM	1	0	0	0	2	0	0	2	2	0	0	1								
5:10 PM	2	0	0	0	1	0	0	1	2	0	0	1								
5:15 PM	2	0	0	0	1	0	0	2	2	0	0	1								
5:20 PM	1	0	0	0	1	2	0	1	1	0	0	1								
5:25 PM	1	0	0	0	1	0	0	1	1	0	0	1								
5:30 PM	1	0	0	0	2	0	0	1	0	0	0	1								
5:35 PM	1	0	0	0	1	0	0	1	1	0	0	2								
5:40 PM	0	0	0	0	2	0	0	4	1	0	0	0								
5:45 PM	3	0	0	0	2	0	0	1	1	0	0	1								
5:50 PM	1	0	0	0	2	0	0	1	0	0	0	1								
5:55 PM	1	0	0	0	2	0	0	1	0	3	0	1								
6:00 PM	1	0	0	0	0	0	0	2	1	0	0	1	1	0	0	0				
6:05 PM	2	0	0	0	0	0	0	2	2	0	0	1	1	0	0	0				
6:10 PM	1	0	0	0	0	0	0	1	2	0	0	0	1	0	0	0				
6:15 PM	1	0	0	0	1	0	0	1	1	0	0	1	2	0	0	0				
6:20 PM	1	0	0	0	0	0	0	1	2	0	0	1	1	0	0	0				
6:25 PM	2	0	0	0	1	2	0	1	3	0	0	1	1	0	0	0				
6:30 PM	1	0	0	0	2	0	0	1	2	0	0	1	1	0	0	0				
6:35 PM	1	0	0	0	0	0	0	1	0	0	0	1	3	0	0	0				
6:40 PM	2	0	0	0	2	0	0	1	1	0	0	1	1	0	0	0				
6:45 PM	1	0	0	0	2	0	0	2	4	0	0	1	3	0	0	3				
6:50 PM	1	0	0	0	1	0	0	2	1	2	0	1	5	0	0	0				
6:55 PM	3	0	0	0	1	0	0	1	1	0	0	1	3	0	0	1				
7:00 PM													2	0	0	0				
7:05 PM													2	0	0	0				
7:10 PM													2	0	0	3				
7:15 PM													2	0	0	5				
7:20 PM													1	0	0	0				
7:25 PM													1	0	0	0				
7:30 PM													0	0	0	0				
7:35 PM													1	0	0	0				
7:40 PM													0	0	0	0				
7:45 PM													1	0	0	0				
7:50 PM													1	0	0	0				
7:55 PM													0	0	0	0				
8:00 PM													2	0	0	0				
8:05 PM													0	0	0	0				
8:10 PM													1	0	0	0				
8:15 PM													1	0	0	0				
8:20 PM													0	0	0	0				
8:25 PM													2	0	0	0				
8:30 PM													0	0	0	1				
8:35 PM													0	0	0	4				
8:40 PM													1	0	0	2				
8:45 PM													0	0	0	0				
8:50 PM													1	0	0	0				
8:55 PM													1	0	0	0				
9:00 PM													0	0	0	1				
9:05 PM													0	0	0	0				
9:10 PM													0	0	0	0				
9:15 PM													0	0	0	0				
9:20 PM													1	2	0	2				
9:25 PM													0	0	0	2				
9:30 PM													1	0	0	4				
9:35 PM													0	0	0	0				
9:40 PM													0	0	0	2				
9:45 PM													1	0	0	0				
9:50 PM													0	0	0	0				
9:55 PM													0	0	0	0				

Prepared by National Data & Surveying Services

MAX QUEUE STUDY

Location: Ridgeline/Concordia (East Gate)
City: Irvine

TUESDAY, APRIL 14, 2015

TIME	INBOUND QUEUE					OUTBOUND QUEUE		
	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension
	Guest	Student/ Resident	Start Time	End Time	Total # of Cars			
7:00 AM	1	0	0:00	0:00	0	1	0	0
7:05 AM	3	0	0:00	0:00	0	1	0	0
7:10 AM	3	0	0:00	0:00	0	1	0	0
7:15 AM	1	1	0:00	0:00	0	2	0	0
7:20 AM	2	0	0:00	0:00	0	1	0	0
7:25 AM	7	0	0:00	0:00	0	2	0	0
7:30 AM	3	0	0:00	0:00	0	3	0	0
7:35 AM	2	0	0:00	0:00	0	2	0	0
7:40 AM	1	0	0:00	0:00	0	2	0	0
7:45 AM	1	0	0:00	0:00	0	3	0	0
7:50 AM	1	0	0:00	0:00	0	4	0	0
7:55 AM	1	0	0:00	0:00	0	2	0	0
8:00 AM	1	0	0:00	0:00	0	1	0	0
8:05 AM	1	0	0:00	0:00	0	4	0	0
8:10 AM	1	0	0:00	0:00	0	4	0	0
8:15 AM	2	0	0:00	0:00	0	3	0	0
8:20 AM	1	0	0:00	0:00	0	2	0	0
8:25 AM	4	0	0:00	0:00	0	2	0	0
8:30 AM	1	0	0:00	0:00	0	1	0	0
8:35 AM	2	0	0:00	0:00	0	1	0	0
8:40 AM	2	0	0:00	0:00	0	1	0	0
8:45 AM	5	0	0:00	0:00	0	4	0	0
8:50 AM	5	0	0:00	0:00	0	2	0	0
8:55 AM	4	0	0:00	0:00	0	3	0	0
9:00 AM	1	0	0:00	0:00	0	3	0	0
9:05 AM	5	0	0:00	0:00	0	2	0	0
9:10 AM	2	0	0:00	0:00	0	2	0	0
9:15 AM	1	0	0:00	0:00	0	1	0	0
9:20 AM	3	0	0:00	0:00	0	1	0	0
9:25 AM	2	3	0:00	0:00	0	1	0	0
9:30 AM	1	0	0:00	0:00	0	3	0	0
9:35 AM	1	0	0:00	0:00	0	2	0	0
9:40 AM	1	0	0:00	0:00	0	1	0	0
9:45 AM	1	0	0:00	0:00	0	2	0	0
9:50 AM	1	0	0:00	0:00	0	2	0	0
9:55 AM	2	1	0:00	0:00	0	2	0	0

WEDNESDAY, APRIL 15, 2015

TIME	INBOUND QUEUE					OUTBOUND QUEUE		
	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension
	Guest	Student/ Resident	Start Time	End Time	Total # of Cars			
7:00 AM	0	0	0:00	0:00	0	0	0	0
7:05 AM	2	0	0:00	0:00	0	1	0	0
7:10 AM	1	0	0:00	0:00	0	1	0	0
7:15 AM	5	0	0:00	0:00	0	1	0	0
7:20 AM	4	0	0:00	0:00	0	1	0	0
7:25 AM	2	0	0:00	0:00	0	1	0	0
7:30 AM	3	0	0:00	0:00	0	3	0	0
7:35 AM	3	0	0:00	0:00	0	1	0	0
7:40 AM	2	0	0:00	0:00	0	2	0	0
7:45 AM	1	0	0:00	0:00	0	2	0	0
7:50 AM	1	0	0:00	0:00	0	4	0	0
7:55 AM	1	0	0:00	0:00	0	1	0	0
8:00 AM	1	0	0:00	0:00	0	2	0	0
8:05 AM	1	0	0:00	0:00	0	1	0	0
8:10 AM	2	0	0:00	0:00	0	1	0	0
8:15 AM	1	0	0:00	0:00	0	1	0	0
8:20 AM	2	0	0:00	0:00	0	3	0	0
8:25 AM	2	2	0:00	0:00	0	4	0	0
8:30 AM	3	0	0:00	0:00	0	1	0	0
8:35 AM	2	0	0:00	0:00	0	1	0	0
8:40 AM	1	0	0:00	0:00	0	2	0	0
8:45 AM	1	0	0:00	0:00	0	3	0	0
8:50 AM	1	0	0:00	0:00	0	3	0	0
8:55 AM	2	0	0:00	0:00	0	3	0	0
9:00 AM	2	0	0:00	0:00	0	1	0	0
9:05 AM	1	0	0:00	0:00	0	1	0	0
9:10 AM	3	0	0:00	0:00	0	1	0	0
9:15 AM	2	0	0:00	0:00	0	2	0	0
9:20 AM	2	0	0:00	0:00	0	4	0	0
9:25 AM	2	0	0:00	0:00	0	3	0	0
9:30 AM	3	0	0:00	0:00	0	5	0	0
9:35 AM	4	0	0:00	0:00	0	2	0	0
9:40 AM	1	0	0:00	0:00	0	5	0	0
9:45 AM	2	0	0:00	0:00	0	1	0	0
9:50 AM	1	0	0:00	0:00	0	2	0	0
9:55 AM	2	0	0:00	0:00	0	0	0	0

THURSDAY, APRIL 16, 2015

TIME	INBOUND QUEUE					OUTBOUND QUEUE		
	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension
	Guest	Student/ Resident	Start Time	End Time	Total # of Cars			
7:00 AM	1	0	0:00	0:00	0	1	0	0
7:05 AM	1	0	0:00	0:00	0	1	0	0
7:10 AM	2	0	0:00	0:00	0	1	0	0
7:15 AM	1	0	0:00	0:00	0	1	0	0
7:20 AM	3	0	0:00	0:00	0	1	0	0
7:25 AM	2	0	0:00	0:00	0	1	0	0
7:30 AM	1	0	0:00	0:00	0	1	0	0
7:35 AM	1	0	0:00	0:00	0	2	0	0
7:40 AM	1	0	0:00	0:00	0	3	0	0
7:45 AM	1	0	0:00	0:00	0	1	0	0
7:50 AM	1	0	0:00	0:00	0	3	0	0
7:55 AM	1	0	0:00	0:00	0	1	0	0
8:00 AM	3	0	0:00	0:00	0	1	0	0
8:05 AM	1	0	0:00	0:00	0	2	0	0
8:10 AM	1	0	0:00	0:00	0	1	0	0
8:15 AM	4	0	0:00	0:00	0	3	0	0
8:20 AM	3	0	0:00	0:00	0	3	0	0
8:25 AM	1	0	0:00	0:00	0	3	0	0
8:30 AM	1	0	0:00	0:00	0	1	0	0
8:35 AM	2	0	0:00	0:00	0	2	0	0
8:40 AM	2	0	0:00	0:00	0	1	0	0
8:45 AM	2	0	0:00	0:00	0	5	0	0
8:50 AM	4	0	0:00	0:00	0	3	0	0
8:55 AM	2	0	0:00	0:00	0	2	0	0
9:00 AM	3	0	0:00	0:00	0	1	0	0
9:05 AM	2	0	0:00	0:00	0	2	0	0
9:10 AM	2	0	0:00	0:00	0	1	0	0
9:15 AM	2	0	0:00	0:00	0	2	0	0
9:20 AM	2	0	0:00	0:00	0	1	0	0
9:25 AM	2	0	0:00	0:00	0	1	0	0
9:30 AM	3	0	0:00	0:00	0	1	0	0
9:35 AM	2	0	0:00	0:00	0	1	0	0
9:40 AM	1	0	0:00	0:00	0	2	0	0
9:45 AM	1	0	0:00	0:00	0	1	0	0
9:50 AM	4	0	0:00	0:00	0	1	0	0
9:55 AM	2	0	0:00	0:00	0	1	0	0

SATURDAY, APRIL 18, 2015

TIME	INBOUND QUEUE					OUTBOUND QUEUE		
	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension
	Guest	Student/ Resident	Start Time	End Time	Total # of Cars			

SUNDAY, APRIL 19,3015

TIME	INBOUND QUEUE					OUTBOUND QUEUE		
	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension
	Guest	Student Resident	Start Time	End Time	Total # of Cars			
2:00 PM	5	2	0:00	0:00	0	2	0	0
2:05 PM	6	1	0:00	0:00	0	2	0	0
2:10 PM	4	2	0:00	0:00	0	3	0	0
2:15 PM	6	1	0:00	0:00	0	3	0	0
2:20 PM	3	1	0:00	0:00	0	2	0	0
2:25 PM	6	0	0:00	0:00	0	3	0	0
2:30 PM	9	1	14:31	14:32	5	2	0	0
2:35 PM	5	1	0:00	0:00	0	2	0	0
2:40 PM	8	0	0:00	0:00	0	3	0	0
2:45 PM	3	1	0:00	0:00	0	2	0	0
2:50 PM	8	2	0:00	0:00	0	4	0	0
2:55 PM	5	0	0:00	0:00	0	1	0	0
3:00 PM	2	2	0:00	0:00	0	2	0	0
3:05 PM	6	1	0:00	0:00	0	2	0	0
3:10 PM	3	0	0:00	0:00	0	1	0	0
3:15 PM	2	0	0:00	0:00	0	2	0	0
3:20 PM	1	0	0:00	0:00	0	3	0	0
3:25 PM	4	0	0:00	0:00	0	1	0	0
3:30 PM	2	2	0:00	0:00	0	3	0	0
3:35 PM	3	0	0:00	0:00	0	2	0	0
3:40 PM	2	0	0:00	0:00	0	1	0	0
3:45 PM	3	1	0:00	0:00	0	1	0	0
3:50 PM	2	3	0:00	0:00	0	1	1	0
3:55 PM	1	0	0:00	0:00	0	1	0	0

Prepared by National Data & Surveying Services

MAX QUEUE STUDY

Location: Ridgeline/Concordia (East Gate)
City: Irvine

TIME	TUESDAY, APRIL 14, 2015								WEDNESDAY, APRIL 15, 2015								THURSDAY, APRIL 16, 2015							
	INBOUND QUEUE					OUTBOUND QUEUE			INBOUND QUEUE					OUTBOUND QUEUE			INBOUND QUEUE					OUTBOUND QUEUE		
	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension
	Guest	Student/ Resident	Start Time	End Time	Total # of Cars				Guest	Student/ Resident	Start Time	End Time	Total # of Cars				Guest	Student/ Resident	Start Time	End Time	Total # of Cars			
4:00 PM	1	0	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	4	0	0	1	0	0:00	0:00	0	2	0	0
4:05 PM	2	0	0:00	0:00	0	5	0	0	2	0	0:00	0:00	0	7	0	0	2	0	0:00	0:00	0	3	0	0
4:10 PM	2	2	0:00	0:00	0	2	0	0	1	0	0:00	0:00	0	4	0	0	2	0	0:00	0:00	0	2	0	0
4:15 PM	3	0	0:00	0:00	0	4	0	0	1	0	0:00	0:00	0	2	0	0	1	0	0:00	0:00	0	4	0	0
4:20 PM	1	0	0:00	0:00	0	2	0	0	4	0	0:00	0:00	0	3	0	0	2	0	0:00	0:00	0	4	0	0
4:25 PM	3	0	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	2	0	0	3	0	0:00	0:00	0	4	0	0
4:30 PM	1	0	0:00	0:00	0	6	0	0	2	0	0:00	0:00	0	6	0	0	1	0	0:00	0:00	0	2	0	0
4:35 PM	1	0	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	8	0	0	2	0	0:00	0:00	0	5	0	0
4:40 PM	2	0	0:00	0:00	0	6	0	0	5	0	0:00	0:00	0	5	0	0	2	0	0:00	0:00	0	2	0	0
4:45 PM	1	0	0:00	0:00	0	10	0	0	2	0	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	2	0	0
4:50 PM	3	2	0:00	0:00	0	3	0	0	3	0	0:00	0:00	0	3	0	0	1	0	0:00	0:00	0	2	0	0
4:55 PM	2	0	0:00	0:00	0	4	0	0	3	0	0:00	0:00	0	6	0	0	1	0	0:00	0:00	0	2	0	0
5:00 PM	3	0	0:00	0:00	0	4	0	0	2	0	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	4	0	0
5:05 PM	3	0	0:00	0:00	0	3	0	0	2	0	0:00	0:00	0	5	0	0	4	0	0:00	0:00	0	3	0	0
5:10 PM	1	0	0:00	0:00	0	3	0	0	2	0	0:00	0:00	0	4	0	0	4	0	0:00	0:00	0	3	0	0
5:15 PM	1	0	0:00	0:00	0	3	0	0	5	0	0:00	0:00	0	4	0	0	2	0	0:00	0:00	0	4	0	0
5:20 PM	1	0	0:00	0:00	0	2	0	0	3	0	0:00	0:00	0	3	0	0	3	0	0:00	0:00	0	3	0	0
5:25 PM	1	0	0:00	0:00	0	4	0	0	2	0	0:00	0:00	0	3	0	0	3	0	0:00	0:00	0	1	0	0
5:30 PM	1	0	0:00	0:00	0	6	0	0	2	0	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	3	0	0
5:35 PM	4	0	0:00	0:00	0	3	0	0	3	0	0:00	0:00	0	4	0	0	2	0	0:00	0:00	0	3	0	0
5:40 PM	3	0	0:00	0:00	0	2	0	0	4	0	0:00	0:00	0	8	0	0	2	0	0:00	0:00	0	1	0	0
5:45 PM	1	0	0:00	0:00	0	3	0	0	3	0	0:00	0:00	0	9	1	0	1	0	0:00	0:00	0	1	0	0
5:50 PM	1	0	0:00	0:00	0	4	0	0	2	0	0:00	0:00	0	9	4	0	2	0	0:00	0:00	0	3	0	0
5:55 PM	2	0	0:00	0:00	0	5	0	0	1	0	0:00	0:00	0	4	0	0	4	0	0:00	0:00	0	3	0	0
6:00 PM	2	0	0:00	0:00	0	3	0	0	3	0	0:00	0:00	0	4	0	0	3	0	0:00	0:00	0	5	0	0
6:05 PM	1	0	0:00	0:00	0	5	0	0	3	0	0:00	0:00	0	3	0	0	2	0	0:00	0:00	0	3	0	0
6:10 PM	3	3	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	5	0	0	6	0	0:00	0:00	0	3	0	0
6:15 PM	2	0	0:00	0:00	0	1	0	0	1	0	0:00	0:00	0	7	0	0	2	0	0:00	0:00	0	3	0	0
6:20 PM	1	0	0:00	0:00	0	3	0	0	3	0	0:00	0:00	0	4	0	0	3	0	0:00	0:00	0	2	0	0
6:25 PM	3	0	0:00	0:00	0	1	0	0	2	0	0:00	0:00	0	4	0	0	2	0	0:00	0:00	0	1	0	0
6:30 PM	1	0	0:00	0:00	0	3	0	0	2	0	0:00	0:00	0	2	0	0	2	0	0:00	0:00	0	3	0	0
6:35 PM	2	0	0:00	0:00	0	3	0	0	2	0	0:00	0:00	0	3	0	0	1	0	0:00	0:00	0	4	0	0
6:40 PM	4	0	0:00	0:00	0	4	0	0	8	0	0:00	0:00	0	3	0	0	5	0	0:00	0:00	0	4	0	0
6:45 PM	4	0	0:00	0:00	0	2	0	0	5	0	0:00	0:00	0	5	0	0	6	0	0:00	0:00	0	6	0	0
6:50 PM	3	2	0:00	0:00	0	4	0	0	6	0	0:00	0:00	0	3	0	0	5	0	0:00	0:00	0	4	0	0
6:55 PM	4	0	0:00	0:00	0	4	0	0	8	0	0:00	0:00	0	2	0	0	5	0	0:00	0:00	0	4	0	0

TIME	SATURDAY, APRIL 18, 2015								SUNDAY, APRIL 19,3015							
	INBOUND QUEUE					OUTBOUND QUEUE			INBOUND QUEUE					OUTBOUND QUEUE		
	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension	Guard Shack to Ridgeline		Onto Ridgeline			Ridgeline to Guard Shack	Guard Shack to Ascension	Past Ascension
	Guest	Student/ Resident	Start Time	End Time	Total # of Cars				Guest	Student Resident	Start Time	End Time	Total # of Cars			
4:00 PM																
4:05 PM																
4:10 PM																
4:15 PM																
4:20 PM																
4:25 PM																
4:30 PM																
4:35 PM																
4:40 PM																
4:45 PM																
4:50 PM																
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5:25 PM																
5:30 PM																
5:35 PM																
5:40 PM																
5:45 PM																
5:50 PM																
5:55 PM																
6:00 PM	6	0	0:00	0:00	0	1	0	0								
6:05 PM	4	0	0:00	0:00	0	1	0	0								
6:10 PM	8	1	0:00	0:00	0	3	0	0								
6:15 PM	9	0	0:00	0:00	0	3	0	0								
6:20 PM	8	0	0:00	0:00	0	3	0	0								
6:25 PM	6	0	0:00	0:00	0	4	0	0								
6:30 PM	9	2	18:34	18:34	6	1	0	0								
6:35 PM	8	0	0:00	0:00	0	1	0	0								
6:40 PM	9	0	0:00	0:00	0	4	0	0								
6:45 PM	9	0	0:00	0:00	0	2	0	0								
6:50 PM	9	0	18:53		15	3	0	0								
6:55 PM	9	0	(spill continued)		15+	4	0	0								
7:00 PM	9	0	(spill continued)		15+	6	0	0								
7:05 PM	9	0	(spill continued)		15+	8	0	0								
7:10 PM	9	0		19:10	4	12	0	0								
7:15 PM	7	0	0:00	0:00	0	5	0	0								
7:20 PM	5	1	0:00	0:00	0	5	0	0								
7:25 PM	2	0	0:00	0:00	0	6	0	0								
7:30 PM	3	0	0:00	0:00	0	6	0	0								
7:35 PM	2	1	0:00	0:00	0	4	0	0								
7:40 PM	3	0	0:00	0:00	0	5	0	0								
7:45 PM	2	0	0:00	0:00	0	3	0	0								
7:50 PM	2	0	0:00	0:00	0	5	0	0								
7:55 PM	0	0	0:00	0:00	0	5	0	0								
8:00 PM	2	0	0:00	0:00	0	5	0	0								
8:05 PM	2	1	0:00	0:00	0	3	0	0								
8:10 PM	2	0	0:00	0:00	0	6	0	0								
8:15 PM	2	0	0:00	0:00	0	6	0	0								
8:20 PM	2	0	0:00	0:00	0	7	0	0								
8:25 PM	3	0	0:00	0:00	0	5	0	0								
8:30 PM	2	2	0:00	0:00	0	3	0	0								
8:35 PM	2	0	0:00	0:00	0	3	0	0								
8:40 PM	2	0	0:00	0:00	0	3	0	0								
8:45 PM	1	0	0:00	0:00	0	4	0	0								
8:50 PM	2	0	0:00	0:00	0	1	0	0								
8:55 PM	5	1	0:00	0:00	0	2	0	0								
9:00 PM	2	0	0:00	0:00	0	2	0	0								
9:05 PM	2	0	0:00	0:00	0	5	0	0								
9:10 PM	2	0	0:00	0:00	0	3	0	0								
9:15 PM	5	0	0:00	0:00	0	6	0	0								
9:20 PM	2	0	0:00	0:00	0	10	0	0								
9:25 PM	1	0	0:00	0:00	0	9	0	0								
9:30 PM	2	0	0:00	0:00	0	9	0	0								
9:35 PM	3	0	0:00	0:00	0	5	0	0								
9:40 PM	0	0	0:00	0:00	0	6	3	0								
9:45 PM	1	0	0:00	0:00	0	6	0	0								
9:50 PM	2	2	0:00	0:00	0	5	0	0								
9:55 PM	1	0	0:00	0:00	0	6	0	0								

Concordia University Existing Average Daily Traffic (ADT) Volumes - 2015 vs. 2014

Roadway	Segment	Thursday (October 30, 2014)			Weekday Average (2015)			Δ (2015 - 2014)		
		EB/NB	WB/SB	Total	EB/NB	WB/SB	Total	EB/NB	WB/SB	Total
	west of Daystar	720	689	**1,409**	684	650	**1,334**	(36)	(39)	**(75)**
	Faith to Lot A	601	569	**1,170**	573	541	**1,114**	(28)	(28)	**(56)**
	Lot B (south) to Joy	589	521	**1,110**	475	443	**918**	(114)	(78)	**(192)**
	Joy to Lot B (north)	641	566	**1,207**	515	488	**1,003**	(126)	(78)	**(204)**
	Lot B (north) to Lot C	1,182	1,102	**2,284**	1,347	1,327	**2,674**	165	225	**390**
	west of Lot E	1,443	1,510	**2,953**	1,562	1,540	**3,102**	119	30	**149**
	Lot H to Ascension	2,289	2,179	**4,468**	2,034	2,018	**4,052**	(255)	(161)	**(416)**
Concordia	west of Ridgeline	2,330	2,361	**4,691**	2,147	2,284	**4,431**	(183)	(77)	**(260)**
Internal Drive	south of Concordia	929	942	**1,871**	868	864	**1,732**	(61)	(78)	**(139)**
Joy	west of Concordia	109	106	**215**	86	91	**177**	(23)	(15)	**(38)**
Faith	west of Concordia	148	145	**293**	164	157	**321**	16	12	**28**
Daystar	west of Concordia	59	66	**125**	65	65	**130**	6	(1)	**5**
Ascension	south of Concordia	367	368	**735**	345	349	**694**	(22)	(19)	**(41)**

Roadway	Segment	2014 ADT	2015 ADT	Sat ADT
				4/18/2015
	west of Daystar	1,409	1,334	1,303
Concordia	west of Ridgeline	4,691	4,431	4,403
Grand Total		**6,100**	**5,765**	**5,706**
		100%	***100%***	***100%***
Joy	west of Concordia	215	177	207
Faith	west of Concordia	293	321	318
Daystar	west of Concordia	125	130	133
Ascension	south of Concordia	735	694	609
Concordia Residential		**1,368**	**1,322**	**1,267**
		22.43%	***22.93%***	***22.20%***
Concordia University		**4,732**	**4,443**	**4,439**
		77.57%	***77.07%***	***77.80%***

West Gate vs. East Gate		
2014	2015	Sat 2015
23.10%	23.14%	22.84%
76.90%	76.86%	77.16%

APPENDIX E

HCM WORKSHEETS

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	389	66	713	47	172	1052
Future Volume (veh/h)	389	66	713	47	172	1052
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	423	72	775	51	187	1143
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	785	361	1588	711	805	1588
Arrive On Green	0.25	0.25	0.50	0.50	0.50	0.50
Sat Flow, veh/h	3079	1417	3250	1417	1282	3250
Grp Volume(v), veh/h	423	72	775	51	187	1143
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	641	1583
Q Serve(g_s), s	4.6	1.6	6.3	0.7	4.4	11.0
Cycle Q Clear(g_c), s	4.6	1.6	6.3	0.7	10.7	11.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	785	361	1588	711	805	1588
V/C Ratio(X)	0.54	0.20	0.49	0.07	0.23	0.72
Avail Cap(c_a), veh/h	1538	708	1704	762	851	1704
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	11.4	6.4	5.0	9.9	7.6
Incr Delay (d2), s/veh	0.6	0.3	0.2	0.0	0.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	0.6	2.7	0.3	0.8	4.9
LnGrp Delay(d),s/veh	13.1	11.7	6.7	5.1	10.1	9.0
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	495		826			1330
Approach Delay, s/veh	12.9		6.6			9.1
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.1				25.1		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		8.3				13.0		6.6
Green Ext Time (p_c), s		9.8				6.6		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.0
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	548	0	136	0	1379	734	0	1894	1186
Future Volume (veh/h)	0	0	0	548	0	136	0	1379	734	0	1894	1186
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				596	0	148	0	1499	0	0	2059	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				924	0	425	0	2465	767	0	2465	767
Arrive On Green				0.30	0.00	0.30	0.00	0.54	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				596	0	148	0	1499	0	0	2059	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				10.1	0.0	4.9	0.0	13.5	0.0	0.0	22.7	0.0
Cycle Q Clear(g_c), s				10.1	0.0	4.9	0.0	13.5	0.0	0.0	22.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				924	0	425	0	2465	767	0	2465	767
V/C Ratio(X)				0.65	0.00	0.35	0.00	0.61	0.00	0.00	0.84	0.00
Avail Cap(c_a), veh/h				924	0	425	0	2465	767	0	2465	767
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.69	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				18.2	0.0	16.4	0.0	9.4	0.0	0.0	11.5	0.0
Incr Delay (d2), s/veh				3.5	0.0	2.2	0.0	0.8	0.0	0.0	3.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.7	0.0	2.2	0.0	5.7	0.0	0.0	10.1	0.0
LnGrp Delay(d),s/veh				21.7	0.0	18.7	0.0	10.2	0.0	0.0	15.0	0.0
LnGrp LOS				C		B		B			B	
Approach Vol, veh/h					744			1499			2059	
Approach Delay, s/veh					21.1			10.2			15.0	
Approach LOS					C			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.0		38.0				38.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		18.0		32.5				32.5
Max Q Clear Time (g_c+I1), s		12.1		15.5				24.7
Green Ext Time (p_c), s		1.5		16.0				7.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	685	0	449	0	0	0	0	1426	429	0	2037	405
Future Volume (veh/h)	685	0	449	0	0	0	0	1426	429	0	2037	405
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	897	0	325				0	1550	0	0	2214	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1060	0	473				0	2366	737	0	2366	737
Arrive On Green	0.33	0.00	0.33				0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	897	0	325				0	1550	0	0	2214	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	17.1	0.0	12.9				0.0	16.1	0.0	0.0	29.6	0.0
Cycle Q Clear(g_c), s	17.1	0.0	12.9				0.0	16.1	0.0	0.0	29.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1060	0	473				0	2366	737	0	2366	737
V/C Ratio(X)	0.85	0.00	0.69				0.00	0.66	0.00	0.00	0.94	0.00
Avail Cap(c_a), veh/h	1074	0	479				0	2450	763	0	2366	737
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.54	0.00
Uniform Delay (d), s/veh	20.1	0.0	18.7				0.0	11.4	0.0	0.0	14.6	0.0
Incr Delay (d2), s/veh	8.3	0.0	7.9				0.0	0.6	0.0	0.0	5.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.0	6.0				0.0	6.7	0.0	0.0	13.4	0.0
LnGrp Delay(d),s/veh	28.4	0.0	26.6				0.0	12.0	0.0	0.0	19.7	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		1222						1550			2214	
Approach Delay, s/veh		27.9						12.0			19.7	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				39.3		25.7		39.3
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 35		22.0		33.5
Max Q Clear Time (g_c+I1), s				18.1		19.1		31.6
Green Ext Time (p_c), s				15.7		1.5		1.9

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1294	0	104	0	1156	252	0	1564	1436
Future Volume (veh/h)	0	0	0	1294	0	104	0	1156	252	0	1564	1436
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1407	0	113	0	1257	0	0	1700	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1364	0	627	0	1917	597	0	1917	597
Arrive On Green				0.44	0.00	0.44	0.00	0.42	0.00	0.00	0.42	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1407	0	113	0	1257	0	0	1700	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				31.0	0.0	3.4	0.0	15.5	0.0	0.0	24.2	0.0
Cycle Q Clear(g_c), s				31.0	0.0	3.4	0.0	15.5	0.0	0.0	24.2	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1364	0	627	0	1917	597	0	1917	597
V/C Ratio(X)				1.03	0.00	0.18	0.00	0.66	0.00	0.00	0.89	0.00
Avail Cap(c_a), veh/h				1364	0	627	0	1918	597	0	1918	597
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.91	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				19.5	0.0	11.8	0.0	16.2	0.0	0.0	18.7	0.0
Incr Delay (d2), s/veh				32.9	0.0	0.1	0.0	1.6	0.0	0.0	6.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				19.3	0.0	1.3	0.0	6.7	0.0	0.0	11.2	0.0
LnGrp Delay(d),s/veh				52.4	0.0	11.9	0.0	17.8	0.0	0.0	25.2	0.0
LnGrp LOS				F		B		B			C	
Approach Vol, veh/h					1520			1257			1700	
Approach Delay, s/veh					49.4			17.8			25.2	
Approach LOS					D			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		35.0		35.0		35.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		29.5		31.0		29.5		
Max Q Clear Time (g_c+I1), s		26.2		33.0		17.5		
Green Ext Time (p_c), s		3.2		0.0		10.8		

Intersection Summary	
HCM 2010 Ctrl Delay	31.3
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	0	74	0	0	0	0	1127	1202	0	2592	263
Future Volume (veh/h)	272	0	74	0	0	0	0	1127	1202	0	2592	263
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	296	0	80				0	1225	0	0	2817	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	395	0	182				0	3426	1067	0	3426	1067
Arrive On Green	0.13	0.00	0.13				0.00	0.75	0.00	0.00	0.75	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	296	0	80				0	1225	0	0	2817	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	7.4	0.0	4.2				0.0	7.3	0.0	0.0	32.1	0.0
Cycle Q Clear(g_c), s	7.4	0.0	4.2				0.0	7.3	0.0	0.0	32.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	395	0	182				0	3426	1067	0	3426	1067
V/C Ratio(X)	0.75	0.00	0.44				0.00	0.36	0.00	0.00	0.82	0.00
Avail Cap(c_a), veh/h	693	0	319				0	3426	1067	0	3426	1067
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.20	0.00
Uniform Delay (d), s/veh	33.6	0.0	32.2				0.0	3.3	0.0	0.0	6.4	0.0
Incr Delay (d2), s/veh	2.9	0.0	1.7				0.0	0.3	0.0	0.0	0.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.7				0.0	3.0	0.0	0.0	13.2	0.0
LnGrp Delay(d),s/veh	36.5	0.0	33.9				0.0	3.6	0.0	0.0	6.9	0.0
LnGrp LOS	D		C					A			A	
Approach Vol, veh/h		376						1225			2817	
Approach Delay, s/veh		35.9						3.6			6.9	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		65.7				65.7		14.3
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		52.5				52.5		18.0
Max Q Clear Time (g_c+I1), s		34.1				9.3		9.4
Green Ext Time (p_c), s		17.9				40.7		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	8.5
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	7	173	25	0	16	177	0	0	10	4	14	0	5	0	4
Future Vol, veh/h	0	7	173	25	0	16	177	0	0	10	4	14	0	5	0	4
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	188	27	0	17	192	0	0	11	4	15	0	5	0	4
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.4	9.6	8.5	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	71%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	29%	0%	0%	100%	0%	0%	100%	100%	0%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	14	7	173	25	16	177	0	5	4
LT Vol	10	0	7	0	0	16	0	0	5	0
Through Vol	4	0	0	173	0	0	177	0	0	0
RT Vol	0	14	0	0	25	0	0	0	0	4
Lane Flow Rate	15	15	8	188	27	17	192	0	5	4
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.026	0.021	0.012	0.266	0.033	0.027	0.272	0	0.009	0.006
Departure Headway (Hd)	6.066	5.005	5.591	5.09	4.388	5.595	5.094	5.094	6.253	5.049
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	590	714	641	707	816	641	706	0	571	706
Service Time	3.808	2.747	3.316	2.815	2.113	3.321	2.82	2.82	4.002	2.797
HCM Lane V/C Ratio	0.025	0.021	0.012	0.266	0.033	0.027	0.272	0	0.009	0.006
HCM Control Delay	9	7.9	8.4	9.7	7.3	8.5	9.7	7.8	9.1	7.8
HCM Lane LOS	A	A	A	A	A	A	A	N	A	A
HCM 95th-tile Q	0.1	0.1	0	1.1	0.1	0.1	1.1	0	0	0

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	117	5	3	736	497	229
Future Vol, veh/h	117	5	3	736	497	229
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	5	3	800	540	249

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1072	395	789	0	-	0
Stage 1	665	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	215	604	827	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	214	604	827	-	-	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	43.5	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	827	-	220	-	-
HCM Lane V/C Ratio	0.004	-	0.603	-	-
HCM Control Delay (s)	9.4	-	43.5	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.5	-	-

Intersection	
Intersection Delay, s/veh	28.9
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	229	87	9	0	11	112	398	0	4	52	28
Future Vol, veh/h	0	229	87	9	0	11	112	398	0	4	52	28
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	249	95	10	0	12	122	433	0	4	57	30
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	23.1	40.2	13.5
HCM LOS	C	E	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	93%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	56	28	229	87	9	11	112	398	248	19	287
LT Vol	4	0	229	0	0	11	0	0	248	0	0
Through Vol	52	0	0	87	0	0	112	0	0	19	0
RT Vol	0	28	0	0	9	0	0	398	0	0	287
Lane Flow Rate	61	30	249	95	10	12	122	433	270	21	312
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.161	0.074	0.64	0.23	0.022	0.029	0.278	0.903	0.648	0.047	0.645
Departure Headway (Hd)	9.534	8.798	9.257	8.746	8.036	8.847	8.337	7.623	8.766	8.26	7.553
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	378	409	393	412	448	407	433	480	415	436	480
Service Time	7.248	6.512	6.963	6.452	5.736	6.547	6.037	5.323	6.466	5.96	5.253
HCM Lane V/C Ratio	0.161	0.073	0.634	0.231	0.022	0.029	0.282	0.902	0.651	0.048	0.65
HCM Control Delay	14.1	12.2	27	14	10.9	11.8	14.2	48.3	26.2	11.4	23
HCM Lane LOS	B	B	D	B	B	B	B	E	D	B	C
HCM 95th-tile Q	0.6	0.2	4.3	0.9	0.1	0.1	1.1	10.1	4.4	0.1	4.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	248	19	287
Future Vol, veh/h	0	248	19	287
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	270	21	312
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	24
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	110	56	0	224	97	0	40	393
Future Vol, veh/h	0	110	56	0	224	97	0	40	393
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	61	0	243	105	0	43	427
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	10.3	13.4	16.3
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	393	110	56	224	97
LT Vol	40	0	0	0	224	0
Through Vol	0	0	110	0	0	97
RT Vol	0	393	0	56	0	0
Lane Flow Rate	43	427	120	61	243	105
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.079	0.636	0.214	0.097	0.45	0.18
Departure Headway (Hd)	6.567	5.357	6.438	5.724	6.656	6.148
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	546	675	557	625	541	583
Service Time	4.307	3.097	4.185	3.471	4.397	3.889
HCM Lane V/C Ratio	0.079	0.633	0.215	0.098	0.449	0.18
HCM Control Delay	9.9	17	10.9	9.1	14.8	10.2
HCM Lane LOS	A	C	B	A	B	B
HCM 95th-tile Q	0.3	4.6	0.8	0.3	2.3	0.7

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	202	206	0	256	232	0	160	154
Future Vol, veh/h	0	202	206	0	256	232	0	160	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	220	224	0	278	252	0	174	167
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	13.9	13.6	13
HCM LOS	B	B	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	206	256	232	160	154
LT Vol	202	0	0	0	160	0
Through Vol	0	206	256	0	0	0
RT Vol	0	0	0	232	0	154
Lane Flow Rate	220	224	278	252	174	167
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.421	0.397	0.49	0.394	0.36	0.29
Departure Headway (Hd)	6.898	6.389	6.336	5.624	7.455	6.235
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	562	568	638	482	574
Service Time	4.658	4.149	4.094	3.381	5.216	3.996
HCM Lane V/C Ratio	0.423	0.399	0.489	0.395	0.361	0.291
HCM Control Delay	14.6	13.3	15.1	12	14.4	11.5
HCM Lane LOS	B	B	C	B	B	B
HCM 95th-tile Q	2.1	1.9	2.7	1.9	1.6	1.2

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	89	286	497	35	26	93
Future Vol, veh/h	89	286	497	35	26	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	311	540	38	28	101

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	540	0	-	0	889	270
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	349	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1025	-	-	-	283	728
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	685	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1025	-	-	-	256	728
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	620	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1025	-	-	-	519
HCM Lane V/C Ratio	0.094	-	-	-	0.249
HCM Control Delay (s)	8.9	-	-	-	14.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	29	1376	33	98	975
Future Volume (veh/h)	148	29	1376	33	98	975
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	161	32	1496	36	107	1060
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	688	317	1693	757	444	1693
Arrive On Green	0.22	0.22	0.53	0.53	0.53	0.53
Sat Flow, veh/h	3079	1417	3250	1417	656	3250
Grp Volume(v), veh/h	161	32	1496	36	107	1060
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	328	1583
Q Serve(g_s), s	1.7	0.7	16.4	0.5	4.6	9.2
Cycle Q Clear(g_c), s	1.7	0.7	16.4	0.5	21.0	9.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	688	317	1693	757	444	1693
V/C Ratio(X)	0.23	0.10	0.88	0.05	0.24	0.63
Avail Cap(c_a), veh/h	1529	703	1693	757	444	1693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.1	8.1	4.4	18.0	6.4
Incr Delay (d2), s/veh	0.2	0.1	5.9	0.0	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	8.3	0.2	0.6	4.1
LnGrp Delay(d),s/veh	12.7	12.3	14.0	4.4	18.2	7.1
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	193		1532			1167
Approach Delay, s/veh	12.6		13.8			8.1
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.8
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		18.4				23.0		3.7
Green Ext Time (p_c), s		2.5				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	444	0	370	0	2581	310	0	1541	402
Future Volume (veh/h)	0	0	0	444	0	370	0	2581	310	0	1541	402
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				483	0	402	0	2805	0	0	1675	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				787	0	362	0	2907	905	0	2907	905
Arrive On Green				0.26	0.00	0.26	0.00	0.64	0.00	0.00	0.64	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				483	0	402	0	2805	0	0	1675	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				12.5	0.0	23.0	0.0	52.2	0.0	0.0	18.9	0.0
Cycle Q Clear(g_c), s				12.5	0.0	23.0	0.0	52.2	0.0	0.0	18.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				787	0	362	0	2907	905	0	2907	905
V/C Ratio(X)				0.61	0.00	1.11	0.00	0.96	0.00	0.00	0.58	0.00
Avail Cap(c_a), veh/h				787	0	362	0	2907	905	0	2907	905
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.20	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				29.6	0.0	33.5	0.0	15.3	0.0	0.0	9.3	0.0
Incr Delay (d2), s/veh				3.6	0.0	80.5	0.0	2.8	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.7	0.0	17.0	0.0	22.3	0.0	0.0	8.0	0.0
LnGrp Delay(d),s/veh				33.1	0.0	114.0	0.0	18.1	0.0	0.0	10.1	0.0
LnGrp LOS				C		F		B			B	
Approach Vol, veh/h					885			2805			1675	
Approach Delay, s/veh					69.9			18.1			10.1	
Approach LOS					E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		27.0		63.0				63.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		23.0		57.5				57.5
Max Q Clear Time (g_c+I1), s		25.0		54.2				20.9
Green Ext Time (p_c), s		0.0		3.2				35.5

Intersection Summary	
HCM 2010 Ctrl Delay	24.2
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1052	0	503	0	0	0	0	1838	944	0	1592	396
Future Volume (veh/h)	1052	0	503	0	0	0	0	1838	944	0	1592	396
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1313	0	365				0	1998	0	0	1730	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1625	0	725				0	2074	646	0	2074	646
Arrive On Green	0.51	0.00	0.51				0.00	0.46	0.00	0.00	0.46	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1313	0	365				0	1998	0	0	1730	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	24.1	0.0	11.9				0.0	29.8	0.0	0.0	23.4	0.0
Cycle Q Clear(g_c), s	24.1	0.0	11.9				0.0	29.8	0.0	0.0	23.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1625	0	725				0	2074	646	0	2074	646
V/C Ratio(X)	0.81	0.00	0.50				0.00	0.96	0.00	0.00	0.83	0.00
Avail Cap(c_a), veh/h	1625	0	725				0	2080	648	0	2074	646
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.78	0.00
Uniform Delay (d), s/veh	14.2	0.0	11.2				0.0	18.5	0.0	0.0	16.7	0.0
Incr Delay (d2), s/veh	4.4	0.0	2.5				0.0	12.2	0.0	0.0	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	5.1				0.0	14.7	0.0	0.0	10.2	0.0
LnGrp Delay(d),s/veh	18.7	0.0	13.7				0.0	30.7	0.0	0.0	20.0	0.0
LnGrp LOS	B		B					C			B	
Approach Vol, veh/h		1678						1998			1730	
Approach Delay, s/veh		17.6						30.7			20.0	
Approach LOS		B						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.4		39.8		37.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 32		30.0		30.5
Max Q Clear Time (g_c+I1), s				31.8		26.1		25.4
Green Ext Time (p_c), s				0.1		2.5		5.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1112	0	409	0	1709	95	0	1287	557
Future Volume (veh/h)	0	0	0	1112	0	409	0	1709	95	0	1287	557
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1209	0	445	0	1858	0	0	1399	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1271	0	585	0	2055	640	0	2055	640
Arrive On Green				0.41	0.00	0.41	0.00	0.45	0.00	0.00	0.45	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1209	0	445	0	1858	0	0	1399	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				26.6	0.0	18.8	0.0	26.5	0.0	0.0	17.0	0.0
Cycle Q Clear(g_c), s				26.6	0.0	18.8	0.0	26.5	0.0	0.0	17.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1271	0	585	0	2055	640	0	2055	640
V/C Ratio(X)				0.95	0.00	0.76	0.00	0.90	0.00	0.00	0.68	0.00
Avail Cap(c_a), veh/h				1276	0	587	0	2055	640	0	2055	640
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				19.9	0.0	17.6	0.0	17.8	0.0	0.0	15.2	0.0
Incr Delay (d2), s/veh				15.1	0.0	5.8	0.0	5.9	0.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.9	0.0	8.2	0.0	12.1	0.0	0.0	7.5	0.0
LnGrp Delay(d),s/veh				35.0	0.0	23.4	0.0	23.7	0.0	0.0	17.0	0.0
LnGrp LOS				C		C		C			B	
Approach Vol, veh/h					1654			1858			1399	
Approach Delay, s/veh					31.8			23.7			17.0	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		37.1		32.9		37.1		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		31.5		29.0		31.5		
Max Q Clear Time (g_c+I1), s		19.0		28.6		28.5		
Green Ext Time (p_c), s		11.6		0.3		2.9		

Intersection Summary	
HCM 2010 Ctrl Delay	24.5
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	402	0	46	0	0	0	0	1408	1230	0	2182	240
Future Volume (veh/h)	402	0	46	0	0	0	0	1408	1230	0	2182	240
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	437	0	50				0	1530	0	0	2372	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	561	0	258				0	3056	951	0	3056	951
Arrive On Green	0.18	0.00	0.18				0.00	0.67	0.00	0.00	0.67	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	437	0	50				0	1530	0	0	2372	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	8.8	0.0	1.9				0.0	10.8	0.0	0.0	23.2	0.0
Cycle Q Clear(g_c), s	8.8	0.0	1.9				0.0	10.8	0.0	0.0	23.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	561	0	258				0	3056	951	0	3056	951
V/C Ratio(X)	0.78	0.00	0.19				0.00	0.50	0.00	0.00	0.78	0.00
Avail Cap(c_a), veh/h	853	0	392				0	3056	951	0	3056	951
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.49	0.00
Uniform Delay (d), s/veh	25.3	0.0	22.5				0.0	5.3	0.0	0.0	7.3	0.0
Incr Delay (d2), s/veh	2.6	0.0	0.4				0.0	0.6	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	0.8				0.0	4.6	0.0	0.0	9.7	0.0
LnGrp Delay(d),s/veh	27.9	0.0	22.9				0.0	5.9	0.0	0.0	8.3	0.0
LnGrp LOS	C		C					A			A	
Approach Vol, veh/h		487						1530			2372	
Approach Delay, s/veh		27.4						5.9			8.3	
Approach LOS		C						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		49.2				49.2		15.8
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		37.5				37.5		18.0
Max Q Clear Time (g_c+I1), s		25.2				12.8		10.8
Green Ext Time (p_c), s		11.9				23.4		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	23.2
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	505	15	0	19	241	2	0	11	1	58	0	0	2	2
Future Vol, veh/h	0	2	505	15	0	19	241	2	0	11	1	58	0	0	2	2
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	549	16	0	21	262	2	0	12	1	63	0	0	2	2
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	30.1	13.3	9.9	9.7
HCM LOS	D	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	92%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	8%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	58	2	505	15	19	241	2	2	2
LT Vol	11	0	2	0	0	19	0	0	0	0
Through Vol	1	0	0	505	0	0	241	0	2	0
RT Vol	0	58	0	0	15	0	0	2	0	2
Lane Flow Rate	13	63	2	549	16	21	262	2	2	2
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.027	0.11	0.004	0.843	0.022	0.038	0.443	0.003	0.004	0.004
Departure Headway (Hd)	7.427	6.267	6.03	5.528	4.826	6.591	6.088	5.386	7.176	6.474
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	482	571	595	659	743	544	592	664	498	552
Service Time	5.171	4.01	3.753	3.251	2.548	4.324	3.821	3.118	4.928	4.225
HCM Lane V/C Ratio	0.027	0.11	0.003	0.833	0.022	0.039	0.443	0.003	0.004	0.004
HCM Control Delay	10.4	9.8	8.8	30.8	7.7	9.6	13.6	8.1	10	9.3
HCM Lane LOS	B	A	A	D	A	A	B	A	A	A
HCM 95th-tile Q	0.1	0.4	0	9.3	0.1	0.1	2.3	0	0	0

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive

12/28/2015

Intersection	
Int Delay, s/veh	11.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	222	4	6	492	506	152
Future Vol, veh/h	222	4	6	492	506	152
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	241	4	7	535	550	165

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	913	358	715	0	-	0
Stage 1	633	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	273	638	881	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	271	638	881	-	-	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	71.3	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	881	-	274	-	-
HCM Lane V/C Ratio	0.007	-	0.897	-	-
HCM Control Delay (s)	9.1	-	71.3	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	8	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive

4/20/2016

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	176	80	11	0	20	52	297	0	5	26	14
Future Vol, veh/h	0	176	80	11	0	20	52	297	0	5	26	14
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	191	87	12	0	22	57	323	0	5	28	15
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	14.7	16.8	11.1
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	16%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	84%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	14	176	80	11	20	52	297	282	30	132
LT Vol	5	0	176	0	0	20	0	0	282	0	0
Through Vol	26	0	0	80	0	0	52	0	0	30	0
RT Vol	0	14	0	0	11	0	0	297	0	0	132
Lane Flow Rate	34	15	191	87	12	22	57	323	307	33	143
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.076	0.031	0.422	0.18	0.022	0.047	0.114	0.587	0.64	0.064	0.251
Departure Headway (Hd)	8.124	7.343	7.943	7.436	6.726	7.766	7.26	6.551	7.513	7.011	6.309
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	487	453	483	532	462	494	552	481	512	570
Service Time	5.871	5.09	5.683	5.176	4.466	5.502	4.996	4.287	5.247	4.745	4.043
HCM Lane V/C Ratio	0.077	0.031	0.422	0.18	0.023	0.048	0.115	0.585	0.638	0.064	0.251
HCM Control Delay	11.5	10.3	16.4	11.8	9.6	10.9	10.9	18.2	22.7	10.2	11.2
HCM Lane LOS	B	B	C	B	A	B	B	C	C	B	B
HCM 95th-tile Q	0.2	0.1	2.1	0.6	0.1	0.1	0.4	3.8	4.4	0.2	1

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	282	30	132
Future Vol, veh/h	0	282	30	132
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	307	33	143
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	18.4
HCM LOS	C

Lane

Intersection									
Intersection Delay, s/veh	10.1								
Intersection LOS	B								

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	64	19	0	224	97	0	15	172
Future Vol, veh/h	0	64	19	0	224	97	0	15	172
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	21	0	243	105	0	16	187
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	8.5	10.9	9.4
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	172	64	19	224	97
LT Vol	15	0	0	0	224	0
Through Vol	0	0	64	0	0	97
RT Vol	0	172	0	19	0	0
Lane Flow Rate	16	187	70	21	243	105
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.028	0.257	0.105	0.027	0.381	0.15
Departure Headway (Hd)	6.152	4.946	5.423	4.717	5.635	5.133
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	582	725	657	753	635	696
Service Time	3.893	2.687	3.188	2.481	3.388	2.885
HCM Lane V/C Ratio	0.027	0.258	0.107	0.028	0.383	0.151
HCM Control Delay	9.1	9.4	8.8	7.6	11.8	8.8
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	0.1	1	0.4	0.1	1.8	0.5

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	125	128	0	75	80	0	137	264
Future Vol, veh/h	0	125	128	0	75	80	0	137	264
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	136	139	0	82	87	0	149	287
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	10.8	9.3	11.1
HCM LOS	B	A	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	128	75	80	137	264
LT Vol	125	0	0	0	137	0
Through Vol	0	128	75	0	0	0
RT Vol	0	0	0	80	0	264
Lane Flow Rate	136	139	82	87	149	287
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.243	0.229	0.138	0.13	0.256	0.397
Departure Headway (Hd)	6.44	5.933	6.107	5.396	6.294	5.086
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	561	608	590	668	575	712
Service Time	4.144	3.638	3.814	3.103	3.994	2.786
HCM Lane V/C Ratio	0.242	0.229	0.139	0.13	0.259	0.403
HCM Control Delay	11.2	10.4	9.8	8.9	11.1	11.1
HCM Lane LOS	B	B	A	A	B	B
HCM 95th-tile Q	0.9	0.9	0.5	0.4	1	1.9

Intersection	
Int Delay, s/veh	2.4

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	89	286	497	35	26	93
Future Vol, veh/h	89	286	497	35	26	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	311	540	38	28	101

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	540	0	-	0	889	270
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	349	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1025	-	-	-	283	728
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	685	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1025	-	-	-	256	728
Mov Cap-2 Maneuver	-	-	-	-	256	-
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	620	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	14.2
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1025	-	-	-	519
HCM Lane V/C Ratio	0.094	-	-	-	0.249
HCM Control Delay (s)	8.9	-	-	-	14.2
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	402	66	695	46	160	1057
Future Volume (veh/h)	402	66	695	46	160	1057
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	437	72	755	50	174	1149
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	786	362	1587	710	820	1587
Arrive On Green	0.26	0.26	0.50	0.50	0.50	0.50
Sat Flow, veh/h	3079	1417	3250	1417	1307	3250
Grp Volume(v), veh/h	437	72	755	50	174	1149
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	654	1583
Q Serve(g_s), s	4.8	1.6	6.1	0.7	3.9	11.1
Cycle Q Clear(g_c), s	4.8	1.6	6.1	0.7	10.0	11.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	786	362	1587	710	820	1587
V/C Ratio(X)	0.56	0.20	0.48	0.07	0.21	0.72
Avail Cap(c_a), veh/h	1539	708	1705	763	869	1705
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.6	11.4	6.4	5.0	9.7	7.6
Incr Delay (d2), s/veh	0.6	0.3	0.2	0.0	0.1	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.6	2.7	0.3	0.7	5.1
LnGrp Delay(d),s/veh	13.2	11.7	6.6	5.1	9.8	9.1
LnGrp LOS	B	B	A	A	A	A
Approach Vol, veh/h	509		805			1323
Approach Delay, s/veh	13.0		6.5			9.2
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.1				25.1		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		8.1				13.1		6.8
Green Ext Time (p_c), s		9.8				6.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	9.1
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	551	0	136	0	1376	735	0	1894	1188
Future Volume (veh/h)	0	0	0	551	0	136	0	1376	735	0	1894	1188
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				599	0	148	0	1496	0	0	2059	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				993	0	457	0	2385	743	0	2385	743
Arrive On Green				0.32	0.00	0.32	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				599	0	148	0	1496	0	0	2059	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				10.1	0.0	4.9	0.0	14.5	0.0	0.0	24.4	0.0
Cycle Q Clear(g_c), s				10.1	0.0	4.9	0.0	14.5	0.0	0.0	24.4	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				993	0	457	0	2385	743	0	2385	743
V/C Ratio(X)				0.60	0.00	0.32	0.00	0.63	0.00	0.00	0.86	0.00
Avail Cap(c_a), veh/h				993	0	457	0	2385	743	0	2385	743
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.68	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				17.7	0.0	15.9	0.0	10.5	0.0	0.0	12.8	0.0
Incr Delay (d2), s/veh				2.7	0.0	1.9	0.0	0.9	0.0	0.0	4.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.6	0.0	2.1	0.0	6.1	0.0	0.0	11.1	0.0
LnGrp Delay(d),s/veh				20.4	0.0	17.8	0.0	11.3	0.0	0.0	17.3	0.0
LnGrp LOS				C		B		B			B	
Approach Vol, veh/h					747			1496			2059	
Approach Delay, s/veh					19.9			11.3			17.3	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		24.0		38.0				38.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.5		32.5				32.5
Max Q Clear Time (g_c+I1), s		12.1		16.5				26.4
Green Ext Time (p_c), s		1.7		15.1				5.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	682	0	468	0	0	0	0	1428	429	0	2039	406
Future Volume (veh/h)	682	0	468	0	0	0	0	1428	429	0	2039	406
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	899	0	339				0	1552	0	0	2216	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1024	0	457				0	2385	743	0	2385	743
Arrive On Green	0.32	0.00	0.32				0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	899	0	339				0	1552	0	0	2216	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	16.6	0.0	13.2				0.0	15.3	0.0	0.0	28.0	0.0
Cycle Q Clear(g_c), s	16.6	0.0	13.2				0.0	15.3	0.0	0.0	28.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1024	0	457				0	2385	743	0	2385	743
V/C Ratio(X)	0.88	0.00	0.74				0.00	0.65	0.00	0.00	0.93	0.00
Avail Cap(c_a), veh/h	1024	0	457				0	2385	743	0	2385	743
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.54	0.00
Uniform Delay (d), s/veh	19.8	0.0	18.7				0.0	10.7	0.0	0.0	13.7	0.0
Incr Delay (d2), s/veh	10.6	0.0	10.4				0.0	0.6	0.0	0.0	4.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	0.0	6.4				0.0	6.5	0.0	0.0	12.5	0.0
LnGrp Delay(d),s/veh	30.4	0.0	29.1				0.0	11.3	0.0	0.0	18.4	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		1238						1552			2216	
Approach Delay, s/veh		30.1						11.3			18.4	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.0		24.0		38.0
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 20		19.5		32.5
Max Q Clear Time (g_c+I1), s				17.3		18.6		30.0
Green Ext Time (p_c), s				2.2		0.5		2.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1317	0	100	0	1158	253	0	1571	1439
Future Volume (veh/h)	0	0	0	1317	0	100	0	1158	253	0	1571	1439
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1432	0	109	0	1259	0	0	1708	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1232	0	567	0	1866	581	0	1866	581
Arrive On Green				0.40	0.00	0.40	0.00	0.41	0.00	0.00	0.41	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1432	0	109	0	1259	0	0	1708	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				20.0	0.0	2.5	0.0	11.3	0.0	0.0	17.7	0.0
Cycle Q Clear(g_c), s				20.0	0.0	2.5	0.0	11.3	0.0	0.0	17.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	567	0	1866	581	0	1866	581
V/C Ratio(X)				1.16	0.00	0.19	0.00	0.67	0.00	0.00	0.92	0.00
Avail Cap(c_a), veh/h				1232	0	567	0	1866	581	0	1866	581
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.91	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.0	0.0	9.8	0.0	12.0	0.0	0.0	13.9	0.0
Incr Delay (d2), s/veh				82.4	0.0	0.2	0.0	1.8	0.0	0.0	8.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				22.5	0.0	1.0	0.0	5.0	0.0	0.0	8.8	0.0
LnGrp Delay(d),s/veh				97.4	0.0	9.9	0.0	13.8	0.0	0.0	22.5	0.0
LnGrp LOS				F		A		B			C	
Approach Vol, veh/h					1541			1259			1708	
Approach Delay, s/veh					91.2			13.8			22.5	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		26.0		24.0		26.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		20.5		20.0		20.5		
Max Q Clear Time (g_c+I1), s		19.7		22.0		13.3		
Green Ext Time (p_c), s		0.7		0.0		6.7		

Intersection Summary	
HCM 2010 Ctrl Delay	43.6
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	272	0	74	0	0	0	0	1130	1207	0	2628	257
Future Volume (veh/h)	272	0	74	0	0	0	0	1130	1207	0	2628	257
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	296	0	80				0	1228	0	0	2857	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	395	0	182				0	3426	1067	0	3426	1067
Arrive On Green	0.13	0.00	0.13				0.00	0.75	0.00	0.00	0.75	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	296	0	80				0	1228	0	0	2857	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	7.4	0.0	4.2				0.0	7.3	0.0	0.0	33.3	0.0
Cycle Q Clear(g_c), s	7.4	0.0	4.2				0.0	7.3	0.0	0.0	33.3	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	395	0	182				0	3426	1067	0	3426	1067
V/C Ratio(X)	0.75	0.00	0.44				0.00	0.36	0.00	0.00	0.83	0.00
Avail Cap(c_a), veh/h	693	0	319				0	3426	1067	0	3426	1067
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	33.6	0.0	32.2				0.0	3.3	0.0	0.0	6.6	0.0
Incr Delay (d2), s/veh	2.9	0.0	1.7				0.0	0.3	0.0	0.0	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.7				0.0	3.0	0.0	0.0	13.6	0.0
LnGrp Delay(d),s/veh	36.5	0.0	33.9				0.0	3.6	0.0	0.0	6.8	0.0
LnGrp LOS	D		C					A			A	
Approach Vol, veh/h		376						1228			2857	
Approach Delay, s/veh		35.9						3.6			6.8	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		65.7				65.7		14.3
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		52.5				52.5		18.0
Max Q Clear Time (g_c+I1), s		35.3				9.3		9.4
Green Ext Time (p_c), s		16.7				40.8		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	8.4
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	7	199	25	0	15	182	0	0	10	4	16	0	5	0	4
Future Vol, veh/h	0	7	199	25	0	15	182	0	0	10	4	16	0	5	0	4
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	8	216	27	0	16	198	0	0	11	4	17	0	5	0	4
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	9.7	9.8	8.5	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	71%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Thru, %	29%	0%	0%	100%	0%	0%	100%	100%	0%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	16	7	199	25	15	182	0	5	4
LT Vol	10	0	7	0	0	15	0	0	5	0
Through Vol	4	0	0	199	0	0	182	0	0	0
RT Vol	0	16	0	0	25	0	0	0	0	4
Lane Flow Rate	15	17	8	216	27	16	198	0	5	4
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.026	0.025	0.012	0.307	0.033	0.026	0.284	0	0.01	0.006
Departure Headway (Hd)	6.156	5.095	5.614	5.112	4.41	5.66	5.16	5.16	6.351	5.145
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	580	700	638	703	811	633	696	0	562	692
Service Time	3.908	2.846	3.344	2.842	2.14	3.391	2.89	2.89	4.107	2.901
HCM Lane V/C Ratio	0.026	0.024	0.013	0.307	0.033	0.025	0.284	0	0.009	0.006
HCM Control Delay	9.1	8	8.4	10.1	7.3	8.5	9.9	7.9	9.2	7.9
HCM Lane LOS	A	A	A	B	A	A	A	N	A	A
HCM 95th-tile Q	0.1	0.1	0	1.3	0.1	0.1	1.2	0	0	0

Intersection	
Int Delay, s/veh	5.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	140	6	5	734	498	312
Future Vol, veh/h	140	6	5	734	498	312
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	152	7	5	798	541	339

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1121	440	880	0	-	0
Stage 1	711	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	200	565	764	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	638	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	199	565	764	-	-	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	634	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	65.8	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	764	-	204	-	-
HCM Lane V/C Ratio	0.007	-	0.778	-	-
HCM Control Delay (s)	9.7	-	65.8	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	5.4	-	-

Intersection	
Intersection Delay, s/veh	29.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	227	87	9	0	11	110	400	0	4	53	27
Future Vol, veh/h	0	227	87	9	0	11	110	400	0	4	53	27
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	247	95	10	0	12	120	435	0	4	58	29
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	22.9	40.8	13.5
HCM LOS	C	E	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	93%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	27	227	87	9	11	110	400	248	19	287
LT Vol	4	0	227	0	0	11	0	0	248	0	0
Through Vol	53	0	0	87	0	0	110	0	0	19	0
RT Vol	0	27	0	0	9	0	0	400	0	0	287
Lane Flow Rate	62	29	247	95	10	12	120	435	270	21	312
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.164	0.072	0.635	0.23	0.022	0.029	0.273	0.907	0.648	0.047	0.645
Departure Headway (Hd)	9.526	8.79	9.26	8.749	8.033	8.843	8.333	7.619	8.762	8.257	7.549
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	379	409	392	412	448	407	434	478	415	436	480
Service Time	7.241	6.506	6.966	6.455	5.739	6.543	6.033	5.319	6.462	5.957	5.249
HCM Lane V/C Ratio	0.164	0.071	0.63	0.231	0.022	0.029	0.276	0.91	0.651	0.048	0.65
HCM Control Delay	14.1	12.2	26.8	14.1	10.9	11.8	14.1	49	26.2	11.4	23
HCM Lane LOS	B	B	D	B	B	B	B	E	D	B	C
HCM 95th-tile Q	0.6	0.2	4.2	0.9	0.1	0.1	1.1	10.2	4.4	0.1	4.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	248	19	287
Future Vol, veh/h	0	248	19	287
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	270	21	312
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	24
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	14.2
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	110	56	0	225	97	0	40	393
Future Vol, veh/h	0	110	56	0	225	97	0	40	393
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	120	61	0	245	105	0	43	427
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	10.3	13.4	16.3
HCM LOS	B	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	40	393	110	56	225	97
LT Vol	40	0	0	0	225	0
Through Vol	0	0	110	0	0	97
RT Vol	0	393	0	56	0	0
Lane Flow Rate	43	427	120	61	245	105
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.079	0.636	0.214	0.097	0.452	0.18
Departure Headway (Hd)	6.57	5.36	6.44	5.726	6.656	6.148
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	545	675	557	625	540	583
Service Time	4.311	3.1	4.187	3.473	4.397	3.889
HCM Lane V/C Ratio	0.079	0.633	0.215	0.098	0.454	0.18
HCM Control Delay	9.9	17	10.9	9.1	14.8	10.2
HCM Lane LOS	A	C	B	A	B	B
HCM 95th-tile Q	0.3	4.6	0.8	0.3	2.3	0.7

Intersection	
Intersection Delay, s/veh	13.5
Intersection LOS	B

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	202	205	0	256	232	0	160	154
Future Vol, veh/h	0	202	205	0	256	232	0	160	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	220	223	0	278	252	0	174	167
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	13.9	13.6	13
HCM LOS	B	B	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	205	256	232	160	154
LT Vol	202	0	0	0	160	0
Through Vol	0	205	256	0	0	0
RT Vol	0	0	0	232	0	154
Lane Flow Rate	220	223	278	252	174	167
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.421	0.395	0.49	0.394	0.36	0.29
Departure Headway (Hd)	6.896	6.387	6.333	5.621	7.453	6.233
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	520	562	568	638	482	574
Service Time	4.658	4.149	4.092	3.379	5.214	3.994
HCM Lane V/C Ratio	0.423	0.397	0.489	0.395	0.361	0.291
HCM Control Delay	14.6	13.3	15.1	12	14.4	11.5
HCM Lane LOS	B	B	C	B	B	B
HCM 95th-tile Q	2.1	1.9	2.7	1.9	1.6	1.2

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	102	286	494	35	26	110
Future Vol, veh/h	102	286	494	35	26	110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	111	311	537	38	28	120

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	537	0	-	0	914	268
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	377	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1027	-	-	-	272	730
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	663	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1027	-	-	-	243	730
Mov Cap-2 Maneuver	-	-	-	-	243	-
Stage 1	-	-	-	-	550	-
Stage 2	-	-	-	-	591	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1027	-	-	-	528
HCM Lane V/C Ratio	0.108	-	-	-	0.28
HCM Control Delay (s)	8.9	-	-	-	14.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	148	29	1383	26	97	973
Future Volume (veh/h)	148	29	1383	26	97	973
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	161	32	1503	28	105	1058
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	688	317	1693	757	441	1693
Arrive On Green	0.22	0.22	0.53	0.53	0.53	0.53
Sat Flow, veh/h	3079	1417	3250	1417	656	3250
Grp Volume(v), veh/h	161	32	1503	28	105	1058
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	328	1583
Q Serve(g_s), s	1.7	0.7	16.5	0.4	4.5	9.2
Cycle Q Clear(g_c), s	1.7	0.7	16.5	0.4	21.0	9.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	688	317	1693	757	441	1693
V/C Ratio(X)	0.23	0.10	0.89	0.04	0.24	0.62
Avail Cap(c_a), veh/h	1529	703	1693	757	441	1693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.1	8.1	4.3	18.0	6.4
Incr Delay (d2), s/veh	0.2	0.1	6.2	0.0	0.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.3	8.3	0.1	0.6	4.0
LnGrp Delay(d),s/veh	12.7	12.3	14.3	4.4	18.3	7.1
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	193		1531			1163
Approach Delay, s/veh	12.6		14.1			8.1
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.8
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		18.5				23.0		3.7
Green Ext Time (p_c), s		2.4				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	451	0	368	0	2579	319	0	1546	402
Future Volume (veh/h)	0	0	0	451	0	368	0	2579	319	0	1546	402
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				490	0	400	0	2803	0	0	1680	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				821	0	378	0	2856	889	0	2856	889
Arrive On Green				0.27	0.00	0.27	0.00	0.63	0.00	0.00	0.63	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				490	0	400	0	2803	0	0	1680	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				12.5	0.0	24.0	0.0	53.7	0.0	0.0	19.6	0.0
Cycle Q Clear(g_c), s				12.5	0.0	24.0	0.0	53.7	0.0	0.0	19.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				821	0	378	0	2856	889	0	2856	889
V/C Ratio(X)				0.60	0.00	1.06	0.00	0.98	0.00	0.00	0.59	0.00
Avail Cap(c_a), veh/h				821	0	378	0	2856	889	0	2856	889
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.19	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				28.8	0.0	33.0	0.0	16.2	0.0	0.0	9.9	0.0
Incr Delay (d2), s/veh				3.2	0.0	62.7	0.0	4.2	0.0	0.0	0.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.7	0.0	15.9	0.0	23.2	0.0	0.0	8.3	0.0
LnGrp Delay(d),s/veh				32.0	0.0	95.7	0.0	20.4	0.0	0.0	10.8	0.0
LnGrp LOS				C		F		C			B	
Approach Vol, veh/h					890			2803			1680	
Approach Delay, s/veh					60.6			20.4			10.8	
Approach LOS					E			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		62.0				62.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		24.0		56.5				56.5
Max Q Clear Time (g_c+I1), s		26.0		55.7				21.6
Green Ext Time (p_c), s		0.0		0.7				33.9

Intersection Summary	
HCM 2010 Ctrl Delay	24.1
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1052	0	503	0	0	0	0	1845	940	0	1596	404
Future Volume (veh/h)	1052	0	503	0	0	0	0	1845	940	0	1596	404
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1313	0	365				0	2005	0	0	1735	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1634	0	729				0	2079	647	0	2079	647
Arrive On Green	0.51	0.00	0.51				0.00	0.46	0.00	0.00	0.46	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1313	0	365				0	2005	0	0	1735	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	24.0	0.0	11.8				0.0	30.0	0.0	0.0	23.4	0.0
Cycle Q Clear(g_c), s	24.0	0.0	11.8				0.0	30.0	0.0	0.0	23.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1634	0	729				0	2079	647	0	2079	647
V/C Ratio(X)	0.80	0.00	0.50				0.00	0.96	0.00	0.00	0.83	0.00
Avail Cap(c_a), veh/h	1634	0	729				0	2080	648	0	2079	647
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.78	0.00
Uniform Delay (d), s/veh	14.1	0.0	11.1				0.0	18.5	0.0	0.0	16.7	0.0
Incr Delay (d2), s/veh	4.3	0.0	2.4				0.0	12.5	0.0	0.0	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	5.1				0.0	14.8	0.0	0.0	10.3	0.0
LnGrp Delay(d),s/veh	18.4	0.0	13.6				0.0	30.9	0.0	0.0	20.0	0.0
LnGrp LOS	B		B					C			B	
Approach Vol, veh/h		1678						2005			1735	
Approach Delay, s/veh		17.3						30.9			20.0	
Approach LOS		B						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.5		40.0		37.5
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 32		30.0		30.5
Max Q Clear Time (g_c+I1), s				32.0		26.0		25.4
Green Ext Time (p_c), s				0.0		2.6		5.0

Intersection Summary	
HCM 2010 Ctrl Delay	23.2
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1109	0	414	0	1719	95	0	1293	558
Future Volume (veh/h)	0	0	0	1109	0	414	0	1719	95	0	1293	558
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1205	0	450	0	1868	0	0	1405	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1269	0	584	0	2057	641	0	2057	641
Arrive On Green				0.41	0.00	0.41	0.00	0.45	0.00	0.00	0.45	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1205	0	450	0	1868	0	0	1405	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				26.5	0.0	19.2	0.0	26.7	0.0	0.0	17.1	0.0
Cycle Q Clear(g_c), s				26.5	0.0	19.2	0.0	26.7	0.0	0.0	17.1	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1269	0	584	0	2057	641	0	2057	641
V/C Ratio(X)				0.95	0.00	0.77	0.00	0.91	0.00	0.00	0.68	0.00
Avail Cap(c_a), veh/h				1276	0	587	0	2057	641	0	2057	641
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				19.9	0.0	17.7	0.0	17.8	0.0	0.0	15.2	0.0
Incr Delay (d2), s/veh				14.8	0.0	6.2	0.0	6.1	0.0	0.0	1.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				13.8	0.0	8.4	0.0	12.2	0.0	0.0	7.5	0.0
LnGrp Delay(d),s/veh				34.6	0.0	23.9	0.0	23.9	0.0	0.0	17.1	0.0
LnGrp LOS				C		C		C			B	
Approach Vol, veh/h					1655			1868			1405	
Approach Delay, s/veh					31.7			23.9			17.1	
Approach LOS					C			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		37.1		32.9		37.1		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		31.5		29.0		31.5		
Max Q Clear Time (g_c+I1), s		19.1		28.5		28.7		
Green Ext Time (p_c), s		11.5		0.4		2.7		

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	398	0	48	0	0	0	0	1424	1242	0	2186	239
Future Volume (veh/h)	398	0	48	0	0	0	0	1424	1242	0	2186	239
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	433	0	52				0	1548	0	0	2376	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	558	0	256				0	3061	953	0	3061	953
Arrive On Green	0.18	0.00	0.18				0.00	0.67	0.00	0.00	0.67	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	433	0	52				0	1548	0	0	2376	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	8.7	0.0	2.0				0.0	11.0	0.0	0.0	23.2	0.0
Cycle Q Clear(g_c), s	8.7	0.0	2.0				0.0	11.0	0.0	0.0	23.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	558	0	256				0	3061	953	0	3061	953
V/C Ratio(X)	0.78	0.00	0.20				0.00	0.51	0.00	0.00	0.78	0.00
Avail Cap(c_a), veh/h	853	0	392				0	3061	953	0	3061	953
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.49	0.00
Uniform Delay (d), s/veh	25.4	0.0	22.6				0.0	5.3	0.0	0.0	7.3	0.0
Incr Delay (d2), s/veh	2.5	0.0	0.4				0.0	0.6	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	0.0	0.8				0.0	4.6	0.0	0.0	9.7	0.0
LnGrp Delay(d),s/veh	27.9	0.0	23.0				0.0	5.9	0.0	0.0	8.3	0.0
LnGrp LOS	C		C					A			A	
Approach Vol, veh/h		485						1548			2376	
Approach Delay, s/veh		27.3						5.9			8.3	
Approach LOS		C						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		49.2				49.2		15.8
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		37.5				37.5		18.0
Max Q Clear Time (g_c+I1), s		25.2				13.0		10.7
Green Ext Time (p_c), s		11.9				23.3		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Intersection	
Intersection Delay, s/veh	24.5
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	2	513	15	0	20	247	1	0	11	1	58	0	0	2	2
Future Vol, veh/h	0	2	513	15	0	20	247	1	0	11	1	58	0	0	2	2
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	558	16	0	22	268	1	0	12	1	63	0	0	2	2
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	32	13.6	10	9.7
HCM LOS	D	B	A	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	92%	0%	100%	0%	0%	100%	0%	0%	0%	0%
Vol Thru, %	8%	0%	0%	100%	0%	0%	100%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	12	58	2	513	15	20	247	1	2	2
LT Vol	11	0	2	0	0	20	0	0	0	0
Through Vol	1	0	0	513	0	0	247	0	2	0
RT Vol	0	58	0	0	15	0	0	1	0	2
Lane Flow Rate	13	63	2	558	16	22	268	1	2	2
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.027	0.111	0.004	0.859	0.022	0.04	0.456	0.002	0.004	0.004
Departure Headway (Hd)	7.475	6.314	6.051	5.549	4.847	6.616	6.114	5.411	7.227	6.524
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	479	567	593	652	739	542	591	661	495	547
Service Time	5.22	4.06	3.775	3.273	2.571	4.349	3.847	3.144	4.98	4.277
HCM Lane V/C Ratio	0.027	0.111	0.003	0.856	0.022	0.041	0.453	0.002	0.004	0.004
HCM Control Delay	10.4	9.9	8.8	32.8	7.7	9.6	13.9	8.2	10	9.3
HCM Lane LOS	B	A	A	D	A	A	B	A	A	A
HCM 95th-tile Q	0.1	0.4	0	9.8	0.1	0.1	2.4	0	0	0

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive 12/28/2015

Intersection	
Int Delay, s/veh	24.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	267	6	7	490	502	187
Future Vol, veh/h	267	6	7	490	502	187
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	290	7	8	533	546	203

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	929	374	749	0	-	0
Stage 1	647	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 266	623	856	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 264	623	856	-	-	-
Mov Cap-2 Maneuver	~ 264	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	129.4	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	856	-	267	-	-
HCM Lane V/C Ratio	0.009	-	1.111	-	-
HCM Control Delay (s)	9.2	-	129.4	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	12.6	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive 4/20/2016

Intersection	
Intersection Delay, s/veh	16.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	176	80	11	0	20	52	297	0	5	26	14
Future Vol, veh/h	0	176	80	11	0	20	52	297	0	5	26	14
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	191	87	12	0	22	57	323	0	5	28	15
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	14.7	16.8	11.1
HCM LOS	B	C	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	16%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	84%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	31	14	176	80	11	20	52	297	282	29	133
LT Vol	5	0	176	0	0	20	0	0	282	0	0
Through Vol	26	0	0	80	0	0	52	0	0	29	0
RT Vol	0	14	0	0	11	0	0	297	0	0	133
Lane Flow Rate	34	15	191	87	12	22	57	323	307	32	145
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.076	0.031	0.422	0.18	0.022	0.047	0.114	0.587	0.64	0.061	0.253
Departure Headway (Hd)	8.123	7.342	7.942	7.435	6.725	7.765	7.259	6.55	7.513	7.011	6.309
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	487	453	483	532	462	495	552	481	512	570
Service Time	5.87	5.089	5.682	5.175	4.465	5.501	4.995	4.286	5.247	4.745	4.043
HCM Lane V/C Ratio	0.077	0.031	0.422	0.18	0.023	0.048	0.115	0.585	0.638	0.063	0.254
HCM Control Delay	11.5	10.3	16.4	11.8	9.6	10.9	10.9	18.2	22.7	10.2	11.2
HCM Lane LOS	B	B	C	B	A	B	B	C	C	B	B
HCM 95th-tile Q	0.2	0.1	2.1	0.6	0.1	0.1	0.4	3.8	4.4	0.2	1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	282	29	133
Future Vol, veh/h	0	282	29	133
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	307	32	145
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	18.4
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.1
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	64	19	0	224	96	0	15	173
Future Vol, veh/h	0	64	19	0	224	96	0	15	173
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	70	21	0	243	104	0	16	188
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	8.5	10.9	9.4
HCM LOS	A	B	A

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	15	173	64	19	224	96
LT Vol	15	0	0	0	224	0
Through Vol	0	0	64	0	0	96
RT Vol	0	173	0	19	0	0
Lane Flow Rate	16	188	70	21	243	104
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.028	0.258	0.105	0.027	0.381	0.149
Departure Headway (Hd)	6.149	4.943	5.424	4.718	5.638	5.135
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	582	726	657	753	635	696
Service Time	3.892	2.685	3.189	2.483	3.39	2.887
HCM Lane V/C Ratio	0.027	0.259	0.107	0.028	0.383	0.149
HCM Control Delay	9.1	9.4	8.8	7.6	11.8	8.8
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	0.1	1	0.4	0.1	1.8	0.5

Intersection	
Intersection Delay, s/veh	10.7
Intersection LOS	B

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	125	128	0	75	80	0	137	264
Future Vol, veh/h	0	125	128	0	75	80	0	137	264
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	136	139	0	82	87	0	149	287
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	10.8	9.3	11.1
HCM LOS	B	A	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	125	128	75	80	137	264
LT Vol	125	0	0	0	137	0
Through Vol	0	128	75	0	0	0
RT Vol	0	0	0	80	0	264
Lane Flow Rate	136	139	82	87	149	287
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.243	0.229	0.138	0.13	0.256	0.397
Departure Headway (Hd)	6.44	5.933	6.107	5.396	6.294	5.086
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	561	608	590	668	575	712
Service Time	4.144	3.638	3.814	3.103	3.994	2.786
HCM Lane V/C Ratio	0.242	0.229	0.139	0.13	0.259	0.403
HCM Control Delay	11.2	10.4	9.8	8.9	11.1	11.1
HCM Lane LOS	B	B	A	A	B	B
HCM 95th-tile Q	0.9	0.9	0.5	0.4	1	1.9

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	100	285	497	35	26	120
Future Vol, veh/h	100	285	497	35	26	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	109	310	540	38	28	130

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	540	0	-	0	912	270
Stage 1	-	-	-	-	540	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1025	-	-	-	273	728
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1025	-	-	-	244	728
Mov Cap-2 Maneuver	-	-	-	-	244	-
Stage 1	-	-	-	-	548	-
Stage 2	-	-	-	-	596	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1025	-	-	-	538
HCM Lane V/C Ratio	0.106	-	-	-	0.295
HCM Control Delay (s)	8.9	-	-	-	14.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.2

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	462	48	702	59	221	1058
Future Volume (veh/h)	462	48	702	59	221	1058
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	502	52	763	64	240	1150
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	779	358	1603	717	812	1603
Arrive On Green	0.25	0.25	0.51	0.51	0.51	0.51
Sat Flow, veh/h	3079	1417	3250	1417	1280	3250
Grp Volume(v), veh/h	502	52	763	64	240	1150
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	640	1583
Q Serve(g_s), s	5.7	1.1	6.2	0.9	5.9	11.1
Cycle Q Clear(g_c), s	5.7	1.1	6.2	0.9	12.1	11.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	779	358	1603	717	812	1603
V/C Ratio(X)	0.64	0.15	0.48	0.09	0.30	0.72
Avail Cap(c_a), veh/h	1523	700	1686	754	846	1686
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	11.4	6.3	5.0	10.3	7.6
Incr Delay (d2), s/veh	0.9	0.2	0.2	0.1	0.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.5	2.7	0.4	1.1	5.1
LnGrp Delay(d),s/veh	14.0	11.6	6.6	5.1	10.5	9.0
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	554		827			1390
Approach Delay, s/veh	13.8		6.4			9.2
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.5				25.5		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		8.2				14.1		7.7
Green Ext Time (p_c), s		10.1				5.9		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	607	0	152	0	1308	820	0	1613	1060
Future Volume (veh/h)	0	0	0	607	0	152	0	1308	820	0	1613	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				660	0	165	0	1422	0	0	1753	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1008	0	464	0	2275	708	0	2275	708
Arrive On Green				0.33	0.00	0.33	0.00	0.50	0.00	0.00	0.50	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				660	0	165	0	1422	0	0	1753	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				10.1	0.0	4.9	0.0	12.5	0.0	0.0	17.2	0.0
Cycle Q Clear(g_c), s				10.1	0.0	4.9	0.0	12.5	0.0	0.0	17.2	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1008	0	464	0	2275	708	0	2275	708
V/C Ratio(X)				0.65	0.00	0.36	0.00	0.63	0.00	0.00	0.77	0.00
Avail Cap(c_a), veh/h				1008	0	464	0	2275	708	0	2275	708
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.71	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.8	0.0	14.1	0.0	10.0	0.0	0.0	11.2	0.0
Incr Delay (d2), s/veh				3.3	0.0	2.1	0.0	0.9	0.0	0.0	2.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.7	0.0	2.2	0.0	5.3	0.0	0.0	7.7	0.0
LnGrp Delay(d),s/veh				19.2	0.0	16.2	0.0	10.9	0.0	0.0	13.8	0.0
LnGrp LOS				B		B		B			B	
Approach Vol, veh/h					825			1422			1753	
Approach Delay, s/veh					18.6			10.9			13.8	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.0		33.0				33.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		18.0		27.5				27.5
Max Q Clear Time (g_c+I1), s		12.1		14.5				19.2
Green Ext Time (p_c), s		1.7		11.9				7.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	470	0	353	0	0	0	0	1560	370	0	1867	380
Future Volume (veh/h)	470	0	353	0	0	0	0	1560	370	0	1867	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	630	0	256				0	1696	0	0	2029	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	984	0	439				0	2419	753	0	2419	753
Arrive On Green	0.31	0.00	0.31				0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	630	0	256				0	1696	0	0	2029	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	10.2	0.0	9.1				0.0	16.7	0.0	0.0	22.6	0.0
Cycle Q Clear(g_c), s	10.2	0.0	9.1				0.0	16.7	0.0	0.0	22.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	984	0	439				0	2419	753	0	2419	753
V/C Ratio(X)	0.64	0.00	0.58				0.00	0.70	0.00	0.00	0.84	0.00
Avail Cap(c_a), veh/h	1005	0	449				0	2503	779	0	2419	753
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.62	0.00
Uniform Delay (d), s/veh	17.8	0.0	17.4				0.0	10.5	0.0	0.0	11.9	0.0
Incr Delay (d2), s/veh	3.2	0.0	5.6				0.0	0.9	0.0	0.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.2				0.0	7.1	0.0	0.0	9.9	0.0
LnGrp Delay(d),s/veh	21.0	0.0	23.0				0.0	11.3	0.0	0.0	14.2	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		886						1696			2029	
Approach Delay, s/veh		21.6						11.3			14.2	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.4		22.6		37.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 33		19.0		31.5
Max Q Clear Time (g_c+I1), s				18.7		12.2		24.6
Green Ext Time (p_c), s				13.2		2.0		6.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1240	0	140	0	1250	270	0	1930	1350
Future Volume (veh/h)	0	0	0	1240	0	140	0	1250	270	0	1930	1350
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1348	0	152	0	1359	0	0	2098	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1191	0	548	0	2214	689	0	2214	689
Arrive On Green				0.39	0.00	0.39	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1348	0	152	0	1359	0	0	2098	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				29.0	0.0	5.5	0.0	16.4	0.0	0.0	32.9	0.0
Cycle Q Clear(g_c), s				29.0	0.0	5.5	0.0	16.4	0.0	0.0	32.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1191	0	548	0	2214	689	0	2214	689
V/C Ratio(X)				1.13	0.00	0.28	0.00	0.61	0.00	0.00	0.95	0.00
Avail Cap(c_a), veh/h				1191	0	548	0	2214	689	0	2214	689
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.88	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				23.0	0.0	15.8	0.0	14.1	0.0	0.0	18.3	0.0
Incr Delay (d2), s/veh				70.4	0.0	0.3	0.0	1.1	0.0	0.0	10.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				23.9	0.0	2.2	0.0	7.0	0.0	0.0	15.7	0.0
LnGrp Delay(d),s/veh				93.4	0.0	16.1	0.0	15.2	0.0	0.0	28.6	0.0
LnGrp LOS				F		B		B			C	
Approach Vol, veh/h					1500			1359			2098	
Approach Delay, s/veh					85.6			15.2			28.6	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		42.0		33.0		42.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		36.5		29.0		36.5		
Max Q Clear Time (g_c+I1), s		34.9		31.0		18.4		
Green Ext Time (p_c), s		1.5		0.0		16.8		

Intersection Summary	
HCM 2010 Ctrl Delay	42.2
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	388	0	109	0	0	0	0	1112	990	0	2721	380
Future Volume (veh/h)	388	0	109	0	0	0	0	1112	990	0	2721	380
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	422	0	118				0	1209	0	0	2958	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	505	0	232				0	3324	1035	0	3324	1035
Arrive On Green	0.16	0.00	0.16				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	422	0	118				0	1209	0	0	2958	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.0	0.0	6.8				0.0	8.8	0.0	0.0	45.1	0.0
Cycle Q Clear(g_c), s	12.0	0.0	6.8				0.0	8.8	0.0	0.0	45.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	505	0	232				0	3324	1035	0	3324	1035
V/C Ratio(X)	0.84	0.00	0.51				0.00	0.36	0.00	0.00	0.89	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3324	1035	0	3324	1035
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.5	0.0	34.3				0.0	4.4	0.0	0.0	9.3	0.0
Incr Delay (d2), s/veh	8.3	0.0	1.7				0.0	0.3	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	2.8				0.0	3.7	0.0	0.0	18.5	0.0
LnGrp Delay(d),s/veh	44.7	0.0	36.0				0.0	4.8	0.0	0.0	9.7	0.0
LnGrp LOS	D		D					A			A	
Approach Vol, veh/h		540						1209			2958	
Approach Delay, s/veh		42.8						4.8			9.7	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		71.3				71.3		18.7
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		47.1				10.8		14.0
Green Ext Time (p_c), s		15.2				48.9		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	41.2
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	87	368	45	0	90	430	9	0	21	64	85	0	67	55	88
Future Vol, veh/h	0	87	368	45	0	90	430	9	0	21	64	85	0	67	55	88
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	95	400	49	0	98	467	10	0	23	70	92	0	73	60	96
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	40.4	60.8	14.4	15.5
HCM LOS	E	F	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	25%	0%	100%	0%	0%	100%	0%	0%	55%	0%
Vol Thru, %	75%	0%	0%	100%	0%	0%	100%	0%	45%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	85	87	368	45	90	430	9	122	88
LT Vol	21	0	87	0	0	90	0	0	67	0
Through Vol	64	0	0	368	0	0	430	0	55	0
RT Vol	0	85	0	0	45	0	0	9	0	88
Lane Flow Rate	92	92	95	400	49	98	467	10	133	96
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.24	0.219	0.226	0.901	0.101	0.235	1	0.02	0.344	0.222
Departure Headway (Hd)	9.359	8.547	8.608	8.108	7.408	8.64	8.127	7.407	9.329	8.369
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	420	417	448	484	415	449	482	386	429
Service Time	7.112	6.3	6.354	5.853	5.153	6.406	5.892	5.172	7.079	6.118
HCM Lane V/C Ratio	0.24	0.219	0.228	0.893	0.101	0.236	1.04	0.021	0.345	0.224
HCM Control Delay	15.1	13.7	13.9	50.2	11	14.1	71.6	10.3	16.9	13.5
HCM Lane LOS	C	B	B	F	B	B	F	B	C	B
HCM 95th-tile Q	0.9	0.8	0.9	9.8	0.3	0.9	12.8	0.1	1.5	0.8

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	115	5	3	735	505	247
Future Vol, veh/h	115	5	3	735	505	247
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	5	3	799	549	268

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1089	409	817	0	-	0
Stage 1	683	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	210	592	807	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	209	592	807	-	-	-
Mov Cap-2 Maneuver	209	-	-	-	-	-
Stage 1	463	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.6	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	807	-	215	-	-
HCM Lane V/C Ratio	0.004	-	0.607	-	-
HCM Control Delay (s)	9.5	-	44.6	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.5	-	-

Intersection	
Intersection Delay, s/veh	24.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
Future Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	208	89	8	0	10	239	414	0	18	75	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	19.7	31.1	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	34	191	82	7	9	220	381	183	24	263
LT Vol	17	0	191	0	0	9	0	0	183	0	0
Through Vol	69	0	0	82	0	0	220	0	0	24	0
RT Vol	0	34	0	0	7	0	0	381	0	0	263
Lane Flow Rate	93	37	208	89	8	10	239	414	199	26	286
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.243	0.088	0.539	0.219	0.017	0.023	0.532	0.84	0.486	0.06	0.602
Departure Headway (Hd)	9.36	8.561	9.346	8.834	8.118	8.63	8.121	7.407	8.901	8.395	7.688
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	421	388	408	443	417	447	493	408	429	472
Service Time	7.072	6.273	7.054	6.542	5.826	6.33	5.821	5.107	6.601	6.095	5.388
HCM Lane V/C Ratio	0.242	0.088	0.536	0.218	0.018	0.024	0.535	0.84	0.488	0.061	0.606
HCM Control Delay	15.1	12.1	22.5	14	11	11.5	19.7	38.1	19.7	11.6	21.3
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.1	0.8	0.1	0.1	3.1	8.4	2.6	0.2	3.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	183	24	263
Future Vol, veh/h	0	183	24	263
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	199	26	286
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.2
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	324	121	0	109	214	0	96	106
Future Vol, veh/h	0	324	121	0	109	214	0	96	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	352	132	0	118	233	0	104	115
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	106	324	121	109	214
LT Vol	96	0	0	0	109	0
Through Vol	0	0	324	0	0	214
RT Vol	0	106	0	121	0	0
Lane Flow Rate	104	115	352	132	118	233
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.206	0.188	0.557	0.182	0.208	0.376
Departure Headway (Hd)	7.09	5.874	5.697	4.989	6.323	5.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	611	634	719	569	619
Service Time	4.824	3.608	3.426	2.718	4.055	3.548
HCM Lane V/C Ratio	0.205	0.188	0.555	0.184	0.207	0.376
HCM Control Delay	11.7	10	15.4	8.8	10.7	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	2	2	0	10	2	0	2	10
Future Vol, veh/h	0	2	2	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	2	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.2	6.8
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	2	10	2	2	10
LT Vol	2	0	0	0	2	0
Through Vol	0	2	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	2	2	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.003	0.003	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.56	3.86	5.064	3.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	787	788	931	709	929
Service Time	2.772	2.272	2.267	1.567	2.776	1.576
HCM Lane V/C Ratio	0.003	0.003	0.014	0.002	0.003	0.012
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	91	285	515	29	25	115
Future Vol, veh/h	91	285	515	29	25	115
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	99	310	560	32	27	125

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	560	0	-	0	913	280
Stage 1	-	-	-	-	560	-
Stage 2	-	-	-	-	353	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1007	-	-	-	273	717
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	682	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1007	-	-	-	246	717
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	615	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1007	-	-	-	534
HCM Lane V/C Ratio	0.098	-	-	-	0.285
HCM Control Delay (s)	9	-	-	-	14.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	174	36	1374	26	74	876
Future Volume (veh/h)	174	36	1374	26	74	876
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	189	39	1493	28	80	952
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	713	328	1675	750	435	1675
Arrive On Green	0.23	0.23	0.53	0.53	0.53	0.53
Sat Flow, veh/h	3079	1417	3250	1417	663	3250
Grp Volume(v), veh/h	189	39	1493	28	80	952
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	331	1583
Q Serve(g_s), s	2.0	0.9	16.7	0.4	4.3	8.0
Cycle Q Clear(g_c), s	2.0	0.9	16.7	0.4	21.0	8.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	713	328	1675	750	435	1675
V/C Ratio(X)	0.27	0.12	0.89	0.04	0.18	0.57
Avail Cap(c_a), veh/h	1513	696	1675	750	435	1675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.1	8.3	4.5	17.9	6.3
Incr Delay (d2), s/veh	0.2	0.2	6.4	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	8.5	0.2	0.4	3.5
LnGrp Delay(d),s/veh	12.7	12.2	14.8	4.5	18.1	6.7
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	228		1521			1032
Approach Delay, s/veh	12.6		14.6			7.6
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.2
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		18.7				23.0		4.0
Green Ext Time (p_c), s		2.2				0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	424	0	358	0	2452	340	0	1386	510
Future Volume (veh/h)	0	0	0	424	0	358	0	2452	340	0	1386	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				461	0	389	0	2665	0	0	1507	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				809	0	372	0	2736	852	0	2736	852
Arrive On Green				0.26	0.00	0.26	0.00	0.60	0.00	0.00	0.60	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				461	0	389	0	2665	0	0	1507	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				9.1	0.0	18.4	0.0	39.4	0.0	0.0	13.8	0.0
Cycle Q Clear(g_c), s				9.1	0.0	18.4	0.0	39.4	0.0	0.0	13.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				809	0	372	0	2737	852	0	2737	852
V/C Ratio(X)				0.57	0.00	1.04	0.00	0.97	0.00	0.00	0.55	0.00
Avail Cap(c_a), veh/h				809	0	372	0	2736	852	0	2736	852
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.23	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				22.4	0.0	25.8	0.0	13.4	0.0	0.0	8.3	0.0
Incr Delay (d2), s/veh				2.9	0.0	58.8	0.0	4.2	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	13.2	0.0	17.4	0.0	0.0	5.9	0.0
LnGrp Delay(d),s/veh				25.3	0.0	84.6	0.0	17.6	0.0	0.0	9.1	0.0
LnGrp LOS				C		F		B			A	
Approach Vol, veh/h					850			2665			1507	
Approach Delay, s/veh					52.4			17.6			9.1	
Approach LOS					D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.4		47.6				47.6
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		18.4		42.1				42.1
Max Q Clear Time (g_c+I1), s		20.4		41.4				15.8
Green Ext Time (p_c), s		0.0		0.7				25.4

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1044	0	626	0	0	0	0	1751	821	0	1437	361
Future Volume (veh/h)	1044	0	626	0	0	0	0	1751	821	0	1437	361
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1347	0	453				0	1903	0	0	1562	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1553	0	693				0	1985	618	0	1985	618
Arrive On Green	0.49	0.00	0.49				0.00	0.44	0.00	0.00	0.44	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1347	0	453				0	1903	0	0	1562	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	28.2	0.0	18.0				0.0	30.4	0.0	0.0	22.1	0.0
Cycle Q Clear(g_c), s	28.2	0.0	18.0				0.0	30.4	0.0	0.0	22.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1553	0	693				0	1985	618	0	1985	618
V/C Ratio(X)	0.87	0.00	0.65				0.00	0.96	0.00	0.00	0.79	0.00
Avail Cap(c_a), veh/h	1553	0	693				0	2002	623	0	1985	618
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.81	0.00
Uniform Delay (d), s/veh	17.0	0.0	14.4				0.0	20.5	0.0	0.0	18.1	0.0
Incr Delay (d2), s/veh	6.8	0.0	4.8				0.0	11.8	0.0	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.6	0.0	7.8				0.0	14.7	0.0	0.0	9.6	0.0
LnGrp Delay(d),s/veh	23.8	0.0	19.1				0.0	32.3	0.0	0.0	20.8	0.0
LnGrp LOS	C		B					C			C	
Approach Vol, veh/h		1800						1903			1562	
Approach Delay, s/veh		22.6						32.3			20.8	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.2		40.7		38.2
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 33		34.0		31.5
Max Q Clear Time (g_c+I1), s				32.4		30.2		24.1
Green Ext Time (p_c), s				0.3		2.5		7.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1092	0	379	0	2216	110	0	1543	421
Future Volume (veh/h)	0	0	0	1092	0	379	0	2216	110	0	1543	421
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1187	0	412	0	2409	0	0	1677	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1170	0	538	0	2389	744	0	2389	744
Arrive On Green				0.38	0.00	0.38	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1187	0	412	0	2409	0	0	1677	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				38.0	0.0	25.4	0.0	52.5	0.0	0.0	27.7	0.0
Cycle Q Clear(g_c), s				38.0	0.0	25.4	0.0	52.5	0.0	0.0	27.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1170	0	538	0	2389	744	0	2389	744
V/C Ratio(X)				1.01	0.00	0.77	0.00	1.01	0.00	0.00	0.70	0.00
Avail Cap(c_a), veh/h				1170	0	538	0	2389	744	0	2389	744
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.61	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.0	0.0	27.1	0.0	23.8	0.0	0.0	17.9	0.0
Incr Delay (d2), s/veh				29.9	0.0	6.5	0.0	16.5	0.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.0	0.0	10.9	0.0	25.3	0.0	0.0	11.9	0.0
LnGrp Delay(d),s/veh				60.9	0.0	33.6	0.0	40.2	0.0	0.0	19.6	0.0
LnGrp LOS				F		C		F			B	
Approach Vol, veh/h					1599			2409			1677	
Approach Delay, s/veh					53.9			40.2			19.6	
Approach LOS					D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		58.0		42.0		58.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		52.5		38.0		52.5		
Max Q Clear Time (g_c+I1), s		29.7		40.0		54.5		
Green Ext Time (p_c), s		21.9		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	547	0	91	0	0	0	0	1803	1290	0	2269	270
Future Volume (veh/h)	547	0	91	0	0	0	0	1803	1290	0	2269	270
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	595	0	99				0	1960	0	0	2466	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	713	0	328				0	2832	882	0	2832	882
Arrive On Green	0.23	0.00	0.23				0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	595	0	99				0	1960	0	0	2466	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.0	0.0	3.8				0.0	18.6	0.0	0.0	29.0	0.0
Cycle Q Clear(g_c), s	12.0	0.0	3.8				0.0	18.6	0.0	0.0	29.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	713	0	328				0	2832	882	0	2832	882
V/C Ratio(X)	0.84	0.00	0.30				0.00	0.69	0.00	0.00	0.87	0.00
Avail Cap(c_a), veh/h	853	0	392				0	2832	882	0	2832	882
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.44	0.00
Uniform Delay (d), s/veh	23.8	0.0	20.6				0.0	8.1	0.0	0.0	10.1	0.0
Incr Delay (d2), s/veh	6.2	0.0	0.5				0.0	1.4	0.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	1.5				0.0	8.0	0.0	0.0	12.4	0.0
LnGrp Delay(d),s/veh	30.0	0.0	21.2				0.0	9.6	0.0	0.0	12.0	0.0
LnGrp LOS	C		C					A			B	
Approach Vol, veh/h		694						1960			2466	
Approach Delay, s/veh		28.7						9.6			12.0	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		46.0				46.0		19.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		37.5				37.5		18.0
Max Q Clear Time (g_c+I1), s		31.0				20.6		14.0
Green Ext Time (p_c), s		6.4				16.6		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	50.3
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	39	473	17	0	22	532	36	0	17	5	28	0	33	12	35
Future Vol, veh/h	0	39	473	17	0	22	532	36	0	17	5	28	0	33	12	35
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	514	18	0	24	578	39	0	18	5	30	0	36	13	38
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	50	59.1	11.5	11.8
HCM LOS	E	F	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	77%	0%	100%	0%	0%	100%	0%	0%	73%	0%
Vol Thru, %	23%	0%	0%	100%	0%	0%	100%	0%	27%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	22	28	39	473	17	22	532	36	45	35
LT Vol	17	0	39	0	0	22	0	0	33	0
Through Vol	5	0	0	473	0	0	532	0	12	0
RT Vol	0	28	0	0	17	0	0	36	0	35
Lane Flow Rate	24	30	42	514	18	24	578	39	49	38
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.058	0.065	0.085	0.958	0.031	0.048	1	0.065	0.117	0.08
Departure Headway (Hd)	8.76	7.689	7.203	6.705	6.007	7.157	6.652	5.945	8.615	7.562
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	408	464	498	540	596	498	544	598	416	473
Service Time	6.53	5.459	4.935	4.437	3.74	4.936	4.431	3.724	6.377	5.324
HCM Lane V/C Ratio	0.059	0.065	0.084	0.952	0.03	0.048	1.063	0.065	0.118	0.08
HCM Control Delay	12.1	11	10.6	54.7	8.9	10.3	64.5	9.1	12.5	11
HCM Lane LOS	B	B	B	F	A	B	F	A	B	B
HCM 95th-tile Q	0.2	0.2	0.3	12.5	0.1	0.2	14.2	0.2	0.4	0.3

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive

12/28/2015

Intersection	
Int Delay, s/veh	12.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	225	4	7	491	510	154
Future Vol, veh/h	225	4	7	491	510	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	4	8	534	554	167

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	920	361	722	0	-	0
Stage 1	638	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	270	636	876	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	268	636	876	-	-	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	76.3	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	876	-	271	-	-
HCM Lane V/C Ratio	0.009	-	0.918	-	-
HCM Control Delay (s)	9.1	-	76.3	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	8.4	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive

4/20/2016

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
Future Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	114	11	0	21	74	236	0	7	28	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	12.8	13.3	11
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	19%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	81%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	107	105	10	19	68	217	328	61	166
LT Vol	6	0	107	0	0	19	0	0	328	0	0
Through Vol	26	0	0	105	0	0	68	0	0	61	0
RT Vol	0	8	0	0	10	0	0	217	0	0	166
Lane Flow Rate	35	9	116	114	11	21	74	236	357	66	180
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.077	0.017	0.257	0.237	0.02	0.044	0.148	0.426	0.697	0.12	0.293
Departure Headway (Hd)	7.948	7.154	7.967	7.46	6.75	7.823	7.316	6.607	7.042	6.542	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	453	503	454	484	533	461	493	550	510	544	610
Service Time	5.658	4.864	5.669	5.162	4.452	5.523	5.016	4.307	4.833	4.333	3.632
HCM Lane V/C Ratio	0.077	0.018	0.256	0.236	0.021	0.046	0.15	0.429	0.7	0.121	0.295
HCM Control Delay	11.3	10	13.4	12.5	9.6	10.9	11.3	14.1	24.6	10.2	11.1
HCM Lane LOS	B	A	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.2	0.1	1	0.9	0.1	0.1	0.5	2.1	5.4	0.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	328	61	166
Future Vol, veh/h	0	328	61	166
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	357	66	180
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	139	71	0	109	181	0	99	181
Future Vol, veh/h	0	139	71	0	109	181	0	99	181
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	151	77	0	118	197	0	108	197
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.7	10.7	10.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	181	139	71	109	181
LT Vol	99	0	0	0	109	0
Through Vol	0	0	139	0	0	181
RT Vol	0	181	0	71	0	0
Lane Flow Rate	108	197	151	77	118	197
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.19	0.282	0.244	0.109	0.2	0.305
Departure Headway (Hd)	6.475	5.165	5.814	5.105	6.195	5.689
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	557	687	621	706	583	635
Service Time	4.175	2.965	3.514	2.805	3.895	3.389
HCM Lane V/C Ratio	0.194	0.287	0.243	0.109	0.202	0.31
HCM Control Delay	10.7	10	10.4	8.4	10.4	10.9
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.7	1.2	1	0.4	0.7	1.3

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	10	10	0	1	1	0	1	1
Future Vol, veh/h	0	10	10	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	11	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	10	1	1	1	1
LT Vol	10	0	0	0	1	0
Through Vol	0	10	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	11	11	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.015	0.014	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.548	3.848	5.076	3.876
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	790	934	707	925
Service Time	2.741	2.241	2.255	1.555	2.793	1.593
HCM Lane V/C Ratio	0.015	0.014	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	143	371	217	27	39	143
Future Vol, veh/h	143	371	217	27	39	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	155	403	236	29	42	155

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	236	0	-	0	749	118
Stage 1	-	-	-	-	236	-
Stage 2	-	-	-	-	513	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1328	-	-	-	348	912
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1328	-	-	-	307	912
Mov Cap-2 Maneuver	-	-	-	-	307	-
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	500	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1328	-	-	-	641
HCM Lane V/C Ratio	0.117	-	-	-	0.309
HCM Control Delay (s)	8.1	-	-	-	13.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.3

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	454	46	704	65	235	1056
Future Volume (veh/h)	454	46	704	65	235	1056
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	493	50	765	71	255	1148
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	776	357	1609	720	810	1609
Arrive On Green	0.25	0.25	0.51	0.51	0.51	0.51
Sat Flow, veh/h	3079	1417	3250	1417	1270	3250
Grp Volume(v), veh/h	493	50	765	71	255	1148
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	635	1583
Q Serve(g_s), s	5.6	1.1	6.2	1.0	6.5	11.1
Cycle Q Clear(g_c), s	5.6	1.1	6.2	1.0	12.7	11.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	776	357	1609	720	810	1609
V/C Ratio(X)	0.64	0.14	0.48	0.10	0.31	0.71
Avail Cap(c_a), veh/h	1517	698	1680	752	838	1680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	11.5	6.3	5.0	10.4	7.5
Incr Delay (d2), s/veh	0.9	0.2	0.2	0.1	0.2	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.4	2.7	0.4	1.1	5.1
LnGrp Delay(d),s/veh	14.1	11.7	6.5	5.1	10.6	8.9
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	543		836			1403
Approach Delay, s/veh	13.8		6.4			9.2
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.6				25.6		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		8.2				14.7		7.6
Green Ext Time (p_c), s		10.1				5.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	596	0	154	0	1306	820	0	1624	1060
Future Volume (veh/h)	0	0	0	596	0	154	0	1306	820	0	1624	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				648	0	167	0	1420	0	0	1765	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1008	0	464	0	2275	708	0	2275	708
Arrive On Green				0.33	0.00	0.33	0.00	0.50	0.00	0.00	0.50	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				648	0	167	0	1420	0	0	1765	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				9.9	0.0	4.9	0.0	12.5	0.0	0.0	17.4	0.0
Cycle Q Clear(g_c), s				9.9	0.0	4.9	0.0	12.5	0.0	0.0	17.4	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1008	0	464	0	2275	708	0	2275	708
V/C Ratio(X)				0.64	0.00	0.36	0.00	0.62	0.00	0.00	0.78	0.00
Avail Cap(c_a), veh/h				1008	0	464	0	2275	708	0	2275	708
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.71	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.8	0.0	14.1	0.0	10.0	0.0	0.0	11.2	0.0
Incr Delay (d2), s/veh				3.2	0.0	2.2	0.0	0.9	0.0	0.0	2.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.6	0.0	2.2	0.0	5.3	0.0	0.0	7.8	0.0
LnGrp Delay(d),s/veh				18.9	0.0	16.3	0.0	10.9	0.0	0.0	13.9	0.0
LnGrp LOS				B		B		B			B	
Approach Vol, veh/h					815			1420			1765	
Approach Delay, s/veh					18.4			10.9			13.9	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.0		33.0				33.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		18.0		27.5				27.5
Max Q Clear Time (g_c+I1), s		11.9		14.5				19.4
Green Ext Time (p_c), s		1.7		12.0				7.6

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	464	0	369	0	0	0	0	1556	370	0	1871	380
Future Volume (veh/h)	464	0	369	0	0	0	0	1556	370	0	1871	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	629	0	267				0	1691	0	0	2034	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	984	0	439				0	2419	753	0	2419	753
Arrive On Green	0.31	0.00	0.31				0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	629	0	267				0	1691	0	0	2034	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	10.2	0.0	9.6				0.0	16.6	0.0	0.0	22.7	0.0
Cycle Q Clear(g_c), s	10.2	0.0	9.6				0.0	16.6	0.0	0.0	22.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	984	0	439				0	2419	753	0	2419	753
V/C Ratio(X)	0.64	0.00	0.61				0.00	0.70	0.00	0.00	0.84	0.00
Avail Cap(c_a), veh/h	1005	0	449				0	2503	779	0	2419	753
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.62	0.00
Uniform Delay (d), s/veh	17.8	0.0	17.6				0.0	10.5	0.0	0.0	11.9	0.0
Incr Delay (d2), s/veh	3.2	0.0	6.1				0.0	0.8	0.0	0.0	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.5				0.0	7.1	0.0	0.0	9.9	0.0
LnGrp Delay(d),s/veh	21.0	0.0	23.7				0.0	11.3	0.0	0.0	14.3	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		896						1691			2034	
Approach Delay, s/veh		21.8						11.3			14.3	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.4		22.6		37.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 33		19.0		31.5
Max Q Clear Time (g_c+I1), s				18.6		12.2		24.7
Green Ext Time (p_c), s				13.3		2.0		6.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1244	0	139	0	1251	270	0	1956	1350
Future Volume (veh/h)	0	0	0	1244	0	139	0	1251	270	0	1956	1350
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1352	0	151	0	1360	0	0	2126	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1191	0	548	0	2214	689	0	2214	689
Arrive On Green				0.39	0.00	0.39	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1352	0	151	0	1360	0	0	2126	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				29.0	0.0	5.5	0.0	16.4	0.0	0.0	33.8	0.0
Cycle Q Clear(g_c), s				29.0	0.0	5.5	0.0	16.4	0.0	0.0	33.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1191	0	548	0	2214	689	0	2214	689
V/C Ratio(X)				1.14	0.00	0.28	0.00	0.61	0.00	0.00	0.96	0.00
Avail Cap(c_a), veh/h				1191	0	548	0	2214	689	0	2214	689
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.88	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				23.0	0.0	15.8	0.0	14.1	0.0	0.0	18.5	0.0
Incr Delay (d2), s/veh				71.7	0.0	0.3	0.0	1.1	0.0	0.0	11.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				24.1	0.0	2.2	0.0	7.0	0.0	0.0	16.4	0.0
LnGrp Delay(d),s/veh				94.7	0.0	16.1	0.0	15.2	0.0	0.0	30.4	0.0
LnGrp LOS				F		B		B			C	
Approach Vol, veh/h					1503			1360			2126	
Approach Delay, s/veh					86.8			15.2			30.4	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		42.0		33.0		42.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		36.5		29.0		36.5		
Max Q Clear Time (g_c+I1), s		35.8		31.0		18.4		
Green Ext Time (p_c), s		0.7		0.0		16.8		

Intersection Summary	
HCM 2010 Ctrl Delay	43.2
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	387	0	111	0	0	0	0	1123	1000	0	2739	390
Future Volume (veh/h)	387	0	111	0	0	0	0	1123	1000	0	2739	390
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	421	0	121				0	1221	0	0	2977	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	504	0	232				0	3325	1035	0	3325	1035
Arrive On Green	0.16	0.00	0.16				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	421	0	121				0	1221	0	0	2977	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	11.9	0.0	7.0				0.0	8.9	0.0	0.0	45.9	0.0
Cycle Q Clear(g_c), s	11.9	0.0	7.0				0.0	8.9	0.0	0.0	45.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	504	0	232				0	3325	1035	0	3325	1035
V/C Ratio(X)	0.84	0.00	0.52				0.00	0.37	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3325	1035	0	3325	1035
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.5	0.0	34.4				0.0	4.5	0.0	0.0	9.4	0.0
Incr Delay (d2), s/veh	8.2	0.0	1.8				0.0	0.3	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	2.9				0.0	3.7	0.0	0.0	18.9	0.0
LnGrp Delay(d),s/veh	44.7	0.0	36.2				0.0	4.8	0.0	0.0	9.8	0.0
LnGrp LOS	D		D					A			A	
Approach Vol, veh/h		542						1221			2977	
Approach Delay, s/veh		42.8						4.8			9.8	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		71.3				71.3		18.7
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		47.9				10.9		13.9
Green Ext Time (p_c), s		14.4				48.9		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	44.1
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	89	388	45	0	92	428	9	0	20	63	87	0	69	54	86
Future Vol, veh/h	0	89	388	45	0	92	428	9	0	20	63	87	0	69	54	86
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	97	422	49	0	100	465	10	0	22	68	95	0	75	59	93
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	48.1	60.9	14.5	15.7
HCM LOS	E	F	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	24%	0%	100%	0%	0%	100%	0%	0%	56%	0%
Vol Thru, %	76%	0%	0%	100%	0%	0%	100%	0%	44%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	87	89	388	45	92	428	9	123	86
LT Vol	20	0	89	0	0	92	0	0	69	0
Through Vol	63	0	0	388	0	0	428	0	54	0
RT Vol	0	87	0	0	45	0	0	9	0	86
Lane Flow Rate	90	95	97	422	49	100	465	10	134	93
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.237	0.227	0.232	0.952	0.101	0.242	1	0.02	0.35	0.22
Departure Headway (Hd)	9.446	8.638	8.628	8.128	7.427	8.729	8.215	7.495	9.424	8.458
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	381	416	416	447	482	411	442	476	382	424
Service Time	7.199	6.39	6.375	5.875	5.174	6.498	5.983	5.263	7.174	6.207
HCM Lane V/C Ratio	0.236	0.228	0.233	0.944	0.102	0.243	1.052	0.021	0.351	0.219
HCM Control Delay	15.1	13.9	14	60.2	11	14.3	72	10.4	17.2	13.6
HCM Lane LOS	C	B	B	F	B	B	F	B	C	B
HCM 95th-tile Q	0.9	0.9	0.9	11.3	0.3	0.9	12.8	0.1	1.5	0.8

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	115	5	4	735	505	286
Future Vol, veh/h	115	5	4	735	505	286
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	5	4	799	549	311

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1112	430	860	0	-	0
Stage 1	704	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	203	573	777	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	202	573	777	-	-	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	47.6	0.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	777	-	208	-	-
HCM Lane V/C Ratio	0.006	-	0.627	-	-
HCM Control Delay (s)	9.7	-	47.6	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.7	-	-

Intersection	
Intersection Delay, s/veh	24.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
Future Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	208	89	8	0	10	239	414	0	18	75	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	19.7	31.1	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	34	191	82	7	9	220	381	183	24	263
LT Vol	17	0	191	0	0	9	0	0	183	0	0
Through Vol	69	0	0	82	0	0	220	0	0	24	0
RT Vol	0	34	0	0	7	0	0	381	0	0	263
Lane Flow Rate	93	37	208	89	8	10	239	414	199	26	286
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.243	0.088	0.539	0.219	0.017	0.023	0.532	0.84	0.486	0.06	0.602
Departure Headway (Hd)	9.36	8.561	9.346	8.834	8.118	8.63	8.121	7.407	8.901	8.395	7.688
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	421	388	408	443	417	447	493	408	429	472
Service Time	7.072	6.273	7.054	6.542	5.826	6.33	5.821	5.107	6.601	6.095	5.388
HCM Lane V/C Ratio	0.242	0.088	0.536	0.218	0.018	0.024	0.535	0.84	0.488	0.061	0.606
HCM Control Delay	15.1	12.1	22.5	14	11	11.5	19.7	38.1	19.7	11.6	21.3
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.1	0.8	0.1	0.1	3.1	8.4	2.6	0.2	3.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	183	24	263
Future Vol, veh/h	0	183	24	263
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	199	26	286
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.2
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	324	121	0	109	214	0	96	106
Future Vol, veh/h	0	324	121	0	109	214	0	96	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	352	132	0	118	233	0	104	115
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	106	324	121	109	214
LT Vol	96	0	0	0	109	0
Through Vol	0	0	324	0	0	214
RT Vol	0	106	0	121	0	0
Lane Flow Rate	104	115	352	132	118	233
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.206	0.188	0.557	0.182	0.208	0.376
Departure Headway (Hd)	7.09	5.874	5.697	4.989	6.323	5.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	611	634	719	569	619
Service Time	4.824	3.608	3.426	2.718	4.055	3.548
HCM Lane V/C Ratio	0.205	0.188	0.555	0.184	0.207	0.376
HCM Control Delay	11.7	10	15.4	8.8	10.7	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	2	2	0	10	2	0	2	10
Future Vol, veh/h	0	2	2	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	2	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.2	6.8
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	2	10	2	2	10
LT Vol	2	0	0	0	2	0
Through Vol	0	2	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	2	2	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.003	0.003	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.56	3.86	5.064	3.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	787	788	931	709	929
Service Time	2.772	2.272	2.267	1.567	2.776	1.576
HCM Lane V/C Ratio	0.003	0.003	0.014	0.002	0.003	0.012
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

HCM 2010 TWSC
33: Turtle Rock Drive & Concordia Drive 12/28/2015

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	94	288	510	36	32	120
Future Vol, veh/h	94	288	510	36	32	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	313	554	39	35	130

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	915	277
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1012	-	-	-	272	720
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	676	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1012	-	-	-	245	720
Mov Cap-2 Maneuver	-	-	-	-	245	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1012	-	-	-	511
HCM Lane V/C Ratio	0.101	-	-	-	0.323
HCM Control Delay (s)	9	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps 12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	174	36	1384	26	74	886
Future Volume (veh/h)	174	36	1384	26	74	886
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	189	39	1504	28	80	963
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	713	328	1675	750	430	1675
Arrive On Green	0.23	0.23	0.53	0.53	0.53	0.53
Sat Flow, veh/h	3079	1417	3250	1417	656	3250
Grp Volume(v), veh/h	189	39	1504	28	80	963
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	328	1583
Q Serve(g_s), s	2.0	0.9	16.9	0.4	4.1	8.2
Cycle Q Clear(g_c), s	2.0	0.9	16.9	0.4	21.0	8.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	713	328	1675	750	430	1675
V/C Ratio(X)	0.27	0.12	0.90	0.04	0.19	0.57
Avail Cap(c_a), veh/h	1513	696	1675	750	430	1675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.1	8.4	4.5	18.1	6.3
Incr Delay (d2), s/veh	0.2	0.2	6.9	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	8.7	0.2	0.4	3.6
LnGrp Delay(d),s/veh	12.7	12.2	15.3	4.5	18.3	6.8
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	228		1532			1043
Approach Delay, s/veh	12.6		15.1			7.7
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.2
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		18.9				23.0		4.0
Green Ext Time (p_c), s		2.0				0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	419	0	361	0	2459	340	0	1391	510
Future Volume (veh/h)	0	0	0	419	0	361	0	2459	340	0	1391	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				455	0	392	0	2673	0	0	1512	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				809	0	372	0	2736	852	0	2736	852
Arrive On Green				0.26	0.00	0.26	0.00	0.60	0.00	0.00	0.60	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				455	0	392	0	2673	0	0	1512	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				8.9	0.0	18.4	0.0	39.7	0.0	0.0	13.9	0.0
Cycle Q Clear(g_c), s				8.9	0.0	18.4	0.0	39.7	0.0	0.0	13.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				809	0	372	0	2737	852	0	2737	852
V/C Ratio(X)				0.56	0.00	1.05	0.00	0.98	0.00	0.00	0.55	0.00
Avail Cap(c_a), veh/h				809	0	372	0	2736	852	0	2736	852
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.22	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				22.3	0.0	25.8	0.0	13.5	0.0	0.0	8.3	0.0
Incr Delay (d2), s/veh				2.8	0.0	61.2	0.0	4.4	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.1	0.0	13.5	0.0	17.4	0.0	0.0	5.9	0.0
LnGrp Delay(d),s/veh				25.1	0.0	87.0	0.0	17.9	0.0	0.0	9.1	0.0
LnGrp LOS				C		F		B			A	
Approach Vol, veh/h					847			2673			1512	
Approach Delay, s/veh					53.7			17.9			9.1	
Approach LOS					D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.4		47.6				47.6
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		18.4		42.1				42.1
Max Q Clear Time (g_c+I1), s		20.4		41.7				15.9
Green Ext Time (p_c), s		0.0		0.4				25.3

Intersection Summary	
HCM 2010 Ctrl Delay	21.3
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1047	0	632	0	0	0	0	1752	830	0	1428	360
Future Volume (veh/h)	1047	0	632	0	0	0	0	1752	830	0	1428	360
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1352	0	458				0	1904	0	0	1552	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1566	0	699				0	1986	618	0	1986	618
Arrive On Green	0.49	0.00	0.49				0.00	0.44	0.00	0.00	0.44	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1352	0	458				0	1904	0	0	1552	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	28.2	0.0	18.2				0.0	30.4	0.0	0.0	21.9	0.0
Cycle Q Clear(g_c), s	28.2	0.0	18.2				0.0	30.4	0.0	0.0	21.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1566	0	699				0	1986	618	0	1986	618
V/C Ratio(X)	0.86	0.00	0.66				0.00	0.96	0.00	0.00	0.78	0.00
Avail Cap(c_a), veh/h	1566	0	699				0	2002	623	0	1986	618
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.81	0.00
Uniform Delay (d), s/veh	16.8	0.0	14.2				0.0	20.5	0.0	0.0	18.1	0.0
Incr Delay (d2), s/veh	6.6	0.0	4.8				0.0	11.9	0.0	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.6	0.0	7.9				0.0	14.9	0.0	0.0	9.5	0.0
LnGrp Delay(d),s/veh	23.3	0.0	19.0				0.0	32.3	0.0	0.0	20.6	0.0
LnGrp LOS	C		B					C			C	
Approach Vol, veh/h		1810						1904			1552	
Approach Delay, s/veh		22.2						32.3			20.6	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.2		41.0		38.2
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 33		34.0		31.5
Max Q Clear Time (g_c+I1), s				32.4		30.2		23.9
Green Ext Time (p_c), s				0.3		2.6		7.3

Intersection Summary	
HCM 2010 Ctrl Delay	25.4
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1107	0	384	0	2226	110	0	1553	420
Future Volume (veh/h)	0	0	0	1107	0	384	0	2226	110	0	1553	420
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1203	0	417	0	2420	0	0	1688	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1176	0	541	0	2420	753	0	2420	753
Arrive On Green				0.38	0.00	0.38	0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1203	0	417	0	2420	0	0	1688	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				42.0	0.0	28.4	0.0	58.5	0.0	0.0	30.4	0.0
Cycle Q Clear(g_c), s				42.0	0.0	28.4	0.0	58.5	0.0	0.0	30.4	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1176	0	541	0	2420	753	0	2420	753
V/C Ratio(X)				1.02	0.00	0.77	0.00	1.00	0.00	0.00	0.70	0.00
Avail Cap(c_a), veh/h				1176	0	541	0	2420	753	0	2420	753
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.61	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				34.0	0.0	29.8	0.0	25.7	0.0	0.0	19.2	0.0
Incr Delay (d2), s/veh				32.3	0.0	6.7	0.0	14.3	0.0	0.0	1.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				23.1	0.0	12.0	0.0	27.4	0.0	0.0	13.0	0.0
LnGrp Delay(d),s/veh				66.3	0.0	36.5	0.0	40.0	0.0	0.0	20.9	0.0
LnGrp LOS				F		D		F			C	
Approach Vol, veh/h					1620			2420			1688	
Approach Delay, s/veh					58.6			40.0			20.9	
Approach LOS					E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		64.0		46.0		64.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		58.5		42.0		58.5		
Max Q Clear Time (g_c+I1), s		32.4		44.0		60.5		
Green Ext Time (p_c), s		25.1		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	39.6
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	546	0	92	0	0	0	0	1814	1290	0	2288	290
Future Volume (veh/h)	546	0	92	0	0	0	0	1814	1290	0	2288	290
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	593	0	100				0	1972	0	0	2487	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	711	0	327				0	2835	883	0	2835	883
Arrive On Green	0.23	0.00	0.23				0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	593	0	100				0	1972	0	0	2487	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	11.9	0.0	3.8				0.0	18.7	0.0	0.0	29.5	0.0
Cycle Q Clear(g_c), s	11.9	0.0	3.8				0.0	18.7	0.0	0.0	29.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	711	0	327				0	2835	883	0	2835	883
V/C Ratio(X)	0.83	0.00	0.31				0.00	0.70	0.00	0.00	0.88	0.00
Avail Cap(c_a), veh/h	853	0	392				0	2835	883	0	2835	883
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.44	0.00
Uniform Delay (d), s/veh	23.8	0.0	20.7				0.0	8.2	0.0	0.0	10.2	0.0
Incr Delay (d2), s/veh	6.1	0.0	0.5				0.0	1.4	0.0	0.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	1.5				0.0	8.0	0.0	0.0	12.7	0.0
LnGrp Delay(d),s/veh	30.0	0.0	21.2				0.0	9.6	0.0	0.0	12.1	0.0
LnGrp LOS	C		C					A			B	
Approach Vol, veh/h		693						1972			2487	
Approach Delay, s/veh		28.7						9.6			12.1	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		46.0				46.0		19.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		37.5				37.5		18.0
Max Q Clear Time (g_c+I1), s		31.5				20.7		13.9
Green Ext Time (p_c), s		5.9				16.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	51.1
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	38	477	16	0	22	539	38	0	17	4	29	0	34	12	34
Future Vol, veh/h	0	38	477	16	0	22	539	38	0	17	4	29	0	34	12	34
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	518	17	0	24	586	41	0	18	4	32	0	37	13	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	51.8	59	11.5	11.9
HCM LOS	F	F	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	81%	0%	100%	0%	0%	100%	0%	0%	74%	0%
Vol Thru, %	19%	0%	0%	100%	0%	0%	100%	0%	26%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	29	38	477	16	22	539	38	46	34
LT Vol	17	0	38	0	0	22	0	0	34	0
Through Vol	4	0	0	477	0	0	539	0	12	0
RT Vol	0	29	0	0	16	0	0	38	0	34
Lane Flow Rate	23	32	41	518	17	24	586	41	50	37
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.056	0.067	0.083	0.966	0.029	0.048	1	0.068	0.12	0.078
Departure Headway (Hd)	8.796	7.706	7.208	6.71	6.013	7.171	6.667	5.96	8.633	7.577
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	407	464	498	544	596	497	545	597	415	472
Service Time	6.561	5.471	4.94	4.441	3.744	4.947	4.442	3.735	6.39	5.335
HCM Lane V/C Ratio	0.057	0.069	0.082	0.952	0.029	0.048	1.075	0.069	0.12	0.078
HCM Control Delay	12.1	11	10.6	56.5	8.9	10.3	64.5	9.2	12.6	11
HCM Lane LOS	B	B	B	F	A	B	F	A	B	B
HCM 95th-tile Q	0.2	0.2	0.3	12.8	0.1	0.2	14.2	0.2	0.4	0.3

Intersection	
Int Delay, s/veh	13.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	226	4	6	494	513	166
Future Vol, veh/h	226	4	6	494	513	166
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	246	4	7	537	558	180

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	930	369	738	0	-	0
Stage 1	648	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	266	628	864	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	628	864	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	80.9	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	864	-	267	-	-
HCM Lane V/C Ratio	0.008	-	0.936	-	-
HCM Control Delay (s)	9.2	-	80.9	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	8.7	-	-

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
Future Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	114	11	0	21	74	236	0	7	28	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	12.8	13.3	11
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	19%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	81%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	107	105	10	19	68	217	328	61	166
LT Vol	6	0	107	0	0	19	0	0	328	0	0
Through Vol	26	0	0	105	0	0	68	0	0	61	0
RT Vol	0	8	0	0	10	0	0	217	0	0	166
Lane Flow Rate	35	9	116	114	11	21	74	236	357	66	180
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.077	0.017	0.257	0.237	0.02	0.044	0.148	0.426	0.697	0.12	0.293
Departure Headway (Hd)	7.948	7.154	7.967	7.46	6.75	7.823	7.316	6.607	7.042	6.542	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	453	503	454	484	533	461	493	550	510	544	610
Service Time	5.658	4.864	5.669	5.162	4.452	5.523	5.016	4.307	4.833	4.333	3.632
HCM Lane V/C Ratio	0.077	0.018	0.256	0.236	0.021	0.046	0.15	0.429	0.7	0.121	0.295
HCM Control Delay	11.3	10	13.4	12.5	9.6	10.9	11.3	14.1	24.6	10.2	11.1
HCM Lane LOS	B	A	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.2	0.1	1	0.9	0.1	0.1	0.5	2.1	5.4	0.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	328	61	166
Future Vol, veh/h	0	328	61	166
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	357	66	180
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	139	71	0	109	181	0	99	181
Future Vol, veh/h	0	139	71	0	109	181	0	99	181
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	151	77	0	118	197	0	108	197
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.7	10.7	10.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	99	181	139	71	109	181
LT Vol	99	0	0	0	109	0
Through Vol	0	0	139	0	0	181
RT Vol	0	181	0	71	0	0
Lane Flow Rate	108	197	151	77	118	197
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.19	0.282	0.244	0.109	0.2	0.305
Departure Headway (Hd)	6.475	5.165	5.814	5.105	6.195	5.689
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	557	687	621	706	583	635
Service Time	4.175	2.965	3.514	2.805	3.895	3.389
HCM Lane V/C Ratio	0.194	0.287	0.243	0.109	0.202	0.31
HCM Control Delay	10.7	10	10.4	8.4	10.4	10.9
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.7	1.2	1	0.4	0.7	1.3

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	10	1	0	1	1	0	1	1
Future Vol, veh/h	0	10	1	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	1	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	1	1	1	1	1
LT Vol	10	0	0	0	1	0
Through Vol	0	1	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	11	1	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.015	0.001	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.544	3.844	5.059	3.859
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	792	936	710	931
Service Time	2.741	2.241	2.248	1.548	2.768	1.568
HCM Lane V/C Ratio	0.015	0.001	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.2	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	147	376	221	23	34	149
Future Vol, veh/h	147	376	221	23	34	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	160	409	240	25	37	162

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	240	0	-	0	764	120
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	524	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1324	-	-	-	340	909
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	559	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1324	-	-	-	299	909
Mov Cap-2 Maneuver	-	-	-	-	299	-
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	491	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1324	-	-	-	659
HCM Lane V/C Ratio	0.121	-	-	-	0.302
HCM Control Delay (s)	8.1	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.3

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	455	45	715	64	226	1065
Future Volume (veh/h)	455	45	715	64	226	1065
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	495	49	777	70	246	1158
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	776	357	1609	720	801	1609
Arrive On Green	0.25	0.25	0.51	0.51	0.51	0.51
Sat Flow, veh/h	3079	1417	3250	1417	1257	3250
Grp Volume(v), veh/h	495	49	777	70	246	1158
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	628	1583
Q Serve(g_s), s	5.7	1.1	6.3	1.0	6.3	11.2
Cycle Q Clear(g_c), s	5.7	1.1	6.3	1.0	12.6	11.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	776	357	1609	720	801	1609
V/C Ratio(X)	0.64	0.14	0.48	0.10	0.31	0.72
Avail Cap(c_a), veh/h	1517	698	1680	751	829	1680
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	11.5	6.3	5.0	10.5	7.6
Incr Delay (d2), s/veh	0.9	0.2	0.2	0.1	0.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	0.4	2.7	0.4	1.1	5.2
LnGrp Delay(d),s/veh	14.1	11.6	6.6	5.1	10.7	9.0
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	544		847			1404
Approach Delay, s/veh	13.9		6.5			9.3
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.6				25.6		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		8.3				14.6		7.7
Green Ext Time (p_c), s		10.1				5.5		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	602	0	156	0	1304	830	0	1618	1060
Future Volume (veh/h)	0	0	0	602	0	156	0	1304	830	0	1618	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				654	0	170	0	1417	0	0	1759	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1026	0	472	0	2313	720	0	2313	720
Arrive On Green				0.33	0.00	0.33	0.00	0.51	0.00	0.00	0.51	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				654	0	170	0	1417	0	0	1759	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				10.8	0.0	5.5	0.0	13.3	0.0	0.0	18.6	0.0
Cycle Q Clear(g_c), s				10.8	0.0	5.5	0.0	13.3	0.0	0.0	18.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1026	0	472	0	2313	720	0	2313	720
V/C Ratio(X)				0.64	0.00	0.36	0.00	0.61	0.00	0.00	0.76	0.00
Avail Cap(c_a), veh/h				1026	0	472	0	2313	720	0	2313	720
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.71	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				16.9	0.0	15.2	0.0	10.5	0.0	0.0	11.8	0.0
Incr Delay (d2), s/veh				3.0	0.0	2.1	0.0	0.9	0.0	0.0	2.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.0	0.0	2.4	0.0	5.7	0.0	0.0	8.2	0.0
LnGrp Delay(d),s/veh				20.0	0.0	17.3	0.0	11.4	0.0	0.0	14.2	0.0
LnGrp LOS				B		B		B			B	
Approach Vol, veh/h					824			1417			1759	
Approach Delay, s/veh					19.4			11.4			14.2	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		24.0		36.0				36.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		20.0		30.5				30.5
Max Q Clear Time (g_c+I1), s		12.8		15.3				20.6
Green Ext Time (p_c), s		1.9		13.8				9.3

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	0	361	0	0	0	0	1559	370	0	1869	380
Future Volume (veh/h)	471	0	361	0	0	0	0	1559	370	0	1869	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	634	0	261				0	1695	0	0	2032	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	984	0	439				0	2419	753	0	2419	753
Arrive On Green	0.31	0.00	0.31				0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	634	0	261				0	1695	0	0	2032	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	10.3	0.0	9.3				0.0	16.7	0.0	0.0	22.7	0.0
Cycle Q Clear(g_c), s	10.3	0.0	9.3				0.0	16.7	0.0	0.0	22.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	984	0	439				0	2419	753	0	2419	753
V/C Ratio(X)	0.64	0.00	0.59				0.00	0.70	0.00	0.00	0.84	0.00
Avail Cap(c_a), veh/h	1005	0	449				0	2503	779	0	2419	753
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.64	0.00
Uniform Delay (d), s/veh	17.8	0.0	17.5				0.0	10.5	0.0	0.0	11.9	0.0
Incr Delay (d2), s/veh	3.2	0.0	5.8				0.0	0.9	0.0	0.0	2.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.3				0.0	7.1	0.0	0.0	9.9	0.0
LnGrp Delay(d),s/veh	21.1	0.0	23.3				0.0	11.3	0.0	0.0	14.3	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		895						1695			2032	
Approach Delay, s/veh		21.7						11.3			14.3	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.4		22.6		37.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 33		19.0		31.5
Max Q Clear Time (g_c+I1), s				18.7		12.3		24.7
Green Ext Time (p_c), s				13.2		2.0		6.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.7
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1240	0	140	0	1250	270	0	1940	1350
Future Volume (veh/h)	0	0	0	1240	0	140	0	1250	270	0	1940	1350
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1348	0	152	0	1359	0	0	2109	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1191	0	548	0	2214	689	0	2214	689
Arrive On Green				0.39	0.00	0.39	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1348	0	152	0	1359	0	0	2109	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				29.0	0.0	5.5	0.0	16.4	0.0	0.0	33.3	0.0
Cycle Q Clear(g_c), s				29.0	0.0	5.5	0.0	16.4	0.0	0.0	33.3	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1191	0	548	0	2214	689	0	2214	689
V/C Ratio(X)				1.13	0.00	0.28	0.00	0.61	0.00	0.00	0.95	0.00
Avail Cap(c_a), veh/h				1191	0	548	0	2214	689	0	2214	689
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.88	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				23.0	0.0	15.8	0.0	14.1	0.0	0.0	18.4	0.0
Incr Delay (d2), s/veh				70.4	0.0	0.3	0.0	1.1	0.0	0.0	10.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				23.9	0.0	2.2	0.0	7.0	0.0	0.0	15.9	0.0
LnGrp Delay(d),s/veh				93.4	0.0	16.1	0.0	15.2	0.0	0.0	29.2	0.0
LnGrp LOS				F		B		B			C	
Approach Vol, veh/h					1500			1359			2109	
Approach Delay, s/veh					85.6			15.2			29.2	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		42.0		33.0		42.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		36.5		29.0		36.5		
Max Q Clear Time (g_c+I1), s		35.3		31.0		18.4		
Green Ext Time (p_c), s		1.2		0.0		16.8		

Intersection Summary	
HCM 2010 Ctrl Delay	42.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	383	0	113	0	0	0	0	1117	1000	0	2717	390
Future Volume (veh/h)	383	0	113	0	0	0	0	1117	1000	0	2717	390
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	416	0	123				0	1214	0	0	2953	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	500	0	230				0	3332	1037	0	3332	1037
Arrive On Green	0.16	0.00	0.16				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	416	0	123				0	1214	0	0	2953	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	11.8	0.0	7.2				0.0	8.8	0.0	0.0	44.6	0.0
Cycle Q Clear(g_c), s	11.8	0.0	7.2				0.0	8.8	0.0	0.0	44.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	500	0	230				0	3332	1037	0	3332	1037
V/C Ratio(X)	0.83	0.00	0.54				0.00	0.36	0.00	0.00	0.89	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3332	1037	0	3332	1037
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.5	0.0	34.6				0.0	4.4	0.0	0.0	9.2	0.0
Incr Delay (d2), s/veh	8.0	0.0	1.9				0.0	0.3	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.6	0.0	2.9				0.0	3.7	0.0	0.0	18.2	0.0
LnGrp Delay(d),s/veh	44.5	0.0	36.5				0.0	4.7	0.0	0.0	9.6	0.0
LnGrp LOS	D		D					A			A	
Approach Vol, veh/h		539						1214			2953	
Approach Delay, s/veh		42.7						4.7			9.6	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		71.4				71.4		18.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		46.6				10.8		13.8
Green Ext Time (p_c), s		15.6				48.9		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.1
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	42.5
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	88	377	46	0	90	431	9	0	21	63	86	0	67	55	88
Future Vol, veh/h	0	88	377	46	0	90	431	9	0	21	63	86	0	67	55	88
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	96	410	50	0	98	468	10	0	23	68	93	0	73	60	96
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	43.6	61	14.4	15.6
HCM LOS	E	F	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	25%	0%	100%	0%	0%	100%	0%	0%	55%	0%
Vol Thru, %	75%	0%	0%	100%	0%	0%	100%	0%	45%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	86	88	377	46	90	431	9	122	88
LT Vol	21	0	88	0	0	90	0	0	67	0
Through Vol	63	0	0	377	0	0	431	0	55	0
RT Vol	0	86	0	0	46	0	0	9	0	88
Lane Flow Rate	91	93	96	410	50	98	468	10	133	96
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.239	0.223	0.229	0.924	0.103	0.236	1	0.02	0.345	0.224
Departure Headway (Hd)	9.406	8.593	8.619	8.119	7.419	8.687	8.173	7.453	9.373	8.412
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	382	418	417	447	483	413	445	479	385	427
Service Time	7.156	6.343	6.365	5.864	5.164	6.452	5.938	5.218	7.12	6.16
HCM Lane V/C Ratio	0.238	0.222	0.23	0.917	0.104	0.237	1.052	0.021	0.345	0.225
HCM Control Delay	15.1	13.8	13.9	54.5	11	14.1	71.8	10.4	17	13.6
HCM Lane LOS	C	B	B	F	B	B	F	B	C	B
HCM 95th-tile Q	0.9	0.8	0.9	10.4	0.3	0.9	12.8	0.1	1.5	0.8

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	115	5	3	735	505	237
Future Vol, veh/h	115	5	3	735	505	237
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	5	3	799	549	258

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1084	403	807	0	-	0
Stage 1	678	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	211	597	814	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	210	597	814	-	-	-
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	466	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	44.2	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	814	-	216	-	-
HCM Lane V/C Ratio	0.004	-	0.604	-	-
HCM Control Delay (s)	9.4	-	44.2	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.5	-	-

Intersection	
Intersection Delay, s/veh	24.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
Future Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	208	89	8	0	10	239	414	0	18	75	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	19.7	31.1	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	34	191	82	7	9	220	381	183	24	263
LT Vol	17	0	191	0	0	9	0	0	183	0	0
Through Vol	69	0	0	82	0	0	220	0	0	24	0
RT Vol	0	34	0	0	7	0	0	381	0	0	263
Lane Flow Rate	93	37	208	89	8	10	239	414	199	26	286
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.243	0.088	0.539	0.219	0.017	0.023	0.532	0.84	0.486	0.06	0.602
Departure Headway (Hd)	9.36	8.561	9.346	8.834	8.118	8.63	8.121	7.407	8.901	8.395	7.688
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	421	388	408	443	417	447	493	408	429	472
Service Time	7.072	6.273	7.054	6.542	5.826	6.33	5.821	5.107	6.601	6.095	5.388
HCM Lane V/C Ratio	0.242	0.088	0.536	0.218	0.018	0.024	0.535	0.84	0.488	0.061	0.606
HCM Control Delay	15.1	12.1	22.5	14	11	11.5	19.7	38.1	19.7	11.6	21.3
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.1	0.8	0.1	0.1	3.1	8.4	2.6	0.2	3.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	183	24	263
Future Vol, veh/h	0	183	24	263
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	199	26	286
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.2
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	324	121	0	109	214	0	96	106
Future Vol, veh/h	0	324	121	0	109	214	0	96	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	352	132	0	118	233	0	104	115
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	106	324	121	109	214
LT Vol	96	0	0	0	109	0
Through Vol	0	0	324	0	0	214
RT Vol	0	106	0	121	0	0
Lane Flow Rate	104	115	352	132	118	233
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.206	0.188	0.557	0.182	0.208	0.376
Departure Headway (Hd)	7.09	5.874	5.697	4.989	6.323	5.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	611	634	719	569	619
Service Time	4.824	3.608	3.426	2.718	4.055	3.548
HCM Lane V/C Ratio	0.205	0.188	0.555	0.184	0.207	0.376
HCM Control Delay	11.7	10	15.4	8.8	10.7	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	2	2	0	10	2	0	2	10
Future Vol, veh/h	0	2	2	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	2	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.2	6.8
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	2	10	2	2	10
LT Vol	2	0	0	0	2	0
Through Vol	0	2	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	2	2	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.003	0.003	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.56	3.86	5.064	3.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	787	788	931	709	929
Service Time	2.772	2.272	2.267	1.567	2.776	1.576
HCM Lane V/C Ratio	0.003	0.003	0.014	0.002	0.003	0.012
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	89	292	516	31	28	114
Future Vol, veh/h	89	292	516	31	28	114
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	97	317	561	34	30	124

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	561	0	-	0	913	280
Stage 1	-	-	-	-	561	-
Stage 2	-	-	-	-	352	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1006	-	-	-	273	717
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1006	-	-	-	247	717
Mov Cap-2 Maneuver	-	-	-	-	247	-
Stage 1	-	-	-	-	535	-
Stage 2	-	-	-	-	617	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	14.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1006	-	-	-	521
HCM Lane V/C Ratio	0.096	-	-	-	0.296
HCM Control Delay (s)	9	-	-	-	14.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	168	33	1377	27	73	882
Future Volume (veh/h)	168	33	1377	27	73	882
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	183	36	1497	29	79	959
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	708	326	1679	751	436	1679
Arrive On Green	0.23	0.23	0.53	0.53	0.53	0.53
Sat Flow, veh/h	3079	1417	3250	1417	659	3250
Grp Volume(v), veh/h	183	36	1497	29	79	959
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	330	1583
Q Serve(g_s), s	1.9	0.8	16.7	0.4	4.3	8.1
Cycle Q Clear(g_c), s	1.9	0.8	16.7	0.4	21.0	8.1
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	708	326	1679	751	436	1679
V/C Ratio(X)	0.26	0.11	0.89	0.04	0.18	0.57
Avail Cap(c_a), veh/h	1516	698	1679	751	436	1679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.1	8.3	4.5	17.8	6.3
Incr Delay (d2), s/veh	0.2	0.1	6.5	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.3	8.6	0.2	0.4	3.6
LnGrp Delay(d),s/veh	12.7	12.2	14.7	4.5	18.0	6.7
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	219		1526			1038
Approach Delay, s/veh	12.6		14.5			7.6
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.1
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		18.7				23.0		3.9
Green Ext Time (p_c), s		2.2				0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	424	0	358	0	2462	340	0	1396	510
Future Volume (veh/h)	0	0	0	424	0	358	0	2462	340	0	1396	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				461	0	389	0	2676	0	0	1517	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				801	0	368	0	2749	856	0	2749	856
Arrive On Green				0.26	0.00	0.26	0.00	0.60	0.00	0.00	0.60	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				461	0	389	0	2676	0	0	1517	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				9.1	0.0	18.2	0.0	39.6	0.0	0.0	13.9	0.0
Cycle Q Clear(g_c), s				9.1	0.0	18.2	0.0	39.6	0.0	0.0	13.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				801	0	368	0	2749	856	0	2749	856
V/C Ratio(X)				0.58	0.00	1.06	0.00	0.97	0.00	0.00	0.55	0.00
Avail Cap(c_a), veh/h				801	0	368	0	2749	856	0	2749	856
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.22	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				22.5	0.0	25.9	0.0	13.3	0.0	0.0	8.2	0.0
Incr Delay (d2), s/veh				3.0	0.0	62.4	0.0	4.0	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.2	0.0	13.4	0.0	17.1	0.0	0.0	6.0	0.0
LnGrp Delay(d),s/veh				25.5	0.0	88.3	0.0	17.3	0.0	0.0	9.0	0.0
LnGrp LOS				C		F		B			A	
Approach Vol, veh/h					850			2676			1517	
Approach Delay, s/veh					54.3			17.3			9.0	
Approach LOS					D			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.2		47.8				47.8
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		18.2		42.3				42.3
Max Q Clear Time (g_c+I1), s		20.2		41.6				15.9
Green Ext Time (p_c), s		0.0		0.7				25.6

Intersection Summary	
HCM 2010 Ctrl Delay	21.0
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1053	0	629	0	0	0	0	1757	830	0	1441	360
Future Volume (veh/h)	1053	0	629	0	0	0	0	1757	830	0	1441	360
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1358	0	456				0	1910	0	0	1566	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1587	0	708				0	1989	619	0	1989	619
Arrive On Green	0.50	0.00	0.50				0.00	0.44	0.00	0.00	0.44	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1358	0	456				0	1910	0	0	1566	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	28.0	0.0	17.8				0.0	30.5	0.0	0.0	22.2	0.0
Cycle Q Clear(g_c), s	28.0	0.0	17.8				0.0	30.5	0.0	0.0	22.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1587	0	708				0	1989	619	0	1989	619
V/C Ratio(X)	0.86	0.00	0.64				0.00	0.96	0.00	0.00	0.79	0.00
Avail Cap(c_a), veh/h	1587	0	708				0	2002	623	0	1989	619
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.81	0.00
Uniform Delay (d), s/veh	16.4	0.0	13.8				0.0	20.5	0.0	0.0	18.1	0.0
Incr Delay (d2), s/veh	6.2	0.0	4.5				0.0	12.1	0.0	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.4	0.0	7.7				0.0	15.0	0.0	0.0	9.6	0.0
LnGrp Delay(d),s/veh	22.6	0.0	18.3				0.0	32.6	0.0	0.0	20.7	0.0
LnGrp LOS	C		B					C			C	
Approach Vol, veh/h		1814						1910			1566	
Approach Delay, s/veh		21.5						32.6			20.7	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.3		41.5		38.3
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 33		34.0		31.5
Max Q Clear Time (g_c+I1), s				32.5		30.0		24.2
Green Ext Time (p_c), s				0.3		2.7		7.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1096	0	375	0	2215	110	0	1544	420
Future Volume (veh/h)	0	0	0	1096	0	375	0	2215	110	0	1544	420
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1191	0	408	0	2408	0	0	1678	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1170	0	538	0	2389	744	0	2389	744
Arrive On Green				0.38	0.00	0.38	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1191	0	408	0	2408	0	0	1678	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				38.0	0.0	25.1	0.0	52.5	0.0	0.0	27.8	0.0
Cycle Q Clear(g_c), s				38.0	0.0	25.1	0.0	52.5	0.0	0.0	27.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1170	0	538	0	2389	744	0	2389	744
V/C Ratio(X)				1.02	0.00	0.76	0.00	1.01	0.00	0.00	0.70	0.00
Avail Cap(c_a), veh/h				1170	0	538	0	2389	744	0	2389	744
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.61	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.0	0.0	27.0	0.0	23.8	0.0	0.0	17.9	0.0
Incr Delay (d2), s/veh				30.9	0.0	6.1	0.0	16.3	0.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.1	0.0	10.7	0.0	25.3	0.0	0.0	11.9	0.0
LnGrp Delay(d),s/veh				61.9	0.0	33.1	0.0	40.1	0.0	0.0	19.6	0.0
LnGrp LOS				F		C		F			B	
Approach Vol, veh/h					1599			2408			1678	
Approach Delay, s/veh					54.5			40.1			19.6	
Approach LOS					D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		58.0		42.0		58.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		52.5		38.0		52.5		
Max Q Clear Time (g_c+I1), s		29.8		40.0		54.5		
Green Ext Time (p_c), s		21.9		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	38.1
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	553	0	95	0	0	0	0	1807	1290	0	2275	280
Future Volume (veh/h)	553	0	95	0	0	0	0	1807	1290	0	2275	280
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	601	0	103				0	1964	0	0	2473	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	718	0	330				0	2824	879	0	2824	879
Arrive On Green	0.23	0.00	0.23				0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	601	0	103				0	1964	0	0	2473	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.1	0.0	3.9				0.0	18.7	0.0	0.0	29.4	0.0
Cycle Q Clear(g_c), s	12.1	0.0	3.9				0.0	18.7	0.0	0.0	29.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	718	0	330				0	2824	879	0	2824	879
V/C Ratio(X)	0.84	0.00	0.31				0.00	0.70	0.00	0.00	0.88	0.00
Avail Cap(c_a), veh/h	853	0	392				0	2824	879	0	2824	879
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.44	0.00
Uniform Delay (d), s/veh	23.7	0.0	20.6				0.0	8.2	0.0	0.0	10.2	0.0
Incr Delay (d2), s/veh	6.4	0.0	0.5				0.0	1.4	0.0	0.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	1.6				0.0	8.0	0.0	0.0	12.4	0.0
LnGrp Delay(d),s/veh	30.1	0.0	21.1				0.0	9.7	0.0	0.0	12.2	0.0
LnGrp LOS	C		C					A			B	
Approach Vol, veh/h		704						1964			2473	
Approach Delay, s/veh		28.8						9.7			12.2	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		45.8				45.8		19.2
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		37.5				37.5		18.0
Max Q Clear Time (g_c+I1), s		31.4				20.7		14.1
Green Ext Time (p_c), s		6.1				16.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	51.1
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	38	477	16	0	22	530	37	0	17	4	29	0	35	12	34
Future Vol, veh/h	0	38	477	16	0	22	530	37	0	17	4	29	0	35	12	34
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	518	17	0	24	576	40	0	18	4	32	0	38	13	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	52	59	11.5	11.9
HCM LOS	F	F	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	81%	0%	100%	0%	0%	100%	0%	0%	74%	0%
Vol Thru, %	19%	0%	0%	100%	0%	0%	100%	0%	26%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	29	38	477	16	22	530	37	47	34
LT Vol	17	0	38	0	0	22	0	0	35	0
Through Vol	4	0	0	477	0	0	530	0	12	0
RT Vol	0	29	0	0	16	0	0	37	0	34
Lane Flow Rate	23	32	41	518	17	24	576	40	51	37
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.056	0.067	0.083	0.967	0.029	0.048	1	0.067	0.122	0.078
Departure Headway (Hd)	8.795	7.706	7.211	6.713	6.015	7.171	6.667	5.96	8.628	7.57
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	407	463	498	539	596	497	542	597	415	472
Service Time	6.565	5.476	4.943	4.445	3.747	4.952	4.447	3.74	6.393	5.335
HCM Lane V/C Ratio	0.057	0.069	0.082	0.961	0.029	0.048	1.063	0.067	0.123	0.078
HCM Control Delay	12.1	11	10.6	56.7	8.9	10.3	64.5	9.2	12.6	11
HCM Lane LOS	B	B	B	F	A	B	F	A	B	B
HCM 95th-tile Q	0.2	0.2	0.3	12.9	0.1	0.2	14.1	0.2	0.4	0.3

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive 12/28/2015

Intersection	
Int Delay, s/veh	13.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	225	4	6	491	520	155
Future Vol, veh/h	225	4	6	491	520	155
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	4	7	534	565	168

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	929	367	734	0	-	0
Stage 1	649	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	266	630	867	-	-	-
Stage 1	482	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	264	630	867	-	-	-
Mov Cap-2 Maneuver	264	-	-	-	-	-
Stage 1	482	-	-	-	-	-
Stage 2	736	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	80	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	867	-	267	-	-
HCM Lane V/C Ratio	0.008	-	0.932	-	-
HCM Control Delay (s)	9.2	-	80	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	8.6	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive 4/20/2016

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
Future Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	114	11	0	21	74	236	0	7	28	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	12.8	13.3	11
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	19%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	81%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	107	105	10	19	68	217	328	61	166
LT Vol	6	0	107	0	0	19	0	0	328	0	0
Through Vol	26	0	0	105	0	0	68	0	0	61	0
RT Vol	0	8	0	0	10	0	0	217	0	0	166
Lane Flow Rate	35	9	116	114	11	21	74	236	357	66	180
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.077	0.017	0.257	0.237	0.02	0.044	0.148	0.426	0.697	0.12	0.293
Departure Headway (Hd)	7.948	7.154	7.967	7.46	6.75	7.823	7.316	6.607	7.042	6.542	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	453	503	454	484	533	461	493	550	510	544	610
Service Time	5.658	4.864	5.669	5.162	4.452	5.523	5.016	4.307	4.833	4.333	3.632
HCM Lane V/C Ratio	0.077	0.018	0.256	0.236	0.021	0.046	0.15	0.429	0.7	0.121	0.295
HCM Control Delay	11.3	10	13.4	12.5	9.6	10.9	11.3	14.1	24.6	10.2	11.1
HCM Lane LOS	B	A	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.2	0.1	1	0.9	0.1	0.1	0.5	2.1	5.4	0.4	1.2

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	328	61	166
Future Vol, veh/h	0	328	61	166
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	357	66	180
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	141	69	0	113	186	0	97	183
Future Vol, veh/h	0	141	69	0	113	186	0	97	183
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	153	75	0	123	202	0	105	199
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.8	10.9	10.3
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	183	141	69	113	186
LT Vol	97	0	0	0	113	0
Through Vol	0	0	141	0	0	186
RT Vol	0	183	0	69	0	0
Lane Flow Rate	105	199	153	75	123	202
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.187	0.287	0.248	0.107	0.211	0.32
Departure Headway (Hd)	6.515	5.306	5.832	5.123	6.196	5.69
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	682	619	703	582	635
Service Time	4.215	3.006	3.54	2.831	3.901	3.395
HCM Lane V/C Ratio	0.189	0.292	0.247	0.107	0.211	0.318
HCM Control Delay	10.7	10.1	10.5	8.4	10.6	11.1
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.7	1.2	1	0.4	0.8	1.4

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	10	10	0	1	1	0	1	1
Future Vol, veh/h	0	10	10	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	11	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	10	1	1	1	1
LT Vol	10	0	0	0	1	0
Through Vol	0	10	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	11	11	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.015	0.014	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.548	3.848	5.076	3.876
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	790	934	707	925
Service Time	2.741	2.241	2.255	1.555	2.793	1.593
HCM Lane V/C Ratio	0.015	0.014	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	143	371	217	27	39	143
Future Vol, veh/h	143	371	217	27	39	143
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	155	403	236	29	42	155

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	236	0	-	0	749	118
Stage 1	-	-	-	-	236	-
Stage 2	-	-	-	-	513	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1328	-	-	-	348	912
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	566	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1328	-	-	-	307	912
Mov Cap-2 Maneuver	-	-	-	-	307	-
Stage 1	-	-	-	-	781	-
Stage 2	-	-	-	-	500	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	13.1
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1328	-	-	-	641
HCM Lane V/C Ratio	0.117	-	-	-	0.309
HCM Control Delay (s)	8.1	-	-	-	13.1
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.3

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	456	45	695	63	227	1064
Future Volume (veh/h)	456	45	695	63	227	1064
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	496	49	755	68	247	1157
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	778	358	1604	718	817	1604
Arrive On Green	0.25	0.25	0.51	0.51	0.51	0.51
Sat Flow, veh/h	3079	1417	3250	1417	1285	3250
Grp Volume(v), veh/h	496	49	755	68	247	1157
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	643	1583
Q Serve(g_s), s	5.7	1.1	6.1	1.0	6.1	11.2
Cycle Q Clear(g_c), s	5.7	1.1	6.1	1.0	12.2	11.2
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	778	358	1604	718	817	1604
V/C Ratio(X)	0.64	0.14	0.47	0.09	0.30	0.72
Avail Cap(c_a), veh/h	1522	700	1685	754	850	1685
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	11.4	6.3	5.0	10.3	7.6
Incr Delay (d2), s/veh	0.9	0.2	0.2	0.1	0.2	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.4	0.4	2.7	0.4	1.1	5.1
LnGrp Delay(d),s/veh	14.0	11.6	6.5	5.1	10.5	9.0
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	545		823			1404
Approach Delay, s/veh	13.8		6.4			9.3
Approach LOS	B		A			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		25.5				25.5		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		8.1				14.2		7.7
Green Ext Time (p_c), s		10.1				5.8		1.6

Intersection Summary	
HCM 2010 Ctrl Delay	9.3
HCM 2010 LOS	A

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	605	0	155	0	1315	820	0	1615	1060
Future Volume (veh/h)	0	0	0	605	0	155	0	1315	820	0	1615	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				658	0	168	0	1429	0	0	1755	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1008	0	464	0	2275	708	0	2275	708
Arrive On Green				0.33	0.00	0.33	0.00	0.50	0.00	0.00	0.50	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				658	0	168	0	1429	0	0	1755	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				10.1	0.0	5.0	0.0	12.6	0.0	0.0	17.3	0.0
Cycle Q Clear(g_c), s				10.1	0.0	5.0	0.0	12.6	0.0	0.0	17.3	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1008	0	464	0	2275	708	0	2275	708
V/C Ratio(X)				0.65	0.00	0.36	0.00	0.63	0.00	0.00	0.77	0.00
Avail Cap(c_a), veh/h				1008	0	464	0	2275	708	0	2275	708
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.71	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.8	0.0	14.1	0.0	10.0	0.0	0.0	11.2	0.0
Incr Delay (d2), s/veh				3.3	0.0	2.2	0.0	0.9	0.0	0.0	2.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.7	0.0	2.2	0.0	5.4	0.0	0.0	7.7	0.0
LnGrp Delay(d),s/veh				19.1	0.0	16.3	0.0	11.0	0.0	0.0	13.8	0.0
LnGrp LOS				B		B		B			B	
Approach Vol, veh/h					826			1429			1755	
Approach Delay, s/veh					18.5			11.0			13.8	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		22.0		33.0				33.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		18.0		27.5				27.5
Max Q Clear Time (g_c+I1), s		12.1		14.6				19.3
Green Ext Time (p_c), s		1.7		11.9				7.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	471	0	361	0	0	0	0	1559	370	0	1869	380
Future Volume (veh/h)	471	0	361	0	0	0	0	1559	370	0	1869	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	634	0	261				0	1695	0	0	2032	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	984	0	439				0	2419	753	0	2419	753
Arrive On Green	0.31	0.00	0.31				0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	634	0	261				0	1695	0	0	2032	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	10.3	0.0	9.3				0.0	16.7	0.0	0.0	22.7	0.0
Cycle Q Clear(g_c), s	10.3	0.0	9.3				0.0	16.7	0.0	0.0	22.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	984	0	439				0	2419	753	0	2419	753
V/C Ratio(X)	0.64	0.00	0.59				0.00	0.70	0.00	0.00	0.84	0.00
Avail Cap(c_a), veh/h	1005	0	449				0	2503	779	0	2419	753
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.62	0.00
Uniform Delay (d), s/veh	17.8	0.0	17.5				0.0	10.5	0.0	0.0	11.9	0.0
Incr Delay (d2), s/veh	3.2	0.0	5.8				0.0	0.9	0.0	0.0	2.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	0.0	4.3				0.0	7.1	0.0	0.0	9.9	0.0
LnGrp Delay(d),s/veh	21.1	0.0	23.3				0.0	11.3	0.0	0.0	14.2	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		895						1695			2032	
Approach Delay, s/veh		21.7						11.3			14.2	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				37.4		22.6		37.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 33		19.0		31.5
Max Q Clear Time (g_c+I1), s				18.7		12.3		24.7
Green Ext Time (p_c), s				13.2		2.0		6.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1255	0	127	0	1247	271	0	1935	1354
Future Volume (veh/h)	0	0	0	1255	0	127	0	1247	271	0	1935	1354
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1364	0	138	0	1355	0	0	2103	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1193	0	549	0	2247	699	0	2247	699
Arrive On Green				0.39	0.00	0.39	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1364	0	138	0	1355	0	0	2103	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				31.0	0.0	5.3	0.0	17.2	0.0	0.0	34.8	0.0
Cycle Q Clear(g_c), s				31.0	0.0	5.3	0.0	17.2	0.0	0.0	34.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1193	0	549	0	2247	699	0	2247	699
V/C Ratio(X)				1.14	0.00	0.25	0.00	0.60	0.00	0.00	0.94	0.00
Avail Cap(c_a), veh/h				1193	0	549	0	2247	699	0	2247	699
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.88	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				24.5	0.0	16.6	0.0	14.6	0.0	0.0	19.1	0.0
Incr Delay (d2), s/veh				74.8	0.0	0.2	0.0	1.1	0.0	0.0	9.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				25.5	0.0	2.1	0.0	7.4	0.0	0.0	16.3	0.0
LnGrp Delay(d),s/veh				99.3	0.0	16.9	0.0	15.7	0.0	0.0	28.0	0.0
LnGrp LOS				F		B		B			C	
Approach Vol, veh/h					1502			1355			2103	
Approach Delay, s/veh					91.7			15.7			28.0	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		45.0		35.0		45.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		39.5		31.0		39.5		
Max Q Clear Time (g_c+I1), s		36.8		33.0		19.2		
Green Ext Time (p_c), s		2.6		0.0		18.7		

Intersection Summary	
HCM 2010 Ctrl Delay	43.9
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	388	0	109	0	0	0	0	1122	990	0	2741	370
Future Volume (veh/h)	388	0	109	0	0	0	0	1122	990	0	2741	370
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	422	0	118				0	1220	0	0	2979	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	505	0	232				0	3324	1035	0	3324	1035
Arrive On Green	0.16	0.00	0.16				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	422	0	118				0	1220	0	0	2979	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.0	0.0	6.8				0.0	8.9	0.0	0.0	46.0	0.0
Cycle Q Clear(g_c), s	12.0	0.0	6.8				0.0	8.9	0.0	0.0	46.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	505	0	232				0	3324	1035	0	3324	1035
V/C Ratio(X)	0.84	0.00	0.51				0.00	0.37	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3324	1035	0	3324	1035
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.5	0.0	34.3				0.0	4.5	0.0	0.0	9.5	0.0
Incr Delay (d2), s/veh	8.3	0.0	1.7				0.0	0.3	0.0	0.0	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	2.8				0.0	3.7	0.0	0.0	18.9	0.0
LnGrp Delay(d),s/veh	44.7	0.0	36.0				0.0	4.8	0.0	0.0	9.9	0.0
LnGrp LOS	D		D					A			A	
Approach Vol, veh/h		540						1220			2979	
Approach Delay, s/veh		42.8						4.8			9.9	
Approach LOS		D						A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		71.3				71.3		18.7
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		48.0				10.9		14.0
Green Ext Time (p_c), s		14.3				48.9		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	12.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	42.7
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	88	379	44	0	92	428	9	0	20	63	87	0	68	55	86
Future Vol, veh/h	0	88	379	44	0	92	428	9	0	20	63	87	0	68	55	86
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	96	412	48	0	100	465	10	0	22	68	95	0	74	60	93
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	44.5	60.7	14.5	15.6
HCM LOS	E	F	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	24%	0%	100%	0%	0%	100%	0%	0%	55%	0%
Vol Thru, %	76%	0%	0%	100%	0%	0%	100%	0%	45%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	83	87	88	379	44	92	428	9	123	86
LT Vol	20	0	88	0	0	92	0	0	68	0
Through Vol	63	0	0	379	0	0	428	0	55	0
RT Vol	0	87	0	0	44	0	0	9	0	86
Lane Flow Rate	90	95	96	412	48	100	465	10	134	93
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.236	0.226	0.229	0.929	0.099	0.241	1	0.02	0.348	0.219
Departure Headway (Hd)	9.402	8.593	8.618	8.118	7.418	8.683	8.169	7.449	9.379	8.416
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	382	418	417	449	483	413	442	479	384	426
Service Time	7.156	6.348	6.366	5.865	5.165	6.453	5.939	5.218	7.129	6.167
HCM Lane V/C Ratio	0.236	0.227	0.23	0.918	0.099	0.242	1.052	0.021	0.349	0.218
HCM Control Delay	15.1	13.9	13.9	55.5	11	14.2	71.8	10.4	17.1	13.5
HCM Lane LOS	C	B	B	F	B	B	F	B	C	B
HCM 95th-tile Q	0.9	0.9	0.9	10.6	0.3	0.9	12.8	0.1	1.5	0.8

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	115	5	4	735	505	286
Future Vol, veh/h	115	5	4	735	505	286
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	5	4	799	549	311

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1112	430	860	0	-	0
Stage 1	704	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	203	573	777	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	202	573	777	-	-	-
Mov Cap-2 Maneuver	202	-	-	-	-	-
Stage 1	452	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	47.6	0.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	777	-	208	-	-
HCM Lane V/C Ratio	0.006	-	0.627	-	-
HCM Control Delay (s)	9.7	-	47.6	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.7	-	-

Intersection	
Intersection Delay, s/veh	24.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
Future Vol, veh/h	0	191	82	7	0	9	220	381	0	17	69	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	208	89	8	0	10	239	414	0	18	75	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	19.7	31.1	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	86	34	191	82	7	9	220	381	183	24	263
LT Vol	17	0	191	0	0	9	0	0	183	0	0
Through Vol	69	0	0	82	0	0	220	0	0	24	0
RT Vol	0	34	0	0	7	0	0	381	0	0	263
Lane Flow Rate	93	37	208	89	8	10	239	414	199	26	286
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.243	0.088	0.539	0.219	0.017	0.023	0.532	0.84	0.486	0.06	0.602
Departure Headway (Hd)	9.36	8.561	9.346	8.834	8.118	8.63	8.121	7.407	8.901	8.395	7.688
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	421	388	408	443	417	447	493	408	429	472
Service Time	7.072	6.273	7.054	6.542	5.826	6.33	5.821	5.107	6.601	6.095	5.388
HCM Lane V/C Ratio	0.242	0.088	0.536	0.218	0.018	0.024	0.535	0.84	0.488	0.061	0.606
HCM Control Delay	15.1	12.1	22.5	14	11	11.5	19.7	38.1	19.7	11.6	21.3
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.1	0.8	0.1	0.1	3.1	8.4	2.6	0.2	3.9

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	183	24	263
Future Vol, veh/h	0	183	24	263
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	199	26	286
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.2
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	324	121	0	109	214	0	96	106
Future Vol, veh/h	0	324	121	0	109	214	0	96	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	352	132	0	118	233	0	104	115
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	106	324	121	109	214
LT Vol	96	0	0	0	109	0
Through Vol	0	0	324	0	0	214
RT Vol	0	106	0	121	0	0
Lane Flow Rate	104	115	352	132	118	233
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.206	0.188	0.557	0.182	0.208	0.376
Departure Headway (Hd)	7.09	5.874	5.697	4.989	6.323	5.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	611	634	719	569	619
Service Time	4.824	3.608	3.426	2.718	4.055	3.548
HCM Lane V/C Ratio	0.205	0.188	0.555	0.184	0.207	0.376
HCM Control Delay	11.7	10	15.4	8.8	10.7	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	2	2	0	10	2	0	2	10
Future Vol, veh/h	0	2	2	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	2	2	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.2	6.8
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	2	2	10	2	2	10
LT Vol	2	0	0	0	2	0
Through Vol	0	2	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	2	2	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.003	0.003	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.56	3.86	5.064	3.864
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	787	788	931	709	929
Service Time	2.772	2.272	2.267	1.567	2.776	1.576
HCM Lane V/C Ratio	0.003	0.003	0.014	0.002	0.003	0.012
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	94	288	510	36	32	120
Future Vol, veh/h	94	288	510	36	32	120
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	313	554	39	35	130

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	915	277
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	361	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1012	-	-	-	272	720
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	676	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1012	-	-	-	245	720
Mov Cap-2 Maneuver	-	-	-	-	245	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	608	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	15.4
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1012	-	-	-	511
HCM Lane V/C Ratio	0.101	-	-	-	0.323
HCM Control Delay (s)	9	-	-	-	15.4
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	173	37	1373	25	75	877
Future Volume (veh/h)	173	37	1373	25	75	877
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	188	40	1492	27	82	953
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	713	328	1675	750	436	1675
Arrive On Green	0.23	0.23	0.53	0.53	0.53	0.53
Sat Flow, veh/h	3079	1417	3250	1417	664	3250
Grp Volume(v), veh/h	188	40	1492	27	82	953
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	332	1583
Q Serve(g_s), s	2.0	0.9	16.7	0.4	4.3	8.0
Cycle Q Clear(g_c), s	2.0	0.9	16.7	0.4	21.0	8.0
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	713	328	1675	750	436	1675
V/C Ratio(X)	0.26	0.12	0.89	0.04	0.19	0.57
Avail Cap(c_a), veh/h	1513	696	1675	750	436	1675
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.5	12.1	8.3	4.5	17.9	6.3
Incr Delay (d2), s/veh	0.2	0.2	6.4	0.0	0.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.4	8.5	0.1	0.4	3.5
LnGrp Delay(d),s/veh	12.7	12.2	14.7	4.5	18.1	6.8
LnGrp LOS	B	B	B	A	B	A
Approach Vol, veh/h	228		1519			1035
Approach Delay, s/veh	12.6		14.5			7.7
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.2
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		18.7				23.0		4.0
Green Ext Time (p_c), s		2.2				0.0		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	11.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	419	0	362	0	2448	340	0	1381	510
Future Volume (veh/h)	0	0	0	419	0	362	0	2448	340	0	1381	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				455	0	393	0	2661	0	0	1501	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				847	0	390	0	2758	859	0	2758	859
Arrive On Green				0.28	0.00	0.28	0.00	0.61	0.00	0.00	0.61	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				455	0	393	0	2661	0	0	1501	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				10.1	0.0	22.0	0.0	44.4	0.0	0.0	15.5	0.0
Cycle Q Clear(g_c), s				10.1	0.0	22.0	0.0	44.4	0.0	0.0	15.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				847	0	390	0	2758	859	0	2758	859
V/C Ratio(X)				0.54	0.00	1.01	0.00	0.96	0.00	0.00	0.54	0.00
Avail Cap(c_a), veh/h				847	0	390	0	2758	859	0	2758	859
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.23	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				24.7	0.0	29.0	0.0	14.9	0.0	0.0	9.3	0.0
Incr Delay (d2), s/veh				2.4	0.0	47.8	0.0	3.3	0.0	0.0	0.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				4.5	0.0	13.7	0.0	19.1	0.0	0.0	6.6	0.0
LnGrp Delay(d),s/veh				27.1	0.0	76.9	0.0	18.3	0.0	0.0	10.0	0.0
LnGrp LOS				C		F		B			B	
Approach Vol, veh/h					848			2661			1501	
Approach Delay, s/veh					50.2			18.3			10.0	
Approach LOS					D			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		26.0		54.0				54.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		22.0		48.5				48.5
Max Q Clear Time (g_c+I1), s		24.0		46.4				17.5
Green Ext Time (p_c), s		0.0		2.1				29.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1039	0	631	0	0	0	0	1751	830	0	1429	360
Future Volume (veh/h)	1039	0	631	0	0	0	0	1751	830	0	1429	360
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1342	0	457				0	1903	0	0	1553	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1604	0	716				0	1994	621	0	1994	621
Arrive On Green	0.51	0.00	0.51				0.00	0.44	0.00	0.00	0.44	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1342	0	457				0	1903	0	0	1553	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	25.4	0.0	16.5				0.0	28.3	0.0	0.0	20.4	0.0
Cycle Q Clear(g_c), s	25.4	0.0	16.5				0.0	28.3	0.0	0.0	20.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1604	0	716				0	1994	621	0	1994	621
V/C Ratio(X)	0.84	0.00	0.64				0.00	0.95	0.00	0.00	0.78	0.00
Avail Cap(c_a), veh/h	1604	0	716				0	2015	627	0	1994	621
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.82	0.00
Uniform Delay (d), s/veh	14.8	0.0	12.7				0.0	19.0	0.0	0.0	16.8	0.0
Incr Delay (d2), s/veh	5.4	0.0	4.3				0.0	11.2	0.0	0.0	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	7.2				0.0	13.9	0.0	0.0	9.0	0.0
LnGrp Delay(d),s/veh	20.2	0.0	17.0				0.0	30.2	0.0	0.0	19.3	0.0
LnGrp LOS	C		B					C			B	
Approach Vol, veh/h		1799						1903			1553	
Approach Delay, s/veh		19.4						30.2			19.3	
Approach LOS		B						C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				36.2		39.4		36.2
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 31		31.0		29.5
Max Q Clear Time (g_c+I1), s				30.3		27.4		22.4
Green Ext Time (p_c), s				0.4		2.5		6.9

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1092	0	371	0	2219	110	0	1558	420
Future Volume (veh/h)	0	0	0	1092	0	371	0	2219	110	0	1558	420
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1187	0	403	0	2412	0	0	1693	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1170	0	538	0	2389	744	0	2389	744
Arrive On Green				0.38	0.00	0.38	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1187	0	403	0	2412	0	0	1693	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				38.0	0.0	24.6	0.0	52.5	0.0	0.0	28.1	0.0
Cycle Q Clear(g_c), s				38.0	0.0	24.6	0.0	52.5	0.0	0.0	28.1	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1170	0	538	0	2389	744	0	2389	744
V/C Ratio(X)				1.01	0.00	0.75	0.00	1.01	0.00	0.00	0.71	0.00
Avail Cap(c_a), veh/h				1170	0	538	0	2389	744	0	2389	744
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.61	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.0	0.0	26.9	0.0	23.8	0.0	0.0	18.0	0.0
Incr Delay (d2), s/veh				29.9	0.0	5.7	0.0	16.8	0.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.0	0.0	10.5	0.0	25.4	0.0	0.0	12.2	0.0
LnGrp Delay(d),s/veh				60.9	0.0	32.6	0.0	40.5	0.0	0.0	19.8	0.0
LnGrp LOS				F		C		F			B	
Approach Vol, veh/h					1590			2412			1693	
Approach Delay, s/veh					53.8			40.5			19.8	
Approach LOS					D			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		58.0		42.0		58.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		52.5		38.0		52.5		
Max Q Clear Time (g_c+I1), s		30.1		40.0		54.5		
Green Ext Time (p_c), s		21.6		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	38.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	553	0	95	0	0	0	0	1807	1290	0	2275	280
Future Volume (veh/h)	553	0	95	0	0	0	0	1807	1290	0	2275	280
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	601	0	103				0	1964	0	0	2473	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	718	0	330				0	2824	879	0	2824	879
Arrive On Green	0.23	0.00	0.23				0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	601	0	103				0	1964	0	0	2473	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.1	0.0	3.9				0.0	18.7	0.0	0.0	29.4	0.0
Cycle Q Clear(g_c), s	12.1	0.0	3.9				0.0	18.7	0.0	0.0	29.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	718	0	330				0	2824	879	0	2824	879
V/C Ratio(X)	0.84	0.00	0.31				0.00	0.70	0.00	0.00	0.88	0.00
Avail Cap(c_a), veh/h	853	0	392				0	2824	879	0	2824	879
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.44	0.00
Uniform Delay (d), s/veh	23.7	0.0	20.6				0.0	8.2	0.0	0.0	10.2	0.0
Incr Delay (d2), s/veh	6.4	0.0	0.5				0.0	1.4	0.0	0.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.7	0.0	1.6				0.0	8.0	0.0	0.0	12.4	0.0
LnGrp Delay(d),s/veh	30.1	0.0	21.1				0.0	9.7	0.0	0.0	12.1	0.0
LnGrp LOS	C		C					A			B	
Approach Vol, veh/h		704						1964			2473	
Approach Delay, s/veh		28.8						9.7			12.1	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		45.8				45.8		19.2
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		37.5				37.5		18.0
Max Q Clear Time (g_c+I1), s		31.4				20.7		14.1
Green Ext Time (p_c), s		6.1				16.5		1.1

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	51.1
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	38	477	16	0	22	539	38	0	17	4	29	0	34	12	34
Future Vol, veh/h	0	38	477	16	0	22	539	38	0	17	4	29	0	34	12	34
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	518	17	0	24	586	41	0	18	4	32	0	37	13	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	51.8	59	11.5	11.9
HCM LOS	F	F	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	81%	0%	100%	0%	0%	100%	0%	0%	74%	0%
Vol Thru, %	19%	0%	0%	100%	0%	0%	100%	0%	26%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	21	29	38	477	16	22	539	38	46	34
LT Vol	17	0	38	0	0	22	0	0	34	0
Through Vol	4	0	0	477	0	0	539	0	12	0
RT Vol	0	29	0	0	16	0	0	38	0	34
Lane Flow Rate	23	32	41	518	17	24	586	41	50	37
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.056	0.067	0.083	0.966	0.029	0.048	1	0.068	0.12	0.078
Departure Headway (Hd)	8.796	7.706	7.208	6.71	6.013	7.171	6.667	5.96	8.633	7.577
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	407	464	498	544	596	497	545	597	415	472
Service Time	6.561	5.471	4.94	4.441	3.744	4.947	4.442	3.735	6.39	5.335
HCM Lane V/C Ratio	0.057	0.069	0.082	0.952	0.029	0.048	1.075	0.069	0.12	0.078
HCM Control Delay	12.1	11	10.6	56.5	8.9	10.3	64.5	9.2	12.6	11
HCM Lane LOS	B	B	B	F	A	B	F	A	B	B
HCM 95th-tile Q	0.2	0.2	0.3	12.8	0.1	0.2	14.2	0.2	0.4	0.3

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive 12/28/2015

Intersection	
Int Delay, s/veh	13.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	225	4	7	490	520	164
Future Vol, veh/h	225	4	7	490	520	164
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	245	4	8	533	565	178

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	936	372	743	0	-	0
Stage 1	654	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	264	625	860	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	262	625	860	-	-	-
Mov Cap-2 Maneuver	262	-	-	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	734	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	81.9	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	860	-	265	-	-
HCM Lane V/C Ratio	0.009	-	0.939	-	-
HCM Control Delay (s)	9.2	-	81.9	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	8.7	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive 4/20/2016

Intersection	
Intersection Delay, s/veh	15.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
Future Vol, veh/h	0	107	105	10	0	19	68	217	0	6	26	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	116	114	11	0	21	74	236	0	7	28	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	12.8	13.3	11
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	19%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	81%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	107	105	10	19	68	217	328	61	166
LT Vol	6	0	107	0	0	19	0	0	328	0	0
Through Vol	26	0	0	105	0	0	68	0	0	61	0
RT Vol	0	8	0	0	10	0	0	217	0	0	166
Lane Flow Rate	35	9	116	114	11	21	74	236	357	66	180
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.077	0.017	0.257	0.237	0.02	0.044	0.148	0.426	0.697	0.12	0.293
Departure Headway (Hd)	7.948	7.154	7.967	7.46	6.75	7.823	7.316	6.607	7.042	6.542	5.841
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	453	503	454	484	533	461	493	550	510	544	610
Service Time	5.658	4.864	5.669	5.162	4.452	5.523	5.016	4.307	4.833	4.333	3.632
HCM Lane V/C Ratio	0.077	0.018	0.256	0.236	0.021	0.046	0.15	0.429	0.7	0.121	0.295
HCM Control Delay	11.3	10	13.4	12.5	9.6	10.9	11.3	14.1	24.6	10.2	11.1
HCM Lane LOS	B	A	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.2	0.1	1	0.9	0.1	0.1	0.5	2.1	5.4	0.4	1.2

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	328	61	166
Future Vol, veh/h	0	328	61	166
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	357	66	180
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	141	69	0	113	186	0	97	183
Future Vol, veh/h	0	141	69	0	113	186	0	97	183
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	153	75	0	123	202	0	105	199
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.8	10.9	10.3
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	183	141	69	113	186
LT Vol	97	0	0	0	113	0
Through Vol	0	0	141	0	0	186
RT Vol	0	183	0	69	0	0
Lane Flow Rate	105	199	153	75	123	202
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.187	0.287	0.248	0.107	0.211	0.32
Departure Headway (Hd)	6.515	5.306	5.832	5.123	6.196	5.69
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	555	682	619	703	582	635
Service Time	4.215	3.006	3.54	2.831	3.901	3.395
HCM Lane V/C Ratio	0.189	0.292	0.247	0.107	0.211	0.318
HCM Control Delay	10.7	10.1	10.5	8.4	10.6	11.1
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.7	1.2	1	0.4	0.8	1.4

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	10	10	0	1	1	0	1	1
Future Vol, veh/h	0	10	10	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	11	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	10	1	1	1	1
LT Vol	10	0	0	0	1	0
Through Vol	0	10	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	11	11	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.015	0.014	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.548	3.848	5.076	3.876
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	790	934	707	925
Service Time	2.741	2.241	2.255	1.555	2.793	1.593
HCM Lane V/C Ratio	0.015	0.014	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	147	376	221	23	34	149
Future Vol, veh/h	147	376	221	23	34	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	160	409	240	25	37	162

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	240	0	-	0	764	120
Stage 1	-	-	-	-	240	-
Stage 2	-	-	-	-	524	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1324	-	-	-	340	909
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	559	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1324	-	-	-	299	909
Mov Cap-2 Maneuver	-	-	-	-	299	-
Stage 1	-	-	-	-	777	-
Stage 2	-	-	-	-	491	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1324	-	-	-	659
HCM Lane V/C Ratio	0.121	-	-	-	0.302
HCM Control Delay (s)	8.1	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.3

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	354	74	916	72	408	1046
Future Volume (veh/h)	354	74	916	72	408	1046
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	385	80	996	78	443	1137
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	757	348	1644	736	659	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	1015	3250
Grp Volume(v), veh/h	385	80	996	78	443	1137
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	507	1583
Q Serve(g_s), s	4.4	1.8	8.9	1.1	12.1	10.9
Cycle Q Clear(g_c), s	4.4	1.8	8.9	1.1	21.0	10.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	757	348	1644	736	659	1644
V/C Ratio(X)	0.51	0.23	0.61	0.11	0.67	0.69
Avail Cap(c_a), veh/h	1485	683	1644	736	659	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	12.2	6.8	4.9	16.1	7.3
Incr Delay (d2), s/veh	0.5	0.3	0.6	0.1	2.7	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.7	3.9	0.4	2.6	4.9
LnGrp Delay(d),s/veh	13.7	12.5	7.5	5.0	18.8	8.5
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	465		1074			1580
Approach Delay, s/veh	13.5		7.3			11.4
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.9
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		10.9				23.0		6.4
Green Ext Time (p_c), s		9.2				0.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	728	0	180	0	1470	790	0	1672	1060
Future Volume (veh/h)	0	0	0	728	0	180	0	1470	790	0	1672	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				791	0	196	0	1598	0	0	1817	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1064	0	489	0	2192	683	0	2192	683
Arrive On Green				0.35	0.00	0.35	0.00	0.48	0.00	0.00	0.48	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				791	0	196	0	1598	0	0	1817	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				12.4	0.0	5.8	0.0	15.4	0.0	0.0	18.9	0.0
Cycle Q Clear(g_c), s				12.4	0.0	5.8	0.0	15.4	0.0	0.0	18.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1064	0	489	0	2192	683	0	2192	683
V/C Ratio(X)				0.74	0.00	0.40	0.00	0.73	0.00	0.00	0.83	0.00
Avail Cap(c_a), veh/h				1064	0	489	0	2192	683	0	2192	683
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.67	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.9	0.0	13.7	0.0	11.4	0.0	0.0	12.3	0.0
Incr Delay (d2), s/veh				4.7	0.0	2.4	0.0	1.5	0.0	0.0	3.8	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	0.0	2.6	0.0	6.7	0.0	0.0	8.5	0.0
LnGrp Delay(d),s/veh				20.6	0.0	16.1	0.0	12.8	0.0	0.0	16.1	0.0
LnGrp LOS				C		B		B			B	
Approach Vol, veh/h					987			1598			1817	
Approach Delay, s/veh					19.7			12.8			16.1	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.0		32.0				32.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.0		26.5				26.5
Max Q Clear Time (g_c+I1), s		14.4		17.4				20.9
Green Ext Time (p_c), s		1.7		8.7				5.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	549	0	377	0	0	0	0	1611	330	0	2073	380
Future Volume (veh/h)	549	0	377	0	0	0	0	1611	330	0	2073	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	725	0	273				0	1751	0	0	2253	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	929	0	414				0	2499	778	0	2499	778
Arrive On Green	0.29	0.00	0.29				0.00	0.55	0.00	0.00	0.55	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	725	0	273				0	1751	0	0	2253	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.6	0.0	10.1				0.0	16.9	0.0	0.0	26.5	0.0
Cycle Q Clear(g_c), s	12.6	0.0	10.1				0.0	16.9	0.0	0.0	26.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	929	0	414				0	2499	778	0	2499	778
V/C Ratio(X)	0.78	0.00	0.66				0.00	0.70	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h	952	0	425				0	2578	803	0	2499	778
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.51	0.00
Uniform Delay (d), s/veh	19.5	0.0	18.6				0.0	9.9	0.0	0.0	12.1	0.0
Incr Delay (d2), s/veh	6.5	0.0	8.0				0.0	0.8	0.0	0.0	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	0.0	4.9				0.0	7.2	0.0	0.0	11.6	0.0
LnGrp Delay(d),s/veh	25.9	0.0	26.6				0.0	10.7	0.0	0.0	15.2	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		998						1751			2253	
Approach Delay, s/veh		26.1						10.7			15.2	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.4		21.6		38.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 34		18.0		32.5
Max Q Clear Time (g_c+I1), s				18.9		14.6		28.5
Green Ext Time (p_c), s				14.0		1.4		3.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1288	0	136	0	1664	340	0	2092	1320
Future Volume (veh/h)	0	0	0	1288	0	136	0	1664	340	0	2092	1320
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1400	0	148	0	1809	0	0	2274	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1232	0	567	0	2250	700	0	2250	700
Arrive On Green				0.40	0.00	0.40	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1400	0	148	0	1809	0	0	2274	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				36.0	0.0	6.3	0.0	30.0	0.0	0.0	44.5	0.0
Cycle Q Clear(g_c), s				36.0	0.0	6.3	0.0	30.0	0.0	0.0	44.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	567	0	2250	700	0	2250	700
V/C Ratio(X)				1.14	0.00	0.26	0.00	0.80	0.00	0.00	1.01	0.00
Avail Cap(c_a), veh/h				1232	0	567	0	2250	700	0	2250	700
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				27.0	0.0	18.1	0.0	19.1	0.0	0.0	22.8	0.0
Incr Delay (d2), s/veh				71.9	0.0	0.2	0.0	2.5	0.0	0.0	21.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				27.5	0.0	2.5	0.0	12.9	0.0	0.0	23.1	0.0
LnGrp Delay(d),s/veh				98.9	0.0	18.3	0.0	21.6	0.0	0.0	44.4	0.0
LnGrp LOS				F		B		C			F	
Approach Vol, veh/h					1548			1809			2274	
Approach Delay, s/veh					91.2			21.6			44.4	
Approach LOS					F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		40.0		50.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		44.5		36.0		44.5		
Max Q Clear Time (g_c+I1), s		46.5		38.0		32.0		
Green Ext Time (p_c), s		0.0		0.0		12.2		

Intersection Summary	
HCM 2010 Ctrl Delay	49.9
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	407	0	116	0	0	0	0	1593	1070	0	2904	430
Future Volume (veh/h)	407	0	116	0	0	0	0	1593	1070	0	2904	430
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	442	0	126				0	1732	0	0	3157	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	523	0	240				0	3297	1027	0	3297	1027
Arrive On Green	0.17	0.00	0.17				0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	442	0	126				0	1732	0	0	3157	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.5	0.0	7.3				0.0	15.2	0.0	0.0	56.2	0.0
Cycle Q Clear(g_c), s	12.5	0.0	7.3				0.0	15.2	0.0	0.0	56.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	523	0	240				0	3297	1027	0	3297	1027
V/C Ratio(X)	0.85	0.00	0.52				0.00	0.53	0.00	0.00	0.96	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3297	1027	0	3297	1027
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.2	0.0	34.0				0.0	5.5	0.0	0.0	11.1	0.0
Incr Delay (d2), s/veh	9.3	0.0	1.8				0.0	0.6	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	3.0				0.0	6.4	0.0	0.0	23.1	0.0
LnGrp Delay(d),s/veh	45.5	0.0	35.8				0.0	6.1	0.0	0.0	12.2	0.0
LnGrp LOS	D		D					A			B	
Approach Vol, veh/h		568						1732			3157	
Approach Delay, s/veh		43.3						6.1			12.2	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		70.7				70.7		19.3
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		58.2				17.2		14.5
Green Ext Time (p_c), s		4.3				44.5		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.5
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	34.7
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	85	399	47	0	87	313	8	0	18	67	99	0	82	66	79
Future Vol, veh/h	0	85	399	47	0	87	313	8	0	18	67	99	0	82	66	79
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	92	434	51	0	95	340	9	0	20	73	108	0	89	72	86
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	52	31.4	14.6	16.6
HCM LOS	F	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	21%	0%	100%	0%	0%	100%	0%	0%	55%	0%
Vol Thru, %	79%	0%	0%	100%	0%	0%	100%	0%	45%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	99	85	399	47	87	313	8	148	79
LT Vol	18	0	85	0	0	87	0	0	82	0
Through Vol	67	0	0	399	0	0	313	0	66	0
RT Vol	0	99	0	0	47	0	0	8	0	79
Lane Flow Rate	92	108	92	434	51	95	340	9	161	86
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.239	0.254	0.221	0.974	0.104	0.234	0.794	0.019	0.415	0.198
Departure Headway (Hd)	9.323	8.5	8.596	8.082	7.362	8.913	8.397	7.676	9.285	8.29
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	385	422	418	451	486	403	432	466	388	433
Service Time	7.084	6.261	6.346	5.831	5.111	6.664	6.148	5.426	7.042	6.047
HCM Lane V/C Ratio	0.239	0.256	0.22	0.962	0.105	0.236	0.787	0.019	0.415	0.199
HCM Control Delay	15	14.2	13.8	65	11	14.4	36.7	10.6	18.5	13.1
HCM Lane LOS	B	B	B	F	B	B	E	B	C	B
HCM 95th-tile Q	0.9	1	0.8	12	0.3	0.9	7	0.1	2	0.7

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	116	5	3	740	498	228
Future Vol, veh/h	116	5	3	740	498	228
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	5	3	804	541	248

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1074	395	789	0	-	0
Stage 1	665	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	215	604	827	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	214	604	827	-	-	-
Mov Cap-2 Maneuver	214	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	43.1	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	827	-	220	-	-
HCM Lane V/C Ratio	0.004	-	0.598	-	-
HCM Control Delay (s)	9.4	-	43.1	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.4	-	-

Intersection	
Intersection Delay, s/veh	25.3
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	200	86	8	0	9	238	372	0	19	69	34
Future Vol, veh/h	0	200	86	8	0	9	238	372	0	19	69	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	217	93	9	0	10	259	404	0	21	75	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	21	31.7	14.6
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	34	200	86	8	9	238	372	179	23	284
LT Vol	19	0	200	0	0	9	0	0	179	0	0
Through Vol	69	0	0	86	0	0	238	0	0	23	0
RT Vol	0	34	0	0	8	0	0	372	0	0	284
Lane Flow Rate	96	37	217	93	9	10	259	404	195	25	309
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.254	0.09	0.573	0.233	0.02	0.024	0.587	0.837	0.488	0.059	0.661
Departure Headway (Hd)	9.551	8.743	9.496	8.984	8.267	8.803	8.293	7.579	9.021	8.515	7.827
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	378	411	383	401	435	409	437	481	401	422	463
Service Time	7.272	6.465	7.212	6.7	5.983	6.503	5.993	5.279	6.742	6.236	5.527
HCM Lane V/C Ratio	0.254	0.09	0.567	0.232	0.021	0.024	0.593	0.84	0.486	0.059	0.667
HCM Control Delay	15.5	12.3	24.2	14.4	11.2	11.7	22.1	38.4	20.1	11.8	24.5
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	1	0.3	3.4	0.9	0.1	0.1	3.7	8.3	2.6	0.2	4.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	179	23	284
Future Vol, veh/h	0	179	23	284
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	195	25	309
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	22.3
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	324	121	0	109	214	0	96	106
Future Vol, veh/h	0	324	121	0	109	214	0	96	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	352	132	0	118	233	0	104	115
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	106	324	121	109	214
LT Vol	96	0	0	0	109	0
Through Vol	0	0	324	0	0	214
RT Vol	0	106	0	121	0	0
Lane Flow Rate	104	115	352	132	118	233
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.206	0.188	0.557	0.182	0.208	0.376
Departure Headway (Hd)	7.09	5.874	5.697	4.989	6.323	5.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	611	634	719	569	619
Service Time	4.824	3.608	3.426	2.718	4.055	3.548
HCM Lane V/C Ratio	0.205	0.188	0.555	0.184	0.207	0.376
HCM Control Delay	11.7	10	15.4	8.8	10.7	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	3	3	0	21	3	0	3	9
Future Vol, veh/h	0	3	3	0	21	3	0	3	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	3	0	23	3	0	3	10
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.3	7
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	3	21	3	3	9
LT Vol	3	0	0	0	3	0
Through Vol	0	3	21	0	0	0
RT Vol	0	0	0	3	0	9
Lane Flow Rate	3	3	23	3	3	10
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.005	0.004	0.029	0.003	0.005	0.011
Departure Headway (Hd)	5.07	4.57	4.561	3.861	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	708	786	788	930	704	920
Service Time	2.783	2.283	2.27	1.57	2.812	1.612
HCM Lane V/C Ratio	0.004	0.004	0.029	0.003	0.004	0.011
HCM Control Delay	7.8	7.3	7.4	6.6	7.8	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	97	300	550	33	30	130
Future Vol, veh/h	97	300	550	33	30	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	326	598	36	33	141

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	598	0	-	0	972	299
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	374	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	975	-	-	-	250	697
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	223	697
Mov Cap-2 Maneuver	-	-	-	-	223	-
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	594	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	498
HCM Lane V/C Ratio	0.108	-	-	-	0.349
HCM Control Delay (s)	9.1	-	-	-	16.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	44	1507	44	197	864
Future Volume (veh/h)	123	44	1507	44	197	864
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	134	48	1638	48	214	939
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	312	1700	761	391	1700
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	565	3250
Grp Volume(v), veh/h	134	48	1638	48	214	939
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	282	1583
Q Serve(g_s), s	1.4	1.1	19.4	0.6	1.6	7.6
Cycle Q Clear(g_c), s	1.4	1.1	19.4	0.6	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	678	312	1700	761	391	1700
V/C Ratio(X)	0.20	0.15	0.96	0.06	0.55	0.55
Avail Cap(c_a), veh/h	1535	706	1700	761	391	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.7	4.3	19.5	6.0
Incr Delay (d2), s/veh	0.1	0.2	14.2	0.0	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	11.5	0.2	1.2	3.4
LnGrp Delay(d),s/veh	12.6	12.5	22.8	4.4	21.1	6.4
LnGrp LOS	B	B	C	A	C	A
Approach Vol, veh/h	182		1686			1153
Approach Delay, s/veh	12.6		22.3			9.1
Approach LOS	B		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		21.4				23.0		3.4
Green Ext Time (p_c), s		0.0				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	482	0	364	0	2536	340	0	1608	510
Future Volume (veh/h)	0	0	0	482	0	364	0	2536	340	0	1608	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				524	0	396	0	2757	0	0	1748	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				780	0	359	0	2821	878	0	2821	878
Arrive On Green				0.25	0.00	0.25	0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				524	0	396	0	2757	0	0	1748	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				11.5	0.0	19.0	0.0	43.8	0.0	0.0	17.8	0.0
Cycle Q Clear(g_c), s				11.5	0.0	19.0	0.0	43.8	0.0	0.0	17.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				780	0	359	0	2821	878	0	2821	878
V/C Ratio(X)				0.67	0.00	1.10	0.00	0.98	0.00	0.00	0.62	0.00
Avail Cap(c_a), veh/h				780	0	359	0	2821	878	0	2821	878
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.16	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				25.2	0.0	28.0	0.0	13.7	0.0	0.0	8.8	0.0
Incr Delay (d2), s/veh				4.6	0.0	78.3	0.0	3.3	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.4	0.0	15.2	0.0	18.7	0.0	0.0	7.6	0.0
LnGrp Delay(d),s/veh				29.8	0.0	106.3	0.0	17.0	0.0	0.0	9.8	0.0
LnGrp LOS				C		F		B			A	
Approach Vol, veh/h					920			2757			1748	
Approach Delay, s/veh					62.7			17.0			9.8	
Approach LOS					E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.0		52.0				52.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.0		46.5				46.5
Max Q Clear Time (g_c+I1), s		21.0		45.8				19.8
Green Ext Time (p_c), s		0.0		0.7				26.1

Intersection Summary	
HCM 2010 Ctrl Delay	22.5
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1016	0	654	0	0	0	0	1872	845	0	1670	402
Future Volume (veh/h)	1016	0	654	0	0	0	0	1872	845	0	1670	402
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1325	0	474				0	2035	0	0	1815	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1631	0	728				0	2093	652	0	2093	652
Arrive On Green	0.51	0.00	0.51				0.00	0.46	0.00	0.00	0.46	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1325	0	474				0	2035	0	0	1815	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	26.1	0.0	18.3				0.0	32.8	0.0	0.0	26.9	0.0
Cycle Q Clear(g_c), s	26.1	0.0	18.3				0.0	32.8	0.0	0.0	26.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1631	0	728				0	2093	652	0	2093	652
V/C Ratio(X)	0.81	0.00	0.65				0.00	0.97	0.00	0.00	0.87	0.00
Avail Cap(c_a), veh/h	1631	0	728				0	2093	652	0	2093	652
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.73	0.00
Uniform Delay (d), s/veh	15.2	0.0	13.3				0.0	19.8	0.0	0.0	18.2	0.0
Incr Delay (d2), s/veh	4.5	0.0	4.5				0.0	13.7	0.0	0.0	3.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.3	0.0	8.0				0.0	16.2	0.0	0.0	11.8	0.0
LnGrp Delay(d),s/veh	19.7	0.0	17.8				0.0	33.5	0.0	0.0	22.1	0.0
LnGrp LOS	B		B					C			C	
Approach Vol, veh/h		1799						2035			1815	
Approach Delay, s/veh		19.2						33.5			22.1	
Approach LOS		B						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				40.0		42.5		40.0
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 35		32.5		33.0
Max Q Clear Time (g_c+I1), s				34.8		28.1		28.9
Green Ext Time (p_c), s				0.0		2.9		4.1

Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1167	0	356	0	2329	160	0	1818	461
Future Volume (veh/h)	0	0	0	1167	0	356	0	2329	160	0	1818	461
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1268	0	387	0	2532	0	0	1976	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1176	0	541	0	2420	753	0	2420	753
Arrive On Green				0.38	0.00	0.38	0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1268	0	387	0	2532	0	0	1976	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				42.0	0.0	25.6	0.0	58.5	0.0	0.0	39.5	0.0
Cycle Q Clear(g_c), s				42.0	0.0	25.6	0.0	58.5	0.0	0.0	39.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1176	0	541	0	2420	753	0	2420	753
V/C Ratio(X)				1.08	0.00	0.72	0.00	1.05	0.00	0.00	0.82	0.00
Avail Cap(c_a), veh/h				1176	0	541	0	2420	753	0	2420	753
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.59	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				34.0	0.0	28.9	0.0	25.7	0.0	0.0	21.3	0.0
Incr Delay (d2), s/veh				50.1	0.0	4.5	0.0	28.2	0.0	0.0	3.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				26.0	0.0	10.7	0.0	30.5	0.0	0.0	17.2	0.0
LnGrp Delay(d),s/veh				84.1	0.0	33.4	0.0	53.9	0.0	0.0	24.5	0.0
LnGrp LOS				F		C		F			C	
Approach Vol, veh/h					1655			2532			1976	
Approach Delay, s/veh					72.3			53.9			24.5	
Approach LOS					E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		64.0		46.0		64.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		58.5		42.0		58.5		
Max Q Clear Time (g_c+I1), s		41.5		44.0		60.5		
Green Ext Time (p_c), s		16.7		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	49.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	485	0	114	0	0	0	0	2042	1304	0	2634	331
Future Volume (veh/h)	485	0	114	0	0	0	0	2042	1304	0	2634	331
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	527	0	124				0	2220	0	0	2863	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	614	0	283				0	3102	966	0	3102	966
Arrive On Green	0.20	0.00	0.20				0.00	0.68	0.00	0.00	0.68	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	527	0	124				0	2220	0	0	2863	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.2	0.0	6.1				0.0	24.3	0.0	0.0	43.2	0.0
Cycle Q Clear(g_c), s	13.2	0.0	6.1				0.0	24.3	0.0	0.0	43.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	614	0	283				0	3102	966	0	3102	966
V/C Ratio(X)	0.86	0.00	0.44				0.00	0.72	0.00	0.00	0.92	0.00
Avail Cap(c_a), veh/h	693	0	319				0	3102	966	0	3102	966
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.27	0.00
Uniform Delay (d), s/veh	30.9	0.0	28.1				0.0	7.9	0.0	0.0	10.9	0.0
Incr Delay (d2), s/veh	9.6	0.0	1.1				0.0	1.4	0.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	2.5				0.0	10.3	0.0	0.0	18.3	0.0
LnGrp Delay(d),s/veh	40.5	0.0	29.2				0.0	9.4	0.0	0.0	12.7	0.0
LnGrp LOS	D		C					A			B	
Approach Vol, veh/h		651						2220			2863	
Approach Delay, s/veh		38.4						9.4			12.7	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		60.0				60.0		20.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		52.5				52.5		18.0
Max Q Clear Time (g_c+I1), s		45.2				26.3		15.2
Green Ext Time (p_c), s		7.3				26.0		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	14.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	23.4
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	35	360	17	0	28	430	40	0	18	6	35	0	34	16	31
Future Vol, veh/h	0	35	360	17	0	28	430	40	0	18	6	35	0	34	16	31
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	391	18	0	30	467	43	0	20	7	38	0	37	17	34
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	21.6	28.3	10.8	11.2
HCM LOS	C	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	75%	0%	100%	0%	0%	100%	0%	0%	68%	0%
Vol Thru, %	25%	0%	0%	100%	0%	0%	100%	0%	32%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	35	35	360	17	28	430	40	50	31
LT Vol	18	0	35	0	0	28	0	0	34	0
Through Vol	6	0	0	360	0	0	430	0	16	0
RT Vol	0	35	0	0	17	0	0	40	0	31
Lane Flow Rate	26	38	38	391	18	30	467	43	54	34
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.059	0.075	0.074	0.703	0.03	0.057	0.816	0.067	0.122	0.066
Departure Headway (Hd)	8.205	7.121	6.968	6.464	5.757	6.789	6.285	5.579	8.078	7.03
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	439	506	512	556	617	525	575	637	446	513
Service Time	5.911	4.826	4.746	4.241	3.535	4.566	4.062	3.355	5.78	4.731
HCM Lane V/C Ratio	0.059	0.075	0.074	0.703	0.029	0.057	0.812	0.068	0.121	0.066
HCM Control Delay	11.4	10.4	10.3	23.3	8.7	10	31.3	8.8	11.9	10.2
HCM Lane LOS	B	B	B	C	A	A	D	A	B	B
HCM 95th-tile Q	0.2	0.2	0.2	5.6	0.1	0.2	8.2	0.2	0.4	0.2

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive

12/28/2015

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	223	5	7	487	505	163
Future Vol, veh/h	223	5	7	487	505	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	242	5	8	529	549	177

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	918	363	726	0	-	0
Stage 1	638	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	271	634	873	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	269	634	873	-	-	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	74.6	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	873	-	272	-	-
HCM Lane V/C Ratio	0.009	-	0.911	-	-
HCM Control Delay (s)	9.2	-	74.6	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	8.2	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive

4/20/2016

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	126	130	13	0	19	80	202	0	7	25	8
Future Vol, veh/h	0	126	130	13	0	19	80	202	0	7	25	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	137	141	14	0	21	87	220	0	8	27	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	13.5	13.3	11.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	126	130	13	19	80	202	306	59	186
LT Vol	7	0	126	0	0	19	0	0	306	0	0
Through Vol	25	0	0	130	0	0	80	0	0	59	0
RT Vol	0	8	0	0	13	0	0	202	0	0	186
Lane Flow Rate	35	9	137	141	14	21	87	220	333	64	202
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.018	0.303	0.293	0.027	0.046	0.18	0.411	0.665	0.119	0.337
Departure Headway (Hd)	8.129	7.32	7.972	7.466	6.756	7.95	7.443	6.734	7.316	6.815	6.114
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	442	490	452	483	531	452	483	536	496	529	592
Service Time	5.858	5.049	5.692	5.185	4.476	5.667	5.16	4.451	5.016	4.515	3.814
HCM Lane V/C Ratio	0.079	0.018	0.303	0.292	0.026	0.046	0.18	0.41	0.671	0.121	0.341
HCM Control Delay	11.6	10.2	14.1	13.3	9.7	11.1	11.8	14.1	23.4	10.4	11.9
HCM Lane LOS	B	B	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.3	0.1	1.3	1.2	0.1	0.1	0.6	2	4.8	0.4	1.5

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	306	59	186
Future Vol, veh/h	0	306	59	186
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	333	64	202
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	18.1
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	142	70	0	110	184	0	96	178
Future Vol, veh/h	0	142	70	0	110	184	0	96	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	154	76	0	120	200	0	104	193
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.7	10.7	10.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	178	142	70	110	184
LT Vol	96	0	0	0	110	0
Through Vol	0	0	142	0	0	184
RT Vol	0	178	0	70	0	0
Lane Flow Rate	104	193	154	76	120	200
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.185	0.278	0.249	0.108	0.202	0.31
Departure Headway (Hd)	6.491	5.282	5.803	5.094	6.182	5.676
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	556	685	622	708	585	638
Service Time	4.191	2.982	3.503	2.794	3.882	3.376
HCM Lane V/C Ratio	0.187	0.282	0.248	0.107	0.205	0.313
HCM Control Delay	10.7	10	10.4	8.4	10.4	10.9
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.7	1.1	1	0.4	0.7	1.3

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	10	10	0	1	1	0	1	1
Future Vol, veh/h	0	10	10	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	11	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	10	10	1	1	1	1
LT Vol	10	0	0	0	1	0
Through Vol	0	10	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	11	11	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.015	0.014	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.548	3.848	5.076	3.876
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	790	934	707	925
Service Time	2.741	2.241	2.255	1.555	2.793	1.593
HCM Lane V/C Ratio	0.015	0.014	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	154	433	246	26	37	144
Future Vol, veh/h	154	433	246	26	37	144
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	167	471	267	28	40	157

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	267	0	-	0	837	134
Stage 1	-	-	-	-	267	-
Stage 2	-	-	-	-	570	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1294	-	-	-	305	890
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	529	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1294	-	-	-	266	890
Mov Cap-2 Maneuver	-	-	-	-	266	-
Stage 1	-	-	-	-	754	-
Stage 2	-	-	-	-	461	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	13.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1294	-	-	-	602
HCM Lane V/C Ratio	0.129	-	-	-	0.327
HCM Control Delay (s)	8.2	-	-	-	13.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1.4

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	354	77	923	73	427	1046
Future Volume (veh/h)	354	77	923	73	427	1046
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	385	84	1003	79	464	1137
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	757	348	1644	736	654	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	1007	3250
Grp Volume(v), veh/h	385	84	1003	79	464	1137
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	504	1583
Q Serve(g_s), s	4.4	1.9	9.0	1.1	12.0	10.9
Cycle Q Clear(g_c), s	4.4	1.9	9.0	1.1	21.0	10.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	757	348	1644	736	654	1644
V/C Ratio(X)	0.51	0.24	0.61	0.11	0.71	0.69
Avail Cap(c_a), veh/h	1485	683	1644	736	654	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	12.2	6.8	5.0	16.4	7.3
Incr Delay (d2), s/veh	0.5	0.4	0.7	0.1	3.5	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.8	4.1	0.5	2.8	4.9
LnGrp Delay(d),s/veh	13.7	12.6	7.5	5.0	19.9	8.6
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	469		1082			1601
Approach Delay, s/veh	13.5		7.3			11.8
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.9
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		11.0				23.0		6.4
Green Ext Time (p_c), s		9.1				0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	734	0	183	0	1467	790	0	1666	1060
Future Volume (veh/h)	0	0	0	734	0	183	0	1467	790	0	1666	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				798	0	199	0	1595	0	0	1811	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1064	0	489	0	2192	683	0	2192	683
Arrive On Green				0.35	0.00	0.35	0.00	0.48	0.00	0.00	0.48	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				798	0	199	0	1595	0	0	1811	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				12.6	0.0	5.9	0.0	15.4	0.0	0.0	18.8	0.0
Cycle Q Clear(g_c), s				12.6	0.0	5.9	0.0	15.4	0.0	0.0	18.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1064	0	489	0	2192	683	0	2192	683
V/C Ratio(X)				0.75	0.00	0.41	0.00	0.73	0.00	0.00	0.83	0.00
Avail Cap(c_a), veh/h				1064	0	489	0	2192	683	0	2192	683
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.66	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.9	0.0	13.7	0.0	11.4	0.0	0.0	12.3	0.0
Incr Delay (d2), s/veh				4.9	0.0	2.5	0.0	1.4	0.0	0.0	3.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.0	0.0	2.6	0.0	6.6	0.0	0.0	8.5	0.0
LnGrp Delay(d),s/veh				20.8	0.0	16.2	0.0	12.8	0.0	0.0	16.0	0.0
LnGrp LOS				C		B		B			B	
Approach Vol, veh/h					997			1595			1811	
Approach Delay, s/veh					19.9			12.8			16.0	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.0		32.0				32.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.0		26.5				26.5
Max Q Clear Time (g_c+I1), s		14.6		17.4				20.8
Green Ext Time (p_c), s		1.7		8.7				5.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	543	0	392	0	0	0	0	1617	330	0	2078	380
Future Volume (veh/h)	543	0	392	0	0	0	0	1617	330	0	2078	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	723	0	284				0	1758	0	0	2259	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	928	0	414				0	2499	778	0	2499	778
Arrive On Green	0.29	0.00	0.29				0.00	0.55	0.00	0.00	0.55	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	723	0	284				0	1758	0	0	2259	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.5	0.0	10.6				0.0	17.0	0.0	0.0	26.7	0.0
Cycle Q Clear(g_c), s	12.5	0.0	10.6				0.0	17.0	0.0	0.0	26.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	928	0	414				0	2499	778	0	2499	778
V/C Ratio(X)	0.78	0.00	0.69				0.00	0.70	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h	952	0	425				0	2578	803	0	2499	778
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.51	0.00
Uniform Delay (d), s/veh	19.4	0.0	18.8				0.0	9.9	0.0	0.0	12.1	0.0
Incr Delay (d2), s/veh	6.4	0.0	8.9				0.0	0.9	0.0	0.0	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	0.0	5.1				0.0	7.2	0.0	0.0	11.6	0.0
LnGrp Delay(d),s/veh	25.9	0.0	27.7				0.0	10.8	0.0	0.0	15.3	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		1007						1758			2259	
Approach Delay, s/veh		26.4						10.8			15.3	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.5		21.5		38.5
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 34		18.0		32.5
Max Q Clear Time (g_c+I1), s				19.0		14.5		28.7
Green Ext Time (p_c), s				13.9		1.4		3.8

Intersection Summary	
HCM 2010 Ctrl Delay	15.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1305	0	129	0	1661	340	0	2085	1320
Future Volume (veh/h)	0	0	0	1305	0	129	0	1661	340	0	2085	1320
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1418	0	140	0	1805	0	0	2266	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1232	0	567	0	2250	700	0	2250	700
Arrive On Green				0.40	0.00	0.40	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1418	0	140	0	1805	0	0	2266	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				36.0	0.0	5.9	0.0	29.9	0.0	0.0	44.5	0.0
Cycle Q Clear(g_c), s				36.0	0.0	5.9	0.0	29.9	0.0	0.0	44.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	567	0	2250	700	0	2250	700
V/C Ratio(X)				1.15	0.00	0.25	0.00	0.80	0.00	0.00	1.01	0.00
Avail Cap(c_a), veh/h				1232	0	567	0	2250	700	0	2250	700
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				27.0	0.0	18.0	0.0	19.1	0.0	0.0	22.8	0.0
Incr Delay (d2), s/veh				77.8	0.0	0.2	0.0	2.5	0.0	0.0	20.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				28.5	0.0	2.3	0.0	12.9	0.0	0.0	22.9	0.0
LnGrp Delay(d),s/veh				104.8	0.0	18.2	0.0	21.5	0.0	0.0	43.5	0.0
LnGrp LOS				F		B		C			F	
Approach Vol, veh/h					1558			1805			2266	
Approach Delay, s/veh					97.0			21.5			43.5	
Approach LOS					F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		40.0		50.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		44.5		36.0		44.5		
Max Q Clear Time (g_c+I1), s		46.5		38.0		31.9		
Green Ext Time (p_c), s		0.0		0.0		12.3		

Intersection Summary	
HCM 2010 Ctrl Delay	51.3
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	410	0	122	0	0	0	0	1590	1080	0	2938	420
Future Volume (veh/h)	410	0	122	0	0	0	0	1590	1080	0	2938	420
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	446	0	133				0	1728	0	0	3193	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	527	0	242				0	3292	1025	0	3292	1025
Arrive On Green	0.17	0.00	0.17				0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	446	0	133				0	1728	0	0	3193	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.6	0.0	7.7				0.0	15.2	0.0	0.0	58.6	0.0
Cycle Q Clear(g_c), s	12.6	0.0	7.7				0.0	15.2	0.0	0.0	58.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	527	0	242				0	3292	1025	0	3292	1025
V/C Ratio(X)	0.85	0.00	0.55				0.00	0.52	0.00	0.00	0.97	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3292	1025	0	3292	1025
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.2	0.0	34.1				0.0	5.5	0.0	0.0	11.5	0.0
Incr Delay (d2), s/veh	9.4	0.0	1.9				0.0	0.6	0.0	0.0	1.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	3.2				0.0	6.4	0.0	0.0	24.4	0.0
LnGrp Delay(d),s/veh	45.6	0.0	36.1				0.0	6.2	0.0	0.0	13.0	0.0
LnGrp LOS	D		D					A			B	
Approach Vol, veh/h		579						1728			3193	
Approach Delay, s/veh		43.4						6.2			13.0	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		70.6				70.6		19.4
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		60.6				17.2		14.6
Green Ext Time (p_c), s		1.9				44.5		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.0
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	36.7
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	86	417	49	0	86	313	8	0	18	66	100	0	82	65	79
Future Vol, veh/h	0	86	417	49	0	86	313	8	0	18	66	100	0	82	65	79
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	93	453	53	0	93	340	9	0	20	72	109	0	89	71	86
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	56.9	30.8	14.4	16.4
HCM LOS	F	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	21%	0%	100%	0%	0%	100%	0%	0%	56%	0%
Vol Thru, %	79%	0%	0%	100%	0%	0%	100%	0%	44%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	100	86	417	49	86	313	8	147	79
LT Vol	18	0	86	0	0	86	0	0	82	0
Through Vol	66	0	0	417	0	0	313	0	65	0
RT Vol	0	100	0	0	49	0	0	8	0	79
Lane Flow Rate	91	109	93	453	53	93	340	9	160	86
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.235	0.255	0.224	1	0.109	0.23	0.79	0.018	0.41	0.197
Departure Headway (Hd)	9.276	8.452	8.619	8.105	7.384	8.873	8.358	7.637	9.246	8.25
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	389	425	419	449	488	409	435	471	391	435
Service Time	6.999	6.203	6.319	5.805	5.084	6.55	6.049	5.348	6.969	6.004
HCM Lane V/C Ratio	0.234	0.256	0.222	1.009	0.109	0.227	0.782	0.019	0.409	0.198
HCM Control Delay	14.8	14.1	13.8	71.2	11	14.2	35.9	10.5	18.3	13
HCM Lane LOS	B	B	B	F	B	B	E	B	C	B
HCM 95th-tile Q	0.9	1	0.8	12.9	0.4	0.9	7	0.1	2	0.7

Intersection	
Int Delay, s/veh	4.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	124	5	4	736	501	310
Future Vol, veh/h	124	5	4	736	501	310
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	135	5	4	800	545	337

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1122	441	882	0	-	0
Stage 1	713	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	200	564	762	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	199	564	762	-	-	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	636	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	54.3	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	762	-	204	-	-
HCM Lane V/C Ratio	0.006	-	0.687	-	-
HCM Control Delay (s)	9.8	-	54.3	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	4.3	-	-

Intersection	
Intersection Delay, s/veh	25.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	200	88	8	0	9	242	372	0	19	68	35
Future Vol, veh/h	0	200	88	8	0	9	242	372	0	19	68	35
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	217	96	9	0	10	263	404	0	21	74	38
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	20.9	31.6	14.5
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	35	200	88	8	9	242	372	177	23	279
LT Vol	19	0	200	0	0	9	0	0	177	0	0
Through Vol	68	0	0	88	0	0	242	0	0	23	0
RT Vol	0	35	0	0	8	0	0	372	0	0	279
Lane Flow Rate	95	38	217	96	9	10	263	404	192	25	303
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.251	0.092	0.572	0.238	0.02	0.024	0.596	0.835	0.477	0.059	0.65
Departure Headway (Hd)	9.546	8.737	9.478	8.966	8.249	8.778	8.268	7.553	9.05	8.524	7.835
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	378	412	383	403	436	410	439	481	400	422	464
Service Time	7.259	6.45	7.187	6.675	5.958	6.478	5.968	5.253	6.75	6.244	5.535
HCM Lane V/C Ratio	0.251	0.092	0.567	0.238	0.021	0.024	0.599	0.84	0.48	0.059	0.653
HCM Control Delay	15.4	12.3	24.1	14.5	11.1	11.7	22.4	38.1	19.7	11.8	23.9
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	1	0.3	3.4	0.9	0.1	0.1	3.8	8.3	2.5	0.2	4.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	177	23	279
Future Vol, veh/h	0	177	23	279
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	192	25	303
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	21.8
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	325	115	0	105	215	0	95	105
Future Vol, veh/h	0	325	115	0	105	215	0	95	105
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	353	125	0	114	234	0	103	114
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.5	10.7
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	95	105	325	115	105	215
LT Vol	95	0	0	0	105	0
Through Vol	0	0	325	0	0	215
RT Vol	0	105	0	115	0	0
Lane Flow Rate	103	114	353	125	114	234
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.203	0.186	0.558	0.173	0.2	0.377
Departure Headway (Hd)	7.073	5.858	5.682	4.975	6.308	5.802
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	508	613	636	721	570	622
Service Time	4.809	3.593	3.41	2.702	4.038	3.532
HCM Lane V/C Ratio	0.203	0.186	0.555	0.173	0.2	0.376
HCM Control Delay	11.6	9.9	15.4	8.7	10.6	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.6	0.7	1.8

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	3	3	0	21	3	0	3	9
Future Vol, veh/h	0	3	3	0	21	3	0	3	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	3	0	23	3	0	3	10
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.3	7
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	3	21	3	3	9
LT Vol	3	0	0	0	3	0
Through Vol	0	3	21	0	0	0
RT Vol	0	0	0	3	0	9
Lane Flow Rate	3	3	23	3	3	10
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.005	0.004	0.029	0.003	0.005	0.011
Departure Headway (Hd)	5.07	4.57	4.561	3.861	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	708	786	788	930	704	920
Service Time	2.783	2.283	2.27	1.57	2.812	1.612
HCM Lane V/C Ratio	0.004	0.004	0.029	0.003	0.004	0.011
HCM Control Delay	7.8	7.3	7.4	6.6	7.8	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0

Intersection	
Int Delay, s/veh	3.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	116	300	549	34	30	151
Future Vol, veh/h	116	300	549	34	30	151
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	326	597	37	33	164

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	597	0	-	0	1012	298
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	415	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	976	-	-	-	236	698
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	976	-	-	-	206	698
Mov Cap-2 Maneuver	-	-	-	-	206	-
Stage 1	-	-	-	-	513	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	16.8
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	976	-	-	-	500
HCM Lane V/C Ratio	0.129	-	-	-	0.393
HCM Control Delay (s)	9.2	-	-	-	16.8
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	44	1507	44	197	864
Future Volume (veh/h)	123	44	1507	44	197	864
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	134	48	1638	48	214	939
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	312	1700	761	391	1700
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	565	3250
Grp Volume(v), veh/h	134	48	1638	48	214	939
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	282	1583
Q Serve(g_s), s	1.4	1.1	19.4	0.6	1.6	7.6
Cycle Q Clear(g_c), s	1.4	1.1	19.4	0.6	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	678	312	1700	761	391	1700
V/C Ratio(X)	0.20	0.15	0.96	0.06	0.55	0.55
Avail Cap(c_a), veh/h	1535	706	1700	761	391	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.7	4.3	19.5	6.0
Incr Delay (d2), s/veh	0.1	0.2	14.2	0.0	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	11.5	0.2	1.2	3.4
LnGrp Delay(d),s/veh	12.6	12.5	22.8	4.4	21.1	6.4
LnGrp LOS	B	B	C	A	C	A
Approach Vol, veh/h	182		1686			1153
Approach Delay, s/veh	12.6		22.3			9.1
Approach LOS	B		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		21.4				23.0		3.4
Green Ext Time (p_c), s		0.0				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	484	0	360	0	2540	350	0	1606	510
Future Volume (veh/h)	0	0	0	484	0	360	0	2540	350	0	1606	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				526	0	391	0	2761	0	0	1746	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				780	0	359	0	2821	878	0	2821	878
Arrive On Green				0.25	0.00	0.25	0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				526	0	391	0	2761	0	0	1746	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				11.5	0.0	19.0	0.0	44.0	0.0	0.0	17.7	0.0
Cycle Q Clear(g_c), s				11.5	0.0	19.0	0.0	44.0	0.0	0.0	17.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				780	0	359	0	2821	878	0	2821	878
V/C Ratio(X)				0.67	0.00	1.09	0.00	0.98	0.00	0.00	0.62	0.00
Avail Cap(c_a), veh/h				780	0	359	0	2821	878	0	2821	878
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.16	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				25.2	0.0	28.0	0.0	13.8	0.0	0.0	8.8	0.0
Incr Delay (d2), s/veh				4.6	0.0	73.6	0.0	3.4	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.4	0.0	14.7	0.0	18.8	0.0	0.0	7.5	0.0
LnGrp Delay(d),s/veh				29.8	0.0	101.6	0.0	17.2	0.0	0.0	9.8	0.0
LnGrp LOS				C		F		B			A	
Approach Vol, veh/h					917			2761			1746	
Approach Delay, s/veh					60.5			17.2			9.8	
Approach LOS					E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.0		52.0				52.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.0		46.5				46.5
Max Q Clear Time (g_c+I1), s		21.0		46.0				19.7
Green Ext Time (p_c), s		0.0		0.5				26.2

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1020	0	651	0	0	0	0	1884	854	0	1680	402
Future Volume (veh/h)	1020	0	651	0	0	0	0	1884	854	0	1680	402
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1329	0	472				0	2048	0	0	1826	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1657	0	740				0	2111	657	0	2111	657
Arrive On Green	0.52	0.00	0.52				0.00	0.46	0.00	0.00	0.46	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1329	0	472				0	2048	0	0	1826	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	25.8	0.0	17.9				0.0	32.9	0.0	0.0	26.9	0.0
Cycle Q Clear(g_c), s	25.8	0.0	17.9				0.0	32.9	0.0	0.0	26.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1657	0	740				0	2111	657	0	2111	657
V/C Ratio(X)	0.80	0.00	0.64				0.00	0.97	0.00	0.00	0.86	0.00
Avail Cap(c_a), veh/h	1657	0	740				0	2111	657	0	2111	657
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.73	0.00
Uniform Delay (d), s/veh	14.7	0.0	12.8				0.0	19.6	0.0	0.0	18.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	4.2				0.0	13.3	0.0	0.0	3.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	7.8				0.0	16.2	0.0	0.0	11.9	0.0
LnGrp Delay(d),s/veh	18.9	0.0	17.0				0.0	32.9	0.0	0.0	21.8	0.0
LnGrp LOS	B		B					C			C	
Approach Vol, veh/h		1801						2048			1826	
Approach Delay, s/veh		18.4						32.9			21.8	
Approach LOS		B						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				40.3		43.2		40.3
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 35		32.2		33.3
Max Q Clear Time (g_c+I1), s				34.9		27.8		28.9
Green Ext Time (p_c), s				0.0		2.9		4.3

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1161	0	371	0	2344	160	0	1824	461
Future Volume (veh/h)	0	0	0	1161	0	371	0	2344	160	0	1824	461
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1262	0	403	0	2548	0	0	1983	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1180	0	543	0	2446	761	0	2446	761
Arrive On Green				0.38	0.00	0.38	0.00	0.54	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1262	0	403	0	2548	0	0	1983	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				46.0	0.0	29.4	0.0	64.5	0.0	0.0	42.9	0.0
Cycle Q Clear(g_c), s				46.0	0.0	29.4	0.0	64.5	0.0	0.0	42.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1180	0	543	0	2446	761	0	2446	761
V/C Ratio(X)				1.07	0.00	0.74	0.00	1.04	0.00	0.00	0.81	0.00
Avail Cap(c_a), veh/h				1180	0	543	0	2446	761	0	2446	761
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.58	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				37.0	0.0	31.9	0.0	27.8	0.0	0.0	22.7	0.0
Incr Delay (d2), s/veh				46.8	0.0	5.4	0.0	26.4	0.0	0.0	3.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				27.2	0.0	12.3	0.0	32.7	0.0	0.0	18.5	0.0
LnGrp Delay(d),s/veh				83.8	0.0	37.3	0.0	54.2	0.0	0.0	25.8	0.0
LnGrp LOS				F		D		F			C	
Approach Vol, veh/h					1665			2548			1983	
Approach Delay, s/veh					72.5			54.2			25.8	
Approach LOS					E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		70.0		50.0		70.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		64.5		46.0		64.5		
Max Q Clear Time (g_c+I1), s		44.9		48.0		66.5		
Green Ext Time (p_c), s		19.3		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	50.0
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	483	0	117	0	0	0	0	2057	1310	0	2643	330
Future Volume (veh/h)	483	0	117	0	0	0	0	2057	1310	0	2643	330
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	525	0	127				0	2236	0	0	2873	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	613	0	282				0	3104	966	0	3104	966
Arrive On Green	0.20	0.00	0.20				0.00	0.68	0.00	0.00	0.68	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	525	0	127				0	2236	0	0	2873	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.2	0.0	6.3				0.0	24.6	0.0	0.0	43.6	0.0
Cycle Q Clear(g_c), s	13.2	0.0	6.3				0.0	24.6	0.0	0.0	43.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	613	0	282				0	3104	966	0	3104	966
V/C Ratio(X)	0.86	0.00	0.45				0.00	0.72	0.00	0.00	0.93	0.00
Avail Cap(c_a), veh/h	693	0	319				0	3104	966	0	3104	966
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.29	0.00
Uniform Delay (d), s/veh	30.9	0.0	28.2				0.0	7.9	0.0	0.0	11.0	0.0
Incr Delay (d2), s/veh	9.5	0.0	1.1				0.0	1.5	0.0	0.0	2.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	2.6				0.0	10.6	0.0	0.0	18.4	0.0
LnGrp Delay(d),s/veh	40.4	0.0	29.3				0.0	9.4	0.0	0.0	12.9	0.0
LnGrp LOS	D		C					A			B	
Approach Vol, veh/h		652						2236			2873	
Approach Delay, s/veh		38.3						9.4			12.9	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		60.1				60.1		19.9
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		52.5				52.5		18.0
Max Q Clear Time (g_c+I1), s		45.6				26.6		15.2
Green Ext Time (p_c), s		6.9				25.7		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.4
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	23.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	34	361	16	0	29	436	42	0	17	6	36	0	35	16	29
Future Vol, veh/h	0	34	361	16	0	29	436	42	0	17	6	36	0	35	16	29
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	392	17	0	32	474	46	0	18	7	39	0	38	17	32
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	21.8	29.2	10.8	11.3
HCM LOS	C	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	74%	0%	100%	0%	0%	100%	0%	0%	69%	0%
Vol Thru, %	26%	0%	0%	100%	0%	0%	100%	0%	31%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	36	34	361	16	29	436	42	51	29
LT Vol	17	0	34	0	0	29	0	0	35	0
Through Vol	6	0	0	361	0	0	436	0	16	0
RT Vol	0	36	0	0	16	0	0	42	0	29
Lane Flow Rate	25	39	37	392	17	32	474	46	55	32
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.057	0.078	0.072	0.706	0.028	0.059	0.827	0.071	0.125	0.061
Departure Headway (Hd)	8.222	7.143	6.984	6.48	5.774	6.788	6.284	5.578	8.104	7.056
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	438	504	510	553	615	525	573	637	445	511
Service Time	5.925	4.846	4.765	4.26	3.554	4.565	4.061	3.354	5.808	4.756
HCM Lane V/C Ratio	0.057	0.077	0.073	0.709	0.028	0.061	0.827	0.072	0.124	0.063
HCM Control Delay	11.4	10.4	10.3	23.5	8.7	10	32.4	8.8	12	10.2
HCM Lane LOS	B	B	B	C	A	A	D	A	B	B
HCM 95th-tile Q	0.2	0.3	0.2	5.6	0.1	0.2	8.5	0.2	0.4	0.2

Intersection	
Int Delay, s/veh	16.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	233	7	12	487	503	198
Future Vol, veh/h	233	7	12	487	503	198
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	253	8	13	529	547	215

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	945	381	762	0	-	0
Stage 1	654	-	-	-	-	-
Stage 2	291	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	260	617	846	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	733	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	256	617	846	-	-	-
Mov Cap-2 Maneuver	256	-	-	-	-	-
Stage 1	479	-	-	-	-	-
Stage 2	722	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	98.7	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	846	-	260	-	-
HCM Lane V/C Ratio	0.015	-	1.003	-	-
HCM Control Delay (s)	9.3	-	98.7	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	9.9	-	-

Intersection	
Intersection Delay, s/veh	15.7
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	127	130	13	0	19	77	205	0	7	25	8
Future Vol, veh/h	0	127	130	13	0	19	77	205	0	7	25	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	138	141	14	0	21	84	223	0	8	27	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	13.6	13.4	11.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	127	130	13	19	77	205	310	60	180
LT Vol	7	0	127	0	0	19	0	0	310	0	0
Through Vol	25	0	0	130	0	0	77	0	0	60	0
RT Vol	0	8	0	0	13	0	0	205	0	0	180
Lane Flow Rate	35	9	138	141	14	21	84	223	337	65	196
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.018	0.306	0.293	0.027	0.046	0.173	0.417	0.674	0.121	0.326
Departure Headway (Hd)	8.138	7.329	7.978	7.471	6.762	7.957	7.451	6.741	7.32	6.819	6.118
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	441	490	453	483	531	452	483	537	495	529	591
Service Time	5.864	5.055	5.695	5.188	4.479	5.674	5.168	4.458	5.02	4.519	3.818
HCM Lane V/C Ratio	0.079	0.018	0.305	0.292	0.026	0.046	0.174	0.415	0.681	0.123	0.332
HCM Control Delay	11.6	10.2	14.2	13.3	9.7	11.1	11.7	14.2	23.9	10.5	11.7
HCM Lane LOS	B	B	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.3	0.1	1.3	1.2	0.1	0.1	0.6	2	5	0.4	1.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	310	60	180
Future Vol, veh/h	0	310	60	180
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	337	65	196
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	18.4
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	142	70	0	110	184	0	96	178
Future Vol, veh/h	0	142	70	0	110	184	0	96	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	154	76	0	120	200	0	104	193
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.7	10.7	10.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	178	142	70	110	184
LT Vol	96	0	0	0	110	0
Through Vol	0	0	142	0	0	184
RT Vol	0	178	0	70	0	0
Lane Flow Rate	104	193	154	76	120	200
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.185	0.278	0.249	0.108	0.202	0.31
Departure Headway (Hd)	6.491	5.282	5.803	5.094	6.182	5.676
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	556	685	622	708	585	638
Service Time	4.191	2.982	3.503	2.794	3.882	3.376
HCM Lane V/C Ratio	0.187	0.282	0.248	0.107	0.205	0.313
HCM Control Delay	10.7	10	10.4	8.4	10.4	10.9
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.7	1.1	1	0.4	0.7	1.3

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	1	10	0	1	1	0	1	1
Future Vol, veh/h	0	1	10	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	11	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.3	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	10	1	1	1	1
LT Vol	1	0	0	0	1	0
Through Vol	0	10	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	1	11	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.002	0.014	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.544	3.844	5.059	3.859
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	792	936	710	931
Service Time	2.741	2.241	2.248	1.548	2.768	1.568
HCM Lane V/C Ratio	0.001	0.014	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	165	431	247	25	39	173
Future Vol, veh/h	165	431	247	25	39	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	179	468	268	27	42	188

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	268	0	-	0	861	134
Stage 1	-	-	-	-	268	-
Stage 2	-	-	-	-	593	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1293	-	-	-	295	890
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	515	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1293	-	-	-	254	890
Mov Cap-2 Maneuver	-	-	-	-	254	-
Stage 1	-	-	-	-	753	-
Stage 2	-	-	-	-	444	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	14.5
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1293	-	-	-	609
HCM Lane V/C Ratio	0.139	-	-	-	0.378
HCM Control Delay (s)	8.2	-	-	-	14.5
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.8

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	357	73	917	74	406	1043
Future Volume (veh/h)	357	73	917	74	406	1043
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	388	79	997	80	441	1134
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	757	348	1644	736	658	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	1012	3250
Grp Volume(v), veh/h	388	79	997	80	441	1134
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	506	1583
Q Serve(g_s), s	4.4	1.8	8.9	1.2	12.1	10.8
Cycle Q Clear(g_c), s	4.4	1.8	8.9	1.2	21.0	10.8
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	757	348	1644	736	658	1644
V/C Ratio(X)	0.51	0.23	0.61	0.11	0.67	0.69
Avail Cap(c_a), veh/h	1485	683	1644	736	658	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.2	12.2	6.8	5.0	16.1	7.3
Incr Delay (d2), s/veh	0.5	0.3	0.6	0.1	2.6	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.7	4.0	0.5	2.6	4.9
LnGrp Delay(d),s/veh	13.7	12.5	7.5	5.0	18.7	8.5
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	467		1077			1575
Approach Delay, s/veh	13.5		7.3			11.4
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.9
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		10.9				23.0		6.4
Green Ext Time (p_c), s		9.2				0.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.3
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	739	0	183	0	1487	790	0	1661	1060
Future Volume (veh/h)	0	0	0	739	0	183	0	1487	790	0	1661	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				803	0	199	0	1616	0	0	1805	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1064	0	489	0	2192	683	0	2192	683
Arrive On Green				0.35	0.00	0.35	0.00	0.48	0.00	0.00	0.48	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				803	0	199	0	1616	0	0	1805	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				12.7	0.0	5.9	0.0	15.7	0.0	0.0	18.7	0.0
Cycle Q Clear(g_c), s				12.7	0.0	5.9	0.0	15.7	0.0	0.0	18.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1064	0	489	0	2192	683	0	2192	683
V/C Ratio(X)				0.75	0.00	0.41	0.00	0.74	0.00	0.00	0.82	0.00
Avail Cap(c_a), veh/h				1064	0	489	0	2192	683	0	2192	683
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.67	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.9	0.0	13.7	0.0	11.5	0.0	0.0	12.2	0.0
Incr Delay (d2), s/veh				5.0	0.0	2.5	0.0	1.5	0.0	0.0	3.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	2.6	0.0	6.7	0.0	0.0	8.4	0.0
LnGrp Delay(d),s/veh				20.9	0.0	16.2	0.0	13.0	0.0	0.0	15.9	0.0
LnGrp LOS				C		B		B			B	
Approach Vol, veh/h					1002			1616			1805	
Approach Delay, s/veh					20.0			13.0			15.9	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.0		32.0				32.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.0		26.5				26.5
Max Q Clear Time (g_c+I1), s		14.7		17.7				20.7
Green Ext Time (p_c), s		1.7		8.4				5.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	569	0	364	0	0	0	0	1601	330	0	2086	380
Future Volume (veh/h)	569	0	364	0	0	0	0	1601	330	0	2086	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	741	0	264				0	1740	0	0	2267	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	929	0	415				0	2498	778	0	2498	778
Arrive On Green	0.29	0.00	0.29				0.00	0.55	0.00	0.00	0.55	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	741	0	264				0	1740	0	0	2267	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.9	0.0	9.7				0.0	16.8	0.0	0.0	26.9	0.0
Cycle Q Clear(g_c), s	12.9	0.0	9.7				0.0	16.8	0.0	0.0	26.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	929	0	415				0	2498	778	0	2498	778
V/C Ratio(X)	0.80	0.00	0.64				0.00	0.70	0.00	0.00	0.91	0.00
Avail Cap(c_a), veh/h	952	0	425				0	2578	803	0	2498	778
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.51	0.00
Uniform Delay (d), s/veh	19.6	0.0	18.4				0.0	9.9	0.0	0.0	12.2	0.0
Incr Delay (d2), s/veh	7.1	0.0	7.3				0.0	0.8	0.0	0.0	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	0.0	4.7				0.0	7.1	0.0	0.0	11.9	0.0
LnGrp Delay(d),s/veh	26.7	0.0	25.7				0.0	10.7	0.0	0.0	15.5	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		1005						1740			2267	
Approach Delay, s/veh		26.4						10.7			15.5	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.4		21.6		38.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 34		18.0		32.5
Max Q Clear Time (g_c+I1), s				18.8		14.9		28.9
Green Ext Time (p_c), s				14.2		1.3		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1294	0	146	0	1719	331	0	2106	1304
Future Volume (veh/h)	0	0	0	1294	0	146	0	1719	331	0	2106	1304
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1407	0	159	0	1868	0	0	2289	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1232	0	567	0	2250	700	0	2250	700
Arrive On Green				0.40	0.00	0.40	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1407	0	159	0	1868	0	0	2289	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				36.0	0.0	6.8	0.0	31.7	0.0	0.0	44.5	0.0
Cycle Q Clear(g_c), s				36.0	0.0	6.8	0.0	31.7	0.0	0.0	44.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	567	0	2250	700	0	2250	700
V/C Ratio(X)				1.14	0.00	0.28	0.00	0.83	0.00	0.00	1.02	0.00
Avail Cap(c_a), veh/h				1232	0	567	0	2250	700	0	2250	700
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				27.0	0.0	18.2	0.0	19.5	0.0	0.0	22.8	0.0
Incr Delay (d2), s/veh				74.2	0.0	0.3	0.0	2.9	0.0	0.0	23.5	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				27.9	0.0	2.7	0.0	13.8	0.0	0.0	23.4	0.0
LnGrp Delay(d),s/veh				101.2	0.0	18.5	0.0	22.4	0.0	0.0	46.2	0.0
LnGrp LOS				F		B		C			F	
Approach Vol, veh/h					1566			1868			2289	
Approach Delay, s/veh					92.8			22.4			46.2	
Approach LOS					F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		50.0		40.0		50.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		44.5		36.0		44.5		
Max Q Clear Time (g_c+I1), s		46.5		38.0		33.7		
Green Ext Time (p_c), s		0.0		0.0		10.6		

Intersection Summary	
HCM 2010 Ctrl Delay	51.2
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	398	0	114	0	0	0	0	1632	1090	0	2926	430
Future Volume (veh/h)	398	0	114	0	0	0	0	1632	1090	0	2926	430
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	433	0	124				0	1774	0	0	3180	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	515	0	237				0	3309	1030	0	3309	1030
Arrive On Green	0.17	0.00	0.17				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	433	0	124				0	1774	0	0	3180	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.3	0.0	7.2				0.0	15.7	0.0	0.0	57.0	0.0
Cycle Q Clear(g_c), s	12.3	0.0	7.2				0.0	15.7	0.0	0.0	57.0	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	515	0	237				0	3309	1030	0	3309	1030
V/C Ratio(X)	0.84	0.00	0.52				0.00	0.54	0.00	0.00	0.96	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3309	1030	0	3309	1030
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.3	0.0	34.2				0.0	5.5	0.0	0.0	11.1	0.0
Incr Delay (d2), s/veh	8.8	0.0	1.8				0.0	0.6	0.0	0.0	1.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.9	0.0	2.9				0.0	6.6	0.0	0.0	23.6	0.0
LnGrp Delay(d),s/veh	45.1	0.0	36.0				0.0	6.1	0.0	0.0	12.2	0.0
LnGrp LOS	D		D					A			B	
Approach Vol, veh/h		557						1774			3180	
Approach Delay, s/veh		43.1						6.1			12.2	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		71.0				71.0		19.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		59.0				17.7		14.3
Green Ext Time (p_c), s		3.5				44.1		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	13.4
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	36.7
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	86	417	49	0	86	313	8	0	18	66	100	0	82	65	79
Future Vol, veh/h	0	86	417	49	0	86	313	8	0	18	66	100	0	82	65	79
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	93	453	53	0	93	340	9	0	20	72	109	0	89	71	86
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	56.9	30.8	14.4	16.4
HCM LOS	F	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	21%	0%	100%	0%	0%	100%	0%	0%	56%	0%
Vol Thru, %	79%	0%	0%	100%	0%	0%	100%	0%	44%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	100	86	417	49	86	313	8	147	79
LT Vol	18	0	86	0	0	86	0	0	82	0
Through Vol	66	0	0	417	0	0	313	0	65	0
RT Vol	0	100	0	0	49	0	0	8	0	79
Lane Flow Rate	91	109	93	453	53	93	340	9	160	86
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.235	0.255	0.224	1	0.109	0.23	0.79	0.018	0.41	0.197
Departure Headway (Hd)	9.276	8.452	8.619	8.105	7.384	8.873	8.358	7.637	9.246	8.25
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	389	425	419	449	488	409	435	471	391	435
Service Time	6.999	6.203	6.319	5.805	5.084	6.55	6.049	5.348	6.969	6.004
HCM Lane V/C Ratio	0.234	0.256	0.222	1.009	0.109	0.227	0.782	0.019	0.409	0.198
HCM Control Delay	14.8	14.1	13.8	71.2	11	14.2	35.9	10.5	18.3	13
HCM Lane LOS	B	B	B	F	B	B	E	B	C	B
HCM 95th-tile Q	0.9	1	0.8	12.9	0.4	0.9	7	0.1	2	0.7

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	115	5	3	735	505	227
Future Vol, veh/h	115	5	3	735	505	227
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	5	3	799	549	247

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1078	398	796	0	-	0
Stage 1	672	-	-	-	-	-
Stage 2	406	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	213	601	822	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	212	601	822	-	-	-
Mov Cap-2 Maneuver	212	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	43.5	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	822	-	218	-	-
HCM Lane V/C Ratio	0.004	-	0.598	-	-
HCM Control Delay (s)	9.4	-	43.5	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.4	-	-

Intersection	
Intersection Delay, s/veh	25.3
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	200	86	8	0	9	238	372	0	19	69	34
Future Vol, veh/h	0	200	86	8	0	9	238	372	0	19	69	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	217	93	9	0	10	259	404	0	21	75	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	21	31.7	14.6
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	88	34	200	86	8	9	238	372	179	23	284
LT Vol	19	0	200	0	0	9	0	0	179	0	0
Through Vol	69	0	0	86	0	0	238	0	0	23	0
RT Vol	0	34	0	0	8	0	0	372	0	0	284
Lane Flow Rate	96	37	217	93	9	10	259	404	195	25	309
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.254	0.09	0.573	0.233	0.02	0.024	0.587	0.837	0.488	0.059	0.661
Departure Headway (Hd)	9.551	8.743	9.496	8.984	8.267	8.803	8.293	7.579	9.021	8.515	7.827
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	378	411	383	401	435	409	437	481	401	422	463
Service Time	7.272	6.465	7.212	6.7	5.983	6.503	5.993	5.279	6.742	6.236	5.527
HCM Lane V/C Ratio	0.254	0.09	0.567	0.232	0.021	0.024	0.593	0.84	0.486	0.059	0.667
HCM Control Delay	15.5	12.3	24.2	14.4	11.2	11.7	22.1	38.4	20.1	11.8	24.5
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	1	0.3	3.4	0.9	0.1	0.1	3.7	8.3	2.6	0.2	4.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	179	23	284
Future Vol, veh/h	0	179	23	284
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	195	25	309
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	22.3
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	324	121	0	109	214	0	96	106
Future Vol, veh/h	0	324	121	0	109	214	0	96	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	352	132	0	118	233	0	104	115
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	106	324	121	109	214
LT Vol	96	0	0	0	109	0
Through Vol	0	0	324	0	0	214
RT Vol	0	106	0	121	0	0
Lane Flow Rate	104	115	352	132	118	233
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.206	0.188	0.557	0.182	0.208	0.376
Departure Headway (Hd)	7.09	5.874	5.697	4.989	6.323	5.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	611	634	719	569	619
Service Time	4.824	3.608	3.426	2.718	4.055	3.548
HCM Lane V/C Ratio	0.205	0.188	0.555	0.184	0.207	0.376
HCM Control Delay	11.7	10	15.4	8.8	10.7	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	3	3	0	21	3	0	3	9
Future Vol, veh/h	0	3	3	0	21	3	0	3	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	3	0	23	3	0	3	10
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.3	7
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	3	21	3	3	9
LT Vol	3	0	0	0	3	0
Through Vol	0	3	21	0	0	0
RT Vol	0	0	0	3	0	9
Lane Flow Rate	3	3	23	3	3	10
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.005	0.004	0.029	0.003	0.005	0.011
Departure Headway (Hd)	5.07	4.57	4.561	3.861	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	708	786	788	930	704	920
Service Time	2.783	2.283	2.27	1.57	2.812	1.612
HCM Lane V/C Ratio	0.004	0.004	0.029	0.003	0.004	0.011
HCM Control Delay	7.8	7.3	7.4	6.6	7.8	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	97	300	550	33	30	130
Future Vol, veh/h	97	300	550	33	30	130
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	105	326	598	36	33	141

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	598	0	-	0	972	299
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	374	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	975	-	-	-	250	697
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	666	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	223	697
Mov Cap-2 Maneuver	-	-	-	-	223	-
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	594	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	16.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	498
HCM Lane V/C Ratio	0.108	-	-	-	0.349
HCM Control Delay (s)	9.1	-	-	-	16.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	121	46	1509	43	198	862
Future Volume (veh/h)	121	46	1509	43	198	862
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	132	50	1640	47	215	937
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	312	1700	761	390	1700
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	564	3250
Grp Volume(v), veh/h	132	50	1640	47	215	937
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	282	1583
Q Serve(g_s), s	1.4	1.1	19.5	0.6	1.5	7.6
Cycle Q Clear(g_c), s	1.4	1.1	19.5	0.6	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	678	312	1700	761	390	1700
V/C Ratio(X)	0.19	0.16	0.96	0.06	0.55	0.55
Avail Cap(c_a), veh/h	1535	706	1700	761	390	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.7	4.3	19.5	6.0
Incr Delay (d2), s/veh	0.1	0.2	14.4	0.0	1.7	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	11.6	0.2	1.2	3.3
LnGrp Delay(d),s/veh	12.6	12.6	23.1	4.4	21.1	6.3
LnGrp LOS	B	B	C	A	C	A
Approach Vol, veh/h	182		1687			1152
Approach Delay, s/veh	12.6		22.5			9.1
Approach LOS	B		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		21.5				23.0		3.4
Green Ext Time (p_c), s		0.0				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.8
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	495	0	362	0	2528	340	0	1625	510
Future Volume (veh/h)	0	0	0	495	0	362	0	2528	340	0	1625	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				538	0	393	0	2748	0	0	1766	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				788	0	363	0	2809	875	0	2809	875
Arrive On Green				0.26	0.00	0.26	0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				538	0	393	0	2748	0	0	1766	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				11.8	0.0	19.2	0.0	43.8	0.0	0.0	18.2	0.0
Cycle Q Clear(g_c), s				11.8	0.0	19.2	0.0	43.8	0.0	0.0	18.2	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				788	0	363	0	2809	875	0	2809	875
V/C Ratio(X)				0.68	0.00	1.08	0.00	0.98	0.00	0.00	0.63	0.00
Avail Cap(c_a), veh/h				788	0	363	0	2809	875	0	2809	875
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.16	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				25.2	0.0	27.9	0.0	13.9	0.0	0.0	9.0	0.0
Incr Delay (d2), s/veh				4.7	0.0	71.5	0.0	3.4	0.0	0.0	1.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.5	0.0	14.7	0.0	18.7	0.0	0.0	7.8	0.0
LnGrp Delay(d),s/veh				29.9	0.0	99.4	0.0	17.3	0.0	0.0	10.1	0.0
LnGrp LOS				C		F		B			B	
Approach Vol, veh/h					931			2748			1766	
Approach Delay, s/veh					59.2			17.3			10.1	
Approach LOS					E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.2		51.8				51.8
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.2		46.3				46.3
Max Q Clear Time (g_c+I1), s		21.2		45.8				20.2
Green Ext Time (p_c), s		0.0		0.5				25.5

Intersection Summary	
HCM 2010 Ctrl Delay	22.1
HCM 2010 LOS	C

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1012	0	658	0	0	0	0	1880	836	0	1700	403
Future Volume (veh/h)	1012	0	658	0	0	0	0	1880	836	0	1700	403
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1322	0	477				0	2043	0	0	1848	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1637	0	731				0	2105	655	0	2105	655
Arrive On Green	0.52	0.00	0.52				0.00	0.46	0.00	0.00	0.46	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1322	0	477				0	2043	0	0	1848	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	25.9	0.0	18.4				0.0	32.8	0.0	0.0	27.6	0.0
Cycle Q Clear(g_c), s	25.9	0.0	18.4				0.0	32.8	0.0	0.0	27.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1637	0	731				0	2105	655	0	2105	655
V/C Ratio(X)	0.81	0.00	0.65				0.00	0.97	0.00	0.00	0.88	0.00
Avail Cap(c_a), veh/h	1637	0	731				0	2105	655	0	2105	655
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.72	0.00
Uniform Delay (d), s/veh	15.1	0.0	13.3				0.0	19.7	0.0	0.0	18.2	0.0
Incr Delay (d2), s/veh	4.4	0.0	4.5				0.0	13.4	0.0	0.0	4.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.2	0.0	8.1				0.0	16.2	0.0	0.0	12.3	0.0
LnGrp Delay(d),s/veh	19.5	0.0	17.8				0.0	33.0	0.0	0.0	22.4	0.0
LnGrp LOS	B		B					C			C	
Approach Vol, veh/h		1799						2043			1848	
Approach Delay, s/veh		19.0						33.0			22.4	
Approach LOS		B						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				40.2		42.7		40.2
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 35		32.3		33.2
Max Q Clear Time (g_c+I1), s				34.8		27.9		29.6
Green Ext Time (p_c), s				0.0		2.9		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	25.1
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1152	0	360	0	2390	150	0	1868	480
Future Volume (veh/h)	0	0	0	1152	0	360	0	2390	150	0	1868	480
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1252	0	391	0	2598	0	0	2030	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1159	0	533	0	2445	761	0	2445	761
Arrive On Green				0.38	0.00	0.38	0.00	0.54	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1252	0	391	0	2598	0	0	2030	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				41.4	0.0	26.2	0.0	59.1	0.0	0.0	41.0	0.0
Cycle Q Clear(g_c), s				41.4	0.0	26.2	0.0	59.1	0.0	0.0	41.0	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1159	0	533	0	2445	761	0	2445	761
V/C Ratio(X)				1.08	0.00	0.73	0.00	1.06	0.00	0.00	0.83	0.00
Avail Cap(c_a), veh/h				1159	0	533	0	2445	761	0	2445	761
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.56	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				34.3	0.0	29.5	0.0	25.5	0.0	0.0	21.3	0.0
Incr Delay (d2), s/veh				50.9	0.0	5.2	0.0	34.0	0.0	0.0	3.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				25.7	0.0	11.0	0.0	32.2	0.0	0.0	17.9	0.0
LnGrp Delay(d),s/veh				85.2	0.0	34.7	0.0	59.5	0.0	0.0	24.7	0.0
LnGrp LOS				F		C		F			C	
Approach Vol, veh/h					1643			2598			2030	
Approach Delay, s/veh					73.2			59.5			24.7	
Approach LOS					E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		64.6		45.4		64.6		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		59.1		41.4		59.1		
Max Q Clear Time (g_c+I1), s		43.0		43.4		61.1		
Green Ext Time (p_c), s		15.9		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	51.8
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	507	0	113	0	0	0	0	2073	1300	0	2647	340
Future Volume (veh/h)	507	0	113	0	0	0	0	2073	1300	0	2647	340
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	551	0	123				0	2253	0	0	2877	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	634	0	292				0	3073	957	0	3073	957
Arrive On Green	0.21	0.00	0.21				0.00	0.68	0.00	0.00	0.68	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	551	0	123				0	2253	0	0	2877	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.8	0.0	6.0				0.0	25.5	0.0	0.0	44.7	0.0
Cycle Q Clear(g_c), s	13.8	0.0	6.0				0.0	25.5	0.0	0.0	44.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	634	0	292				0	3073	957	0	3073	957
V/C Ratio(X)	0.87	0.00	0.42				0.00	0.73	0.00	0.00	0.94	0.00
Avail Cap(c_a), veh/h	693	0	319				0	3073	957	0	3073	957
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.26	0.00
Uniform Delay (d), s/veh	30.7	0.0	27.6				0.0	8.3	0.0	0.0	11.5	0.0
Incr Delay (d2), s/veh	10.8	0.0	1.0				0.0	1.6	0.0	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.8	0.0	2.4				0.0	10.9	0.0	0.0	18.7	0.0
LnGrp Delay(d),s/veh	41.6	0.0	28.6				0.0	9.9	0.0	0.0	13.5	0.0
LnGrp LOS	D		C					A			B	
Approach Vol, veh/h		674						2253			2877	
Approach Delay, s/veh		39.2						9.9			13.5	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		59.5				59.5		20.5
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		52.5				52.5		18.0
Max Q Clear Time (g_c+I1), s		46.7				27.5		15.8
Green Ext Time (p_c), s		5.8				24.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	23.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	34	361	16	0	29	436	42	0	17	6	36	0	35	16	29
Future Vol, veh/h	0	34	361	16	0	29	436	42	0	17	6	36	0	35	16	29
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	37	392	17	0	32	474	46	0	18	7	39	0	38	17	32
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	21.8	29.2	10.8	11.3
HCM LOS	C	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	74%	0%	100%	0%	0%	100%	0%	0%	69%	0%
Vol Thru, %	26%	0%	0%	100%	0%	0%	100%	0%	31%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	23	36	34	361	16	29	436	42	51	29
LT Vol	17	0	34	0	0	29	0	0	35	0
Through Vol	6	0	0	361	0	0	436	0	16	0
RT Vol	0	36	0	0	16	0	0	42	0	29
Lane Flow Rate	25	39	37	392	17	32	474	46	55	32
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.057	0.078	0.072	0.706	0.028	0.059	0.827	0.071	0.125	0.061
Departure Headway (Hd)	8.222	7.143	6.984	6.48	5.774	6.788	6.284	5.578	8.104	7.056
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	438	504	510	553	615	525	573	637	445	511
Service Time	5.925	4.846	4.765	4.26	3.554	4.565	4.061	3.354	5.808	4.756
HCM Lane V/C Ratio	0.057	0.077	0.073	0.709	0.028	0.061	0.827	0.072	0.124	0.063
HCM Control Delay	11.4	10.4	10.3	23.5	8.7	10	32.4	8.8	12	10.2
HCM Lane LOS	B	B	B	C	A	A	D	A	B	B
HCM 95th-tile Q	0.2	0.3	0.2	5.6	0.1	0.2	8.5	0.2	0.4	0.2

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive 12/28/2015

Intersection	
Int Delay, s/veh	12.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	223	5	7	487	505	163
Future Vol, veh/h	223	5	7	487	505	163
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	242	5	8	529	549	177

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	918	363	726	0	-	0
Stage 1	638	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	271	634	873	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	742	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	269	634	873	-	-	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	488	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	74.6	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	873	-	272	-	-
HCM Lane V/C Ratio	0.009	-	0.911	-	-
HCM Control Delay (s)	9.2	-	74.6	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	8.2	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive 4/20/2016

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	126	130	13	0	19	80	202	0	7	25	8
Future Vol, veh/h	0	126	130	13	0	19	80	202	0	7	25	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	137	141	14	0	21	87	220	0	8	27	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	13.5	13.3	11.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	126	130	13	19	80	202	306	59	186
LT Vol	7	0	126	0	0	19	0	0	306	0	0
Through Vol	25	0	0	130	0	0	80	0	0	59	0
RT Vol	0	8	0	0	13	0	0	202	0	0	186
Lane Flow Rate	35	9	137	141	14	21	87	220	333	64	202
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.018	0.303	0.293	0.027	0.046	0.18	0.411	0.665	0.119	0.337
Departure Headway (Hd)	8.129	7.32	7.972	7.466	6.756	7.95	7.443	6.734	7.316	6.815	6.114
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	442	490	452	483	531	452	483	536	496	529	592
Service Time	5.858	5.049	5.692	5.185	4.476	5.667	5.16	4.451	5.016	4.515	3.814
HCM Lane V/C Ratio	0.079	0.018	0.303	0.292	0.026	0.046	0.18	0.41	0.671	0.121	0.341
HCM Control Delay	11.6	10.2	14.1	13.3	9.7	11.1	11.8	14.1	23.4	10.4	11.9
HCM Lane LOS	B	B	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.3	0.1	1.3	1.2	0.1	0.1	0.6	2	4.8	0.4	1.5

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	306	59	186
Future Vol, veh/h	0	306	59	186
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	333	64	202
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	18.1
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	142	70	0	110	184	0	96	178
Future Vol, veh/h	0	142	70	0	110	184	0	96	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	154	76	0	120	200	0	104	193
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.7	10.7	10.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	178	142	70	110	184
LT Vol	96	0	0	0	110	0
Through Vol	0	0	142	0	0	184
RT Vol	0	178	0	70	0	0
Lane Flow Rate	104	193	154	76	120	200
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.185	0.278	0.249	0.108	0.202	0.31
Departure Headway (Hd)	6.491	5.282	5.803	5.094	6.182	5.676
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	556	685	622	708	585	638
Service Time	4.191	2.982	3.503	2.794	3.882	3.376
HCM Lane V/C Ratio	0.187	0.282	0.248	0.107	0.205	0.313
HCM Control Delay	10.7	10	10.4	8.4	10.4	10.9
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.7	1.1	1	0.4	0.7	1.3

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	1	10	0	1	1	0	1	1
Future Vol, veh/h	0	1	10	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	11	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.3	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	10	1	1	1	1
LT Vol	1	0	0	0	1	0
Through Vol	0	10	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	1	11	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.002	0.014	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.544	3.844	5.059	3.859
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	792	936	710	931
Service Time	2.741	2.241	2.248	1.548	2.768	1.568
HCM Lane V/C Ratio	0.001	0.014	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	156	436	251	24	34	149
Future Vol, veh/h	156	436	251	24	34	149
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	170	474	273	26	37	162

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	273	0	-	0	849	136
Stage 1	-	-	-	-	273	-
Stage 2	-	-	-	-	576	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1287	-	-	-	300	888
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	525	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1287	-	-	-	260	888
Mov Cap-2 Maneuver	-	-	-	-	260	-
Stage 1	-	-	-	-	748	-
Stage 2	-	-	-	-	456	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	13.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1287	-	-	-	613
HCM Lane V/C Ratio	0.132	-	-	-	0.324
HCM Control Delay (s)	8.2	-	-	-	13.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.4

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	354	74	916	73	417	1046
Future Volume (veh/h)	354	74	916	73	417	1046
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	385	80	996	79	453	1137
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	757	348	1644	736	659	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	1014	3250
Grp Volume(v), veh/h	385	80	996	79	453	1137
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	507	1583
Q Serve(g_s), s	4.4	1.8	8.9	1.1	12.1	10.9
Cycle Q Clear(g_c), s	4.4	1.8	8.9	1.1	21.0	10.9
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	757	348	1644	736	659	1644
V/C Ratio(X)	0.51	0.23	0.61	0.11	0.69	0.69
Avail Cap(c_a), veh/h	1485	683	1644	736	659	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.1	12.2	6.8	5.0	16.2	7.3
Incr Delay (d2), s/veh	0.5	0.3	0.6	0.1	3.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.7	3.9	0.5	2.7	4.9
LnGrp Delay(d),s/veh	13.7	12.5	7.5	5.0	19.2	8.5
LnGrp LOS	B	B	A	A	B	A
Approach Vol, veh/h	465		1075			1590
Approach Delay, s/veh	13.5		7.3			11.6
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		13.9
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		10.9				23.0		6.4
Green Ext Time (p_c), s		9.2				0.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	10.4
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	737	0	182	0	1488	790	0	1653	1060
Future Volume (veh/h)	0	0	0	737	0	182	0	1488	790	0	1653	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				801	0	198	0	1617	0	0	1797	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1064	0	489	0	2192	683	0	2192	683
Arrive On Green				0.35	0.00	0.35	0.00	0.48	0.00	0.00	0.48	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				801	0	198	0	1617	0	0	1797	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				12.7	0.0	5.8	0.0	15.7	0.0	0.0	18.6	0.0
Cycle Q Clear(g_c), s				12.7	0.0	5.8	0.0	15.7	0.0	0.0	18.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1064	0	489	0	2192	683	0	2192	683
V/C Ratio(X)				0.75	0.00	0.40	0.00	0.74	0.00	0.00	0.82	0.00
Avail Cap(c_a), veh/h				1064	0	489	0	2192	683	0	2192	683
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.66	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.9	0.0	13.7	0.0	11.5	0.0	0.0	12.2	0.0
Incr Delay (d2), s/veh				4.9	0.0	2.5	0.0	1.5	0.0	0.0	3.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				6.1	0.0	2.6	0.0	6.7	0.0	0.0	8.4	0.0
LnGrp Delay(d),s/veh				20.9	0.0	16.2	0.0	13.0	0.0	0.0	15.8	0.0
LnGrp LOS				C		B		B			B	
Approach Vol, veh/h					999			1617			1797	
Approach Delay, s/veh					19.9			13.0			15.8	
Approach LOS					B			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.0		32.0				32.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.0		26.5				26.5
Max Q Clear Time (g_c+I1), s		14.7		17.7				20.6
Green Ext Time (p_c), s		1.7		8.4				5.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	570	0	385	0	0	0	0	1610	330	0	2085	380
Future Volume (veh/h)	570	0	385	0	0	0	0	1610	330	0	2085	380
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	750	0	279				0	1750	0	0	2266	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	929	0	414				0	2499	778	0	2499	778
Arrive On Green	0.29	0.00	0.29				0.00	0.55	0.00	0.00	0.55	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	750	0	279				0	1750	0	0	2266	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.1	0.0	10.4				0.0	16.9	0.0	0.0	26.8	0.0
Cycle Q Clear(g_c), s	13.1	0.0	10.4				0.0	16.9	0.0	0.0	26.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	929	0	414				0	2499	778	0	2499	778
V/C Ratio(X)	0.81	0.00	0.67				0.00	0.70	0.00	0.00	0.91	0.00
Avail Cap(c_a), veh/h	952	0	425				0	2578	803	0	2499	778
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.51	0.00
Uniform Delay (d), s/veh	19.7	0.0	18.7				0.0	9.9	0.0	0.0	12.1	0.0
Incr Delay (d2), s/veh	7.5	0.0	8.5				0.0	0.8	0.0	0.0	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	5.0				0.0	7.2	0.0	0.0	11.7	0.0
LnGrp Delay(d),s/veh	27.2	0.0	27.2				0.0	10.7	0.0	0.0	15.5	0.0
LnGrp LOS	C		C					B			B	
Approach Vol, veh/h		1029						1750			2266	
Approach Delay, s/veh		27.2						10.7			15.5	
Approach LOS		C						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.4		21.6		38.4
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 34		18.0		32.5
Max Q Clear Time (g_c+I1), s				18.9		15.1		28.8
Green Ext Time (p_c), s				14.0		1.2		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1311	0	140	0	1722	330	0	2124	1302
Future Volume (veh/h)	0	0	0	1311	0	140	0	1722	330	0	2124	1302
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1425	0	152	0	1872	0	0	2309	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1266	0	582	0	2199	685	0	2199	685
Arrive On Green				0.41	0.00	0.41	0.00	0.48	0.00	0.00	0.48	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1425	0	152	0	1872	0	0	2309	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				37.0	0.0	6.4	0.0	32.5	0.0	0.0	43.5	0.0
Cycle Q Clear(g_c), s				37.0	0.0	6.4	0.0	32.5	0.0	0.0	43.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1266	0	582	0	2199	685	0	2199	685
V/C Ratio(X)				1.13	0.00	0.26	0.00	0.85	0.00	0.00	1.05	0.00
Avail Cap(c_a), veh/h				1266	0	582	0	2199	685	0	2199	685
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.77	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				26.5	0.0	17.5	0.0	20.4	0.0	0.0	23.3	0.0
Incr Delay (d2), s/veh				67.2	0.0	0.2	0.0	3.4	0.0	0.0	33.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				27.5	0.0	2.5	0.0	14.2	0.0	0.0	25.0	0.0
LnGrp Delay(d),s/veh				93.7	0.0	17.7	0.0	23.9	0.0	0.0	57.1	0.0
LnGrp LOS				F		B		C			F	
Approach Vol, veh/h					1577			1872			2309	
Approach Delay, s/veh					86.4			23.9			57.1	
Approach LOS					F			C			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		49.0		41.0		49.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		43.5		37.0		43.5		
Max Q Clear Time (g_c+I1), s		45.5		39.0		34.5		
Green Ext Time (p_c), s		0.0		0.0		8.9		

Intersection Summary	
HCM 2010 Ctrl Delay	54.3
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	406	0	116	0	0	0	0	1634	1090	0	2964	430
Future Volume (veh/h)	406	0	116	0	0	0	0	1634	1090	0	2964	430
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	441	0	126				0	1776	0	0	3222	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	522	0	240				0	3299	1027	0	3299	1027
Arrive On Green	0.17	0.00	0.17				0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	441	0	126				0	1776	0	0	3222	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.5	0.0	7.3				0.0	15.8	0.0	0.0	60.1	0.0
Cycle Q Clear(g_c), s	12.5	0.0	7.3				0.0	15.8	0.0	0.0	60.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	522	0	240				0	3299	1027	0	3299	1027
V/C Ratio(X)	0.85	0.00	0.52				0.00	0.54	0.00	0.00	0.98	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3299	1027	0	3299	1027
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.2	0.0	34.1				0.0	5.6	0.0	0.0	11.7	0.0
Incr Delay (d2), s/veh	9.2	0.0	1.8				0.0	0.6	0.0	0.0	1.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	3.0				0.0	6.8	0.0	0.0	25.0	0.0
LnGrp Delay(d),s/veh	45.4	0.0	35.8				0.0	6.2	0.0	0.0	13.4	0.0
LnGrp LOS	D		D					A			B	
Approach Vol, veh/h		567						1776			3222	
Approach Delay, s/veh		43.3						6.2			13.4	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		70.7				70.7		19.3
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		62.1				17.8		14.5
Green Ext Time (p_c), s		0.4				44.0		0.8

Intersection Summary	
HCM 2010 Ctrl Delay	14.2
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	36.7
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	86	417	49	0	86	313	8	0	18	66	100	0	82	65	79
Future Vol, veh/h	0	86	417	49	0	86	313	8	0	18	66	100	0	82	65	79
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	93	453	53	0	93	340	9	0	20	72	109	0	89	71	86
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	56.9	30.8	14.4	16.4
HCM LOS	F	D	B	C

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	21%	0%	100%	0%	0%	100%	0%	0%	56%	0%
Vol Thru, %	79%	0%	0%	100%	0%	0%	100%	0%	44%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	84	100	86	417	49	86	313	8	147	79
LT Vol	18	0	86	0	0	86	0	0	82	0
Through Vol	66	0	0	417	0	0	313	0	65	0
RT Vol	0	100	0	0	49	0	0	8	0	79
Lane Flow Rate	91	109	93	453	53	93	340	9	160	86
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.235	0.255	0.224	1	0.109	0.23	0.79	0.018	0.41	0.197
Departure Headway (Hd)	9.276	8.452	8.619	8.105	7.384	8.873	8.358	7.637	9.246	8.25
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	389	425	419	449	488	409	435	471	391	435
Service Time	6.999	6.203	6.319	5.805	5.084	6.55	6.049	5.348	6.969	6.004
HCM Lane V/C Ratio	0.234	0.256	0.222	1.009	0.109	0.227	0.782	0.019	0.409	0.198
HCM Control Delay	14.8	14.1	13.8	71.2	11	14.2	35.9	10.5	18.3	13
HCM Lane LOS	B	B	B	F	B	B	E	B	C	B
HCM 95th-tile Q	0.9	1	0.8	12.9	0.4	0.9	7	0.1	2	0.7

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	116	4	3	739	499	309
Future Vol, veh/h	116	4	3	739	499	309
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	4	3	803	542	336

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1118	439	878	0	-	0
Stage 1	710	-	-	-	-	-
Stage 2	408	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	201	566	765	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	640	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	566	765	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	448	-	-	-	-	-
Stage 2	637	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	49.5	0	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	765	-	204	-	-
HCM Lane V/C Ratio	0.004	-	0.639	-	-
HCM Control Delay (s)	9.7	-	49.5	-	-
HCM Lane LOS	A	-	E	-	-
HCM 95th %tile Q(veh)	0	-	3.8	-	-

Intersection	
Intersection Delay, s/veh	25.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	205	91	8	0	9	242	367	0	19	68	35
Future Vol, veh/h	0	205	91	8	0	9	242	367	0	19	68	35
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	223	99	9	0	10	263	399	0	21	74	38
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	21.4	31.2	14.6
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	87	35	205	91	8	9	242	367	175	23	279
LT Vol	19	0	205	0	0	9	0	0	175	0	0
Through Vol	68	0	0	91	0	0	242	0	0	23	0
RT Vol	0	35	0	0	8	0	0	367	0	0	279
Lane Flow Rate	95	38	223	99	9	10	263	399	190	25	303
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.251	0.093	0.586	0.246	0.02	0.024	0.597	0.827	0.478	0.059	0.66
Departure Headway (Hd)	9.566	8.756	9.469	8.957	8.24	8.823	8.313	7.598	9.051	8.545	7.836
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	376	410	383	403	436	408	437	479	399	421	464
Service Time	7.294	6.485	7.196	6.684	5.967	6.523	6.013	5.298	6.773	6.267	5.558
HCM Lane V/C Ratio	0.253	0.093	0.582	0.246	0.021	0.025	0.602	0.833	0.476	0.059	0.653
HCM Control Delay	15.5	12.4	24.8	14.6	11.1	11.7	22.6	37.3	19.8	11.8	24.5
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	1	0.3	3.6	1	0.1	0.1	3.8	8	2.5	0.2	4.7

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	175	23	279
Future Vol, veh/h	0	175	23	279
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	190	25	303
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	22.2
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	324	121	0	109	214	0	96	106
Future Vol, veh/h	0	324	121	0	109	214	0	96	106
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	352	132	0	118	233	0	104	115
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	106	324	121	109	214
LT Vol	96	0	0	0	109	0
Through Vol	0	0	324	0	0	214
RT Vol	0	106	0	121	0	0
Lane Flow Rate	104	115	352	132	118	233
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.206	0.188	0.557	0.182	0.208	0.376
Departure Headway (Hd)	7.09	5.874	5.697	4.989	6.323	5.816
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	507	611	634	719	569	619
Service Time	4.824	3.608	3.426	2.718	4.055	3.548
HCM Lane V/C Ratio	0.205	0.188	0.555	0.184	0.207	0.376
HCM Control Delay	11.7	10	15.4	8.8	10.7	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.3
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	3	3	0	21	3	0	3	9
Future Vol, veh/h	0	3	3	0	21	3	0	3	9
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	3	3	0	23	3	0	3	10
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.6	7.3	7
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	3	3	21	3	3	9
LT Vol	3	0	0	0	3	0
Through Vol	0	3	21	0	0	0
RT Vol	0	0	0	3	0	9
Lane Flow Rate	3	3	23	3	3	10
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.005	0.004	0.029	0.003	0.005	0.011
Departure Headway (Hd)	5.07	4.57	4.561	3.861	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	708	786	788	930	704	920
Service Time	2.783	2.283	2.27	1.57	2.812	1.612
HCM Lane V/C Ratio	0.004	0.004	0.029	0.003	0.004	0.011
HCM Control Delay	7.8	7.3	7.4	6.6	7.8	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	116	299	550	34	31	160
Future Vol, veh/h	116	299	550	34	31	160
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	126	325	598	37	34	174

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	598	0	-	0	1013	299
Stage 1	-	-	-	-	598	-
Stage 2	-	-	-	-	415	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	975	-	-	-	235	697
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	975	-	-	-	205	697
Mov Cap-2 Maneuver	-	-	-	-	205	-
Stage 1	-	-	-	-	512	-
Stage 2	-	-	-	-	553	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	17.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	975	-	-	-	502
HCM Lane V/C Ratio	0.129	-	-	-	0.414
HCM Control Delay (s)	9.2	-	-	-	17.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.4	-	-	-	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	121	45	1500	43	198	862
Future Volume (veh/h)	121	45	1500	43	198	862
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	132	49	1630	47	215	937
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	677	312	1701	761	395	1701
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	570	3250
Grp Volume(v), veh/h	132	49	1630	47	215	937
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	285	1583
Q Serve(g_s), s	1.4	1.1	19.2	0.6	1.8	7.6
Cycle Q Clear(g_c), s	1.4	1.1	19.2	0.6	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	677	312	1701	761	395	1701
V/C Ratio(X)	0.19	0.16	0.96	0.06	0.54	0.55
Avail Cap(c_a), veh/h	1536	707	1701	761	395	1701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.6	4.3	19.4	5.9
Incr Delay (d2), s/veh	0.1	0.2	13.3	0.0	1.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	11.3	0.2	1.2	3.3
LnGrp Delay(d),s/veh	12.6	12.6	21.9	4.4	21.0	6.3
LnGrp LOS	B	B	C	A	C	A
Approach Vol, veh/h	181		1677			1152
Approach Delay, s/veh	12.6		21.5			9.1
Approach LOS	B		C			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		21.2				23.0		3.4
Green Ext Time (p_c), s		0.0				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	502	0	363	0	2527	350	0	1618	510
Future Volume (veh/h)	0	0	0	502	0	363	0	2527	350	0	1618	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				546	0	395	0	2747	0	0	1759	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				788	0	363	0	2809	875	0	2809	875
Arrive On Green				0.26	0.00	0.26	0.00	0.62	0.00	0.00	0.62	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				546	0	395	0	2747	0	0	1759	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				12.0	0.0	19.2	0.0	43.7	0.0	0.0	18.1	0.0
Cycle Q Clear(g_c), s				12.0	0.0	19.2	0.0	43.7	0.0	0.0	18.1	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				788	0	363	0	2809	875	0	2809	875
V/C Ratio(X)				0.69	0.00	1.09	0.00	0.98	0.00	0.00	0.63	0.00
Avail Cap(c_a), veh/h				788	0	363	0	2809	875	0	2809	875
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.16	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				25.2	0.0	27.9	0.0	13.9	0.0	0.0	9.0	0.0
Incr Delay (d2), s/veh				5.0	0.0	73.3	0.0	3.3	0.0	0.0	1.1	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				5.6	0.0	14.8	0.0	18.7	0.0	0.0	7.8	0.0
LnGrp Delay(d),s/veh				30.2	0.0	101.2	0.0	17.2	0.0	0.0	10.0	0.0
LnGrp LOS				C		F		B			B	
Approach Vol, veh/h					941			2747			1759	
Approach Delay, s/veh					60.0			17.2			10.0	
Approach LOS					E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		23.2		51.8				51.8
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.2		46.3				46.3
Max Q Clear Time (g_c+I1), s		21.2		45.7				20.1
Green Ext Time (p_c), s		0.0		0.6				25.6

Intersection Summary	
HCM 2010 Ctrl Delay	22.3
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1008	0	661	0	0	0	0	1898	838	0	1711	404
Future Volume (veh/h)	1008	0	661	0	0	0	0	1898	838	0	1711	404
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1319	0	479				0	2063	0	0	1860	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1649	0	736				0	2123	661	0	2123	661
Arrive On Green	0.52	0.00	0.52				0.00	0.47	0.00	0.00	0.47	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1319	0	479				0	2063	0	0	1860	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	25.6	0.0	18.4				0.0	33.2	0.0	0.0	27.7	0.0
Cycle Q Clear(g_c), s	25.6	0.0	18.4				0.0	33.2	0.0	0.0	27.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1649	0	736				0	2123	661	0	2123	661
V/C Ratio(X)	0.80	0.00	0.65				0.00	0.97	0.00	0.00	0.88	0.00
Avail Cap(c_a), veh/h	1649	0	736				0	2123	661	0	2123	661
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.72	0.00
Uniform Delay (d), s/veh	14.8	0.0	13.1				0.0	19.5	0.0	0.0	18.0	0.0
Incr Delay (d2), s/veh	4.2	0.0	4.4				0.0	13.5	0.0	0.0	4.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	8.1				0.0	16.4	0.0	0.0	12.2	0.0
LnGrp Delay(d),s/veh	19.0	0.0	17.5				0.0	33.0	0.0	0.0	22.1	0.0
LnGrp LOS	B		B					C			C	
Approach Vol, veh/h		1798						2063			1860	
Approach Delay, s/veh		18.6						33.0			22.1	
Approach LOS		B						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				40.5		43.0		40.5
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 35		32.0		33.5
Max Q Clear Time (g_c+I1), s				35.2		27.6		29.7
Green Ext Time (p_c), s				0.0		2.9		3.8

Intersection Summary	
HCM 2010 Ctrl Delay	24.9
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1158	0	357	0	2393	150	0	1882	480
Future Volume (veh/h)	0	0	0	1158	0	357	0	2393	150	0	1882	480
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1259	0	388	0	2601	0	0	2046	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1180	0	543	0	2446	761	0	2446	761
Arrive On Green				0.38	0.00	0.38	0.00	0.54	0.00	0.00	0.54	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1259	0	388	0	2601	0	0	2046	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				46.0	0.0	27.9	0.0	64.5	0.0	0.0	45.3	0.0
Cycle Q Clear(g_c), s				46.0	0.0	27.9	0.0	64.5	0.0	0.0	45.3	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1180	0	543	0	2446	761	0	2446	761
V/C Ratio(X)				1.07	0.00	0.71	0.00	1.06	0.00	0.00	0.84	0.00
Avail Cap(c_a), veh/h				1180	0	543	0	2446	761	0	2446	761
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.56	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				37.0	0.0	31.4	0.0	27.8	0.0	0.0	23.3	0.0
Incr Delay (d2), s/veh				45.9	0.0	4.4	0.0	34.4	0.0	0.0	3.6	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				27.0	0.0	11.6	0.0	34.5	0.0	0.0	19.8	0.0
LnGrp Delay(d),s/veh				82.9	0.0	35.9	0.0	62.1	0.0	0.0	26.9	0.0
LnGrp LOS				F		D		F			C	
Approach Vol, veh/h					1647			2601			2046	
Approach Delay, s/veh					71.8			62.1			26.9	
Approach LOS					E			E			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		70.0		50.0		70.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		64.5		46.0		64.5		
Max Q Clear Time (g_c+I1), s		47.3		48.0		66.5		
Green Ext Time (p_c), s		16.9		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	53.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	497	0	114	0	0	0	0	2083	1310	0	2666	350
Future Volume (veh/h)	497	0	114	0	0	0	0	2083	1310	0	2666	350
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	540	0	124				0	2264	0	0	2898	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	625	0	288				0	3086	961	0	3086	961
Arrive On Green	0.20	0.00	0.20				0.00	0.68	0.00	0.00	0.68	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	540	0	124				0	2264	0	0	2898	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.6	0.0	6.1				0.0	25.5	0.0	0.0	45.2	0.0
Cycle Q Clear(g_c), s	13.6	0.0	6.1				0.0	25.5	0.0	0.0	45.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	625	0	288				0	3086	961	0	3086	961
V/C Ratio(X)	0.86	0.00	0.43				0.00	0.73	0.00	0.00	0.94	0.00
Avail Cap(c_a), veh/h	693	0	319				0	3086	961	0	3086	961
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.26	0.00
Uniform Delay (d), s/veh	30.8	0.0	27.8				0.0	8.2	0.0	0.0	11.4	0.0
Incr Delay (d2), s/veh	10.2	0.0	1.0				0.0	1.6	0.0	0.0	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.7	0.0	2.5				0.0	10.9	0.0	0.0	19.1	0.0
LnGrp Delay(d),s/veh	41.1	0.0	28.9				0.0	9.8	0.0	0.0	13.6	0.0
LnGrp LOS	D		C					A			B	
Approach Vol, veh/h		664						2264			2898	
Approach Delay, s/veh		38.8						9.8			13.6	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		59.8				59.8		20.2
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		52.5				52.5		18.0
Max Q Clear Time (g_c+I1), s		47.2				27.5		15.6
Green Ext Time (p_c), s		5.3				24.8		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	24.4
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	35	360	17	0	29	440	41	0	18	6	35	0	34	16	31
Future Vol, veh/h	0	35	360	17	0	29	440	41	0	18	6	35	0	34	16	31
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	391	18	0	32	478	45	0	20	7	38	0	37	17	34
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	21.8	30.2	10.9	11.3
HCM LOS	C	D	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	75%	0%	100%	0%	0%	100%	0%	0%	68%	0%
Vol Thru, %	25%	0%	0%	100%	0%	0%	100%	0%	32%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	24	35	35	360	17	29	440	41	50	31
LT Vol	18	0	35	0	0	29	0	0	34	0
Through Vol	6	0	0	360	0	0	440	0	16	0
RT Vol	0	35	0	0	17	0	0	41	0	31
Lane Flow Rate	26	38	38	391	18	32	478	45	54	34
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.06	0.076	0.074	0.706	0.03	0.06	0.836	0.069	0.123	0.066
Departure Headway (Hd)	8.248	7.163	7	6.495	5.789	6.796	6.292	5.586	8.12	7.071
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	437	503	509	552	613	524	574	636	444	509
Service Time	5.953	4.868	4.785	4.28	3.573	4.577	4.072	3.366	5.823	4.775
HCM Lane V/C Ratio	0.059	0.076	0.075	0.708	0.029	0.061	0.833	0.071	0.122	0.067
HCM Control Delay	11.5	10.5	10.4	23.5	8.8	10	33.5	8.8	12	10.3
HCM Lane LOS	B	B	B	C	A	A	D	A	B	B
HCM 95th-tile Q	0.2	0.2	0.2	5.6	0.1	0.2	8.7	0.2	0.4	0.2

Intersection	
Int Delay, s/veh	15.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	233	6	10	487	504	190
Future Vol, veh/h	233	6	10	487	504	190
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	253	7	11	529	548	207

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	937	377	754	0	-	0
Stage 1	651	-	-	-	-	-
Stage 2	286	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	263	621	852	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	737	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	260	621	852	-	-	-
Mov Cap-2 Maneuver	260	-	-	-	-	-
Stage 1	481	-	-	-	-	-
Stage 2	727	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	92.8	0.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	852	-	264	-	-
HCM Lane V/C Ratio	0.013	-	0.984	-	-
HCM Control Delay (s)	9.3	-	92.8	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	9.6	-	-

Intersection	
Intersection Delay, s/veh	15.6
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	126	130	13	0	19	80	202	0	7	25	8
Future Vol, veh/h	0	126	130	13	0	19	80	202	0	7	25	8
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	137	141	14	0	21	87	220	0	8	27	9
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	13.5	13.3	11.3
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	22%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	78%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	32	8	126	130	13	19	80	202	306	59	186
LT Vol	7	0	126	0	0	19	0	0	306	0	0
Through Vol	25	0	0	130	0	0	80	0	0	59	0
RT Vol	0	8	0	0	13	0	0	202	0	0	186
Lane Flow Rate	35	9	137	141	14	21	87	220	333	64	202
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.018	0.303	0.293	0.027	0.046	0.18	0.411	0.665	0.119	0.337
Departure Headway (Hd)	8.129	7.32	7.972	7.466	6.756	7.95	7.443	6.734	7.316	6.815	6.114
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	442	490	452	483	531	452	483	536	496	529	592
Service Time	5.858	5.049	5.692	5.185	4.476	5.667	5.16	4.451	5.016	4.515	3.814
HCM Lane V/C Ratio	0.079	0.018	0.303	0.292	0.026	0.046	0.18	0.41	0.671	0.121	0.341
HCM Control Delay	11.6	10.2	14.1	13.3	9.7	11.1	11.8	14.1	23.4	10.4	11.9
HCM Lane LOS	B	B	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.3	0.1	1.3	1.2	0.1	0.1	0.6	2	4.8	0.4	1.5

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	306	59	186
Future Vol, veh/h	0	306	59	186
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	333	64	202
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	18.1
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	142	70	0	110	184	0	96	178
Future Vol, veh/h	0	142	70	0	110	184	0	96	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	154	76	0	120	200	0	104	193
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.7	10.7	10.2
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	178	142	70	110	184
LT Vol	96	0	0	0	110	0
Through Vol	0	0	142	0	0	184
RT Vol	0	178	0	70	0	0
Lane Flow Rate	104	193	154	76	120	200
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.185	0.278	0.249	0.108	0.202	0.31
Departure Headway (Hd)	6.491	5.282	5.803	5.094	6.182	5.676
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	556	685	622	708	585	638
Service Time	4.191	2.982	3.503	2.794	3.882	3.376
HCM Lane V/C Ratio	0.187	0.282	0.248	0.107	0.205	0.313
HCM Control Delay	10.7	10	10.4	8.4	10.4	10.9
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.7	1.1	1	0.4	0.7	1.3

Intersection	
Intersection Delay, s/veh	7.2
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	1	10	0	1	1	0	1	1
Future Vol, veh/h	0	1	10	0	1	1	0	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	1	11	0	1	1	0	1	1
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.3	7	7.2
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	1	10	1	1	1	1
LT Vol	1	0	0	0	1	0
Through Vol	0	10	1	0	0	0
RT Vol	0	0	0	1	0	1
Lane Flow Rate	1	11	1	1	1	1
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.002	0.014	0.001	0.001	0.002	0.001
Departure Headway (Hd)	5.039	4.539	4.544	3.844	5.059	3.859
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	714	793	792	936	710	931
Service Time	2.741	2.241	2.248	1.548	2.768	1.568
HCM Lane V/C Ratio	0.001	0.014	0.001	0.001	0.001	0.001
HCM Control Delay	7.8	7.3	7.3	6.6	7.8	6.6
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0	0	0	0

Intersection	
Int Delay, s/veh	4.1

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	167	433	252	23	37	178
Future Vol, veh/h	167	433	252	23	37	178
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	182	471	274	25	40	193

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	274	0	-	0	872	137
Stage 1	-	-	-	-	274	-
Stage 2	-	-	-	-	598	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1286	-	-	-	290	886
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	512	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1286	-	-	-	249	886
Mov Cap-2 Maneuver	-	-	-	-	249	-
Stage 1	-	-	-	-	747	-
Stage 2	-	-	-	-	440	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	14.4
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1286	-	-	-	615
HCM Lane V/C Ratio	0.141	-	-	-	0.38
HCM Control Delay (s)	8.3	-	-	-	14.4
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.8

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	386	55	935	117	433	1014
Future Volume (veh/h)	386	55	935	117	433	1014
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	420	60	1016	127	471	1102
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	758	349	1644	735	634	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	951	3250
Grp Volume(v), veh/h	420	60	1016	127	471	1102
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	475	1583
Q Serve(g_s), s	4.8	1.3	9.2	1.9	11.8	10.4
Cycle Q Clear(g_c), s	4.8	1.3	9.2	1.9	21.0	10.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	758	349	1644	735	634	1644
V/C Ratio(X)	0.55	0.17	0.62	0.17	0.74	0.67
Avail Cap(c_a), veh/h	1484	683	1644	735	634	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	12.0	6.9	5.1	16.7	7.2
Incr Delay (d2), s/veh	0.6	0.2	0.7	0.1	4.7	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.5	4.1	0.8	3.0	4.7
LnGrp Delay(d),s/veh	13.9	12.2	7.6	5.2	21.5	8.2
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	480		1143			1573
Approach Delay, s/veh	13.7		7.3			12.2
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		11.2				23.0		6.8
Green Ext Time (p_c), s		9.0				0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.7
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	990	0	299	0	1261	790	0	1610	1060
Future Volume (veh/h)	0	0	0	990	0	299	0	1261	790	0	1610	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1076	0	325	0	1371	0	0	1750	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1232	0	567	0	1944	605	0	1944	605
Arrive On Green				0.40	0.00	0.40	0.00	0.43	0.00	0.00	0.43	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1076	0	325	0	1371	0	0	1750	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				17.7	0.0	9.8	0.0	13.6	0.0	0.0	19.7	0.0
Cycle Q Clear(g_c), s				17.7	0.0	9.8	0.0	13.6	0.0	0.0	19.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	567	0	1944	605	0	1944	605
V/C Ratio(X)				0.87	0.00	0.57	0.00	0.71	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h				1232	0	567	0	1944	605	0	1944	605
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.2	0.0	12.8	0.0	12.9	0.0	0.0	14.7	0.0
Incr Delay (d2), s/veh				8.8	0.0	4.2	0.0	1.7	0.0	0.0	7.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.0	0.0	4.4	0.0	5.9	0.0	0.0	9.4	0.0
LnGrp Delay(d),s/veh				24.0	0.0	17.0	0.0	14.6	0.0	0.0	21.9	0.0
LnGrp LOS				C		B		B			C	
Approach Vol, veh/h					1401			1371			1750	
Approach Delay, s/veh					22.4			14.6			21.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		26.0		29.0				29.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		22.0		23.5				23.5
Max Q Clear Time (g_c+I1), s		19.7		15.6				21.7
Green Ext Time (p_c), s		1.3		7.4				1.8

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	507	0	316	0	0	0	0	1404	503	0	2168	412
Future Volume (veh/h)	507	0	316	0	0	0	0	1404	503	0	2168	412
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	658	0	229				0	1526	0	0	2357	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	873	0	389				0	2634	820	0	2634	820
Arrive On Green	0.27	0.00	0.27				0.00	0.58	0.00	0.00	0.58	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	658	0	229				0	1526	0	0	2357	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.3	0.0	9.1				0.0	13.8	0.0	0.0	29.4	0.0
Cycle Q Clear(g_c), s	12.3	0.0	9.1				0.0	13.8	0.0	0.0	29.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	873	0	389				0	2634	820	0	2634	820
V/C Ratio(X)	0.75	0.00	0.59				0.00	0.58	0.00	0.00	0.89	0.00
Avail Cap(c_a), veh/h	879	0	392				0	2730	850	0	2634	820
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.34	0.00
Uniform Delay (d), s/veh	21.6	0.0	20.4				0.0	8.7	0.0	0.0	12.0	0.0
Incr Delay (d2), s/veh	6.0	0.0	6.4				0.0	0.3	0.0	0.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	4.3				0.0	5.7	0.0	0.0	12.5	0.0
LnGrp Delay(d),s/veh	27.6	0.0	26.8				0.0	9.0	0.0	0.0	13.8	0.0
LnGrp LOS	C		C					A			B	
Approach Vol, veh/h		887						1526			2357	
Approach Delay, s/veh		27.4						9.0			13.8	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				43.1		21.9		43.1
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 39		18.0		37.5
Max Q Clear Time (g_c+I1), s				15.8		14.3		31.4
Green Ext Time (p_c), s				21.8		1.3		6.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1331	0	156	0	1494	400	0	2059	1440
Future Volume (veh/h)	0	0	0	1331	0	156	0	1494	400	0	2059	1440
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1447	0	170	0	1624	0	0	2238	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1201	0	552	0	2343	730	0	2343	730
Arrive On Green				0.39	0.00	0.39	0.00	0.51	0.00	0.00	0.51	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1447	0	170	0	1624	0	0	2238	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				39.0	0.0	8.3	0.0	26.9	0.0	0.0	46.9	0.0
Cycle Q Clear(g_c), s				39.0	0.0	8.3	0.0	26.9	0.0	0.0	46.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1201	0	553	0	2343	730	0	2343	730
V/C Ratio(X)				1.20	0.00	0.31	0.00	0.69	0.00	0.00	0.96	0.00
Avail Cap(c_a), veh/h				1201	0	553	0	2343	730	0	2343	730
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				30.5	0.0	21.1	0.0	18.3	0.0	0.0	23.1	0.0
Incr Delay (d2), s/veh				100.3	0.0	0.3	0.0	1.4	0.0	0.0	10.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				33.2	0.0	3.3	0.0	11.4	0.0	0.0	21.8	0.0
LnGrp Delay(d),s/veh				130.8	0.0	21.5	0.0	19.7	0.0	0.0	33.8	0.0
LnGrp LOS				F		C		B			C	
Approach Vol, veh/h					1617			1624			2238	
Approach Delay, s/veh					119.3			19.7			33.8	
Approach LOS					F			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		57.0		43.0		57.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		51.5		39.0		51.5		
Max Q Clear Time (g_c+I1), s		48.9		41.0		28.9		
Green Ext Time (p_c), s		2.5		0.0		21.4		

Intersection Summary	
HCM 2010 Ctrl Delay	54.9
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	433	0	139	0	0	0	0	1427	1080	0	2921	430
Future Volume (veh/h)	433	0	139	0	0	0	0	1427	1080	0	2921	430
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	471	0	151				0	1551	0	0	3175	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	548	0	252				0	3259	1015	0	3259	1015
Arrive On Green	0.18	0.00	0.18				0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	471	0	151				0	1551	0	0	3175	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.4	0.0	8.8				0.0	13.2	0.0	0.0	58.9	0.0
Cycle Q Clear(g_c), s	13.4	0.0	8.8				0.0	13.2	0.0	0.0	58.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	548	0	252				0	3259	1015	0	3259	1015
V/C Ratio(X)	0.86	0.00	0.60				0.00	0.48	0.00	0.00	0.97	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3259	1015	0	3259	1015
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	35.9	0.0	34.0				0.0	5.5	0.0	0.0	12.0	0.0
Incr Delay (d2), s/veh	10.8	0.0	2.8				0.0	0.5	0.0	0.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	3.6				0.0	5.6	0.0	0.0	24.6	0.0
LnGrp Delay(d),s/veh	46.7	0.0	36.8				0.0	6.0	0.0	0.0	13.6	0.0
LnGrp LOS	D		D					A			B	
Approach Vol, veh/h		622						1551			3175	
Approach Delay, s/veh		44.3						6.0			13.6	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		70.0				70.0		20.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		60.9				15.2		15.4
Green Ext Time (p_c), s		1.5				46.3		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	43
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	153	265	50	0	136	233	22	0	14	186	102	0	224	284	163
Future Vol, veh/h	0	153	265	50	0	136	233	22	0	14	186	102	0	224	284	163
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	166	288	54	0	148	253	24	0	15	202	111	0	243	309	177
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	32.8	29.5	25.6	65.8
HCM LOS	D	D	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	44%	0%
Vol Thru, %	93%	0%	0%	100%	0%	0%	100%	0%	56%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	102	153	265	50	136	233	22	508	163
LT Vol	14	0	153	0	0	136	0	0	224	0
Through Vol	186	0	0	265	0	0	233	0	284	0
RT Vol	0	102	0	0	50	0	0	22	0	163
Lane Flow Rate	217	111	166	288	54	148	253	24	552	177
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.637	0.303	0.482	0.795	0.139	0.442	0.722	0.064	1	0.455
Departure Headway (Hd)	10.548	9.824	10.564	10.068	9.373	10.766	10.27	9.575	10.179	9.236
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	343	367	343	363	385	336	355	375	359	392
Service Time	8.27	7.546	8.264	7.768	7.073	8.487	7.991	7.296	7.909	6.966
HCM Lane V/C Ratio	0.633	0.302	0.484	0.793	0.14	0.44	0.713	0.064	1.538	0.452
HCM Control Delay	30.1	16.8	22.7	42.3	13.6	21.8	35.6	13	80.7	19.5
HCM Lane LOS	D	C	C	E	B	C	E	B	F	C
HCM 95th-tile Q	4.2	1.3	2.5	6.7	0.5	2.2	5.4	0.2	11.5	2.3

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	133	6	3	733	497	238
Future Vol, veh/h	133	6	3	733	497	238
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	145	7	3	797	540	259

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1075	399	799	0	-	0
Stage 1	670	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	214	601	819	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	601	819	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	470	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	51.5	0	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	819	-	219	-	-
HCM Lane V/C Ratio	0.004	-	0.69	-	-
HCM Control Delay (s)	9.4	-	51.5	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	4.4	-	-

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
Future Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	214	93	9	0	10	241	412	0	18	74	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	20.2	31.2	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	34	197	86	8	9	222	379	182	23	264
LT Vol	17	0	197	0	0	9	0	0	182	0	0
Through Vol	68	0	0	86	0	0	222	0	0	23	0
RT Vol	0	34	0	0	8	0	0	379	0	0	264
Lane Flow Rate	92	37	214	93	9	10	241	412	198	25	287
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.242	0.088	0.556	0.23	0.02	0.023	0.54	0.84	0.485	0.058	0.607
Departure Headway (Hd)	9.412	8.612	9.355	8.843	8.127	8.672	8.162	7.449	8.949	8.443	7.735
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	418	388	409	443	415	444	490	406	427	471
Service Time	7.125	6.325	7.062	6.551	5.835	6.372	5.862	5.149	6.649	6.143	5.435
HCM Lane V/C Ratio	0.24	0.089	0.552	0.227	0.02	0.024	0.543	0.841	0.488	0.059	0.609
HCM Control Delay	15.1	12.2	23.2	14.2	11	11.6	20	38.3	19.8	11.7	21.7
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.3	0.9	0.1	0.1	3.1	8.4	2.6	0.2	4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	182	23	264
Future Vol, veh/h	0	182	23	264
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	198	25	287
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.5
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	323	126	0	114	213	0	97	107
Future Vol, veh/h	0	323	126	0	114	213	0	97	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	351	137	0	124	232	0	105	116
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	107	323	126	114	213
LT Vol	97	0	0	0	114	0
Through Vol	0	0	323	0	0	213
RT Vol	0	107	0	126	0	0
Lane Flow Rate	105	116	351	137	124	232
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.208	0.19	0.557	0.191	0.218	0.375
Departure Headway (Hd)	7.108	5.892	5.716	5.008	6.341	5.835
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	505	609	632	718	568	618
Service Time	4.844	3.627	3.441	2.733	4.07	3.564
HCM Lane V/C Ratio	0.208	0.19	0.555	0.191	0.218	0.375
HCM Control Delay	11.7	10	15.4	8.9	10.8	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	6	4	0	16	4	0	6	24
Future Vol, veh/h	0	6	4	0	16	4	0	6	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	4	0	17	4	0	7	26
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.2	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	4	16	4	6	24
LT Vol	6	0	0	0	6	0
Through Vol	0	4	16	0	0	0
RT Vol	0	0	0	4	0	24
Lane Flow Rate	7	4	17	4	7	26
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.009	0.006	0.022	0.005	0.009	0.028
Departure Headway (Hd)	5.102	4.601	4.596	3.896	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	703	779	780	920	704	920
Service Time	2.822	2.322	2.315	1.614	2.814	1.613
HCM Lane V/C Ratio	0.01	0.005	0.022	0.004	0.01	0.028
HCM Control Delay	7.9	7.3	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0.1

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	94	308	510	39	29	92
Future Vol, veh/h	94	308	510	39	29	92
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	335	554	42	32	100

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	554	0	-	0	926	277
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	372	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1012	-	-	-	268	720
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	667	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1012	-	-	-	241	720
Mov Cap-2 Maneuver	-	-	-	-	241	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	600	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1012	-	-	-	488
HCM Lane V/C Ratio	0.101	-	-	-	0.27
HCM Control Delay (s)	9	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.3	-	-	-	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	122	45	1450	49	232	861
Future Volume (veh/h)	122	45	1450	49	232	861
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	133	49	1576	53	252	936
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	312	1700	761	415	1700
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	597	3250
Grp Volume(v), veh/h	133	49	1576	53	252	936
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	298	1583
Q Serve(g_s), s	1.4	1.1	17.9	0.7	3.1	7.6
Cycle Q Clear(g_c), s	1.4	1.1	17.9	0.7	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	678	312	1700	761	415	1700
V/C Ratio(X)	0.20	0.16	0.93	0.07	0.61	0.55
Avail Cap(c_a), veh/h	1535	706	1700	761	415	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.4	4.4	19.3	6.0
Incr Delay (d2), s/veh	0.1	0.2	9.3	0.0	2.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	9.9	0.3	1.5	3.3
LnGrp Delay(d),s/veh	12.6	12.5	17.6	4.4	21.8	6.3
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	182		1629			1188
Approach Delay, s/veh	12.6		17.2			9.6
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		19.9				23.0		3.4
Green Ext Time (p_c), s		1.0				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	815	0	592	0	2438	320	0	1455	510
Future Volume (veh/h)	0	0	0	815	0	592	0	2438	320	0	1455	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				886	0	643	0	2650	0	0	1582	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1042	0	479	0	2678	834	0	2678	834
Arrive On Green				0.34	0.00	0.34	0.00	0.59	0.00	0.00	0.59	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				886	0	643	0	2650	0	0	1582	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				34.7	0.0	44.0	0.0	74.6	0.0	0.0	28.5	0.0
Cycle Q Clear(g_c), s				34.7	0.0	44.0	0.0	74.6	0.0	0.0	28.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1042	0	479	0	2678	834	0	2678	834
V/C Ratio(X)				0.85	0.00	1.34	0.00	0.99	0.00	0.00	0.59	0.00
Avail Cap(c_a), veh/h				1042	0	479	0	2678	834	0	2678	834
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.37	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				39.9	0.0	43.0	0.0	26.4	0.0	0.0	16.9	0.0
Incr Delay (d2), s/veh				8.7	0.0	167.0	0.0	8.4	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				16.0	0.0	39.4	0.0	33.0	0.0	0.0	12.1	0.0
LnGrp Delay(d),s/veh				48.6	0.0	210.0	0.0	34.8	0.0	0.0	17.8	0.0
LnGrp LOS				D		F		C			B	
Approach Vol, veh/h					1529			2650			1582	
Approach Delay, s/veh					116.5			34.8			17.8	
Approach LOS					F			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		48.0		82.0				82.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		44.0		76.5				76.5
Max Q Clear Time (g_c+I1), s		46.0		76.6				30.5
Green Ext Time (p_c), s		0.0		0.0				43.5

Intersection Summary	
HCM 2010 Ctrl Delay	51.8
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1196	0	480	0	0	0	0	1581	1046	0	1794	402
Future Volume (veh/h)	1196	0	480	0	0	0	0	1581	1046	0	1794	402
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1462	0	348				0	1718	0	0	1950	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1649	0	736				0	2026	631	0	2026	631
Arrive On Green	0.52	0.00	0.52				0.00	0.45	0.00	0.00	0.45	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1462	0	348				0	1718	0	0	1950	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	36.9	0.0	14.1				0.0	30.3	0.0	0.0	37.4	0.0
Cycle Q Clear(g_c), s	36.9	0.0	14.1				0.0	30.3	0.0	0.0	37.4	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1649	0	736				0	2026	631	0	2026	631
V/C Ratio(X)	0.89	0.00	0.47				0.00	0.85	0.00	0.00	0.96	0.00
Avail Cap(c_a), veh/h	1649	0	736				0	2073	645	0	2026	631
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.67	0.00
Uniform Delay (d), s/veh	19.3	0.0	13.8				0.0	22.3	0.0	0.0	24.2	0.0
Incr Delay (d2), s/veh	7.4	0.0	2.2				0.0	3.5	0.0	0.0	9.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	6.0				0.0	13.2	0.0	0.0	17.4	0.0
LnGrp Delay(d),s/veh	26.7	0.0	15.9				0.0	25.7	0.0	0.0	34.0	0.0
LnGrp LOS	C		B					C			C	
Approach Vol, veh/h		1810						1718			1950	
Approach Delay, s/veh		24.6						25.7			34.0	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				45.6		50.8		45.6
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 41		41.0		39.5
Max Q Clear Time (g_c+I1), s				32.3		38.9		39.4
Green Ext Time (p_c), s				7.8		1.5		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	28.3
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1097	0	298	0	2226	240	0	1758	571
Future Volume (veh/h)	0	0	0	1097	0	298	0	2226	240	0	1758	571
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1192	0	324	0	2420	0	0	1911	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1170	0	538	0	2389	744	0	2389	744
Arrive On Green				0.38	0.00	0.38	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1192	0	324	0	2420	0	0	1911	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				38.0	0.0	18.4	0.0	52.5	0.0	0.0	34.4	0.0
Cycle Q Clear(g_c), s				38.0	0.0	18.4	0.0	52.5	0.0	0.0	34.4	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1170	0	538	0	2389	744	0	2389	744
V/C Ratio(X)				1.02	0.00	0.60	0.00	1.01	0.00	0.00	0.80	0.00
Avail Cap(c_a), veh/h				1170	0	538	0	2389	744	0	2389	744
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.57	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.0	0.0	24.9	0.0	23.8	0.0	0.0	19.5	0.0
Incr Delay (d2), s/veh				31.1	0.0	1.9	0.0	17.2	0.0	0.0	2.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.1	0.0	7.5	0.0	25.5	0.0	0.0	15.0	0.0
LnGrp Delay(d),s/veh				62.1	0.0	26.8	0.0	41.0	0.0	0.0	22.4	0.0
LnGrp LOS				F		C		F			C	
Approach Vol, veh/h					1516			2420			1911	
Approach Delay, s/veh					54.5			41.0			22.4	
Approach LOS					D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		58.0		42.0		58.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		52.5		38.0		52.5		
Max Q Clear Time (g_c+I1), s		36.4		40.0		54.5		
Green Ext Time (p_c), s		15.8		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	38.4
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	569	0	139	0	0	0	0	1941	1280	0	2441	410
Future Volume (veh/h)	569	0	139	0	0	0	0	1941	1280	0	2441	410
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	618	0	151				0	2110	0	0	2653	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	700	0	322				0	2939	915	0	2939	915
Arrive On Green	0.23	0.00	0.23				0.00	0.65	0.00	0.00	0.65	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	618	0	151				0	2110	0	0	2653	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	14.5	0.0	6.9				0.0	23.0	0.0	0.0	37.1	0.0
Cycle Q Clear(g_c), s	14.5	0.0	6.9				0.0	23.0	0.0	0.0	37.1	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	700	0	322				0	2939	915	0	2939	915
V/C Ratio(X)	0.88	0.00	0.47				0.00	0.72	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h	739	0	340				0	2939	915	0	2939	915
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.34	0.00
Uniform Delay (d), s/veh	28.0	0.0	25.1				0.0	8.8	0.0	0.0	11.3	0.0
Incr Delay (d2), s/veh	11.7	0.0	1.1				0.0	1.5	0.0	0.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	0.0	2.8				0.0	9.8	0.0	0.0	15.7	0.0
LnGrp Delay(d),s/veh	39.7	0.0	26.1				0.0	10.3	0.0	0.0	13.1	0.0
LnGrp LOS	D		C					B			B	
Approach Vol, veh/h		769						2110			2653	
Approach Delay, s/veh		37.1						10.3			13.1	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		53.9				53.9		21.1
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		47.5				47.5		18.0
Max Q Clear Time (g_c+I1), s		39.1				25.0		16.5
Green Ext Time (p_c), s		8.3				22.2		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	31.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	180	213	25	0	35	266	178	0	48	122	74	0	133	159	146
Future Vol, veh/h	0	180	213	25	0	35	266	178	0	48	122	74	0	133	159	146
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	196	232	27	0	38	289	193	0	52	133	80	0	145	173	159
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	26.8	31.3	22.1	40.1
HCM LOS	D	D	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	28%	0%	100%	0%	0%	100%	0%	0%	46%	0%
Vol Thru, %	72%	0%	0%	100%	0%	0%	100%	0%	54%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	74	180	213	25	35	266	178	292	146
LT Vol	48	0	180	0	0	35	0	0	133	0
Through Vol	122	0	0	213	0	0	266	0	159	0
RT Vol	0	74	0	0	25	0	0	178	0	146
Lane Flow Rate	185	80	196	232	27	38	289	193	317	159
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.542	0.217	0.57	0.641	0.07	0.109	0.789	0.488	0.865	0.391
Departure Headway (Hd)	10.568	9.703	10.485	9.961	9.228	10.343	9.819	9.087	9.956	9.008
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	342	371	344	363	389	348	370	399	365	402
Service Time	8.305	7.44	8.217	7.693	6.959	8.073	7.55	6.817	7.656	6.708
HCM Lane V/C Ratio	0.541	0.216	0.57	0.639	0.069	0.109	0.781	0.484	0.868	0.396
HCM Control Delay	25.2	15.1	26.3	28.9	12.7	14.3	40.9	20.2	51.5	17.4
HCM Lane LOS	D	C	D	D	B	B	E	C	F	C
HCM 95th-tile Q	3.1	0.8	3.4	4.2	0.2	0.4	6.6	2.6	8.2	1.8

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive

12/28/2015

Intersection	
Int Delay, s/veh	14.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	236	4	6	504	506	154
Future Vol, veh/h	236	4	6	504	506	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	257	4	7	548	550	167

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	921	359	717	0	-	0
Stage 1	634	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	270	638	880	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	268	638	880	-	-	-
Mov Cap-2 Maneuver	268	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	86.2	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	880	-	271	-	-
HCM Lane V/C Ratio	0.007	-	0.963	-	-
HCM Control Delay (s)	9.1	-	86.2	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	9.3	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive

4/20/2016

Intersection	
Intersection Delay, s/veh	16.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	118	102	10	0	17	58	225	0	5	28	7
Future Vol, veh/h	0	118	102	10	0	17	58	225	0	5	28	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	128	111	11	0	18	63	245	0	5	30	8
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	13	13.6	11.1
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	15%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	85%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	7	118	102	10	17	58	225	331	63	157
LT Vol	5	0	118	0	0	17	0	0	331	0	0
Through Vol	28	0	0	102	0	0	58	0	0	63	0
RT Vol	0	7	0	0	10	0	0	225	0	0	157
Lane Flow Rate	36	8	128	111	11	18	63	245	360	68	171
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.015	0.284	0.23	0.02	0.04	0.127	0.443	0.706	0.125	0.278
Departure Headway (Hd)	7.954	7.178	7.964	7.457	6.748	7.853	7.346	6.637	7.066	6.566	5.865
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	452	501	454	485	534	459	491	545	507	542	608
Service Time	5.666	4.89	5.666	5.159	4.449	5.553	5.046	4.337	4.859	4.358	3.657
HCM Lane V/C Ratio	0.08	0.016	0.282	0.229	0.021	0.039	0.128	0.45	0.71	0.125	0.281
HCM Control Delay	11.3	10	13.8	12.4	9.6	10.9	11.1	14.5	25.3	10.3	10.9
HCM Lane LOS	B	A	B	B	A	B	B	B	D	B	B
HCM 95th-tile Q	0.3	0	1.2	0.9	0.1	0.1	0.4	2.3	5.5	0.4	1.1

Intersection				
Intersection Delay, s/veh				
Intersection LOS				

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	331	63	157
Future Vol, veh/h	0	331	63	157
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	360	68	171
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19.5
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	146	74	0	116	184	0	96	184
Future Vol, veh/h	0	146	74	0	116	184	0	96	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	159	80	0	126	200	0	104	200
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.9	10.8	10.4
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	96	184	146	74	116	184
LT Vol	96	0	0	0	116	0
Through Vol	0	0	146	0	0	184
RT Vol	0	184	0	74	0	0
Lane Flow Rate	104	200	159	80	126	200
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.186	0.29	0.257	0.115	0.218	0.317
Departure Headway (Hd)	6.545	5.335	5.839	5.13	6.213	5.708
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	552	678	617	702	581	634
Service Time	4.245	3.035	3.547	2.838	3.919	3.413
HCM Lane V/C Ratio	0.188	0.295	0.258	0.114	0.217	0.315
HCM Control Delay	10.7	10.2	10.6	8.5	10.6	11
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.7	1.2	1	0.4	0.8	1.4

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	18	18	0	10	2	0	2	10
Future Vol, veh/h	0	18	18	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	20	20	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.3	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	18	10	2	2	10
LT Vol	18	0	0	0	2	0
Through Vol	0	18	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	20	20	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.028	0.025	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.576	3.876	5.121	3.921
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	788	784	925	697	908
Service Time	2.772	2.272	2.292	1.592	2.864	1.664
HCM Lane V/C Ratio	0.028	0.025	0.014	0.002	0.003	0.012
HCM Control Delay	7.9	7.4	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0	0

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	152	388	202	28	32	108
Future Vol, veh/h	152	388	202	28	32	108
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	165	422	220	30	35	117

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	220	0	-	0	761	110
Stage 1	-	-	-	-	220	-
Stage 2	-	-	-	-	541	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1346	-	-	-	342	922
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	548	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1346	-	-	-	300	922
Mov Cap-2 Maneuver	-	-	-	-	300	-
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	481	-

Approach	EB	WB	SB
HCM Control Delay, s	2.3	0	12.6
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1346	-	-	-	626
HCM Lane V/C Ratio	0.123	-	-	-	0.243
HCM Control Delay (s)	8	-	-	-	12.6
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	0.9

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	385	55	945	114	416	1015
Future Volume (veh/h)	385	55	945	114	416	1015
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	418	60	1027	124	452	1103
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	758	349	1644	735	628	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	944	3250
Grp Volume(v), veh/h	418	60	1027	124	452	1103
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	472	1583
Q Serve(g_s), s	4.8	1.3	9.3	1.9	11.7	10.4
Cycle Q Clear(g_c), s	4.8	1.3	9.3	1.9	21.0	10.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	758	349	1644	735	628	1644
V/C Ratio(X)	0.55	0.17	0.62	0.17	0.72	0.67
Avail Cap(c_a), veh/h	1484	683	1644	735	628	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	12.0	6.9	5.1	16.7	7.2
Incr Delay (d2), s/veh	0.6	0.2	0.7	0.1	4.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.5	4.2	0.7	2.8	4.7
LnGrp Delay(d),s/veh	13.9	12.2	7.7	5.2	20.7	8.3
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	478		1151			1555
Approach Delay, s/veh	13.7		7.4			11.9
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		11.3				23.0		6.8
Green Ext Time (p_c), s		8.9				0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1000	0	300	0	1260	790	0	1610	1060
Future Volume (veh/h)	0	0	0	1000	0	300	0	1260	790	0	1610	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1087	0	326	0	1370	0	0	1750	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1232	0	567	0	1944	605	0	1944	605
Arrive On Green				0.40	0.00	0.40	0.00	0.43	0.00	0.00	0.43	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1087	0	326	0	1370	0	0	1750	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				18.0	0.0	9.9	0.0	13.6	0.0	0.0	19.7	0.0
Cycle Q Clear(g_c), s				18.0	0.0	9.9	0.0	13.6	0.0	0.0	19.7	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	567	0	1944	605	0	1944	605
V/C Ratio(X)				0.88	0.00	0.58	0.00	0.70	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h				1232	0	567	0	1944	605	0	1944	605
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				15.3	0.0	12.9	0.0	12.9	0.0	0.0	14.7	0.0
Incr Delay (d2), s/veh				9.3	0.0	4.2	0.0	1.7	0.0	0.0	7.2	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.1	0.0	4.5	0.0	5.9	0.0	0.0	9.4	0.0
LnGrp Delay(d),s/veh				24.6	0.0	17.1	0.0	14.6	0.0	0.0	21.9	0.0
LnGrp LOS				C		B		B			C	
Approach Vol, veh/h					1413			1370			1750	
Approach Delay, s/veh					22.9			14.6			21.9	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		26.0		29.0				29.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		22.0		23.5				23.5
Max Q Clear Time (g_c+I1), s		20.0		15.6				21.7
Green Ext Time (p_c), s		1.2		7.4				1.8

Intersection Summary	
HCM 2010 Ctrl Delay	20.0
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	500	0	323	0	0	0	0	1411	503	0	2181	412
Future Volume (veh/h)	500	0	323	0	0	0	0	1411	503	0	2181	412
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	652	0	234				0	1534	0	0	2371	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	872	0	389				0	2636	821	0	2636	821
Arrive On Green	0.27	0.00	0.27				0.00	0.58	0.00	0.00	0.58	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	652	0	234				0	1534	0	0	2371	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.2	0.0	9.3				0.0	13.9	0.0	0.0	29.8	0.0
Cycle Q Clear(g_c), s	12.2	0.0	9.3				0.0	13.9	0.0	0.0	29.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	872	0	389				0	2636	821	0	2636	821
V/C Ratio(X)	0.75	0.00	0.60				0.00	0.58	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h	879	0	392				0	2730	850	0	2636	821
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.33	0.00
Uniform Delay (d), s/veh	21.5	0.0	20.5				0.0	8.7	0.0	0.0	12.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	6.7				0.0	0.3	0.0	0.0	1.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	0.0	4.4				0.0	5.8	0.0	0.0	12.8	0.0
LnGrp Delay(d),s/veh	27.3	0.0	27.2				0.0	9.0	0.0	0.0	14.0	0.0
LnGrp LOS	C		C					A			B	
Approach Vol, veh/h		886						1534			2371	
Approach Delay, s/veh		27.3						9.0			14.0	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				43.2		21.8		43.2
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 39		18.0		37.5
Max Q Clear Time (g_c+I1), s				15.9		14.2		31.8
Green Ext Time (p_c), s				21.7		1.3		5.6

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1355	0	153	0	1489	401	0	2060	1442
Future Volume (veh/h)	0	0	0	1355	0	153	0	1489	401	0	2060	1442
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1473	0	166	0	1618	0	0	2239	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1293	0	595	0	2207	687	0	2207	687
Arrive On Green				0.42	0.00	0.42	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1473	0	166	0	1618	0	0	2239	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				42.0	0.0	7.7	0.0	28.4	0.0	0.0	48.5	0.0
Cycle Q Clear(g_c), s				42.0	0.0	7.7	0.0	28.4	0.0	0.0	48.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1293	0	595	0	2207	687	0	2207	687
V/C Ratio(X)				1.14	0.00	0.28	0.00	0.73	0.00	0.00	1.01	0.00
Avail Cap(c_a), veh/h				1293	0	595	0	2207	687	0	2207	687
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				29.0	0.0	19.1	0.0	20.6	0.0	0.0	25.8	0.0
Incr Delay (d2), s/veh				72.4	0.0	0.3	0.0	1.8	0.0	0.0	22.9	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				30.8	0.0	3.0	0.0	12.2	0.0	0.0	24.9	0.0
LnGrp Delay(d),s/veh				101.4	0.0	19.3	0.0	22.4	0.0	0.0	48.6	0.0
LnGrp LOS				F		B		C			F	
Approach Vol, veh/h					1639			1618			2239	
Approach Delay, s/veh					93.1			22.4			48.6	
Approach LOS					F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		54.0		46.0		54.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		48.5		42.0		48.5		
Max Q Clear Time (g_c+I1), s		50.5		44.0		30.4		
Green Ext Time (p_c), s		0.0		0.0		17.3		

Intersection Summary	
HCM 2010 Ctrl Delay	54.1
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	431	0	141	0	0	0	0	1429	1080	0	2949	430
Future Volume (veh/h)	431	0	141	0	0	0	0	1429	1080	0	2949	430
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	468	0	153				0	1553	0	0	3205	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	546	0	251				0	3263	1016	0	3263	1016
Arrive On Green	0.18	0.00	0.18				0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	468	0	153				0	1553	0	0	3205	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.3	0.0	9.0				0.0	13.2	0.0	0.0	60.7	0.0
Cycle Q Clear(g_c), s	13.3	0.0	9.0				0.0	13.2	0.0	0.0	60.7	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	546	0	251				0	3263	1016	0	3263	1016
V/C Ratio(X)	0.86	0.00	0.61				0.00	0.48	0.00	0.00	0.98	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3263	1016	0	3263	1016
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	35.9	0.0	34.1				0.0	5.5	0.0	0.0	12.2	0.0
Incr Delay (d2), s/veh	10.6	0.0	3.1				0.0	0.5	0.0	0.0	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.5	0.0	3.7				0.0	5.6	0.0	0.0	25.3	0.0
LnGrp Delay(d),s/veh	46.5	0.0	37.2				0.0	6.0	0.0	0.0	14.3	0.0
LnGrp LOS	D		D					A			B	
Approach Vol, veh/h		621						1553			3205	
Approach Delay, s/veh		44.2						6.0			14.3	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		70.0				70.0		20.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		62.7				15.2		15.3
Green Ext Time (p_c), s		0.0				46.3		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.4
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	44
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	156	278	51	0	135	232	22	0	14	183	103	0	229	284	164
Future Vol, veh/h	0	156	278	51	0	135	232	22	0	14	183	103	0	229	284	164
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	170	302	55	0	147	252	24	0	15	199	112	0	249	309	178
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	36	29.8	25.5	66.2
HCM LOS	E	D	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	45%	0%
Vol Thru, %	93%	0%	0%	100%	0%	0%	100%	0%	55%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	197	103	156	278	51	135	232	22	513	164
LT Vol	14	0	156	0	0	135	0	0	229	0
Through Vol	183	0	0	278	0	0	232	0	284	0
RT Vol	0	103	0	0	51	0	0	22	0	164
Lane Flow Rate	214	112	170	302	55	147	252	24	558	178
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.632	0.308	0.492	0.834	0.142	0.442	0.724	0.064	1	0.46
Departure Headway (Hd)	10.621	9.897	10.569	10.073	9.378	10.832	10.336	9.641	10.245	9.299
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	365	343	363	385	335	351	373	357	389
Service Time	8.343	7.619	8.269	7.773	7.078	8.554	8.058	7.363	7.979	7.032
HCM Lane V/C Ratio	0.629	0.307	0.496	0.832	0.143	0.439	0.718	0.064	1.563	0.458
HCM Control Delay	30	17	23.1	47.4	13.6	21.9	36	13	81	19.7
HCM Lane LOS	D	C	C	E	B	C	E	B	F	C
HCM 95th-tile Q	4.1	1.3	2.6	7.5	0.5	2.2	5.4	0.2	11.5	2.3

Intersection	
Int Delay, s/veh	8.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	163	7	4	732	496	318
Future Vol, veh/h	163	7	4	732	496	318
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	177	8	4	796	539	346

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1119	442	885	0	-	0
Stage 1	712	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	201	563	760	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	641	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	563	760	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	447	-	-	-	-	-
Stage 2	638	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	87.6	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	760	-	205	-	-
HCM Lane V/C Ratio	0.006	-	0.901	-	-
HCM Control Delay (s)	9.8	-	87.6	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	7.2	-	-

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
Future Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	214	93	9	0	10	241	412	0	18	74	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	20.2	31.2	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	34	197	86	8	9	222	379	182	23	264
LT Vol	17	0	197	0	0	9	0	0	182	0	0
Through Vol	68	0	0	86	0	0	222	0	0	23	0
RT Vol	0	34	0	0	8	0	0	379	0	0	264
Lane Flow Rate	92	37	214	93	9	10	241	412	198	25	287
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.242	0.088	0.556	0.23	0.02	0.023	0.54	0.84	0.485	0.058	0.607
Departure Headway (Hd)	9.412	8.612	9.355	8.843	8.127	8.672	8.162	7.449	8.949	8.443	7.735
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	418	388	409	443	415	444	490	406	427	471
Service Time	7.125	6.325	7.062	6.551	5.835	6.372	5.862	5.149	6.649	6.143	5.435
HCM Lane V/C Ratio	0.24	0.089	0.552	0.227	0.02	0.024	0.543	0.841	0.488	0.059	0.609
HCM Control Delay	15.1	12.2	23.2	14.2	11	11.6	20	38.3	19.8	11.7	21.7
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.3	0.9	0.1	0.1	3.1	8.4	2.6	0.2	4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	182	23	264
Future Vol, veh/h	0	182	23	264
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	198	25	287
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.5
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	323	126	0	114	213	0	97	107
Future Vol, veh/h	0	323	126	0	114	213	0	97	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	351	137	0	124	232	0	105	116
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	107	323	126	114	213
LT Vol	97	0	0	0	114	0
Through Vol	0	0	323	0	0	213
RT Vol	0	107	0	126	0	0
Lane Flow Rate	105	116	351	137	124	232
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.208	0.19	0.557	0.191	0.218	0.375
Departure Headway (Hd)	7.108	5.892	5.716	5.008	6.341	5.835
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	505	609	632	718	568	618
Service Time	4.844	3.627	3.441	2.733	4.07	3.564
HCM Lane V/C Ratio	0.208	0.19	0.555	0.191	0.218	0.375
HCM Control Delay	11.7	10	15.4	8.9	10.8	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	6	4	0	16	4	0	6	24
Future Vol, veh/h	0	6	4	0	16	4	0	6	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	4	0	17	4	0	7	26
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.2	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	4	16	4	6	24
LT Vol	6	0	0	0	6	0
Through Vol	0	4	16	0	0	0
RT Vol	0	0	0	4	0	24
Lane Flow Rate	7	4	17	4	7	26
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.009	0.006	0.022	0.005	0.009	0.028
Departure Headway (Hd)	5.102	4.601	4.596	3.896	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	703	779	780	920	704	920
Service Time	2.822	2.322	2.315	1.614	2.814	1.613
HCM Lane V/C Ratio	0.01	0.005	0.022	0.004	0.01	0.028
HCM Control Delay	7.9	7.3	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0.1

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	114	307	511	36	23	99
Future Vol, veh/h	114	307	511	36	23	99
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	124	334	555	39	25	108

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	555	0	-	0	970	278
Stage 1	-	-	-	-	555	-
Stage 2	-	-	-	-	415	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1011	-	-	-	251	719
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	635	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1011	-	-	-	220	719
Mov Cap-2 Maneuver	-	-	-	-	220	-
Stage 1	-	-	-	-	539	-
Stage 2	-	-	-	-	557	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	14.7
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1011	-	-	-	504
HCM Lane V/C Ratio	0.123	-	-	-	0.263
HCM Control Delay (s)	9.1	-	-	-	14.7
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	123	45	1450	48	223	860
Future Volume (veh/h)	123	45	1450	48	223	860
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	134	49	1576	52	242	935
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	679	312	1699	760	414	1699
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	598	3250
Grp Volume(v), veh/h	134	49	1576	52	242	935
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	299	1583
Q Serve(g_s), s	1.4	1.1	18.0	0.7	3.0	7.6
Cycle Q Clear(g_c), s	1.4	1.1	18.0	0.7	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	679	312	1699	760	414	1699
V/C Ratio(X)	0.20	0.16	0.93	0.07	0.58	0.55
Avail Cap(c_a), veh/h	1534	706	1699	760	414	1699
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.4	4.4	19.3	6.0
Incr Delay (d2), s/veh	0.1	0.2	9.3	0.0	2.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	9.9	0.3	1.4	3.3
LnGrp Delay(d),s/veh	12.6	12.5	17.7	4.4	21.4	6.3
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	183		1628			1177
Approach Delay, s/veh	12.6		17.3			9.4
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		20.0				23.0		3.4
Green Ext Time (p_c), s		1.0				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	13.9
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	809	0	595	0	2435	320	0	1461	510
Future Volume (veh/h)	0	0	0	809	0	595	0	2435	320	0	1461	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				879	0	647	0	2647	0	0	1588	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1056	0	486	0	2681	835	0	2681	835
Arrive On Green				0.34	0.00	0.34	0.00	0.59	0.00	0.00	0.59	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				879	0	647	0	2647	0	0	1588	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				36.8	0.0	48.0	0.0	80.0	0.0	0.0	30.8	0.0
Cycle Q Clear(g_c), s				36.8	0.0	48.0	0.0	80.0	0.0	0.0	30.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1056	0	486	0	2681	835	0	2681	835
V/C Ratio(X)				0.83	0.00	1.33	0.00	0.99	0.00	0.00	0.59	0.00
Avail Cap(c_a), veh/h				1056	0	486	0	2681	835	0	2681	835
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.37	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				42.3	0.0	46.0	0.0	28.2	0.0	0.0	18.1	0.0
Incr Delay (d2), s/veh				7.7	0.0	163.1	0.0	8.0	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				16.8	0.0	40.8	0.0	35.3	0.0	0.0	13.0	0.0
LnGrp Delay(d),s/veh				50.0	0.0	209.1	0.0	36.2	0.0	0.0	19.1	0.0
LnGrp LOS				D		F		D			B	
Approach Vol, veh/h					1526			2647			1588	
Approach Delay, s/veh					117.4			36.2			19.1	
Approach LOS					F			D			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		52.0		88.0				88.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		48.0		82.5				82.5
Max Q Clear Time (g_c+I1), s		50.0		82.0				32.8
Green Ext Time (p_c), s		0.0		0.5				46.8

Intersection Summary	
HCM 2010 Ctrl Delay	53.0
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1195	0	481	0	0	0	0	1582	1056	0	1803	402
Future Volume (veh/h)	1195	0	481	0	0	0	0	1582	1056	0	1803	402
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1462	0	349				0	1720	0	0	1960	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1649	0	736				0	2026	631	0	2026	631
Arrive On Green	0.52	0.00	0.52				0.00	0.45	0.00	0.00	0.45	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1462	0	349				0	1720	0	0	1960	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	36.9	0.0	14.1				0.0	30.3	0.0	0.0	37.8	0.0
Cycle Q Clear(g_c), s	36.9	0.0	14.1				0.0	30.3	0.0	0.0	37.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1649	0	736				0	2026	631	0	2026	631
V/C Ratio(X)	0.89	0.00	0.47				0.00	0.85	0.00	0.00	0.97	0.00
Avail Cap(c_a), veh/h	1649	0	736				0	2073	645	0	2026	631
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.68	0.00
Uniform Delay (d), s/veh	19.3	0.0	13.8				0.0	22.3	0.0	0.0	24.3	0.0
Incr Delay (d2), s/veh	7.4	0.0	2.2				0.0	3.5	0.0	0.0	10.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	6.0				0.0	13.2	0.0	0.0	17.8	0.0
LnGrp Delay(d),s/veh	26.7	0.0	16.0				0.0	25.8	0.0	0.0	34.8	0.0
LnGrp LOS	C		B					C			C	
Approach Vol, veh/h		1811						1720			1960	
Approach Delay, s/veh		24.6						25.8			34.8	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				45.6		50.8		45.6
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 41		41.0		39.5
Max Q Clear Time (g_c+I1), s				32.3		38.9		39.8
Green Ext Time (p_c), s				7.7		1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1097	0	292	0	2228	260	0	1763	570
Future Volume (veh/h)	0	0	0	1097	0	292	0	2228	260	0	1763	570
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1192	0	317	0	2422	0	0	1916	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1170	0	538	0	2389	744	0	2389	744
Arrive On Green				0.38	0.00	0.38	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1192	0	317	0	2422	0	0	1916	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				38.0	0.0	17.9	0.0	52.5	0.0	0.0	34.6	0.0
Cycle Q Clear(g_c), s				38.0	0.0	17.9	0.0	52.5	0.0	0.0	34.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1170	0	538	0	2389	744	0	2389	744
V/C Ratio(X)				1.02	0.00	0.59	0.00	1.01	0.00	0.00	0.80	0.00
Avail Cap(c_a), veh/h				1170	0	538	0	2389	744	0	2389	744
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.55	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				31.0	0.0	24.8	0.0	23.8	0.0	0.0	19.5	0.0
Incr Delay (d2), s/veh				31.1	0.0	1.7	0.0	17.3	0.0	0.0	3.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.1	0.0	7.2	0.0	25.5	0.0	0.0	15.0	0.0
LnGrp Delay(d),s/veh				62.1	0.0	26.4	0.0	41.0	0.0	0.0	22.4	0.0
LnGrp LOS				F		C		F			C	
Approach Vol, veh/h					1509			2422			1916	
Approach Delay, s/veh					54.6			41.0			22.4	
Approach LOS					D			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		58.0		42.0		58.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		52.5		38.0		52.5		
Max Q Clear Time (g_c+I1), s		36.6		40.0		54.5		
Green Ext Time (p_c), s		15.6		0.0		0.0		

Intersection Summary		
HCM 2010 Ctrl Delay		38.4
HCM 2010 LOS		D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	571	0	146	0	0	0	0	1973	1282	0	2468	401
Future Volume (veh/h)	571	0	146	0	0	0	0	1973	1282	0	2468	401
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	621	0	159				0	2145	0	0	2683	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	703	0	323				0	2935	914	0	2935	914
Arrive On Green	0.23	0.00	0.23				0.00	0.65	0.00	0.00	0.65	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	621	0	159				0	2145	0	0	2683	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	14.6	0.0	7.3				0.0	23.7	0.0	0.0	38.2	0.0
Cycle Q Clear(g_c), s	14.6	0.0	7.3				0.0	23.7	0.0	0.0	38.2	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	703	0	323				0	2935	914	0	2935	914
V/C Ratio(X)	0.88	0.00	0.49				0.00	0.73	0.00	0.00	0.91	0.00
Avail Cap(c_a), veh/h	739	0	340				0	2935	914	0	2935	914
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.34	0.00
Uniform Delay (d), s/veh	28.0	0.0	25.2				0.0	8.9	0.0	0.0	11.5	0.0
Incr Delay (d2), s/veh	11.9	0.0	1.2				0.0	1.6	0.0	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	3.0				0.0	10.2	0.0	0.0	16.2	0.0
LnGrp Delay(d),s/veh	39.9	0.0	26.3				0.0	10.6	0.0	0.0	13.6	0.0
LnGrp LOS	D		C					B			B	
Approach Vol, veh/h		780						2145			2683	
Approach Delay, s/veh		37.1						10.6			13.6	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		53.9				53.9		21.1
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		47.5				47.5		18.0
Max Q Clear Time (g_c+I1), s		40.2				25.7		16.6
Green Ext Time (p_c), s		7.2				21.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.7
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	31.1
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	180	213	25	0	35	266	178	0	48	122	74	0	133	159	146
Future Vol, veh/h	0	180	213	25	0	35	266	178	0	48	122	74	0	133	159	146
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	196	232	27	0	38	289	193	0	52	133	80	0	145	173	159
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	26.8	31.3	22.1	40.1
HCM LOS	D	D	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	28%	0%	100%	0%	0%	100%	0%	0%	46%	0%
Vol Thru, %	72%	0%	0%	100%	0%	0%	100%	0%	54%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	170	74	180	213	25	35	266	178	292	146
LT Vol	48	0	180	0	0	35	0	0	133	0
Through Vol	122	0	0	213	0	0	266	0	159	0
RT Vol	0	74	0	0	25	0	0	178	0	146
Lane Flow Rate	185	80	196	232	27	38	289	193	317	159
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.542	0.217	0.57	0.641	0.07	0.109	0.789	0.488	0.865	0.391
Departure Headway (Hd)	10.568	9.703	10.485	9.961	9.228	10.343	9.819	9.087	9.956	9.008
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	342	371	344	363	389	348	370	399	365	402
Service Time	8.305	7.44	8.217	7.693	6.959	8.073	7.55	6.817	7.656	6.708
HCM Lane V/C Ratio	0.541	0.216	0.57	0.639	0.069	0.109	0.781	0.484	0.868	0.396
HCM Control Delay	25.2	15.1	26.3	28.9	12.7	14.3	40.9	20.2	51.5	17.4
HCM Lane LOS	D	C	D	D	B	B	E	C	F	C
HCM 95th-tile Q	3.1	0.8	3.4	4.2	0.2	0.4	6.6	2.6	8.2	1.8

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive 12/28/2015

Intersection	
Int Delay, s/veh	34.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	296	5	7	504	505	173
Future Vol, veh/h	296	5	7	504	505	173
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	322	5	8	548	549	188

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	932	368	737	0	-	0
Stage 1	643	-	-	-	-	-
Stage 2	289	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 265	629	865	-	-	-
Stage 1	485	-	-	-	-	-
Stage 2	735	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 263	629	865	-	-	-
Mov Cap-2 Maneuver	~ 263	-	-	-	-	-
Stage 1	485	-	-	-	-	-
Stage 2	728	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	171.1	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	865	-	266	-	-
HCM Lane V/C Ratio	0.009	-	1.23	-	-
HCM Control Delay (s)	9.2	-	171.1	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	15.5	-	-

Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive 4/20/2016

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	114	106	10	0	18	63	219	0	6	27	7
Future Vol, veh/h	0	114	106	10	0	18	63	219	0	6	27	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	124	115	11	0	20	68	238	0	7	29	8
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	12.9	13.4	11.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	18%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	82%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	7	114	106	10	18	63	219	327	62	161
LT Vol	6	0	114	0	0	18	0	0	327	0	0
Through Vol	27	0	0	106	0	0	63	0	0	62	0
RT Vol	0	7	0	0	10	0	0	219	0	0	161
Lane Flow Rate	36	8	124	115	11	20	68	238	355	67	175
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.015	0.274	0.238	0.02	0.042	0.137	0.431	0.697	0.123	0.285
Departure Headway (Hd)	7.958	7.167	7.953	7.446	6.737	7.841	7.335	6.626	7.059	6.559	5.858
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	452	502	455	485	534	459	492	548	508	543	607
Service Time	5.668	4.877	5.655	5.148	4.438	5.541	5.035	4.326	4.852	4.351	3.65
HCM Lane V/C Ratio	0.08	0.016	0.273	0.237	0.021	0.044	0.138	0.434	0.699	0.123	0.288
HCM Control Delay	11.4	10	13.6	12.5	9.6	10.9	11.2	14.3	24.7	10.3	11
HCM Lane LOS	B	A	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.3	0	1.1	0.9	0.1	0.1	0.5	2.2	5.4	0.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	327	62	161
Future Vol, veh/h	0	327	62	161
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	355	67	175
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19.1
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	146	77	0	113	180	0	100	184
Future Vol, veh/h	0	146	77	0	113	180	0	100	184
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	159	84	0	123	196	0	109	200
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.9	10.8	10.4
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	184	146	77	113	180
LT Vol	100	0	0	0	113	0
Through Vol	0	0	146	0	0	180
RT Vol	0	184	0	77	0	0
Lane Flow Rate	109	200	159	84	123	196
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.197	0.289	0.258	0.119	0.213	0.311
Departure Headway (Hd)	6.512	5.326	5.842	5.133	6.229	5.724
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	552	678	617	701	579	630
Service Time	4.236	3.026	3.556	2.847	3.941	3.435
HCM Lane V/C Ratio	0.197	0.295	0.258	0.12	0.212	0.311
HCM Control Delay	10.8	10.2	10.6	8.5	10.6	11
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.7	1.2	1	0.4	0.8	1.3

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	18	18	0	10	2	0	2	10
Future Vol, veh/h	0	18	18	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	20	20	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.3	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	18	10	2	2	10
LT Vol	18	0	0	0	2	0
Through Vol	0	18	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	20	20	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.028	0.025	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.576	3.876	5.121	3.921
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	788	784	925	697	908
Service Time	2.772	2.272	2.292	1.592	2.864	1.664
HCM Lane V/C Ratio	0.028	0.025	0.014	0.002	0.003	0.012
HCM Control Delay	7.9	7.4	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0	0

Intersection	
Int Delay, s/veh	3.6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	172	388	208	28	32	122
Future Vol, veh/h	172	388	208	28	32	122
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	422	226	30	35	133

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	226	0	-	0	811	113
Stage 1	-	-	-	-	226	-
Stage 2	-	-	-	-	585	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1340	-	-	-	317	918
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	520	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1340	-	-	-	273	918
Mov Cap-2 Maneuver	-	-	-	-	273	-
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	447	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1340	-	-	-	616
HCM Lane V/C Ratio	0.14	-	-	-	0.272
HCM Control Delay (s)	8.1	-	-	-	13
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.1

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	382	59	961	113	437	1018
Future Volume (veh/h)	382	59	961	113	437	1018
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	415	64	1045	123	475	1107
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	758	349	1644	735	618	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	929	3250
Grp Volume(v), veh/h	415	64	1045	123	475	1107
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	464	1583
Q Serve(g_s), s	4.8	1.4	9.6	1.8	11.4	10.5
Cycle Q Clear(g_c), s	4.8	1.4	9.6	1.8	21.0	10.5
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	758	349	1644	735	618	1644
V/C Ratio(X)	0.55	0.18	0.64	0.17	0.77	0.67
Avail Cap(c_a), veh/h	1484	683	1644	735	618	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	12.0	7.0	5.1	17.1	7.2
Incr Delay (d2), s/veh	0.6	0.3	0.8	0.1	5.8	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.6	4.3	0.7	3.1	4.7
LnGrp Delay(d),s/veh	13.9	12.3	7.8	5.2	22.9	8.3
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	479		1168			1582
Approach Delay, s/veh	13.7		7.5			12.7
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		11.6				23.0		6.8
Green Ext Time (p_c), s		8.8				0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	11.0
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	985	0	315	0	1265	790	0	1605	1060
Future Volume (veh/h)	0	0	0	985	0	315	0	1265	790	0	1605	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1071	0	342	0	1375	0	0	1745	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1232	0	567	0	2010	626	0	2010	626
Arrive On Green				0.40	0.00	0.40	0.00	0.44	0.00	0.00	0.44	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1071	0	342	0	1375	0	0	1745	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				19.2	0.0	11.5	0.0	14.5	0.0	0.0	20.8	0.0
Cycle Q Clear(g_c), s				19.2	0.0	11.5	0.0	14.5	0.0	0.0	20.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1232	0	567	0	2010	626	0	2010	626
V/C Ratio(X)				0.87	0.00	0.60	0.00	0.68	0.00	0.00	0.87	0.00
Avail Cap(c_a), veh/h				1232	0	567	0	2010	626	0	2010	626
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.78	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				16.6	0.0	14.2	0.0	13.4	0.0	0.0	15.2	0.0
Incr Delay (d2), s/veh				8.5	0.0	4.7	0.0	1.5	0.0	0.0	5.4	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				9.5	0.0	5.2	0.0	6.3	0.0	0.0	9.6	0.0
LnGrp Delay(d),s/veh				25.1	0.0	18.9	0.0	14.9	0.0	0.0	20.6	0.0
LnGrp LOS				C		B		B			C	
Approach Vol, veh/h					1413			1375			1745	
Approach Delay, s/veh					23.6			14.9			20.6	
Approach LOS					C			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		28.0		32.0				32.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		24.0		26.5				26.5
Max Q Clear Time (g_c+I1), s		21.2		16.5				22.8
Green Ext Time (p_c), s		1.6		9.3				3.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.8
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	501	0	322	0	0	0	0	1417	485	0	2171	404
Future Volume (veh/h)	501	0	322	0	0	0	0	1417	485	0	2171	404
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	654	0	233				0	1540	0	0	2360	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	872	0	389				0	2636	821	0	2636	821
Arrive On Green	0.27	0.00	0.27				0.00	0.58	0.00	0.00	0.58	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	654	0	233				0	1540	0	0	2360	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	12.2	0.0	9.3				0.0	14.0	0.0	0.0	29.5	0.0
Cycle Q Clear(g_c), s	12.2	0.0	9.3				0.0	14.0	0.0	0.0	29.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	872	0	389				0	2636	821	0	2636	821
V/C Ratio(X)	0.75	0.00	0.60				0.00	0.58	0.00	0.00	0.90	0.00
Avail Cap(c_a), veh/h	879	0	392				0	2730	850	0	2636	821
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.38	0.00
Uniform Delay (d), s/veh	21.5	0.0	20.5				0.0	8.7	0.0	0.0	12.0	0.0
Incr Delay (d2), s/veh	5.9	0.0	6.7				0.0	0.3	0.0	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	0.0	4.3				0.0	5.8	0.0	0.0	12.5	0.0
LnGrp Delay(d),s/veh	27.4	0.0	27.1				0.0	9.0	0.0	0.0	14.1	0.0
LnGrp LOS	C		C					A			B	
Approach Vol, veh/h		887						1540			2360	
Approach Delay, s/veh		27.4						9.0			14.1	
Approach LOS		C						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				43.2		21.8		43.2
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 39		18.0		37.5
Max Q Clear Time (g_c+I1), s				16.0		14.2		31.5
Green Ext Time (p_c), s				21.7		1.3		5.9

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1330	0	157	0	1513	390	0	2070	1450
Future Volume (veh/h)	0	0	0	1330	0	157	0	1513	390	0	2070	1450
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1446	0	171	0	1645	0	0	2250	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1198	0	551	0	2300	716	0	2300	716
Arrive On Green				0.39	0.00	0.39	0.00	0.51	0.00	0.00	0.51	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1446	0	171	0	1645	0	0	2250	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				35.0	0.0	7.6	0.0	25.2	0.0	0.0	43.5	0.0
Cycle Q Clear(g_c), s				35.0	0.0	7.6	0.0	25.2	0.0	0.0	43.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1198	0	551	0	2300	716	0	2300	716
V/C Ratio(X)				1.21	0.00	0.31	0.00	0.72	0.00	0.00	0.98	0.00
Avail Cap(c_a), veh/h				1198	0	551	0	2300	716	0	2300	716
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.81	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				27.5	0.0	19.1	0.0	17.2	0.0	0.0	21.8	0.0
Incr Delay (d2), s/veh				101.4	0.0	0.3	0.0	1.6	0.0	0.0	14.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				31.7	0.0	3.0	0.0	10.8	0.0	0.0	21.2	0.0
LnGrp Delay(d),s/veh				128.9	0.0	19.4	0.0	18.8	0.0	0.0	36.0	0.0
LnGrp LOS				F		B		B			D	
Approach Vol, veh/h					1617			1645			2250	
Approach Delay, s/veh					117.3			18.8			36.0	
Approach LOS					F			B			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		51.0		39.0		51.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		45.5		35.0		45.5		
Max Q Clear Time (g_c+I1), s		45.5		37.0		27.2		
Green Ext Time (p_c), s		0.0		0.0		17.6		

Intersection Summary	
HCM 2010 Ctrl Delay	54.7
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	428	0	135	0	0	0	0	1442	1080	0	2955	400
Future Volume (veh/h)	428	0	135	0	0	0	0	1442	1080	0	2955	400
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	465	0	147				0	1567	0	0	3212	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	543	0	250				0	3267	1017	0	3267	1017
Arrive On Green	0.18	0.00	0.18				0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	465	0	147				0	1567	0	0	3212	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	13.2	0.0	8.6				0.0	13.3	0.0	0.0	60.9	0.0
Cycle Q Clear(g_c), s	13.2	0.0	8.6				0.0	13.3	0.0	0.0	60.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	543	0	250				0	3267	1017	0	3267	1017
V/C Ratio(X)	0.86	0.00	0.59				0.00	0.48	0.00	0.00	0.98	0.00
Avail Cap(c_a), veh/h	616	0	283				0	3267	1017	0	3267	1017
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	36.0	0.0	34.1				0.0	5.5	0.0	0.0	12.2	0.0
Incr Delay (d2), s/veh	10.4	0.0	2.5				0.0	0.5	0.0	0.0	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.4	0.0	3.5				0.0	5.7	0.0	0.0	25.4	0.0
LnGrp Delay(d),s/veh	46.4	0.0	36.5				0.0	6.0	0.0	0.0	14.4	0.0
LnGrp LOS	D		D					A			B	
Approach Vol, veh/h		612						1567			3212	
Approach Delay, s/veh		44.0						6.0			14.4	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		70.1				70.1		19.9
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		62.5				62.5		18.0
Max Q Clear Time (g_c+I1), s		62.9				15.3		15.2
Green Ext Time (p_c), s		0.0				46.2		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	43.9
Intersection LOS	E

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	159	271	50	0	137	234	23	0	14	188	101	0	228	284	163
Future Vol, veh/h	0	159	271	50	0	137	234	23	0	14	188	101	0	228	284	163
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	173	295	54	0	149	254	25	0	15	204	110	0	248	309	177
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	34.7	30.2	26.3	66.3
HCM LOS	D	D	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	45%	0%
Vol Thru, %	93%	0%	0%	100%	0%	0%	100%	0%	55%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	202	101	159	271	50	137	234	23	512	163
LT Vol	14	0	159	0	0	137	0	0	228	0
Through Vol	188	0	0	271	0	0	234	0	284	0
RT Vol	0	101	0	0	50	0	0	23	0	163
Lane Flow Rate	220	110	173	295	54	149	254	25	557	177
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.648	0.302	0.507	0.816	0.14	0.448	0.731	0.067	1	0.459
Departure Headway (Hd)	10.624	9.9	10.569	10.11	9.415	10.836	10.34	9.645	10.27	9.324
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	364	342	359	383	334	351	373	356	388
Service Time	8.351	7.628	8.306	7.81	7.115	8.561	8.065	7.37	8.007	7.06
HCM Lane V/C Ratio	0.647	0.302	0.506	0.822	0.141	0.446	0.724	0.067	1.565	0.456
HCM Control Delay	31	16.9	23.7	45.1	13.6	22.1	36.6	13.1	81.1	19.8
HCM Lane LOS	D	C	C	E	B	C	E	B	F	C
HCM 95th-tile Q	4.3	1.2	2.7	7.1	0.5	2.2	5.5	0.2	11.4	2.3

Intersection	
Int Delay, s/veh	4.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	132	7	4	729	499	239
Future Vol, veh/h	132	7	4	729	499	239
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	143	8	4	792	542	260

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1077	401	802	0	-	0
Stage 1	672	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	214	599	817	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	642	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	213	599	817	-	-	-
Mov Cap-2 Maneuver	213	-	-	-	-	-
Stage 1	469	-	-	-	-	-
Stage 2	639	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	51	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	817	-	220	-	-
HCM Lane V/C Ratio	0.005	-	0.687	-	-
HCM Control Delay (s)	9.4	-	51	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	4.4	-	-

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
Future Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	214	93	9	0	10	241	412	0	18	74	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	20.2	31.2	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	34	197	86	8	9	222	379	182	23	264
LT Vol	17	0	197	0	0	9	0	0	182	0	0
Through Vol	68	0	0	86	0	0	222	0	0	23	0
RT Vol	0	34	0	0	8	0	0	379	0	0	264
Lane Flow Rate	92	37	214	93	9	10	241	412	198	25	287
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.242	0.088	0.556	0.23	0.02	0.023	0.54	0.84	0.485	0.058	0.607
Departure Headway (Hd)	9.412	8.612	9.355	8.843	8.127	8.672	8.162	7.449	8.949	8.443	7.735
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	418	388	409	443	415	444	490	406	427	471
Service Time	7.125	6.325	7.062	6.551	5.835	6.372	5.862	5.149	6.649	6.143	5.435
HCM Lane V/C Ratio	0.24	0.089	0.552	0.227	0.02	0.024	0.543	0.841	0.488	0.059	0.609
HCM Control Delay	15.1	12.2	23.2	14.2	11	11.6	20	38.3	19.8	11.7	21.7
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.3	0.9	0.1	0.1	3.1	8.4	2.6	0.2	4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	182	23	264
Future Vol, veh/h	0	182	23	264
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	198	25	287
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.5
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	323	126	0	114	213	0	97	107
Future Vol, veh/h	0	323	126	0	114	213	0	97	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	351	137	0	124	232	0	105	116
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	107	323	126	114	213
LT Vol	97	0	0	0	114	0
Through Vol	0	0	323	0	0	213
RT Vol	0	107	0	126	0	0
Lane Flow Rate	105	116	351	137	124	232
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.208	0.19	0.557	0.191	0.218	0.375
Departure Headway (Hd)	7.108	5.892	5.716	5.008	6.341	5.835
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	505	609	632	718	568	618
Service Time	4.844	3.627	3.441	2.733	4.07	3.564
HCM Lane V/C Ratio	0.208	0.19	0.555	0.191	0.218	0.375
HCM Control Delay	11.7	10	15.4	8.9	10.8	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	6	4	0	16	4	0	6	24
Future Vol, veh/h	0	6	4	0	16	4	0	6	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	4	0	17	4	0	7	26
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.2	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	4	16	4	6	24
LT Vol	6	0	0	0	6	0
Through Vol	0	4	16	0	0	0
RT Vol	0	0	0	4	0	24
Lane Flow Rate	7	4	17	4	7	26
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.009	0.006	0.022	0.005	0.009	0.028
Departure Headway (Hd)	5.102	4.601	4.596	3.896	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	703	779	780	920	704	920
Service Time	2.822	2.322	2.315	1.614	2.814	1.613
HCM Lane V/C Ratio	0.01	0.005	0.022	0.004	0.01	0.028
HCM Control Delay	7.9	7.3	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0.1

Intersection	
Int Delay, s/veh	2.5

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	94	306	513	37	27	93
Future Vol, veh/h	94	306	513	37	27	93
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	102	333	558	40	29	101

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	558	0	-	0	929	279
Stage 1	-	-	-	-	558	-
Stage 2	-	-	-	-	371	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1009	-	-	-	266	718
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1009	-	-	-	239	718
Mov Cap-2 Maneuver	-	-	-	-	239	-
Stage 1	-	-	-	-	537	-
Stage 2	-	-	-	-	600	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	14.9
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1009	-	-	-	495
HCM Lane V/C Ratio	0.101	-	-	-	0.264
HCM Control Delay (s)	9	-	-	-	14.9
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.3	-	-	-	1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	122	45	1470	50	231	861
Future Volume (veh/h)	122	45	1470	50	231	861
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	133	49	1598	54	251	936
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	312	1700	761	406	1700
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	584	3250
Grp Volume(v), veh/h	133	49	1598	54	251	936
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	292	1583
Q Serve(g_s), s	1.4	1.1	18.5	0.7	2.5	7.6
Cycle Q Clear(g_c), s	1.4	1.1	18.5	0.7	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	678	312	1700	761	406	1700
V/C Ratio(X)	0.20	0.16	0.94	0.07	0.62	0.55
Avail Cap(c_a), veh/h	1535	706	1700	761	406	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.5	4.4	19.4	6.0
Incr Delay (d2), s/veh	0.1	0.2	10.7	0.0	2.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.4	10.3	0.3	1.5	3.3
LnGrp Delay(d),s/veh	12.6	12.5	19.2	4.4	22.2	6.3
LnGrp LOS	B	B	B	A	C	A
Approach Vol, veh/h	182		1652			1187
Approach Delay, s/veh	12.6		18.7			9.7
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		20.5				23.0		3.4
Green Ext Time (p_c), s		0.5				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.8
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	815	0	592	0	2438	320	0	1465	510
Future Volume (veh/h)	0	0	0	815	0	592	0	2438	320	0	1465	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				886	0	643	0	2650	0	0	1592	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1042	0	479	0	2678	834	0	2678	834
Arrive On Green				0.34	0.00	0.34	0.00	0.59	0.00	0.00	0.59	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				886	0	643	0	2650	0	0	1592	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				34.7	0.0	44.0	0.0	74.6	0.0	0.0	28.8	0.0
Cycle Q Clear(g_c), s				34.7	0.0	44.0	0.0	74.6	0.0	0.0	28.8	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1042	0	479	0	2678	834	0	2678	834
V/C Ratio(X)				0.85	0.00	1.34	0.00	0.99	0.00	0.00	0.59	0.00
Avail Cap(c_a), veh/h				1042	0	479	0	2678	834	0	2678	834
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.37	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				39.9	0.0	43.0	0.0	26.4	0.0	0.0	16.9	0.0
Incr Delay (d2), s/veh				8.7	0.0	167.0	0.0	8.4	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				16.0	0.0	39.4	0.0	33.0	0.0	0.0	12.2	0.0
LnGrp Delay(d),s/veh				48.6	0.0	210.0	0.0	34.8	0.0	0.0	17.9	0.0
LnGrp LOS				D		F		C			B	
Approach Vol, veh/h					1529			2650			1592	
Approach Delay, s/veh					116.5			34.8			17.9	
Approach LOS					F			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		48.0		82.0				82.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		44.0		76.5				76.5
Max Q Clear Time (g_c+I1), s		46.0		76.6				30.8
Green Ext Time (p_c), s		0.0		0.0				43.3

Intersection Summary	
HCM 2010 Ctrl Delay	51.8
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1184	0	492	0	0	0	0	1588	1035	0	1798	412
Future Volume (veh/h)	1184	0	492	0	0	0	0	1588	1035	0	1798	412
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1453	0	357				0	1726	0	0	1954	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1633	0	729				0	2026	631	0	2026	631
Arrive On Green	0.51	0.00	0.51				0.00	0.45	0.00	0.00	0.45	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1453	0	357				0	1726	0	0	1954	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	36.9	0.0	14.7				0.0	30.5	0.0	0.0	37.6	0.0
Cycle Q Clear(g_c), s	36.9	0.0	14.7				0.0	30.5	0.0	0.0	37.6	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1633	0	729				0	2026	631	0	2026	631
V/C Ratio(X)	0.89	0.00	0.49				0.00	0.85	0.00	0.00	0.96	0.00
Avail Cap(c_a), veh/h	1633	0	729				0	2073	645	0	2026	631
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.67	0.00
Uniform Delay (d), s/veh	19.6	0.0	14.2				0.0	22.3	0.0	0.0	24.3	0.0
Incr Delay (d2), s/veh	7.7	0.0	2.4				0.0	3.6	0.0	0.0	9.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	6.2				0.0	13.3	0.0	0.0	17.4	0.0
LnGrp Delay(d),s/veh	27.3	0.0	16.5				0.0	25.9	0.0	0.0	34.2	0.0
LnGrp LOS	C		B					C			C	
Approach Vol, veh/h		1810						1726			1954	
Approach Delay, s/veh		25.2						25.9			34.2	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				45.6		50.3		45.6
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 41		41.0		39.5
Max Q Clear Time (g_c+I1), s				32.5		38.9		39.6
Green Ext Time (p_c), s				7.6		1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1107	0	299	0	2225	240	0	1798	571
Future Volume (veh/h)	0	0	0	1107	0	299	0	2225	240	0	1798	571
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1203	0	325	0	2418	0	0	1954	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1176	0	541	0	2380	741	0	2380	741
Arrive On Green				0.38	0.00	0.38	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1203	0	325	0	2418	0	0	1954	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				38.2	0.0	18.4	0.0	52.3	0.0	0.0	35.9	0.0
Cycle Q Clear(g_c), s				38.2	0.0	18.4	0.0	52.3	0.0	0.0	35.9	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1176	0	541	0	2380	741	0	2380	741
V/C Ratio(X)				1.02	0.00	0.60	0.00	1.02	0.00	0.00	0.82	0.00
Avail Cap(c_a), veh/h				1176	0	541	0	2380	741	0	2380	741
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.57	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				30.9	0.0	24.8	0.0	23.8	0.0	0.0	19.9	0.0
Incr Delay (d2), s/veh				32.1	0.0	1.8	0.0	18.1	0.0	0.0	3.3	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				21.4	0.0	7.4	0.0	25.6	0.0	0.0	15.6	0.0
LnGrp Delay(d),s/veh				63.0	0.0	26.6	0.0	42.0	0.0	0.0	23.3	0.0
LnGrp LOS				F		C		F			C	
Approach Vol, veh/h					1528			2418			1954	
Approach Delay, s/veh					55.3			42.0			23.3	
Approach LOS					E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		57.8		42.2		57.8		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		52.3		38.2		52.3		
Max Q Clear Time (g_c+I1), s		37.9		40.2		54.3		
Green Ext Time (p_c), s		14.2		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	39.2
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	562	0	137	0	0	0	0	1948	1280	0	2493	410
Future Volume (veh/h)	562	0	137	0	0	0	0	1948	1280	0	2493	410
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	611	0	149				0	2117	0	0	2710	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	695	0	320				0	2947	917	0	2947	917
Arrive On Green	0.23	0.00	0.23				0.00	0.65	0.00	0.00	0.65	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	611	0	149				0	2117	0	0	2710	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	14.4	0.0	6.8				0.0	23.0	0.0	0.0	38.9	0.0
Cycle Q Clear(g_c), s	14.4	0.0	6.8				0.0	23.0	0.0	0.0	38.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	695	0	320				0	2947	917	0	2947	917
V/C Ratio(X)	0.88	0.00	0.47				0.00	0.72	0.00	0.00	0.92	0.00
Avail Cap(c_a), veh/h	739	0	340				0	2947	917	0	2947	917
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.32	0.00
Uniform Delay (d), s/veh	28.0	0.0	25.1				0.0	8.7	0.0	0.0	11.5	0.0
Incr Delay (d2), s/veh	11.3	0.0	1.1				0.0	1.5	0.0	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.2	0.0	2.7				0.0	9.8	0.0	0.0	16.6	0.0
LnGrp Delay(d),s/veh	39.4	0.0	26.2				0.0	10.2	0.0	0.0	13.6	0.0
LnGrp LOS	D		C					B			B	
Approach Vol, veh/h		760						2117			2710	
Approach Delay, s/veh		36.8						10.2			13.6	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		54.1				54.1		20.9
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		47.5				47.5		18.0
Max Q Clear Time (g_c+I1), s		40.9				25.0		16.4
Green Ext Time (p_c), s		6.5				22.2		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	31.8
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	178	210	25	0	35	267	181	0	47	121	74	0	136	160	147
Future Vol, veh/h	0	178	210	25	0	35	267	181	0	47	121	74	0	136	160	147
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	193	228	27	0	38	290	197	0	51	132	80	0	148	174	160
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	26.5	31.5	22	42.4
HCM LOS	D	D	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	28%	0%	100%	0%	0%	100%	0%	0%	46%	0%
Vol Thru, %	72%	0%	0%	100%	0%	0%	100%	0%	54%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	168	74	178	210	25	35	267	181	296	147
LT Vol	47	0	178	0	0	35	0	0	136	0
Through Vol	121	0	0	210	0	0	267	0	160	0
RT Vol	0	74	0	0	25	0	0	181	0	147
Lane Flow Rate	183	80	193	228	27	38	290	197	322	160
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.537	0.217	0.565	0.633	0.07	0.109	0.791	0.496	0.885	0.397
Departure Headway (Hd)	10.58	9.716	10.506	9.982	9.248	10.335	9.812	9.079	9.897	8.947
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	341	370	344	363	387	347	369	397	367	403
Service Time	8.335	7.471	8.257	7.733	6.999	8.086	7.563	6.83	7.644	6.694
HCM Lane V/C Ratio	0.537	0.216	0.561	0.628	0.07	0.11	0.786	0.496	0.877	0.397
HCM Control Delay	25	15.2	26.1	28.5	12.7	14.4	41.2	20.5	54.8	17.5
HCM Lane LOS	C	C	D	D	B	B	E	C	F	C
HCM 95th-tile Q	3	0.8	3.3	4.1	0.2	0.4	6.7	2.7	8.7	1.9

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive

12/28/2015

Intersection	
Int Delay, s/veh	14.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	236	4	6	494	506	154
Future Vol, veh/h	236	4	6	494	506	154
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	257	4	7	537	550	167

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	916	359	717	0	-	0
Stage 1	634	-	-	-	-	-
Stage 2	282	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	272	638	880	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	741	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	270	638	880	-	-	-
Mov Cap-2 Maneuver	270	-	-	-	-	-
Stage 1	491	-	-	-	-	-
Stage 2	735	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	84.2	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	880	-	273	-	-
HCM Lane V/C Ratio	0.007	-	0.956	-	-
HCM Control Delay (s)	9.1	-	84.2	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	9.2	-	-

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive

4/20/2016

Intersection	
Intersection Delay, s/veh	16.2
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	114	105	10	0	18	61	222	0	6	27	7
Future Vol, veh/h	0	114	105	10	0	18	61	222	0	6	27	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	124	114	11	0	20	66	241	0	7	29	8
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	12.9	13.5	11.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	18%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	82%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	7	114	105	10	18	61	222	331	63	156
LT Vol	6	0	114	0	0	18	0	0	331	0	0
Through Vol	27	0	0	105	0	0	61	0	0	63	0
RT Vol	0	7	0	0	10	0	0	222	0	0	156
Lane Flow Rate	36	8	124	114	11	20	66	241	360	68	170
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.015	0.274	0.236	0.02	0.042	0.133	0.437	0.706	0.125	0.276
Departure Headway (Hd)	7.963	7.172	7.963	7.456	6.747	7.845	7.339	6.63	7.061	6.56	5.859
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	452	501	454	484	534	459	491	548	507	542	607
Service Time	5.674	4.883	5.665	5.158	4.448	5.545	5.039	4.33	4.853	4.352	3.651
HCM Lane V/C Ratio	0.08	0.016	0.273	0.236	0.021	0.044	0.134	0.44	0.71	0.125	0.28
HCM Control Delay	11.4	10	13.6	12.4	9.6	10.9	11.2	14.4	25.2	10.3	10.9
HCM Lane LOS	B	A	B	B	A	B	B	B	D	B	B
HCM 95th-tile Q	0.3	0	1.1	0.9	0.1	0.1	0.5	2.2	5.5	0.4	1.1

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	331	63	156
Future Vol, veh/h	0	331	63	156
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	360	68	170
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19.4
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	138	75	0	115	179	0	101	182
Future Vol, veh/h	0	138	75	0	115	179	0	101	182
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	150	82	0	125	195	0	110	198
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.7	10.8	10.3
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	182	138	75	115	179
LT Vol	101	0	0	0	115	0
Through Vol	0	0	138	0	0	179
RT Vol	0	182	0	75	0	0
Lane Flow Rate	110	198	150	82	125	195
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.195	0.285	0.243	0.116	0.216	0.308
Departure Headway (Hd)	6.509	5.3	5.837	5.128	6.21	5.704
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	554	683	618	702	581	634
Service Time	4.209	3	3.544	2.835	3.915	3.409
HCM Lane V/C Ratio	0.199	0.29	0.243	0.117	0.215	0.308
HCM Control Delay	10.8	10.1	10.4	8.5	10.6	10.9
HCM Lane LOS	B	B	B	A	B	B
HCM 95th-tile Q	0.7	1.2	0.9	0.4	0.8	1.3

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	18	18	0	10	2	0	2	10
Future Vol, veh/h	0	18	18	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	20	20	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.3	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	18	10	2	2	10
LT Vol	18	0	0	0	2	0
Through Vol	0	18	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	20	20	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.028	0.025	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.576	3.876	5.121	3.921
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	788	784	925	697	908
Service Time	2.772	2.272	2.292	1.592	2.864	1.664
HCM Lane V/C Ratio	0.028	0.025	0.014	0.002	0.003	0.012
HCM Control Delay	7.9	7.4	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0	0

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	152	397	203	28	33	107
Future Vol, veh/h	152	397	203	28	33	107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	165	432	221	30	36	116

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	221	0	-	0	767	110
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	546	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1345	-	-	-	339	922
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	544	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1345	-	-	-	297	922
Mov Cap-2 Maneuver	-	-	-	-	297	-
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	477	-

Approach	EB	WB	SB
HCM Control Delay, s	2.2	0	12.8
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1345	-	-	-	616
HCM Lane V/C Ratio	0.123	-	-	-	0.247
HCM Control Delay (s)	8.1	-	-	-	12.8
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.4	-	-	-	1

HCM 2010 Signalized Intersection Summary
7: Bonita Canyon Drive & SR-73 NB Ramps

12/28/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	383	55	955	111	409	1017
Future Volume (veh/h)	383	55	955	111	409	1017
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	416	60	1038	121	445	1105
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	758	349	1644	735	623	1644
Arrive On Green	0.25	0.25	0.52	0.52	0.52	0.52
Sat Flow, veh/h	3079	1417	3250	1417	936	3250
Grp Volume(v), veh/h	416	60	1038	121	445	1105
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	468	1583
Q Serve(g_s), s	4.8	1.3	9.5	1.8	11.5	10.4
Cycle Q Clear(g_c), s	4.8	1.3	9.5	1.8	21.0	10.4
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	758	349	1644	735	623	1644
V/C Ratio(X)	0.55	0.17	0.63	0.16	0.71	0.67
Avail Cap(c_a), veh/h	1484	683	1644	735	623	1644
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	12.0	7.0	5.1	16.8	7.2
Incr Delay (d2), s/veh	0.6	0.2	0.8	0.1	3.9	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.5	4.2	0.7	2.7	4.7
LnGrp Delay(d),s/veh	13.9	12.2	7.7	5.2	20.7	8.3
LnGrp LOS	B	B	A	A	C	A
Approach Vol, veh/h	476		1159			1550
Approach Delay, s/veh	13.7		7.5			11.8
Approach LOS	B		A			B

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		14.0
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		11.5				23.0		6.8
Green Ext Time (p_c), s		8.8				0.0		1.4

Intersection Summary	
HCM 2010 Ctrl Delay	10.5
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	985	0	315	0	1265	790	0	1605	1060
Future Volume (veh/h)	0	0	0	985	0	315	0	1265	790	0	1605	1060
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1071	0	342	0	1375	0	0	1745	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				993	0	457	0	2385	743	0	2385	743
Arrive On Green				0.32	0.00	0.32	0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1071	0	342	0	1375	0	0	1745	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				20.0	0.0	13.4	0.0	12.8	0.0	0.0	18.4	0.0
Cycle Q Clear(g_c), s				20.0	0.0	13.4	0.0	12.8	0.0	0.0	18.4	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				993	0	457	0	2385	743	0	2385	743
V/C Ratio(X)				1.08	0.00	0.75	0.00	0.58	0.00	0.00	0.73	0.00
Avail Cap(c_a), veh/h				993	0	457	0	2385	743	0	2385	743
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.77	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				21.0	0.0	18.8	0.0	10.1	0.0	0.0	11.4	0.0
Incr Delay (d2), s/veh				52.1	0.0	10.7	0.0	0.8	0.0	0.0	2.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				15.6	0.0	6.6	0.0	5.4	0.0	0.0	8.0	0.0
LnGrp Delay(d),s/veh				73.1	0.0	29.5	0.0	10.8	0.0	0.0	13.4	0.0
LnGrp LOS				F		C		B			B	
Approach Vol, veh/h					1413			1375			1745	
Approach Delay, s/veh					62.5			10.8			13.4	
Approach LOS					E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		24.0		38.0				38.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		19.5		32.5				32.5
Max Q Clear Time (g_c+I1), s		22.0		14.8				20.4
Green Ext Time (p_c), s		0.0		15.8				11.1

Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	498	0	324	0	0	0	0	1417	484	0	2174	403
Future Volume (veh/h)	498	0	324	0	0	0	0	1417	484	0	2174	403
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	651	0	235				0	1540	0	0	2363	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1024	0	457				0	2385	743	0	2385	743
Arrive On Green	0.32	0.00	0.32				0.00	0.52	0.00	0.00	0.52	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	651	0	235				0	1540	0	0	2363	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	10.8	0.0	8.4				0.0	15.1	0.0	0.0	31.9	0.0
Cycle Q Clear(g_c), s	10.8	0.0	8.4				0.0	15.1	0.0	0.0	31.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1024	0	457				0	2385	743	0	2385	743
V/C Ratio(X)	0.64	0.00	0.51				0.00	0.65	0.00	0.00	0.99	0.00
Avail Cap(c_a), veh/h	1024	0	457				0	2385	743	0	2385	743
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.38	0.00
Uniform Delay (d), s/veh	17.9	0.0	17.1				0.0	10.6	0.0	0.0	14.6	0.0
Incr Delay (d2), s/veh	3.0	0.0	4.1				0.0	0.6	0.0	0.0	9.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	3.8				0.0	6.4	0.0	0.0	15.2	0.0
LnGrp Delay(d),s/veh	20.9	0.0	21.1				0.0	11.2	0.0	0.0	24.0	0.0
LnGrp LOS	C		C					B			C	
Approach Vol, veh/h		886						1540			2363	
Approach Delay, s/veh		21.0						11.2			24.0	
Approach LOS		C						B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				38.0		24.0		38.0
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 20		19.5		32.5
Max Q Clear Time (g_c+I1), s				17.1		12.8		33.9
Green Ext Time (p_c), s				2.4		2.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

HCM 2010 Signalized Intersection Summary
22: Jeffrey Road & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1360	0	158	0	1512	400	0	2080	1450
Future Volume (veh/h)	0	0	0	1360	0	158	0	1512	400	0	2080	1450
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1478	0	172	0	1643	0	0	2261	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1293	0	595	0	2207	687	0	2207	687
Arrive On Green				0.42	0.00	0.42	0.00	0.49	0.00	0.00	0.49	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1478	0	172	0	1643	0	0	2261	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				42.0	0.0	8.0	0.0	29.1	0.0	0.0	48.5	0.0
Cycle Q Clear(g_c), s				42.0	0.0	8.0	0.0	29.1	0.0	0.0	48.5	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1293	0	595	0	2207	687	0	2207	687
V/C Ratio(X)				1.14	0.00	0.29	0.00	0.74	0.00	0.00	1.02	0.00
Avail Cap(c_a), veh/h				1293	0	595	0	2207	687	0	2207	687
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.80	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				29.0	0.0	19.1	0.0	20.8	0.0	0.0	25.8	0.0
Incr Delay (d2), s/veh				73.9	0.0	0.3	0.0	1.9	0.0	0.0	25.7	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				31.1	0.0	3.1	0.0	12.6	0.0	0.0	25.5	0.0
LnGrp Delay(d),s/veh				102.9	0.0	19.4	0.0	22.6	0.0	0.0	51.4	0.0
LnGrp LOS				F		B		C			F	
Approach Vol, veh/h					1650			1643			2261	
Approach Delay, s/veh					94.2			22.6			51.4	
Approach LOS					F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		54.0		46.0		54.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		48.5		42.0		48.5		
Max Q Clear Time (g_c+I1), s		50.5		44.0		31.1		
Green Ext Time (p_c), s		0.0		0.0		16.7		

Intersection Summary	
HCM 2010 Ctrl Delay	55.6
HCM 2010 LOS	E

HCM 2010 Signalized Intersection Summary
23: University Drive/Jeffrey Road & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	431	0	142	0	0	0	0	1449	1090	0	2988	420
Future Volume (veh/h)	431	0	142	0	0	0	0	1449	1090	0	2988	420
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	468	0	154				0	1575	0	0	3248	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	529	0	243				0	3337	1039	0	3337	1039
Arrive On Green	0.17	0.00	0.17				0.00	0.73	0.00	0.00	0.73	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	468	0	154				0	1575	0	0	3248	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	14.8	0.0	10.1				0.0	14.1	0.0	0.0	66.5	0.0
Cycle Q Clear(g_c), s	14.8	0.0	10.1				0.0	14.1	0.0	0.0	66.5	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	529	0	243				0	3337	1039	0	3337	1039
V/C Ratio(X)	0.89	0.00	0.63				0.00	0.47	0.00	0.00	0.97	0.00
Avail Cap(c_a), veh/h	554	0	255				0	3337	1039	0	3337	1039
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.09	0.00
Uniform Delay (d), s/veh	40.5	0.0	38.5				0.0	5.4	0.0	0.0	12.4	0.0
Incr Delay (d2), s/veh	15.3	0.0	4.7				0.0	0.5	0.0	0.0	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	0.0	4.3				0.0	6.0	0.0	0.0	27.6	0.0
LnGrp Delay(d),s/veh	55.8	0.0	43.2				0.0	5.9	0.0	0.0	14.0	0.0
LnGrp LOS	E		D					A			B	
Approach Vol, veh/h		622						1575			3248	
Approach Delay, s/veh		52.7						5.9			14.0	
Approach LOS		D						A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		78.8				78.8		21.2
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		72.5				72.5		18.0
Max Q Clear Time (g_c+I1), s		68.5				16.1		16.8
Green Ext Time (p_c), s		4.0				55.2		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Intersection																
Intersection Delay, s/veh	45.2															
Intersection LOS	E															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	162	284	51	0	135	233	23	0	14	185	102	0	233	284	163
Future Vol, veh/h	0	162	284	51	0	135	233	23	0	14	185	102	0	233	284	163
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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	176	309	55	0	147	253	25	0	15	201	111	0	253	309	177
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	38.9	30.4	26.2	66.7
HCM LOS	E	D	D	F

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	7%	0%	100%	0%	0%	100%	0%	0%	45%	0%
Vol Thru, %	93%	0%	0%	100%	0%	0%	100%	0%	55%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	199	102	162	284	51	135	233	23	517	163
LT Vol	14	0	162	0	0	135	0	0	233	0
Through Vol	185	0	0	284	0	0	233	0	284	0
RT Vol	0	102	0	0	51	0	0	23	0	163
Lane Flow Rate	216	111	176	309	55	147	253	25	562	177
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.642	0.307	0.517	0.863	0.144	0.444	0.732	0.067	1	0.462
Departure Headway (Hd)	10.688	9.965	10.566	10.07	9.375	10.898	10.402	9.707	10.331	9.382
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	340	361	342	361	384	332	350	370	354	384
Service Time	8.427	7.703	8.302	7.806	7.111	8.635	8.139	7.444	8.079	7.13
HCM Lane V/C Ratio	0.635	0.307	0.515	0.856	0.143	0.443	0.723	0.068	1.588	0.461
HCM Control Delay	30.8	17.1	24.1	51.8	13.7	22.1	37	13.1	81.4	20
HCM Lane LOS	D	C	C	F	B	C	E	B	F	C
HCM 95th-tile Q	4.2	1.3	2.8	8.1	0.5	2.2	5.5	0.2	11.4	2.4

Intersection						
Int Delay, s/veh	8.2					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	159	8	5	721	498	319
Future Vol, veh/h	159	8	5	721	498	319
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	173	9	5	784	541	347

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1118	444	888	0	-	0
Stage 1	715	-	-	-	-	-
Stage 2	403	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	201	561	758	-	-	-
Stage 1	446	-	-	-	-	-
Stage 2	644	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	200	561	758	-	-	-
Mov Cap-2 Maneuver	200	-	-	-	-	-
Stage 1	446	-	-	-	-	-
Stage 2	640	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	83.2	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	758	-	206	-	-
HCM Lane V/C Ratio	0.007	-	0.881	-	-
HCM Control Delay (s)	9.8	-	83.2	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	6.9	-	-

Intersection	
Intersection Delay, s/veh	24.3
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
Future Vol, veh/h	0	197	86	8	0	9	222	379	0	17	68	34
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	214	93	9	0	10	241	412	0	18	74	37
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	20.2	31.2	14.3
HCM LOS	C	D	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	20%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	80%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	85	34	197	86	8	9	222	379	182	23	264
LT Vol	17	0	197	0	0	9	0	0	182	0	0
Through Vol	68	0	0	86	0	0	222	0	0	23	0
RT Vol	0	34	0	0	8	0	0	379	0	0	264
Lane Flow Rate	92	37	214	93	9	10	241	412	198	25	287
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.242	0.088	0.556	0.23	0.02	0.023	0.54	0.84	0.485	0.058	0.607
Departure Headway (Hd)	9.412	8.612	9.355	8.843	8.127	8.672	8.162	7.449	8.949	8.443	7.735
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	383	418	388	409	443	415	444	490	406	427	471
Service Time	7.125	6.325	7.062	6.551	5.835	6.372	5.862	5.149	6.649	6.143	5.435
HCM Lane V/C Ratio	0.24	0.089	0.552	0.227	0.02	0.024	0.543	0.841	0.488	0.059	0.609
HCM Control Delay	15.1	12.2	23.2	14.2	11	11.6	20	38.3	19.8	11.7	21.7
HCM Lane LOS	C	B	C	B	B	B	C	E	C	B	C
HCM 95th-tile Q	0.9	0.3	3.3	0.9	0.1	0.1	3.1	8.4	2.6	0.2	4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	182	23	264
Future Vol, veh/h	0	182	23	264
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	198	25	287
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	20.5
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	12.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	323	126	0	114	213	0	97	107
Future Vol, veh/h	0	323	126	0	114	213	0	97	107
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	351	137	0	124	232	0	105	116
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	13.6	11.6	10.8
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	97	107	323	126	114	213
LT Vol	97	0	0	0	114	0
Through Vol	0	0	323	0	0	213
RT Vol	0	107	0	126	0	0
Lane Flow Rate	105	116	351	137	124	232
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.208	0.19	0.557	0.191	0.218	0.375
Departure Headway (Hd)	7.108	5.892	5.716	5.008	6.341	5.835
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	505	609	632	718	568	618
Service Time	4.844	3.627	3.441	2.733	4.07	3.564
HCM Lane V/C Ratio	0.208	0.19	0.555	0.191	0.218	0.375
HCM Control Delay	11.7	10	15.4	8.9	10.8	12
HCM Lane LOS	B	A	C	A	B	B
HCM 95th-tile Q	0.8	0.7	3.4	0.7	0.8	1.7

Intersection	
Intersection Delay, s/veh	7.1
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	6	4	0	16	4	0	6	24
Future Vol, veh/h	0	6	4	0	16	4	0	6	24
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	7	4	0	17	4	0	7	26
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.2	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	6	4	16	4	6	24
LT Vol	6	0	0	0	6	0
Through Vol	0	4	16	0	0	0
RT Vol	0	0	0	4	0	24
Lane Flow Rate	7	4	17	4	7	26
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.009	0.006	0.022	0.005	0.009	0.028
Departure Headway (Hd)	5.102	4.601	4.596	3.896	5.089	3.889
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	703	779	780	920	704	920
Service Time	2.822	2.322	2.315	1.614	2.814	1.613
HCM Lane V/C Ratio	0.01	0.005	0.022	0.004	0.01	0.028
HCM Control Delay	7.9	7.3	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0	0	0.1	0	0	0.1

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	122	306	514	38	24	106
Future Vol, veh/h	122	306	514	38	24	106
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	133	333	559	41	26	115

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	559	0	-	0	991	279
Stage 1	-	-	-	-	559	-
Stage 2	-	-	-	-	432	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1008	-	-	-	243	718
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1008	-	-	-	211	718
Mov Cap-2 Maneuver	-	-	-	-	211	-
Stage 1	-	-	-	-	536	-
Stage 2	-	-	-	-	540	-

Approach	EB	WB	SB
HCM Control Delay, s	2.6	0	15.1
HCM LOS			C

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1008	-	-	-	497
HCM Lane V/C Ratio	0.132	-	-	-	0.284
HCM Control Delay (s)	9.1	-	-	-	15.1
HCM Lane LOS	A	-	-	-	C
HCM 95th %tile Q(veh)	0.5	-	-	-	1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	121	46	1479	51	240	862
Future Volume (veh/h)	121	46	1479	51	240	862
Number	3	18	2	12	1	6
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00		1.00	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667	1667	1667	1667
Adj Flow Rate, veh/h	132	50	1608	55	261	937
Adj No. of Lanes	2	1	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap, veh/h	678	312	1700	761	402	1700
Arrive On Green	0.22	0.22	0.54	0.54	0.54	0.54
Sat Flow, veh/h	3079	1417	3250	1417	578	3250
Grp Volume(v), veh/h	132	50	1608	55	261	937
Grp Sat Flow(s),veh/h/ln	1540	1417	1583	1417	289	1583
Q Serve(g_s), s	1.4	1.1	18.7	0.7	2.3	7.6
Cycle Q Clear(g_c), s	1.4	1.1	18.7	0.7	21.0	7.6
Prop In Lane	1.00	1.00		1.00	1.00	
Lane Grp Cap(c), veh/h	678	312	1700	761	402	1700
V/C Ratio(X)	0.19	0.16	0.95	0.07	0.65	0.55
Avail Cap(c_a), veh/h	1535	706	1700	761	402	1700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	12.3	8.5	4.4	19.4	6.0
Incr Delay (d2), s/veh	0.1	0.2	11.5	0.0	3.6	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	0.5	10.5	0.3	1.6	3.3
LnGrp Delay(d),s/veh	12.6	12.6	20.0	4.4	23.0	6.3
LnGrp LOS	B	B	C	A	C	A
Approach Vol, veh/h	182		1663			1198
Approach Delay, s/veh	12.6		19.5			10.0
Approach LOS	B		B			A

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		26.5				26.5		12.6
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		21.0				21.0		19.5
Max Q Clear Time (g_c+I1), s		20.7				23.0		3.4
Green Ext Time (p_c), s		0.3				0.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
11: Culver Drive & I-405 NB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	821	0	592	0	2428	320	0	1459	510
Future Volume (veh/h)	0	0	0	821	0	592	0	2428	320	0	1459	510
Number				5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				892	0	643	0	2639	0	0	1586	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1042	0	479	0	2678	834	0	2678	834
Arrive On Green				0.34	0.00	0.34	0.00	0.59	0.00	0.00	0.59	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				892	0	643	0	2639	0	0	1586	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				35.1	0.0	44.0	0.0	73.9	0.0	0.0	28.6	0.0
Cycle Q Clear(g_c), s				35.1	0.0	44.0	0.0	73.9	0.0	0.0	28.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1042	0	479	0	2678	834	0	2678	834
V/C Ratio(X)				0.86	0.00	1.34	0.00	0.99	0.00	0.00	0.59	0.00
Avail Cap(c_a), veh/h				1042	0	479	0	2678	834	0	2678	834
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.37	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				40.0	0.0	43.0	0.0	26.2	0.0	0.0	16.9	0.0
Incr Delay (d2), s/veh				9.0	0.0	167.0	0.0	7.7	0.0	0.0	1.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				16.2	0.0	39.4	0.0	32.5	0.0	0.0	12.1	0.0
LnGrp Delay(d),s/veh				49.1	0.0	210.0	0.0	34.0	0.0	0.0	17.9	0.0
LnGrp LOS				D		F		C			B	
Approach Vol, veh/h					1535			2639			1586	
Approach Delay, s/veh					116.5			34.0			17.9	
Approach LOS					F			C			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		48.0		82.0				82.0
Change Period (Y+Rc), s		4.0		5.5				5.5
Max Green Setting (Gmax), s		44.0		76.5				76.5
Max Q Clear Time (g_c+I1), s		46.0		75.9				30.6
Green Ext Time (p_c), s		0.0		0.6				43.4

Intersection Summary	
HCM 2010 Ctrl Delay	51.5
HCM 2010 LOS	D

HCM 2010 Signalized Intersection Summary
12: Culver Drive & I-405 SB Ramps

12/28/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1191	0	485	0	0	0	0	1581	1045	0	1805	402
Future Volume (veh/h)	1191	0	485	0	0	0	0	1581	1045	0	1805	402
Number	1	6	16				7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	1667	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	1459	0	351				0	1718	0	0	1962	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2				0	2	2	0	2	2
Cap, veh/h	1643	0	733				0	2026	631	0	2026	631
Arrive On Green	0.52	0.00	0.52				0.00	0.45	0.00	0.00	0.45	0.00
Sat Flow, veh/h	3175	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	1459	0	351				0	1718	0	0	1962	0
Grp Sat Flow(s),veh/h/ln	1587	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	36.9	0.0	14.3				0.0	30.3	0.0	0.0	37.9	0.0
Cycle Q Clear(g_c), s	36.9	0.0	14.3				0.0	30.3	0.0	0.0	37.9	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	1643	0	733				0	2026	631	0	2026	631
V/C Ratio(X)	0.89	0.00	0.48				0.00	0.85	0.00	0.00	0.97	0.00
Avail Cap(c_a), veh/h	1643	0	733				0	2073	645	0	2026	631
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.67	0.00
Uniform Delay (d), s/veh	19.4	0.0	13.9				0.0	22.3	0.0	0.0	24.4	0.0
Incr Delay (d2), s/veh	7.5	0.0	2.2				0.0	3.5	0.0	0.0	10.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.7	0.0	6.0				0.0	13.2	0.0	0.0	17.8	0.0
LnGrp Delay(d),s/veh	26.9	0.0	16.2				0.0	25.7	0.0	0.0	34.8	0.0
LnGrp LOS	C		B					C			C	
Approach Vol, veh/h		1810						1718			1962	
Approach Delay, s/veh		24.8						25.7			34.8	
Approach LOS		C						C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				45.6		50.6		45.6
Change Period (Y+Rc), s				* 5.5		4.0		5.5
Max Green Setting (Gmax), s				* 41		41.0		39.5
Max Q Clear Time (g_c+I1), s				32.3		38.9		39.9
Green Ext Time (p_c), s				7.8		1.5		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	28.7
HCM 2010 LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	1108	0	300	0	2230	250	0	1792	570
Future Volume (veh/h)	0	0	0	1108	0	300	0	2230	250	0	1792	570
Number				7	4	14	1	6	16	5	2	12
Initial Q (Qb), veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln				1667	0	1667	0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h				1204	0	326	0	2424	0	0	1948	0
Adj No. of Lanes				2	0	1	0	3	1	0	3	1
Peak Hour Factor				0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %				2	0	2	0	2	2	0	2	2
Cap, veh/h				1176	0	541	0	2420	753	0	2420	753
Arrive On Green				0.38	0.00	0.38	0.00	0.53	0.00	0.00	0.53	0.00
Sat Flow, veh/h				3079	0	1417	0	4700	1417	0	4700	1417
Grp Volume(v), veh/h				1204	0	326	0	2424	0	0	1948	0
Grp Sat Flow(s),veh/h/ln				1540	0	1417	0	1517	1417	0	1517	1417
Q Serve(g_s), s				42.0	0.0	20.3	0.0	58.5	0.0	0.0	38.6	0.0
Cycle Q Clear(g_c), s				42.0	0.0	20.3	0.0	58.5	0.0	0.0	38.6	0.0
Prop In Lane				1.00		1.00	0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h				1176	0	541	0	2420	753	0	2420	753
V/C Ratio(X)				1.02	0.00	0.60	0.00	1.00	0.00	0.00	0.81	0.00
Avail Cap(c_a), veh/h				1176	0	541	0	2420	753	0	2420	753
HCM Platoon Ratio				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)				1.00	0.00	1.00	0.00	0.56	0.00	0.00	1.00	0.00
Uniform Delay (d), s/veh				34.0	0.0	27.3	0.0	25.7	0.0	0.0	21.1	0.0
Incr Delay (d2), s/veh				32.5	0.0	1.9	0.0	14.2	0.0	0.0	3.0	0.0
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln				23.1	0.0	8.3	0.0	27.4	0.0	0.0	16.7	0.0
LnGrp Delay(d),s/veh				66.5	0.0	29.2	0.0	39.9	0.0	0.0	24.1	0.0
LnGrp LOS				F		C		F			C	
Approach Vol, veh/h					1530			2424			1948	
Approach Delay, s/veh					58.6			39.9			24.1	
Approach LOS					E			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		64.0		46.0		64.0		
Change Period (Y+Rc), s		5.5		4.0		5.5		
Max Green Setting (Gmax), s		58.5		42.0		58.5		
Max Q Clear Time (g_c+I1), s		40.6		44.0		60.5		
Green Ext Time (p_c), s		17.6		0.0		0.0		

Intersection Summary	
HCM 2010 Ctrl Delay	39.5
HCM 2010 LOS	D

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	549	0	139	0	0	0	0	1981	1280	0	2501	400
Future Volume (veh/h)	549	0	139	0	0	0	0	1981	1280	0	2501	400
Number	3	8	18				1	6	16	5	2	12
Initial Q (Qb), veh	0	0	0				0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00				1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1667	0	1667				0	1667	1667	0	1667	1667
Adj Flow Rate, veh/h	597	0	151				0	2153	0	0	2718	0
Adj No. of Lanes	2	0	1				0	3	1	0	3	1
Peak Hour Factor	0.92	0.92	0.92				0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	2				0	2	2	0	2	2
Cap, veh/h	685	0	315				0	2962	922	0	2962	922
Arrive On Green	0.22	0.00	0.22				0.00	0.65	0.00	0.00	0.65	0.00
Sat Flow, veh/h	3079	0	1417				0	4700	1417	0	4700	1417
Grp Volume(v), veh/h	597	0	151				0	2153	0	0	2718	0
Grp Sat Flow(s),veh/h/ln	1540	0	1417				0	1517	1417	0	1517	1417
Q Serve(g_s), s	14.0	0.0	7.0				0.0	23.5	0.0	0.0	38.8	0.0
Cycle Q Clear(g_c), s	14.0	0.0	7.0				0.0	23.5	0.0	0.0	38.8	0.0
Prop In Lane	1.00		1.00				0.00		1.00	0.00		1.00
Lane Grp Cap(c), veh/h	685	0	315				0	2962	922	0	2962	922
V/C Ratio(X)	0.87	0.00	0.48				0.00	0.73	0.00	0.00	0.92	0.00
Avail Cap(c_a), veh/h	739	0	340				0	2962	922	0	2962	922
HCM Platoon Ratio	1.00	1.00	1.00				1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00				0.00	1.00	0.00	0.00	0.33	0.00
Uniform Delay (d), s/veh	28.1	0.0	25.4				0.0	8.7	0.0	0.0	11.3	0.0
Incr Delay (d2), s/veh	10.6	0.0	1.1				0.0	1.6	0.0	0.0	2.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0				0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	0.0	2.8				0.0	10.0	0.0	0.0	16.4	0.0
LnGrp Delay(d),s/veh	38.7	0.0	26.5				0.0	10.3	0.0	0.0	13.5	0.0
LnGrp LOS	D		C					B			B	
Approach Vol, veh/h		748						2153			2718	
Approach Delay, s/veh		36.2						10.3			13.5	
Approach LOS		D						B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		54.3				54.3		20.7
Change Period (Y+Rc), s		5.5				5.5		4.0
Max Green Setting (Gmax), s		47.5				47.5		18.0
Max Q Clear Time (g_c+I1), s		40.8				25.5		16.0
Green Ext Time (p_c), s		6.6				21.7		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection	
Intersection Delay, s/veh	32.2
Intersection LOS	D

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	179	207	24	0	35	266	189	0	45	122	73	0	140	161	148
Future Vol, veh/h	0	179	207	24	0	35	266	189	0	45	122	73	0	140	161	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	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	195	225	26	0	38	289	205	0	49	133	79	0	152	175	161
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1	0	0	1	1

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	3	3
HCM Control Delay	26.5	31.6	22	43.4
HCM LOS	D	D	C	E

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	27%	0%	100%	0%	0%	100%	0%	0%	47%	0%
Vol Thru, %	73%	0%	0%	100%	0%	0%	100%	0%	53%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	167	73	179	207	24	35	266	189	301	148
LT Vol	45	0	179	0	0	35	0	0	140	0
Through Vol	122	0	0	207	0	0	266	0	161	0
RT Vol	0	73	0	0	24	0	0	189	0	148
Lane Flow Rate	182	79	195	225	26	38	289	205	327	161
Geometry Grp	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.536	0.215	0.57	0.627	0.067	0.109	0.79	0.519	0.892	0.396
Departure Headway (Hd)	10.625	9.766	10.554	10.03	9.296	10.358	9.834	9.102	9.96	9.007
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	341	369	342	362	386	347	370	396	366	402
Service Time	8.358	7.499	8.285	7.761	7.027	8.087	7.563	6.83	7.66	6.707
HCM Lane V/C Ratio	0.534	0.214	0.57	0.622	0.067	0.11	0.781	0.518	0.893	0.4
HCM Control Delay	25	15.2	26.4	28.2	12.7	14.4	41.1	21.3	56.1	17.5
HCM Lane LOS	C	C	D	D	B	B	E	C	F	C
HCM 95th-tile Q	3	0.8	3.4	4.1	0.2	0.4	6.7	2.9	8.8	1.9

HCM 2010 TWSC
28: Ridgeline Drive & Concordia Drive 12/28/2015

Intersection	
Int Delay, s/veh	33.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	292	6	8	488	504	172
Future Vol, veh/h	292	6	8	488	504	172
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	317	7	9	530	548	187

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	924	367	735	0	-	0
Stage 1	641	-	-	-	-	-
Stage 2	283	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	~ 268	630	866	-	-	-
Stage 1	487	-	-	-	-	-
Stage 2	740	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 265	630	866	-	-	-
Mov Cap-2 Maneuver	~ 265	-	-	-	-	-
Stage 1	487	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	162.9	0.1	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	866	-	268	-	-
HCM Lane V/C Ratio	0.01	-	1.209	-	-
HCM Control Delay (s)	9.2	-	162.9	-	-
HCM Lane LOS	A	-	F	-	-
HCM 95th %tile Q(veh)	0	-	15.1	-	-

Notes

~: Volume exceeds capacity $: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 2010 AWSC
29: Ridgeline Drive & Turtle Rock Drive 4/20/2016

Intersection	
Intersection Delay, s/veh	16
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Traffic Vol, veh/h	0	114	106	10	0	18	63	219	0	6	27	7
Future Vol, veh/h	0	114	106	10	0	18	63	219	0	6	27	7
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
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	124	115	11	0	20	68	238	0	7	29	8
Number of Lanes	0	1	1	1	0	1	1	1	0	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	3	3	3
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	3	2	3
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	2	3	3
HCM Control Delay	12.9	13.4	11.2
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2	SBLn3
Vol Left, %	18%	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%
Vol Thru, %	82%	0%	0%	100%	0%	0%	100%	0%	0%	100%	0%
Vol Right, %	0%	100%	0%	0%	100%	0%	0%	100%	0%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	33	7	114	106	10	18	63	219	327	62	161
LT Vol	6	0	114	0	0	18	0	0	327	0	0
Through Vol	27	0	0	106	0	0	63	0	0	62	0
RT Vol	0	7	0	0	10	0	0	219	0	0	161
Lane Flow Rate	36	8	124	115	11	20	68	238	355	67	175
Geometry Grp	8	8	8	8	8	8	8	8	8	8	8
Degree of Util (X)	0.079	0.015	0.274	0.238	0.02	0.042	0.137	0.431	0.697	0.123	0.285
Departure Headway (Hd)	7.958	7.167	7.953	7.446	6.737	7.841	7.335	6.626	7.059	6.559	5.858
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	452	502	455	485	534	459	492	548	508	543	607
Service Time	5.668	4.877	5.655	5.148	4.438	5.541	5.035	4.326	4.852	4.351	3.65
HCM Lane V/C Ratio	0.08	0.016	0.273	0.237	0.021	0.044	0.138	0.434	0.699	0.123	0.288
HCM Control Delay	11.4	10	13.6	12.5	9.6	10.9	11.2	14.3	24.7	10.3	11
HCM Lane LOS	B	A	B	B	A	B	B	B	C	B	B
HCM 95th-tile Q	0.3	0	1.1	0.9	0.1	0.1	0.5	2.2	5.4	0.4	1.2

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Traffic Vol, veh/h	0	327	62	161
Future Vol, veh/h	0	327	62	161
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2
Mvmt Flow	0	355	67	175
Number of Lanes	0	1	1	1

Approach	SB
Opposing Approach	NB
Opposing Lanes	2
Conflicting Approach Left	WB
Conflicting Lanes Left	3
Conflicting Approach Right	EB
Conflicting Lanes Right	3
HCM Control Delay	19.1
HCM LOS	C

Lane

Intersection	
Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Traffic Vol, veh/h	0	142	78	0	112	178	0	102	178
Future Vol, veh/h	0	142	78	0	112	178	0	102	178
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	154	85	0	122	193	0	111	193
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	2	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	2	0	2
HCM Control Delay	9.8	10.8	10.3
HCM LOS	A	B	B

Lane	NBLn1	NBLn2	EBLn1	EBLn2	WBLn1	WBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	0%	100%	0%	0%	100%
Vol Right, %	0%	100%	0%	100%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	178	142	78	112	178
LT Vol	102	0	0	0	112	0
Through Vol	0	0	142	0	0	178
RT Vol	0	178	0	78	0	0
Lane Flow Rate	111	193	154	85	122	193
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.197	0.279	0.25	0.12	0.21	0.307
Departure Headway (Hd)	6.515	5.306	5.823	5.114	6.21	5.704
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	554	681	619	705	581	633
Service Time	4.215	3.006	3.531	2.822	3.916	3.41
HCM Lane V/C Ratio	0.2	0.283	0.249	0.121	0.21	0.305
HCM Control Delay	10.8	10	10.5	8.5	10.6	10.9
HCM Lane LOS	B	A	B	A	B	B
HCM 95th-tile Q	0.7	1.1	1	0.4	0.8	1.3

Intersection	
Intersection Delay, s/veh	7.5
Intersection LOS	A

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Traffic Vol, veh/h	0	18	18	0	10	2	0	2	10
Future Vol, veh/h	0	18	18	0	10	2	0	2	10
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	20	20	0	11	2	0	2	11
Number of Lanes	0	1	1	0	1	1	0	1	1

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	2	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	2	2
HCM Control Delay	7.7	7.3	6.9
HCM LOS	A	A	A

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	0%	100%	0%
Vol Thru, %	0%	100%	100%	0%	0%	0%
Vol Right, %	0%	0%	0%	100%	0%	100%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	18	10	2	2	10
LT Vol	18	0	0	0	2	0
Through Vol	0	18	10	0	0	0
RT Vol	0	0	0	2	0	10
Lane Flow Rate	20	20	11	2	2	11
Geometry Grp	7	7	7	7	7	7
Degree of Util (X)	0.028	0.025	0.014	0.002	0.003	0.012
Departure Headway (Hd)	5.064	4.564	4.576	3.876	5.121	3.921
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	788	784	925	697	908
Service Time	2.772	2.272	2.292	1.592	2.864	1.664
HCM Lane V/C Ratio	0.028	0.025	0.014	0.002	0.003	0.012
HCM Control Delay	7.9	7.4	7.4	6.6	7.9	6.7
HCM Lane LOS	A	A	A	A	A	A
HCM 95th-tile Q	0.1	0.1	0	0	0	0

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	172	387	203	28	33	127
Future Vol, veh/h	172	387	203	28	33	127
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	187	421	221	30	36	138

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	221	0	-	0	805	110
Stage 1	-	-	-	-	221	-
Stage 2	-	-	-	-	584	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1345	-	-	-	320	922
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	521	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1345	-	-	-	276	922
Mov Cap-2 Maneuver	-	-	-	-	276	-
Stage 1	-	-	-	-	795	-
Stage 2	-	-	-	-	449	-

Approach	EB	WB	SB
HCM Control Delay, s	2.5	0	13
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1345	-	-	-	622
HCM Lane V/C Ratio	0.139	-	-	-	0.28
HCM Control Delay (s)	8.1	-	-	-	13
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.5	-	-	-	1.1

APPENDIX F

MITIGATED LOS WORKSHEETS

Fair-Share Calculations

Ridgline Drive/University Drive Volumes and Fair-Share Calculations

	Existing		Existing + Project	
	AM	PM	AM	PM
NBL	76	57	76	58
NBT	48	31	54	37
NBR	728	625	743	662
SBL	14	22	14	21
SBT	89	46	118	58
SBT	37	22	37	22
EBL	26	22	27	22
EBT	1327	1675	1322	1668
EBR	71	39	75	41
WBL	566	557	617	574
WBT	2008	1292	1997	1279
WBR	17	22	14	22
Total	5007	4410	5094	4464
Fair Share Percentages			**AM:**	**1.74%**
			PM:	**1.22%**

	2017 App		2017 App + Project	
	AM	PM	AM	PM
NBL	60	56	59	54
NBT	85	39	85	39
NBR	684	576	686	582
SBL	18	8	21	8
SBT	62	52	75	52
SBT	39	20	44	20
EBL	18	29	18	29
EBT	1115	2116	1103	2129
EBR	65	70	68	69
WBL	436	598	467	618
WBT	2000	1544	1987	1546
WBR	17	31	17	32
Total	4599	5139	4630	5178
Fair Share Percentages			**AM:**	**0.67%**
			PM:	**0.76%**

	2035 App		2035 App + Proj	
	AM	PM	AM	PM
NBL	53	52	52	49
NBT	79	36	78	35
NBR	704	588	712	597
SBL	22	10	22	10
SBT	57	49	61	49
SBT	41	21	38	21
EBL	22	29	22	28
EBT	1484	2322	1536	2343
EBR	65	62	76	59
WBL	418	609	483	622
WBT	2176	1767	2180	1770
WBR	20	35	20	37
Total	5141	5580	5280	5620
Fair Share Percentages			**AM:**	**2.70%**
			PM:	**0.72%**

	2035 Pend		2035 Pend + Proj	
	AM	PM	AM	PM
NBL	54	52	52	49
NBT	78	36	78	35
NBR	702	588	712	597
SBL	22	10	22	10
SBT	56	49	61	49
SBT	41	21	38	21
EBL	23	29	22	28
EBT	1530	2332	1536	2343
EBR	68	62	76	59
WBL	417	609	483	622
WBT	2189	1767	2180	1770
WBR	19	35	20	37
Total	5199	5590	5280	5620
Fair Share Percentages			**AM:**	**1.56%**
			PM:	**0.54%**

	P2035 App		P2035 App + Proj	
	AM	PM	AM	PM
NBL	64	57	66	58
NBT	81	38	82	39
NBR	694	611	722	656
SBL	20	9	18	9
SBT	57	49	61	49
SBT	44	22	41	21
EBL	21	28	21	27
EBT	1386	2230	1380	2215
EBR	69	63	80	61
WBL	414	607	479	620
WBT	2323	1752	2313	1751
WBR	18	34	17	34
Total	5191	5500	5280	5540
Fair Share Percentages			**AM:**	**1.71%**
			PM:	**0.73%**

	P2035 Pend		P2035 Pend + Proj	
	AM	PM	AM	PM
NBL	63	59	62	62
NBT	80	38	80	39
NBR	685	600	710	644
SBL	20	9	21	9
SBT	56	49	65	49
SBT	44	22	45	22
EBL	22	29	21	28
EBT	1415	2241	1408	2237
EBR	70	65	75	64
WBL	414	605	470	607
WBT	2353	1799	2343	1796
WBR	18	34	18	33
Total	5240	5550	5318	5590
Fair Share Percentages			**AM:**	**1.49%**
			PM:	**0.72%**

University Drive Volumes (Eastbound between Ridgeline Drive and Michelson Drive) and Fair-Share Calculations

	2035 App		2035 App + Proj	
	AM	PM	AM	PM
EBT	2140	2868	2151	2897
Fair Share Percentages			**AM:**	**0.51%**
			PM:	**1.01%**

	2035 Pend		2035 Pend + Proj	
	AM	PM	AM	PM
EBT	2183	2878	2200	2903
Fair Share Percentages			**AM:**	**0.78%**
			PM:	**0.87%**

2nd NBR and 3rd EBT

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2015 Exist No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	76	.04*	57	.03*
NBT	1	1700	48	.03	31	.02
NBR	2	3400	728	.21	625	.18
SBL	1	1700	14	.01	22	.01
SBT	1	1700	89	.07*	46	.04*
SBR	0	0	37		22	
EBL	1	1700	26	.02*	22	.01
EBT	3	5100	1327	.26	1675	.33*
EBR	d	1700	71	.04	39	.02
WBL	2	3400	566	.17	557	.16*
WBT	2	3400	2008	.59*	1292	.38
WBR	d	1700	17	.01	22	.01
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .77 .61

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2015 Exist With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	76	.04*	58	.03*
NBT	1	1700	54	.03	37	.02
NBR	2	3400	743	.22	662	.19
SBL	1	1700	14	.01	21	.01
SBT	1	1700	118	.09*	58	.05*
SBR	0	0	37		22	
EBL	1	1700	27	.02*	22	.01
EBT	3	5100	1322	.26	1668	.33*
EBR	d	1700	75	.04	41	.02
WBL	2	3400	617	.18	574	.17*
WBT	2	3400	1997	.59*	1279	.38
WBR	d	1700	14	.01	22	.01
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .79 .63

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Aprvd No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	60	.04*	56	.03*
NBT	1	1700	85	.05	39	.02
NBR	2	3400	684	.20	576	.17
SBL	1	1700	18	.01	8	.00
SBT	1	1700	62	.06*	52	.04*
SBR	0	0	39		20	
EBL	1	1700	18	.01*	29	.02
EBT	3	5100	1115	.22	2116	.41*
EBR	d	1700	65	.04	70	.04
WBL	2	3400	436	.13	598	.18*
WBT	2	3400	2000	.59*	1544	.45
WBR	d	1700	17	.01	31	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .75 .71

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	59	.03*	54	.03*
NBT	1	1700	85	.05	39	.02
NBR	2	3400	686	.20	582	.17
SBL	1	1700	21	.01	8	.00
SBT	1	1700	75	.07*	52	.04*
SBR	0	0	44		20	
EBL	1	1700	18	.01*	29	.02
EBT	3	5100	1103	.22	2129	.42*
EBR	d	1700	68	.04	69	.04
WBL	2	3400	467	.14	618	.18*
WBT	2	3400	1987	.58*	1546	.45
WBR	d	1700	17	.01	32	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .74 .72

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	61	.04*	58	.03*
NBT	1	1700	86	.05	40	.02
NBR	2	3400	683	.20	573	.17
SBL	1	1700	18	.01	8	.00
SBT	1	1700	62	.06*	52	.04*
SBR	0	0	40		20	
EBL	1	1700	18	.01*	30	.02
EBT	3	5100	1125	.22	2119	.42*
EBR	d	1700	65	.04	73	.04
WBL	2	3400	429	.13	604	.18*
WBT	2	3400	2007	.59*	1542	.45
WBR	d	1700	17	.01	31	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .75 .72

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	59	.03*	54	.03*
NBT	1	1700	84	.05	39	.02
NBR	2	3400	686	.20	582	.17
SBL	1	1700	21	.01	8	.00
SBT	1	1700	75	.07*	52	.04*
SBR	0	0	44		20	
EBL	1	1700	18	.01*	29	.02
EBT	3	5100	1121	.22	2129	.42*
EBR	d	1700	69	.04	69	.04
WBL	2	3400	468	.14	618	.18*
WBT	2	3400	1987	.58*	1546	.45
WBR	d	1700	17	.01	32	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .74 .72

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	53	.03*	52	.03*
NBT	1	1700	79	.05	36	.02
NBR	2	3400	704	.21	588	.17
SBL	1	1700	22	.01	10	.01
SBT	1	1700	57	.06*	49	.04*
SBR	0	0	41		21	
EBL	1	1700	22	.01*	29	.02
EBT	3	5100	1484	.29	2322	.46*
EBR	d	1700	65	.04	62	.04
WBL	2	3400	418	.12	609	.18*
WBT	2	3400	2176	.64*	1767	.52
WBR	d	1700	20	.01	35	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .79 .76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	51	.03*	48	.03*
NBT	1	1700	78	.05	35	.02
NBR	2	3400	712	.21	606	.18
SBL	1	1700	22	.01	10	.01
SBT	1	1700	61	.06*	48	.04*
SBR	0	0	38		21	
EBL	1	1700	22	.01*	28	.02
EBT	3	5100	1487	.29	2333	.46*
EBR	d	1700	73	.04	57	.03
WBL	2	3400	486	.14	615	.18*
WBT	2	3400	2161	.64*	1761	.52
WBR	d	1700	20	.01	37	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .79 .76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	54	.03*	52	.03*
NBT	1	1700	78	.05	36	.02
NBR	2	3400	702	.21	588	.17
SBL	1	1700	22	.01	10	.01
SBT	1	1700	56	.06*	49	.04*
SBR	0	0	41		21	
EBL	1	1700	23	.01*	29	.02
EBT	3	5100	1530	.30	2332	.46*
EBR	d	1700	68	.04	62	.04
WBL	2	3400	417	.12	609	.18*
WBT	2	3400	2189	.64*	1767	.52
WBR	d	1700	19	.01	35	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .79 .76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	52	.03*	49	.03*
NBT	1	1700	78	.05	35	.02
NBR	2	3400	712	.21	597	.18
SBL	1	1700	22	.01	10	.01
SBT	1	1700	61	.06*	49	.04*
SBR	0	0	38		21	
EBL	1	1700	22	.01*	28	.02
EBT	3	5100	1536	.30	2343	.46*
EBR	d	1700	76	.04	59	.03
WBL	2	3400	483	.14	622	.18*
WBT	2	3400	2180	.64*	1770	.52
WBR	d	1700	20	.01	37	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .79 .76

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Approved No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	64	.04*	57	.03*
NBT	1	1700	81	.05	38	.02
NBR	2	3400	694	.20	611	.18
SBL	1	1700	20	.01	9	.01
SBT	1	1700	57	.06*	49	.04*
SBR	0	0	44		22	
EBL	1	1700	21	.01*	28	.02
EBT	3	5100	1386	.27	2230	.44*
EBR	d	1700	69	.04	63	.04
WBL	2	3400	414	.12	607	.18*
WBT	2	3400	2323	.68*	1752	.52
WBR	d	1700	18	.01	34	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .84 .74

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	66	.04*	58	.03*
NBT	1	1700	82	.05	39	.02
NBR	2	3400	722	.21	656	.19
SBL	1	1700	18	.01	9	.01
SBT	1	1700	61	.06*	49	.04*
SBR	0	0	41		21	
EBL	1	1700	21	.01*	27	.02
EBT	3	5100	1380	.27	2215	.43*
EBR	d	1700	80	.05	61	.04
WBL	2	3400	479	.14	620	.18*
WBT	2	3400	2313	.68*	1751	.52
WBR	d	1700	17	.01	34	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .84 .73

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Pending No Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	63	.04*	59	.03*
NBT	1	1700	80	.05	38	.02
NBR	2	3400	685	.20	600	.18
SBL	1	1700	20	.01	9	.01
SBT	1	1700	56	.06*	49	.04*
SBR	0	0	44		22	
EBL	1	1700	22	.01*	29	.02
EBT	3	5100	1415	.28	2241	.44*
EBR	d	1700	70	.04	65	.04
WBL	2	3400	414	.12	605	.18*
WBT	2	3400	2353	.69*	1799	.53
WBR	d	1700	18	.01	34	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .85 .74

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	62	.04*	62	.04*
NBT	1	1700	80	.05	39	.02
NBR	2	3400	710	.21	644	.19
SBL	1	1700	21	.01	9	.01
SBT	1	1700	65	.06*	49	.04*
SBR	0	0	45		22	
EBL	1	1700	21	.01*	28	.02
EBT	3	5100	1408	.28	2237	.44*
EBR	d	1700	75	.04	64	.04
WBL	2	3400	470	.14	607	.18*
WBT	2	3400	2343	.69*	1796	.53
WBR	d	1700	18	.01	33	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .85 .75

2nd NBR

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2017 Approved WP

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	59	.03*	54	.03*
NBT	1	1700	85	.05	39	.02
NBR	2	3400	686	.20	582	.17
SBL	1	1700	21	.01	8	.00
SBT	1	1700	75	.07*	52	.04*
SBR	0	0	44		20	
EBL	1	1700	18	.01*	29	.02
EBT	2	3400	1103	.32	2129	.63*
EBR	d	1700	68	.04	69	.04
WBL	2	3400	467	.14	618	.18*
WBT	2	3400	1987	.58*	1546	.45
WBR	d	1700	17	.01	32	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .74 .93

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	51	.03*	48	.03*
NBT	1	1700	78	.05	35	.02
NBR	2	3400	712	.21	606	.18
SBL	1	1700	22	.01	10	.01
SBT	1	1700	61	.06*	48	.04*
SBR	0	0	38		21	
EBL	1	1700	22	.01*	28	.02
EBT	2	3400	1487	.44	2333	.69*
EBR	d	1700	73	.04	57	.03
WBL	2	3400	486	.14	615	.18*
WBT	2	3400	2161	.64*	1761	.52
WBR	d	1700	20	.01	37	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .79 .99

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Approved With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	66	.04*	58	.03*
NBT	1	1700	82	.05	39	.02
NBR	2	3400	722	.21	656	.19
SBL	1	1700	18	.01	9	.01
SBT	1	1700	61	.06*	49	.04*
SBR	0	0	41		21	
EBL	1	1700	21	.01*	27	.02
EBT	2	3400	1380	.41	2215	.65*
EBR	d	1700	80	.05	61	.04
WBL	2	3400	479	.14	620	.18*
WBT	2	3400	2313	.68*	1751	.52
WBR	d	1700	17	.01	34	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .84 .95

276 . Ridgeline Dr. at University Dr.

ITAM 12.4 Post 2035 Pending With Project

	LANES	CAPACITY	AM PK HOUR VOL	AM PK HOUR V/C	PM PK HOUR VOL	PM PK HOUR V/C
NBL	1	1700	62	.04*	62	.04*
NBT	1	1700	80	.05	39	.02
NBR	2	3400	710	.21	644	.19
SBL	1	1700	21	.01	9	.01
SBT	1	1700	65	.06*	49	.04*
SBR	0	0	45		22	
EBL	1	1700	21	.01*	28	.02
EBT	2	3400	1408	.41	2237	.66*
EBR	d	1700	75	.04	64	.04
WBL	2	3400	470	.14	607	.18*
WBT	2	3400	2343	.69*	1796	.53
WBR	d	1700	18	.01	33	.02
Clearance Interval				.05*		.05*

Note: Assumes Right-Turn Overlap for NBR

TOTAL CAPACITY UTILIZATION .85 .97

APPENDIX G

CAMUTCD TRAFFIC SIGNAL WARRANT WORKSHEETS

ITM Peak Hour Summary

Prepared by:

National Data & Surveying Services

Concordia East Dr and Ridgeline Dr , Irvine

Date: 10/30/2014
Day: Thursday

Project #: 14-1284-028
City: Irvine

AM Peak Hour	745 AM
NOON Peak Hour	
PM Peak Hour	445 PM

Peak Hour Summary

Southbound Approach

Concordia East Dr

Lanes	0	0	0		
AM	229	497	0	853	AM
NOON	0	0	0	0	NOON
PM	152	506	2	714	PM

Ridgeline Dr

Eastbound Approach

	AM	NOON	PM
	232	0	158
0	117	0	222
2	0	0	0
0	5	0	4
Lanes	AM	NOON	PM

CONTROL

1 Way Stop (NB)

Westbound Approach

	AM	NOON	PM	Lanes
	0	0	0	0
	0	0	0	2
	0	0	0	1
	0	0	2	
	AM	NOON	PM	

Northbound Approach

AM	502	3	736	0	AM
NOON	0	0	0	0	NOON
PM	510	6	492	0	PM
		0	1	0	Lanes

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON		
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	726	853	AM
	0	0	NOON
	660	714	PM

West Leg				East Leg		
AM	NOON	PM		AM	NOON	PM
232	0	158		0	0	0
122	0	226		0	0	2

	South Leg	
AM	502	739
NOON	0	0
PM	510	498

Total Volume Per Leg

	North Leg	
	1579	AM
	0	NOON
	1374	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
354	0	384	0	0	2

	South Leg
AM	1241
NOON	0
PM	1008

Prepared by NDS/ATD

VOLUME

Ridgeline Dr - Approach Volumes at Concordia East

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1285_021

DAILY TOTALS	NB	SB	EB	WB	Total
	6,116	8,148	0	0	14,264

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	6		4				10		12:00	71		113				184	
00:15	4		10				14		12:15	84		118				202	
00:30	0		12				12		12:30	70		107				177	
00:45	3	13	7	33			10	46	12:45	76	301	106	444			182	745
01:00	5	12	10	39			15	51	13:00	80	310	117	448			197	758
01:15	0	8	5	34			5	42	13:15	77	303	115	445			192	748
01:30	1	9	8	30			9	39	13:30	122	355	119	457			241	812
01:45	0	6	4	27			4	33	13:45	91	370	133	484			224	854
02:00	3	4	8	25			11	29	14:00	88	378	138	505			226	883
02:15	1	5	6	26			7	31	14:15	111	412	127	517			238	929
02:30	0	4	3	21			3	25	14:30	115	405	102	500			217	905
02:45	1	5	4	21			5	26	14:45	134	448	135	502			269	950
03:00	0	2	2	15			2	17	15:00	166	526	197	561			363	1087
03:15	0	1	3	12			3	13	15:15	150	565	166	600			316	1165
03:30	2	3	3	12			5	15	15:30	109	559	121	619			230	1178
03:45	4	6	5	13			9	19	15:45	89	514	141	625			230	1139
04:00	0	6	6	17			6	23	16:00	91	439	125	553			216	992
04:15	0	6	3	17			3	23	16:15	92	381	130	517			222	898
04:30	4	8	0	14			4	22	16:30	93	365	129	525			222	890
04:45	6	10	7	16			13	26	16:45	111	387	171	555			282	942
05:00	8	18	4	14			12	32	17:00	78	374	165	595			243	969
05:15	19	37	14	25			33	62	17:15	119	401	158	623			277	1024
05:30	21	54	15	40			36	94	17:30	142	450	164	658			306	1108
05:45	22	70	30	63			52	133	17:45	124	463	174	661			298	1124
06:00	32	94	22	81			54	175	18:00	115	500	146	642			261	1142
06:15	22	97	22	89			44	186	18:15	111	492	152	636			263	1128
06:30	35	111	68	142			103	253	18:30	112	462	162	634			274	1096
06:45	66	155	107	219			173	374	18:45	86	424	142	602			228	1026
07:00	81	204	88	285			169	489	19:00	67	376	129	585			196	961
07:15	106	288	176	439			282	727	19:15	49	314	142	575			191	889
07:30	144	397	150	521			294	918	19:30	46	248	125	538			171	786
07:45	167	498	205	619			372	1117	19:45	35	197	115	511			150	708
08:00	174	591	234	765			408	1356	20:00	41	171	115	497			156	668
08:15	167	652	144	733			311	1385	20:15	37	159	85	440			122	599
08:30	174	682	143	726			317	1408	20:30	26	139	80	395			106	534
08:45	148	663	124	645			272	1308	20:45	23	127	75	355			98	482
09:00	141	630	119	530			260	1160	21:00	30	116	86	326			116	442
09:15	103	566	81	467			184	1033	21:15	24	103	73	314			97	417
09:30	122	514	81	405			203	919	21:30	27	104	79	313			106	417
09:45	112	478	86	367			198	845	21:45	19	100	59	297			78	397
10:00	149	486	97	345			246	831	22:00	21	91	70	281			91	372
10:15	119	502	103	367			222	869	22:15	13	80	45	253			58	333
10:30	89	469	79	365			168	834	22:30	11	64	50	224			61	288
10:45	73	430	133	412			206	842	22:45	10	55	24	189			34	244
11:00	98	379	100	415			198	794	23:00	8	42	34	153			42	195
11:15	99	359	108	420			207	779	23:15	6	35	27	135			33	170
11:30	94	364	93	434			187	798	23:30	4	28	16	101			20	129
11:45	79	370	95	396			174	766	23:45	8	26	15	92			23	118
TOTALS		2704		2831				5535	TOTALS		3412		5317				8729
SPLIT %		48.9%		51.1%				38.8%	SPLIT %		39.1%		60.9%				61.2%

DAILY TOTALS	NB	SB	EB	WB	Total
	6,116	8,148	0	0	14,264

AM Peak Hour	07:45	07:15			07:45	PM Peak Hour	14:30	17:00			14:45
AM Pk Volume	682	765			1408	PM Pk Volume	565	661			1178
Pk Hr Factor	0.980	0.817			0.863	Pk Hr Factor	0.851	0.950			0.811
7 - 9 Volume	1161	1264	0	0	2425	4 - 6 Volume	850	1216	0	0	2066
7 - 9 Peak Hour	07:45	07:15			07:45	4 - 6 Peak Hour	17:00	17:00			17:00
7 - 9 Pk Volume	682	765	0	0	1408	4 - 6 Pk Volume	463	661	0	0	1124
Pk Hr Factor	0.980	0.817	0.000	0.000	0.863	Pk Hr Factor	0.815	0.950	0.000	0.000	0.918

Prepared by NDS/ATD

VOLUME

Concordia East - Approach Volumes at Ridgeline Dr

Day: Thursday
Date: 10/30/2014

City: Irvine
Project #: CA14_1287_008

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,330	2,361	4,691

AM Period	NB		SB		EB		WB		TOTAL		PM Period	NB		SB		EB		WB		TOTAL	
00:00					8		10		18		12:00					38		34		72	
00:15					3		6		9		12:15					53		39		92	
00:30					5		5		10		12:30					45		31		76	
00:45					4	20	4	25	8	45	12:45					28	164	26	130	54	294
01:00					6	18	3	18	9	36	13:00					22	148	17	113	39	261
01:15					7	22	4	16	11	38	13:15					24	119	35	109	59	228
01:30					2	19	3	14	5	33	13:30					31	105	39	117	70	222
01:45					2	17	1	11	3	28	13:45					36	113	43	134	79	247
02:00					2	13	4	12	6	25	14:00					44	135	45	162	89	297
02:15					1	7	2	10	3	17	14:15					28	139	28	155	56	294
02:30					0	5	2	9	2	14	14:30					38	146	25	141	63	287
02:45					0	3	1	9	1	12	14:45					32	142	20	118	52	260
03:00					1	2	1	6	2	8	15:00					38	136	38	111	76	247
03:15					0	1	0	4	0	5	15:15					46	154	38	121	84	275
03:30					0	1	1	3	1	4	15:30					63	179	31	127	94	306
03:45					0	1	4	6	4	7	15:45					44	191	31	138	75	329
04:00					1	1	5	10	6	11	16:00					55	208	29	129	84	337
04:15					0	1	1	11	1	12	16:15					47	209	16	107	63	316
04:30					0	1	0	10	0	11	16:30					77	223	24	100	101	323
04:45					2	3	3	9	5	12	16:45					67	246	52	121	119	367
05:00					1	3	3	7	4	10	17:00					61	252	38	130	99	382
05:15					1	4	12	18	13	22	17:15					54	259	31	145	85	404
05:30					10	14	12	30	22	44	17:30					33	215	38	159	71	374
05:45					4	16	21	48	25	64	17:45					46	194	48	155	94	349
06:00					3	18	12	57	15	75	18:00					34	167	50	167	84	334
06:15					6	23	10	55	16	78	18:15					49	162	43	179	92	341
06:30					12	25	27	70	39	95	18:30					51	180	45	186	96	366
06:45					15	36	47	96	62	132	18:45					35	169	37	175	72	344
07:00					9	42	37	121	46	163	19:00					37	172	26	151	63	323
07:15					15	51	60	171	75	222	19:15					22	145	38	146	60	291
07:30					13	52	40	184	53	236	19:30					26	120	32	133	58	253
07:45					21	58	61	198	82	256	19:45					15	100	27	123	42	223
08:00					16	65	53	214	69	279	20:00					28	91	26	123	54	214
08:15					37	87	55	209	92	296	20:15					42	111	21	106	63	217
08:30					41	115	51	220	92	335	20:30					52	137	18	92	70	229
08:45					34	128	69	228	103	356	20:45					40	162	14	79	54	241
09:00					24	136	38	213	62	349	21:00					37	171	18	71	55	242
09:15					15	114	27	185	42	299	21:15					30	159	19	69	49	228
09:30					22	95	18	152	40	247	21:30					31	138	27	78	58	216
09:45					24	85	22	105	46	190	21:45					33	131	15	79	48	210
10:00					27	88	27	94	54	182	22:00					38	132	18	79	56	211
10:15					39	112	28	95	67	207	22:15					17	119	10	70	27	189
10:30					30	120	40	117	70	237	22:30					18	106	10	53	28	159
10:45					31	127	66	161	97	288	22:45					11	84	11	49	22	133
11:00					30	130	46	180	76	310	23:00					4	50	9	40	13	90
11:15					23	114	34	186	57	300	23:15					9	42	11	41	20	83
11:30					30	114	19	165	49	279	23:30					7	31	7	38	14	69
11:45					26	109	28	127	54	236	23:45					11	31	10	37	21	68
TOTALS						603		1023		1626	TOTALS						1727		1338		3065
SPLIT %						37.1%		62.9%		34.7%	SPLIT %						56.3%		43.7%		65.3%

DAILY TOTALS	NB	SB	EB	WB	Total
	0	0	2,330	2,361	4,691

AM Peak Hour			11:45	08:00	08:00	PM Peak Hour			16:30	17:45	16:30
AM Pk Volume			162	228	356	PM Pk Volume			259	186	404
Pk Hr Factor			0.764	0.826	0.864	Pk Hr Factor			0.841	0.930	0.849
7 - 9 Volume	0	0	186	426	612	4 - 6 Volume	0	0	440	276	716
7 - 9 Peak Hour			08:00	08:00	08:00	4 - 6 Peak Hour			16:30	16:45	16:30
7 - 9 Pk Volume	0	0	128	228	356	4 - 6 Pk Volume	0	0	259	159	404
Pk Hr Factor	0.000	0.000	0.780	0.826	0.864	Pk Hr Factor	0.000	0.000	0.841	0.764	0.849

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 1 of 5)

COUNT DATE 10/30/14

DIST ____ CO ____ RTE ____ PM ____

CALC ____ DATE ____

CHK ____ DATE ____

Major St: Ridgeline Dr — Critical Approach Speed 50 mph

Minor St: Concordia East — Critical Approach Speed 25 mph

Speed limit or critical speed on major street traffic > 40 mph ☒ or
In built up area of isolated community of < 10,000 population ☐ } RURAL (R)

☐ URBAN (U)

WARRANT 1 - Eight Hour Vehicular Volume SATISFIED YES ☒ NO ☐
(Condition A or Condition B or combination of A and B must be satisfied)

Condition A - Minimum Vehicle Volume 100% SATISFIED YES ☒ NO ☐
80% SATISFIED YES ☒ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)				10-11	11-12	12-1	1-2	2-3	3-4	4-5	5-6
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	500 (400)	350 (280)	600 (480)	(420) (336)	842	766	745	854	950	1139	942	1124
Highest Approach Minor Street	150 (120)	(105) (84)	200 (160)	140 (112)	127	109	164	113	142	191	246	194

Condition B - Interruption of Continuous Traffic 100% SATISFIED YES ☐ NO ☐
80% SATISFIED YES ☐ NO ☐

	MINIMUM REQUIREMENTS (80% SHOWN IN BRACKETS)											
	U	R	U	R								Hour
APPROACH LANES	1		2 or More									
Both Approaches Major Street	750 (600)	525 (420)	900 (720)	630 (504)								
Highest Approach Minor Street	75 (60)	53 (42)	100 (80)	70 (56)								

Combination of Conditions A & B SATISFIED YES ☐ NO ☐

REQUIREMENT	CONDITION	✓	FULFILLED
TWO CONDITIONS SATISFIED 80%	A. MINIMUM VEHICULAR VOLUME		Yes ☐ No ☐
	AND, B. INTERRUPTION OF CONTINUOUS TRAFFIC		
AND, AN ADEQUATE TRIAL OF OTHER ALTERNATIVES THAT COULD CAUSE LESS DELAY AND INCONVENIENCE TO TRAFFIC HAS FAILED TO SOLVE THE TRAFFIC PROBLEMS			Yes ☐ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet (Sheet 2 of 5)

WARRANT 2 - Four Hour Vehicular Volume **SATISFIED* YES ☒ NO ☐**

Record hourly vehicular volumes for any four hours of an average day.

1 2 3 4 * Point on Figure 4C-2

APPROACH LANES	One	2 or More	2-3	3-4	4-5	5-6 Hour
Both Approaches - Major Street		700	950	1139	948	1124
Higher Approach - Minor Street	100		142	191	246	194

*All plotted points fall above the applicable curve in Figure 4C-1. (URBAN AREAS)	Yes ☐ No ☒
OR, All plotted points fall above the applicable curve in Figure 4C-2. (RURAL AREAS)	Yes ☒ No ☐

WARRANT 3 - Peak Hour **SATISFIED YES ☒ NO ☐**
(Part A or Part B must be satisfied)

PART A **SATISFIED YES ☐ NO ☐**

(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced by traffic on one minor street approach (one direction only) controlled by a STOP sign equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	Yes ☐ No ☐
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	Yes ☐ No ☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	Yes ☐ No ☐

PART B **SATISFIED YES ☒ NO ☐**

* Point on Figure 4C-4

APPROACH LANES	One	2 or More	5-6 Hour
Both Approaches - Major Street		1100	1124
Higher Approach - Minor Street	100		194

The plotted point falls above the applicable curve in Figure 4C-3. (URBAN AREAS)	Yes ☐ No ☒
OR, The plotted point falls above the applicable curve in Figure 4C-4. (RURAL AREAS)	Yes ☒ No ☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Table 4C-1. Warrant 1, Eight-Hour Vehicular Volume

Condition A—Minimum Vehicular Volume

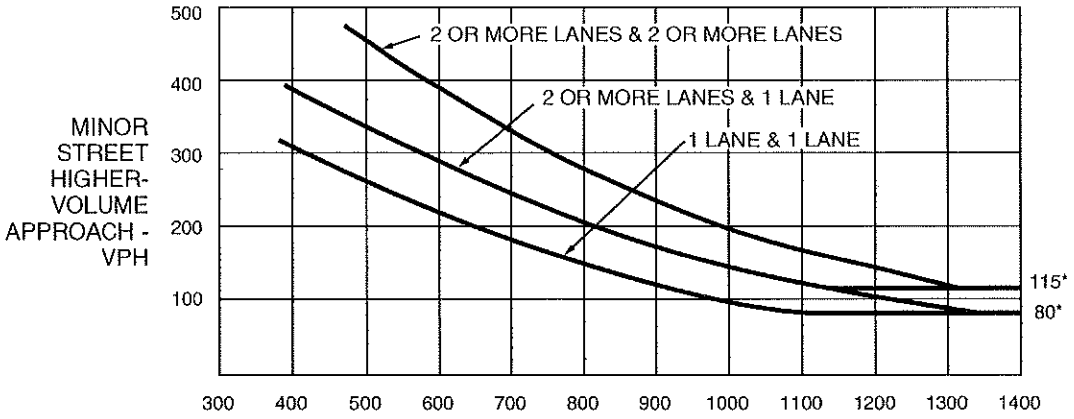
Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	500	400	350	280	150	120	105	84
2 or more	1	600	480	420	336	150	120	105	84
2 or more	2 or more	600	480	420	336	200	160	140	112
1	2 or more	500	400	350	280	200	160	140	112

Condition B—Interruption of Continuous Traffic

Number of lanes for moving traffic on each approach		Vehicles per hour on major street (total of both approaches)				Vehicles per hour on higher-volume minor-street approach (one direction only)			
Major Street	Minor Street	100%[a]	80%[b]	70%[c]	56%[d]	100%[a]	80%[b]	70%[c]	56%[d]
1	1	750	600	525	420	75	60	53	42
2 or more	1	900	720	630	504	75	60	53	42
2 or more	2 or more	900	720	630	504	100	80	70	56
1	2 or more	750	600	525	420	100	80	70	56

[a] Basic minimum hourly volume
[b] Used for combination of Conditions A and B after adequate trial of other remedial measures
[c] May be used when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000
[d] May be used for combination of Conditions A and B after adequate trial of other remedial measures when the major-street speed exceeds 40 mph or in an isolated community with a population of less than 10,000

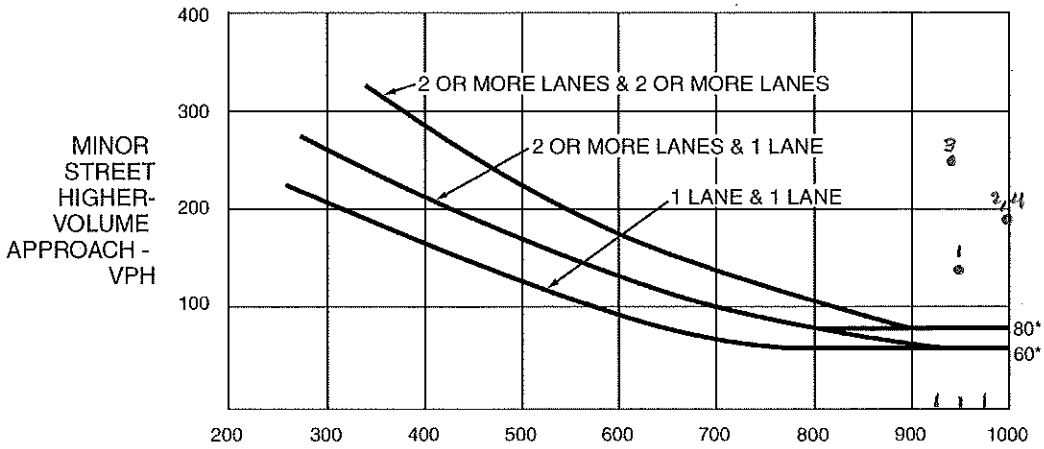
Figure 4C-1. Warrant 2, Four-Hour Vehicular Volume



*Note: 115 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 80 vph applies as the lower threshold volume for a minor-street approach with one lane.

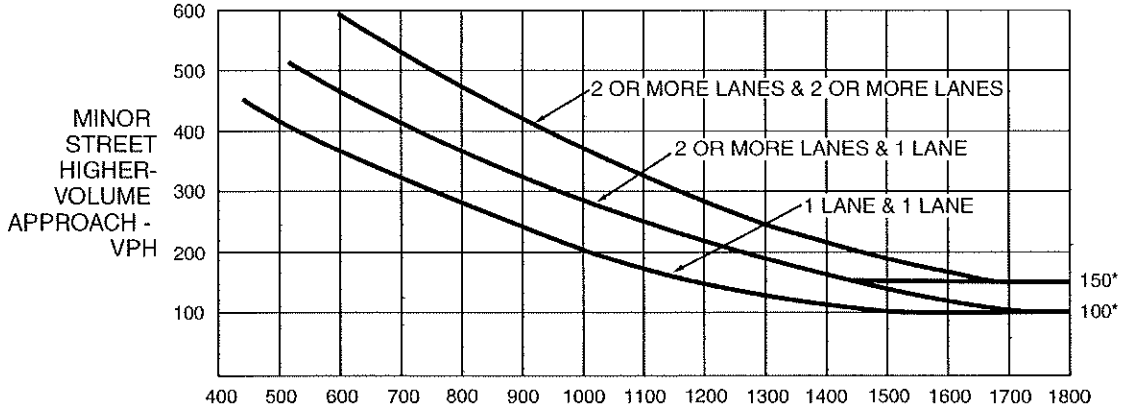
Figure 4C-2. Warrant 2, Four-Hour Vehicular Volume (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 80 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 60 vph applies as the lower threshold volume for a minor-street approach with one lane.

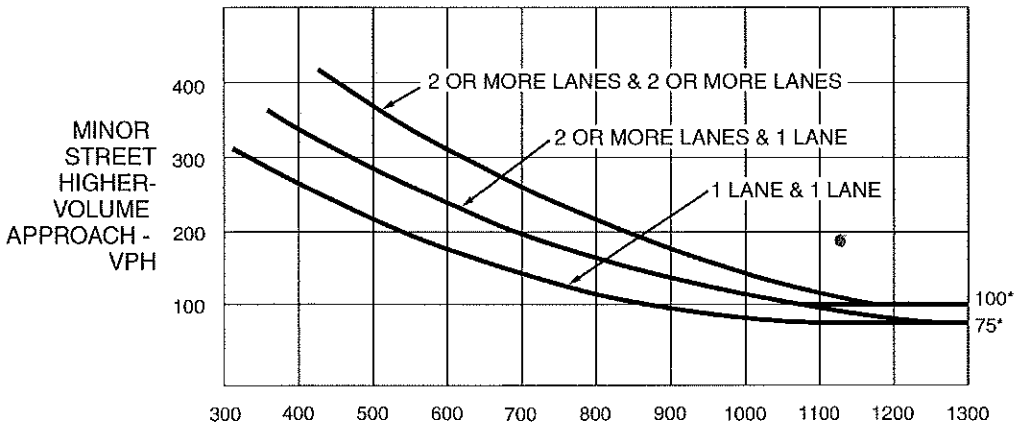
Figure 4C-3. Warrant 3, Peak Hour



*Note: 150 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 100 vph applies as the lower threshold volume for a minor-street approach with one lane.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

(COMMUNITY LESS THAN 10,000 POPULATION OR ABOVE 40 MPH ON MAJOR STREET)



*Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower threshold volume for a minor-street approach with one lane.

APPENDIX H

ROBERT CROMMELIN REPORT

ENTRANCE-EXIT DESIGN AND CONTROL FOR MAJOR PARKING FACILITIES

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Prepared for Presentation at:

"SEMINAR '72" Los Angeles Parking Association, Biltmore Hotel,

Los Angeles, California, October 5, 1972

It hasn't been too many years since a 500-space garage was thought of as a large parking facility. In recent years, garages with over 4,000 spaces have been placed in operation and larger ones are on the drawing boards. Success in the operation of these major parking facilities is dependent upon proper design of access to the facility, in addition to efficient management. Provision of adequate access design and control is a significant item which must be considered as part of the first design concept. The traffic engineer, teamed with the owner's representatives, the architect, and the future parking operator, must work together to develop a proper access and control plan. I have recently read a statement by a nationwide garage design consultant that reservoir space for entrances to garages is no longer an important consideration because of the capacity of ticket dispensers with gates. This is completely untrue as will be brought out later. Thinking of this type can lead to ineffective design which causes backup onto public streets with the accompanying potential hazards and congestion.

This paper covers three principal areas of concern: (1) determination of the number of entrance and exit lanes required based upon the parking control strategy and type of parker served; (2) data to allow comparison of the capacities of the various types of control strategies to allow selection of the one appropriate for each facility, and; (3) determination of needed reservoir space based upon the control strategy selected.

Typical capacity values for the various methods of parking control are included in this paper. A word of caution is necessary since there is much variation in capacity values due to physical conditions present as well as the familiarity of the parker with the parking facility itself. Each major facility requires detailed analysis of its needs and generalized factors are not always adequate.

Design Methodology

In order to provide adequate access design and control for major parking facilities, it is necessary to identify the probable characteristics of the future users of the facility. In this paper it is assumed that the size of the garage has been determined based upon a comprehensive parking study (general public facilities), or the amount necessary to serve a given land use (single purpose facility).

The first step is to determine directional peak hour volumes as related to the total size of the parking garage. Based upon the principal land use served, tables are included in this paper which allow the designer to prepare an estimate of peak hour volumes. In general, our research has found that it is adequate to assume for design purposes that the morning inbound peak flows are approximately equal to the evening outbound peak flows. After determining the peak volumes, a control strategy must be selected which would be appropriate for the intended operation of the garage. Selection of whether it would be best to allow parkers to enter without charge and pay as they leave or to pay a flat fee on the way in and have no control upon exiting will have a significant impact upon traffic capacity. Whether to use no fee, a flat fee, a variable fee, or a combination of fees must be determined as well as whether it is possible to receive the payment in advance, or to collect individual payment of the fee. All of these alternatives should be considered for each individual parking facility in order to determine its proper control strategy.

When the peak hour volumes and control strategy have been determined, it is then possible to determine the number of lanes

which will be required to adequately serve inbound and outbound traffic to the parking facility. This requires knowledge of typical service rates of various methods of parking control. The next step is to determine the amount of reservoir space required to serve the parking control location. Following all of these steps will lead to an efficient, well-working garage which will have minimum impact upon the surrounding street system.

Determination of Peak-Hour Volumes

Comprehensive parking studies have provided much information concerning the characteristics of the users of major parking facilities. In general, it may be stated that the traffic characteristics of a garage will be principally related to the trip purpose of the user and the type of land use served by the facility. Both of these items relate to the length of time the parker is in the facility and the time of day during which major traffic flows occur.

Table 1 was prepared which compares the trip purpose of the parker with the length of time which he parks as observed in the Los Angeles Central Business District. Employees are considered long-term parkers since 80 percent parked three hours or longer; at the peak time of the day, 84 percent of the daily employee parkers were present; and, their average parking duration was 5.6 hours. A garage, which serves employees primarily, would tend to have higher peak hour volumes than would one which serves the other

Table 1
TRIP PURPOSE VS LENGTH OF TIME PARKED

TRIP PURPOSE	PERCENT OF DAILY PARKERS WITH DURATION SHOWN		RATIO OF PEAK ACCUMULATION TO TOTAL DAILY PARKERS	AVERAGE DURATION (hours)
	SHORT-TERM (less than 3 hrs.) (percent)	LONG-TERM (3 hrs. or longer) (percent)		
Work	20%	80%	0.84	5.6
Shopping	85	15	0.26	1.6
Commercial Business	86	14	0.25	1.5
Social-Recreation	91	9	0.24	1.2
Personal Business	94	6	0.21	1.0
Eat Meal	97	3	0.22	0.9

Source: Los Angeles CBD Parking Study, 1967

uses shown in the table. As an example, 35 percent of the shoppers had a parking duration of less than three hours with an average duration of 1.6 hours. More importantly, only 26 percent of the total daily parkers with a shopping trip purpose were present at the time of peak accumulation. This indicates that the peak hour inbound or outbound volume will be less for a garage serving principally shopper parkers than for a similar sized facility serving only employees.

In order to relate the type of land use served with peak hour volumes, the term entering-leaving ratio has been used. This term represents the volume of cars entering or leaving during a peak hour divided by the maximum accumulation of cars in the parking facility (taken as the size of the facility). If the inbound morning or outbound evening peak hour is equal to half the number of spaces in the garage, the entering-leaving ratio is 0.50. Using data obtained by special counts taken by personnel of my firm, as well as information reported in various parking studies, Table 2 was prepared which shows the range of values of the entering-leaving ratio for various land uses served. It may be seen in the table that the range of values for an individual parking facility may vary considerably. This variation may be explained by the typical length of time parked as well as the variation in the times when employees must start work or are let out of work.

Table 2

LAND USE SERVED VS ENTERING-LEAVING RATIO

PRINCIPAL LAND USE SERVED	ENTERING-LEAVING[a] RATIO (Range of Values)
Hotel-Motel	0.25-0.35
College-University	0.40-0.60
Retail Commercial	0.45-0.65
Public Office Building	0.45-0.65
Private Offices-Multiple Tenant	0.45-0.60
Private Offices-Single Tenant	0.55-0.75
Hospital	0.60-0.70
Medical Offices	0.70-0.85
Airport (public parking)	0.70-0.85
Manufacturing Plant	0.70-0.90
Restaurant (sit-down)	0.80-0.95
Branch Bank	0.90-1.20

(a) Volume of cars entering and leaving in peak hour divided by maximum accumulation of cars (capacity of facility)

Source: Special counts by RC and A; various parking studies by others

In locations where there is some staggering of employment hours, the entering-leaving ratio tends to be lower. The characteristics of the potential users of the parking facility must be studied in detail to arrive at the proper entering ratio.

Once the entering-leaving ratio has been selected, it is possible to determine the actual peak hour design volumes to be used in determining the parking control strategy and the design of access lanes.

Parking Control Strategy Selection

Selection of the proper type of parking control strategy is exceedingly important in the successful operation of a major parking facility. The strategy involves the method of parking control, the charge which will be placed upon the user, and the type of payment to be collected from the user. Table 3 shows the application of various control strategies as related to the type of parking facility used as well as to the type of parking control equipment. For shopper and business parkers, it is normal to allow free entry with payment of a variable fee on an individual basis as they exit the garage. In the case of employees, it is more normal to allow them to enter freely and have a prepaid monthly charge which could be checked through the use of parking permits, coded cards, tokens, or other means as they exit. Parkers at sports events exhibit high peak volumes but have a length of time parked which can be estimated.

Table 3
APPLICATION OF VARIOUS CONTROL STRATEGIES

ITEM	CONTROL STRATEGY APPLICABILITY					
	CONTROL METHOD		TYPE CHARGE		TYPE PAYMENT	
	Free-In Pay-Out	Pay-In Free-Out	Flat Fee	Variable Fee	Pre-paid	Individual Payment
Preferred Method To Serve:						
Employee	x	x	x	x	x	x
Office Bldg. Visitor	x	x	x			x
Sports Event				x		x
Shopper	x		x		x	
Student	x			x		x
Air Traveler	x					
Control Type						
Ticket Spitter	x			x		x
Cashier/Attendant	x	x	x	x	x	x
Time Stamp Ticket Manually	x			x		x
Coded Card	x	x	x		x	
Coin-Operated Gate	x		x			x
Token-Operated Gate	x	x	x	x	x	
Parking Meter	-	-	x	x		x

For this type of condition, it is much more appropriate to collect a flat fee inbound and to have no control outbound. This latter type of control was the one which we recommended for use at the Los Angeles Convention Center.

Parking Control Operating Characteristics

Table 4 indicates our findings concerning the service rates for various types of parking controls. We have taken the design service rate as being equal to 80 percent of the maximum service rate. There is considerable variation in service rates and careful study must be given to the probable characteristics of the users of the parking facility as well as the experience of the personnel operating the facility.

For the control measures normally used in entering a facility, the average headways vary from 3.6 seconds per vehicle for a clear aisle with no control to 20.4 seconds per vehicle for a coin-operated gate. In terms of design hourly capacities, the rates would be 800 per hour per lane for clear aisles and only 140 per hour per lane for coin-operated gates. The most common type of control used at major parking facilities is the ticket dispenser with a gate. Research in England identified the fact that there is a significant difference in the capacity of this equipment depending upon whether the parker has an easy direct approach or if a sharp turn is required to approach the equipment. This is obvious since a straight approach allows a parker to position himself in a reasonable location to pull the ticket to open the gate. Thus, the design of the approach to a ticket dispenser can cause the hourly capacities to vary between 305 and 520 vehicles per hour.

Internally, the circulation pattern can affect the capacity of the inbound approach. It is very important to have a minimum of interference within the parking facility so that once a driver leaves the entrance parking control, he can do so without delaying the next inbound parker immediately behind him. This can be accomplished by avoiding situations where outbound parkers queued up from the exit control block parkers entering the facility.

Table 4

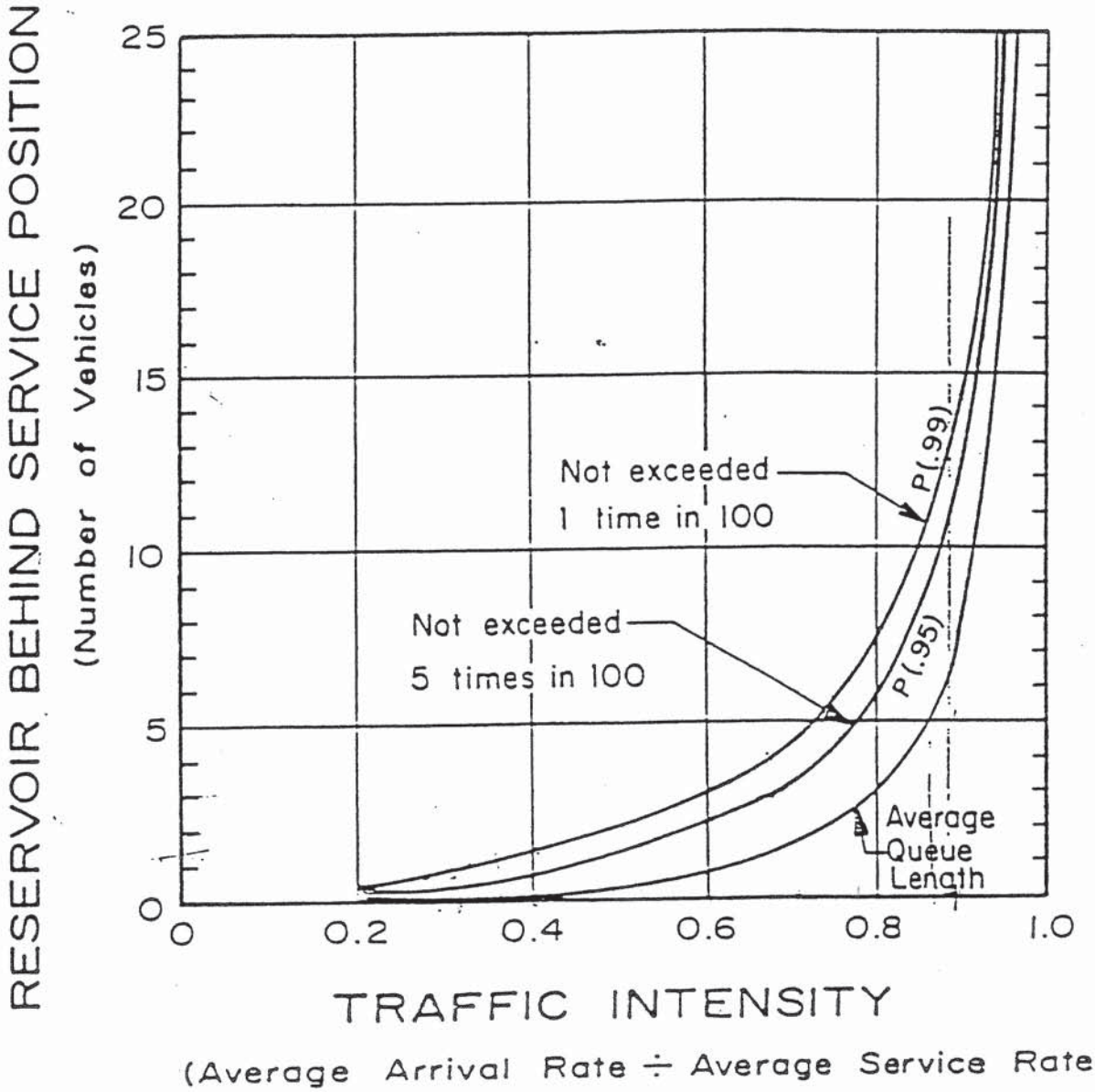
PARKING CONTROL SERVICE RATE

TYPE OF CONTROL	TYPICAL SERVICE RATES PER LANE[a] AVERAGE HEADWAY (Sec/Veh)	HOURLY CAPACITY Design[b] (Veh/Hr)	HOURLY CAPACITY Maximum (Veh/Hr)
Entering:			
Clear aisle, no control	3.6	800	1,000
Ticket dispenser, no gate	5.0	575	720
Time Stamp and hand to driver	8.5	340	425
Coded-card operated gate	8.9	340	425
Cashier, flat fee, no gate			
No information given	9.2	310	390
Direction-info needed	14.8	195	250
Ticket dispenser w/gate			
Sharp turn @ approach	9.5	305	380
Easy direct approach	5.5	520	650
Coin operated gate	20.4	140	175
Internal:			
Clear aisle or ramp, no parking	2.0	1,200	1,800
Straight ramp w/bend @ end	2.2	1,000	1,610
Circular ramp, 30'R @ C/L	2.2	840	1,650
Aisle with adjacent 9 x 18' stalls			
Inbound	3.5	830	1,040
Outbound	8.6	335	420
Exiting:			
Light street congestion	7.2	400	500
Moderate street congestion	9.0	320	400
Coded card/token-operated gate	9.0	320	400
Cashier, flat fee w/gate	13.4	215	270
Cashier, variable fee w/gate	19.5	150	185
Coin operated gate	20.4	140	175

(a) Assumes no significant interference by pedestrians, other traffic, etc.

(b) Taken as 80% of maximum rate; require 6 car lengths reservoir in advance of control points.

RESERVOIR NEEDS VS TRAFFIC INTENSITY



×22' (autos)

×35' (service)

Assumptions:

1. Arrivals follow a Poisson Distribution
2. Service rate can be represented by an exponential probability function.
3. Flow is equally divided between each lane if more than one is available.

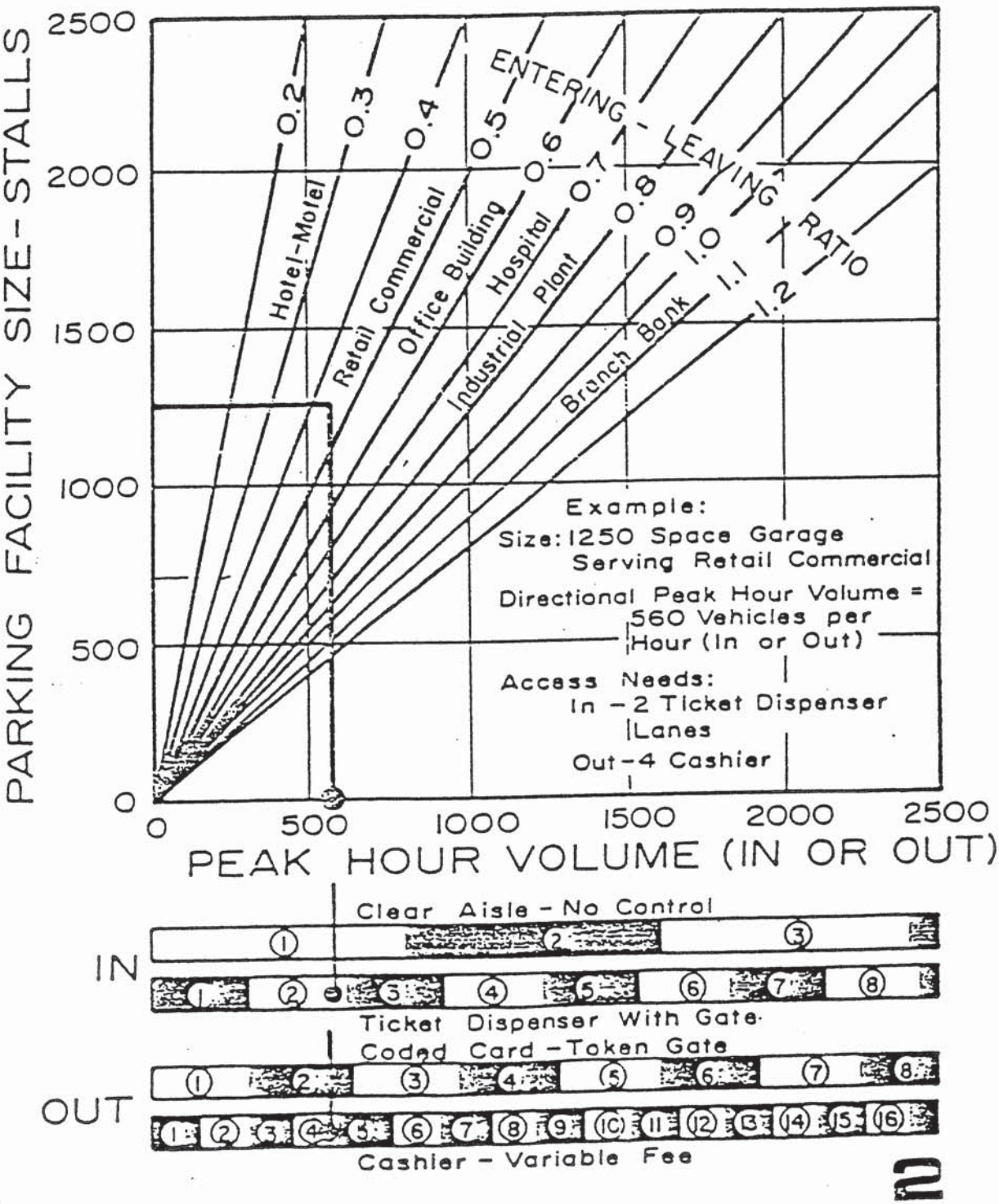
Note: To obtain reservoir length, use 22 feet per vehicle.

The capacity of exits from a major parking facility are dependent upon adequate space approaching the exit control location as well as adequate reservoir between that location and the driveway to the public street. Analysis must be conducted on both of these reservoir needs and sufficient lanes as well as sufficient reservoir length provided to allow proper operation The emphasis of this paper will be upon the capacity of the exiting parking control itself. The most common type of operation involves use of a cashier collecting a variable fee from a parker based upon length of time parked. This type of control has a capacity of approximately 150 vehicles per hour. Another approach might be to have the parker pay his fee to the cashier before entering his car and then utilize a token operated gate as a means of exit control. This control strategy would have over twice the capacity of a cashier lane itself and could have application where there is insufficient space to provide an adequate number of cashier lanes.

Reservoir Needs

If you have ever watched cars approaching any type of parking control, you know that they do not come at an even rate. Even though there may be nearby traffic signals which may cause the approaching parkers to arrive in groups or platoons, ramdom arrival is the normal approach characteristic assumed. Research has shown that ramdom arrivals or events in a traffic stream tend to follow the Poisson mathematical distribution. This distribution provides a means that. if the average rate is known, the probability of exceeding a given volume in a unit of time may be calculated. Thus, if you know the average volume, you may calculate the surges in volume to allow design of reservoir space. As an example, if the average number of cars in a five-minute interval is 10, use of Poisson statistical techniques will yield the fact that no more than 13 cars will arrive in a five-minute interval within a probability that this amount will be exceeded only one time in a 100 five-minute intervals. Use of these calculation techniques allow the determination of the amount of reservoir required to serve a given type of parking control.

PARKING FACILITY SIZE VS ACCESS NEEDS



The relationship between the arrival of vehicles and the ability of the parking control equipment or strategy to handle these vehicles are the most important items in determining reservoir space. If the average number of arrivals per unit of time is called "v" and "s" is the average rate of service (discharge) per unit of time, the ratio of v/s is used to determine the amount of reservoir space. This ratio is called traffic intensity ("i"). The average length of the queue ($\overline{q}$) behind the vehicle being serviced is equal to $\overline{q} = \frac{i^2}{(1-i)}$. This formula assumes that the arrival of vehicles at the service point follows a random distribution, the servicing time for vehicles can be represented by an exponential probability function, and that the flow is equally divided among service facilities if there is more than one lane serving a given area of the garage.

Knowing the average queue length and selecting a probability value which represents the frequency that the design length will be exceeded, will allow the designer to determine the amount of reservoir required behind the service position. These formulas and probabilities were utilized to prepare Figure 1 which compares traffic intensity with required reservoir for common probabilities used in design. The mathematics are such that, as the average volume approaches the average service rate, the amount of backup will be infinite. In addition, the probability that the amount of reservoir space for a given volume will <u>never</u> be exceeded also is infinite. In actuality, these conditions do not occur but the general relationships hold true based upon our field observations.

As may be noted in the figure, an insignificant amount of reservoir is required when the average arrival rate is 50 percent or less of the average service rate of the parking control device. At this level, only a two-car reservoir would be required. As the ratio of traffic intensity increases above 0.7, the amount of reservoir space increases rapidly. We have selected a traffic intensity of 0.9 as appropriate for design and a probability that the determined reservoir would be exceeded only five times in 100. Thus, if the average service rate for a given type of parking

control is known and sufficient lanes are provided so that the average arrival rate during the peak hour is 0.3 times the average service rate, a reservoir of six car lengths behind each service position would be adequate to meet the needs of the facility. If this is physically impossible, a traffic intensity of 0.6 should be used to determine the number of lanes requiring only a two-car reservoir.

Summary

Having determined the peak hour volumes, the parking control strategy, the number of lanes, and the reservoir length to adequately serve the peak-hour volumes, the physical design of the facilities then may be made. As noted previously, having an inadequate capacity to serve the traffic volumes approaching the control means can have a very drastic effect upon the backup which will occur. This backup creates adverse operating characteristics in and around the facility and also causes the length of time that a parker is involved in entering or leaving a garage to grow significantly. Thus, the design features of the facility can have an impact on the attitudes of the users and indirectly affect the success or failure of the parking facility in attracting customers or users.

To provide a means of easily determining the number of lanes necessary for various types of parking garages, Figure 2 was prepared which allows the designer to directly translate the size of the garage and the type of land use served into the number of necessary access lanes for the parking control strategy assumed. The example shows that a 1,250-space garage serving a retail commercial facility will normally have a directional peak hour volume of 560 vehicles per hour. If inbound ticket dispensers with gates are used, two lanes will be adequate to serve this garage. If cashiers collect variable fees, a total of four exit cashier lanes will be required. Normally these four lanes will not be provided all in the same location and, of course, it would be necessary to operate all four only during peak hours.

In the case of an office building rather than a retail facility, it would be possible to use coded card exit gates for monthly parkers. This would significantly reduce the required number of exit lanes since transient visitors are a much lower percentage of the peak hour volumes for an office building than they are in a garage serving a retail facility. The reduction in construction and operating cost would be significant.

A warning is necessary concerning the use of Figure 2 since it was based upon very generalized information. Each individual major parking facility must be considered on its own and its access needs determined in light of the characteristics of the probable users of the facility itself. In order to have satisfied customers and users of a major parking facility, thorough investigation and determination of access needs must be accomplished.

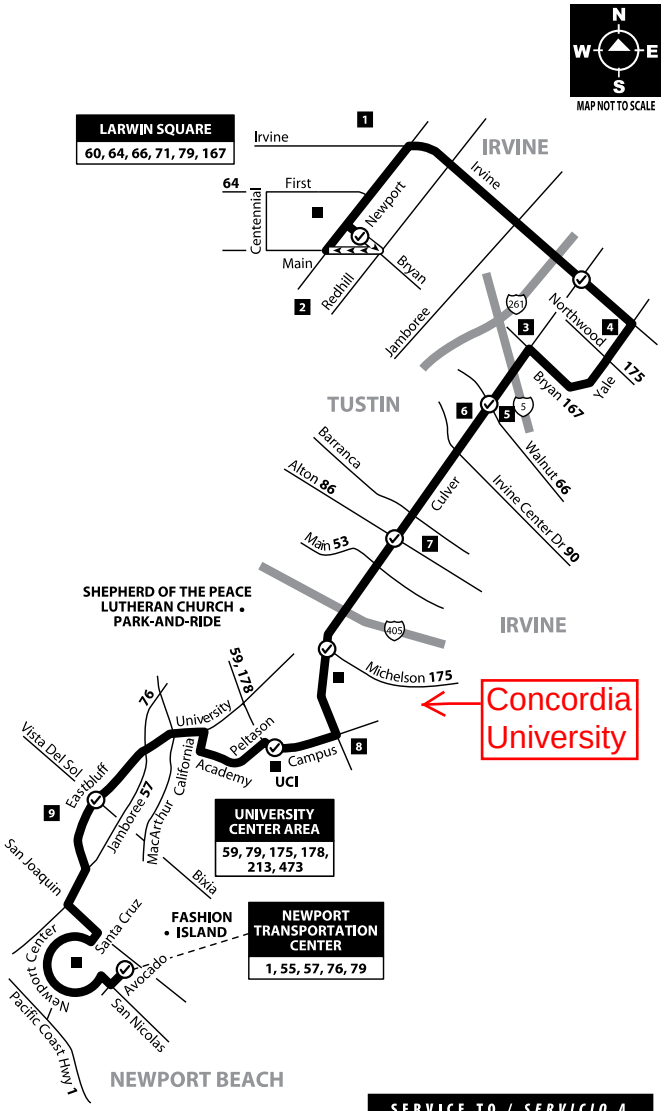
APPENDIX I

OCTA BUS INFORMATION

79

Tustin to Newport Beach

via Irvine Blvd / Culver Dr / University Ave



LEGEND / *LEYENDA*

- Scheduled Departure
- Regular Routing
- Southbound Only
- Middle or High School

Numbers on streets indicate transfers.
Números en la calle indican transbordos.

SERVICE TO / *SERVICIO A*

Tustin
1 - Columbus Tustin Middle School
- Larwin Square
- Tustin Civic Center
2 - Tustin High School
- Tustin Ranch Golf Course

Irvine
3 - Arnold O. Beckman High School
4 - Sierra Vista Middle School
- Heritage Plaza
5 - Irvine High School
6 - Venado Middle School
7 - Woodbridge High School
8 - University High School
- University Center
- UC Irvine
- Shepherd of the Peace
- Katie Wheeler Library
- Northwood Community Park
- Lower Peters Canyon Community Park
- The Crossroads
- Alton Athletic Park
- William R. Mason Regional Park

Newport Beach
9 - Corona Del Mar High School
- Newport Center/Fashion Island
- Newport Transportation Center
- Newport Beach Civic Center and Park
- Bonita Creek Park
- Newport Sports Museum

Route 079/042315

Monday - Friday
NORTHBOUND To: Tustin

Newport Transportation Center	Eastbluff & Bixia	University Center	Culver & Michelson	Culver & Alton	Culver & Walnut	Culver & Irvine	Newport & Bryan
6:00	6:10	6:18	6:27	6:31	6:38	6:49	7:03
6:30	6:40	6:48	6:57	7:01	7:08	7:19	7:33
7:00	7:14	7:26	7:36	7:42	7:51	8:02	8:17
7:25	7:39	7:51	8:01	8:07	8:16	8:27	8:42
7:59	8:10	8:21	8:31	8:36	8:45	8:58	9:10
8:29	8:40	8:51	9:01	9:06	9:15	9:28	9:40
8:59	9:10	9:21	9:31	9:36	9:45	9:58	10:10
9:44	9:55	10:06	10:16	10:21	10:30	10:43	10:55
10:29	10:40	10:51	11:01	11:06	11:15	11:28	11:40
11:14	11:25	11:36	11:46	11:51	**12:00**	**12:13**	**12:25**
11:55	**12:09**	**12:20**	**12:31**	**12:38**	**12:48**	**1:03**	**1:20**
12:40	**12:54**	**1:05**	**1:16**	**1:23**	**1:33**	**1:48**	**2:05**
1:20	**1:34**	**1:45**	**1:56**	**2:03**	**2:13**	**2:28**	**2:45**
2:05	**2:19**	**2:30**	**2:41**	**2:48**	**2:58**	**3:13**	**3:30**
2:32	**2:52**	**3:03**	**3:16**	**3:25**	**3:35**	**3:50**	**4:08**
3:07	**3:27**	**3:38**	**3:51**	**4:00**	**4:10**	**4:25**	**4:43**
3:50	**4:04**	**4:15**	**4:26**	**4:33**	**4:43**	**4:58**	**5:15**
4:25	**4:39**	**4:50**	**5:01**	**5:08**	**5:18**	**5:33**	**5:50**
5:09	**5:23**	**5:34**	**5:45**	**5:52**	**6:02**	**6:17**	**6:34**
5:45	**5:59**	**6:10**	**6:21**	**6:28**	**6:38**	**6:53**	**7:10**
6:30	**6:42**	**6:52**	**7:01**	**7:06**	**7:14**	**7:25**	**7:38**
7:25	**7:37**	**7:47**	**7:56**	**8:01**	**8:09**	**8:20**	**8:33**
8:25	**8:37**	**8:47**	**8:56**	**9:01**	**9:09**	**9:20**	**9:33**
9:25	**9:37**	**9:47**	**9:56**	**10:01**	**10:09**	**10:20**	**10:33**
10:21	**10:33**	**10:43**	**10:52**	**10:57**	**11:05**	**11:16**	**11:29**

www.octa.net/Bus/Routes-and-Schedules/ebusbook/ebusbook-October-2015/

www.octa.net/ebusbook/RoutePDF/route079.pdf

Tustin to Newport Beach
via Irvine Blvd / Culver Dr / University Ave

79

Monday - Friday
SOUTHBOUND To: Newport Beach

Newport & Bryan	Culver & Irvine	Culver & Walnut	Culver & Alton	Culver & Michelson	University Center	Eastbluff & Vista Del Sol	Newport Transportation Center
4:58	5:09	5:16	5:21	5:24	5:30	5:39	5:48
5:28	5:39	5:46	5:51	5:54	6:00	6:09	6:18
5:54	6:05	6:13	6:19	6:24	6:32	6:41	6:51
6:19	6:30	6:38	6:44	6:49	6:57	7:06	7:16
6:32	6:48	7:01	7:08	7:14	7:22	7:34	7:47
6:57	7:13	7:26	7:33	7:39	7:47	7:59	8:12
7:14	7:30	7:45	7:58	8:04	8:15	8:27	8:37
7:33	7:53	8:08	8:18	8:24	8:34	8:44	8:55
8:03	8:19	8:33	8:42	8:49	9:00	9:13	9:22
8:52	9:08	9:22	9:31	9:38	9:49	10:02	10:11
9:33	9:49	10:03	10:12	10:19	10:30	10:43	10:52
10:18	10:34	10:48	10:57	11:04	11:15	11:28	11:37
11:05	11:22	11:34	11:43	11:49	11:59	**12:11**	**12:24**
11:50	**12:07**	**12:19**	**12:28**	**12:34**	**12:44**	**12:56**	**1:09**
12:35	**12:52**	**1:04**	**1:13**	**1:19**	**1:29**	**1:41**	**1:54**
1:20	**1:37**	**1:49**	**1:58**	**2:04**	**2:14**	**2:26**	**2:39**
1:55	**2:12**	**2:24**	**2:33**	**2:39**	**2:49**	**3:01**	**3:14**
2:20	**2:37**	**2:49**	**2:58**	**3:04**	**3:14**	**3:26**	**3:39**
2:54	**3:12**	**3:24**	**3:34**	**3:42**	**3:52**	**4:04**	**4:17**
3:40	**3:57**	**4:09**	**4:18**	**4:24**	**4:34**	**4:46**	**4:59**
4:18	**4:35**	**4:47**	**4:56**	**5:02**	**5:12**	**5:24**	**5:37**
5:01	**5:18**	**5:30**	**5:39**	**5:44**	**5:54**	**6:06**	**6:18**
6:00	**6:17**	**6:29**	**6:38**	**6:43**	**6:53**	**7:05**	**7:17**
7:08	**7:23**	**7:33**	**7:40**	**7:44**	**7:51**	**8:01**	**8:11**
8:08	**8:23**	**8:33**	**8:40**	**8:44**	**8:51**	**9:01**	**9:11**
9:09	**9:24**	**9:34**	**9:41**	**9:45**	**9:52**	**10:02**	**10:12**
10:17	**10:29**	**10:37**	**10:42**	**10:46**	**10:53**	**11:02**	**11:11**

Saturday, Sunday & Holiday
NORTHBOUND To: Tustin

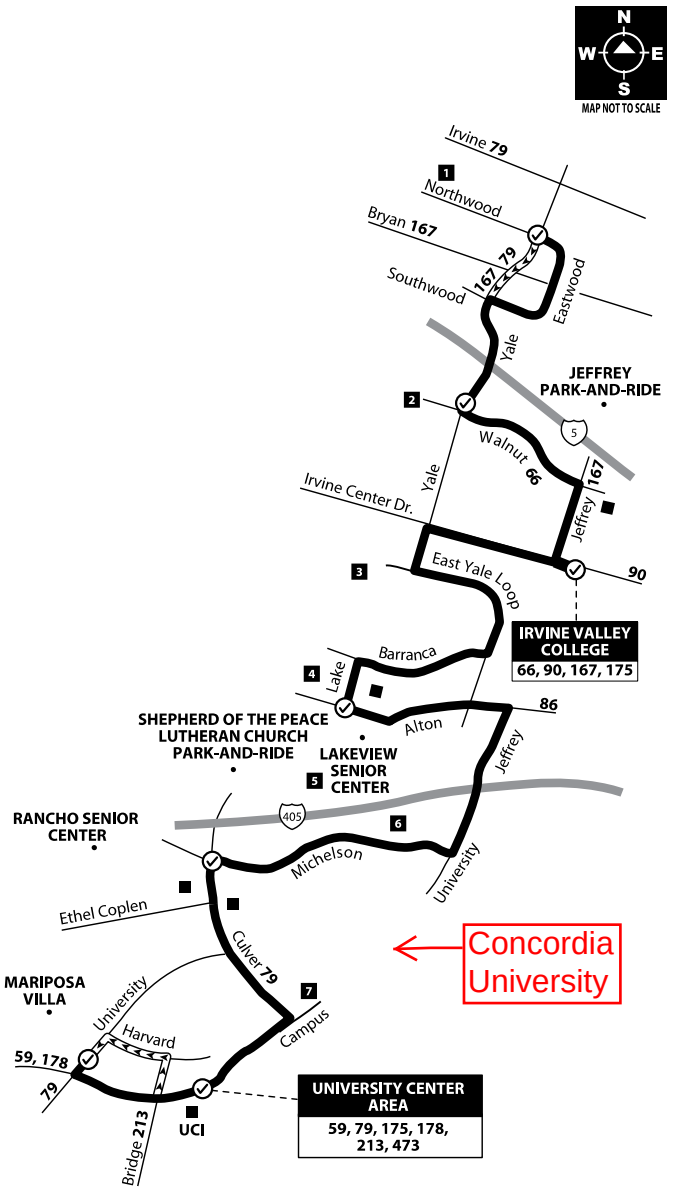
Newport Transportation Center	Eastbluff & Bixia	University Center	Culver & Michelson	Culver & Alton	Culver & Walnut	Culver & Irvine	Newport & Bryan
5:43	5:54	6:03	6:10	6:14	6:21	6:31	6:44
6:43	6:54	7:03	7:10	7:14	7:21	7:31	7:44
7:40	7:50	7:59	8:10	8:16	8:24	8:35	8:48
8:40	8:50	8:59	9:10	9:16	9:24	9:35	9:48
9:35	9:48	9:58	10:10	10:15	10:25	10:37	10:51
10:35	10:48	10:58	11:10	11:15	11:25	11:37	11:51
11:35	11:48	11:58	**12:10**	**12:15**	**12:25**	**12:37**	**12:51**
12:35	**12:48**	**12:58**	**1:10**	**1:15**	**1:25**	**1:37**	**1:51**
1:35	**1:48**	**1:58**	**2:10**	**2:15**	**2:25**	**2:37**	**2:51**
2:35	**2:48**	**2:58**	**3:10**	**3:15**	**3:25**	**3:37**	**3:51**
3:35	**3:48**	**3:58**	**4:10**	**4:15**	**4:25**	**4:37**	**4:51**
4:35	**4:48**	**4:58**	**5:10**	**5:15**	**5:25**	**5:37**	**5:51**
5:35	**5:48**	**5:58**	**6:10**	**6:15**	**6:25**	**6:37**	**6:51**
6:35	**6:48**	**6:58**	**7:10**	**7:15**	**7:25**	**7:37**	**7:51**
7:42	**7:55**	**8:03**	**8:12**	**8:17**	**8:25**	**8:35**	**8:48**

Saturday, Sunday & Holiday
SOUTHBOUND To: Newport Beach

Newport & Bryan	Culver & Irvine	Culver & Walnut	Culver & Alton	Culver & Michelson	University Center	Eastbluff & Vista Del Sol	Newport Transportation Center
6:10	6:22	6:31	6:36	6:40	6:46	6:55	7:03
7:05	7:20	7:30	7:35	7:40	7:47	7:55	8:06
8:00	8:15	8:26	8:35	8:40	8:50	9:00	9:10
9:00	9:15	9:26	9:35	9:40	9:50	10:00	10:10
9:59	10:14	10:25	10:34	10:40	10:50	11:01	11:13
10:59	11:14	11:25	11:34	11:40	11:50	**12:01**	**12:13**
11:59	**12:14**	**12:25**	**12:34**	**12:40**	**12:50**	**1:01**	**1:13**
12:59	**1:14**	**1:25**	**1:34**	**1:40**	**1:50**	**2:01**	**2:13**
1:59	**2:14**	**2:25**	**2:34**	**2:40**	**2:50**	**3:01**	**3:13**
2:59	**3:14**	**3:25**	**3:34**	**3:40**	**3:50**	**4:01**	**4:13**
3:59	**4:14**	**4:25**	**4:34**	**4:40**	**4:50**	**5:01**	**5:13**
4:58	**5:14**	**5:25**	**5:34**	**5:40**	**5:48**	**5:58**	**6:08**
5:58	**6:14**	**6:25**	**6:34**	**6:40**	**6:48**	**6:58**	**7:08**
6:58	**7:14**	**7:25**	**7:34**	**7:40**	**7:48**	**7:58**	**8:08**
8:12	**8:24**	**8:34**	**8:40**	**8:43**	**8:50**	**8:59**	**9:09**

175 Irvine
via Yale Ave / Campus Dr

NOTE: No weekend service.
NOTA: *No hay servicio los fines de semana.*



SERVICE TO / *SERVICIO A*

Irvine
- Northwood
1 - Sierra Vista Middle School
2 - Irvine High School
- Shepherd of the Peace Lutheran Church Park-and-Ride
- Woodbridge
- Irvine Valley College
3 - Lakeside Middle School
4 - Woodbridge High School
- Jeffrey Park-and-Ride
- Lakeview Senior Center
5 - South Lake Middle School
6 - Rancho San Joaquin Middle School
- Rancho Senior Center
7 - University High School
- University Center
- UC Irvine
- Mariposa Villa

LEGEND / *LEYENDA*

- Scheduled Departure
- Regular Routing
- Southbound Only
- 1 Middle or High School

Numbers on streets indicate transfers.
Números en la calle indican transbordos.

Route 175/042315

Monday - Friday
NORTHBOUND To: Irvine - Northwood Area

Mariposa Villa	University Center	Culver & Michelson	Alton & Lake	Irvine Valley College	Yale & Sacramento	Northwood & Yale
7:00	7:03	7:15	7:28	7:41	7:49	7:57
8:10	8:13	8:25	8:38	8:51	8:59	9:07
9:20	9:23	9:35	9:48	10:01	10:09	10:17
10:30	10:33	10:45	10:58	11:11	11:19	11:27
11:40	11:44	11:58	**12:11**	**12:24**	**12:33**	**12:42**
12:50	**12:54**	**1:06**	**1:19**	**1:33**	**1:41**	**1:49**
2:00	**2:04**	**2:16**	**2:29**	**2:43**	**2:51**	**2:59**
2:41	**2:44**	**3:03**	**3:19**	**3:30**	**3:39**	**3:47**
3:10	**3:14**	**3:27**	**3:40**	**3:54**	**4:03**	**4:11**
4:20	**4:24**	**4:37**	**4:50**	**5:04**	**5:13**	**5:21**
5:30	**5:34**	**5:47**	**6:00**	**6:14**	**6:23**	**6:31**
6:40	**6:45**	**6:58**	**7:10**	**7:22**	**7:29**	**7:37**
7:50	**7:53**	**8:04**	**8:14**	**8:25**	**8:32**	**8:40**
8:48	**8:51**	**9:02**	**9:12**	**9:23**	**9:30**	**9:38**
9:48	**9:50**	**9:59**	**10:08**	**10:18**	**10:24**	**10:31**

Monday - Friday
SOUTHBOUND To: Irvine - Mariposa Villa

Northwood & Yale	Walnut & Yale	Irvine Valley College	Alton & Lake	Culver & Michelson	University Center	Mariposa Villa
6:02	6:09	6:15	6:28	6:39	6:50	6:55
6:57	7:05	7:14	7:30	7:45	7:53	8:00
8:10	8:18	8:26	8:41	8:54	9:03	9:10
9:20	9:28	9:36	9:51	10:04	10:13	10:20
10:34	10:41	10:49	11:03	11:14	11:23	11:30
11:44	11:51	11:59	**12:13**	**12:24**	**12:33**	**12:40**
12:52	**12:58**	**1:06**	**1:21**	**1:34**	**1:43**	**1:50**
2:02	**2:08**	**2:16**	**2:31**	**2:44**	**2:53**	**3:00**
3:06	**3:13**	**3:22**	**3:38**	**3:52**	**4:03**	**4:10**
4:16	**4:23**	**4:32**	**4:48**	**5:02**	**5:13**	**5:20**
5:35	**5:42**	**5:49**	**6:03**	**6:15**	**6:24**	**6:30**
6:45	**6:52**	**6:59**	**7:13**	**7:25**	**7:34**	**7:40**
7:50	**7:57**	**8:04**	**8:16**	**8:27**	**8:34**	**8:40**
8:56	**9:01**	**9:08**	**9:18**	**9:27**	**9:34**	**9:40**

www.octa.net/ebusbook/RoutePDF/route175.pdf

APPENDIX J

CONCORDIA UNIVERSITY SCHEDULES

Concordia Daily Schedule

Thursday, October 30, 2014

Start	End	Activity	Room	Location	Category	Comments
7:00AM	9:30AM	Business Breakfast	GH 302/301	Grimm Hall	University	90 Staff/Visitors
7:30AM	8:20AM	Academic Courses	Classrooms	General Campus	Academic	21 Students
7:30AM	8:45AM	Academic Courses	Classrooms	General Campus	Academic	282 Students
8:00AM	9:00AM	Tutoring Center Hours	Core Tutoring Center	Rho Dorm	Academic	7-10 Students
8:00AM	5:00PM	IT Dept. Training	GH 011	Grimm Hall	University	15-20 Staff
8:00AM	2:00PM	Delta Sigma Pi: Halloween Grams	SU Patio	Student Union	Student	25 Students
8:30AM	9:30AM	Academic Courses	Classrooms	General Campus	Academic	13 Students
8:30 AM	10:20 AM	Academic Courses	Classrooms	General Campus	Academic	54 Students
9:00AM	10:30AM	Executive Council	GH 308	Grimm Hall	University	10 Staff
9:05AM	10:20AM	Academic Courses	Classrooms	General Campus	Academic	441 Students
9:30AM	10:20AM	Academic Courses	Classrooms	General Campus	Academic	7 Students
9:30AM	10:30AM	WINGS Study Lounge	Rho Gameroom	Rho Dorm	Academic	7-10 Students
10:00AM	12:00PM	Soccer Teams Study Halls	Sigma Square	Sigma Dorm	Academic	25-40 Students
10:00AM	10:55AM	Chapel Service	CU Center	CU Center	University	173 Staff/Students
10:30AM	2:00PM	Research in Bio	FH 105	Founders Hall	Academic	15-20 Students
11:00 AM	12:50 PM	Academic Courses	Classrooms	General Campus	Academic	33 Students

Concordia Daily Schedule

Thursday, October 30, 2014

Start	End	Activity	Room	Location	Category	Comments
11:10 AM	12:00 PM	Academic Courses	Classrooms	General Campus	Academic	32 Students
11:10 AM	12:25 PM	Academic Courses	Classrooms	General Campus	Academic	481 Students
11:10 AM	1:00 PM	Academic Courses	Classrooms	General Campus	Academic	10 Students
12:00PM	1:00PM	Physics Tutoring Session	Kappa Lounge	Upper Quads	Academic	15-20 Students
12:15PM	2:15PM	Men's Basketball Practice	Gym	Gym	Student	20-25 Students
12:30PM	2:00PM	CMTH Tutor Sessions	Epsilon Lounge	Lower Quads	Academic	7-10 Students
12:35 PM	1:50 PM	Academic Courses	Classrooms	General Campus	Academic	485 Students
1:10 PM	3:00 PM	Academic Courses	Classrooms	General Campus	Academic	25 Students
2:00PM	3:30PM	My Budget Training	GH 218	Grimm Hall	University	15-20 Visitors
2:00PM	4:00PM	School of Education Meeting	GH 302/301	Grimm Hall	University	15 Visitors
2:10 PM	3:25 PM	Academic Courses	Classrooms	General Campus	Academic	428 Students
2:10 PM	3:30 PM	Academic Courses	Classrooms	General Campus	Academic	15 Students
2:10 PM	5:00 PM	Academic Courses	Classrooms	General Campus	Academic	21 Students
2:15PM	4:15PM	Women's Basketball Practice	Gym	Gym	Student	20-25 Students
3:00PM	4:00PM	CUI Tutoring	Gym 202	Gym Classroom	Academic	7-10 Students
3:10 PM	5:00 PM	Academic Courses	Classrooms	General Campus	Academic	19 Students

Concordia Daily Schedule

Thursday, October 30, 2014

Start	End	Activity	Room	Location	Category	Comments
3:30PM	4:50PM	Academic Courses	Classrooms	General Campus	Academic	10 Students
3:30PM	5:00PM	Academic Courses	Classrooms	General Campus	Academic	40 Students
3:30PM	5:15PM	Academic Courses	Classrooms	General Campus	Academic	29 Students
3:30PM	6:30PM	Ensemble Sectional Rehearsal	CU Center	CU Center	Student	25-30 Students
3:30PM	5:30PM	Sinfonietta Strings Rehearsal	Good Shepherd Chapel	Good Shepherd Chapel	Student	10-15 Students
3:30PM	5:00PM	Delta Sigma Pi: Thursday Meetings	GH 218	Grimm Hall	Student	15 Students
3:35 PM	4:50 PM	Academic Courses	Classrooms	General Campus	Academic	335 Students
4:00PM	5:30PM	CMTH Tutor Sessions	Epsilon Lounge	Lower Quads	Academic	7-10 Students
4:00PM	6:00PM	Tutor Session: CHE 221/222	FH 200	Founders Hall	Academic	7-10 Students
4:00PM	6:00PM	CBIO: Tutor Sessions	Kappa Lounge	Upper Quads	Academic	10-15 Students
4:00PM	5:00PM	Advisory Board	GH 302/301	Grimm Hall	Student	20 Visitors
4:10 PM	5:15 PM	Academic Courses	Classrooms	General Campus	Academic	11 Students
4:30 PM	8:30 PM	Academic Courses	Classrooms	General Campus	Academic	503 Students
4:15PM	7:00PM	Women's Volleyball Practice	Gym	Gym	Student	15 Students
5:00PM	6:00PM	MBA Program Meeting	GH 220	Grimm Hall	University	25-50 Visitors
5:10 PM	6:25 PM	Academic Courses	Classrooms	General Campus	Academic	72 Students

Concordia Daily Schedule

Thursday, October 30, 2014

Start	End	Activity	Room	Location	Category	Comments
5:15 PM	6:25 PM	Academic Courses	Classrooms	General Campus	Academic	9 Students
5:30PM	10:00PM	SCORE - 2014/2015 Workshops	GH 302/301	Grimm Hall	Auxiliary/Com Life	20-25 Visitors
6:00 PM	8:50 PM	Academic Courses	Classrooms	General Campus	Academic	47 Students
6:00PM	9:00PM	Dia de Muertos - Celebration	Eagle Rock Café	Eagle Rock Café	Student	15-25 Students
6:00 PM	10:00 PM	Academic Courses	Classrooms	General Campus	Academic	93 Students
6:30PM	7:15PM	Tutor Session: CBIO - Kappa	Kappa Lounge	Upper Quads	Academic	10-15 Students
6:00 PM	9:30 PM	Academic Courses	Classrooms	General Campus	Academic	95 Students
7:00PM	9:00PM	Tutor Session: CHE 221/222	FH 105	Founders Hall	Academic	10-15 Students
7:00PM	8:00PM	Tutor Session: CHE221/222	FH 200	Founders Hall	Academic	10-15 Students
7:00PM	8:00PM	CTHL Tutor Sessions	GH 128	Grimm Hall	Academic	10-15 Students
7:00 PM	8:15 PM	Academic Courses	Classrooms	General Campus	Academic	6 Students
7:00PM	8:30PM	CUI Study Hall (Softball)	Gym 204	Gym Classroom	Academic	25 Students
7:00PM	9:00PM	CU Active: YOGA	Sigma Square	Sigma Dorm	Student	10-15 Students
7:00PM	8:00PM	Delta Sigma Pi: Pledge Meetings	FH 205	Founders Hall	Student	15-20 Students
7:00PM	10:00PM	Bio Study Sessions	LA 123	Library Arts Building	Academic	15-20 Students
7:00PM	10:00PM	League of Legends Club Meetings	Gamma Lounge	Lower Quads	Student	15-25 Students

Concordia Daily Schedule

Thursday, October 30, 2014

Start	End	Activity	Room	Location	Category	Comments
7:00PM	8:00PM	Fushion Meetings	GH 120	Grimm Hall	Student	15-20 Students
7:00PM	9:00PM	Irvine Parks and Rec	Gym	Gym	Aux/Comm	Per joint use agreement
7:30PM	9:00PM	SHOUT Worship Rehearsal	CU Center 510	CU Center	Student	10-15 Students
8:20 PM	9:30 PM	Academic Courses	Classrooms	General Campus	Academic	6 Students
9:00PM	12:00AM	Open Gym	Gym	Gym	Student	10-20 Students
9:30PM	10:30PM	SHOUT Worship	CU Center 510	CU Center	Student	open to campus

Campus Events Classified as:

Academic Life
Student Life
University Life
Auxiliary/Community Life

Concordia Daily Schedule

Tuesday, April 14, 2015

Start	End	Activity	Room	Location	Category	Comments
6:00 AM	7:00 AM	Women's Volleyball Practice	Gym	Gym	Student	20 Students
7:30 AM	8:30 AM	Academic Courses	CU Center	CU Center	Academic	5 Students
7:30 AM	8:45 AM	Academic Courses	Classrooms	General Campus	Academic	295 Students
7:30 AM	9:20 AM	Academic Courses	Classrooms	General Campus	Academic	25 Students
7:30 AM	10:20 AM	Academic Courses	Classrooms	General Campus	Academic	35 Students
8:00 AM	9:00 PM	Tutoring Center Hours	Core Tutoring Center	Rho Dorm	Academic	10 - 20 Students
8:30 AM	9:20 AM	Academic Courses	Classrooms	General Campus	Academic	17 Students
8:30 AM	10:20 AM	Academic Courses	Classrooms	General Campus	Academic	29 Students
9:00 AM	11:00 AM	Subject Tutoring: CHE 221/222	S U 203	Student Union	Academic	10 - 20 Students
9:00 AM	11:00 AM	Math Tutor	FH 102	Founders Hall	Academic	10 - 20 Students
9:30 AM	10:30 AM	Subject Tutoring: MUS 202/MUS	Music Rm 104	CU Center	Academic	10 - 20 Students
10:30 AM	10:55 AM	Chapel Service	CU Center	CU Center	University	120 Staff/Students
11:00 AM	11:50 AM	Academic Courses	Classrooms	General Campus	Academic	35 Students
11:00 AM	12:00 PM	Subject Tutoring: PHY 222	Kappa Lounge	Upper Quads	Academic	10 - 20 Students
11:00 AM	12:50 PM	Academic Courses	Classrooms	General Campus	Academic	22 Students
11:00 AM	1:00 PM	Academic Courses	Classrooms	General Campus	Academic	5 Students

Concordia Daily Schedule

Tuesday, April 14, 2015

Start	End	Activity	Room	Location	Category	Comments
11:10 AM	12:00 PM	Academic Courses	Classrooms	General Campus	Academic	47 Students
11:10 AM	12:25 PM	Academic Courses	Classrooms	General Campus	Academic	541 Students
12:00 PM	2:00 PM	Subject Tutoring: LAT 102	Alpha 101	Alpha bldg.	Academic	10 - 20 Students
12:15 PM	2:15 PM	Women's Basketball Practice	Gym	Gym	Academic	20 Students
12:35 PM	1:50 PM	Academic Courses	Classrooms	General Campus	Academic	514 Students
1:00 PM	2:00 PM	Subject Tutoring: BIO 247	Gym 203	Gym Classroom	Academic	10 - 20 Students
1:00PM	2:50PM	Academic Courses	Classrooms	General Campus	Academic	19 Students
1:10PM	3:00PM	Academic Courses	Classrooms	General Campus	Academic	27 Students
2:00 PM	3:00 PM	Subject Tutoring: ACT 211	GH 002	Grimm Hall	Academic	10 - 20 Students
2:00PM	3:50PM	Academic Courses	Classrooms	General Campus	Academic	9 Students
2:10PM	3:25PM	Academic Courses	Classrooms	General Campus	Academic	331 Students
2:10PM	5:00PM	Academic Courses	Classrooms	General Campus	Academic	29 Students
2:15 PM	4:15 PM	Men's Basketball Practice	Gym	Gym	Student	40 Students
2:30 PM	4:30 PM	Academic Courses	Good Shepherd Chapel	Good Shepherd Chapel	Academic	5 Staff/Students
3:00PM	4:50PM	Academic Courses	Classrooms	General Campus	Academic	9 Students
3:00 PM	5:00 PM	Subject Tutoring: CHE 221/222	Admin 100	Admin Bldg.	Academic	10 - 20 Students

Concordia Daily Schedule

Tuesday, April 14, 2015

Start	End	Activity	Room	Location	Category	Comments
3:30 PM	4:30 PM	Subject Tutoring: CHE 421	FH 204	Founders Hall	Academic	10 - 20 Students
3:30PM	4:50PM	Academic Courses	Classrooms	General Campus	Academic	4 Students
3:30PM	5:00PM	Academic Courses	Classrooms	General Campus	Academic	35 Students
3:30PM	5:15PM	Academic Courses	Classrooms	General Campus	Academic	24 Students
3:35PM	4:25PM	Academic Courses	Classrooms	General Campus	Academic	10 Students
3:35PM	4:50PM	Academic Courses	Classrooms	General Campus	Academic	105 Students
4:30 PM	8:30PM	Academic Courses	Classrooms	General Campus	Academic	335 Students
4:30 PM	9:00 PM	ODK Initiation	Good Shepherd Chapel	Good Shepherd Chapel	Student	30 - 40 Students
4:40 PM	5:55 PM	Academic Courses	Classrooms	General Campus	Academic	50 Students
5:00 PM	5:50 PM	Academic Courses	Classrooms	General Campus	Academic	37 Students
5:00 PM	7:00 PM	Delta Sigma Pi: Exec Committee	LA 123	Library Arts Building	Student	15 Students
5:15 PM	6:25 PM	Academic Courses	Classrooms	General Campus	Academic	12 Students
6:00 PM	7:00 PM	Subject Tutoring: CHE 322	FH 105	Founders Hall	Academic	10 - 20 Students
6:00 PM	7:00 PM	Subject Tutoring: BIO 112	S U 203	Student Union	Academic	10 - 20 Students
6:00 PM	8:00 PM	Subject Tutoring: MTH 265	Gamma Lounge	Lower Quads	Academic	10 - 20 Students
6:00 PM	8:50 PM	Academic Courses	Classrooms	General Campus	Academic	45 Students

Concordia Daily Schedule

Tuesday, April 14, 2015

Start	End	Activity	Room	Location	Category	Comments
6:00 PM	9:30 PM	Academic Courses	Classrooms	General Campus	Academic	18 Students
6:00 PM	9:30 PM	God on Trial 2	Rho Programming Center	Rho Dorm	Student	25 Staff/Students
6:00 PM	10:00 PM	Academic Courses	Classrooms	General Campus	Academic	122 Students
6:30 PM	9:20 PM	Academic Courses	Classrooms	General Campus	Academic	191 Students
6:45 PM	9:15 PM	Academic Courses	Classrooms	General Campus	Academic	8 Students
7:00 PM	8:30 PM	CMTH Tutoring	Epsilon Lounge	Lower Quads	Academic	10 - 20 Students
7:00 PM	8:30 PM	CMTH Exam Reviews # 3	GH 120 DeNault	Grimm Hall	Academic	100 - 150 Students
7:00 PM	8:00 PM	Subject Tutoring: LAT 102	FH 200	Founders Hall	Academic	10 - 20 Students
7:00 PM	10:00 PM	Debate Practice	S U 202 & SU 203	Student Union	Academic	20 - 30 Students
7:00 PM	9:15 PM	Academic Courses	Classrooms	General Campus	Academic	8 Students
8:00 PM	10:00 PM	Nuestra Voz Club Meeting	LA 123	Library Arts Building	Student	10 - 30 Students
8:20 PM	9:30 PM	Academic Courses	Classrooms	General Campus	Academic	8 Students
9:30 PM	10:30 PM	Academic Courses	Classrooms	General Campus	Academic	5 Students

Campus Events Classified as:

Academic Life
Student Life
University Life
Auxiliary/Community Life

Concordia Daily Schedule

Wednesday, April 15, 2015

Start	End	Activity	Room	Location	Category	Comments
7:30 AM	8:20 AM	Academic Courses	Classrooms	General Campus	Academic	347 Students
8:00 AM	9:00 PM	Tutoring Center Hours	Core Tutoring Center	Rho Dorm	Academic	10 - 20 Students
8:00 AM	3:00 PM	Orchestral Instrument Juries	CU Center	CU Center	Academic	5 - 15 Staff/Students
8:30 AM	9:20 AM	Academic Courses	Classrooms	General Campus	Academic	575 Students
8:30 AM	10:20 AM	Academic Courses	Classrooms	General Campus	Academic	18 Students
8:30 AM	10:30 AM	Academic Courses	Classrooms	General Campus	Academic	4 Students
9:00 AM	9:50 AM	Academic Courses	Classrooms	General Campus	Academic	22 Students
9:00 AM	4:00 PM	Academic Courses	Good Shepherd Chapel	Good Shepherd Chapel	Academic	20 Students
9:30 AM	10:20AM	Academic Courses	Classrooms	General Campus	Academic	535 Students
9:30 AM	10:30 AM	Subject Tutoring: CHE 322	FH 204	Founders Hall	Academic	10 - 20 Students
9:30 AM	11:09 AM	Academic Courses	Classrooms	General Campus	Academic	29 Students
10:00 AM	1:20 PM	School of Education - Faculty Meeting	GH 302/301	Grimm Hall	University	40 - 50 Staff
10:25 AM	11:00 AM	Academic Courses	Classrooms	General Campus	Academic	7 Students
10:25 AM	11:00 AM	Admissions Meeting	GH 120	Grimm Hall	University	20 - 30 Staff
10:30 AM	11:20 AM	Academic Courses	Classrooms	General Campus	Academic	28 Students
10:30 AM	11:25 AM	Academic Courses	Classrooms	General Campus	Academic	7 Students

Concordia Daily Schedule

Wednesday, April 15, 2015

Start	End	Activity	Room	Location	Category	Comments
10:30 AM	12:00 PM	Academic Courses	Classrooms	General Campus	Academic	3 Students
10:30 AM	12:00 PM	School of Business - Faculty Meeting	GH 210	Grimm Hall	University	20 - 25 Staff
11:00 AM	11:50 AM	Academic Courses	Classrooms	General Campus	Academic	22 Students
11:00 AM	12:50 PM	Academic Courses	Classrooms	General Campus	Academic	8 Students
11:10 AM	12:00 PM	Academic Courses	Classrooms	General Campus	Academic	354 Students
11:10 AM	1:00 PM	Academic Courses	Classrooms	General Campus	Academic	20 Students
12:00 PM	1:00 PM	Subject Tutoring: CHE 322	FH 200	Founders Hall	Academic	10 - 20 Students
12:00 PM	2:00 PM	Subject Tutoring: LAT 102	Epsilon Lounge	Lower Quads	Academic	10 - 20 Students
12:10 PM	1:00 PM	Academic Courses	Classrooms	General Campus	Academic	457 Students
12:10 PM	2:00 PM	Academic Courses	Classrooms	General Campus	Academic	28 Students
12:15 PM	2:15 PM	Women's Basketball Practice	Gym	Gym	Student	20 Students
1:00 PM	2:50 PM	Academic Courses	Classrooms	General Campus	Academic	41 Students
1:00 PM	2:00 PM	Subject Tutoring: ACT 211	GH 002	Grimm Hall	Academic	10 - 20 Students
1:10 PM	2:00 PM	Academic Courses	Classrooms	General Campus	Academic	439 Students
1:10 PM	2:25 PM	Academic Courses	Classrooms	General Campus	Academic	26 Students
1:10 PM	3:00 PM	Academic Courses	Classrooms	General Campus	Academic	15 Students

Concordia Daily Schedule

Wednesday, April 15, 2015

Start	End	Activity	Room	Location	Category	Comments
1:30 PM	4:30 PM	April Staff Meeting	GH 120	Grimm Hall	University	100 - 150 Staff
2:00 PM	3:00 PM	Subject Tutoring: CHE 322	FH 204	Founders Hall	Academic	10 - 20 Students
2:00 PM	3:00 PM	Subject Tutoring: MUS 202/MUS 212	Music Rm 124	CU Center	Academic	10 - 20 Students
2:00 PM	3:50 PM	Academic Courses	Classrooms	General Campus	Academic	16 Students
2:00 PM	4:00 PM	Student Teacher Meeting	GH 302/301	Grimm Hall	Academic	30 - 50 Staff/Students
2:10 PM	3:00 PM	Academic Courses	Classrooms	General Campus	Academic	277 Students
2:10 PM	4:00 PM	Academic Courses	Classrooms	General Campus	Academic	24 Students
2:10 PM	5:00 PM	Academic Courses	Classrooms	General Campus	Academic	37 Students
2:15 PM	4:15 PM	Men's Basketball Practice	Gym	Gym	Academic	40 Students
3:00 PM	4:50 PM	Academic Courses	Classrooms	General Campus	Academic	21 Students
3:00 PM	6:00 PM	CUI Baseball vs Cal State San Marcos	Baseball Field	Campus Fields	University	100 Visitors
3:10 PM	4:00 PM	Academic Courses	Classrooms	General Campus	Academic	110 Students
3:10 PM	4:25 PM	Academic Courses	Classrooms	General Campus	Academic	90 Students
3:10 PM	4:40 PM	Academic Courses	Classrooms	General Campus	Academic	43 Students
3:10 PM	5:00 PM	Academic Courses	Classrooms	General Campus	Academic	10 Students
3:10 PM	6:00 PM	Academic Courses	Classrooms	General Campus	Academic	11 Students

Concordia Daily Schedule

Wednesday, April 15, 2015

Start	End	Activity	Room	Location	Category	Comments
3:30 PM	5:30 PM	CMTH Small Group Tutoring	Epsilon Lounge	Lower Quads	Academic	10 - 20 Students
4:00 PM	6:00 PM	Academic Courses	Classrooms	General Campus	Academic	6 Students
4:00 PM	5:00 PM	John Norton Meeting	Good Shepherd Chapel	Good Shepherd Chapel	University	5 Staff/Students
4:00 PM	6:00 PM	Subject Tutoring: BIO 112	GH 126	Grimm Hall	Academic	10 - 20 Students
4:00 PM	8:00 PM	Student Teacher Seminar	GH 302/301	Grimm Hall	Academic	30 - 50 Staff/Students
4:10 PM	5:25 PM	Academic Courses	Classrooms	General Campus	Academic	12 Students
4:15 PM	6:00 PM	Men's Volleyball Practice	Gym	Gym	Academic	20 Students
4:30 PM	8:00 PM	abbey west band rehearsal - 3 & 4	CU Center	CU Center	University	10 - 15 Students
4:30 PM	8:30 PM	Academic Courses	Classrooms	General Campus	Academic	319 Students
4:40 PM	5:55pm	Academic Courses	Classrooms	General Campus	Academic	46 Students
4:45 PM	5:55pm	Academic Courses	Classrooms	General Campus	Academic	16 Students
4:45 PM	6:10 PM	abbey west band rehearsal - 1	Performing Arts Annex	PAX	University	10 - 15 Students
4:45 PM	6:15 PM	Academic Courses	Classrooms	General Campus	Academic	26 Students
5:00 PM	6:00 PM	Subject Tutoring: PHY 212	Gamma Lounge	Lower Quads	Academic	10 - 20 Students
5:00 PM	7:00 PM	Chemistry Club - Spring 2015	FH 204	Founders Hall	Student	10 - 20 Students
5:00 PM	7:00 PM	Cui Bono Round Table	Rho Programming Center	Rho Dorm	Student	60 - 80 Staff/Students

Concordia Daily Schedule

Wednesday, April 15, 2015

Start	End	Activity	Room	Location	Category	Comments
5:01 PM	5:50 PM	Academic Courses	Classrooms	General Campus	Academic	15 Students
5:10 PM	6:00 PM	Academic Courses	Classrooms	General Campus	Academic	21 Students
6:00 PM	7:00 PM	Subject Tutoring: CHE 322	FH 105	Founders Hall	Academic	10 - 20 Students
6:00 PM	8:50 PM	Academic Courses	Classrooms	General Campus	Academic	37 Students
6:00 PM	9:00 PM	Academic Course	Good Shepherd Chapel	Good Shepherd Chapel	Academic	20 Students
6:00 PM	9:30 PM	Academic Courses	Classrooms	General Campus	Academic	15 Students
6:00 PM	10:00 PM	Academic Courses	Classrooms	General Campus	Academic	114 Students
6:15 PM	7:45 PM	abbey west band rehearsal - 2	Performing Arts Annex	PAX	University	10 - 15 Students
6:30 PM	9:20 PM	Academic Courses	Classrooms	General Campus	Academic	113 Students
7:00 PM	8:30 PM	CMTH Tutoring	Epsilon Lounge	Lower Quads	Academic	10 - 20 Students
7:00 PM	9:00 PM	Subject Tutoring: CHE 421	FH 204	Founders Hall	Academic	10 - 20 Students
7:00 PM	9:00 PM	Phi Delta Epsilon General Meeting	GH 219	Grimm Hall	Student	30 - 40 Students
8:00 PM	10:00 PM	Delta Sigma Pi: Exec Committee	LA 122	Library Arts Building	Student	15 Students
8:30 PM	9:30 PM	Percussion and Chamber Concert	CU Center	CU Center	University	25 - 40 Staff/Students &Visitors
9:30 PM	10:30 PM	Intramural Capture the Flag	Soccer Field	Campus Fields	Student	10 Students

Campus Events Classified as:

Academic Life
Student Life
University Life
Auxiliary/Community Life

Concordia Daily Schedule

Thursday, April 16, 2015

Start	End	Activity	Room	Location	Category	Comments
7:30 AM	8:30 AM	Academic Courses	CU Center	CU Center	Academic	5 Students
7:30 AM	8:45 AM	Academic Courses	Classrooms	General Campus	Academic	295 Students
7:30 AM	9:20 AM	Academic Courses	Classrooms	General Campus	Academic	16 Students
8:00 AM	9:00 PM	Tutoring Center Hours	Core Tutoring Center	Rho Dorm	Academic	10 - 20 Students
8:30 AM	9:00 AM	Abbey West - ACTS Set-Up	CU Center	CU Center	University	10 Staff/Students
8:30 AM	9:20 AM	Academic Courses	Classrooms	General Campus	Academic	11 Students
8:30 AM	10:20 AM	Academic Courses	Classrooms	General Campus	Academic	23 Students
9:00 AM	9:50 AM	Academic Courses	Classrooms	General Campus	Academic	35 Students
9:00 AM	10:30 AM	Executive Council	GH 308	Grimm Hall	University	10 Staff/Visitors
9:05 AM	10:20 AM	Academic Courses	Classrooms	General Campus	Academic	476 Students
9:30 AM	10:30 AM	Subject Tutoring: CHE 322	S U 203	Student Union	Academic	10 - 20 Students
9:30 AM	10:30 AM	Subject Tutoring: PHY 212	Beta 101	Beta	Academic	10 - 20 Students
9:30 AM	4:00 PM	Research Experiment	FH 105	Founders Hall	Academic	10 Staff/Students
9:30 AM	10:30 AM	J Moschina Team Meeting	GH 302/301	Grimm Hall	University	8 Staff
10:30 AM	10:55 AM	Chapel Service	CU Center	CU Center	University	140 Staff/Students
11:00 AM	11:50 AM	Academic Courses	Classrooms	General Campus	Academic	35 Students

Concordia Daily Schedule

Thursday, April 16, 2015

Start	End	Activity	Room	Location	Category	Comments
11:00 AM	12:00 PM	Subject Tutoring: CHE 421	Epsilon Lounge	Lower Quads	Academic	10 - 20 Students
11:00 AM	12:00 PM	Fac/Staff Basketball Game	Gym	Gym	University	20 Staff
11:00 AM	12:50 PM	Academic Courses	Classrooms	General Campus	Academic	22 Students
11:00 AM	1:00 PM	Academic Courses	Classrooms	General Campus	Academic	5 Students
11:10 AM	12:00 PM	Academic Courses	Classrooms	General Campus	Academic	31 Students
11:10 AM	12:25 PM	Academic Courses	Classrooms	General Campus	Academic	566 Students
11:15 AM	11:30 AM	Abbey West - ACTS Take-Down	CU Center	CU Center	University	10 Staff/Students
11:30 AM	12:30 PM	Academic Courses	CU Center	CU Center	Academic	5 - 10 Students
12:00 PM	2:00 PM	Subject Tutoring: LAT 102	Alpha 101	Alpha bldg.	Academic	10 - 20 Students
12:15 PM	2:15 PM	Women's Basketball Practice	Gym	Gym	Academic	20 Students
12:35 PM	1:35 PM	Academic Courses	Classrooms	General Campus	Academic	7 Students
12:35 PM	1:50 PM	Academic Courses	Classrooms	General Campus	Academic	514 Students
1:00 PM	3:00 PM	Subject Tutoring: MTH 252	Gym 203	Gym Classroom	Academic	10 - 20 Students
1:00 PM	2:50 PM	Academic Courses	Classrooms	General Campus	Academic	19 Students
1:10 PM	3:00 PM	Academic Courses	Classrooms	General Campus	Academic	29 Students
2:00PM	3:50PM	Academic Courses	Classrooms	General Campus	Academic	9 Students

Concordia Daily Schedule

Thursday, April 16, 2015

Start	End	Activity	Room	Location	Category	Comments
2:10PM	3:25PM	Academic Courses	Classrooms	General Campus	Academic	336 Students
2:10PM	5:00PM	Academic Courses	Classrooms	General Campus	Academic	13 Students
2:15 PM	4:15 PM	Men's Basketball Practice	Gym	Gym	Academic	40 Students
3:00PM	4:50PM	Academic Courses	Classrooms	General Campus	Academic	9 Students
3:10 PM	5:00 PM	Academic Courses	Classrooms	General Campus	Academic	19 Students
3:30PM	4:50PM	Academic Courses	Classrooms	General Campus	Academic	4 Students
3:30PM	5:00PM	Academic Courses	Classrooms	General Campus	Academic	35 Students
3:30PM	5:15PM	Academic Courses	Classrooms	General Campus	Academic	24 Students
3:30 PM	5:30 PM	Sinfonietta Rehearsal	Good Shepherd Chapel	Good Shepherd Chapel	University	5 - 10 Staff/Students
3:35 PM	5:15 PM	Academic Courses	Classrooms	General Campus	Academic	105 Students
3:40 PM	4:30 PM	Academic Courses	Classrooms	General Campus	Academic	6 Students
4:00 PM	5:00 PM	Subject Tutoring: MTH 265	S U 202	Student Union	Academic	10 - 20 Students
4:10 PM	5:15 PM	Academic Courses	Classrooms	General Campus	Academic	8 Students
4:15 PM	6:00 PM	Men's Volleyball Practice	Gym	Gym	Student	20 Students
4:30 PM	8:30 PM	Academic Courses	Classrooms	General Campus	Academic	424 Students
4:40 PM	5:55 PM	Academic Courses	Classrooms	General Campus	Academic	50 Students

Concordia Daily Schedule

Thursday, April 16, 2015

Start	End	Activity	Room	Location	Category	Comments
5:00 PM	6:00 PM	Subject Tutoring: BIO 247	GH 121	Grimm Hall	Academic	10 - 20 Students
5:00 PM	6:00 PM	Subject Tutoring: ACT 212	GH 002	Grimm Hall	Academic	10 - 20 Students
5:00 PM	6:00 PM	Subject Tutoring: BIO 112	FH 200	Founders Hall	Academic	10 - 20 Students
5:00 PM	6:00 PM	CUI Tutor Appreciation Dinner	Rho Programming Center	Rho Dorm	University	25 - 35 Staff/Students
5:15 PM	6:25 PM	Academic Courses	Classrooms	General Campus	Academic	12 Students
6:00 PM	8:00 PM	MBA Soiree	GH 302/301	Grimm Hall	University	25 - 30 Staff/Visitors
6:00 PM	8:00 PM	Academic Courses	Classrooms	General Campus	Academic	23 Students
6:00 PM	8:50 PM	Academic Courses	Classrooms	General Campus	Academic	17 Students
6:00 PM	9:00 PM	Academic Courses	Classrooms	General Campus	Academic	19 Students
6:00 PM	9:00 PM	Special Voice Concert	Good Shepherd Chapel	Good Shepherd Chapel	University	20 - 30 Staff/Students
6:00 PM	9:40 PM	Guatemala Nacho Night	Sigma Square	Sigma Dorm	Student	20 Students
6:30 PM	10:00 PM	Academic Courses	Classrooms	General Campus	Academic	119 Students
6:00 PM	10:00 PM	Chemistry Lecture	GH 120	Grimm Hall	Academic	80 - 100 Staff/Students
6:30 PM	9:20 PM	Academic Courses	Classrooms	General Campus	Academic	97 Students
7:00 PM	8:30 PM	CMTH Tutoring	Epsilon Lounge	Lower Quads	Academic	10 - 20 Students
7:00 PM	8:00 PM	Subject Tutoring: LAT 102	Admin 100	Admin Bldg.	Academic	10 - 20 Students

Concordia Daily Schedule

Thursday, April 16, 2015

Start	End	Activity	Room	Location	Category	Comments
7:00 PM	9:00 PM	Subject Tutoring: CHE 221	S U 203	Student Union	Academic	10 - 20 Students
7:00 PM	9:15 PM	Academic Courses	Classrooms	General Campus	Academic	8 Students
7:30 PM	9:00 PM	SHOUT! Worship Band Rehearsal	CU Center	CU Center	University	10 Students
8:01 PM	10:00 PM	Academic Courses	Classrooms	General Campus	Academic	10 Students
8:20 PM	9:30 PM	Academic Courses	Classrooms	General Campus	Academic	8 Students
9:30 PM	10:30 PM	SHOUT! Worship	CU Center	CU Center	University	150 Students

Campus Events Classified as:

Academic Life
Student Life
University Life
Auxiliary/Community Life

Concordia Daily Schedule

Friday, April 17, 2015

Start	End	Activity	Room	Location	Category	Comments
7:30 AM	8:20 AM	Academic Courses	Classrooms	General Campus	Academic	347 Students
8:00 AM	9:00 PM	Tutoring Center Hours	Core Tutoring Center	Rho Dorm	Academic	10 - 20 Students
8:30 AM	9:20 AM	Academic Courses	Classrooms	General Campus	Academic	536 Students
9:00 AM	9:50 AM	Academic Courses	Classrooms	General Campus	Academic	12 Students
9:30 AM	10:20 AM	Academic Courses	Classrooms	General Campus	Academic	512 Students
8:30 AM	10:30 AM	Academic Courses	Good Shepherd Chapel	Good Shepherd Chapel	Academic	25 Students
8:50 AM	10:00 AM	Student Employee Stipend Meeting	GH 210	Grimm Hall	University	7 Staff
9:30 AM	10:30 AM	Subject Tutoring: CHE 322	FH 204	Founders Hall	Academic	10 - 20 Students
10:30 AM	10:55 AM	Chapel Service	CU Center	CU Center	University	350 Staff/Students
11:00 AM	11:50 AM	Academic Courses	Classrooms	General Campus	Academic	12 Students
11:00 AM	12:50 PM	Academic Courses	Classrooms	General Campus	Academic	16 Students
11:10 AM	12:00 PM	Academic Courses	Classrooms	General Campus	Academic	384 Students
11:10 AM	12:25 PM	Academic Courses	Classrooms	General Campus	Academic	28 Students
11:00 AM	2:30 PM	Academic Courses	Music Rm 105	CU Center	Academic	5 - 10 Staff/Students
11:00 AM	12:00 PM	Brass Ensemble	Performing Arts Annex	PAX	Student	8 - 10 Staff/Students
12:10 PM	1:00 PM	Academic Courses	Classrooms	General Campus	Academic	444 Students

Concordia Daily Schedule

Friday, April 17, 2015

Start	End	Activity	Room	Location	Category	Comments
12:15 PM	2:15 PM	Women's Basketball Practice	Gym	Gym	Academic	20 Students
1:00 PM	2:00 PM	Academic Courses	Good Shepherd Chapel	Good Shepherd Chapel	Academic	5 - 10 Staff/Students
1:00 PM	2:50 PM	Academic Courses	Classrooms	General Campus	Academic	17 Students
1:10 PM	2:00 PM	Academic Courses	Classrooms	General Campus	Academic	403 Students
2:00 PM	8:00 PM	CUI Softball vs. University of Antelope	Softball Field	Campus Fields	University	200 Staff/Students &Visitors
2:10 PM	3:00 PM	Academic Courses	Classrooms	General Campus	Academic	270 Students
2:15 PM	4:15 PM	Men's Basketball Practice	Gym	Gym	Academic	40 Students
2:30 PM	4:15 PM	Core Theology	Good Shepherd Chapel	Good Shepherd Chapel	Academic	10 Staff/Students
3:00 PM	6:00 PM	CUI Baseball vs Vanguard University	Baseball Field	Campus Fields	University	225 Staff/Students &Visitors
3:10 PM	4:00 PM	Academic Courses	Classrooms	General Campus	Academic	90 Students
3:10 PM	4:10 PM	Math Major Review Meeting	FH 201	Founders Hall	Academic	10 - 20 Students
3:10 PM	4:40 PM	Academic Courses	Classrooms	General Campus	Academic	43 Students
4:00 PM	5:30 PM	Softball Team Meeting	Gym 204	Gym Classroom	Student	20 - 30 Staff/Students
4:30 PM	6:30 PM	SSA Traffic Control Training	Admin 100	Admin Bldg.	University	15 Staff/Students
5:30 PM	9:00 PM	Intramural Soccer	Soccer Field	Campus Fields	Student	40 Students
6:00 PM	10:00 PM	Academic Courses	Classrooms	General Campus	Academic	60 Students

Concordia Daily Schedule

Friday, April 17, 2015

Start	End	Activity	Room	Location	Category	Comments
6:20 PM	9:00 PM	Phi Delta Epsilon Banquet	GH 302/301	Grimm Hall	Student	30 Staff/Students
7:00 PM	10:00 PM	Fusion Event: Casino Night	SU Dining Hall	Student Union	Student	150 Students

Campus Events Classified as:

Academic Life
Student Life
University Life
Auxiliary/Community Life

Concordia Daily Schedule

Saturday, April 18, 2015

Start	End	Activity	Room	Location	Category	Comments
8:00 AM	5:00 PM	Academic Courses	Classrooms	General Campus	Academic	79 Students
8:30 AM	12:00 PM	Academic Courses	Classrooms	General Campus	Academic	24 Students
9:00 AM	11:50 AM	Academic Courses	Classrooms	General Campus	Academic	17 Students
9:00 AM	1:00 PM	Academic Courses	Classrooms	General Campus	Academic	10 Students
9:00 AM	3:00 PM	Spring Open House	Campus Wide	Campus Wide	University	170 Visitors
9:00 AM	4:00 PM	Academic Courses	Classrooms	General Campus	Academic	13 Students
12:00 PM	6:00 PM	CUI Baseball vs Vanguard University	Baseball Field	Campus Fields	University	325 Staff/Students &Visitors
1:00 PM	3:00 PM	Club Softball Practice	Softball Field	Campus Fields	Aux/Comm	20 - 25 Visitors
1:00 PM	4:00 PM	Academic Courses	Classrooms	General Campus	Academic	46 Students
2:00 PM	4:00 PM	CUI Men's Lacrosse vs. Biola University	Soccer Field	Campus Fields	University	100 Staff/Students &Visitors
5:00PM	7:00PM	Women's OC All Star Game	Gym	Gym	Aux/Comm	1500 Visitors
7:00PM	9:00PM	Men's OC All Star Game	Gym	Gym	Aux/Comm	2000 Visitors
7:30 PM	9:30 PM	MasterWorks Concert	CU Center	CU Center	University	357 Visitors

Campus Events Classified as:

Academic Life
Student Life
University Life
Auxiliary/Community Life

Concordia Daily Schedule

Sunday, April 19, 2015

Start	End	Activity	Room	Location	Category	Comments
7:00 AM	10:00 PM	Student Study Space	Sigma Square	Sigma Dorm	Academic	20 - 60 Students
7:00 AM	5:30 PM	Student Study Space	Rho Programming Center	Rho Dorm	Academic	20 - 60 Students
8:00 AM	6:00 PM	Masterworks Reception	GH 302/301	Grimm Hall	University	Approx. 45 Visitors
1:00 PM	3:00 PM	Subject Tutoring: MTH 265	S U 202	Student Union	Academic	10 - 20 Students
3:00 PM	5:00 PM	Subject Tutoring: MTH 252	GH 210	Grimm Hall	Academic	10 - 20 Students
3:00 PM	5:00 PM	MasterWorks Concert	CU Center	CU Center	University	497 Visitors
5:30 PM	9:00 PM	PAL Spring Training	Rho Programming Center	Rho Dorm	University	40 Staff/Students
6:00 PM	7:00 PM	Subject Tutoring: BIO 112	Gym 203	Gym Classroom	Academic	10 - 20 Students
6:00 PM	8:00 PM	Exam Review: CHE 221	GH 127	Grimm Hall	Academic	10 - 20 Students
6:00 PM	8:00 PM	Subject Tutoring: CHE 221	S U 203	Student Union	Academic	10 - 20 Students
7:00 PM	8:30 PM	CMTH Tutoring	Epsilon Lounge	Lower Quads	Academic	10 - 20 Students
7:00 PM	8:00 PM	Subject Tutoring: CHE 221/222	FH 200	Founders Hall	Academic	10 - 20 Students
7:00 PM	8:00 PM	Subject Tutoring: BIO 112	Gym 203	Gym Classroom	Academic	10 - 20 Students
9:30 PM	10:00 PM	Student Study Space	Rho Programming Center	Rho Dorm	Academic	20 - 60 Students

Campus Events Classified as:
Academic Life
Student Life
University Life
Auxiliary/Community Life

Conferenced Events

2013/14	Number of Events	2014/15	Number of Events
July	**131**	*July*	**30**
August	**6**	*August*	**2**
September	**11**	*September*	**5**
October	**11**	*October*	**4**
November	**16**	*November*	**10**
December	**19**	*December*	**6**
January	**14**	*January*	**5**
February	**45**	*February*	**4**
March	**43**	*March*	**16**
April	**29**	*April*	**13**
May	**20**	*May*	**7**
June	**27**	*June*	**11**
TOTAL	**372**	***TOTAL***	**113**

Academic Events

2013/14	Number of Events	2014/15	Number of Events
July	**6**	*July*	0
August	**1**	*August*	1
September	**7**	*September*	9
October	**4**	*October*	10
November	**9**	*November*	10
December	**3**	*December*	1
January	**6**	*January*	4
February	**10**	*February*	6
March	**3**	*March*	5
April	**5**	*April*	1
May	**6**	*May*	2
June	**5**	*June*	1
TOTAL	**65**	***TOTAL***	**50**

Joint Use Agreement (City of Irvine) **Joint Use Agreement (City of Irvine)**

2013/14	Attendance	2014/15	Attendance
Year Round		*Year Round*	
Monday 7-9pm	*15-20*	Monday 7-9pm	*15-20*
Tuesday 7-9pm	15-20	Tuesday 7-9pm	15-20
Wednesday 7-9pm	40-50	Wednesday 7-9pm	40-50
Friday 7-9pm	15-20	Friday 7-9pm	15-20
Saturday 7-4pm	50-60	Saturday 7-4pm	50-60
Sunday 7-6pm	40-50	Sunday 7-6pm	40-50

APPENDIX K

WEEKEND HCM WORKSHEETS

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	147	3	17	339	389	314
Future Vol, veh/h	147	3	17	339	389	314
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	160	3	18	368	423	341

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	814	382	764	0	-	0
Stage 1	593	-	-	-	-	-
Stage 2	221	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	316	616	845	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	309	616	845	-	-	-
Mov Cap-2 Maneuver	309	-	-	-	-	-
Stage 1	515	-	-	-	-	-
Stage 2	778	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.5	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	845	-	312	-	-
HCM Lane V/C Ratio	0.022	-	0.523	-	-
HCM Control Delay (s)	9.4	-	28.5	-	-
HCM Lane LOS	A	-	D	-	-
HCM 95th %tile Q(veh)	0.1	-	2.8	-	-

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	73	200	143	5	7	51
Future Vol, veh/h	73	200	143	5	7	51
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	217	155	5	8	55

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	155	0	-	0	422	78
Stage 1	-	-	-	-	155	-
Stage 2	-	-	-	-	267	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1423	-	-	-	560	967
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	754	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1423	-	-	-	529	967
Mov Cap-2 Maneuver	-	-	-	-	529	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	712	-

Approach	EB	WB	SB
HCM Control Delay, s	2.1	0	9.4
HCM LOS			A

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1423	-	-	-	879
HCM Lane V/C Ratio	0.056	-	-	-	0.072
HCM Control Delay (s)	7.7	-	-	-	9.4
HCM Lane LOS	A	-	-	-	A
HCM 95th %tile Q(veh)	0.2	-	-	-	0.2

Intersection	
Int Delay, s/veh	6.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Vol, veh/h	261	14	1	163	261	73
Future Vol, veh/h	261	14	1	163	261	73
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	95	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	284	15	1	177	284	79

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	414	182	363	0	-	0
Stage 1	323	-	-	-	-	-
Stage 2	91	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	566	829	1192	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	566	829	1192	-	-	-
Mov Cap-2 Maneuver	566	-	-	-	-	-
Stage 1	706	-	-	-	-	-
Stage 2	921	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	17.8	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1192	-	575	-	-
HCM Lane V/C Ratio	0.001	-	0.52	-	-
HCM Control Delay (s)	8	-	17.8	-	-
HCM Lane LOS	A	-	C	-	-
HCM 95th %tile Q(veh)	0	-	3	-	-

Intersection	
Int Delay, s/veh	6

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Traffic Vol, veh/h	25	111	81	4	43	218
Future Vol, veh/h	25	111	81	4	43	218
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	115	-	-	0	0	-
Veh in Median Storage, #	-	0	0	-	0	-
Grade, %	-	0	0	-	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	121	88	4	47	237

Major/Minor	Major1		Major2		Minor2	
Conflicting Flow All	88	0	-	0	203	44
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	115	-
Critical Hdwy	4.14	-	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	2.22	-	-	-	3.52	3.32
Pot Cap-1 Maneuver	1506	-	-	-	767	1017
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	897	-
Platoon blocked, %		-	-	-		
Mov Cap-1 Maneuver	1506	-	-	-	753	1017
Mov Cap-2 Maneuver	-	-	-	-	753	-
Stage 1	-	-	-	-	925	-
Stage 2	-	-	-	-	881	-

Approach	EB	WB	SB
HCM Control Delay, s	1.4	0	10.3
HCM LOS			B

Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1
Capacity (veh/h)	1506	-	-	-	961
HCM Lane V/C Ratio	0.018	-	-	-	0.295
HCM Control Delay (s)	7.4	-	-	-	10.3
HCM Lane LOS	A	-	-	-	B
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2

APPENDIX L

TRAFFIC AND PARKING MANAGEMENT PLAN

Concordia University Irvine

Traffic & Parking Management Plan

April 2016

The Concordia University Irvine main campus is located at 1530 Concordia, Irvine, California. The University is a gated campus with two points of entry. Each point of entry is controlled by a manned gatehouse. Located within the confines of the gatehouses are two private non-University owned neighborhoods. The campus is bounded by Ridgeline Drive to the east and Turtle Rock Drive to the west. The primary route of travel within the University campus is Concordia East/West, a two-lane roadway. A network of secondary streets provide access to the private residential neighborhoods and other campus facilities.

Traffic Rules & Parking Regulations

The following is an abbreviated version of the Concordia University Irvine Traffic Rules and Parking Regulations. Further questions may be directed to the Department of Campus Safety by calling 949-214-3003 or stopping by the Department of Campus Safety located in Admin 103.

Concordia University Irvine facilities including buildings, athletic fields and parking lots are restricted to student, faculty, staff and approved guest use. All non-affiliated groups, organizations and individuals must receive authorization prior to using University facilities. Portions of the campus may be made available to the general public during designated times or special events.

Concordia University Irvine's traffic rules and parking regulations are enforced by the Department of Campus Safety. These individuals have the authority to issue citations or tow vehicles that are in violation of traffic or parking regulations on University property.

All vehicles utilizing University parking areas are required to obtain a parking decal or visitor's pass. Student, faculty and staff parking decals are issued by the Department of Campus Safety. Visitor passes may be obtained at the gatehouses. Parking decals and passes remain the property of Concordia University Irvine. The University reserves the right to:

- Refuse to issue a parking permit/pass
- Revoke or recall a permit/pass
- Restrict the use of any parking space or lot at any time
- Determine hours of control

Anyone parking a motor vehicle on University property must display a parking decal/pass. Any vehicle parked without displaying a valid decal/pass is subject to ticketing or towing. Parking in the following areas is prohibited:

- Fire lanes
- Crosswalks
- Sidewalks
- Handicap spaces (without a valid placard)
- Loading zones (in excess of time limit)
- Other designated parking spaces without proper decal/pass

Traffic and Parking Management

Traffic on campus is self-regulated during periods of normal campus activity. Self-regulation includes permanently placed stop signs, speed limit signs and roadway markings. Campus parking lots and spaces have been designated for specific usage (student, faculty/staff, visitor, etc.). The Department of Campus Safety will be responsible for the development and implementation of an Event Action Plan for events that may result in higher than normal traffic flows. This would include any large/multiple events during which on-campus parking is anticipated to reach capacity or impact traffic circulation. Below is a list of Special Events which may necessitate the use of an Event Action Plan. The use of an Event Action Plan is not limited to the listed Special Events, but may be used anytime at the discretion of Campus Safety.

Special Events	Month	2013-14 Attendees Highest Day	2014-15 Attendees Highest Day	2015-16 Attendees Highest Day
Move in Day	August	1600	1545	1500
Opening Convocation	August	1450	1200	1400
Fall Graduation	December	N/A	1300	1300
Christmas Concerts (3 Days)	December	850	847	850
Homecoming Game	February	400	525	500
Forensics Competition (4 days)	March	550	650	600
PacWest Conference* Tourney (4 days)	March	N/A	2000	2000
Preview Days for HS Seniors	April	600	525	575
Community Chorale/Master Works	April	860	970	995
OC HS All-star Basketball Games	April	2000	2000	0**
Gala (fundraiser)	May	600	800	750
Shakespeare productions (3 days)	May	635	700	700
Great Commission Summit (2 days)	June	N/A	95	125
Coaches Conference (5 days)	June/July	N/A	N/A	700
CU Soon (incoming freshman)	July	495	550	500
Concerts on the Green (3 day)	July	640	750	750

*The conference championship tourney moves to a different university every 3 years
**Concordia no longer hosts these games

The Event Action Plan will list specific details needed to ensure efficient traffic circulation. Details may include actions such as event specific parking areas, entrance and exit routes, etc. The following is a list of specific actions that can be taken to manage event traffic and

parking. Campus Safety personnel will be briefed prior to events regarding their specific assignments.

Gatehouses:

During periods of heavy traffic, both the entry and exit control arms will be locked in the open position. Gatehouse attendants will forgo the normal procedure of stopping visitor vehicles entering campus. Maintaining unimpeded traffic flow increases the capacity of the entries two to threefold during periods of increased traffic. Vehicles not displaying a "Concordia" parking decal will be screened at another location further inside the campus. This is intended to prevent vehicles from backing up onto city streets and make entering and exiting campus quicker and easier.

Parking Lots:

Vehicles entering campus will be directed to parking lots designated for specific events. For example, vehicles entering campus for a baseball game will be directed to the west parking lot. This will ensure visitors are parked in an area closest to the event they are attending. This will also reduce the number of vehicles "circling" the campus looking for parking. The Department of Campus Safety will work with event coordinators to provide parking instructions to guests prior to the event. At times, special parking passes are issued to expected guests in advance of their arrival so that they can move more quickly through the gatehouse screening.

Uniformed Safety Personnel:

Uniformed safety personnel will be assigned to key positions on campus to assist with the flow of traffic and parking. Key positions include all entrances, exits and within all parking lots, crosswalks, fire lanes, etc. Uniformed safety personnel will be assigned to key intersections, including Concordia East and Ascension Drive. Personnel will work to ensure intersections remain clear for turning vehicles and pedestrians needing to cross streets. Personnel assigned specifically to the intersection of Concordia East and Ascension Drive will ensure intersection remains clear to allow vehicles to enter and exit the private neighborhood. Safety personnel will also be assigned as roving units to continually monitor traffic flow and parking.

Uniformed safety personnel will wear reflective vests while on-duty. Each will be equipped with a campus safety radio and traffic directional devices (hand-held stop signs, flashlights, directional wands, etc.).

Signs:

Temporary signs will be posted on campus to help direct vehicles to proper designated parking lots. Temporary "No Event Parking" signs will be placed at each entrance to the private neighborhoods. In addition, signs indicating directions to the 405 Freeway will be posted at the Turtle Rock gate.

Bus Parking:

Large buses entering campus will be requested to do so via the Turtle Rock Drive gate. Buses remaining on campus will be directed to park in designated bus parking areas (rear of main lot, west lot or Pacific Southwest District loading zone). Buses will not be permitted to idle while parked on campus.

Egress:

Vehicles exiting campus after an event will be directed and required to exit campus via either the Ridgeline Drive or Turtle Rock Drive gate depending on the parking lot utilized. Sending exiting traffic to both gates will help reduce vehicle back-up at the Ridgeline Drive gate. As previously stated, uniformed safety personnel will be assigned to the intersection

of Concordia East and Ascension Drive to ensure intersection remains clear for vehicles entering and exiting the private neighborhood.

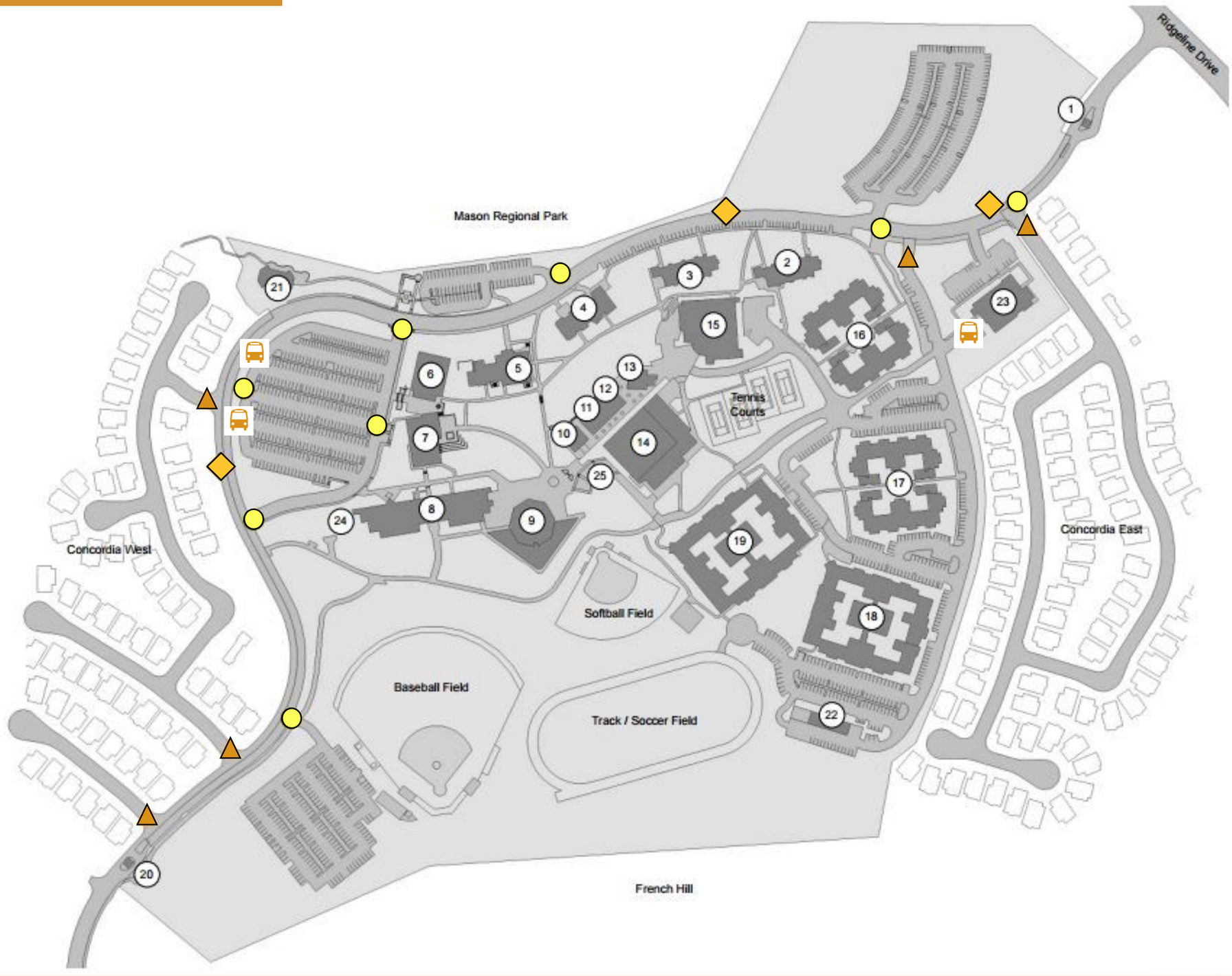
Off-site Parking:

Off-site parking and shuttle service will be considered depending on the nature and size of an event. Off-site parking and shuttle service has been used during well-attended events with great success. Off-site parking and shuttle service will be considered for large/multiple events when on-campus parking is anticipated to reach capacity. Examples of off-site parking locations that have been used include University High School, Light of Christ Lutheran Church, Turtle Rock Pre-School and Mariners Church Irvine .

Irvine Police Department:

The Irvine Police Department will be notified in advance anytime large/multiple events have the potential to impact local traffic (i.e. traffic backing up onto Ridgeline Drive or Turtle Rock Drive). Irvine Police Department will be requested to provide traffic direction on local streets surrounding the campus. At such time as a traffic signal is installed at Ridgeline and Concordia East, the University will seek to establish a contract for services with Irvine Police Department to staff an officer(s) to work the pickle at the control box (similar to the existing arrangement with Mariners Church Irvine).

The attached map indicates general placement of directional signage and campus safety personnel.



EXISTING BUILDINGS	
1	Access Gate House 1
2	Chi Beta—Faculty Offices
3	Chi Alpha—Faculty Offices
4	Administration Building
5	Founders Hall
6,7	Grimm Hall North and South
8	Library/Arts/Theater Building
9	CU Center
10	Performing Arts Annex
11,12	Student Services/Bookstore
13	Center for Student Leadership & Development
14	Gymnasium/Coaching Offices
15	Grimm Student Union
16	Lower Quad Residence Hall
17	Upper Quad Residence Hall
18	Chi Rho Residence Hall
19	Chi Sigma Residence Hall
20	Access Gate House 2
21	Chapel of the Good Shepherd
22	Maintenance Building
23	District Office
24	Service
25	Nelson Amphitheater

Legend

- No Event Parking Sign
- Event Direction Sign
- Traffic Control Personnel
- Designated Bus Parking

0' 150'

APPENDIX M

DAILY TRIP CAP ANALYSIS

SPECIAL DEVELOPMENT REQUIREMENTS – DAILY TRIP CAP ANALYSIS

A Zone Change is proposed to update the Special Development Requirements (SDR) in Zoning Ordinance Section 9-21-7 adopted in conjunction with the 1992 Christ College General Plan Amendment and Zone Change (GPA/ZC). As it pertains to traffic, Zoning Ordinance Section 9-21-7.B currently states the following:

Special Development Requirement 10:

> *Any development applications for institutional use within the campus site shall demonstrate to the satisfaction of the Director of Community Development that the projected total average daily traffic from the site, based on the City of Irvine trip generation rates approved with General Plan Amendment 4237-GA for the campus (330 institutional housing units at four trips per unit and 1,800 full-time equivalent students at 1.21 trips per student), does not exceed 3,500 average daily trips.*

Special Development Requirement 20:

> *In conjunction with submittal of any tentative tract map covering Chapel Hill Vista, Christ College Irvine campus build-out, and/or Hillcrest Vista, the applicant shall submit a traffic analysis, in accordance with a City-approved scope of work, addressing specifically, but not limited to, the intersections of University Drive and Ridgeline Drive, and Ridgeline Drive and Concordia. Based upon the study, additional mitigation measures may be placed on the map.*

1992 Trip Generation Rates

Using the 1992 GPA trip generation rates, SDR 10 defined the campus build-out condition as 1,800 full-time equivalent (FTE) students and 330 dorms with a resulting 3,500 average daily trip (ADT) cap calculated as follows:

1,800 FTE x 1.21 trips per FTE per day =	2,178 trips	
330 dorms x 4 trips per dorm unit =	1,320 trips (note: 4 beds per dorm unit)	
	3,498 trips total	

The GPA trip rates of 1.21 trips per FTE student and four trips per dormitory unit are derived from a single 1988 gate count of 1,175 daily trips generated by 515 FTE students and 138 dorm units as follows:

Gate Count:		1,175 trips
Existing Dorm Trips:	138 units x 4 trips/unit =	552 trips (assumed)
Remaining Student Trips:		623 trips

623 student trips divided by 515 existing students = 1.21 trips per student

With each development application submittal for Concordia University (CU), the City determined that the 3,500 ADT cap was not exceeded based on the 1992 GPA trip generation rates because the campus was and is continuing to operate within the 330 dorm and 1,800 FTE parameters. The City required that and CU has agreed to evaluate the ADT cap and trip generation rates in conjunction with the current CUP modification and Zone Change applications.

The existing 3,500 ADT cap is calculated based upon 1992 GPA trip generation rates, assumptions and conditions, and has not been reviewed or modified in over 27 years. Additionally, the ADT cap does not explicitly account for the entire on-campus population as it excludes faculty, staff and visitors. Therefore, the goal with this update is to ensure the ADT cap reflects actual real world conditions and to be able to implement an effective monitoring/mitigation system based on actual trip counts and not assumed trip generation rates.

Additionally, the SDR is proposed to be updated because the FTE student criterion was not clearly defined, which in turn, makes the ADT cap difficult to monitor. The educational curriculum in 1988 (when the gate counts were taken to establish the 3,500 average daily trip cap) primarily consisted of traditional full-time undergraduate students. As technology and teaching methods evolved, educational teaching opportunities increased beyond the traditional college classroom lecture format. Currently, there are commuter students, resident students, online students, and vocational students served both on-site and off-site as well as online. Students are full-time and part-time. The numbers and types of students, faculty/staff and visitors on campus vary day-to-day. Basing a trip cap primarily on FTE students is not a reliable method to determine a daily trip cap and is extremely difficult to monitor and confirm.

1993 Traffic Study

Subsequent to the 1992 adoption of the General Plan Amendment and Zone Change to establish residential uses on the westerly and easterly portions of the campus, the Planning Commission approved the original campus build-out Conditional Use Permit (CUP) in 1993.

The 1993 CUP traffic study used 1992 gate counts and determined the build out of the campus would generate approximately 6,000 daily trips based on a trip generation rate of 2.6 ADT per student. It continued to assume 4 trips per dormitory unit (with 4 beds per unit) as well as 1,800 students and 330 dorms (and 310,980 square feet of institutional uses) at build-out. The projected (6,000) daily trip and peak hour trip generation was used for campus build out analysis and mitigation purposes, while the project at that time continued to comply with the 3,500 ADT cap outlined in SDR 10 because the campus was only partially developed and the 1,800 FTE and 330 dorm parameters were not met.

2014 Gate Counts and Proposed Trip Limit

The existing 3,500 ADT cap is based on the 1992 GPA trip generation rate formulas and does not represent the actual or current campus trip generation rate. The October 2014 gate count completed for this CUP modification and Zone Change indicate a two-way daily volume of 4,732 trips, up from the 1988 gate count of 1,175 trips. This gate count reflects the entire on-campus population of the traditionally higher enrollment levels experienced during the fall semester. The gate count is based on the existing 243,571 square feet of institutional uses and 256 dormitory units currently on campus. Based on the October gate counts, Concordia University is proposing to change the way the ADT trip cap is calculated and to increase the maximum daily trip budget to 6,241 trips. The budget is intended to encompass the entire campus at full build-out and all its operations including academic life, student life, university life, and auxiliary/community life.

The proposed ADT cap is based upon the net percentage increase of approximately 30 percent for both institutional square footage and dorm units as shown in the following table.

	Existing	**Approved Campus Build-Out**	**Net Increase**	**% Increase**
Institutional SF	243,571 SF	321,220 SF	77,649 SF	31.9%
Dorm Units (Beds)	256 dorm units (1,024 beds)	330 dorm units (1,320 beds)	74 dorm units or 296 bed	28.9%

The proposed methodology of calculating the trip cap is based on the following formula:

$$\frac{\text{Concordia Gate Count}}{\text{Existing Institutional TSF}} \times \text{Master Plan Institutional TSF}$$

Based on this formula, the Concordia University Campus Master Build-Out Plan would produce an updated daily trip cap of 6,241 trips at full build-out (i.e., 321,220 square feet of institutional uses and 330 dormitory units) as detailed below.

$$\frac{\text{4,732 daily trips}}{\text{243.571 TSF}} = 19.43 \text{ trips/TSF} \times 321.220 \text{ TSF} = 6{,}241 \text{ daily trips}$$

The recent counts show the campus is generally growing consistent with the 1993 traffic study projections. The 1993 projections anticipated 6,000 daily trips, while the 2014 gate counts and future anticipated construction would project a daily trip count of 6,241 trips.

Since the proposed campus build out would occur over a 20-year plus timeframe with at least four phases, it is proposed that the trip limit would be phased in as future

development occurs. The daily trip limit will be based upon actual existing institutional square footage on campus at the time new construction is completed.

The proposed daily trip cap is based on actual gate counts in relation to institutional square footage, whereas the remainder of this traffic study generally addresses traffic impact assessment and mitigation on a regional basis using the City's traffic modeling system.

By using institutional square footage, subsets of the on-campus population no longer need to be extracted in order to estimate FTE to calculate the campus' trip generation. As a result, the trip generation rate can be more easily monitored because it's directly based on the gate count correlated to a quantifiable and trackable variable, institutional square footage. This new methodology eliminates the competing variables in the SDR and reduces any potential monitoring challenges because it is based on criteria that can easily be measured: actual traffic volume counts and institutional square footage.

Zone Change and CUP Conditions

The Zone Change application proposes to eliminate SDRs 10 and 20 from the Zoning Ordinance. Instead, these requirements will be incorporated into the Concordia University CUP as a condition of approval.

The proposed condition of approval requires gate counts annually and during the review of any future discretionary development case applications to confirm that the daily trip cap is not exceeded as the campus builds out. The annual count would take place in October during the Fall Semester where no scheduled holidays or breaks occur and where student enrollment is at its peak. The Condition reads as follows:

> *The total number of vehicle trips that can be generated by the Concordia University campus in Planning Area 21 is limited to 19.43 trips per thousand square feet of existing institutional uses (excludes dormitory unit square footage). The maximum daily trip cap shall be determined based on the actual existing square footage (i.e., buildings with temporary or permanent certificate of occupancy) on the campus on the starting date of the count. At full-campus build-out (i.e., 321,220 square feet of institutional uses and 330 dormitory units), the daily trip generation shall not exceed 6,241 daily trips.*
>
> *Concordia and all its successors shall conduct a minimum three-day up to a maximum five-day count of vehicles entering and exiting the campus during the month of October on an annual basis. The proposed dates of the count will be reviewed and approved by City staff a minimum of 30 days in advance of commencing any actual counts. This "cordon count" shall be conducted via a mixture of electronic and mechanical means (e.g., magnetic road loops, video and/or rubber*

hose counting systems). All trips entering and exiting the campus, including those associated with pass-through traffic (e.g., community HOA vehicles traversing the campus to travel from one location to another), shall be recorded. Furthermore, counts from all residential neighborhood streets (i.e., Ascension for Concordia East and Daystar, Faith and Joy for Concordia West) shall be deducted from the overall gate volumes.

At the end of each year, and not later than December 31 of such year, Concordia University shall submit to the Community Development Director (and provide copies directly to the presidents of the Concordia East and West Homeowners' associations) a comprehensive trip monitoring report summarizing the counts of vehicles entering and exiting the campus. Actual count data for each day shall be included in the report. The highest 24-hour count shall be used in determining compliance with the daily trip cap, and daily counts shall not be averaged between the count days for that year. At the discretion of the Director of Community Development, additional traffic count reports beyond the annual report may be required, if deemed necessary.

Additionally, a special events summary detailing the date, start and end times, event description, attendance numbers, and whether special arrangements such as extra City Public Safety assistance, off-site parking were required, and descriptions of any complaints received shall be provided in the annual report. A copy of the most current Traffic and Parking Management Plan for Concordia University shall also be provided.

Should any annual report or specially requested report submitted to the City evidence noncompliance with the applicable maximum trip count limitation, the Director of Community Development will meet with university representatives to review actions including but not limited to reducing on-campus activities, restricting parking, and implementing transportation demand management measures (e.g., carpooling, use of alternative modes of transportation) that shall be immediately taken to comply with the trip count limitations. In the event that such actions do not result in compliance, the Director of Community Development may, in his or her discretion, initiate the enforcement and revocation procedures set forth in Chapter 2-10 of the City Zoning Ordinance.

Similarly, any development applications for uses within the campus shall demonstrate to the satisfaction of the Director of Community Development that the projected total daily traffic from the site will not exceed 19.43 daily trips per thousand square feet of existing and proposed institutional square footage.

Additionally, where the applicant is required to submit a traffic analysis by any federal, state, or local law or policy, including but not limited to the City Traffic Impact Analysis Guidelines and/or California Environmental Quality Act, the applicant shall submit such traffic analysis in addition to the above requirements.

(Final EIR as Mitigation Measure ---).