

APPENDIX 2.7-1
Transportation Impact Analysis

TRANSPORTATION IMPACT ANALYSIS

THE VILLAGES

Escondido, California
June 19, 2017

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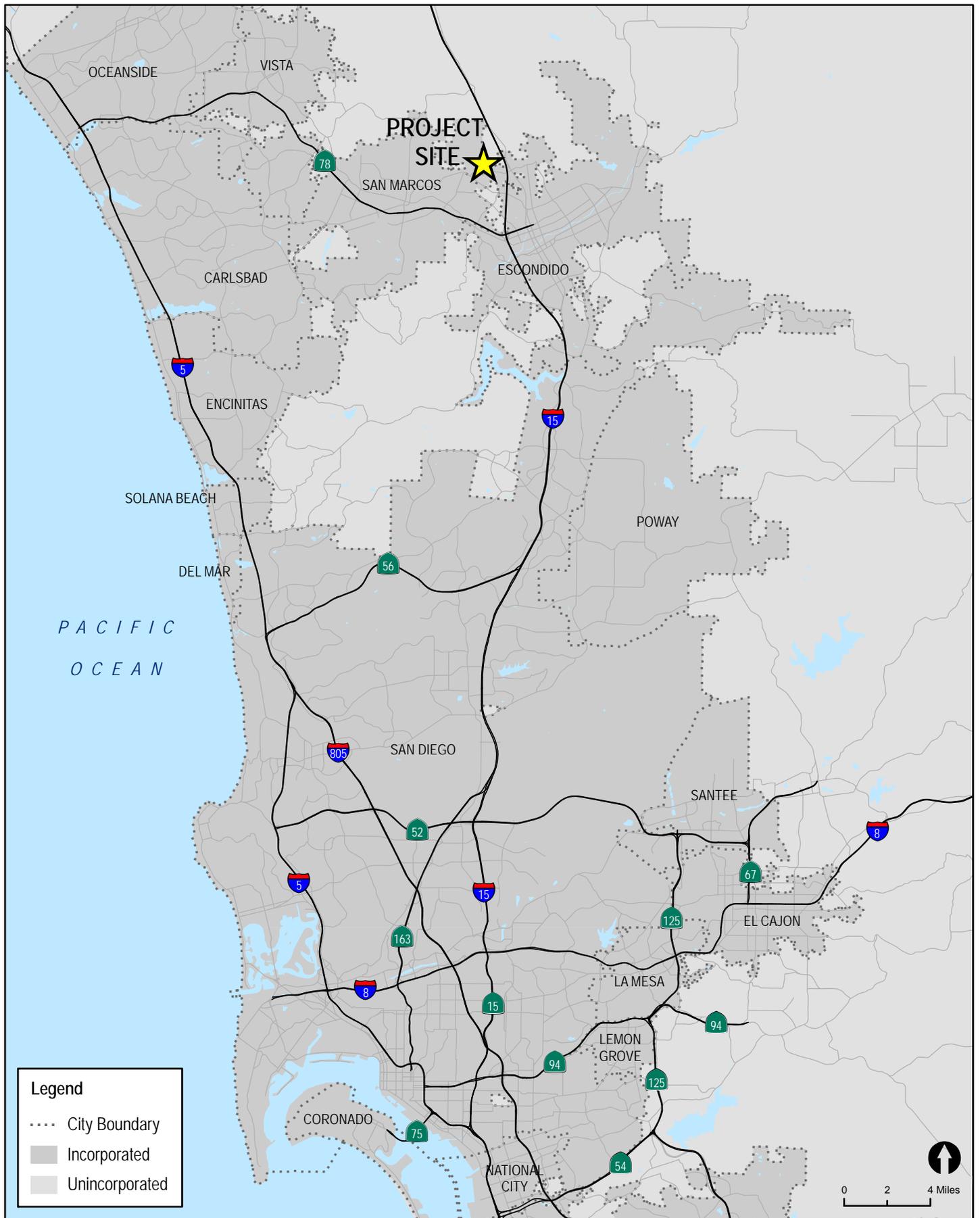
1.0 INTRODUCTION

Linscott, Law and Greenspan, Engineers (LLG) has prepared the following transportation impact analysis to assess the impacts to the street system as a result of Escondido Country Club project (“Project”), which proposes the development of 392 single-family residential dwelling units, a local bar & grill and market, and clubhouse and association amenities such as a pool, meeting spaces, and banquet facilities. A Specific Alignment Plan for Country Club Lane is also proposed that will provide speed calming and pedestrian/bicycle enhancing features for the local neighborhood. The Project site is located generally north of El Norte Parkway and west of I-15 along Country Club Lane within the City of Escondido.

Figure 1-1 shows the Project vicinity and *Figure 1-2* illustrates, in more detail, the site location.

The transportation analysis presented in this report includes the following:

- Project Description
- Existing Conditions
- Analysis Approach and Methodology
- Significance Criteria
- Analysis of Existing Conditions
- Project Trip Generation/Distribution/Assignment
- Cumulative Projects
- Analysis of Near-Term Scenarios
- General Plan (Year 2035) Analysis
- Access
- Construction traffic analysis
- Significance of Impacts and Mitigation Measures



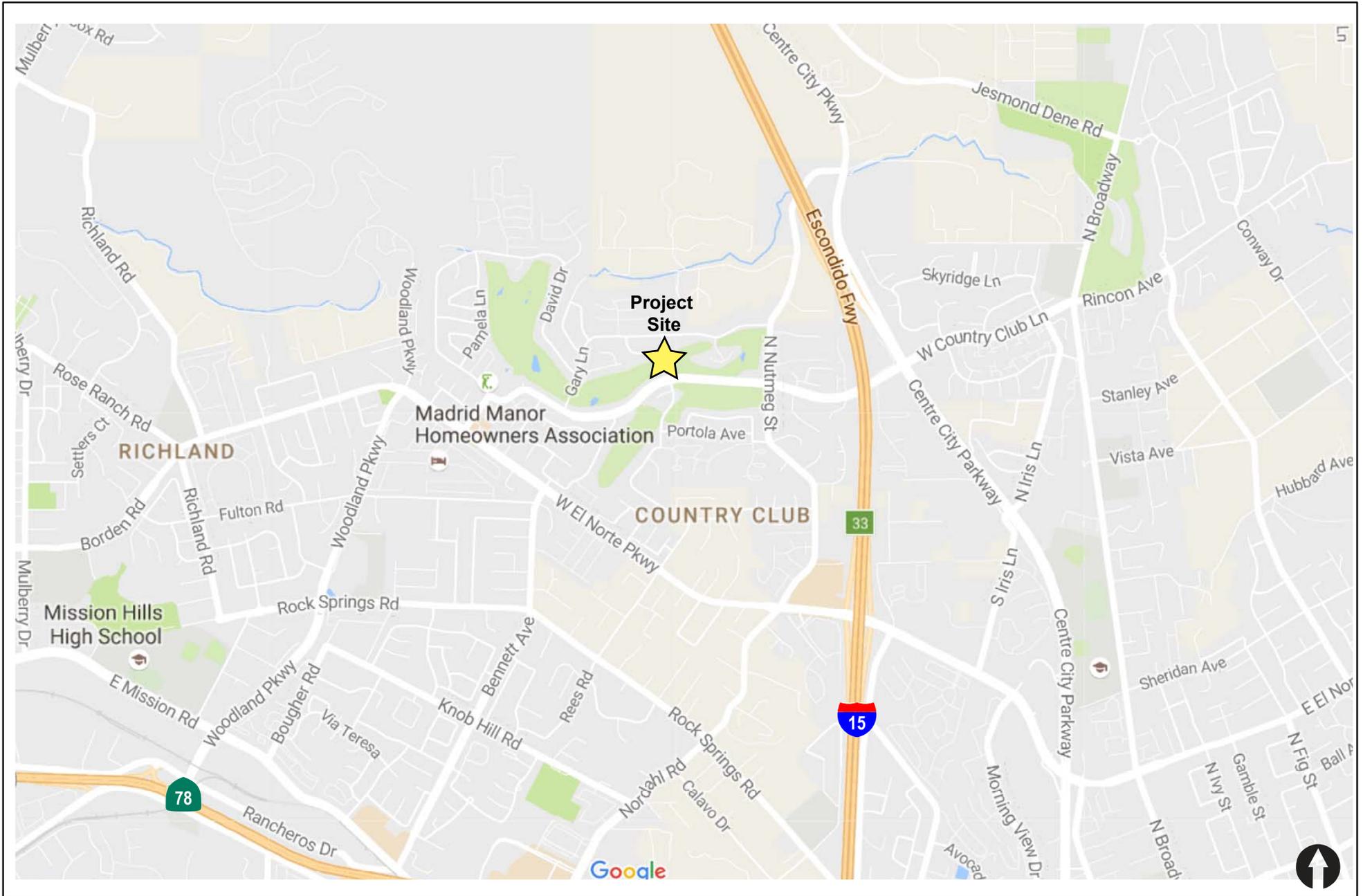


Figure 1-2

Project Area Map

2.0 PROJECT DESCRIPTION

2.1 Project Location

The Project site is located north of El Norte Parkway and west of I-15 along Country Club Lane within the City of Escondido. The site is the current Escondido Country Club which is no longer in operation.

2.2 Project Description

The Project proposes to construct 392 single-family residential homes in three (3) villages. The Project also proposes to construct community amenities that will be available to residents of the Project and the public at large. These include a small bar & grill and market to serve the Project and the local residents, and homeowner's association facilities such as a pool and gym, office and meeting space, and banquet facilities. Each of the villages is intended to be developed in an individual style to provide their own unique characteristics.

Village 1 is located on the western-most site of the Project. Village 1 is north of Country Club Lane and west of Gary Lane, and is generally bounded by Golden Circle Drive, Pamela Lane, David Drive, Gary Lane, and Country Club Lane. Access is via the existing intersection of Country Club Lane and Golden Circle Drive, which is the access for the existing golf course land use. Village 1 will be developed with 155 homes, as well as the community amenities described above.

Village 2 is located on the north part of the Project, north of Country Club Lane. Village 2 is bounded by Gary Lane, Calle Redonda Lane, Wren Glen, Nutmeg Street and Country Club Lane. This village proposes 91 homes in two non-contiguous neighborhoods. Access to these neighborhoods is provided via one driveway to Country Club Lane (aligned opposite of Brea Street, west neighborhood), and one to Gary Lane (east neighborhood).

Village 3 is located on the south part of the Project, south of Country Club Lane. Village 3 is bounded by Firestone Drive, Cortez Avenue, La Brea Street, La Mirada Avenue and Nutmeg Street. Village 3 also proposes two non-contiguous neighborhoods with a total of 146 homes. Access to the western neighborhood is provided via a driveway to Country Club Lane approximately midway between Firestone Drive and La Brea Street. The eastern neighborhood is accessed via a driveway to La Brea Street.

Figure 2-1 depicts the conceptual Project site plan.

The Project proposes a series of improvement to Country Club Lane, between El Norte Parkway and Nutmeg Street. Within the study area, Country Club Lane from El Norte Parkway to Nutmeg Street is classified on the City of Escondido's Circulation Element as a Collector Roadway (4-lanes) with a capacity of 20,000 ADT to 34,200 ADT, depending on the presence of parking. Currently, it is constructed with two lanes and a raised median from El Norte Parkway to Golden Circle Drive, and with two lanes and parking from Golden Circle Drive to Gary Lane. East of Gary Lane, Country Club Lane provides four lanes with parking and a raised median. Current volumes on Country Club lane range from 4,500 ADT to 6,500 ADT. Buildout volumes range from 9,600 ADT to 11,300

ADT, well below the Circulation Element capacities described above. Country Club Lane is also classified on the City of Escondido's bicycle master plan as having a Class II bike lane.

The posted speed limit on Country Club Lane is 25 MPH throughout the study area. Field observations have revealed higher speeds in the mid-30 MPH range, and the City is aware of complaints from residents in the area that speeding is a concern.

The SAP proposed by the Project intends to address speeding through a series of traffic calming both at the primary intersections along Country Club Lane, as well as on the tangent street segment between intersections. The SAP has the following goals:

Traffic Calming – the intent of the SAP features is to reduce speeds on the roadway. Volumes are well within the existing capacity of the roadway, and while some cut through traffic from I-15 to SR-78 may be occurring, the existing traffic counts indicate the majority of traffic is from Escondido. Therefore, reductions in volume may occur with the calming features, but that is not the express goal.

Multi-modal Encouragement – the Project envisions that its public amenities including the bar/grill and event space, as well as its HOA facilities will be seen as amenities to both its non-contiguous villages as well as the broader community along the Country Club Lane corridor. Separate from the SAP, the Project is providing a comprehensive trails network to encourage multi-modal (non-automobile) circulation throughout the vicinity. To augment this vision, and to complete the roadway's bicycle circulation classification, the SAP focuses strongly on improving the pedestrian and bicycle users' experience by providing enhanced crosswalks and large, buffered bike lanes to encourage bicycle circulation.

Enhanced aesthetics – The existing community had previously enjoyed an identity strongly connected to the previous golf course use. The Project intends to maintain this sense of community, and to integrate its residences with not only the proposed land uses, but with design features throughout the SAP that will provide community character as well as traffic calming benefits. Noteworthy and attractive features such as the roundabouts will provide a unique, identifying characteristic, and will capitalize on the already attractive mature landscaping and medians along the corridor.

As discussed above, the Country Club Lane corridor has both opportunities and constraints that are considered in the SAP design. Chief among the constraints are the existing curb-to-curb dimensions (narrow on the west end and wide in the central and eastern portions). Also, existing residences fronting the roadway (especially at Firestone Drive) limit the potential for many types of calming measures, especially vertical and horizontal deflection techniques. Lastly among constraints is the long tangent section of Country Club Lane from La Brea Street to Nutmeg Street, which is approximately 1,650 feet long. This straightaway, coupled with the wide existing lanes, encourages speeding in the corridor.

The corridor does offer a number of opportunities as well. The large raised median is an attractive feature that can be used to reduce speeds with creative restriping of lane widths. The existing speed limit is already posted at 25 MPH, so calming measures to achieve that speed will not fundamentally

change the intended roadway character. Lastly, the low existing and future forecasted volumes allow for creative speed reduction measures without unnecessarily affecting capacity.

The following is a description of the SAP sections, from west to east.

El Norte Parkway to Golden Circle Drive – The existing two-lane segment of Country Club Lane north of El Norte Parkway will remain as a two-lane roadway with a raised, landscaped median. A roundabout is proposed at the Country Club Lane/Golden Circle Drive intersection which will also serve Driveway “A”, the main driveway to Village 1. Vertical deflection will be added on the approach and departure sides of the roundabout to reduce entering speeds and align vehicles into the roundabout. Ramp transitions may be provided on the approach and departure deflections at the roundabout to allow cyclists to leave the roadway and dismount to the sidewalk if they do not desire to take the lane through the roundabout. The roundabout will be designed to be mounted by oversized vehicles (fire apparatus, busses, trucks), and will have the opportunity for attractive landscaping. Currently, the majority of volumes through the Country Club Lane/Golden Circle Drive/Project Driveway “A” intersection use the intersection as a curve, with the northbound to eastbound and westbound to southbound movements prevailing. As such, the roundabout is a logical and efficient way to serve existing and future traffic flows.

Golden Circle Drive to Gary Lane – There are driveways and residences fronting this two-lane section of Country Club Lane. Currently, this 64’ wide two-lane segment is allocated between two wide travel lanes with a yellow centerline, which encourages higher speeds through the existing S-curve. The SAP proposes to narrow the vehicular travel lanes and to provide a two-way left-turn lane to provide refuge for turning vehicles as well as to delineate the roadway. Alternately, sections of raised median could also be installed in logical increments to maintain roadway and driveway full access, but provide a more positive barrier between travel lanes. Curbside parking for residents is retained in either case. A full raised median is not possible, because it would preclude left-turns to the westbound direction from the south side of the road. These would become right-turns, desiring to U-turn at Gary Lane. The 64’ of roadway width at Gary Lane is not wide enough to permit U-turns, and the lanes cannot be shifted southward to accommodate this movement without eliminating curbside parking in front of the residences just west of Gary Lane. A class II bike lane is provided in both directions along this segment.

A traffic signal is proposed at Gary Lane to accommodate future traffic volumes, and to provide enhanced pedestrian safety at the intersection.

Gary Lane to Firestone Drive – Country Club Lane transitions from the existing two-lane section (64’ curb-to-curb) to the existing four-lane section with median (82’ curb-to-curb) just east of Gary Lane. There are driveways and residences fronting on the north with driveway access directly to Country Club Lane. The SAP proposes to maintain a single lane in both directions between Gary Lane and Firestone Drive, and to extend the raised median

across the intersection of Country Club Lane & Firestone Drive, which will prohibit left turns to and from Firestone Drive at this location. Maintaining a single lane in each direction will provide calming and allow for wide buffered bike lanes, while restricting left turns will significantly reduce the attractiveness of Firestone Drive as a through route, reducing non-local traffic on this road..

Firestone Drive is proposed to remain a minor-street stop controlled intersection approaching Country Club Lane, but with left turns prohibited via extension of the raised center median, and with enhanced pedestrian crosswalks such as rectangular rapid flashing beacons (RRFB's), pedestrian hybrid beacon (PHB, or "HAWK" signal), or other measures to the satisfaction of the City Engineer. The raised crosswalks will also provide vertical deflection, further serving to reinforce the residential nature of the corridor and aid in reducing speeds. Curb bulbouts will be provided on the southwest and southeast curb returns of the intersection to minimized the distance pedestrians must cross.

Firestone Drive to La Brea Street – The second roundabout in the corridor is proposed at La Brea Street. This will serve the existing street system as well as serve Driveway "D". As with the westerly roundabout, this is a single-lane roundabout. A buffered bike lane and curbside parking for residents will be provided in both directions. Ramp transitions may be provided on the approach and departure deflections at the roundabout to allow cyclists to leave the roadway and dismount to the sidewalk if they do not desire to take the lane through the roundabout.

The SAP also proposes to provide traffic calming on La Brea Street to address effects of current and future cut-through traffic between Country Club Lane and El Norte Parkway. These include the placement of all-way stop-control at key intersections along La Brea Street in addition to vertical displacement features such as raised intersections, if/where applicable.

La Brea Street to Nutmeg Street– This is the 1,650 foot tangent section that most invites higher speeds along the corridor. The SAP proposes to transition to/from 2-lanes to four lanes at approximately a midblock location between the La Brea Street roundabout and Nutmeg Street. A wide, buffered bike lane is proposed in each direction, separated physically from the vehicular travel lanes by raised, decorative concrete medians, effectively creating a cycle-track for this segment.

In all cases, the two-lane segment would provide adequate capacity for future traffic volumes. Total volumes with buildout of the City and the Project on this segment are 11,570 ADT. The City of Escondido does not have a published capacity for two-lane roadways with raised medians. The City does have a "Local Collector (no parking)" standard with a capacity of 15,000 ADT which is used in this report. The County of San Diego does have a "Light Collector with Raised Median (2.2A) with

a capacity of 19,000 ADT. In either case, the capacity will accommodate the buildout volumes without impact.

A traffic signal is proposed at Nutmeg Street along with curb bulbouts to enhance both peak hour operations and pedestrian security.

Lastly, the Project proposes to provide ***Adaptive Signal Control*** to the El Norte Parkway corridor within the study area, from Woodland Parkway to the west to the I-15 Southbound Ramps intersection to the east. Conventional signal timing systems use pre-programmed, daily signal timing schedules. Adaptive signal control technology adjusts the timing of red, yellow and green lights to accommodate changing traffic patterns and ease traffic congestion. This will enhance operations along El Norte Parkway during peak periods, and adapt to changing volume loads that may occur depending on I-15 operations and cut-thru traffic that congestion on the freeway mainline may impose on El Norte Parkway.



Land Use	Count	Area (SF)	Area (AC)	
35' x 73' SFD	78	219,624	5.0	
45' x 75' SFD	126	475,330	10.9	
45' x 95' SFD	109	607,379	13.9	
6-PAC SFD/SFA	13	277,848	6.4	
Basin	9	260,760	6.0	
Community Center	2	230,896	5.3	5.9 (Gross)
Conveyance Channel	5	337,961	7.8	
Other Open Space	41	1,443,789	33.1	
Private Drives	11	45,494	1.0	
Public Streets	5	863,747	19.8	
TOTAL:		4,762,828	109.3	

Legend

- ECC Boundary
- Lot Lines
- 35' x 73' SFD
- 45' x 75' SFD
- 45' x 95' SFD
- 6-PAC SFD/SFA
- Basin
- Community Center
- Conveyance Channel
- Other Open Space
- Private Drives
- Public Streets



3.0 EXISTING CONDITIONS

Effective evaluation of the transportation impacts associated with the proposed Project requires an understanding of the existing transportation system within the Project study area. **Figure 3-1** depicts existing conditions, including signalized/unsignalized intersections and lane configurations.

The study area includes the following seventeen (17) existing intersections and nineteen (19) street segments. These locations were selected in conjunction with City of Escondido staff and using the City's methodology published in the City of Escondido Traffic Impact Study Guideline.

Intersections:

1. Centre City Parkway / Nutmeg Street (*City of Escondido*)
2. Country Club Lane / Golden Circle Drive (*City of Escondido*)
3. Country Club Lane / Gary Lane (*City of Escondido*)
4. Country Club Lane / Firestone Drive (*City of Escondido*)
5. Country Club Lane / La Brea Street (*City of Escondido*)
6. Country Club Lane / Nutmeg Street (*City of Escondido*)
7. Country Club Lane / Centre City Parkway (*City of Escondido*)
8. El Norte Parkway / Woodland Parkway (*City of Escondido/ City of San Marcos*)
9. El Norte Parkway / Country Club Lane (*City of Escondido*)
10. El Norte Parkway / Bennett Avenue (*City of Escondido*)
11. El Norte Parkway / Rees Road (*City of Escondido*)
12. El Norte Parkway / Nutmeg Street / Nordahl Road (*City of Escondido*)
13. El Norte Parkway / I-15 SB Ramps (*Caltrans*)
14. El Norte Parkway / I-15 NB Ramps (*Caltrans*)
15. El Norte Parkway / Seven Oaks Road (*City of Escondido*)
16. El Norte Parkway / Centre City Parkway (*City of Escondido*)
17. El Norte Parkway / Broadway (*City of Escondido*)

Street Segments:

Country Club Lane

1. El Norte Parkway to Country Club Lane / Golden Circle Drive (*City of Escondido*)
2. Country Club Lane to Gary Lane (*City of Escondido*)
3. Gary Lane to La Brea Street (*City of Escondido*)
4. La Brea Street to Nutmeg Street (*City of Escondido*)
5. Nutmeg Street to Centre City Parkway (*City of Escondido*)

El Norte Parkway

6. Woodland Parkway to Country Club Lane (*City of Escondido*)
7. Country Club Lane to Bennett Avenue (*City of Escondido*)
8. Bennett Avenue to Rees Road (*City of Escondido*)
9. Rees Road to Nutmeg Street (*County of San Diego*)
10. Nutmeg Street / Nordahl Road to I-15 Ramps (*City of Escondido*)
11. I-15 Ramps to Morning View Drive (*City of Escondido*)
12. Morning View Drive to Centre City Parkway (*City of Escondido*)

13. Centre City Parkway to Broadway (*City of Escondido*)

Nutmeg Street

14. North of Country Club Lane (*City of Escondido*)

15. Country Club Lane to Via Alexandra (*City of Escondido*)

16. Via Alexandra to El Norte Parkway (*City of Escondido*)

Bennett Avenue

17. El Norte Parkway to Toyon Glen (*City of Escondido*)

La Brea Street

18. Country Club Drive to Cortez Avenue (*City of Escondido*)

Firestone Drive

19. Country Club Lane to Woodbridge Road (*City of Escondido*)

Freeway Ramp Meter Locations

Interstate 15 (I-15)

1. El Norte Parkway – Southbound On-Ramp (AM peak hour) (*Caltrans*)

Freeway Mainline Segments

Interstate 15

1. El Norte Parkway to SR-78 (*Caltrans*)

It should be noted that the maximum peak hour contribution to the I-15 southbound mainline segment is 44 trips during the AM peak hour. This is less than the 50 peak hour trip threshold to require analysis of a freeway mainline, based on the published, regional SANTEC/ITE Guidelines for the Traffic Impacts Studies [TIS] in the San Diego Region. However, the mainline section is included to provide a conservative analysis.

3.1 Existing Transportation Conditions

The following is a brief description of the streets in the Project study area.

Interstate 15 is a north/south facility that extends as a freeway from the San Diego area to the California-Nevada border and beyond. It provides four lanes in each direction in the Project study area. The posted speed limit is 65 mph. A diamond interchange is provided at El Norte Parkway.

El Norte Parkway is east/west facility, mainly within City of Escondido jurisdiction within the Project area, and is classified as a Major Road on the City of Escondido Mobility Element. It is currently constructed as a four lane divided roadway from Woodland Parkway to Rees Road. From Rees Road to Nutmeg Street / Nordahl Road it is within County of San Diego jurisdiction, where it is classified as a 4.1A Major Road and built as a four lane undivided roadway with two-way left-turn lane (TWLTL) median. East of Nutmeg Street / Nordahl Road, El Norte Parkway returns to Escondido jurisdiction and is built as a four-lane divided roadway to Morning View Drive. Between Morning View Drive and Centre City Parkway, it is a seven-lane divided roadway with three

eastbound lanes and four westbound lanes. East of Centre City Parkway, the roadway returns to four lanes. Bike lanes are provided along both sides of the street. The posted speed limit is 45 mph.

Country Club Lane is east/west facility constructed as a two lane divided roadway from El Norte Parkway to Golden Circle Drive and as a two lane undivided roadway from Golden Circle Drive to Gary Lane. Country Club Lane is currently built as a four lane divided roadway from Gary Lane to Center City Parkway. According to the City of Escondido General Plan Mobility Element, Country Club Lane is classified as a Collector in the vicinity of the project. The posted speed limit is 25 mph for the majority of Country Club Lane in the Project area, transitioning to 35 mph east of Nutmeg Street. Project-related improvements to Country Club Lane are proposed with the SAP.

Centre City Parkway is north/south facility constructed as a four lane divided roadway. Bike lanes are provided along both sides of the street. According to the City of Escondido General Plan Mobility Element, Centre City Parkway is classified as a Collector north of Country Club Lane and a Major Road south of Country Club Lane within the vicinity of the Project.

Nutmeg Street is north/south facility constructed as a two lane undivided roadway. According to the City of Escondido General Plan Mobility Element, Nutmeg Street is classified as a Local Collector from Centre City Parkway to Yuma Glen and as Collector south of Yuma Glen within the vicinity of the Project. The posted speed limit is 25 mph. Project-related improvements to Nutmeg Street at Country Club Lane are proposed with the SAP.

Gary Lane is an unclassified residential roadway, currently built as a two-lane undivided roadway. Gary Lane is generally east-west, connecting Nutmeg Street and Country Club Lane. From Country Club Lane to Calle Redonda, it is built with street parking and sidewalks on both sides of the roadway. From Calle Redonda to Nutmeg Street, there is a striped center median, no on-street parking, a sidewalk on one side of the street only, and few fronting properties along this portion of Gary Lane. The posted speed limit is 25 mph. Project-related improvements to Gary Lane at Country Club Lane are proposed with the SAP.

La Brea Street is an unclassified, north-south, two-lane residential roadway. Sidewalks and street parking are provided on both sides of the roadway. Project-related improvements to La Brea Street at Country Club Lane are proposed with the SAP.

Firestone Drive is an unclassified residential roadway, generally north-south between El Norte Parkway and Country Club Lane. On-street parking and sidewalks are provided on both sides of the roadway. Project-related improvements to Firestone Drive at Country Club Lane are proposed with the SAP.

3.2 Existing Traffic Volumes

Table 3-1 is a summary of the average daily traffic volumes (ADTs) based on counts taken primarily in May 2016, when schools were in session.

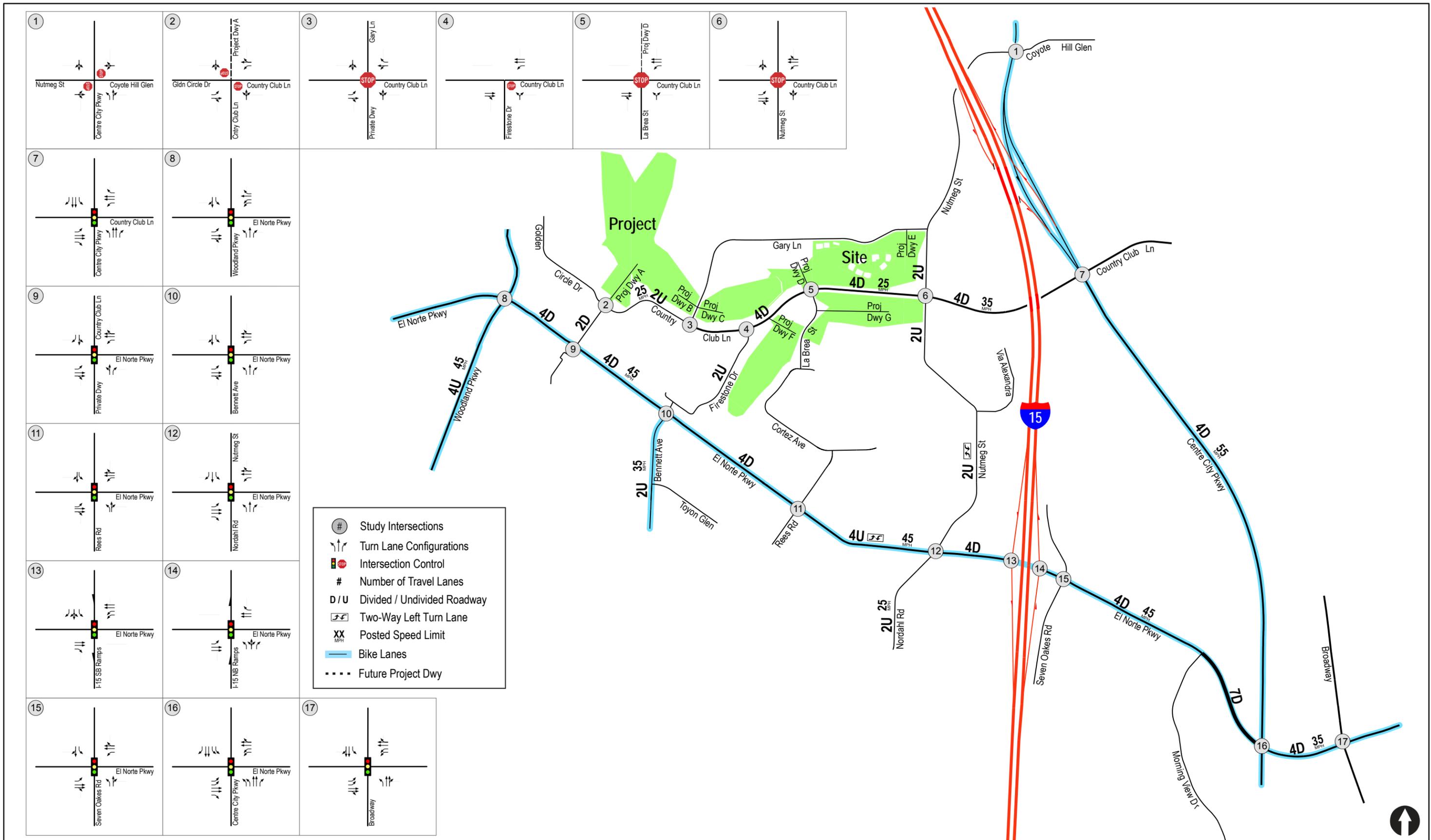
Figure 3–2 shows the Existing Traffic Volumes on both an ADT and peak hour basis. Appendix A contains the manual count sheets.

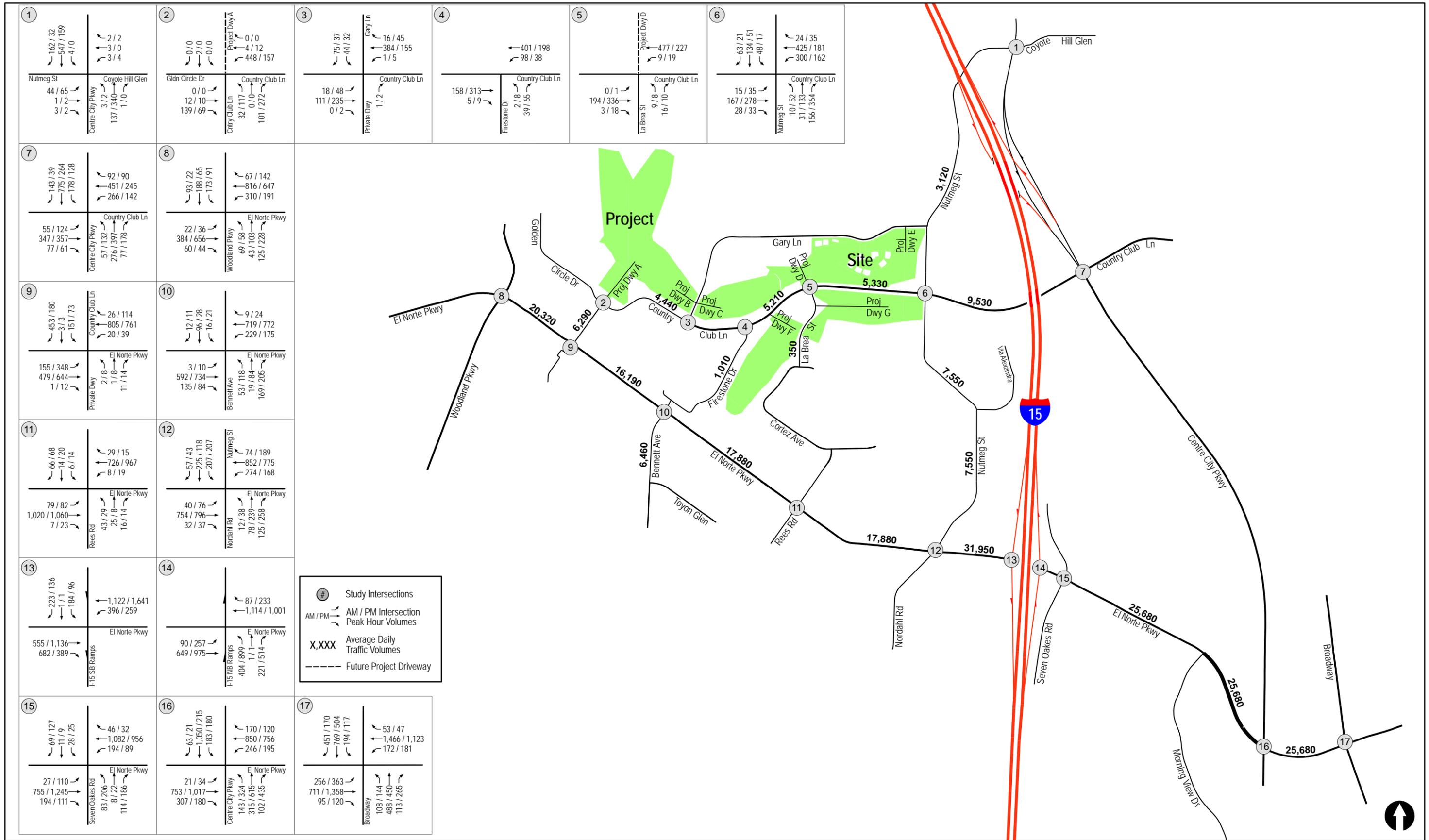
TABLE 3–1
EXISTING TRAFFIC VOLUMES

Street Segment	Jurisdiction	ADT ^a	Date ^b
Country Club Lane			
1. El Norte Pkwy to Country Club Lane/Golden Circle Dr.	Escondido	6,290	May 2016
2. Country Club Lane/Golden Circle Dr. to Gary Lane	Escondido	4,440	May 2016
3. Gary Lane to La Brea Street	Escondido	5,210	May 2016
4. La Brea Street to Nutmeg Street	Escondido	5,330	May 2016
5. Nutmeg Street to Centre City Pkwy	Escondido	9,530	May 2016
El Norte Parkway			
6. Woodland Pkwy to Country Club Lane	Escondido	20,320	May 2016
7. Country Club Lane to Bennett Avenue	Escondido	16,190	May 2016
8. Bennett Avenue to Rees Road	Escondido	17,880	May 2016
9. Rees Road to Nutmeg Street / Nordahl Road	County	17,880	May 2016
10. Nutmeg Street / Nordahl Road to I-15 Ramps	Escondido	31,950	May 2016
11. I-15 Ramps to Morning View Drive	Escondido	25,680	May 2016
12. Morning View Drive to Centre City Parkway	Escondido	25,680	May 2016
13. Centre City Parkway to Broadway	Escondido	25,680	May 2016
Nutmeg Street			
14. North of Country Club Lane	Escondido	3,120	May 2016
15. Country Club Lane to Via Alexandra	Escondido	7,550	May 2016
16. Via Alexandra to El Norte Parkway	Escondido	7,550	May 2016
Bennett Avenue			
17. El Norte Parkway to Toyon Glen	Escondido	6,460	September 2016
La Brea Street			
18. Country Club Lane to Cortez Avenue	Escondido	350	^c
Firestone Drive			
19. Country Club Lane to Woodbridge Road	Escondido	1,010	May 2016

Footnotes:

- a. Average Daily Traffic
- b. Data collection date
- c. Daily trips estimated based on the relationship of existing peak hour intersection counts and ADTs at the neighboring Firestone Drive segment as compared to peak hour volumes observed on La Brea Street. The ADT can be accurately estimated based on these comparative relationships of known volumes on like-roadways.





4.0 ANALYSIS APPROACH AND METHODOLOGY

4.1 Analysis Approach

Table 4-1 shows the analyses performed in each of the scenarios to determine the potential impacts to the road network.

TABLE 4-1
ANALYSIS SCENARIOS

Scenario	Analysis Performed
<i>Existing & Near-Term Conditions</i>	
Existing	Peak Hour Intersection Analysis
Existing + Project ^a	Daily Street Segment Analysis
Existing + Cumulative Projects	Peak Hour Ramp Meter Analysis
Existing + Cumulative Projects + Project ^a	
<i>General Plan (Year 2035) Conditions</i>	
Year 2035 Without Project	Peak Hour Intersection Analysis
Year 2035 With Project ^a	Daily Street Segment Analysis
	Peak Hour Ramp Meter Analysis

Footnotes:

- a. All “with Project” analyses include the SAP intersection and street segment improvements proposed along Country Club Lane from Golden Circle Drive to Nutmeg Street.

4.2 Methodology

Level of service (LOS) is the term used to denote the different operating conditions which occur on a given roadway segment under various traffic volume loads. It is a qualitative measure used to describe a quantitative analysis taking into account factors such as roadway geometries, signal phasing, speed, travel delay, freedom to maneuver, and safety. Level of service provides an index to the operational qualities of a roadway segment or an intersection. Level of service designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. Level of service designation is reported differently for signalized intersections, unsignalized intersections and roadway segments.

4.2.1 Intersections

Signalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay was determined using the methodology found in Chapter 18 of the *2010 Highway Capacity Manual (HCM)*, with the assistance of Synchro (version 9) software. The delay values (represented in seconds) were qualified with a corresponding intersection LOS. Location-specific signal timing information was used in the analysis where available.

Unsignalized intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and LOS was determined based on the procedures found in Chapters 19 and 20 of the *2010*

HCM, with the assistance of Synchro (version 9) software.

Roundabout intersections were analyzed under AM and PM peak hour conditions. Average vehicle delay and LOS was determined based on the procedures found in Chapter 17 of the 2010 HCM, with the assistance of Sidra Intersection 6.0 software.

4.2.2 Street Segments

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Escondido and County of San Diego Roadway Classification, Level of Service, and ADT Tables, depending on which jurisdiction the street segment is located within. These tables provide segment capacities for different street classifications, based on traffic volumes and roadway characteristics. Copies of the City of Escondido and County of San Diego capacity tables are attached in **Appendix B**.

4.3 Metered Freeway Ramps

The measure of effectiveness (MOE) for the metered freeway ramp analysis is delay in minutes. Ramp meter flows characteristically vary throughout the peak hour based on the performance of the freeway mainline. As the mainline becomes more congested, the ramp meter rates decline, allowing fewer vehicles onto the freeway in the same time period.

The ramp meters were analyzed using the Fixed Rate method. With the Fixed Rate method, using the most restrictive flow rate during the peak hour, the total discharge and delay (in minutes) are calculated and the corresponding queue lengths are calculated. The meter rates are dynamic, and fluctuate between the most conservative (restrictive) and most aggressive (permissive) intervals assigned to a metered ramp. The regional standard of practice is to use the longest, restrictive rates to ensure a conservative analysis.

The metering information was obtained from Caltrans for the ramp within the Project study area (El Norte Parkway to I-15 SB) and is included in **Appendix A**.

4.4 Freeway Mainline Segments

Freeway segments were analyzed during the AM and PM peak hours based on the methodologies developed by Caltrans District 11. The assessment of key freeway segments is necessary to satisfy the requirement of the CMP, as outlined later in the report. Freeway segment LOS is based on the volume to capacity ratio on the freeway.

The analysis of freeway segment LOS is based on the procedure developed by Caltrans District 11 based on methods described in the HCM. The procedure involves comparing the peak hour volume of the mainline segment to the theoretical capacity of the roadway (V/C). The procedure for calculating freeway LOS involves the estimation of volume to capacity (V/C) ratio using the following equation:

$$V/C = ((\text{Daily Volume} * \text{Peak Hour Percent} * \text{Directional Factor} * \text{Truck Factor}) / \text{Capacity})$$

Daily Volume = Average Daily Traffic (ADT)

Peak Hour Percent = Percentage of ADT occurring during the peak hour.

Directional Factor = Percentage of peak hour traffic occurring in peak direction.

Truck Factor = Truck/terrain factor to represent influence of heavy vehicles & grades.

Capacity = 2,000 vehicles/lane/hour/lane for mainline, and 1,200 for auxiliary lanes.

The resulting V/C is then compared to accepted ranges of V/C values corresponding to the various Levels of Service for each facility classification, as shown in **Table 4-2**. The corresponding Level of Service represents an approximation of existing or anticipated future freeway operating condition in the peak direction of travel during the peak hour.

TABLE 4-2
FREEWAY SEGMENT LEVEL OF SERVICE DEFINITIONS

LOS	V/C	Congestion/Delay	Traffic Description
<i>USED FOR FREEWAYS, EXPRESSWAYS AND CONVENTIONAL HIGHWAYS</i>			
A	<0.41	None	Free flow
B	0.42-0.62	None	Free to stable flow, light to moderate volumes.
C	0.63-0.80	None to minimal	Stable flow, moderate volumes, freedom to maneuver noticeably restricted
D	0.81-0.92	Minimal to substantial	Approaches unstable flow, heavy volumes, very limited freedom to maneuver.
E	0.93-1.00	Significant	Extremely unstable flow, maneuverability and psychological comfort extremely poor.
<i>USED FOR FREEWAYS AND EXPRESSWAYS</i>			
F(0)	1.01-1.25	Considerable 0-1 hour delay	Forced flow, heavy congestion, long queues form behind breakdown points, stop and go.
F(1)	1.26-1.35	Severe 1-2 hour delay	Very heavy congestion, very long queues.
F(2)	1.36-1.45	Very Severe 2-3 hour delay	Extremely heavy congestion, longer queues, more numerous breakdown points, longer stop periods.
F(3)	>1.46	Extremely Severe 3+ hours of delay	Gridlock

5.0 SIGNIFICANCE CRITERIA

The project study area includes transportation facilities primarily within the jurisdiction of the City of Escondido. However, some facilities analyzed in this study area are located within neighboring jurisdictions, or share jurisdiction between the City of Escondido and a neighboring agency. Thus, the significance criteria of the jurisdiction within which a transportation facility is located was used to determine significance. Where jurisdiction is shared, the City of Escondido’s criteria was used. The significance criteria for the following jurisdictions are included in this section.

- City of Escondido
- County of San Diego
- City of San Marcos
- Caltrans

5.1 City of Escondido Criteria

The following is a summary of the City of Escondido’s published significance criteria.

In accordance with the SANTEC/ITE Guidelines for Traffic Impact Studies in the San Diego Region, the following thresholds shall be used to identify if a project is of significant traffic impact under any scenario. Based on SANTEC/ITE guidelines, if now or in the future, the Project’s traffic impact causes the values in *Table 5-1* to be exceeded in a roadway segment or intersection that is operating at LOS D or worse, it is determined to be a significant impact and the Project shall identify mitigation measures.

TABLE 5-1
PROPOSED THRESHOLDS TO IDENTIFY A PROJECT’S SIGNIFICANT TRAFFIC IMPACT
CITY OF ESCONDIDO

Level of Service with Project	Allowable Change due to Project Impact		
	Roadway Segments		Intersections Delay (sec.)
	V/C	Speed (mph)	
D, E, or F	0.02	1	2

Source: City of Escondido

*No Significant Impact occurs at areas in GP Downtown Specific Area that operates at LOS “D” or better.

*Mitigation measures should also be considered for any segment or intersection operating at LOS “F” subject to less than significant impact.

*V: Volume *C: Capacity (use LOS “E”)

Furthermore, according to the City’s General Plan, Mobility Element streets and intersections shall be planned and developed to achieve a minimum LOS “C” defined by the Highway Capacity Manual as amended or updated, or such other national standard deemed appropriate by the city. Level of Service “C” may not be feasible in all areas at all times and LOS “D” shall be considered the threshold for determining significant impacts and appropriate mitigation. Per the certified

General Plan EIR, a significant impact would result from a General Plan (Year 2035) analysis when a project would “cause the LOS of a General Plan Mobility and Infrastructure Element roadway to fall below LOS D and/or add more than 200 ADT to a Mobility and Infrastructure Element roadway with an LOS E or F.”

5.2 San Diego County Criteria

The following criteria are used to evaluate potential significant impacts within San Diego County jurisdiction, based on the County’s document, *Guidelines for Determining Significance*, updated August 24, 2011:

“Pursuant to the County’s General Plan Mobility Element Policy M2.1, new development must provide improvements or other measures to mitigate traffic impacts to avoid:

- a. Reduction in LOS below “C” for on-site Mobility Element roads;*
- b. Reduction in LOS below “D” for off-site and on-site abutting Mobility Element roads; and*
- c. “Significantly impacting congestion” on roads that operate at LOS “E” or “F”. If impacts cannot be mitigated, the project cannot be approved unless a statement of overriding considerations is made pursuant to State CEQA Guidelines. However, the General Plan Mobility Element does not include specific guidelines for determining the amount of additional traffic that would “significantly impact congestion” on such roads.”*

The County has created the following guidelines to evaluate likely traffic impacts of a proposed project for road segments and intersections serving that project site, for the purposes of determining whether the development would “significantly impact congestion” on the referenced LOS E and F roads. The guidelines are summarized in **Table 5–2**. The thresholds in *Table 5–2* are based upon average operating conditions on County roadways. It should be noted that these thresholds only establish general guidelines, and that the specific project location must be taken into account in conducting an analysis of traffic impact from new development.

TABLE 5–2
MEASURES OF SIGNIFICANT PROJECT IMPACTS TO MOBILITY ELEMENT ROAD SEGMENTS
ALLOWABLE INCREASES ON CONGESTED ROAD SEGMENTS

Level of Service	Two-Lane Road	Four-Lane Road	Six-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

General Notes:

1. By adding proposed project trips to all other trips from a list of projects, this same table must be used to determine if total cumulative impacts are significant. If cumulative impacts are found to be significant, each project that contributes additional trips must mitigate a share of the cumulative impacts.
2. The County may also determine impacts have occurred on roads even when a project’s traffic or cumulative impacts do not trigger an unacceptable level of service, when such traffic uses a significant amount of remaining road capacity.

5.3 City of San Marcos Criteria

Within the City of San Marcos, a project is considered to have a significant impact if the new project

traffic has decreased the operations of surrounding roadways by a defined threshold. The defined thresholds shown in *Table 5-3* (LOS D accepted), are based on published SANTEC guidelines and the City of San Marcos General Plan. If the project exceeds the thresholds in *Table 5-3*, then the project may be considered to have a significant project impact. A feasible mitigation measure will need to be identified to return the impact within the thresholds (pre-project + allowable increase) or the impact will be considered significant and unmitigated.

For intersections and roadway segments affected by a project, level of service (LOS) D or better is considered acceptable under both direct and cumulative conditions.

If the Project exceeds the thresholds in *Table 5-3*, then the Project may be considered to have a significant “direct” or “cumulative” project impact. A significant impact can also occur if a project causes the Level of Service to degrade from D to E, even if the allowable increases in *Table 5-3* are not exceeded. A feasible mitigation measure will need to be identified to return the impact within the City thresholds, or the impact will be considered significant and unmitigated.

**TABLE 5-3
TRAFFIC IMPACT SIGNIFICANT THRESHOLDS**

Level of Service with Project ^a	Allowable Increase Due to Project Impacts ^b					
	Freeways		Roadway Segments		Intersections	Ramp Metering
	V/C	Speed (mph)	V/C	Speed (mph)	Delay (sec.)	Delay (min.)
E & F (or ramp meter delays above 15 minutes)	0.01	1	0.02	1	2	2 ^c

Footnotes:

- a. All level of service measurements are based upon HCM procedures for peak-hour conditions. However, V/C ratios for Roadway Segments may be estimated on an ADT/24-hour traffic volume basis (using Table 2 or a similar LOS chart for each jurisdiction). The acceptable LOS for freeways, roadways, and intersections is generally “D” (“C” for undeveloped or not densely developed locations per jurisdiction definitions). For metered freeway ramps, LOS does not apply. However, ramp meter delays above 15 minutes are considered excessive.
- b. If a proposed project’s traffic causes the values shown in the table to be exceeded, the impacts are deemed to be significant. These impact changes may be measured from appropriate computer programs or expanded manual spreadsheets. The project applicant shall then identify feasible mitigations (within the Traffic Impact Analysis [TIA] report) that will maintain the traffic facility at an acceptable LOS. If the LOS with the proposed project becomes unacceptable (see note a above), or if the project adds a significant amount of peak hour trips to cause any traffic queues to exceed on- or off-ramp storage capacities, the project applicant shall be responsible for mitigating significant impact changes.
- c. The impact is only considered significant if the total delay exceeds 15 minutes.

General Notes:

- 1. V/C = Volume to Capacity Ratio
- 2. Speed = Arterial speed measured in miles per hour
- 3. Delay = Average stopped delay per vehicle measured in seconds for intersections, or minutes for ramp meters.
- 4. LOS = Level of Service
- 5. HCM = Highway Capacity Manual

5.4 Caltrans Criteria

The SANTEC guidelines shown on *Table 5-3* are also used for Caltrans freeway segments and ramp meters, although Caltrans accepts LOS D operations for urban locations, which Escondido is considered.

6.0 ANALYSIS OF EXISTING CONDITIONS

The criteria used for determining unacceptable operations are subject to each jurisdiction's standards, as discussed in *Section 5.0* of this report. The City of Escondido considers LOS D the threshold for unacceptable operations, while the County, City of San Marcos and Caltrans criteria indicate locations operating at LOS E or worse are unacceptable operations. The following section summarizes the existing analysis of study area locations.

6.1 Peak Hour Intersection Levels of Service

Table 6-1 summarizes the existing peak hour intersection operations. As shown, the following intersections are calculated to currently operate at unacceptable LOS based on their respective jurisdiction criteria:

- Intersection #2. Country Club Lane / Golden Circle Drive – LOS E in the AM peak hour (*Escondido*)
- Intersection #6. Country Club Lane / Nutmeg Street – LOS E in the PM peak hour (*Escondido*)
- Intersection #8. El Norte Parkway / Woodland Parkway – LOS D in the AM peak hour (*Escondido / San Marcos*)
- Intersection #9. El Norte Parkway / Country Club Lane – LOS D in the PM peak hour (*Escondido*)
- Intersection #16. El Norte Parkway / Centre City Parkway – LOS D in the AM and PM peak hours (*Escondido*)
- Intersection #17. El Norte Parkway / Broadway – LOS F/E in the AM/PM peak hours (*Escondido*)

Appendix C contains the Existing peak hour intersection analysis worksheets.

6.2 Daily Street Segment Levels of Service

Table 6-2 summarizes the existing segment operations along the key study area roadways. As shown, all roadway segments are calculated to currently operate at acceptable LOS on a daily basis except the following:

- Segment #10. El Norte Parkway from Nutmeg Street / Nordahl Road to I-15 Ramps – LOS D (*Escondido*)
- Segment #15. Nutmeg Street from Country Club Lane to Via Alexandra – LOS D (*Escondido*)

6.3 Peak Hour Freeway Ramp Meter Operations

Table 6-3 summarizes the existing operations of the I-15/ El Norte Parkway southbound on-ramp meter using the fixed rate analysis methodology. As shown in **Table 6-3**, an existing delay of greater than 15.0 minutes during the AM peak hour is calculated using this methodology. Again, it is widely

accepted that this methodology grossly overstates the calculated queues and delays. However, field observation corroborate that substantial queueing occurs during the AM peak hour at this location.

6.4 Peak Hour Freeway Mainline Operations

Table 6-4 summarizes the existing operations of the I-15 freeway mainline segment between El Norte Parkway and SR-78. As shown in *Table 6-4*, during the AM and PM peak hours this freeway segment operates at LOS F(0) in the peak direction (southbound AM, northbound PM). The off-peak direction of travel operates at LOS B or better.

**TABLE 6-1
EXISTING INTERSECTION OPERATIONS**

Intersection	Jurisdiction	Control Type	Peak Hour	Delay^a	LOS^b
1. Centre City Pkwy / Nutmeg St	Escondido	MSSC ^c	AM	23.8	C
			PM	16.1	C
2. Country Club Ln / Golden Circle Dr	Escondido	MSSC ^c	AM	35.3	E
			PM	15.6	C
3. Gary Ln / Country Club Ln	Escondido	AWSC ^d	AM	12.0	B
			PM	9.3	A
4. Firestone Dr / Country Club Ln	Escondido	MSSC	AM	9.4	A
			PM	10.2	B
5. La Brea St / Country Club Ln	Escondido	AWSC ^d	AM	8.7	A
			PM	8.8	A
6. Nutmeg St / Country Club Ln	Escondido	AWSC ^d	AM	17.9	C
			PM	44.5	E
7. Centre City Pkwy / Country Club Ln	Escondido	Signal	AM	25.8	C
			PM	20.9	C
8. Woodland Pkwy / El Norte Pkwy	Escondido/ San Marcos	Signal	AM	37.3	D
			PM	23.9	C
9. Country Club Ln / El Norte Pkwy	Escondido	Signal	AM	48.4	D
			PM	32.3	C
10. Bennett Ave / El Norte Pkwy	Escondido	Signal	AM	22.8	C
			PM	25.0	C
11. El Norte Pkwy / Rees Rd	Escondido/ County	Signal	AM	9.4	A
			PM	9.5	A
12. El Norte Pkwy / Nutmeg Street / Nordahl Rd	Escondido	Signal	AM	23.4	C
			PM	30.6	C
13. El Norte Pkwy / I-15 SB Ramps	Caltrans	Signal	AM	23.7	C
			PM	10.3	B
14. El Norte Pkwy / I-15 NB Ramps	Caltrans	Signal	AM	19.5	B
			PM	32.2	C
15. El Norte Pkwy / 7 Oaks Rd	Escondido	Signal	AM	16.7	B
			PM	25.1	C
<i>Continued on Next Page</i>					

**TABLE 6-1
EXISTING INTERSECTION OPERATIONS**

Intersection	Jurisdiction	Control Type	Peak Hour	Delay ^a	LOS ^b
<i>Continued from Previous Page</i>					
16. El Norte Pkwy / Centre City Pkwy	Escondido	Signal	AM	52.9	D
			PM	50.8	D
17. El Norte Pkwy / Broadway	Escondido	Signal	AM	>100.0	F
			PM	72.6	E

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. MSSC - Minor-Street Stop Controlled intersection. Minor street left-turn delay is reported.
- d. AWSC – All-Way Stop Controlled intersection.

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 45.0	D	25.1 to 35.0	D
45.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

**TABLE 6-2
EXISTING STREET SEGMENT OPERATIONS**

Street Segment	Jurisdiction	Functional Classification	LOS E^a Capacity	ADT^b	LOS^c	V/C^d
Country Club Lane						
1. El Norte Pkwy to Country Club Ln	Escondido	2-Ln Local Collector (WP)	15,000 ^e	6,290	B	0.419
2. Country Club Ln to Gary Ln	Escondido	2-Ln Local Collector (WP)	10,000	4,440	B	0.444
3. Gary Ln to La Brea St	Escondido	4-Ln Collector (WP)	20,000	5,210	A	0.261
4. La Brea St to Nutmeg St	Escondido	4-Ln Collector (WP)	20,000	5,330	A	0.267
5. Nutmeg St to Centre City Pkwy	Escondido	4-Ln Collector (NP)	34,200	9,530	A	0.279
El Norte Parkway						
6. Woodland Pkwy to Country Club Ln	Escondido	4-Ln Major Road	37,000	20,320	C	0.549
7. Country Club Ln to Bennett Ave	Escondido	4-Ln Major Road	37,000	16,190	B	0.438
8. Bennett Ave to Rees Rd	Escondido	4-Ln Major Road	37,000	17,880	B	0.483
9. Rees Rd to Nutmeg St / Nordahl Rd ^f	County	4.1A Major Road	37,000	17,880	B	0.483
10. Nutmeg St / Nordahl Rd to I-15 Ramps	Escondido	4-Ln Major Road	37,000	31,950	D	0.864
11. I-15 Ramps to Morning View Dr	Escondido	4-Ln Major Road	37,000	25,680	C	0.694
12. Morning View Dr to Centre City Pkwy	Escondido	7-Ln Major Road ^g	55,000	25,680	B	0.467
13. Centre City Pkwy to Broadway	Escondido	4-Ln Major Road	37,000	25,680	C	0.694
Nutmeg Street						
14. North of Country Club Ln	Escondido	2-Ln Local Collector (WP)	10,000	3,120	A	0.312
15. Country Club Ln to Via Alexandra	Escondido	2-Ln Local Collector (WP)	10,000	7,550	D	0.755
16. Via Alexandra to El Norte Pkwy	Escondido	2-Ln Collector w/ TWLTL	15,000	7,550	B	0.503
Bennett Avenue						
17. El Norte Pkwy to Toyon Glen	Escondido	2-Ln Collector	10,000	6,460	C	0.646
La Brea Street						
18. Country Club Lane to Cortez Ave ^h	Escondido	Local Road	4,500	350	C+	—
Firestone Drive						
19. Country Club Ln to Woodbridge Rd ^h	Escondido	Local Road	4,500	1,010	C+	—

Footnotes:

- a. Capacities based on *City of Escondido Roadway Classification Table* (See Appendix B).
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to capacity ratio.
- e. Segment has raised median increasing capacity.
- f. Street segment located in County of San Diego. Roadway classification and capacity based on County of San Diego *Public Roads Standards*.
- g. Street segment currently constructed with three eastbound lanes and four westbound lanes. Daily capacity is assumed at 5,000 ADT above a 6-Lane Major Road.
- h. Level of Service is not reported for residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Level of service normally applies to roads carrying through traffic between major traffic generators and attractors. 4,500 is County of San Diego LOS C capacity for a residential collector. LOS is reported as better (+) or worse (-) than LOS C.

General Notes:

1. (NP) = No Parking
2. (WP) = With Parking

**TABLE 6-3
EXISTING CALTRANS RAMP METER ANALYSIS – FIXED RATE**

Location	Peak Hour ^a	Existing						
		Volume		Peak Hour Demand (D) ^b	Meter Rate (R) ^c	Excess Demand (E) (veh)	Delay (min)	Queue (ft) ^d
		SOV	HOV					
I-15 / El Norte Parkway Interchange								
El Norte Parkway to I-15 SB (1 SOV+1 HOV)	AM	917	162	917	492	425	> 15.0	> 5,000

Footnotes:

- Selected peak hour based on period when ramp meter is operating.
- Peak hour demand in vehicles/hour/lane for SOV and HOV lanes.
- Meter rate “R” is the most restrictive rate at which the ramp meter (signal) discharges traffic onto the freeway (obtained from Caltrans). The discharge rate ranges from 492 to 996 vehicles per hour depending on the mainline volumes.
- Queue calculated assuming vehicle length of 25 feet.

General Notes:

- SOV = Single Occupancy Vehicle, HOV = High Occupancy Vehicle
- Lane utilization factor accounted for in peak hour demand calculation. (Assumed 15% for HOV).

**TABLE 6-4
EXISTING CALTRANS FREEWAY ANALYSIS**

Freeway Segment	Dir.	# of Lanes	Hourly Capacity ^a	AADT ^b	Truck Factor ^c	Peak Hour Volume ^d		V/C ^e		LOS	
						AM	PM	AM	PM	AM	PM
Interstate 15											
El Norte Pkwy to SR-78	NB	4	8,000	135,000	0.8990	2,149	8,044	0.269	1.005	A	F(0)
	SB	4	8,000			8,062	4,059	1.008	0.507	F(0)	B

Footnotes:

- Capacity calculated at 2000 vph per lane and 1200 vph per auxiliary lane.
- Existing Average Annual Daily Traffic volumes from Caltrans Traffic Census (2015).
- Truck factor from “2015 Annual Average Daily Truck Traffic on the California State Highway System”.
- Peak hour volumes from Caltrans Peak Hour Volume Data (2015). Factored using Passenger Car Equivalent for trucks.
- V/C = Volume to Capacity.

LOS	v/c
A	<0.41
B	0.62
C	0.8
D	0.92
E	1
F(0)	1.25
F(1)	1.35
F(2)	1.45
F(3)	>1.46

7.0 TRIP GENERATION/DISTRIBUTION/ASSIGNMENT

The following is a discussion of the Project trip generation calculations and the Project traffic distribution and assignment through the local network.

7.1 Trip Generation

The Project traffic generation calculations were conducted using the trip generation rates published in SANDAG's "*Not so Brief Guide of Vehicular Traffic Generation Rates for San Diego Region*" (April 2002). Based on the most conservative type and density of homes proposed by the Project (single family residential), SANDAG specifies a residential trip rate of 10 ADT/ unit. The Project has stated an intent to possibly market some units to 55+ seniors, although age-restrictions are not proposed. It should be noted that the rate for "retirement community" (which matches a 55+ demographic) is 4 ADT/unit, or 60% less than that analyzed. If any of the units are ultimately marketed to seniors, this analysis will have conservatively over-estimated Project impacts.

Several amenities are proposed for both the homeowner's association (HOA) members and the nearby community. A 1,500 square foot restaurant space is proposed that would primarily serve the HOA and nearby community, but could potentially draw some small amount of trips from greater Escondido area and beyond. Also proposed is a small (1,000 SF) market that would serve the local neighborhood. A trip rate of 40 trips/1,000 SF for the "specialty retail" land use was applied to this specialty market.

In addition to the restaurant and retail uses, the Project will develop ancillary uses for the primary use of the local residents, including a clubhouse lobby, a swimming pool and a 1,600 SF gymnasium. The HOA will also have office and meeting space and banquet facilities. While it is proposed to sell memberships to the broader public to have access to these amenities, the weekday trip associated with them would be very modest and the trip generation volumes associated with those ancillary uses reflects this. It is also important to note that LLG did not take trip reductions for mixed-use/internal capture of residential and restaurant/amenity trips. Therefore, the analysis is ultimately considered to be conservative.

Table 7-1 shows a summary of the Project traffic generation. As tabulated the Project is calculated to generate 4,280 daily trips with 319 total AM peak hour trips (97 inbound/ 222 outbound) and 420 total PM peak hour trips (293 inbound/127 outbound).

7.2 Trip Distribution/Assignment

Trip distribution is the process of determining traffic percentage splits on the regional and local roadway network. Trip distribution is determined based on the characteristics of the Project and upon the general location of other land uses to which Project trips would originate or terminate, such as employment, housing, schools, recreation and shopping. LLG utilized the SANDAG regional traffic model to establish the regional cordons and distribution. The results of the Select Zone Assignment were reviewed by City staff, who provided additional comment and direction.

LLG used local traffic patterns as well as commercial GIS software to determine the local traffic distribution of each village’s driveway individually. All local driveway distributions ultimately conform to the broader regional distribution described above. The percentage of overall Project traffic assigned to each driveway is based on the relative percentage of overall units in each village. The public and HOA-related uses were only assigned to the Village 1 driveway (Driveway A), as it is the most proximate to these uses.

Figures 7-1a through **7-1g** depict the Project trip distribution percentages for each of seven individual Project driveways, as a percentage of the trips assigned to that particular driveway. **Figure 7-2** shows the percentage of total Project trips distributed to each driveway. **Figure 7-3** depicts the assigned total Project traffic volumes. **Figure 7-4** depicts Existing + Project traffic volumes.

TABLE 7-1
PROJECT TRIP GENERATION

Land Use	Size	Daily Trip Ends (ADTs)		AM Peak Hour					PM Peak Hour				
		Rate ^a	Volume	% of ADT	In:Out Split	Volume			% of ADT	In:Out Split	Volume		
						In	Out	Total			In	Out	Total
Village 1													
Residential (SF DU)	155 DU	10 / DU ^a	1,550	8%	30:70	37	87	124	10%	70:30	109	46	155
Village 2													
Residential (SF DU)	91 DU	10 / DU ^a	910	8%	30:70	22	51	73	10%	70:30	64	27	91
Village 3													
Residential (SF DU)	146 DU	10 / DU ^a	1,460	8%	30:70	35	82	117	10%	70:30	102	44	146
<i>Subtotal - Residential</i>	<i>392 DU</i>	–	<i>3,920</i>	–	–	<i>94</i>	<i>220</i>	<i>314</i>	–	–	<i>275</i>	<i>117</i>	<i>392</i>
Local Retail													
Restaurant	1,500 SF	100/ KSF ^a	150	1%	60:40	1	1	2	8%	70:30	8	4	12
Market	1,000 SF	40/ KSF ^a	40	3%	60:40	1	0	1	9%	50:50	2	2	4
<i>Subtotal: Local Retail</i>	<i>2,500 SF</i>	–	<i>190</i>	–	–	<i>2</i>	<i>1</i>	<i>3</i>	–	–	<i>10</i>	<i>6</i>	<i>16</i>
Local HOA Amenities													
Various Amenities	–	^b	170	1%	50:50	1	1	2	7%	75:25	9	3	12
Grand Total	–	–	4,280	–	–	97	222	319	–	–	294	126	420

Footnotes:

- a. Rate is based on SANDAG’s (Not So) Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002.
- b. “Local HOA Amenities” are assigned a nominal number of daily and peak hour trips

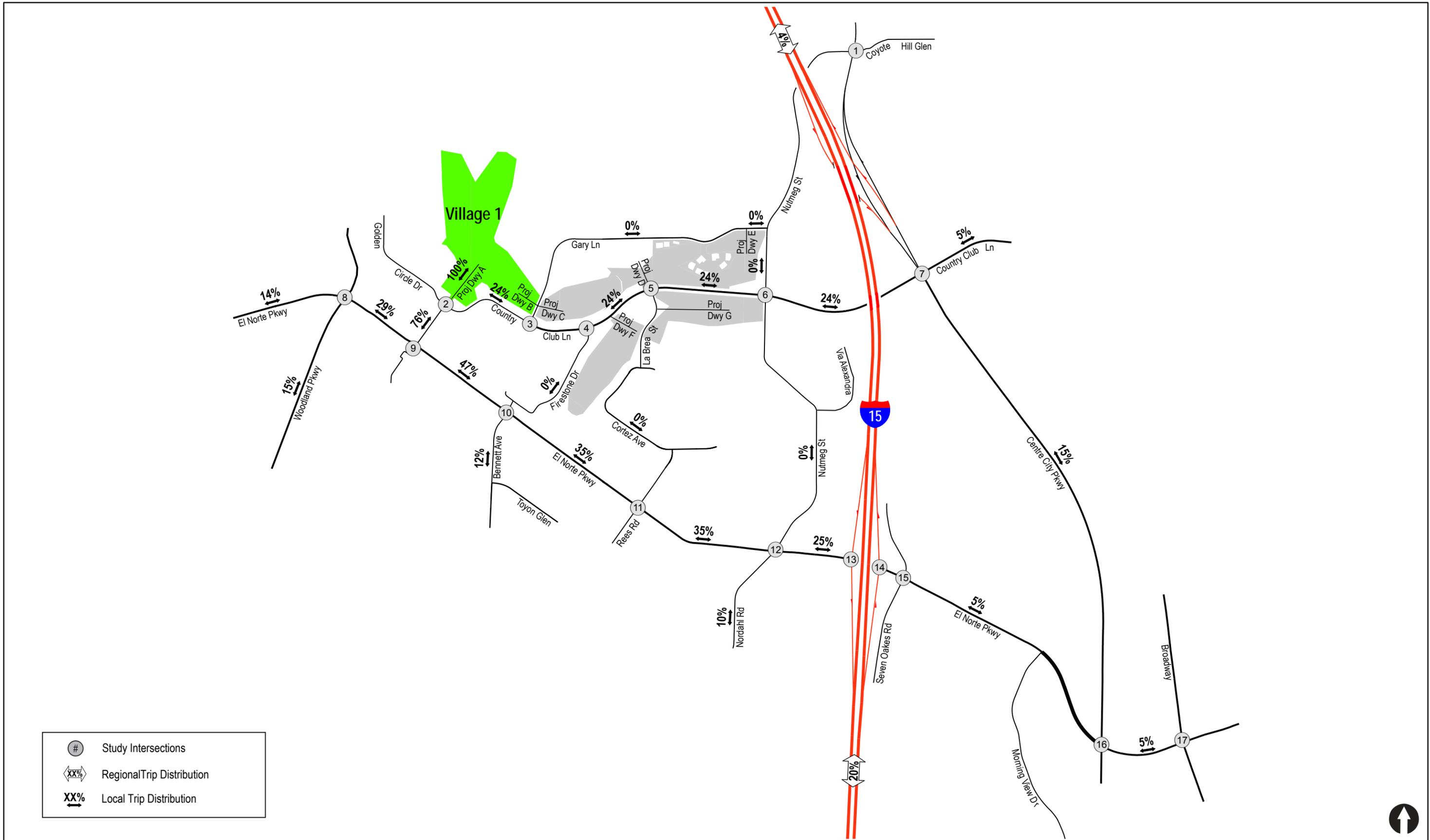
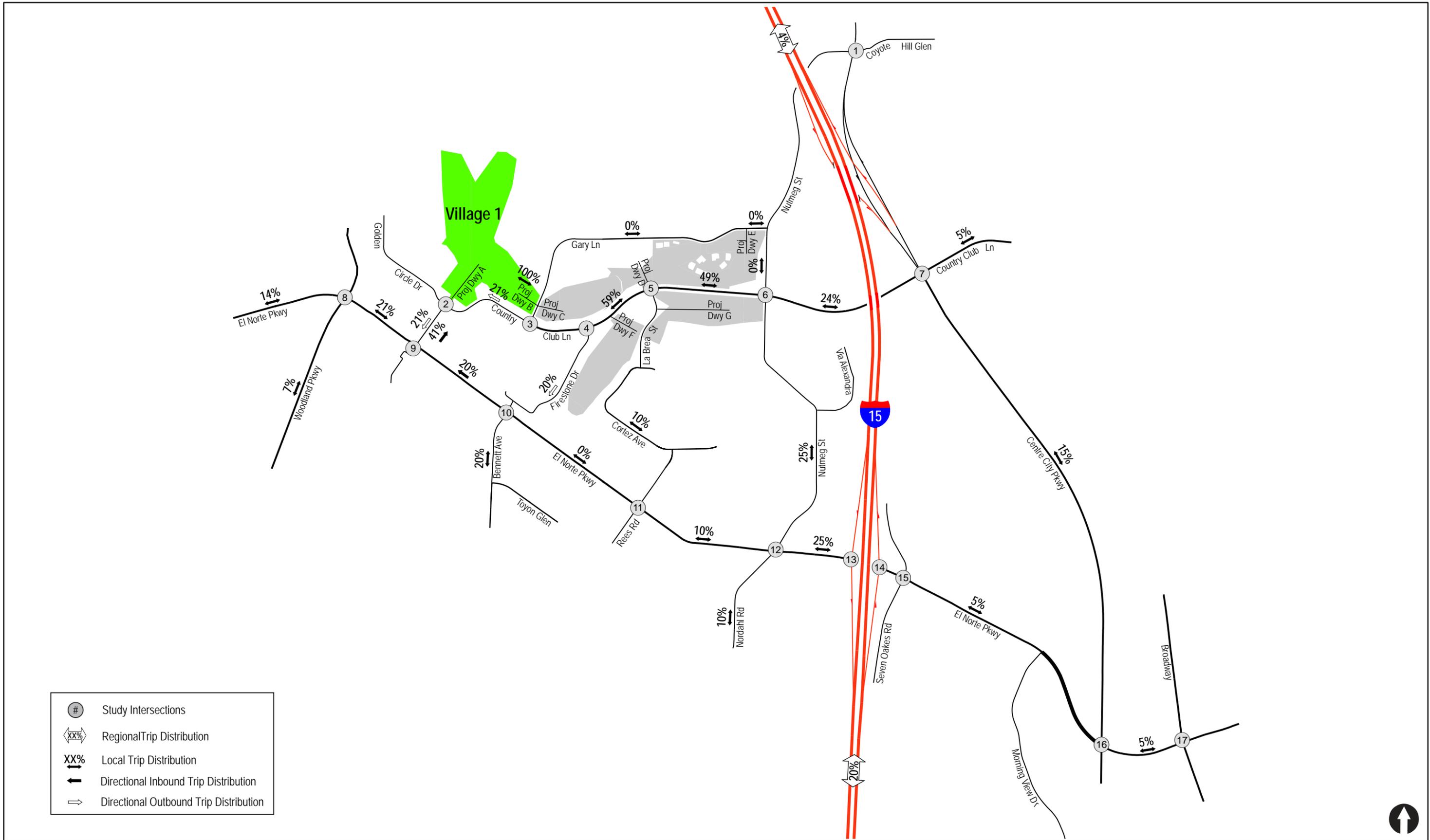


Figure 7-1a
Project Traffic Distribution
(Village 1, Project Driveway A)



- # Study Intersections
- XX% Regional Trip Distribution
- XX% Local Trip Distribution
- ← Directional Inbound Trip Distribution
- Directional Outbound Trip Distribution

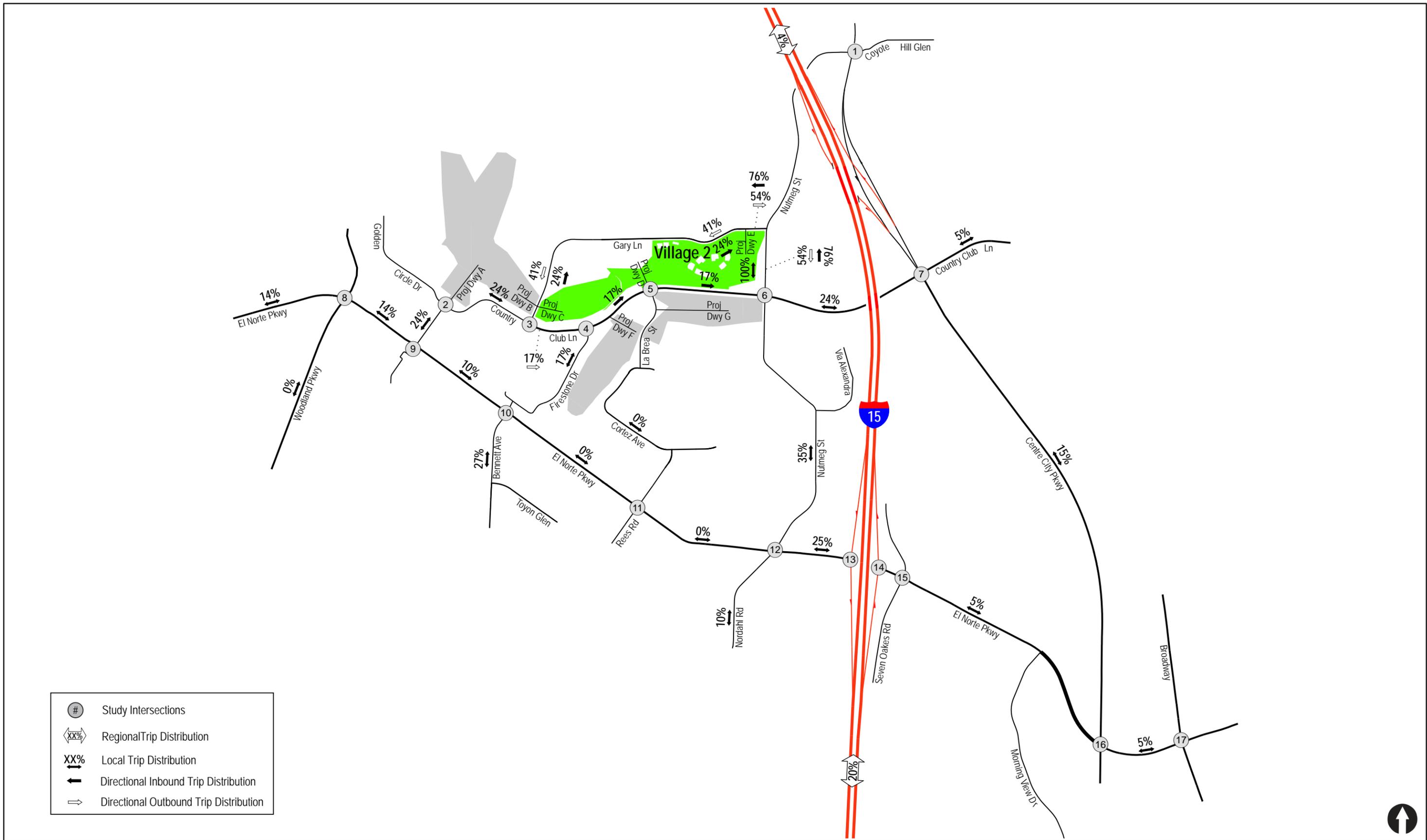


Figure 7-1b
Project Traffic Distribution
(Village 1, Project Driveway B)





Figure 7-1d
Project Traffic Distribution
(Village 2, Project Driveway D)



- # Study Intersections
- ◊ XX% Regional Trip Distribution
- ◯ XX% Local Trip Distribution
- Directional Inbound Trip Distribution
- ⇨ Directional Outbound Trip Distribution

Figure 7-1e
Project Traffic Distribution
 (Village 2, Project Driveway E)

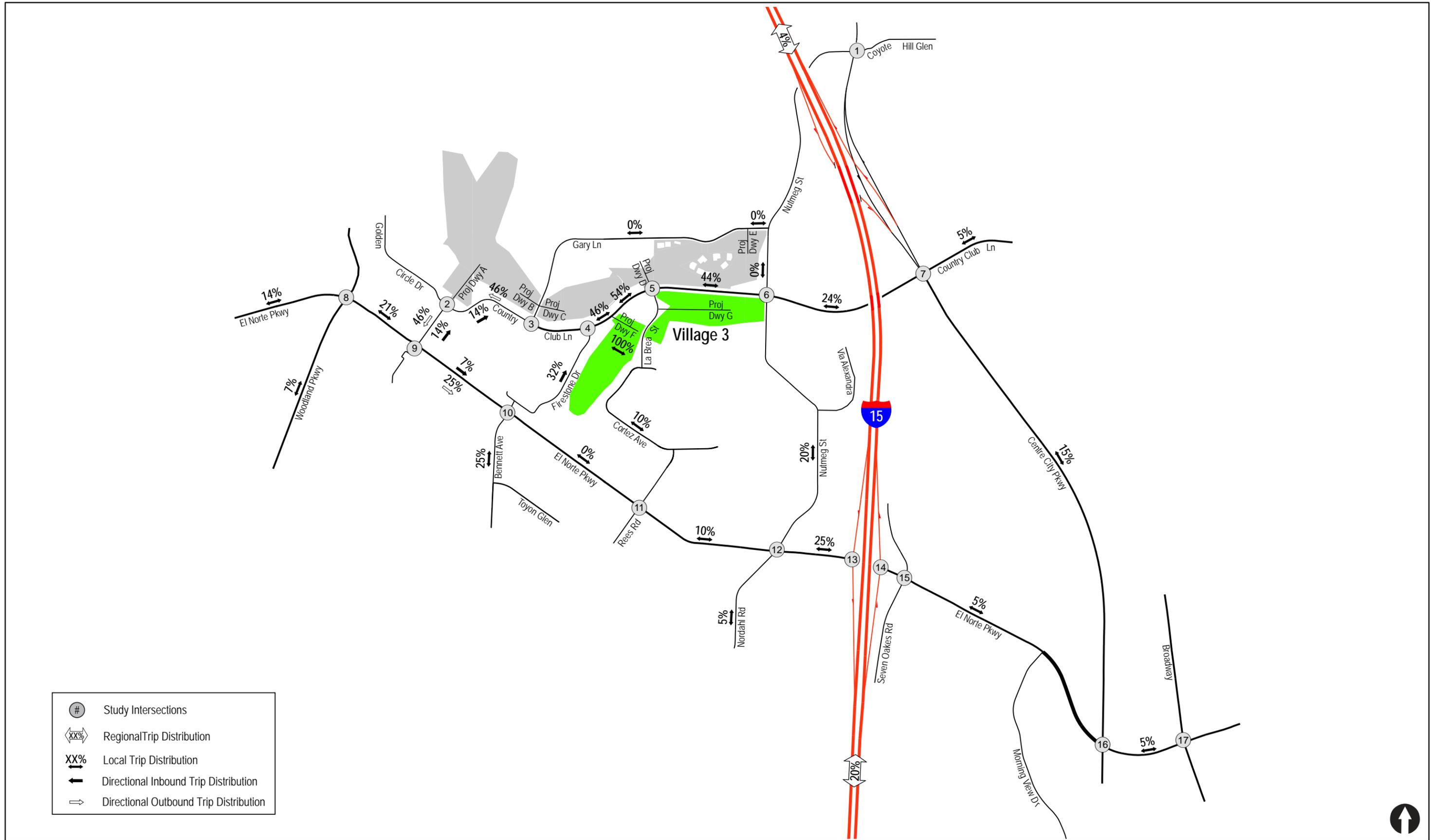


Figure 7-1f
Project Traffic Distribution
(Village 3, Project Driveway F)

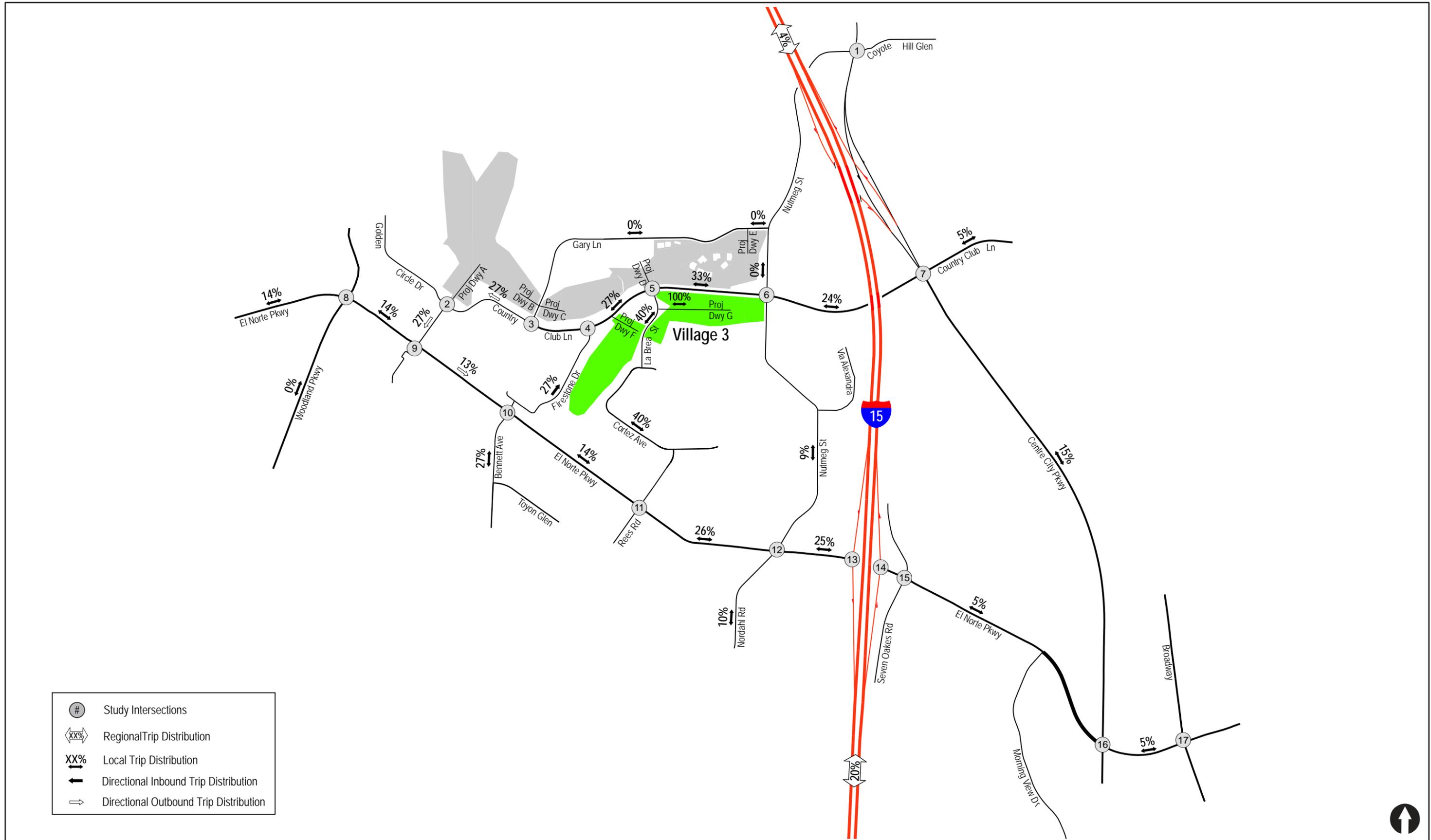
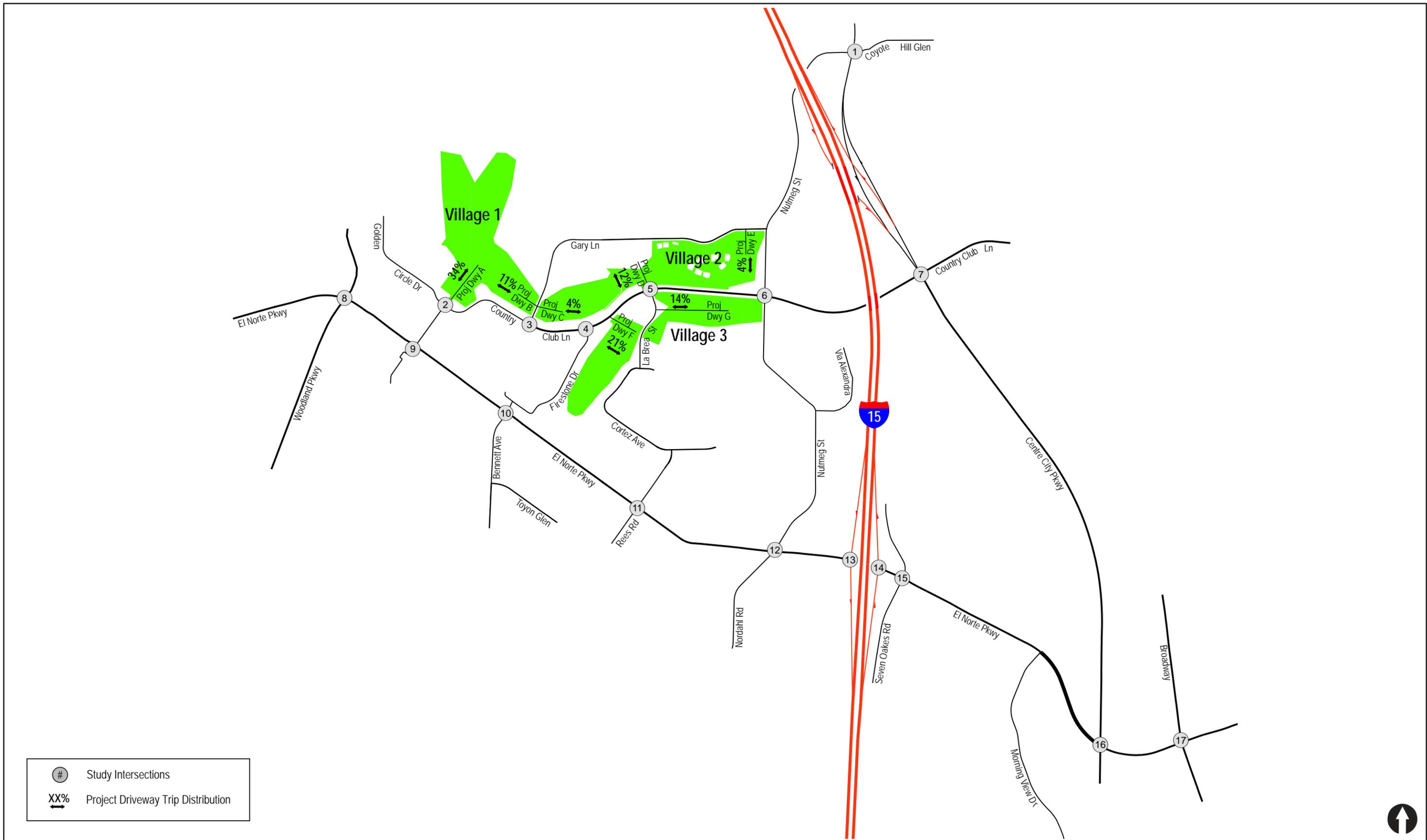


Figure 7-1g
Project Traffic Distribution
(Village 3, Project Driveway G)



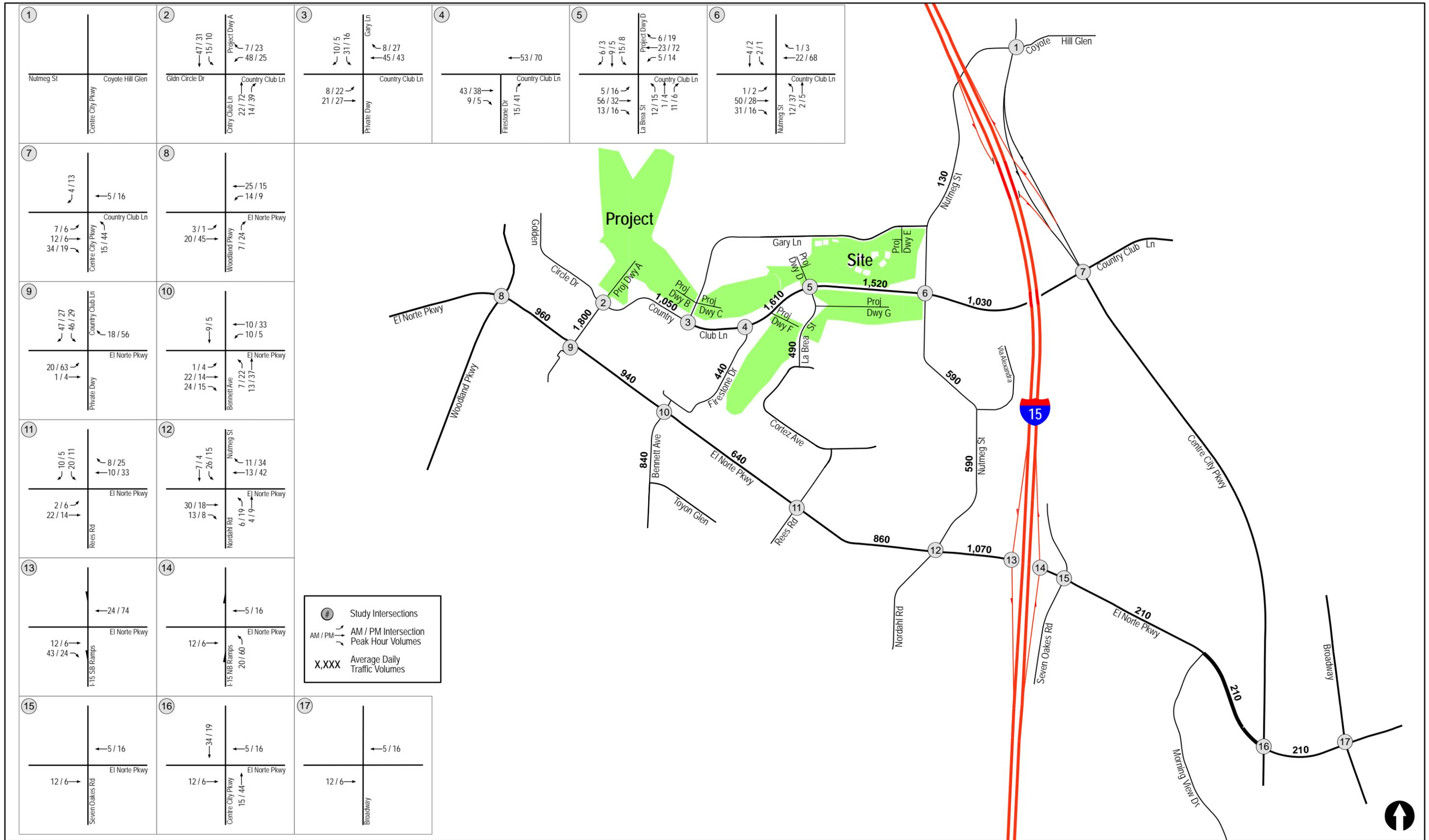


Figure 7-3

Total Project Traffic Volumes

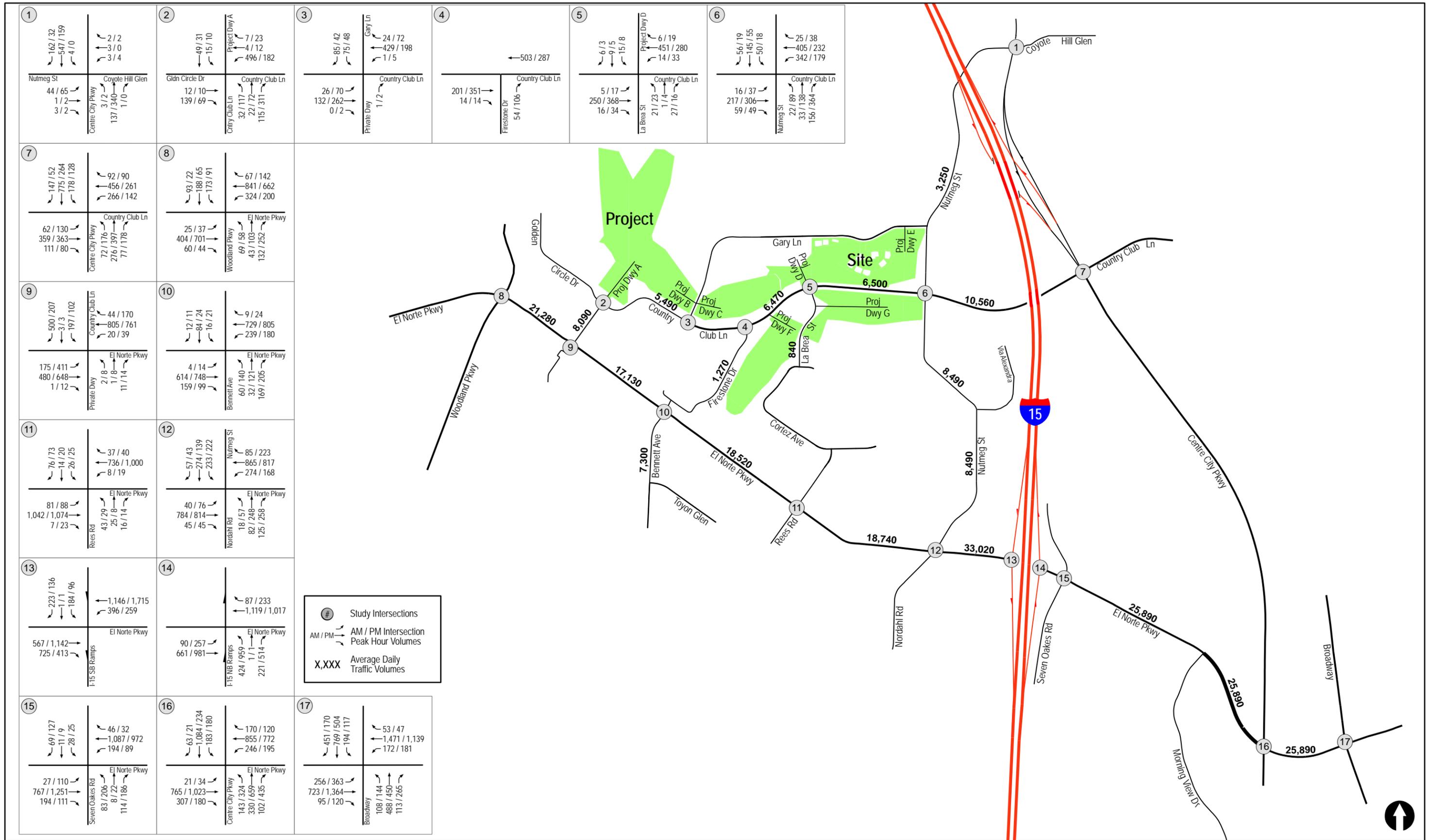


Figure 7-4

Existing + Project Traffic Volumes

8.0 CUMULATIVE PROJECTS

Cumulative projects are other projects in the study area that will add traffic to the local circulation system in the near future. LLG researched cumulative projects in the City of Escondido as well as the nearby jurisdictions of the City of San Marcos and County of San Diego.

Per the direction of City of Escondido staff, a growth rate was applied to existing volumes in lieu of a specific list of projects. LLG determined a growth rate by comparing Year 2035 forecast volumes from the Escondido General Plan to existing (Year 2016) volumes at several locations within the Project study area and calculated an average (median) growth rate of 1.9% annually. This growth rate was applied to existing volumes for a period of five (5) years to reach near-term (Existing + Cumulative) volumes.

In addition to the growth rate used within the City of Escondido, LLG identified one (1) project within the City of San Marcos and one (1) project within the County of San Diego that may add traffic to study area locations in the near-term. Individual assignments of traffic from these projects may be found in *Appendix D*.

Figure 8-1 depicts the total Cumulative traffic volumes. *Figure 8-2* depicts the Existing + Cumulative traffic volumes. *Figure 8-3* depicts the Existing + Cumulative + Project traffic volumes.

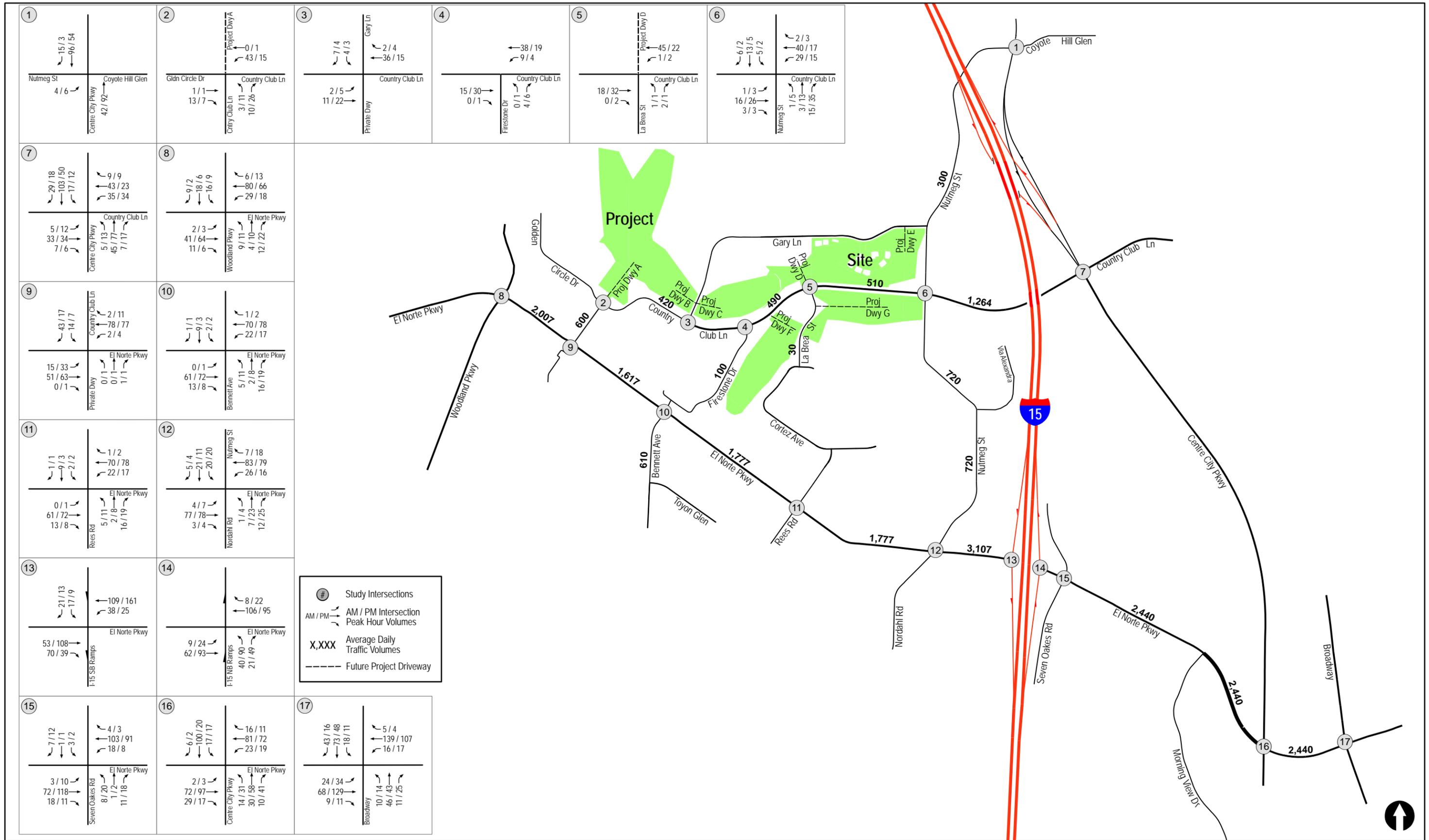


Figure 8-1

Total Cumulative Traffic Volumes

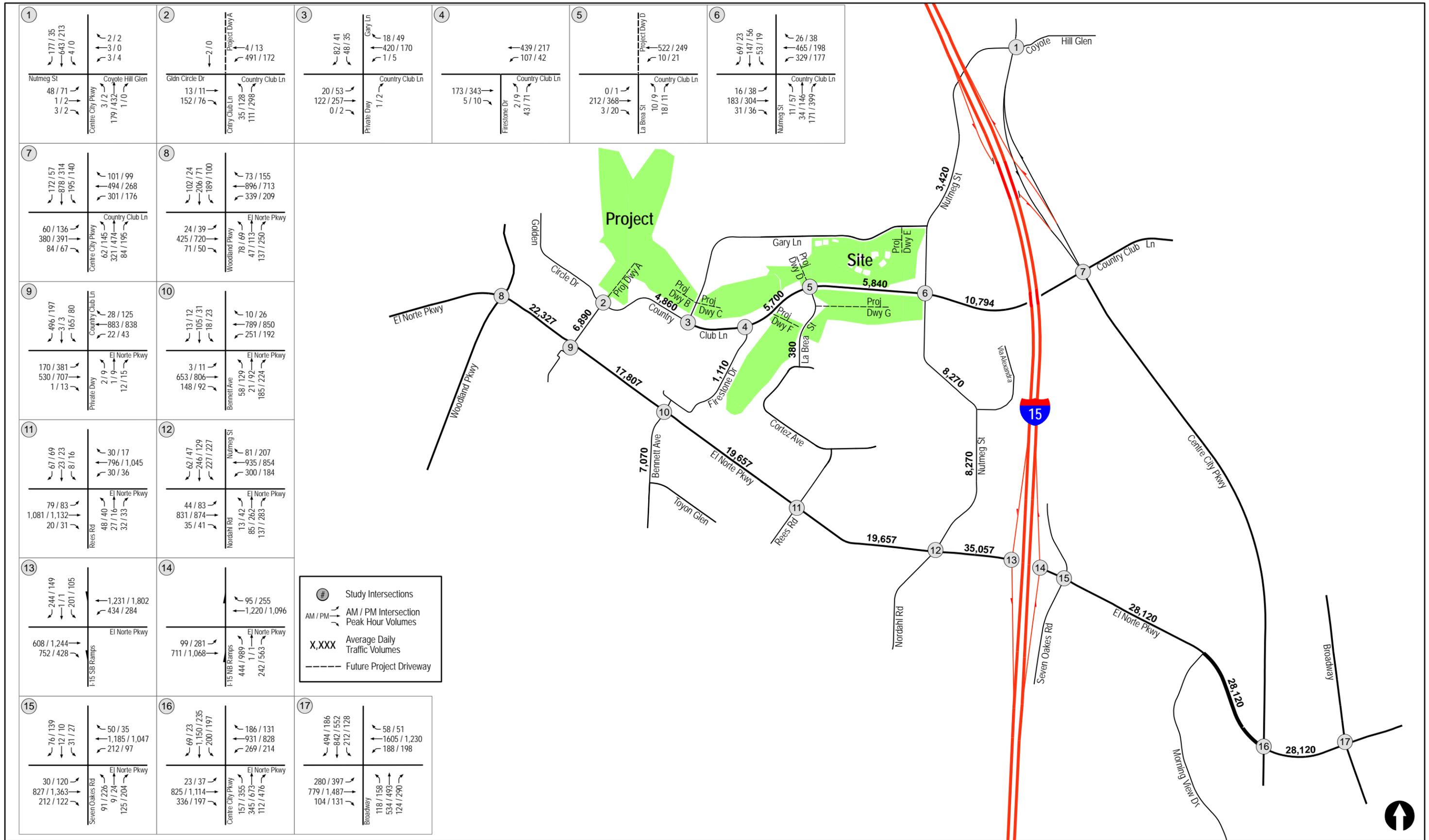


Figure 8-2

Existing + Cumulative Traffic Volumes

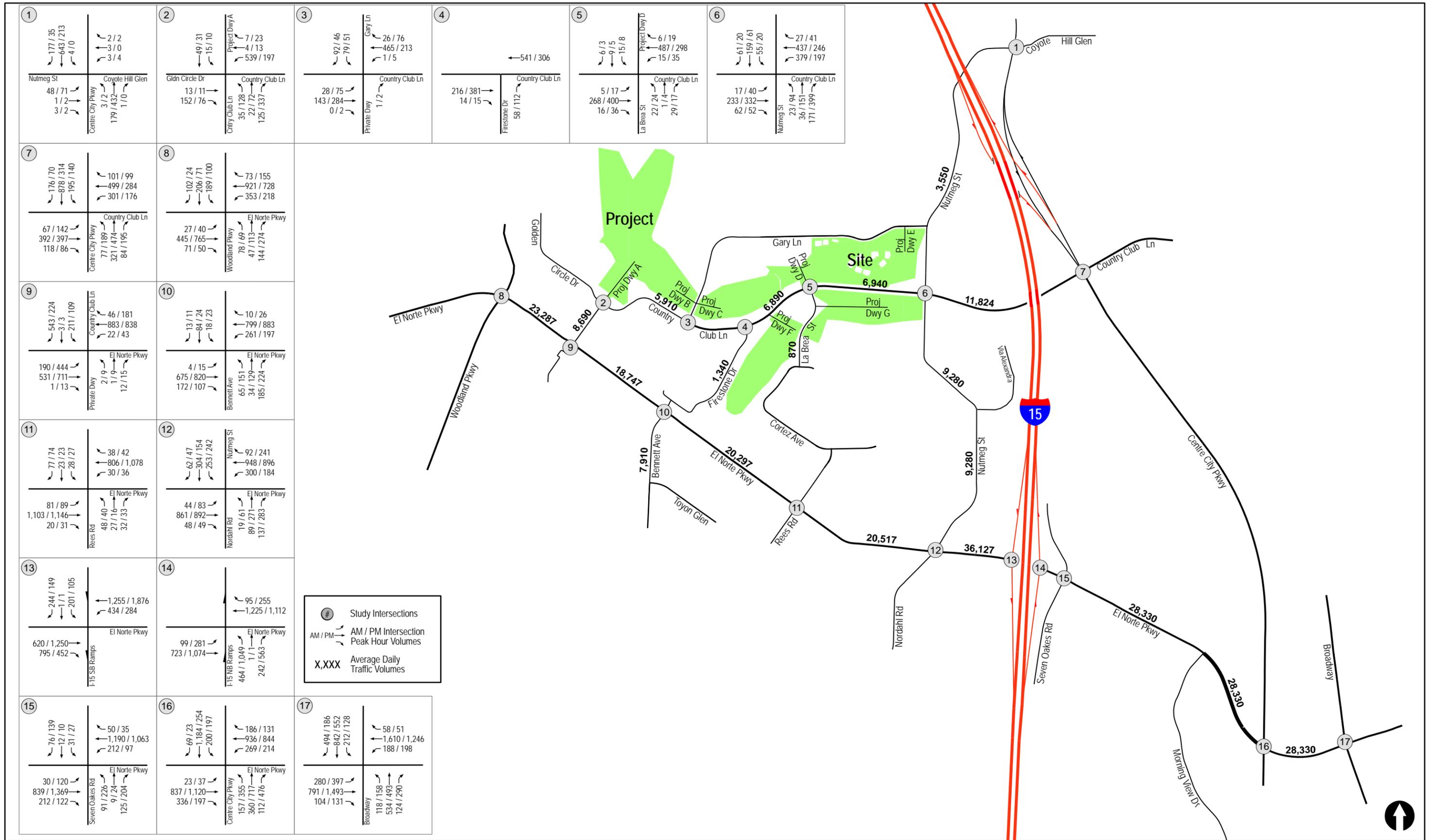


Figure 8-3

Existing + Cumulative + Project Traffic Volumes

9.0 ANALYSIS OF NEAR-TERM SCENARIOS

The following is a summary of the operational analyses for the various street-system components for the near-term traffic scenarios.

9.1 Existing + Project

Operational analyses for the Existing + Project scenario assume the implementation of the proposed SAP along Country Club Lane between Golden Circle Drive and Nutmeg Street. Study area intersections and street segments affected by implementation of the SAP are noted in the analysis tables below.

9.1.1 Intersection Analysis

Table 9-1 summarizes the AM and PM peak hour intersection operations for Existing + Project conditions. With the addition of Project traffic, the following intersections are calculated to continue to operate at unacceptable LOS, per respective jurisdiction criteria:

- **Intersection #8. El Norte Parkway / Woodland Parkway – LOS D in the AM peak hour (Escondido / San Marcos)**
- **Intersection #9. El Norte Parkway / Country Club Lane – LOS E/D in the AM/PM peak hours (Escondido)**
- Intersection #16. El Norte Parkway / Centre City Parkway – LOS D in the AM/PM peak hours (*Escondido*)
- Intersection #17. El Norte Parkway / Broadway – LOS F/E in the AM/PM peak hours (*Escondido*)

Based on the City of Escondido's significance criteria, significant direct impacts were identified at the intersections listed above in **bold** and underline, as the Project contribution to the delay exceeds the allowable 2.0 second threshold. The Project contribution at the remaining intersections is less than the allowable threshold, and therefore would not result in a significant direct impact.

The Project will improve operations at five (5) intersections along Country Club Lane (Intersection #'s 2-6) with the provision of the SAP and the associated capacity enhancements with the proposed roundabouts, signals and all-way stop control.

Appendix E contains the Existing + Project peak hour intersection analysis worksheets.

9.1.2 Segment Operations

Table 9-2 summarizes the street segment operations. With the addition of Project traffic, all the street segments are calculated to continue to operate at acceptable LOS per respective jurisdiction criteria, except for the following:

- **Segment #10. El Norte Parkway from Nutmeg Street / Nordahl Road to I-15 Ramps – LOS E (Escondido)**

- **Segment #15. Nutmeg Street from Country Club Lane to Via Alexandra – LOS D (Escondido)**

Based on the City of Escondido’s significance criteria, a significant direct impact was identified as the Project contribution to these segments exceeds the allowable increase of 0.02 in volume to capacity ratio.

The SAP enhancements to Country Club Lane do not result in significant impacts.

9.1.3 *Freeway Ramp Meter Operations (Caltrans)*

Table 9–3 summarizes the peak hour ramp meter operations for Existing + Project conditions. Using the most restrictive fixed rate analysis method, with the addition of Project traffic, the calculated delay at the El Norte Parkway to I-15 SB on-ramp during the AM peak hour remain at greater than 15.0 minutes, with a calculated increase in excess of the allowable 2.0 minutes over Existing conditions. Hence, a significant direct impact is calculated as the increase in delay exceeds the allowable 2.0 minutes established by the significance criteria.

9.1.4 *Freeway Mainline Operations (Caltrans)*

Table 9–4 summarizes the peak hour freeway mainline operations on I-15 between El Norte Parkway and SR-78 for Existing + Project conditions. As shown in **Table 9–4**, during AM and PM peak hour, this segment continues to operate at LOS F(0) in the peak direction and LOS B or better in the off-peak direction. No significant direct impact is calculated as the Project’s contribution to V/C is less than the allowable 0.01.

9.2 Existing + Cumulative Projects

9.2.1 *Intersection Analysis*

Table 9–1 summarizes the peak hour intersection operations for Existing + Cumulative Project conditions. With the addition of cumulative project traffic, all the study area intersections are calculated to continue to operate at acceptable LOS, with the exception of:

- Intersection #1. Nutmeg Street / Centre City Parkway – LOS D in the AM peak hour (Escondido)
- Intersection #2. Country Club Lane / Golden Circle Drive – LOS E in the AM peak hour (Escondido)
- Intersection #6. Country Club Lane / Nutmeg Street – LOS F in the PM peak hour (Escondido)
- Intersection #8. El Norte Parkway / Woodland Parkway – LOS D in the AM peak hour (Escondido / San Marcos)
- Intersection #9. El Norte Parkway / Country Club Lane – LOS E/D in the AM/PM peak hours (Escondido)
- Intersection #12. El Norte Parkway / Nutmeg Street / Nordahl Road – LOS D in the PM peak hour (Escondido)
- Intersection #16. El Norte Parkway / Centre City Parkway – LOS E/D in the AM/PM peak hours (Escondido)

- Intersection #17. El Norte Parkway / Broadway – LOS F in the AM and PM peak hours (Escondido)

Appendix F contains the Existing + Cumulative Project peak hour intersection analysis worksheets

9.2.2 Segment Operations

Table 9–2 summarizes the street segment operations for Existing + Cumulative Projects conditions. With the addition of cumulative project traffic, all the street segments are calculated to continue to operate at acceptable LOS, with the exception of the following segments:

- Segment #10. El Norte Parkway from Nutmeg Street / Nordahl Road to I-15 Ramps – LOS E (Escondido)
- Segment #11. El Norte Parkway from I-15 Ramps to Morning View Drive – LOS D (Escondido)
- Segment #13. El Norte Parkway from Centre City Parkway to Broadway – LOS D (Escondido)
- Segment #15. Nutmeg Street from Country Club Lane to Via Alexandra – LOS D (Escondido)

9.2.3 Freeway Ramp Meter Operations (Caltrans)

Table 9–3 summarizes the peak hour ramp meter operations of the I-15/ El Norte Parkway southbound on-ramp for Existing + Cumulative Projects conditions. Using the most restrictive fixed rate analysis method, with the addition of cumulative projects traffic, there is a calculated a delay in excess of 15.0 minutes at this on-ramp during the AM peak hour.

9.2.4 Freeway Mainline Operations (Caltrans)

Table 9–5 summarizes the peak hour freeway mainline operations on I-15 between El Norte Parkway and SR-78 for Existing + Cumulative Projects conditions. As shown in *Table 9–5*, during AM and PM peak hour, this segment continues to operate at LOS F(0) in the peak direction and LOS B or better in the off-peak direction.

9.3 Existing + Cumulative Projects + Project

Operational analyses for the Existing + Cumulative Projects + Project scenario assume the implementation of the proposed SAP along Country Club Lane between Golden Circle Drive and Nutmeg Street. Study area intersections and street segments affected by implementation of the SAP are noted in the analysis tables below.

9.3.1 Intersection Analysis

Table 9–1 summarizes the peak hour intersection operations for Existing + Cumulative Project + Project conditions. With the addition of the Project and cumulative project traffic, the following intersections are calculated to operate at unacceptable LOS per respective jurisdiction standards:

- Intersection #1. Nutmeg Street / Centre City Parkway – LOS D in the AM peak hour (*Escondido*)
- **Intersection #8. El Norte Parkway / Woodland Parkway – LOS D in the AM peak hour** (*Escondido*)
- **Intersection #9. El Norte Parkway / Country Club Lane – LOS E/D in the AM/PM peak hours** (*Escondido*)
- **Intersection #12. El Norte Parkway / Nordahl Road / Nutmeg Street – LOS D in the PM peak hour** (*Escondido*)
- Intersection #16. El Norte Parkway / Centre City Parkway – LOS E/D in the AM/PM peak hours (*Escondido*)
- Intersection #17. El Norte Parkway / Broadway – LOS F in the AM and PM peak hours (*Escondido*)

Based on the City of Escondido’s significance criteria, significant cumulative impacts were identified at the three (3) intersections listed above in **bold** and underline as the Project-related delay exceeds the allowable 2.0 second threshold. No significant cumulative impact is calculated at the remaining locations, as the Project-related delay is within the allowable threshold.

The Project will improve operations at five (5) intersections along Country Club Lane (Intersection #’s 2-6) with the provision of the SAP and the associated capacity enhancements with the proposed roundabouts, signals and all-way stop control.

Appendix G contains the Existing + Cumulative Project + Project peak hour intersection analysis worksheets.

9.3.2 Segment Operations

Table 9–2 summarizes the street segment operations for Existing + Project + Cumulative Project conditions. With the addition of Project traffic, and cumulative project traffic all the street segments are calculated to continue to operate at acceptable LOS with the exception of the following segments:

- **Segment #10. El Norte Parkway from Nutmeg Street / Nordahl Road to I-15 Ramps – LOS E** (*Escondido*)
- Segment #11. El Norte Parkway from I-15 Ramps to Morning View Drive – LOS D (*Escondido*)
- Segment #13. El Norte Parkway from Centre City Parkway to Broadway – LOS D (*Escondido*)
- **Segment #15. Nutmeg Street from Country Club Lane to Via Alexandra – LOS E** (*Escondido*)
- **Segment #17. Bennett Avenue from El Norte Parkway to Toyon Glen – LOS D** (*Escondido*)

Based on the City of Escondido’s significance criteria, a significant cumulative impact was identified at the three (3) segments listed above in **bold** and underline as the Project contribution to

this segment exceeds the allowable increase of 0.02 in volume to capacity ratio. It should be noted that Intersection #10 (El Norte Parkway / Bennett Avenue), adjacent to Segment #17, operates at LOS C during both AM and PM peak hours. No significant cumulative impact is identified on the remaining segments as the Project contribution is within the allowable threshold.

The SAP enhancements to Country Club Lane do not result in significant impacts.

9.3.3 Freeway Ramp Meter Operations (Caltrans)

Table 9-3 summarizes the peak hour ramp meter operations at the I-15/ El Norte Parkway southbound on-ramp for Existing + Cumulative Projects + Project conditions. Using the most restrictive fixed rate analysis method, with the addition of Project traffic, the calculated delay at this on-ramp during the AM peak hour continues to be in excess of 15.0 minutes, with a calculated increase in excess of the allowable of 2.0 minutes over Existing + Cumulative Projects conditions. Hence, a significant cumulative impact is calculated as the increase in delay exceeds the allowable 2.0 minutes established by the significance criteria.

9.3.4 Freeway Mainline Operations (Caltrans)

Table 9-5 also summarizes the peak hour freeway mainline operations on I-15 between El Norte Parkway and SR-78 for Existing + Cumulative Projects + Project conditions. As shown in Table 9-5, during AM and PM peak hour, this segment continues to operate at LOS F(0) in the peak direction and LOS B or better in the off-peak direction. No significant cumulative impact is calculated as the Project's contribution to V/C is less than the allowable 0.01.

**TABLE 9-1
NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Jurisdiction	Control Type ^a	Peak Hour	Existing		Existing + Project			Existing+ Cumulative		Existing + Cumulative + Project			Impact?
				Delay ^b	LOS ^c	Delay	LOS	Δ ^d	Delay	LOS	Delay	LOS	Δ	
1. Centre City Pkwy / Nutmeg St	Escondido	MSSC ^e	AM	23.8	C	23.8	C	0.0	33.1	D	33.1	D	0.0	No
			PM	16.1	C	16.1	C	0.0	21.3	C	21.3	C	0.0	
2. Country Club Ln / Golden Circle Dr	Escondido	MSSC/ (Round.)	AM	35.3	E	7.7	A	(27.6)	42.6	E	8.4	A	(34.2)	No
			PM	15.6	C	6.9	A	(8.7)	18.2	C	7.3	A	(10.9)	
3. Country Club Ln / Gary Ln	Escondido	AWSC ^f / (Signal)	AM	12.0	B	6.6	A	(5.4)	13.3	B	6.7	A	(6.6)	No
			PM	9.3	A	5.0	A	(4.3)	9.7	A	5.1	A	(4.6)	
4. Country Club Ln / Firestone Dr	Escondido	MSSC ^g	AM	9.4	A	10.0	A	0.6	9.5	A	10.1	B	0.6	No
			PM	10.2	B	11.6	B	1.4	10.5	B	12.1	B	1.6	
5. Country Club Ln / La Brea St	Escondido	AWSC/ (Round.)	AM	8.7	A	6.5	A	(2.2)	9.0	A	6.9	A	(2.1)	No
			PM	8.8	A	6.5	A	(2.3)	9.2	A	6.9	A	(2.3)	
6. Country Club Ln / Nutmeg St	Escondido	AWSC/ (Signal)	AM	17.9	C	15.3	C	(2.6)	22.1	C	17.4	B	(4.7)	No
			PM	44.5	E	21.6	C	(22.9)	69.0	F	25.9	C	(43.1)	
7. Country Club Ln / Centre City Pkwy	Escondido	Signal	AM	25.8	C	26.9	C	1.1	30.1	C	31.6	C	1.5	No
			PM	20.9	C	21.3	C	0.4	23.3	C	23.8	C	0.5	
8. El Norte Pkwy / Woodland Pkwy	Escondido/ San Marcos	Signal	AM	37.3	D	40.2	D	2.9	47.6	D	51.1	D	3.5	Yes
			PM	23.9	C	26.2	C	2.3	29.7	C	33.2	C	3.5	
9. El Norte Pkwy / Country Club Ln	Escondido	Signal	AM	48.4	D	61.7	E	13.3	61.4	E	77.4	E	16.0	Yes
			PM	32.3	C	42.9	D	10.6	39.3	D	53.8	D	14.5	
10. El Norte Pkwy / Bennett Ave	Escondido	Signal	AM	22.8	C	24.6	C	1.8	27.3	C	30.6	C	3.3	No
			PM	25.0	C	28.0	C	3.0	28.0	C	29.9	C	1.9	

Continued on Next Page

**TABLE 9-1
NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Jurisdiction	Control Type ^a	Peak Hour	Existing		Existing + Project			Existing+ Cumulative		Existing + Cumulative + Project			Impact?
				Delay ^b	LOS ^c	Delay	LOS	Δ ^d	Delay	LOS	Delay	LOS	Δ	
<i>Continued from Previous Page</i>														
11. El Norte Pkwy / Rees Road	Escondido/ County	Signal	AM	9.4	A	9.7	A	0.3	10.6	B	11.0	B	0.4	No
			PM	9.5	A	10.1	A	0.6	11.1	B	11.8	B	0.7	
12. El Norte Pkwy / Nutmeg Street / Nordahl Rd	Escondido	Signal	AM	23.4	C	25.8	C	2.4	27.5	C	30.6	C	3.1	Yes
			PM	30.6	C	33.6	C	3.0	40.7	D	42.8	D	2.1	
13. El Norte Pkwy / I-15 SB Ramps	Caltrans	Signal	AM	23.7	C	24.0	C	0.3	25.8	C	26.4	C	0.6	No
			PM	10.3	B	10.3	B	0.0	10.6	B	10.6	B	0.0	
14. El Norte Pkwy / I-15 NB Ramps	Caltrans	Signal	AM	19.5	B	19.8	B	0.3	20.4	C	20.8	C	0.4	No
			PM	32.2	C	36.7	D	4.5	40.7	D	47.3	D	6.6	
15. El Norte Pkwy / 7 Oaks Rd	Escondido	Signal	AM	16.7	B	16.8	B	0.1	19.5	B	19.7	B	0.2	No
			PM	25.1	C	25.2	C	0.1	30.4	C	30.6	C	0.2	
16. El Norte Pkwy / Centre City Pkwy	Escondido	Signal	AM	52.9	D	53.4	D	0.5	55.9	E	57.0	E	1.1	No
			PM	50.8	D	50.8	D	0.0	51.2	D	51.4	D	0.2	
17. El Norte Pkwy / Broadway	Escondido	Signal	AM	>100.0	F	>100.0	F	0.4	>100.0	F	>100.0	F	0.4	No
			PM	72.6	E	73.2	E	0.6	97.9	F	98.9	F	1.0	

Footnotes:

- a. Control type changes associated with SAP indicated in *italics*. “+ Project” scenarios assume implementation of the SAP.
- b. Average delay expressed in seconds per vehicle.
- c. Level of Service.
- d. Δ denotes an increase in delay due to Project.
- e. MSSC – Minor street Stop Controlled intersection. Minor street left turn delay is reported.
- f. AWSC – All-Way Stop Controlled intersection.
- g. Left turns restricted with implementation of SAP.

General Notes:

- 1. **BOLD** typeface indicates a potentially significant impact.
- 2. (XX) – Reduction in delay with SAP improvements.

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 45.0	D	25.1 to 35.0	D
45.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

**TABLE 9-2
NEAR-TERM STREET SEGMENT OPERATIONS**

Street Segment	Capacity ^a	Existing			Existing + Project				Existing + Cumulative Projects			Existing + Cumulative Projects + Project				Impact?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C	Δ ^e	ADT	LOS	V/C	ADT	LOS	V/C	Δ	
Country Club Lane																
1. El Norte Pkwy to Country Club Ln	15,000	6,290	B	0.419	8,090	B	0.539	0.120	6,890	B	0.459	8,690	C	0.579	0.120	No
2. Country Club Ln to Gary Ln	10,000/ (15,000)	4,440	B	0.444	5,490	B	0.366	(0.078)	4,860	B	0.486	5,910	B	0.394	(0.092)	No
3. Gary Ln to La Brea St	20,000/ (15,000)	5,210	A	0.261	6,470	B	0.431	0.170	5,700	A	0.285	6,890	B	0.459	0.174	No
4. La Brea St to Nutmeg St	20,000/ (15,000)	5,330	A	0.267	6,500	B	0.433	0.166	5,840	A	0.292	6,940	B	0.463	0.171	No
5. Nutmeg St to Centre City Pkwy	34,200	9,530	A	0.279	10,560	A	0.309	0.030	10,794	A	0.316	11,824	B	0.346	0.030	No
El Norte Parkway																
6. Woodland Pkwy to Country Club Ln	37,000	20,320	C	0.549	21,280	C	0.575	0.026	22,327	C	0.603	23,287	C	0.629	0.026	No
7. Country Club Ln to Bennett Ave	37,000	16,190	B	0.438	17,130	B	0.463	0.025	17,807	B	0.481	18,747	B	0.507	0.026	No
8. Bennett Ave to Rees Rd	37,000	17,880	B	0.483	18,520	B	0.501	0.018	19,657	B	0.531	20,297	C	0.549	0.018	No
9. Rees Rd to Nutmeg St / Nordahl Rd	37,000	17,880	B	0.483	18,740	B	0.506	860	19,657	B	0.531	20,517	B	0.555	860	No
10. Nutmeg St / Nordahl Rd to I-15 SB Ramps	37,000	31,950	D	0.864	33,020	E	0.892	0.028	35,057	E	0.947	36,127	E	0.976	0.029	Yes
11. I-15 Ramps to Morning View Dr	37,000	25,680	C	0.694	25,890	C	0.700	0.006	28,120	D	0.760	28,330	D	0.766	0.006	No
12. Morning View Dr to Centre City Pkwy	55,000 ^f	25,680	B	0.467	25,890	B	0.471	0.004	28,120	B	0.511	28,330	B	0.515	0.004	No
13. Centre City Pkwy to Broadway	37,000	25,680	C	0.694	25,890	C	0.700	0.006	28,120	D	0.760	28,330	D	0.766	0.006	No
Nutmeg Street																
14. North of Country Club Ln	10,000	3,120	A	0.312	3,250	A	0.325	0.013	3,420	B	0.342	3,550	B	0.355	0.013	No
15. Country Club Ln to Via Alexandra	10,000	7,550	D	0.755	8,490	D	0.849	0.094	8,270	D	0.827	9,280	E	0.928	0.101	Yes
16. Via Alexandra to El Norte Pkwy	15,000	7,550	B	0.503	8,490	C	0.566	0.063	8,270	C	0.551	9,280	C	0.619	0.068	No

Continued on Next Page

**TABLE 9-2
NEAR-TERM STREET SEGMENT OPERATIONS**

Street Segment	Capacity ^a	Existing			Existing + Project				Existing + Cumulative Projects			Existing + Cumulative Projects + Project				Impact?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C	Δ ^e	ADT	LOS	V/C	ADT	LOS	V/C	Δ	
<i>Continued from Previous Page</i>																
Bennett Avenue																
17. El Norte Pkwy to Toyon Glen	10,000	6,460	C	0.646	7,300	C	0.730	0.084	7,070	C	0.707	7,910	D	0.791	0.084	Yes
La Brea Street^g																
18. Country Club Lane to Cortez Ave	4,500	350	C+	—	840	C+	—	—	380	C+	—	870	C+	—	—	No
Firestone Drive^g																
19. Country Club Ln to Woodbridge Rd	4,500	1,010	C+	—	1,270	C+	—	—	1,110	C+	—	1,340	C+	—	—	No

Footnotes:

- a. Capacities based on the *City of Escondido Roadway Classification Table* (See Table 4-3). Capacity changes associated with SAP indicated in *italics*. Implementation of SAP assumed for with Project scenarios.
- b. Average Daily Traffic
- c. Level of Service
- d. Volume to Capacity ratio
- e. Project Attributable increase in V/C (or Project ADT for segments within County of San Diego jurisdiction).
- f. 7-lane divided roadway. Daily capacity assumed at 5,000 ADT above 6-Lane Major Road.
- g. Level of Service is not reported for residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Level of service normally applies to roads carrying through traffic between major traffic generators and attractors. 4,500 is County of San Diego LOS C capacity for a residential collector. LOS is reported as better (+) or worse (-) than LOS C.

General Notes:

1. All study area street segments are located within City of Escondido jurisdiction, except Segment #9, located in unincorporated San Diego County. Capacity based on County of San Diego *Public Roads Standards*. Δ represents increase in Project trips, not V/C ratio, as this is the measure for significance on County roads (see Section 5.2).

**TABLE 9-3
NEAR-TERM RAMP METER ANALYSIS – FIXED RATE**

Location	Peak Hour ^a	Near-Term						
		Volume		Peak Hour Demand (D) ^b	Meter Rate (R) ^c	Excess Demand (E) (veh)	Delay (min)	Queue (ft) ^d
		SOV	HOV					
El Norte Parkway to I-15 SB (1 SOV+1 HOV)								
Existing	AM	917	162	917	492	425	> 15.0	> 5,000
Existing + Project	AM	955	168	955	492	463	> 15.0	> 5,000
<i>Project Increase</i>	<i>AM</i>	<i>38</i>	<i>4</i>	<i>38</i>	—	<i>38</i>	> 2.0	—
Existing + Cumulative	AM	1,009	178	1,009	492	517	> 15.0	> 5,000
Existing + Cumulative + Project	AM	1,046	185	1,046	492	554	> 15.0	> 5,000
<i>Project Increase</i>	<i>AM</i>	<i>37</i>	<i>5</i>	<i>37</i>	—	<i>37</i>	> 2.0	—

Footnotes:

- a. Selected peak hour based on period when ramp meter is operating.
- b. Peak hour demand in vehicles/hour/lane for SOV and HOV lanes.
- c. Meter rate “R” is the most restrictive rate at which the ramp meter (signal) discharges traffic onto the freeway (obtained from Caltrans). The discharge rate ranges from 492 to 996 vehicles per hour depending on the mainline volumes.
- d. Queue calculated assuming vehicle length of 25 feet.

General Notes:

1. SOV = Single Occupancy Vehicle, HOV = High Occupancy Vehicle
2. Lane utilization factor accounted for in peak hour demand calculation. (Assumed 15% for HOV).

**TABLE 9-4
FREEWAY MAINLINE ANALYSIS – EXISTING + PROJECT**

Freeway Segment	Dir.	# of Lanes	Hourly Capacity ^a	Existing ^b				Project Volumes		Existing + Project						Δ V/C ^d	
				Peak Hour Volume		V/C				Peak Hour Volume		V/C		LOS			
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 15 El Norte Pkwy to SR-78	NB	4	8,000	2,149	8,044	0.269	1.005	20	60	2,169	8,104	0.271	1.013	A	F(0)	0.003	0.008
	SB	4	8,000	8,062	4,059	1.008	0.507	44	25	8,106	4,084	1.013	0.511	F(0)	B	0.005	0.003

Footnotes:

- a. Capacity calculated at 2000 vph per lane and 1200 vph per auxiliary lane.
- b. Peak hour volume from Existing conditions (Table 6-4).
- c. V/C = Peak hour volume/Hourly capacity.
- d. Change in V/C ratio due to the Project.

LOS	v/c
A	<0.41
B	0.62
C	0.8
D	0.92
E	1
F(0)	1.25
F(1)	1.35
F(2)	1.45
F(3)	>1.46

**TABLE 9-5
FREEWAY MAINLINE ANALYSIS – NEAR-TERM**

Freeway Segment	Dir.	# of Lanes	Hourly Capacity ^a	Cumulative Projects Volume ^b		Existing + Cumulative Projects						Existing + Cumulative Projects + Project						Δ V/C ^d	
						Peak Hour Volume		V/C ^c		LOS		Peak Hour Volume		V/C		LOS			
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 15 El Norte Pkwy to SR-78	NB	4	8,000	21	77	2,170	8,121	0.271	1.015	A	F(0)	2,190	8,181	0.274	1.023	A	F(0)	0.003	0.007
	SB	4	8,000	77	39	8,139	4,098	1.017	0.512	F(0)	B	8,183	4,123	1.023	0.515	F(0)	B	0.005	0.003

Footnotes:

- a. Capacity calculated at 2000 vph per lane and 1200 vph per auxiliary lane.
- b. Cumulative volume calculated based on forecast growth between Existing and Project Opening Year.
- c. V/C = Peak hour volume/Hourly capacity.
- d. Change in V/C ratio due to the Project.

LOS	v/c
A	<0.41
B	0.62
C	0.8
D	0.92
E	1
F(0)	1.25
F(1)	1.35
F(2)	1.45
F(3)	>1.46

10.0 GENERAL PLAN (YEAR 2035) CUMULATIVE ANALYSIS

10.1 Land Use and Traffic Volumes

LLG coordinated with City staff to determine the appropriate traffic model to use in the analysis. Upon review, it was determined that the Escondido General Plan Mobility Element Year 2035 traffic model was the most appropriate model, as buildout volumes in other model options were in many cases lower than existing volumes due to aggressive transit and transportation demand management assumptions. This model was utilized because it includes the approved land uses associated with the City of Escondido's approved General Plan (adopted in 2011).

The Project is located in the northwest quadrant of the Escondido Land Use Element and is categorized as Estate, low-density residential. The Project proposes to increase the density of the site, and as such, is proposing a General Plan Amendment. Therefore, the Year 2035 baseline volumes and analysis presented in this report are representative of the operations forecasted per the adopted General Plan, without implementation of the Project. This includes a golf course and golf course clubhouse, which the Project proposes to redevelop. The traffic model identifies the traffic associated with these uses as 967 ADT. This volume was left in the traffic model to provide a conservative buildout cumulative analysis.

Figure 10–1 depicts Year 2035 Without Project traffic volumes. **Figure 10–2** depicts Year 2035 With Project traffic volumes.

10.2 Network Conditions

The model also accounts for the Mobility Element network proposed at buildout of the City's General Plan. For Year 2035 conditions, the City of Escondido assumes that transportation facilities within the City will be improved to their Mobility Element classification, if not currently built as such. The City collects impact fees to fund future improvements, and it is the City's standard of practice to assume buildout of the Circulation Element in buildout traffic analyses. Increases in capacity are annotated in the segment analysis tables. **Figure 10–3** depicts Year 2035 baseline conditions without Project improvements and shows where improvements over existing conditions were assumed with buildout of the Circulation Element.

As with the near-term analyses, the "+ Project" condition assumes the SAP improvements (roundabouts, all-way stops, signals, lane adjustments) are constructed as part of the development.

10.3 Year 2035 Without Project Analysis

As previously mentioned in *Section 5.1*, according to the City's General Plan, Mobility Element streets and intersections shall be planned and developed to achieve a minimum LOS "C" defined by the Highway Capacity Manual as amended or updated, or such other national standard deemed appropriate by the city. Level of Service "C" may not be feasible in all areas at all times and LOS "D" shall be considered the threshold for determining significant impacts and appropriate mitigation. Per the certified General Plan EIR, a significant impact would result from a General Plan (Year 2035) analysis when a project would "cause the LOS of a General Plan Mobility and Infrastructure

Element roadway to fall below LOS D and/or add more than 200 ADT to a Mobility and Infrastructure Element roadway with an LOS E or F.”

10.3.1 *Intersection Analysis*

Table 10–1 summarizes the Year 2035 Without Project intersection operations. As shown in *Table 10–1*, the following study area intersections are calculated to operate at LOS E or F under Year 2035 Without Project conditions.

- Intersection #1. Nutmeg Street / Centre City Parkway – LOS F in the AM and PM peak hours (*Escondido*)
- Intersection #2. Country Club Lane / Golden Circle Drive – LOS F in the AM and PM peak hours (*Escondido*)
- Intersection #3. Country Club Lane / Gary Lane – LOS F in the AM peak hour (*Escondido*)
- Intersection #6. Country Club Lane / Nutmeg Street – LOS F in the AM and PM peak hours (*Escondido*)
- Intersection #8. El Norte Parkway / Woodland Parkway – LOS F/E in the AM/PM peak hours (*Escondido / San Marcos*)
- Intersection #9. El Norte Parkway / Country Club Lane – LOS F in the AM and PM peak hours (*Escondido*)
- Intersection #12. El Norte Parkway / Nordahl Road / Nutmeg Street – LOS E in the PM peak hour (*Escondido*)
- Intersection #16. El Norte Parkway / Centre City Parkway – LOS E in the AM and PM peak hours (*Escondido*)
- Intersection #17. El Norte Parkway / Broadway – LOS F in the AM and PM peak hours (*Escondido*)

Appendix H contains the Year 2035 Without Project peak hour intersection analysis worksheets.

10.3.2 *Segment Operations*

Table 10–2 summarizes the Year 2035 Without Project street segment operations. As seen in *Table 10–2*, all study area street segments are calculated to operate at LOS D or better under Year 2035 Without Project conditions, except the following:

- Segment #2. Country Club Lane from Golden Circle Drive to Gary Lane – LOS E (*Escondido*)

10.3.3 *Freeway Ramp Meter Operations (Caltrans)*

Table 10–3 summarizes the on-ramp meter operations for the I-15/El Norte Parkway southbound on-ramp under Year 2035 Without Project conditions using the fixed rate analysis methodology. As shown in *Table 10–3*, the calculated delay is greater than 15.0 minutes during the AM peak hour using this methodology.

10.3.4 Freeway Mainline Operations (Caltrans)

Table 10–4 summarizes the freeway mainline operations for I-15 from El Norte Parkway to SR-78 under Year 2035 Without Project conditions. As shown in *Table 10–4*, during AM and PM peak hours, this freeway segment is calculated to operate at LOS F(0) in the peak direction and LOS B or better in the off-peak direction.

10.4 Year 2035 With Project Analysis

Operational analyses for the Year 2035 + Project scenario assume the implementation of the proposed SAP along Country Club Lane between Golden Circle Drive and Nutmeg Street. Study area intersections and street segments affected by implementation of the SAP are noted in the analysis tables below.

10.4.1 Intersection Analysis

Table 10–1 summarizes the Year 2035 With Project intersection operations. It should be noted that the City of Escondido allows LOS D or better operations at buildout. As seen in *Table 10–1*, the following study area intersections are calculated to operate at LOS E or F conditions with the addition of Project traffic:

- Intersection #1. Nutmeg Street / Centre City Parkway – LOS F in the AM and PM peak hours (*Escondido*)
- **Intersection #8. El Norte Parkway / Woodland Parkway – LOS F/E in the AM/PM peak hours** (*Escondido / San Marcos*)
- **Intersection #9. El Norte Parkway / Country Club Lane – LOS F in the AM and PM peak hours** (*Escondido*)
- **Intersection #12. El Norte Parkway / Nordahl Road / Nutmeg Street – LOS E in the PM peak hour** (*Escondido*)
- Intersection #16. El Norte Parkway / Centre City Parkway – LOS E in the AM and PM peak hours (*Escondido*)
- Intersection #17. El Norte Parkway / Broadway – LOS F in the AM and PM peak hours (*Escondido*)

Based on the established significance criteria three (3) significant long-term cumulative impacts were calculated with the addition of Project traffic at the intersections **bolded** and underlined above, as the Project-induced change in delay exceeds 2.0 seconds. No long-term cumulative impacts are calculated at the remaining intersections as the Project-related increase in delay is less than 2.0 seconds.

Appendix I contains the Year 2035 With Project peak hour intersection analysis worksheets.

10.4.2 Segment Operations

Table 10–2 summarizes the Year 2035 With Project street segment operations. As shown in *Table 10–2*, study area street segments continue to operate at acceptable LOS D or better, except the following:

- **Segment #2. Country Club Lane from Golden Circle Drive to Gary Lane – LOS F (Escondido)**

Based on the established significance criteria, a significant long-term cumulative impact is calculated at the segment of Country Club Lane listed above since the Project-induced change in V/C exceeds 0.02.

10.4.3 *Freeway Ramp Meter Operations (Caltrans)*

Table 10–3 summarizes the peak hour ramp meter operations for the I-15/El Norte Parkway southbound on-ramp for Year 2035 with Project conditions. Using the most restrictive fixed rate analysis method, with the addition of Project traffic, the calculated delay at this on-ramp is greater than 15.0 minutes during the AM peak hour. A significant long-term cumulative impact is calculated as the Project-related increase in delay exceeds the allowable 2.0 minutes established by the significance criteria.

10.4.4 *Freeway Mainline Operations (Caltrans)*

Table 10–4 summarizes the freeway mainline operations for I-15 from El Norte Parkway to SR-78 under Year 2035 With Project conditions. As shown in *Table 10–4*, during AM and PM peak hours, this freeway segment is calculated to continue to operate at LOS F(0) in the peak direction and LOS B or better in the off-peak direction. No significant impact is calculated as the Project contribution to V/C is less than the allowable 0.01.

**TABLE 10-1
YEAR 2035 INTERSECTION OPERATIONS**

Intersection	Jurisdiction	Control Type ^a	Peak Hour	Year 2035		Year 2035 + Project			Impact?
				Delay ^b	LOS ^c	Delay	LOS	Δ ^d	
1. Centre City Pkwy / Nutmeg St	Escondido	MSSC ^e	AM	>100.0	F	>100.0	F	0.0	No
			PM	>100.0	F	>100.0	F	0.0	
2. Country Club Ln / Golden Circle Dr	Escondido	MSSC/ (Round.)	AM	>100.0	F	12.9	B	—	No
			PM	>100.0	F	10.1	B	—	
3. Country Club Ln / Gary Ln	Escondido	AWSC ^f / (Signal)	AM	69.3	F	7.7	A	(61.6)	No
			PM	18.6	C	5.3	A	(13.3)	
4. Country Club Ln / Firestone Dr	Escondido	MSSC ^g	AM	10.3	B	11.2	B	0.9	No
			PM	16.0	C	15.9	C	(0.1)	
5. Country Club Ln / La Brea St	Escondido	AWSC/ (Round.)	AM	12.2	B	9.4	A	(2.8)	No
			PM	12.3	B	8.2	A	(4.1)	
6. Country Club Ln / Nutmeg St	Escondido	AWSC/ (Signal)	AM	>100.0	F	45.5	D	—	No
			PM	>100.0	F	51.5	D	—	
7. Country Club Ln / Centre City Pkwy	Escondido	Signal	AM	45.3	D	46.5	D	1.2	No
			PM	32.0	C	34.7	C	2.7	
8. El Norte Pkwy / Woodland Pkwy	Escondido / San Marcos	Signal	AM	95.3	F	>100.0	F	>2.0	Yes
			PM	60.8	E	65.7	E	4.9	
9. El Norte Pkwy / Country Club Ln	Escondido	Signal	AM	>100.0	F	>100.0	F	>2.0	Yes
			PM	>100.0	F	>100.0	F	>2.0	
10. El Norte Pkwy / Bennett Ave	Escondido	Signal	AM	31.6	C	33.6	C	2.0	No
			PM	33.7	C	35.2	D	1.5	

Continued on Next Page

**TABLE 10-1
YEAR 2035 INTERSECTION OPERATIONS**

Intersection	Jurisdiction	Control Type ^a	Peak Hour	Year 2035		Year 2035 + Project			Impact?
				Delay ^b	LOS ^c	Delay	LOS	Δ ^d	
<i>Continued from Previous Page</i>									
11. El Norte Pkwy / Rees Road	Escondido	Signal	AM	23.2	C	24.1	C	0.9	No
			PM	33.9	C	34.4	C	0.5	
12. El Norte Pkwy / Nutmeg Street / Nordahl Rd	Escondido	Signal	AM	44.3	D	48.4	D	4.1	Yes
			PM	72.7	E	77.0	E	4.3	
13. El Norte Pkwy / I-15 SB Ramps	Caltrans	Signal	AM	44.4	D	50.3	5.9	6.1	No
			PM	11.3	B	11.3	B	0.0	
14. El Norte Pkwy / I-15 NB Ramps	Caltrans	Signal	AM	17.3	B	17.6	B	0.3	No
			PM	44.2	D	52.1	D	7.9	
15. El Norte Pkwy / 7 Oaks Rd	Escondido	Signal	AM	24.8	C	25.1	C	0.3	No
			PM	48.5	D	49.0	D	0.5	
16. El Norte Pkwy / Centre City Pkwy	Escondido	Signal	AM	69.3	E	70.6	E	1.3	No
			PM	63.1	E	63.5	E	0.4	
17. El Norte Pkwy / Broadway	Escondido	Signal	AM	194.9	F	195.3	F	0.4	No
			PM	124.7	F	125.9	F	1.2	

Footnotes:

- a. Control type changes associated with SAP shown in *italics*. “+ Project” scenario assumes implementation of SAP.
- b. Average delay expressed in seconds per vehicle.
- c. Level of Service
- d. Δ denotes an increase in delay due to project.
- e. MSSC – minor-street stop-controlled intersection. Minor street left turn delay is reported.
- f. AWSC – all-way stop-controlled intersection.
- g. Left turns restricted with implementation of SAP.

General Notes:

(XX) – Reduction in delay with SAP improvements.

SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 45.0	D	25.1 to 35.0	D
45.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

**TABLE 10-2
YEAR 2035 STREET SEGMENT OPERATIONS**

Street Segment	Proposed Classification	LOS E ^a Capacity	Year 2035			Year 2035 + Project				Impact?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C	Δ ^e	
Country Club Lane										
1. El Norte Pkwy to Country Club Ln	2-Ln Local Collector	15,000 ^f	11,300	D	0.753	13,100	D	0.873	0.120	No
2. Country Club Ln to Gary Ln	2-Ln Local Collector	10,000/ (15,000)	9,600	E	0.960	10,650	C	0.710	(0.250)	No
3. Gary Ln to La Brea St	4-Ln Collector	20,000/ (15,000)	9,600	B	0.480	10,660	C	0.711	0.231	No
4. La Brea St to Nutmeg St	4-Ln Collector	20,000/ (15,000)	10,600	B	0.530	11,570	D	0.771	0.241	No
5. Nutmeg St to Centre City Pkwy	4-Ln Collector	34,200	11,800	A	0.345	12,830	B	0.375	0.030	No
El Norte Parkway										
6. Woodland Pkwy to Country Club Ln	4-Ln Major Road	37,000	20,400	C	0.551	21,360	C	0.577	0.026	No
7. Country Club Ln to Bennett Ave	4-Ln Major Road	37,000	17,900	B	0.484	18,840	B	0.509	0.025	No
8. Bennett Ave to Rees Rd	4-Ln Major Road	37,000	25,800	C	0.697	26,440	C	0.715	0.018	No
9. Rees Rd to Nutmeg St / Nordahl Rd ^g	4.1A Major Road	37,000	28,000	C	—	28,860	C	—	860	No
10. Nutmeg St / Nordahl Rd to I-15 Ramps	6-Ln Major Road	50,000	40,800	D	0.816	41,870	D	0.837	0.021	No
11. I-15 Ramps to Morning View Dr	4-Ln Major Road	37,000	31,200	D	0.843	31,410	D	0.849	0.006	No
12. Morning View Dr to Centre City Pkwy	7-Ln Major Road ^h	55,000	35,700	C	0.649	35,910	C	0.653	0.004	No
13. Centre City Pkwy to Broadway	6-Ln Major Road	50,000	31,400	C	0.628	31,610	C	0.632	0.004	No
Nutmeg Street										
14. North of Country Club Ln	2-Ln Local Collector	15,000	9,300	C	0.620	9,430	C	0.629	0.009	No
15. Country Club Ln to Via Alexandra	2-Ln Local Collector	15,000	9,200	C	0.613	10,340	C	0.689	0.076	No
16. Via Alexandra to El Norte Pkwy	4-Ln Collector	34,200	10,100	A	0.295	11,240	A	0.329	0.034	No
<i>Continued on Next Page</i>										

TABLE 10-2
YEAR 2035 STREET SEGMENT OPERATIONS

Street Segment	Proposed Classification	LOS E ^a Capacity	Year 2035			Year 2035 + Project				Impact?
			ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C	Δ ^e	
<i>Continued from Previous Page</i>										
Bennett Avenue 17. El Norte Pkwy to Toyon Glen	<i>2-Ln Local Collector</i>	15,000	11,800	D	0.787	12,640	D	0.843	0.056	No
La Brea Streetⁱ 18. Country Club Lane to Cortez Ave	Local Road	4,500	500	C+	—	990	C+	—	—	No
Firestone Driveⁱ 19. Country Club Ln to Woodbridge Rd	Local Road	4,500	1,500	C+	—	1,670	C+	—	—	No

Footnotes:

- a. All study area street segments are located in the City of Escondido, except where noted. Capacities based on *City of Escondido Roadway Classification Table* (See Appendix C). Roadway capacity changes associated with SAP shown in *(italics)*. “+ Project” scenario assumes implementation of SAP.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to capacity ratio.
- e. Δ = Project-related change in V/C ratio or Project ADT (County of San Diego jurisdiction).
- f. Segment has raised median increasing capacity.
- g. Street segment lies within County of San Diego jurisdiction. Capacity based on County of San Diego *Public Road Standards* and Δ indicates Project ADT, not V/C.
- h. Street segment currently built as 7-lane divided (3 eastbound, 4 westbound). Daily capacity assumed at 5,000 ADT above 6-Lane Major Road.
- i. Level of Service is not reported for residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Level of service normally applies to roads carrying through traffic between major traffic generators and attractors. 4,500 is County of San Diego LOS C capacity for a residential collector. LOS is reported as better (+) or worse (-) than LOS C.

General Note:

1. *Italics* in “Proposed Capacity” column indicates capacity increase over existing to buildout conditions per the City’s Circulation Element classification.

**TABLE 10-3
YEAR 2035 RAMP METER ANALYSIS – FIXED RATE**

Location	Peak Hour ^a	Existing						
		Volume		Peak Hour Demand (D) ^b	Meter Rate (R) ^c	Excess Demand (E) (veh)	Delay (min)	Queue (ft) ^d
		SOV	HOV					
El Norte Parkway to I-15 SB (1 SOV+1 HOV)								
Year 2035 Without Project	AM	1,216	215	1,216	492	724	> 15.0	> 5,000
Existing + Cumulative + Project	AM	1,254	221	1,254	492	762	> 15.0	> 5,000
<i>Project Increase</i>	<i>AM</i>	<i>38</i>	<i>6</i>	<i>38</i>	—	<i>38</i>	> 2.0	—

Footnotes:

- a. Selected peak hour based on period when ramp meter is operating.
- b. Peak hour demand in vehicles/hour/lane for SOV and HOV lanes.
- c. Meter rate “R” is the most restrictive rate at which the ramp meter (signal) discharges traffic onto the freeway (obtained from Caltrans). The discharge rate ranges from 492 to 996 vehicles per hour depending on the mainline volumes.
- d. Queue calculated assuming vehicle length of 25 feet.

General Notes:

1. SOV = Single Occupancy Vehicle, HOV = High Occupancy Vehicle
2. Lane utilization factor accounted for in peak hour demand calculation. (Assumed 15% for HOV).

**TABLE 10-4
YEAR 2035 FREEWAY MAINLINE ANALYSIS**

Freeway Segment	Dir.	# of Lanes	Hourly Capacity ^a	Year 2035						Year 2035 + Project						Δ V/C ^d	
				Peak Hour Volume		V/C ^c		LOS		Peak Hour Volume		V/C		LOS			
				AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
Interstate 15 El Norte Pkwy to SR-78	NB	4	8,000	2,519	9,426	0.315	1.178	A	F(0)	2,539	9,486	0.317	1.186	A	F(0)	0.003	0.008
	SB	4	8,000	9,447	4,757	1.181	0.595	F(0)	B	9,491	4,782	1.186	0.598	F(0)	B	0.006	0.003

Footnotes:

- a. Capacity calculated at 2000 vph per lane and 1200 vph per auxiliary lane.
- b. Year 2035 volumes calculated based on SANDAG Series 13 model, using latest available (Year 2015) peak hour splits.
- c. V/C = Peak hour volume / Hourly capacity
- d. Change in V/C ratio due to the Project.

LOS	v/c
A	<0.41
B	0.62
C	0.8
D	0.92
E	1
F(0)	1.25
F(1)	1.35
F(2)	1.45
F(3)	>1.46

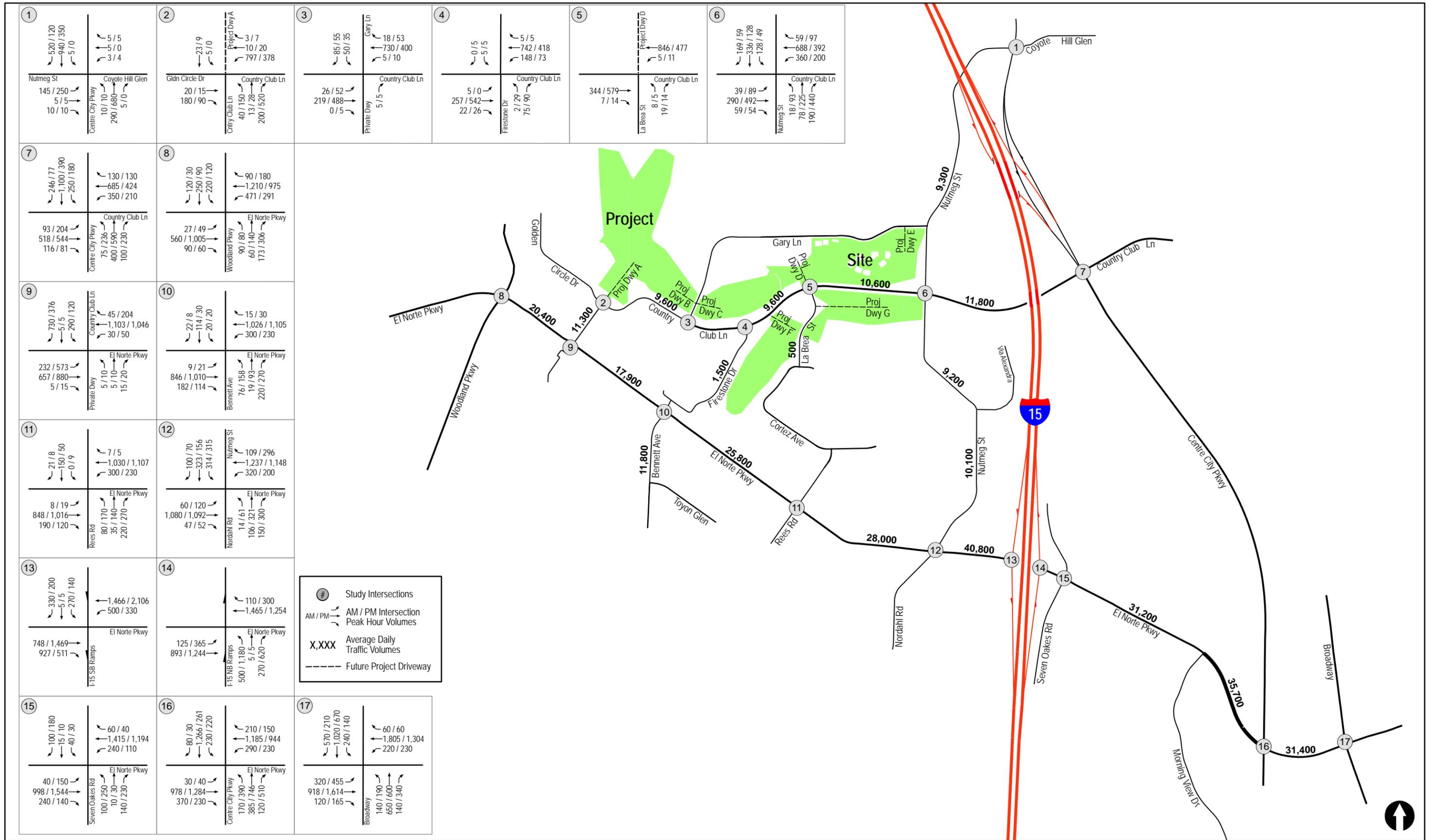


Figure 10-1

Year 2035 Without Project Traffic Volumes

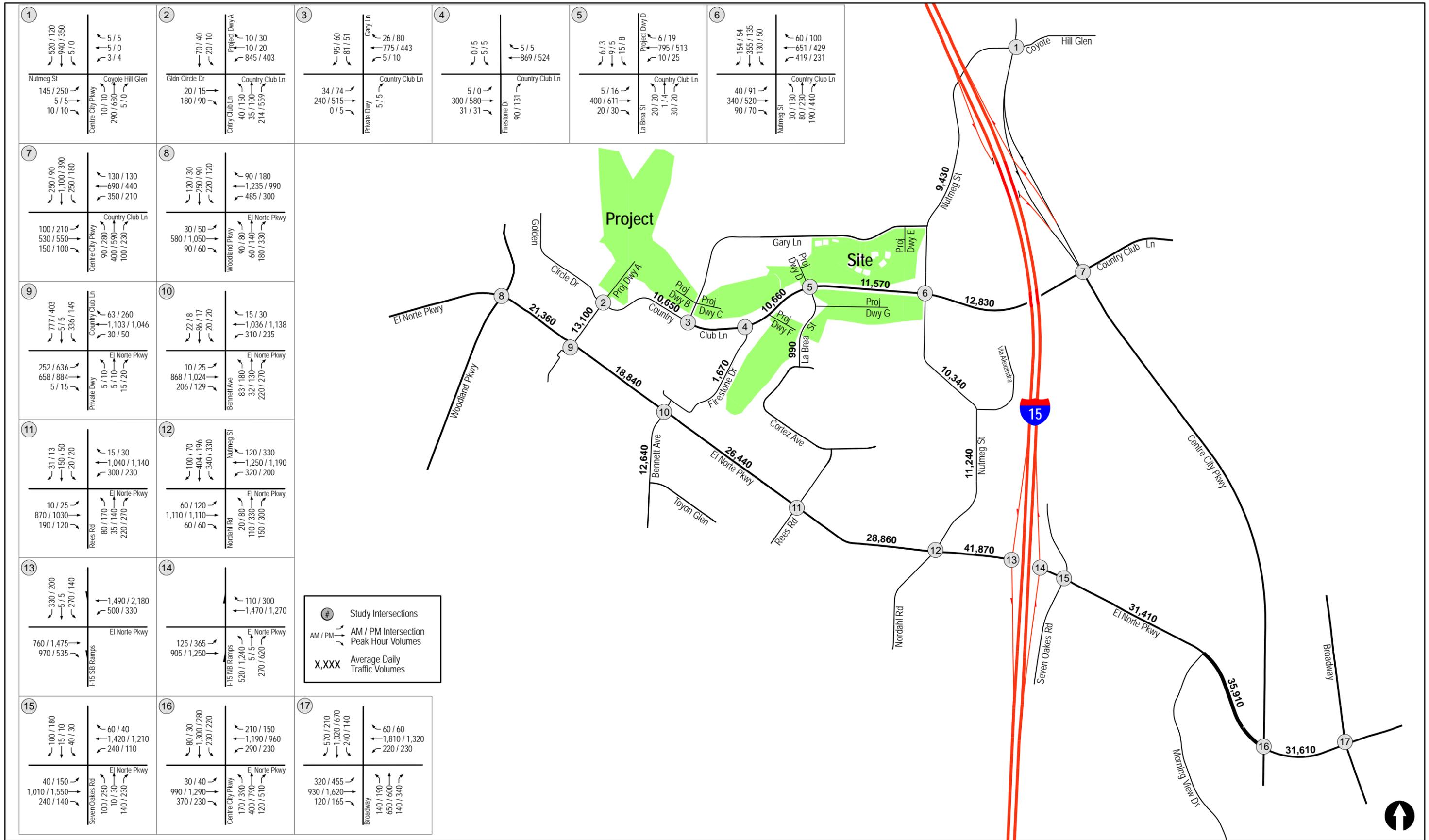
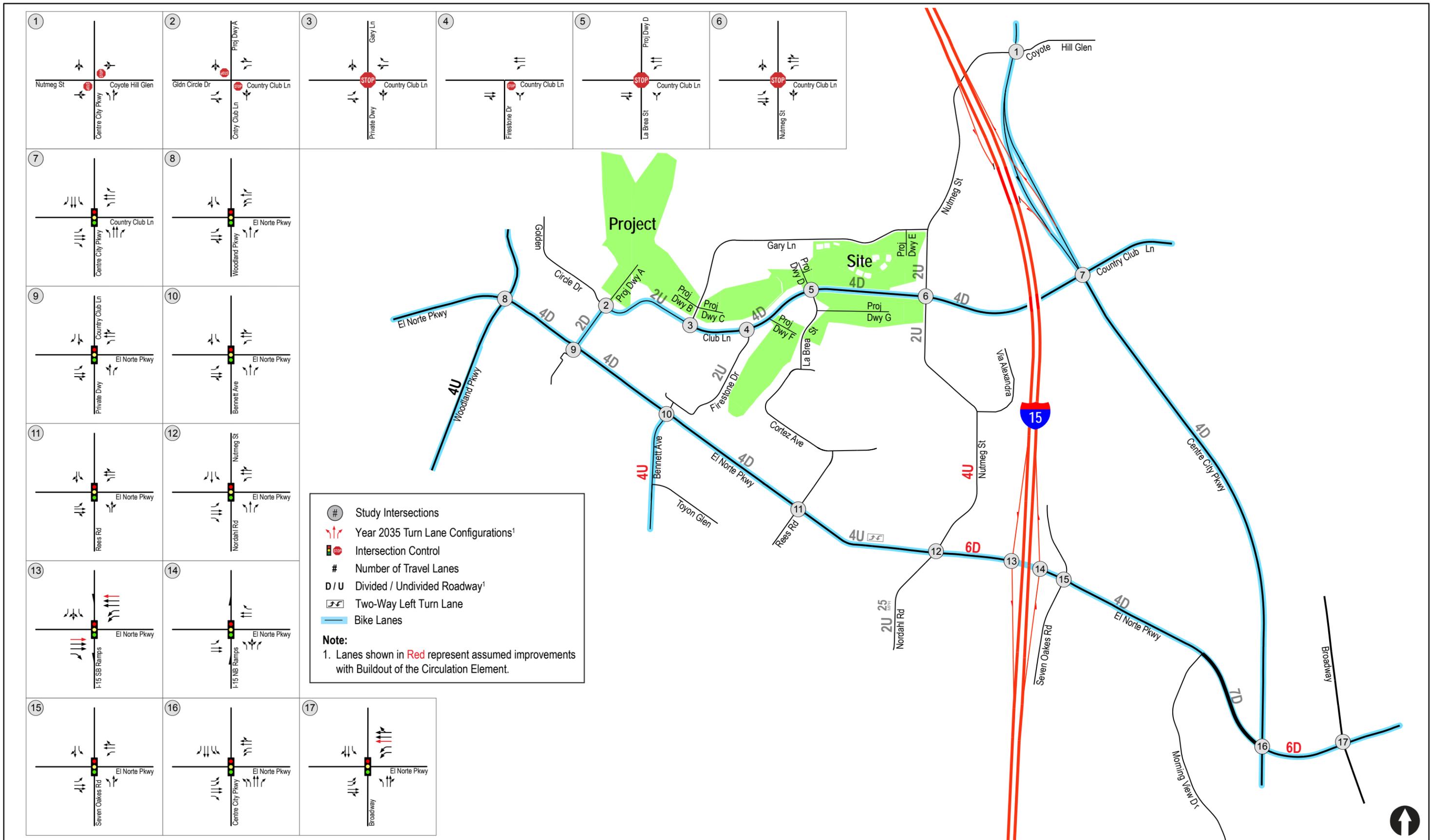


Figure 10-2

Year 2035 With Project Traffic Volumes



11.0 ACCESS

The Project is comprised of three villages, as discussed in the Project description (*Section 2.2*). In total, seven (7) driveways are proposed to serve these three villages. Two of these driveways will serve as the fourth leg to an existing intersection that is evaluated in the report (Intersection No. 2: Country Club Lane/ Golden Circle Drive and Intersection No. 5: Country Club Lane/ La Brea Street). Three additional intersections will be new to the roadway system. All intersections are located within the jurisdiction of the City of Escondido. The following is a discussion of each villages' access:

Village 1: this westerly village contains 155 units plus the community/HOA amenities. It will be served by two driveways; Driveway "A" and Driveway "B".

Driveway "A" is existing (but currently not operating) driveway that comprises the north leg of the Country Club Lane/Golden Circle Drive intersection. The intersection is currently minor-street stop-controlled (north-south). The SAP proposes a high-efficiency roundabout at this location, which is assumed in the analyses.

Driveway "B" will provide secondary access to Village 1 via a minor-street stop-controlled (east-west) intersection at Gary Lane, north of Country Club Lane. This driveway is to be aligned opposite of Driveway "C", discussed below.

Village 2: this village lies north of Country Club Lane and south of Gary Lane, and will be served by three driveways serving 91 units. Driveway "C" will provide secondary access via Gary Lane at a minor-street stop-controlled (east-west) intersection opposite Driveway "B".

Driveway "D" will provide primary access via the north leg of the existing minor-street stop-controlled (north-south) intersection at Country Club Lane and La Brea Street. The SAP proposes a high-efficiency roundabout at this location, which is assumed in the analyses.

Driveway "E" will also serve Village 2 with secondary access to Gary Lane, west of Nutmeg Street with a new stop-controlled intersection.

Village 3: this village lies south of Country Club Lane between Firestone Drive and Nutmeg Street and will be served by two driveways. Driveway "F" will provide access to Country Club Lane via a minor-street stop-controlled intersection between Firestone Drive and La Brea Street.

Driveway "G" will be a minor-street stop-controlled intersection to La Brea Street, south of Country Club Lane. These two driveways will serve 146 units. A secondary emergency/pedestrian access will be provided to Nutmeg Street.

11.1 Near-Term Project Access Operations

Table 11-1 shows a summary of peak hour operations at seven Project driveways (six intersections) during the near-term scenarios. This table shows that, assuming implementation of the SAP, all driveway intersections are calculated to operate at acceptable LOS B or better during the AM and PM peak hours for all near-term scenarios.

Appendix J contains the near-term peak hour driveway analysis worksheets.

11.2 Year 2035 Project Access Operations

Table 11-2 shows a summary of peak hour operations at seven Project driveways (six intersections) for the Year 2035 scenarios. This table shows that, assuming implementation of the SAP, all driveway intersections are calculated to operate at acceptable LOS C or better during the AM and PM peak hours for all Year 2035 scenarios.

Appendix K contains the Year 2035 peak hour driveway analysis worksheets.

**TABLE 11-1
NEAR-TERM INTERSECTION OPERATIONS
PROJECT DRIVEWAYS**

Intersection	Jurisdiction	Control Type	Peak Hour	Existing		Existing + Project			Existing+ Cumulative		Existing + Cumulative + Project			Impact?
				Delay ^a	LOS ^b	Delay	LOS	Δ ^c	Delay	LOS	Delay	LOS	Δ	
a. Country Club Lane/ Golden Circle Drive/ Project Driveway "A"	Escondido	Round.	AM	35.3	E	7.7	A	(27.6)	42.6	E	8.4	A	(34.2)	No
			PM	15.6	C	6.9	A	(8.7)	18.2	C	7.3	A	(10.9)	
b/c. Gary Lane / Project Driveway "B" / Project Driveway "C"	Escondido	MSSC ^d	AM	—	—	10.1	B	—	—	—	10.2	B	—	No
			PM	—	—	10.5	B	—	—	—	10.6	B	—	
d. Country Club Lane/ La Brea Street/ Project Driveway "D"	Escondido	Round.	AM	8.7	A	6.5	A	(2.2)	9.0	A	6.9	A	(2.1)	No
			PM	8.8	A	6.5	A	(2.3)	9.2	A	6.9	A	(2.3)	
e. Gary Lane/ Project Driveway "E"	Escondido	MSSC	AM	—	—	9.2	A	—	—	—	9.2	A	—	No
			PM	—	—	9.0	A	—	—	—	9.1	A	—	
f. Country Club Lane/ Project Driveway "F"	Escondido	MSSC	AM	—	—	11.6	B	—	—	—	11.9	B	—	No
			PM	—	—	12.7	B	—	—	—	13.2	B	—	
g. La Brea Street/ Project Driveway "G"	Escondido	MSSC	AM	—	—	8.8	A	—	—	—	8.8	A	—	No
			PM	—	—	8.9	A	—	—	—	8.9	A	—	

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Δ denotes an increase (decrease) in delay due to Project.
- d. MSSC – Minor street Stop Controlled intersection. Minor street left turn delay is reported.

UNSIGNALIZED

Delay	LOS
0.0 ≤ 10.0	A
10.1 to 15.0	B
15.1 to 25.0	C
25.1 to 35.0	D
35.1 to 50.0	E
≥ 50.1	F

**TABLE 11-2
YEAR 2035 INTERSECTION OPERATIONS
PROJECT DRIVEWAYS**

Intersection	Jurisdiction	Control Type	Peak Hour	Year 2035		Year 2035 + Project			Impact?
				Delay ^a	LOS ^b	Delay	LOS	Δ ^c	
a. Country Club Lane/ Golden Circle Drive/ Project Driveway "A"	Escondido	Round.	AM	>100.0	F	12.9	B	—	No
			PM	>100.0	F	10.1	B	—	
b/c. Gary Lane / Project Driveway "B" / Project Driveway "C"	Escondido	MSSC ^d	AM	—	—	10.3	B	—	No
			PM	—	—	10.8	B	—	
d. Country Club Lane/ La Brea Street/ Project Driveway "D"	Escondido	Round.	AM	12.3	B	9.4	A	(2.8)	No
			PM	12.3	B	8.2	A	(4.1)	
e. Gary Lane/ Project Driveway "E"	Escondido	MSSC	AM	—	—	9.4	A	—	No
			PM	—	—	9.1	A	—	
f. Country Club Lane/ Project Driveway "F"	Escondido	MSSC	AM	—	—	15.1	C	—	No
			PM	—	—	20.6	C	—	
g. La Brea Street/ Project Driveway "F"	Escondido	MSSC	AM	—	—	8.8	A	—	No
			PM	—	—	8.9	A	—	

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. Δ denotes an increase in delay due to Project.
- d. MSSC – Minor street Stop Controlled intersection. Minor street left turn delay is reported.

UN SIGNALIZED	
Delay	LOS
0.0 ≤ 10.0	A
10.1 to 15.0	B
15.1 to 25.0	C
25.1 to 35.0	D
35.1 to 50.0	E
≥ 50.1	F

12.0 CONSTRUCTION TRAFFIC ANALYSIS

The Project will be constructed in phases, and each phase will consist of sub-phases, none of which would generate more traffic than the 4,500 ADT the Project will generate when constructed. As such, no capacity impacts are anticipated to occur during any construction phase. All appropriate work zone traffic control plans shall be prepared to ensure efficient ingress/egress of trucks and equipment, and to maintain access to the degree possible to Country Club Lane during construction.

13.0 SIGNIFICANCE OF IMPACTS AND MITIGATION MEASURES

Per the City of Escondido, County of San Diego, City of San Marcos, and Caltrans significance thresholds and the analysis methodology presented in this report, the following is a summary of the significant near-term direct and cumulative and long-term cumulative impacts, as shown in *Figure 13-1*. Mitigation measures are recommended to reduce the Project's impacts to less-than-significant.

13.1 Significance of Impacts

13.1.1 *Near-Term Significant Direct & Cumulative Impacts*

The Project would result in significant near-term direct and cumulative impacts to the following locations:

Intersections

- TRA-1. Intersection #8. El Norte Parkway / Woodland Parkway (*Escondido/City of San Marcos*)
- TRA-2. Intersection #9. El Norte Parkway / Country Club Lane (*Escondido*)

Street Segments

- TRA-3. Segment #10. El Norte Parkway from Nutmeg Street / Nordahl Road to I-15 Ramps (*Escondido*)
- TRA-4. Segment #15. Nutmeg Street from Country Club Lane to Via Alexandra (*Escondido*)

Ramp Meters

- TRA-5. El Norte Parkway to I-15 Southbound On-Ramp (*Caltrans*)

13.1.2 *Near-Term Significant Cumulative-Only Impacts*

In addition to the four (4) significant direct and cumulative impacts listed above, the Project also would result in significant cumulative-only impacts in the near-term to the following locations:

Intersections

- TRA-6. Intersection #12. El Norte Parkway / Nutmeg Street / Nordahl Road (*Escondido*)

Street Segments

- TRA-7. Segment #17. Bennett Avenue from El Norte Parkway to Toyon Glen (*Escondido*)

13.1.3 *Long-Term Significant Cumulative Impacts*

The Project would result in long-term significant cumulative impacts to the following locations:

Intersections

- TRA-8. Intersection #8. El Norte Parkway / Woodland Parkway (*Escondido/San Marcos*)
- TRA-9. Intersection #9. El Norte Parkway / Country Club Lane (*Escondido*)
- TRA-10. Intersection #12. El Norte Parkway / Nutmeg Street / Nordahl Road (*Escondido*)

Ramp Meters

TRA-11. El Norte Parkway to I-15 Southbound On-Ramp (*Caltrans*)

13.2 Mitigation Measures

13.2.1 Near-Term Direct & Cumulative Mitigation Measures

The Project's construction of the following mitigation measures would mitigate the significant direct impacts to less than significant:

- TRA-1. **Intersection #8. El Norte Parkway / Woodland Parkway** – Prior to issuance of a building permit for the 158th dwelling unit, the Project applicant, or its designee, shall restripe the westbound approach of El Norte Parkway at Woodland Parkway to provide 1 left-turn lane, 2 thru lanes, 1 right-turn lane and a bike lane. The westbound leg (west of Woodland Parkway, now Borden Road) shall be restriped with two receiving lanes and a bike lane. The striped median and eastbound left-turn will be restriped to correct the offset. The westbound right-turn lane striping on Borden Road to the church driveway will be removed. The two westbound lanes shall continue westbound to Amber Drive, where a lane drop shall be striped to transition to a single westbound thru lane. Traffic signal equipment at the El Norte Parkway/ Woodland Parkway intersection shall also be modified to serve the revised geometry. No widening of El Norte Parkway or Borden Road will be required. With implementation of this improvement, the near-term significant direct and cumulative impacts at this intersection would be reduced to less than significant.
- TRA-2. **Intersection #9. El Norte Parkway / Country Club Lane** – Prior to issuance of a building permit for the 60th dwelling unit, the Project applicant, or its designee, shall restripe the eastbound approach of El Norte Parkway to provide a second eastbound left-turn lane and shall also restripe northbound Country Club lane (north of El Norte Parkway) to accept the two left turning lanes, and to taper to one lane south of the Country Club Lane / Golden Circle Driveway. The existing raised median on El Norte Parkway would be removed and reconstructed to accommodate the second eastbound left-turn lane. The eastbound thru lanes shall also be restriped to accommodate the improvement. Traffic signal equipment at the El Norte Parkway/ Country Club Lane intersection shall also be modified to serve the revised geometry. No widening of El Norte Parkway or Country Club Lane will be required. With implementation of these improvements, the near-term significant direct and cumulative impacts would be reduced to less than significant.
- TRA-3. **Segment #10. El Norte Parkway from Nutmeg Street / Nordahl Road to I-15 SB Ramps** – Prior to issuance of a building permit for the 272nd dwelling unit, the Project applicant, or its designee, shall revise and enhance the right-turn/ right edgeline striping serving the commercial uses between Bourbon Road and the I-15 southbound ramps, commensurate with the striping improvements recently installed by the City of Escondido between Nutmeg Street / Nordahl Road and Bourbon Road

to improve ingress and reduce driver confusion with respect to the commercial driveways. The Project shall also restrict the northbound left-turns from Bourbon Road to westbound El Norte Parkway with striping and signage, consistent with left-turn restrictions for the commercial driveway located directly across the intersection. The eastbound U-turn restriction at the El Norte Parkway/ I-15 northbound ramps intersection should be removed to serve the displaced left-turns that will become downstream U-turns. There is sufficient distance in the intersection to serve the displaced left-turns from Bourbon Road, and the modest volume would not affect efficiency of the intersection. If Caltrans will not allow the U-turn at this intersection, the movement is allowed at the signalized El Norte Parkway/ 7 Oaks intersection located approximately 350 feet further east.

Removal of left-turns from Bourbon Road to El Norte Parkway will eliminate a conflicting midblock movement and enhance operations on El Norte Parkway. Construction of mitigation measure TRA-6 (dual southbound lefts on Nutmeg Street at El Norte Parkway) will also increase efficiency on El Norte Parkway by processing twice as many southbound left-turning vehicles per cycle, allowing for more green time to serve El Norte Parkway. TRA-5 (additional ramp storage on the I-15 southbound on-ramp) will further improve operations on this segment by reducing the eastbound queuing that occurs on El Norte Parkway during the AM peak hour and queuing those vehicles on the ramp instead of the segment. With implementation of these improvements, the near-term significant direct and cumulative impact would be reduced to less than significant. While not a mitigation measure, the proposed Adaptive Signal Control proposed for the El Norte Parkway corridor within the study area will also improve capacity along this segment.

TRA-4. **Segment #15. Nutmeg Street from Country Club Lane to Via Alexandra** –Prior to issuance of a building permit for the 145th dwelling unit, the Project applicant, or its designee, shall construct interim improvements in the existing right of way on southbound Nutmeg Street between La Paloma Avenue and Via Alexandra to provide a wider travel lane, and curb, gutter, and sidewalk improvements to the satisfaction of the City Engineer. These improvements will enhance vehicular, pedestrian, and bicycle circulation and will increase capacity to mitigate the Project’s impact. Furthermore, mitigation measure TRA-6 (dual southbound left-turns from Nutmeg Street to El Norte Parkway) will serve to enhance the overall Nutmeg Street corridor operations by increasing traffic flow from Nutmeg Street to El Norte Parkway. With implementation of these improvements, the near-term significant direct and cumulative impacts would be reduced to less than significant.

TRA-5. **El Norte Parkway to I-15 Southbound On-Ramp Meter**– Prior to issuance of a building permit for the 170th dwelling unit, the Project applicant, or its designee, shall provide an additional SOV lane to the southbound on ramp. With implementation of this improvement, the near-term significant direct and cumulative impact would be reduced to less than significant. However, because the improvement would be located

within the jurisdiction and control of the State of California (Caltrans), and neither the applicant nor the City of Escondido can assure that Caltrans will permit the improvement to be made, for the purposes of this analysis, the long-term significant cumulative impact at this location is considered significant and unavoidable.

13.2.2 *Near-Term Cumulative-Only Mitigation Measures*

TRA-6. **Intersection #12. El Norte Parkway / Nutmeg Street / Nordahl Road** – Prior to issuance of a building permit for the 300th dwelling unit, the Project applicant, or its designee, shall restripe the south leg of Nutmeg Street to provide two southbound left-turn lanes, one shared thru-right turn lane and a bike lane. The median on the north leg will need to be restriped. Traffic signal equipment at the subject intersection shall also be modified to serve the revised geometry. No widening of El Norte Parkway, Nutmeg Street or Nordahl Road will be required. This improvement will primarily improve the efficiency of the intersection by serving the dominant movement with two lanes instead of one. The secondary effect will be more green time per cycle to be allocated to El Norte Parkway. Another benefit will be to address the existing offset issue affecting north-south drivers through the intersection. Moving the thru lane to the east will better align it with the receiving lane on the side (Nordahl Road) of the intersection. With implementation of these improvements, the near-term significant cumulative impact would be reduced to less than significant.

TRA-7. **Segment #17. Bennett Avenue from El Norte Parkway to Toyon Glen** – Prior to issuance of a building permit for the 162nd dwelling unit, the Project applicant, or its designee, shall restripe a two-way left-turn lane between El Norte Parkway and Toyon Glen. There are currently left-turn pockets striped at intervals along this segment. As such, there is sufficient room in the existing curb-to-curb width to stripe in the two-way left-turn lane. While the existing pockets serve to allow turning vehicles from Bennett Avenue to queue outside of the thru lanes, they do not provide refuge for vehicles turning from the minor streets along the segment to Bennett Avenue. The additional roadway capacity provided by this improvement would mitigate this significant near-term cumulative-only impact to less than significant.

13.2.3 *Long-Term Cumulative Mitigation Measures*

The Project's fair-share contribution towards the following improvements will mitigate the cumulative impact to less than significant:

TRA-8. **Intersection #8. El Norte Parkway / Woodland Parkway** – Construction of direct impact mitigation measure TRA-1 would mitigate the long-term significant cumulative impact at this intersection and no further mitigation is necessary.

TRA-9. **Intersection #9. El Norte Parkway / Country Club Lane** – Construction of direct impact mitigation measure TRA-2 would mitigate the long-term significant cumulative impact at this intersection and no further mitigation is necessary.

- TRA-10. **Intersection #12. El Norte Parkway / Nutmeg Street / Nordahl Road** Construction of direct impact mitigation measure TRA-6 would mitigate the long-term significant cumulative impact at this intersection and no further mitigation is necessary.
- TRA-11. **El Norte Parkway to I-15 Southbound On-Ramp Meter** – Construction of direct impact mitigation TRA-5 would mitigate this significant cumulative impact. However, because the improvement would be located within the jurisdiction and control of the State of California (Caltrans), and neither the applicant nor the City of Escondido can assure that Caltrans will permit the improvement to be made, for the purposes of this analysis, the long-term significant cumulative impact at this location is considered significant and unavoidable.

Table 13–1 summarizes the intersection impacts and mitigation measures. *Appendix L* contains the post-mitigation intersection analysis worksheets. *Table 13–2* summarizes the street segment impacts and mitigation measures. *Table 13–3* summarizes the ramp meter impact and mitigation measure.

**TABLE 13-1
IMPACT / MITIGATION MEASURES SUMMARY - INTERSECTIONS**

Jurisdiction	MM#	Intersection	Peak Hour	With (+) Project Operations				Impact Type	Mitigation Measure	Mitigated to Below a Level of Significance
				Without Mitigation		With Mitigation				
				Delay	LOS	Delay	LOS			
Escondido/ San Marcos	TRA-1 & TRA-8	#8. El Norte Parkway/ Woodland Parkway	AM	51.1	D	28.1	C	Near-Term Direct & Cumulative/ Long-Term Cumulative	Restripe the WB approach to provide the following geometry: 1 left-turn lane, 2 through lanes, 1 right-turn lane & bike lane. Restripe eastbound departure lanes. Modify signal equipment.	Yes
			PM	33.2	C	30.8	C			
Escondido	TRA-2 & TRA-9	#9. El Norte Parkway / Country Club Lane	AM	77.4	E	54.4	D	Near-Term Direct & Cumulative/ Long-Term Cumulative	Restripe a second EB left-turn lane and reconstruct existing raised median to accommodate additional lane. Modify EB thru lane striping. Restripe eastbound departure lanes. Modify signal equipment. Provide corresponding receiving lanes on north leg of intersection.	Yes
			PM	53.8	D	32.0	C			
Escondido	TRA-6 & TRA-10	#12. El Norte Parkway / Nutmeg Street / Nordahl Road	AM	30.6	C	29.0	C	Near-Term Cumulative/ Long-Term Cumulative	Restripe the SB approach to provide the following geometry: 1 shared through/right-turn lane, 2 left-turn lanes & bike lane. Modify median striping and signal equipment.	Yes
			PM	42.8	D	32.5	C			

General Notes:

1. MM# = Mitigation measure number.
2. Pre-mitigation and post-mitigation analysis shown for Direct and Near-term Cumulative significant impacts is for the "Existing + Cumulative Projects" and "Existing + Cumulative Projects + Project" conditions. For Long-Term Cumulative significant impacts, the Year 2035 (Buildout) analyses are shown.

TABLE 13-2
IMPACT / MITIGATION MEASURES SUMMARY – STREET SEGMENTS

Jurisdiction	MM#	Street Segment	Capacity	With Project Operations				Impact Type	Mitigation Measure	Mitigated to Below a Level of Significance
				Without Mitigation		With Mitigation				
				LOS	V/C	LOS	V/C			
Escondido	TRA-3	10. El Norte Parkway: Nutmeg Street to I-15 SB Ramps	37,000	E	0.976	—	—	Near-Term Direct & Cumulative	Revise and enhance the right-turn/ right edgeline/turn-lane striping serving the commercial uses between Bourbon Road and the I-15 southbound ramps to improve ingress and reduce driver confusion. Restrict NB left-turns from Bourbon Road with striping and signage. Permit EB to WB U-turns at the El Norte Parkway / I-15 NB ramps intersection. Additionally, construction of mitigation measures TRA-6/TRA-10 and TRA-5 would improve operations on this segment.	Yes
Escondido	TRA-4	15. Nutmeg Street: Country Club Lane to Via Alexandra	10,000	E	0.928	—	—	Near-Term Direct & Cumulative	Widening of the southbound lane from La Paloma Avenue to Via Alexandra, along with the provision of curb, gutter and sidewalk improvements to the satisfaction of the City Engineer, will enhance the local segment and overall Nutmeg Street corridor operations. Additionally, improvements to the El Norte Parkway/ Nutmeg Street/ Nordahl Road intersection (TRA-6, dual SB lefts) will also improve the overall corridor operations.	Yes
Escondido	TRA-7	17. Bennett Avenue: El Norte Parkway to Toyon Glen ^a	10,000	D	0.791	—	—	Near-term Cumulative Only	Remove intermittent left-turn pockets and restripe with a two-way left-turn lane between El Norte Parkway and Toyon Glen.	Yes

Footnotes:

- a. The adjacent intersection (#10. El Norte Parkway / Bennett Avenue) operates at acceptable LOS C during AM and PM peak hours, indicating street segment operations that are likely better than those shown with V/C analysis.

General Notes:

1. MM# = Mitigation measure number.

TABLE 13-3
IMPACT / MITIGATION MEASURES SUMMARY – RAMP METER LOCATIONS

Jurisdiction	MM#	Ramp Meter Location	Capacity	With Project Operations				Impact Type	Mitigation Measure	Mitigated to Below a Level of Significance
				Without Mitigation		With Mitigation				
				Delay (min)	Queue (ft)	Delay (min)	Queue (ft)			
Caltrans	TRA-5 & TRA-11	El Norte Parkway to I-15 southbound on-ramp	1 HOV/1 SOV	>15.0	>10,000	>15.0	<10,000	Direct & Near-Term Cumulative/Long-Term Cumulative	Provide an additional SOV lane to the southbound on ramp	No ^a

Footnotes:

a. This mitigation relies on the Caltrans allowing the proposed mitigation measure to be completed, which is not assured. In this case, the impact is not considered mitigated to below a level of significance.

General Notes:

1. MM# = Mitigation measure number.

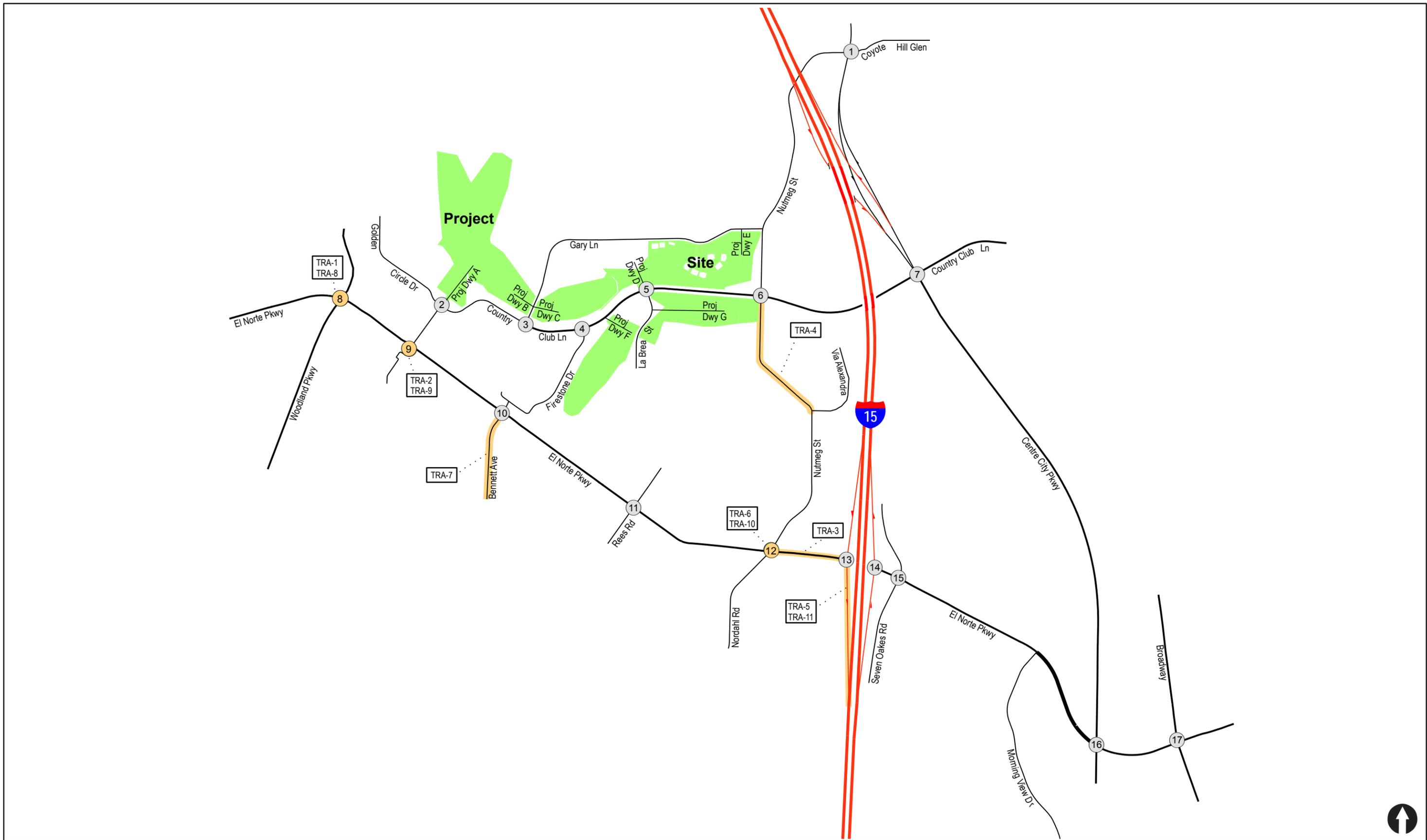


Figure 13-1

Project Impacts Location Map

TECHNICAL APPENDICES
THE VILLAGES
Escondido, California
June 19, 2017

LLG Ref. 3-16-2614

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Greenspan, Engineers**

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APPENDIX A

INTERSECTION AND SEGMENT COUNT SHEETS CALTRANS RAMP METER RATES

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Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Nutmeg Street @ Centre City Parkway

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Nutmeg Street @ Centre City Parkway

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	15	126	1	0	0	2	0	21	0	2	0	2	169
7:15 AM	39	138	0	2	0	0	0	26	0	0	0	9	214
7:30 AM	53	164	0	0	1	2	1	35	1	0	0	13	270
7:45 AM	44	155	1	0	2	0	0	34	1	2	0	13	252
8:00 AM	26	90	3	0	0	1	0	42	1	1	1	9	174
8:15 AM	17	60	0	1	2	1	0	29	1	0	0	4	115
8:30 AM	13	70	0	0	0	1	0	32	2	0	0	5	123
8:45 AM	8	46	0	0	0	0	0	32	1	1	0	3	91
Total	215	849	5	3	5	7	1	251	7	6	1	58	1,408

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.84**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	162	547	4	2	3	3	1	137	3	3	1	44	910
PHF	0.76	0.83	0.33	0.25	0.38	0.38	0.25	0.82	0.75	0.38	0.25	0.85	0.84
Movement PHF		0.82			0.67			0.82			0.80		0.84

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	5	40	2	1	1	2	0	56	2	1	0	27	137
4:15 PM	6	31	0	0	0	0	0	84	3	1	0	16	141
4:30 PM	4	38	0	0	0	1	0	82	0	2	0	16	143
4:45 PM	6	46	0	0	0	1	0	92	2	0	0	19	166
5:00 PM	15	33	0	0	0	1	0	86	0	0	1	15	151
5:15 PM	7	42	0	2	0	1	0	80	0	0	1	15	148
5:30 PM	11	26	0	0	0	0	0	63	1	1	1	20	123
5:45 PM	9	34	0	0	0	1	0	63	2	1	0	24	134
Total	63	290	2	3	1	7	0	606	10	6	3	152	1,143

PM Intersection Peak Hour : **4:30 PM - 5:30 PM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	32	159	0	2	0	4	0	340	2	2	2	65	608
PHF	0.53	0.864	#####	0.25	#####	1	#####	0.924	0.25	0.25	0.5	0.855	0.92
Movement PHF		0.92			0.50			0.91			0.91		0.92

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Golden Circle Drive

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Golden Circle Drive

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	0	77	16	0	5	23	4	0	125
7:15 AM	0	0	0	0	1	104	25	0	5	33	2	0	170
7:30 AM	0	1	0	0	1	135	20	0	6	41	3	0	207
7:45 AM	0	1	0	0	0	113	25	0	12	32	6	0	189
8:00 AM	0	0	0	0	2	96	31	0	9	33	1	0	172
8:15 AM	0	0	0	0	1	49	12	0	14	22	2	0	100
8:30 AM	0	0	0	0	4	51	14	0	14	38	1	0	122
8:45 AM	0	0	0	0	1	45	17	0	11	27	3	0	104
Total	0	2	0	0	10	670	160	0	76	249	22	0	1,189

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.89**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	2	0	0	4	448	101	0	32	139	12	0	738
PHF	#####	0.50	#####	#####	0.50	0.83	0.81	#####	0.67	0.85	0.50	#####	0.89
Movement PHF		0.50			0.83			0.83			0.86		0.89

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	5	35	50	0	22	17	4	0	133
4:15 PM	0	0	0	0	1	30	55	0	40	6	1	0	133
4:30 PM	0	1	0	0	2	47	58	0	30	13	1	1	153
4:45 PM	0	0	0	0	3	38	62	0	26	19	6	0	154
5:00 PM	0	0	0	0	5	48	55	0	20	16	1	0	145
5:15 PM	0	0	0	0	1	36	66	0	33	21	3	0	160
5:30 PM	0	0	0	0	3	42	76	0	34	12	4	0	171
5:45 PM	0	0	0	0	3	31	75	0	30	20	2	0	161
Total	0	1	0	0	23	307	497	0	235	124	22	1	1,210

PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	12	157	272	0	117	69	10	0	637
PHF	#####	#####	#####	#####	0.6	0.818	0.895	#####	0.86	0.821	0.625	#####	0.93
Movement PHF		#DIV/0!			0.80			0.88			0.82		0.93

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Gary Lane

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Gary Lane

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	12	0	16	2	57	0	0	0	0	22	1		110
7:15 AM	16	0	15	2	98	1	0	0	0	29	5		166
7:30 AM	22	0	7	2	98	0	0	0	0	26	6		161
7:45 AM	20	0	9	6	106	0	0	0	0	31	3		175
8:00 AM	17	0	13	6	82	0	1	0	0	25	4		148
8:15 AM	6	0	12	5	43	0	0	0	0	11	5		82
8:30 AM	6	0	7	0	51	0	1	0	0	12	4		81
8:45 AM	10	0	6	3	29	0	0	0	0	19	4		71
Total	109	0	85	26	564	1	2	0	0	0	175	32	994

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	75	0	44	16	384	1	1	0	0	0	111	18	650
PHF	0.85	#####	0.73	0.67	0.91	0.25	0.25	#####	#####	#####	0.90	0.75	0.93
Movement PHF		0.96			0.90			0.25			0.95		0.93

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	10	0	11	10	35	0	0	0	0	56	13		135
4:15 PM	4	0	8	12	34	1	0	0	0	42	12		113
4:30 PM	10	0	4	9	41	0	0	0	0	46	13		123
4:45 PM	4	0	7	10	42	1	0	0	0	64	15		143
5:00 PM	16	0	9	14	37	1	1	0	0	49	8		135
5:15 PM	7	0	7	11	42	2	0	0	0	62	10		143
5:30 PM	10	0	9	10	34	1	1	0	0	60	15		140
5:45 PM	7	0	9	7	26	2	0	0	0	59	14		124
Total	68	0	64	83	291	8	2	0	0	2	438	100	1,056

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	37	0	32	45	155	5	2	0	0	2	235	48	561
PHF	0.58	#####	0.889	0.804	0.923	0.625	0.5	#####	#####	0.25	0.918	0.8	0.98
Movement PHF		0.69			0.93			0.50			0.90		0.98

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Firestone Drive

Date of Count: Thursday, September 15, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0564



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Firestone Drive

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	1	0	0	0	89	13	8	0	0	1	38	0	150
7:15 AM	0	0	0	0	140	27	11	0	0	2	41	0	221
7:30 AM	0	0	0	0	98	33	9	0	0	2	38	0	180
7:45 AM	0	0	0	0	74	25	11	0	2	0	41	0	153
8:00 AM	1	0	0	0	73	12	2	0	0	3	34	1	126
8:15 AM	0	0	0	0	76	6	5	0	0	2	28	1	118
8:30 AM	0	0	0	0	57	2	3	0	2	1	32	0	97
8:45 AM	0	0	0	0	63	4	4	0	0	2	25	1	99
Total	2	0	0	0	670	122	53	0	4	13	277	3	1,144

AM Intersection Peak Hour : **7:00 AM - 8:00 AM**

Intersection PHF : **0.80**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	1	0	0	0	401	98	39	0	2	5	158	0	704
PHF	0.25	#####	#####	#####	0.72	0.74	0.89	#####	0.25	0.63	0.96	#####	0.80
Movement PHF		0.25			0.75			0.79			0.95		0.80

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	36	6	4	0	1	0	73	0	120
4:15 PM	0	0	0	1	41	10	13	0	1	3	71	0	140
4:30 PM	0	0	0	0	44	9	20	0	4	2	77	0	156
4:45 PM	0	0	0	0	52	12	11	0	2	4	78	0	159
5:00 PM	0	0	0	0	44	8	12	0	1	1	84	1	151
5:15 PM	0	0	0	0	58	9	22	0	1	2	74	1	167
5:30 PM	0	0	0	0	40	3	12	0	0	2	82	0	139
5:45 PM	0	0	0	0	41	7	9	0	2	3	71	0	133
Total	0	0	0	1	356	64	103	0	12	17	610	2	1,165

PM Intersection Peak Hour : **4:30 PM - 5:30 PM**

Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	198	38	65	0	8	9	313	2	633
PHF	#####	#####	#####	#####	0.853	0.792	0.739	#####	0.5	0.563	0.932	0.5	0.95
Movement PHF		#DIV/0!			0.88			0.76			0.94		0.95

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ La Brea Street

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ La Brea Street

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	0	77	0	4	0	1	0	46	0	128
7:15 AM	0	0	0	0	114	3	5	0	3	2	50	0	177
7:30 AM	0	0	0	0	137	4	4	0	2	0	48	0	195
7:45 AM	0	0	0	0	125	1	4	0	1	0	50	0	181
8:00 AM	0	0	0	0	101	1	3	0	3	1	46	0	155
8:15 AM	0	0	0	0	57	2	1	0	1	2	27	2	92
8:30 AM	0	0	0	0	52	0	0	0	0	0	27	0	79
8:45 AM	0	0	2	0	33	2	0	0	2	1	32	0	72
Total	0	0	2	0	696	13	21	0	13	6	326	2	1,079

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.91**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	477	9	16	0	9	3	194	0	708
PHF	#####	#####	#####	#####	0.87	0.56	0.80	#####	0.75	0.38	0.97	#####	0.91
Movement PHF	#DIV/0!				0.86			0.78			0.95		0.91

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	0	41	2	1	0	3	2	60	0	109
4:15 PM	0	0	0	0	51	1	1	0	4	2	81	0	140
4:30 PM	0	0	0	0	56	4	3	0	0	3	53	1	120
4:45 PM	0	0	0	0	62	5	5	0	4	4	86	0	166
5:00 PM	0	0	0	0	50	6	3	0	1	6	71	0	137
5:15 PM	0	0	0	0	62	5	2	0	1	5	88	0	163
5:30 PM	0	0	0	0	53	3	0	0	2	3	91	1	153
5:45 PM	0	0	0	0	39	2	2	0	2	1	74	0	120
Total	0	0	0	0	414	28	17	0	17	26	604	2	1,108

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	0	227	19	10	0	8	18	336	1	619
PHF	#####	#####	#####	#####	0.915	0.792	0.5	#####	0.5	0.75	0.923	0.25	0.93
Movement PHF	#DIV/0!				0.92			0.50			0.93		0.93

Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Nutmeg Street

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	13	15	9	1	59	50	39	5	5	8	42	0	246
7:15 AM	12	26	18	7	105	62	51	8	4	7	45	3	348
7:30 AM	16	37	15	5	129	71	34	4	0	6	40	6	363
7:45 AM	18	46	9	6	107	85	40	9	4	5	45	4	378
8:00 AM	17	25	6	6	84	82	31	10	2	10	37	2	312
8:15 AM	9	24	8	6	49	51	28	10	3	4	22	2	216
8:30 AM	7	20	6	3	45	40	12	4	0	7	19	1	164
8:45 AM	9	22	8	3	29	21	17	10	1	5	27	2	154
Total	101	215	79	37	607	462	252	60	19	52	277	20	2,181

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.93**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	63	134	48	24	425	300	156	31	10	28	167	15	1,401
PHF	0.88	0.73	0.67	0.86	0.82	0.88	0.76	0.78	0.63	0.70	0.93	0.63	0.93
Movement PHF		0.84			0.91			0.78			0.95		0.93

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	4	8	6	3	36	23	55	23	5	7	52	2	224
4:15 PM	2	16	4	5	48	37	83	40	7	5	72	5	324
4:30 PM	2	10	8	11	53	30	66	29	3	8	46	2	268
4:45 PM	4	9	6	11	54	44	73	37	12	6	76	9	341
5:00 PM	3	14	4	6	40	45	92	33	13	7	59	8	324
5:15 PM	10	13	5	12	46	32	96	28	16	10	73	7	348
5:30 PM	4	15	2	6	41	41	103	35	11	10	70	11	349
5:45 PM	3	13	4	4	27	33	90	45	7	8	63	5	302
Total	32	98	39	58	345	285	658	270	74	61	511	49	2,480

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	21	51	17	35	181	162	364	133	52	33	278	35	1362
PHF	0.53	0.85	0.708	0.729	0.838	0.9	0.883	0.899	0.813	0.825	0.914	0.795	0.98
Movement PHF		0.79			0.87			0.92			0.95		0.98

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Centre City Parkway

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: Country Club Lane @ Centre City Parkway

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	19	145	47	24	88	54	11	43	7	22	75	12	547
7:15 AM	32	173	59	23	103	54	28	70	9	25	125	6	707
7:30 AM	56	241	42	31	118	63	23	53	14	24	81	15	761
7:45 AM	32	218	40	13	119	86	11	66	14	12	100	18	729
8:00 AM	23	143	37	25	111	63	15	87	20	16	41	16	597
8:15 AM	20	77	9	21	64	35	16	55	14	16	34	16	377
8:30 AM	14	104	27	19	45	38	14	41	14	24	18	7	365
8:45 AM	14	75	13	13	33	42	18	51	12	22	22	11	326
Total	210	1,176	274	169	681	435	136	466	104	161	496	101	4,409

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	143	775	178	92	451	266	77	276	57	77	347	55	2,794
PHF	0.64	0.80	0.75	0.74	0.95	0.77	0.69	0.79	0.71	0.77	0.69	0.76	0.92
Movement PHF		0.81			0.93			0.84			0.77		0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left										
4:00 PM	9	53	31	22	48	30	26	65	25	21	78	22	430
4:15 PM	13	60	33	25	43	29	32	96	39	18	66	30	484
4:30 PM	7	48	31	26	66	30	32	97	20	26	58	26	467
4:45 PM	13	74	41	30	64	34	36	95	35	16	92	38	568
5:00 PM	11	61	35	26	66	44	48	111	25	16	77	36	556
5:15 PM	7	79	24	15	56	29	49	107	35	17	83	31	532
5:30 PM	8	50	28	19	59	35	45	84	37	12	105	19	501
5:45 PM	9	49	25	19	52	25	38	87	25	20	89	31	469
Total	77	474	248	182	454	256	306	742	241	146	648	233	4,007

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	39	264	128	90	245	142	178	397	132	61	357	124	2157
PHF	0.75	0.835	0.78	0.75	0.928	0.807	0.908	0.894	0.892	0.897	0.85	0.816	0.95
Movement PHF		0.84			0.88			0.93			0.93		0.95

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Woodland Parkway

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Woodland Parkway

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	5	38	45	11	107	74	17	12	9	16	74	1	409
7:15 AM	16	41	33	9	196	85	19	5	4	15	116	5	544
7:30 AM	19	58	47	20	219	72	32	6	16	25	85	5	604
7:45 AM	32	60	39	20	231	71	35	22	30	13	90	2	645
8:00 AM	26	29	54	18	170	82	39	10	19	7	93	10	557
8:15 AM	22	38	40	18	140	61	36	10	15	16	83	10	489
8:30 AM	30	24	22	19	128	68	27	8	16	9	87	10	448
8:45 AM	5	11	37	10	81	71	40	10	11	14	77	10	377
Total	155	299	317	125	1,272	584	245	83	120	115	705	53	4,073

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.91**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	93	188	173	67	816	310	125	43	69	60	384	22	2,350
PHF	0.73	0.78	0.80	0.84	0.88	0.91	0.80	0.49	0.58	0.60	0.83	0.55	0.91
Movement PHF		0.87			0.93			0.68			0.86		0.91

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	3	19	21	32	93	64	68	20	16	7	154	12	509
4:15 PM	5	9	19	37	181	46	53	25	16	10	177	8	586
4:30 PM	5	25	16	32	169	52	59	24	15	10	158	9	574
4:45 PM	8	16	32	45	139	42	45	26	15	11	185	11	575
5:00 PM	4	15	24	28	158	51	71	28	12	13	136	8	548
5:15 PM	8	15	20	36	124	43	68	16	21	11	174	21	557
5:30 PM	9	11	21	40	138	44	60	22	17	9	173	11	555
5:45 PM	3	18	22	42	115	47	67	25	16	7	132	14	508
Total	45	128	175	292	1,117	389	491	186	128	78	1,289	94	4,412

PM Intersection Peak Hour : **4:15 PM - 5:15 PM**

Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	22	65	91	142	647	191	228	103	58	44	656	36	2283
PHF	0.69	0.65	0.711	0.789	0.894	0.918	0.803	0.92	0.906	0.846	0.886	0.818	0.97
Movement PHF		0.79			0.93			0.88			0.89		0.97

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Country Club Lane

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Country Club Lane

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	73	0	37	2	151	5	3	1	1	1	119	21	414
7:15 AM	126	0	33	7	180	5	1	1	0	0	112	28	493
7:30 AM	124	1	45	4	219	3	6	0	0	0	106	37	545
7:45 AM	118	1	32	9	222	5	3	0	2	0	124	57	573
8:00 AM	85	1	41	6	184	7	1	0	0	1	137	33	496
8:15 AM	49	1	20	9	201	6	4	0	1	3	123	27	444
8:30 AM	74	2	28	6	125	6	8	0	2	1	104	27	383
8:45 AM	45	1	27	5	128	7	7	2	4	1	119	28	374
Total	694	7	263	48	1,410	44	33	4	10	7	944	258	3,722

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	453	3	151	26	805	20	11	1	2	1	479	155	2,107
PHF	0.90	0.75	0.84	0.72	0.91	0.71	0.46	0.25	0.25	0.25	0.87	0.68	0.92
Movement PHF		0.89			0.90				0.58		0.88		0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	47	0	13	25	186	8	5	0	3	2	146	84	519
4:15 PM	32	0	9	31	233	10	4	1	1	3	178	83	585
4:30 PM	52	1	16	19	195	10	2	0	2	2	124	94	517
4:45 PM	46	1	19	35	202	9	2	2	5	7	166	79	573
5:00 PM	42	0	18	20	179	9	4	0	0	0	158	71	501
5:15 PM	46	1	25	32	183	13	4	0	2	2	181	86	575
5:30 PM	46	1	11	27	197	8	4	6	1	3	139	112	555
5:45 PM	43	3	14	24	181	13	2	2	1	2	119	102	506
Total	354	7	125	213	1,556	80	27	11	15	21	1,211	711	4,331

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.96**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	180	3	73	114	761	39	14	8	8	12	644	348	2204
PHF	0.98	0.75	0.73	0.814	0.942	0.75	0.875	0.333	0.4	0.429	0.89	0.777	0.96
Movement PHF		0.89			0.93				0.68		0.93		0.96

Turn Count Summary

Accurate Video Counts Inc
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(619) 987-5136



Location: El Norte Parkway @ Bennett Avenue

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Bennett Avenue

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	2	13	9	3	142	41	32	7	10	22	138	1	420
7:15 AM	5	20	4	3	165	52	40	3	10	24	129	0	455
7:30 AM	4	36	3	0	222	54	37	7	12	52	173	2	602
7:45 AM	2	23	3	5	181	72	52	6	14	35	132	0	525
8:00 AM	1	17	6	1	151	51	40	3	17	24	158	1	470
8:15 AM	1	11	7	3	162	31	34	4	14	26	140	2	435
8:30 AM	0	10	6	2	122	32	25	12	15	28	128	0	380
8:45 AM	3	8	7	3	127	26	26	7	9	22	135	3	376
Total	18	138	45	20	1,272	359	286	49	101	233	1,133	9	3,663

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.85**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	12	96	16	9	719	229	169	19	53	135	592	3	2,052
PHF	0.60	0.67	0.67	0.45	0.81	0.80	0.81	0.68	0.78	0.65	0.86	0.38	0.85
Movement PHF		0.72			0.87			0.84			0.80		0.85

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	3	7	1	7	155	31	42	14	36	18	164	4	482
4:15 PM	5	5	4	5	214	47	37	15	28	24	162	2	548
4:30 PM	2	9	5	7	176	25	50	12	26	25	133	4	474
4:45 PM	4	10	5	7	197	58	45	24	35	27	185	2	599
5:00 PM	2	3	3	6	181	59	58	26	24	15	190	2	569
5:15 PM	4	11	5	7	197	32	55	20	29	23	204	5	592
5:30 PM	1	4	8	4	197	26	47	14	30	19	155	1	506
5:45 PM	2	6	7	7	179	26	43	6	26	20	120	6	448
Total	23	55	38	50	1,496	304	377	131	234	171	1,313	26	4,218

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	11	28	21	24	772	175	205	84	118	84	734	10	2266
PHF	0.69	0.636	0.656	0.857	0.98	0.742	0.884	0.808	0.843	0.778	0.9	0.5	0.95
Movement PHF		0.75			0.93			0.94			0.89		0.95

Turn Count Summary

Accurate Video Counts Inc
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(619) 987-5136



Location: El Norte Parkway @ Rees Road

Date of Count: Thursday, February 23, 2017

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 17-0630



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Rees Road

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	22	5	2	4	164	0	2	4	14	1	223	7	448
7:15 AM	14	2	1	2	185	3	5	7	11	4	299	19	552
7:30 AM	11	4	2	12	169	2	4	11	9	1	273	22	520
7:45 AM	19	3	1	11	208	3	5	3	9	1	225	31	519
8:00 AM	13	4	1	6	145	4	5	6	6	3	214	25	432
8:15 AM	13	2	1	4	138	2	3	0	8	5	220	19	415
8:30 AM	7	1	1	9	160	2	1	5	6	1	173	13	379
8:45 AM	13	2	1	7	140	2	2	5	10	2	154	12	350
Total	112	23	10	55	1,309	18	27	41	73	18	1,781	148	3,615

AM Intersection Peak Hour : **7:00 AM - 8:00 AM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	66	14	6	29	726	8	16	25	43	7	1,020	79	2,039
PHF	0.75	0.70	0.75	0.60	0.87	0.67	0.80	0.57	0.77	0.44	0.85	0.64	0.92
Movement PHF	0.74			0.86			0.88			0.86			0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	15	11	1	5	257	7	2	1	8	8	226	14	555
4:15 PM	14	1	6	1	297	10	2	3	8	8	215	14	579
4:30 PM	15	2	2	8	215	9	2	1	4	10	219	16	503
4:45 PM	31	4	3	5	208	5	4	4	5	3	286	11	569
5:00 PM	22	5	4	3	225	3	6	2	7	5	249	15	546
5:15 PM	18	4	5	6	228	9	2	4	7	5	256	24	568
5:30 PM	15	4	2	1	281	4	1	0	8	4	290	19	629
5:45 PM	13	7	3	5	233	3	5	2	7	9	265	24	576
Total	143	38	26	34	1,944	50	24	17	54	52	2,006	137	4,525

PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	68	20	14	15	967	19	14	8	29	23	1060	82	2319
PHF	0.77	0.714	0.7	0.625	0.86	0.528	0.583	0.5	0.906	0.639	0.914	0.854	0.92
Movement PHF	0.82			0.88			0.85			0.93			0.92

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Nutmeg Street

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Nutmeg Street

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	9	45	56	19	185	57	32	11	3	2	202	13	634
7:15 AM	14	45	49	12	219	67	24	14	2	4	172	8	630
7:30 AM	16	63	49	17	234	67	24	11	3	8	177	14	683
7:45 AM	12	71	49	14	215	64	26	25	1	14	179	11	681
8:00 AM	15	57	59	17	179	75	32	20	6	7	191	11	669
8:15 AM	14	34	50	26	224	68	43	22	2	3	207	4	697
8:30 AM	6	30	55	18	150	53	43	12	1	5	171	6	550
8:45 AM	4	15	47	29	145	61	32	12	6	4	164	9	528
Total	90	360	414	152	1,551	512	256	127	24	47	1,463	76	5,072

AM Intersection Peak Hour : **7:30 AM - 8:30 AM**

Intersection PHF : **0.98**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	57	225	207	74	852	274	125	78	12	32	754	40	2,730
PHF	0.89	0.79	0.88	0.71	0.91	0.91	0.73	0.78	0.50	0.57	0.91	0.71	0.98
Movement PHF	0.93			0.94			0.80			0.96			0.98

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	2	23	33	51	185	46	71	56	4	15	168	20	674
4:15 PM	3	30	35	59	218	38	70	43	10	12	204	15	737
4:30 PM	4	18	51	52	187	50	51	63	15	5	162	18	676
4:45 PM	4	20	43	55	209	41	55	54	7	12	213	16	729
5:00 PM	16	40	56	41	182	42	43	61	11	11	204	23	730
5:15 PM	11	29	53	49	185	45	72	57	11	7	187	17	723
5:30 PM	12	29	55	44	199	40	88	67	9	7	192	20	762
5:45 PM	11	17	65	35	193	46	46	68	10	6	202	18	717
Total	63	206	391	386	1,558	348	496	469	77	75	1,532	147	5,748

PM Intersection Peak Hour : **4:45 PM - 5:45 PM**

Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	43	118	207	189	775	168	258	239	38	37	796	76	2944
PHF	0.67	0.738	0.924	0.859	0.927	0.933	0.733	0.892	0.864	0.771	0.934	0.826	0.97
Movement PHF	0.82			0.93			0.82			0.94			0.97

Turn Count Summary

Accurate Video Counts Inc
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Location: El Norte Parkway @ I-15 SB Ramps

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
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Location: El Norte Parkway @ I-15 SB Ramps

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	59	0	59	0	249	111	0	0	0	193	116	0	787
7:15 AM	57	0	49	0	267	89	0	0	0	160	160	0	782
7:30 AM	61	1	32	0	327	101	0	0	0	159	148	0	829
7:45 AM	46	0	44	0	279	95	0	0	0	170	117	0	751
8:00 AM	57	3	31	0	254	104	0	0	0	142	158	0	749
8:15 AM	23	0	34	0	240	70	0	0	0	168	136	0	671
8:30 AM	30	0	36	0	192	77	0	0	0	138	125	0	598
8:45 AM	36	0	27	0	209	70	0	0	0	133	134	0	609
Total	369	4	312	0	2,017	717	0	0	0	1,263	1,094	0	5,776

AM Intersection Peak Hour : 7:00 AM - 8:00 AM

Intersection PHF : 0.95

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	223	1	184	0	1,122	396	0	0	0	682	541	0	3,149
PHF	0.91	0.25	0.78	#####	0.86	0.89	#####	#####	#####	0.88	0.85	#####	0.95
Movement PHF		0.86			0.89			#DIV/0!			0.96		0.95

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	31	0	29	0	419	66	0	0	0	101	240	0	886
4:15 PM	31	0	22	0	431	79	0	0	0	83	328	0	974
4:30 PM	21	0	28	0	342	81	0	0	0	88	216	0	776
4:45 PM	36	0	33	0	397	55	0	0	0	102	202	0	825
5:00 PM	42	0	26	0	392	63	0	0	0	105	227	0	855
5:15 PM	37	1	29	0	449	59	0	0	0	99	343	0	1,017
5:30 PM	23	0	24	0	442	60	0	0	0	98	311	0	958
5:45 PM	34	0	17	0	358	77	0	0	0	87	255	0	828
Total	255	1	208	0	3,230	540	0	0	0	763	2,122	0	7,119

PM Intersection Peak Hour : 5:00 PM - 6:00 PM

Intersection PHF : 0.90

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	136	1	96	0	1641	259	0	0	0	389	1136	0	3658
PHF	0.81	0.25	0.828	#####	0.914	0.841	#####	#####	#####	0.926	0.828	#####	0.90
Movement PHF		0.86			0.94			#DIV/0!			0.86		0.90

Turn Count Summary

Accurate Video Counts Inc
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Location: El Norte Parkway @ I-15 NB Ramps

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
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Location: El Norte Parkway @ I-15 NB Ramps

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	0	0	0	25	288	0	35	0	72	0	155	20	595
7:15 AM	0	0	0	29	271	0	64	1	85	0	185	24	659
7:30 AM	0	0	0	21	313	0	54	0	115	0	160	20	683
7:45 AM	0	0	0	15	273	0	58	0	101	0	140	21	608
8:00 AM	0	0	0	22	255	0	45	0	103	0	164	25	614
8:15 AM	0	0	0	27	200	0	63	0	110	0	150	20	570
8:30 AM	0	0	0	37	177	0	48	0	92	0	133	28	515
8:45 AM	0	0	0	12	181	0	44	0	98	0	141	20	496
Total	0	0	0	188	1,958	0	411	1	776	0	1,228	178	4,740

AM Intersection Peak Hour : 7:15 AM - 8:15 AM

Intersection PHF : 0.94

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	87	1,112	0	221	1	404	0	649	90	2,564
PHF	#####	#####	#####	0.75	0.89	#####	0.86	0.25	0.88	#####	0.88	0.90	0.94
Movement PHF	#DIV/0!			0.90			0.93			0.88			0.94

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	0	0	0	54	244	0	133	1	241	0	214	55	942
4:15 PM	0	0	0	74	250	0	151	0	260	0	257	93	1,085
4:30 PM	0	0	0	64	200	0	129	0	223	0	182	62	860
4:45 PM	0	0	0	71	185	0	113	1	267	0	191	44	872
5:00 PM	0	0	0	62	215	0	113	1	240	0	198	55	884
5:15 PM	0	0	0	51	267	1	123	0	241	0	298	74	1,055
5:30 PM	0	0	0	49	281	0	140	0	221	0	261	74	1,026
5:45 PM	0	0	0	71	238	0	138	0	197	0	218	54	916
Total	0	0	0	496	1,880	1	1,040	3	1,890	0	1,819	511	7,640

PM Intersection Peak Hour : 5:00 PM - 6:00 PM

Intersection PHF : 0.92

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	0	0	0	233	1001	1	514	1	899	0	975	257	3881
PHF	#####	#####	#####	0.82	0.891	0.25	0.918	0.25	0.933	#####	0.818	0.868	0.92
Movement PHF	#DIV/0!			0.94			0.97			0.83			0.92

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ 7 Oakes Road

Date of Count: Wednesday, September 07, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0559



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ 7 Oakes Road

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	15	0	7	10	232	25	34	1	33	49	154	3	563
7:15 AM	18	1	5	11	268	46	35	3	26	35	187	3	638
7:30 AM	19	5	8	14	310	52	25	0	22	52	194	8	709
7:45 AM	18	2	6	10	255	50	27	3	14	55	207	9	656
8:00 AM	14	3	9	11	249	46	27	2	21	52	167	7	608
8:15 AM	12	6	4	8	245	28	13	1	22	39	194	13	585
8:30 AM	20	4	6	3	257	23	17	5	23	46	171	14	589
8:45 AM	11	4	7	5	247	18	19	2	13	38	187	15	566
Total	127	25	52	72	2,063	288	197	17	174	366	1,461	72	4,914

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.92**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	69	11	28	46	1,082	194	114	8	83	194	755	27	2,611
PHF	0.91	0.55	0.78	0.82	0.87	0.93	0.81	0.67	0.80	0.88	0.91	0.75	0.92
Movement PHF		0.84			0.88			0.80			0.90		0.92

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	26	2	6	12	231	15	44	4	53	26	304	23	746
4:15 PM	17	2	4	6	215	28	38	3	52	25	288	31	709
4:30 PM	26	3	0	7	256	23	41	6	52	37	325	30	806
4:45 PM	29	1	10	5	237	19	40	5	47	24	309	27	753
5:00 PM	32	3	7	11	238	22	53	6	51	19	297	28	767
5:15 PM	40	2	8	9	225	25	52	5	56	31	314	25	792
5:30 PM	35	1	16	14	234	32	35	11	43	31	295	23	770
5:45 PM	18	1	14	3	280	23	28	10	33	20	297	26	753
Total	223	15	65	67	1,916	187	331	50	387	213	2,429	213	6,096

PM Intersection Peak Hour : **4:30 PM - 5:30 PM**

Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	127	9	25	32	956	89	186	22	206	111	1245	110	3118
PHF	0.79	0.75	0.625	0.727	0.934	0.89	0.877	0.917	0.92	0.75	0.958	0.917	0.97
Movement PHF		0.81			0.94			0.92			0.93		0.97

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Centre City Parkway

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Centre City Parkway

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	12	153	43	21	181	87	20	55	21	58	152	5	808
7:15 AM	10	240	50	31	192	71	31	90	22	76	190	5	1,008
7:30 AM	10	263	37	70	229	56	16	71	28	81	216	4	1,081
7:45 AM	26	297	62	31	194	63	28	83	47	79	165	3	1,078
8:00 AM	17	250	34	38	235	56	27	71	46	71	182	9	1,036
8:15 AM	5	160	29	22	165	63	27	81	43	55	157	2	809
8:30 AM	9	104	32	24	138	49	30	64	48	62	139	1	700
8:45 AM	7	119	37	28	112	68	24	56	39	54	103	4	651
Total	96	1,586	324	265	1,446	513	203	571	294	536	1,304	33	7,171

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	63	1,050	183	170	850	246	102	315	143	307	753	21	4,203
PHF	0.61	0.88	0.74	0.61	0.90	0.87	0.82	0.88	0.76	0.95	0.87	0.58	0.97
Movement PHF		0.84			0.89			0.89			0.90		0.97

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	8	53	44	27	151	32	89	104	89	52	189	9	847
4:15 PM	0	55	35	42	180	37	130	109	69	52	255	11	975
4:30 PM	8	61	30	31	147	41	82	158	65	47	211	12	893
4:45 PM	0	63	32	38	163	37	90	155	78	45	264	12	977
5:00 PM	3	58	38	35	182	50	137	149	88	36	238	8	1,022
5:15 PM	3	46	51	37	194	49	95	165	84	57	284	9	1,074
5:30 PM	6	46	57	30	204	53	120	125	62	42	245	9	999
5:45 PM	9	65	34	18	176	43	83	176	90	45	250	8	997
Total	37	447	321	258	1,397	342	826	1,141	625	376	1,936	78	7,784

PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.95**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	21	215	180	120	756	195	435	615	324	180	1017	34	4092
PHF	0.58	0.827	0.789	0.811	0.926	0.92	0.794	0.874	0.9	0.789	0.895	0.944	0.95
Movement PHF		0.95			0.93			0.92			0.88		0.95

Turn Count Summary

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Broadway

Date of Count: Tuesday, May 17, 2016

Analysts: LV/CD

Weather: Sunny

AVC Proj No: 16-0521



Vehicular Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: El Norte Parkway @ Broadway

AM Period (7:00 AM - 9:00 AM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
7:00 AM	86	113	32	19	323	36	23	145	27	13	125	75	1,017
7:15 AM	107	193	61	28	385	49	17	221	39	17	207	110	1,434
7:30 AM	117	217	47	7	374	38	34	145	18	24	181	64	1,266
7:45 AM	119	171	48	12	362	28	34	81	33	39	172	49	1,148
8:00 AM	108	188	38	6	345	57	28	41	18	15	151	33	1,028
8:15 AM	49	80	15	6	252	38	31	34	19	18	144	23	709
8:30 AM	32	78	8	5	242	42	25	27	16	18	94	34	621
8:45 AM	32	60	7	14	280	33	36	39	16	24	130	12	683
Total	650	1,100	256	97	2,563	321	228	733	186	168	1,204	400	7,906

AM Intersection Peak Hour : **7:15 AM - 8:15 AM**

Intersection PHF : **0.85**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	451	769	194	53	1,466	172	113	488	108	95	711	256	4,876
PHF	0.95	0.89	0.80	0.47	0.95	0.75	0.83	0.55	0.69	0.61	0.86	0.58	0.85
Movement PHF	0.93			0.92			0.64			0.79			0.85

PM Period (4:00 PM - 6:00 PM)													
	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
4:00 PM	44	97	22	13	204	36	61	74	44	28	278	82	983
4:15 PM	42	98	20	11	205	30	75	106	25	28	311	77	1,028
4:30 PM	48	106	28	9	238	31	63	101	25	21	345	64	1,079
4:45 PM	57	129	28	8	223	46	72	109	38	34	327	89	1,160
5:00 PM	42	107	29	19	292	35	55	106	47	28	378	92	1,230
5:15 PM	41	138	36	7	276	56	68	141	27	45	318	98	1,251
5:30 PM	39	106	21	14	294	44	72	98	33	27	353	91	1,192
5:45 PM	48	153	31	7	261	46	70	105	37	20	309	82	1,169
Total	361	934	215	88	1,993	324	536	840	276	231	2,619	675	9,092

PM Intersection Peak Hour : **5:00 PM - 6:00 PM**

Intersection PHF : **0.97**

	Southbound			Westbound			Northbound			Eastbound			TOTAL
	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	
Volume	170	504	117	47	1,123	181	265	450	144	120	1,358	363	4,842
PHF	0.89	0.824	0.813	0.618	0.955	0.808	0.92	0.798	0.766	0.667	0.898	0.926	0.97
Movement PHF	0.85			0.96			0.91			0.92			0.97

24 Hour Segment Count

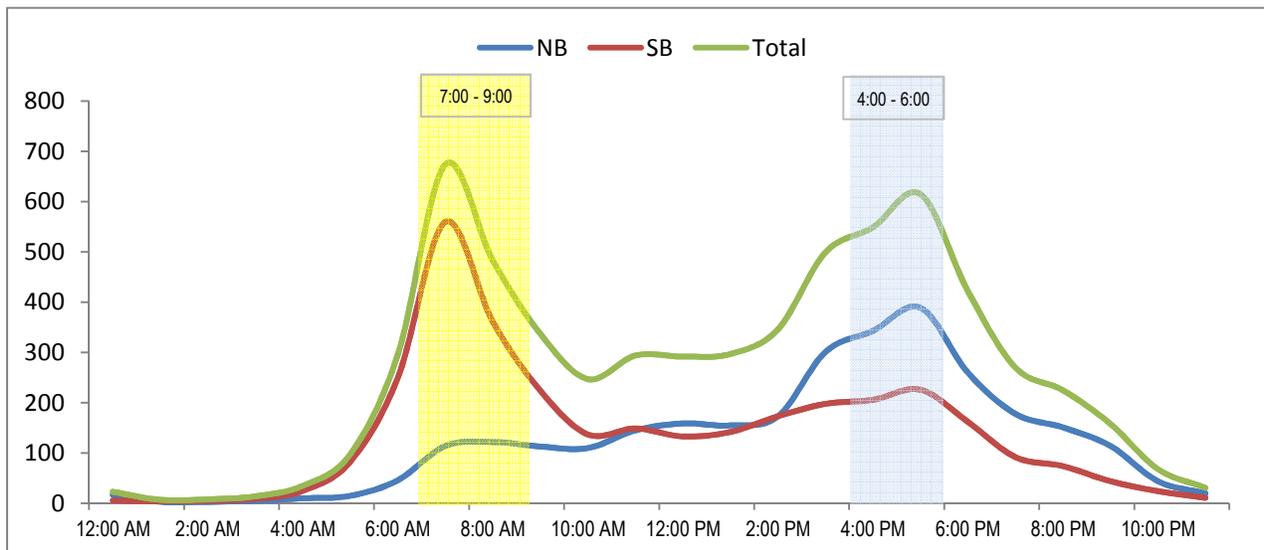
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: B. Country Club Lane, El Norte Parkway to Golden Circle Drive
Orientation: North-South
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					6,288				
Time	Hourly Volume			Time	Hourly Volume				
	NB	SB	Total		NB	SB	Total		
12:00 AM - 1:00 AM	17	6	23	12:00 PM - 1:00 PM	159	133	292		
1:00 AM - 2:00 AM	3	4	7	1:00 PM - 2:00 PM	155	142	297		
2:00 AM - 3:00 AM	3	5	8	2:00 PM - 3:00 PM	173	173	346		
3:00 AM - 4:00 AM	5	9	14	3:00 PM - 4:00 PM	301	198	499		
4:00 AM - 5:00 AM	10	25	35	4:00 PM - 5:00 PM	343	206	549		
5:00 AM - 6:00 AM	15	83	98	5:00 PM - 6:00 PM	389	226	615		
6:00 AM - 7:00 AM	46	250	296	6:00 PM - 7:00 PM	260	162	422		
7:00 AM - 8:00 AM	114	560	674	7:00 PM - 8:00 PM	178	92	270		
8:00 AM - 9:00 AM	122	361	483	8:00 PM - 9:00 PM	151	74	225		
9:00 AM - 10:00 AM	113	224	337	9:00 PM - 10:00 PM	114	44	158		
10:00 AM - 11:00 AM	110	137	247	10:00 PM - 11:00 PM	44	24	68		
11:00 AM - 12:00 PM	145	149	294	11:00 PM - 12:00 AM	20	11	31		
Total	703	1,813	2,516	Total	2,287	1,485	3,772		

24-Hour NB Volume 2,990 **24-Hour SB Volume 3,298**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: C. Country Club Lane, Golden Circle Drive to Gary Lane

Orientation: East-West

Date of Count: Tuesday, May 17, 2016

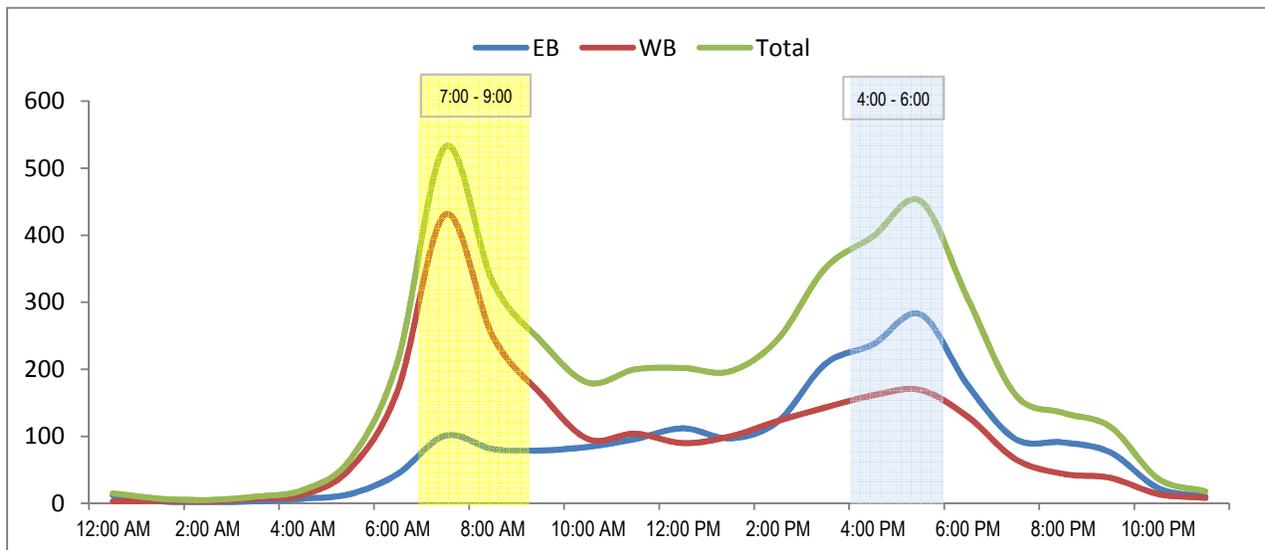
Analysts: DASH

Weather: Sunny

AVC Proj. No: 16-0521

24 Hour Segment Volume					4,436			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	12	3	15	12:00 PM - 1:00 PM	112	90	202	
1:00 AM - 2:00 AM	3	4	7	1:00 PM - 2:00 PM	97	100	197	
2:00 AM - 3:00 AM	2	3	5	2:00 PM - 3:00 PM	122	123	245	
3:00 AM - 4:00 AM	3	7	10	3:00 PM - 4:00 PM	208	143	351	
4:00 AM - 5:00 AM	7	13	20	4:00 PM - 5:00 PM	237	161	398	
5:00 AM - 6:00 AM	14	52	66	5:00 PM - 6:00 PM	282	169	451	
6:00 AM - 7:00 AM	44	169	213	6:00 PM - 7:00 PM	176	129	305	
7:00 AM - 8:00 AM	101	431	532	7:00 PM - 8:00 PM	96	66	162	
8:00 AM - 9:00 AM	81	249	330	8:00 PM - 9:00 PM	91	44	135	
9:00 AM - 10:00 AM	79	164	243	9:00 PM - 10:00 PM	76	38	114	
10:00 AM - 11:00 AM	84	96	180	10:00 PM - 11:00 PM	23	14	37	
11:00 AM - 12:00 PM	96	104	200	11:00 PM - 12:00 AM	10	8	18	
Total	526	1,295	1,821	Total	1,530	1,085	2,615	

24-Hour EB Volume 2,056 **24-Hour WB Volume 2,380**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: D. Country Club Lane, Gary Lane to La Brea Street

Orientation: East-West

Date of Count: Tuesday, May 17, 2016

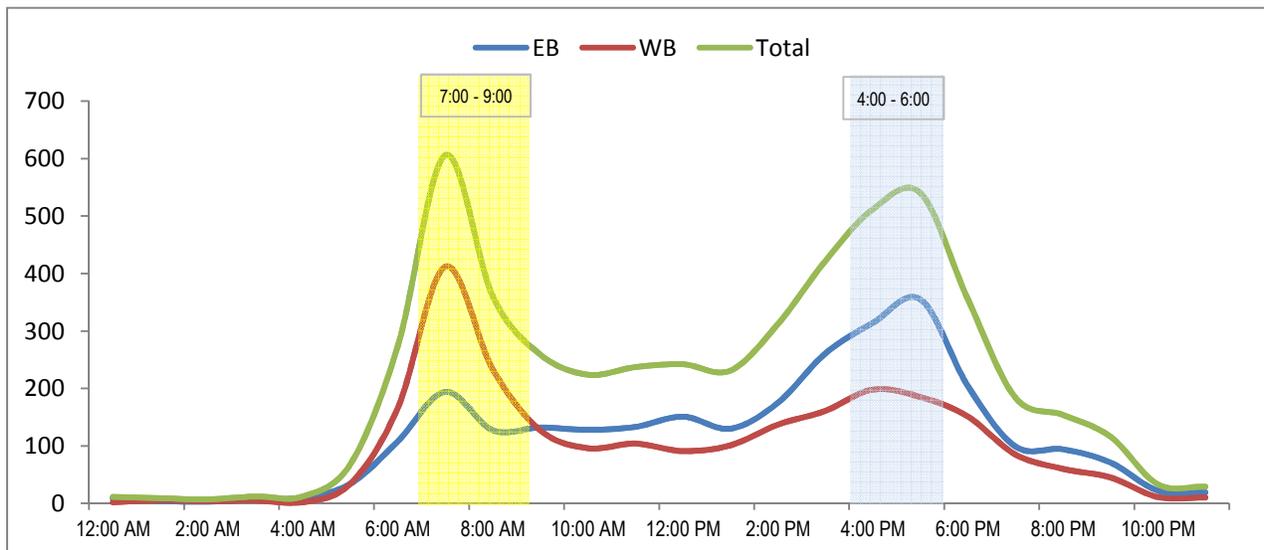
Analysts: DASH

Weather: Sunny

AVC Proj. No: 16-0521

24 Hour Segment Volume					5,209			
Time	Hourly Volume			Total	Time	Hourly Volume		
	EB	WB	Total			EB	WB	Total
12:00 AM - 1:00 AM	9	2	11	12:00 PM - 1:00 PM	151	91	242	
1:00 AM - 2:00 AM	4	5	9	1:00 PM - 2:00 PM	130	101	231	
2:00 AM - 3:00 AM	3	4	7	2:00 PM - 3:00 PM	175	137	312	
3:00 AM - 4:00 AM	7	5	12	3:00 PM - 4:00 PM	261	161	422	
4:00 AM - 5:00 AM	10	2	12	4:00 PM - 5:00 PM	314	198	512	
5:00 AM - 6:00 AM	34	34	68	5:00 PM - 6:00 PM	355	185	540	
6:00 AM - 7:00 AM	108	166	274	6:00 PM - 7:00 PM	204	151	355	
7:00 AM - 8:00 AM	194	412	606	7:00 PM - 8:00 PM	99	85	184	
8:00 AM - 9:00 AM	127	233	360	8:00 PM - 9:00 PM	94	60	154	
9:00 AM - 10:00 AM	132	127	259	9:00 PM - 10:00 PM	71	45	116	
10:00 AM - 11:00 AM	128	96	224	10:00 PM - 11:00 PM	22	11	33	
11:00 AM - 12:00 PM	133	104	237	11:00 PM - 12:00 AM	19	10	29	
Total	889	1,190	2,079	Total	1,895	1,235	3,130	

24-Hour EB Volume 2,784 **24-Hour WB Volume 2,425**



24 Hour Segment Count

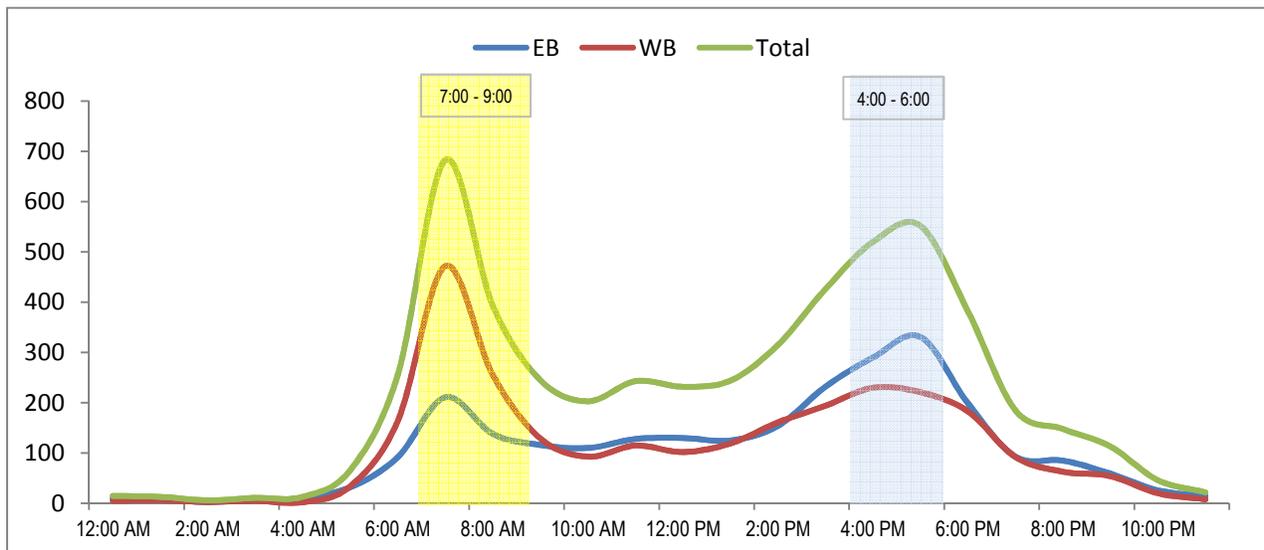
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: E. Country Club Lane, La Brea Street to Nutmeg Street
Orientation: East-West
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					5,332			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	10	5	15	12:00 PM - 1:00 PM	130	102	232	
1:00 AM - 2:00 AM	7	6	13	1:00 PM - 2:00 PM	125	119	244	
2:00 AM - 3:00 AM	3	3	6	2:00 PM - 3:00 PM	154	161	315	
3:00 AM - 4:00 AM	6	5	11	3:00 PM - 4:00 PM	232	194	426	
4:00 AM - 5:00 AM	11	2	13	4:00 PM - 5:00 PM	290	230	520	
5:00 AM - 6:00 AM	32	34	66	5:00 PM - 6:00 PM	331	221	552	
6:00 AM - 7:00 AM	92	164	256	6:00 PM - 7:00 PM	199	183	382	
7:00 AM - 8:00 AM	211	472	683	7:00 PM - 8:00 PM	93	92	185	
8:00 AM - 9:00 AM	138	255	393	8:00 PM - 9:00 PM	85	63	148	
9:00 AM - 10:00 AM	116	129	245	9:00 PM - 10:00 PM	59	54	113	
10:00 AM - 11:00 AM	110	93	203	10:00 PM - 11:00 PM	26	20	46	
11:00 AM - 12:00 PM	128	115	243	11:00 PM - 12:00 AM	14	8	22	
Total	864	1,283	2,147	Total	1,738	1,447	3,185	

24-Hour EB Volume 2,602 **24-Hour WB Volume 2,730**



24 Hour Segment Count

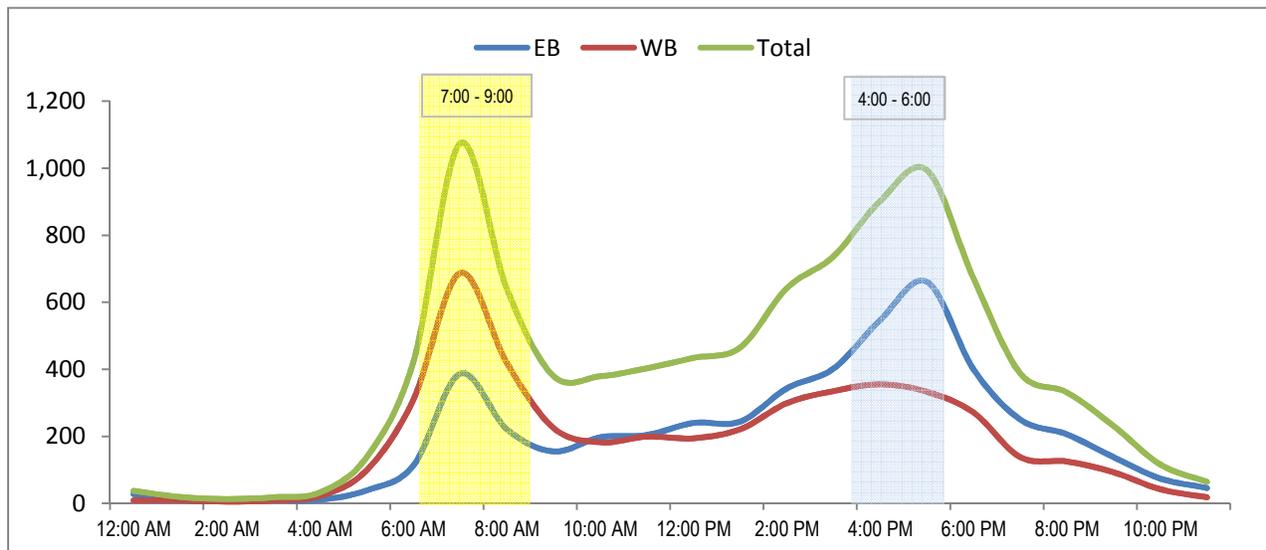
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: F. Country Club Lane, Nutmeg Street to Centre City Parkway
Orientation: East-West
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					9,532			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	28	9	37	12:00 PM - 1:00 PM	240	194	434	
1:00 AM - 2:00 AM	10	9	19	1:00 PM - 2:00 PM	244	221	465	
2:00 AM - 3:00 AM	8	5	13	2:00 PM - 3:00 PM	343	299	642	
3:00 AM - 4:00 AM	9	9	18	3:00 PM - 4:00 PM	402	335	737	
4:00 AM - 5:00 AM	11	22	33	4:00 PM - 5:00 PM	547	355	902	
5:00 AM - 6:00 AM	39	99	138	5:00 PM - 6:00 PM	661	333	994	
6:00 AM - 7:00 AM	113	310	423	6:00 PM - 7:00 PM	400	271	671	
7:00 AM - 8:00 AM	387	687	1,074	7:00 PM - 8:00 PM	250	138	388	
8:00 AM - 9:00 AM	221	419	640	8:00 PM - 9:00 PM	206	125	331	
9:00 AM - 10:00 AM	155	225	380	9:00 PM - 10:00 PM	138	93	231	
10:00 AM - 11:00 AM	197	182	379	10:00 PM - 11:00 PM	74	42	116	
11:00 AM - 12:00 PM	204	199	403	11:00 PM - 12:00 AM	46	18	64	
Total	1,382	2,175	3,557	Total	3,551	2,424	5,975	

24-Hour EB Volume 4,933 **24-Hour WB Volume 4,599**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: H. El Norte Parkway, Woodland Parkway to Country Club Lane

Orientation: East-West

Date of Count: Tuesday, May 17, 2016

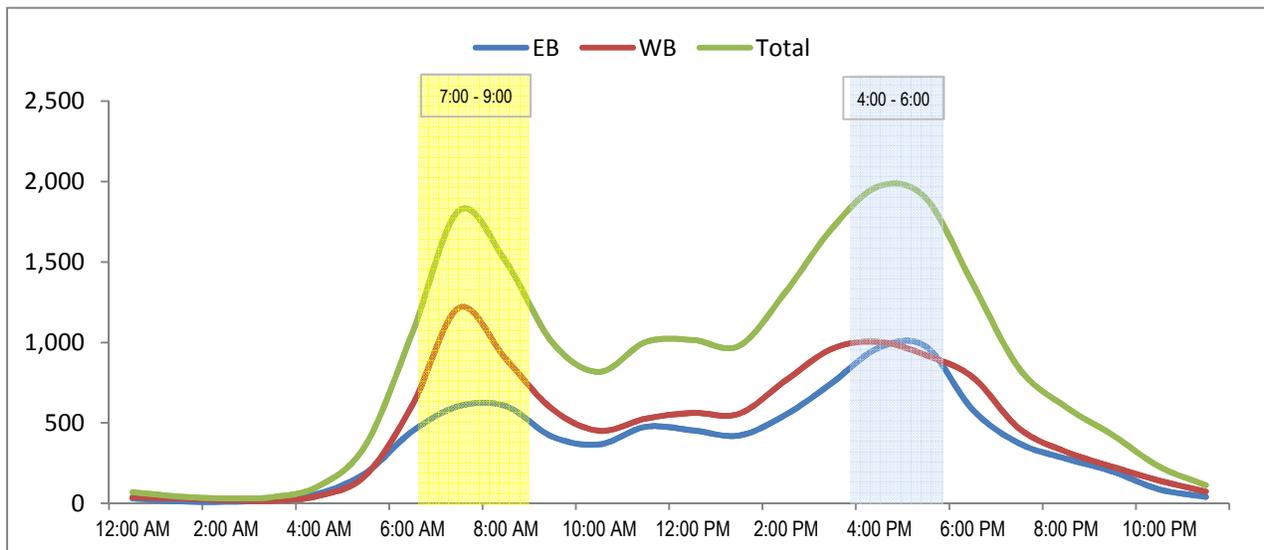
Analysts: DASH

Weather: Sunny

AVC Proj. No: 16-0521

24 Hour Segment Volume					20,320			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	31	38	69	12:00 PM - 1:00 PM	454	562	1,016	
1:00 AM - 2:00 AM	12	31	43	1:00 PM - 2:00 PM	422	557	979	
2:00 AM - 3:00 AM	10	20	30	2:00 PM - 3:00 PM	551	765	1,316	
3:00 AM - 4:00 AM	22	17	39	3:00 PM - 4:00 PM	751	962	1,713	
4:00 AM - 5:00 AM	62	47	109	4:00 PM - 5:00 PM	968	1,004	1,972	
5:00 AM - 6:00 AM	189	175	364	5:00 PM - 6:00 PM	975	921	1,896	
6:00 AM - 7:00 AM	449	612	1,061	6:00 PM - 7:00 PM	583	785	1,368	
7:00 AM - 8:00 AM	605	1,216	1,821	7:00 PM - 8:00 PM	373	465	838	
8:00 AM - 9:00 AM	604	898	1,502	8:00 PM - 9:00 PM	278	321	599	
9:00 AM - 10:00 AM	414	585	999	9:00 PM - 10:00 PM	198	227	425	
10:00 AM - 11:00 AM	366	451	817	10:00 PM - 11:00 PM	87	141	228	
11:00 AM - 12:00 PM	476	527	1003	11:00 PM - 12:00 AM	40	73	113	
Total	3,240	4,617	7,857	Total	5,680	6,783	12,463	

24-Hour EB Volume 8,920 **24-Hour WB Volume 11,400**



24 Hour Segment Count

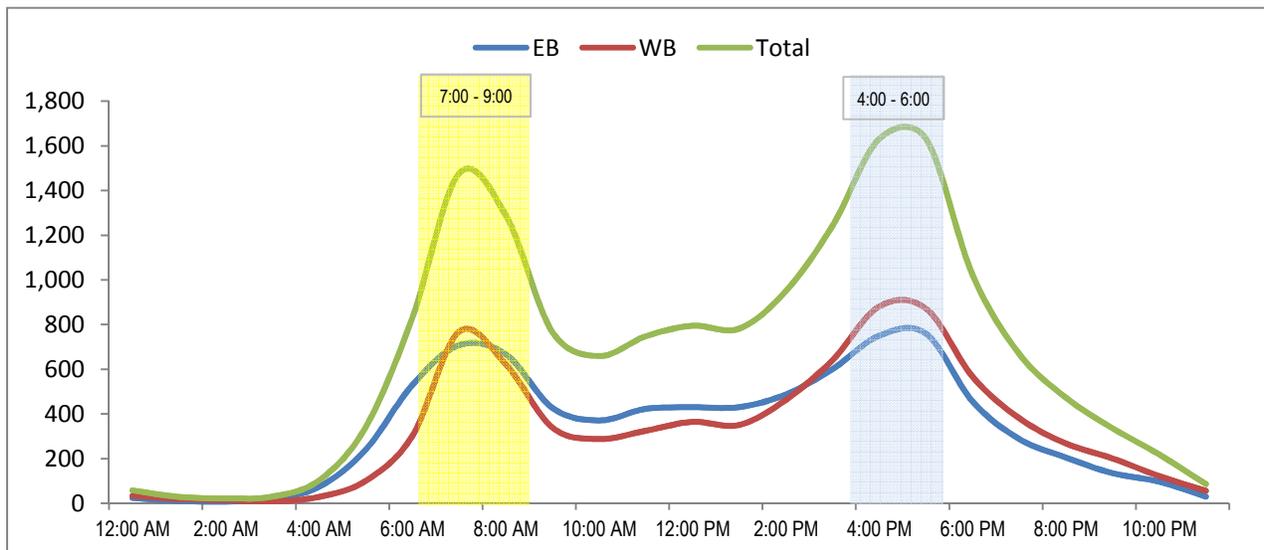
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: I. El Norte Parkway, Country Club Lane to Bennett Avenue
Orientation: East-West
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					16,193			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	24	34	58	12:00 PM - 1:00 PM	430	365	795	
1:00 AM - 2:00 AM	10	19	29	1:00 PM - 2:00 PM	431	351	782	
2:00 AM - 3:00 AM	8	14	22	2:00 PM - 3:00 PM	487	463	950	
3:00 AM - 4:00 AM	21	9	30	3:00 PM - 4:00 PM	601	641	1,242	
4:00 AM - 5:00 AM	74	29	103	4:00 PM - 5:00 PM	750	881	1,631	
5:00 AM - 6:00 AM	241	101	342	5:00 PM - 6:00 PM	760	872	1,632	
6:00 AM - 7:00 AM	530	302	832	6:00 PM - 7:00 PM	456	567	1,023	
7:00 AM - 8:00 AM	708	769	1,477	7:00 PM - 8:00 PM	288	381	669	
8:00 AM - 9:00 AM	667	622	1,289	8:00 PM - 9:00 PM	205	268	473	
9:00 AM - 10:00 AM	427	339	766	9:00 PM - 10:00 PM	135	201	336	
10:00 AM - 11:00 AM	371	288	659	10:00 PM - 11:00 PM	97	122	219	
11:00 AM - 12:00 PM	423	325	748	11:00 PM - 12:00 AM	30	56	86	
Total	3,504	2,851	6,355	Total	4,670	5,168	9,838	

24-Hour EB Volume 8,174 **24-Hour WB Volume 8,019**



24 Hour Segment Count

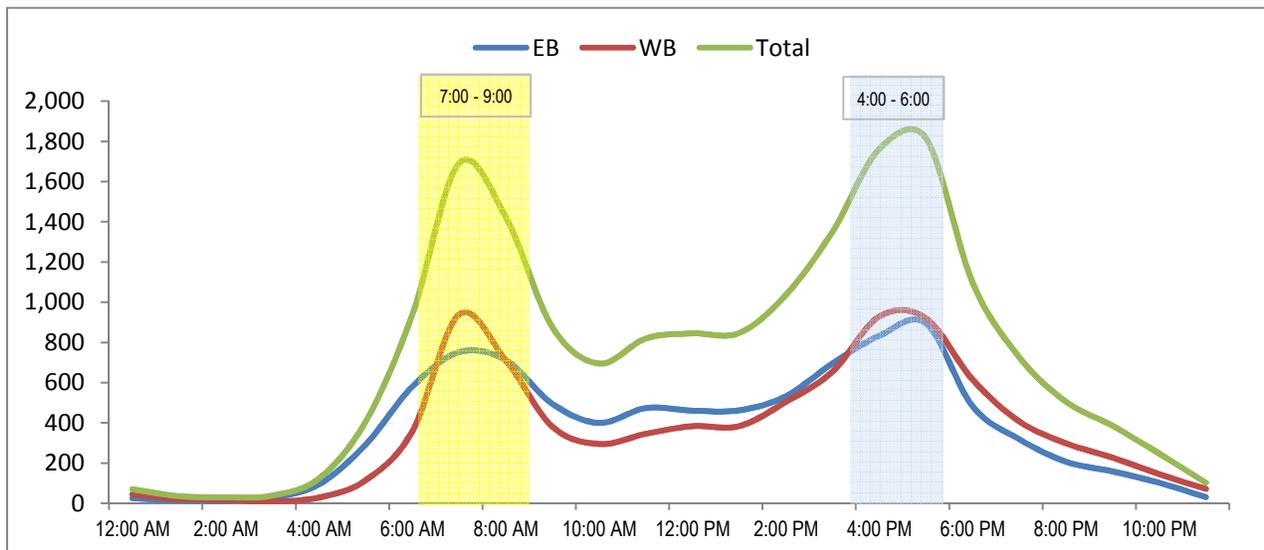
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: J. El Norte Parkway, Bennett Avenue to Reese Road
Orientation: East-West
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					17,877			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	25	45	70	12:00 PM - 1:00 PM	461	384	845	
1:00 AM - 2:00 AM	15	21	36	1:00 PM - 2:00 PM	463	384	847	
2:00 AM - 3:00 AM	13	17	30	2:00 PM - 3:00 PM	532	504	1,036	
3:00 AM - 4:00 AM	29	10	39	3:00 PM - 4:00 PM	696	655	1,351	
4:00 AM - 5:00 AM	95	29	124	4:00 PM - 5:00 PM	833	929	1,762	
5:00 AM - 6:00 AM	293	115	408	5:00 PM - 6:00 PM	895	921	1,816	
6:00 AM - 7:00 AM	581	359	940	6:00 PM - 7:00 PM	483	616	1,099	
7:00 AM - 8:00 AM	752	940	1,692	7:00 PM - 8:00 PM	319	408	727	
8:00 AM - 9:00 AM	712	711	1,423	8:00 PM - 9:00 PM	207	299	506	
9:00 AM - 10:00 AM	494	381	875	9:00 PM - 10:00 PM	159	227	386	
10:00 AM - 11:00 AM	400	295	695	10:00 PM - 11:00 PM	102	145	247	
11:00 AM - 12:00 PM	474	346	820	11:00 PM - 12:00 AM	31	72	103	
Total	3,883	3,269	7,152	Total	5,181	5,544	10,725	

24-Hour EB Volume 9,064 **24-Hour WB Volume 8,813**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: K. El Norte Parkway, Nordahl Rd to I-15

Orientation: East-West

Date of Count: Tuesday, May 17, 2016

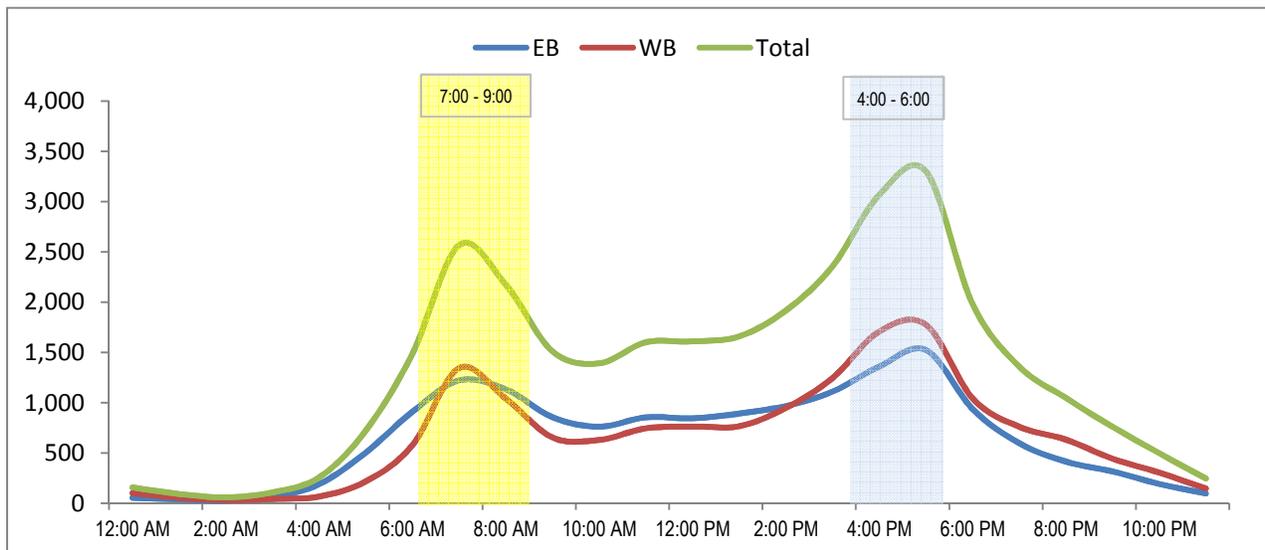
Analysts: DASH

Weather: Sunny

AVC Proj. No: 16-0521

24 Hour Segment Volume					31,954			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	56	102	158	12:00 PM - 1:00 PM	845	765	1,610	
1:00 AM - 2:00 AM	40	54	94	1:00 PM - 2:00 PM	893	767	1,660	
2:00 AM - 3:00 AM	27	33	60	2:00 PM - 3:00 PM	968	949	1,917	
3:00 AM - 4:00 AM	66	43	109	3:00 PM - 4:00 PM	1,111	1,246	2,357	
4:00 AM - 5:00 AM	190	68	258	4:00 PM - 5:00 PM	1,360	1,708	3,068	
5:00 AM - 6:00 AM	505	218	723	5:00 PM - 6:00 PM	1,525	1,777	3,302	
6:00 AM - 7:00 AM	911	578	1,489	6:00 PM - 7:00 PM	939	1,045	1,984	
7:00 AM - 8:00 AM	1,223	1,345	2,568	7:00 PM - 8:00 PM	598	762	1,360	
8:00 AM - 9:00 AM	1,134	1,041	2,175	8:00 PM - 9:00 PM	415	634	1,049	
9:00 AM - 10:00 AM	857	655	1,512	9:00 PM - 10:00 PM	317	444	761	
10:00 AM - 11:00 AM	762	630	1,392	10:00 PM - 11:00 PM	193	306	499	
11:00 AM - 12:00 PM	856	746	1,602	11:00 PM - 12:00 AM	99	148	247	
Total	6,627	5,513	12,140	Total	9,263	10,551	19,814	

24-Hour EB Volume 15,890 24-Hour WB Volume 16,064



24 Hour Segment Count

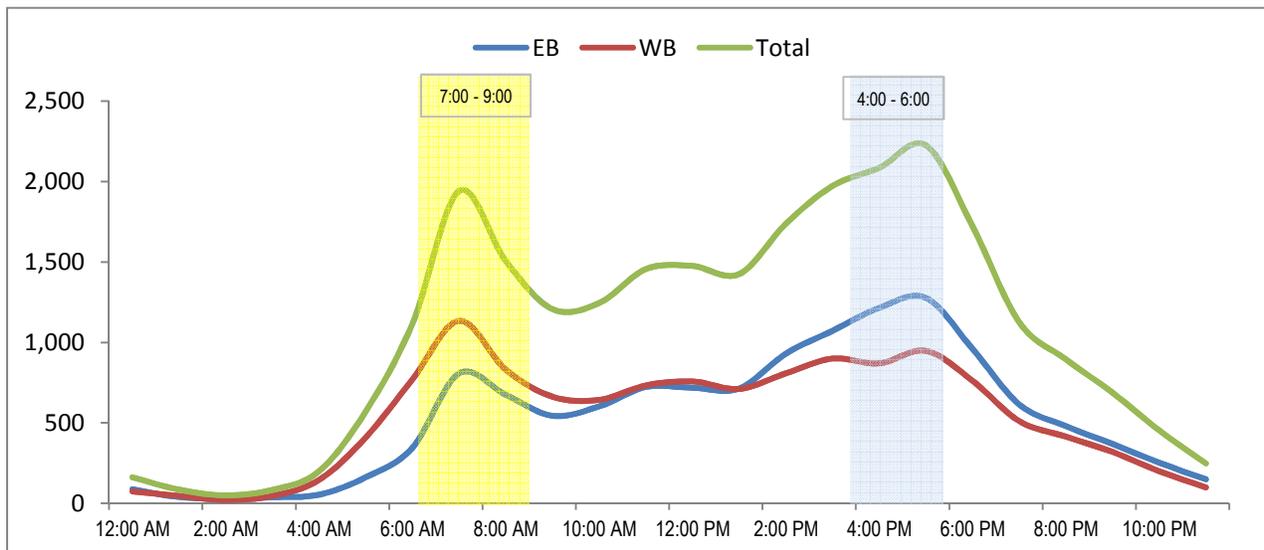
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: L. El Norte Parkway, I-15 NB Ramps to Centre City Parkway
Orientation: East-West
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					25,680			
Time	Hourly Volume			Time	Hourly Volume			
	EB	WB	Total		EB	WB	Total	
12:00 AM - 1:00 AM	88	74	162	12:00 PM - 1:00 PM	718	758	1,476	
1:00 AM - 2:00 AM	39	46	85	1:00 PM - 2:00 PM	714	711	1,425	
2:00 AM - 3:00 AM	29	21	50	2:00 PM - 3:00 PM	930	808	1,738	
3:00 AM - 4:00 AM	38	46	84	3:00 PM - 4:00 PM	1,073	900	1,973	
4:00 AM - 5:00 AM	54	146	200	4:00 PM - 5:00 PM	1,215	870	2,085	
5:00 AM - 6:00 AM	162	410	572	5:00 PM - 6:00 PM	1,277	948	2,225	
6:00 AM - 7:00 AM	346	771	1,117	6:00 PM - 7:00 PM	960	762	1,722	
7:00 AM - 8:00 AM	808	1,134	1,942	7:00 PM - 8:00 PM	615	511	1,126	
8:00 AM - 9:00 AM	675	831	1,506	8:00 PM - 9:00 PM	480	415	895	
9:00 AM - 10:00 AM	544	663	1,207	9:00 PM - 10:00 PM	369	319	688	
10:00 AM - 11:00 AM	602	643	1,245	10:00 PM - 11:00 PM	253	200	453	
11:00 AM - 12:00 PM	723	733	1,456	11:00 PM - 12:00 AM	149	99	248	
Total	4,108	5,518	9,626	Total	8,753	7,301	16,054	

24-Hour EB Volume 12,861 **24-Hour WB Volume 12,819**



24 Hour Segment Count

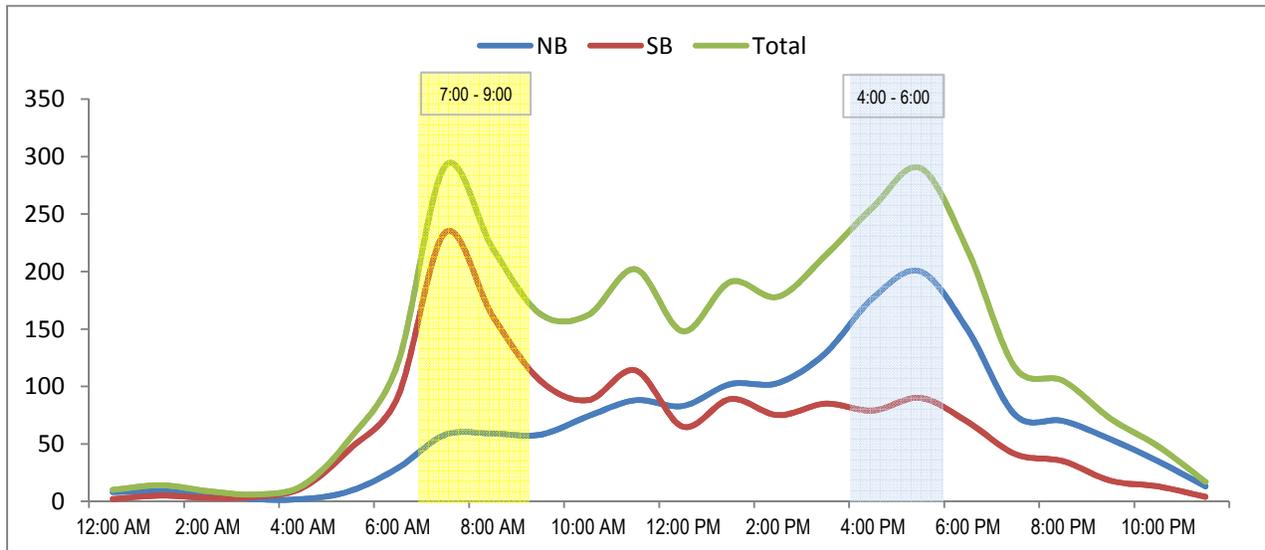
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: A. Nutmeg Street, Country Club Lane to Centre City Parkway
Orientation: North-South
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					3,120				
Time	Hourly Volume			Time	Hourly Volume				
	NB	SB	Total		NB	SB	Total		
12:00 AM - 1:00 AM	8	2	10	12:00 PM - 1:00 PM	83	65	148		
1:00 AM - 2:00 AM	9	5	14	1:00 PM - 2:00 PM	102	89	191		
2:00 AM - 3:00 AM	6	3	9	2:00 PM - 3:00 PM	103	75	178		
3:00 AM - 4:00 AM	2	4	6	3:00 PM - 4:00 PM	129	85	214		
4:00 AM - 5:00 AM	2	12	14	4:00 PM - 5:00 PM	177	79	256		
5:00 AM - 6:00 AM	9	46	55	5:00 PM - 6:00 PM	200	90	290		
6:00 AM - 7:00 AM	29	91	120	6:00 PM - 7:00 PM	149	69	218		
7:00 AM - 8:00 AM	58	234	292	7:00 PM - 8:00 PM	75	41	116		
8:00 AM - 9:00 AM	59	161	220	8:00 PM - 9:00 PM	70	35	105		
9:00 AM - 10:00 AM	58	105	163	9:00 PM - 10:00 PM	54	18	72		
10:00 AM - 11:00 AM	74	88	162	10:00 PM - 11:00 PM	35	13	48		
11:00 AM - 12:00 PM	88	114	202	11:00 PM - 12:00 AM	13	4	17		
Total	402	865	1,267	Total	1,190	663	1,853		

24-Hour NB Volume 1,592 **24-Hour SB Volume 1,528**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: G. Nutmeg Street, Country Club Lane to El Norte Parkway

Orientation: North-South

Date of Count: Tuesday, May 17, 2016

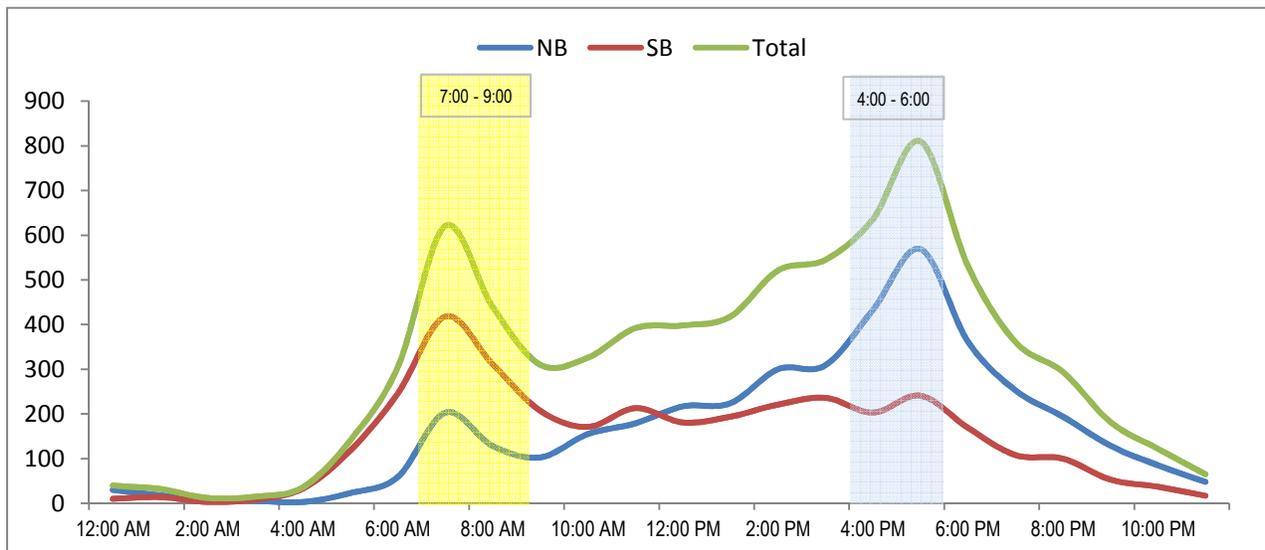
Analysts: DASH

Weather: Sunny

AVC Proj. No: 16-0521

24 Hour Segment Volume					7,552			
Time	Hourly Volume			Time	Hourly Volume			
	NB	SB	Total		NB	SB	Total	
12:00 AM - 1:00 AM	30	10	40	12:00 PM - 1:00 PM	217	181	398	
1:00 AM - 2:00 AM	18	14	32	1:00 PM - 2:00 PM	224	194	418	
2:00 AM - 3:00 AM	9	3	12	2:00 PM - 3:00 PM	300	221	521	
3:00 AM - 4:00 AM	6	9	15	3:00 PM - 4:00 PM	309	236	545	
4:00 AM - 5:00 AM	3	33	36	4:00 PM - 5:00 PM	433	203	636	
5:00 AM - 6:00 AM	23	118	141	5:00 PM - 6:00 PM	569	241	810	
6:00 AM - 7:00 AM	59	246	305	6:00 PM - 7:00 PM	362	169	531	
7:00 AM - 8:00 AM	203	418	621	7:00 PM - 8:00 PM	253	108	361	
8:00 AM - 9:00 AM	128	311	439	8:00 PM - 9:00 PM	194	100	294	
9:00 AM - 10:00 AM	103	207	310	9:00 PM - 10:00 PM	129	53	182	
10:00 AM - 11:00 AM	155	171	326	10:00 PM - 11:00 PM	85	37	122	
11:00 AM - 12:00 PM	179	213	392	11:00 PM - 12:00 AM	48	17	65	
Total	916	1,753	2,669	Total	3,123	1,760	4,883	

24-Hour NB Volume 4,039 **24-Hour SB Volume 3,513**



24 Hour Segment Count

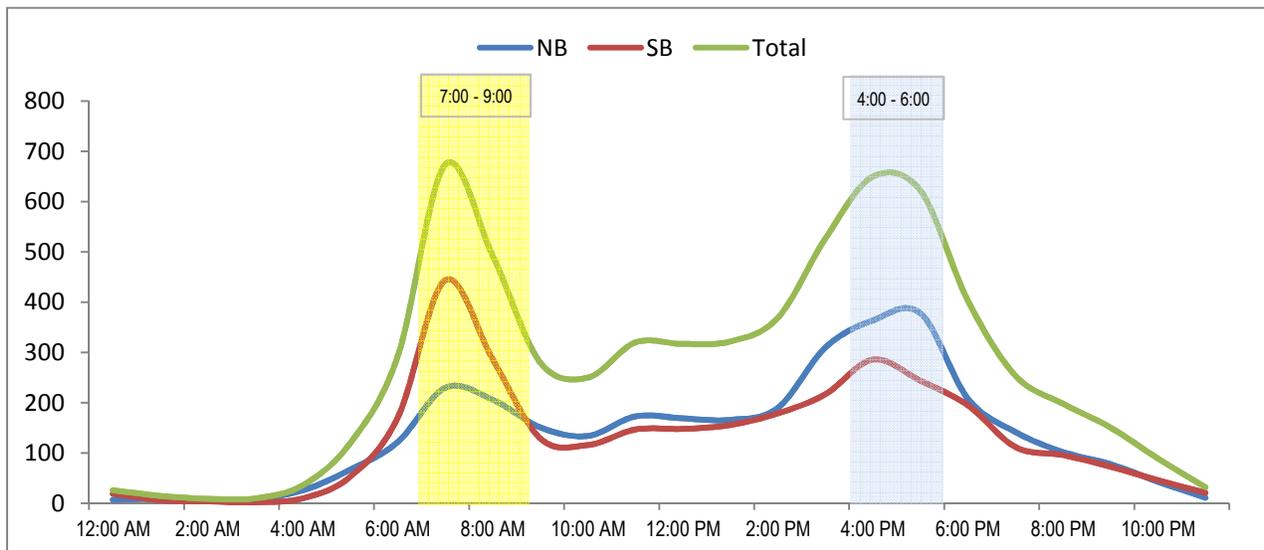
Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: N. Bennett Avenue, El Norte Parkway to Rock Springs Road
Orientation: North-South
Date of Count: Tuesday, May 17, 2016
Analysts: DASH
Weather: Sunny
AVC Proj. No: 16-0521

24 Hour Segment Volume					6,459				
Time	Hourly Volume			Time	Hourly Volume				
	NB	SB	Total		NB	SB	Total		
12:00 AM - 1:00 AM	7	19	26	12:00 PM - 1:00 PM	169	148	317		
1:00 AM - 2:00 AM	9	6	15	1:00 PM - 2:00 PM	166	156	322		
2:00 AM - 3:00 AM	5	4	9	2:00 PM - 3:00 PM	190	179	369		
3:00 AM - 4:00 AM	8	2	10	3:00 PM - 4:00 PM	310	217	527		
4:00 AM - 5:00 AM	26	10	36	4:00 PM - 5:00 PM	364	286	650		
5:00 AM - 6:00 AM	67	53	120	5:00 PM - 6:00 PM	378	244	622		
6:00 AM - 7:00 AM	122	171	293	6:00 PM - 7:00 PM	208	195	403		
7:00 AM - 8:00 AM	230	444	674	7:00 PM - 8:00 PM	142	112	254		
8:00 AM - 9:00 AM	206	286	492	8:00 PM - 9:00 PM	102	96	198		
9:00 AM - 10:00 AM	151	129	280	9:00 PM - 10:00 PM	78	73	151		
10:00 AM - 11:00 AM	134	116	250	10:00 PM - 11:00 PM	43	46	89		
11:00 AM - 12:00 PM	173	147	320	11:00 PM - 12:00 AM	11	21	32		
Total	1,138	1,387	2,525	Total	2,161	1,773	3,934		

24-Hour NB Volume 3,299 **24-Hour SB Volume 3,160**



24 Hour Segment Count

Accurate Video Counts Inc
info@accuratevideocounts.com
(619) 987-5136



Location: A. Firestone Drive South of Country Club Lane

Orientation: North-South

Date of Count: Thursday, September 15, 2016

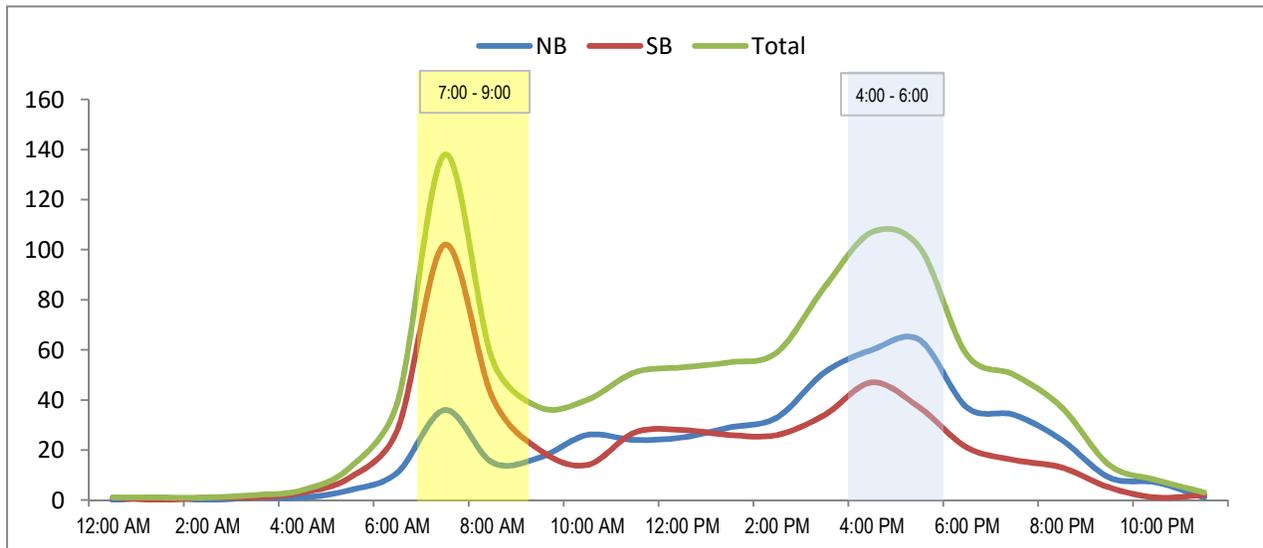
Analysts: DASH

Weather: Sunny

AVC Proj. No: 16-0564

24 Hour Segment Volume					1,013				
Time	Hourly Volume			Time	Hourly Volume				
	NB	SB	Total		NB	SB	Total		
12:00 AM - 1:00 AM	0	1	1	12:00 PM - 1:00 PM	25	28	53		
1:00 AM - 2:00 AM	1	0	1	1:00 PM - 2:00 PM	29	26	55		
2:00 AM - 3:00 AM	0	1	1	2:00 PM - 3:00 PM	33	26	59		
3:00 AM - 4:00 AM	1	1	2	3:00 PM - 4:00 PM	51	34	85		
4:00 AM - 5:00 AM	1	3	4	4:00 PM - 5:00 PM	60	47	107		
5:00 AM - 6:00 AM	4	9	13	5:00 PM - 6:00 PM	64	37	101		
6:00 AM - 7:00 AM	11	28	39	6:00 PM - 7:00 PM	37	21	58		
7:00 AM - 8:00 AM	36	102	138	7:00 PM - 8:00 PM	34	16	50		
8:00 AM - 9:00 AM	15	41	56	8:00 PM - 9:00 PM	24	13	37		
9:00 AM - 10:00 AM	17	20	37	9:00 PM - 10:00 PM	9	5	14		
10:00 AM - 11:00 AM	26	14	40	10:00 PM - 11:00 PM	7	1	8		
11:00 AM - 12:00 PM	24	27	51	11:00 PM - 12:00 AM	1	2	3		
Total	136	247	383	Total	374	256	630		

24-Hour NB Volume	510	24-Hour SB Volume	503
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Location (I.D.)	Route	Dir	Period	Cars per green	Sec./ Cycle	(per lane) Veh./hr	Total # lanes	HOV
El Norte Pkwy (155)	15	SB	0530 - 0930	2	7.2 - 14.6	996 - 492	2	Lt

The meters normally operate in a traffic responsive mode.

There are 15 separate rates or steps between the slowest and the fastest discharge rate that depend on the mainlane volumes.

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APPENDIX B

CITY OF ESCONDIDO ROADWAY CAPACITY TABLE COUNTY OF SAN DIEGO ROADWAY CAPACITY TABLE

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Table

CITY OF ESCONDIDO PROPOSED LEVEL OF SERVICE STANDARDS
STREET SEGMENT AVERAGE DAILY VEHICLE TRIP THRESHOLDS

Street Classification	Lanes	Cross Sections	Level of Service				
			A	B	C	D	E
Prime Arterial	(8lanes)	116/136 (NP)	23,800	37,800	51,800	62,300	70,000
	(6lanes)	106/126 (NP)	20,400	32,400	44,400	53,400	60,000
Major Road	(6lanes)	90/110 (NP)	17,000	27,000	37,000	44,500	50,000
	(4lanes)	82/102 (NP)	12,600	20,000	27,400	32,900	37,000
Collector	(4lanes)	64/84 (NP)	11,600	18,500	25,300	30,400	34,200
	(4lanes)	(WP)	6,800	10,800	14,800	17,800	20,000
Local Collector	(2lanes)	42/66 (NP)	5,100	8,100	11,100	13,400	15,000
		(WP)	3,400	5,400	7,400	8,900	10,000
Rural collector	(2lanes)						

(NP) No Parking
(WP) With Parking

The following V/C Ratios were utilized for determining Existing and Future Level of Service.

Level of Service	Volume/Capacity (V/C) Ratio
A-	Less than or Equal to 0.00 to 0.34
B-	Less than or Equal to 0.35 to 0.54
C-	Less than or Equal to 0.55 to 0.74
D-	Less than or Equal to 0.75 to 0.89
E-	Less than or Equal to 0.90 to 1.00

v/c 0.74

**TABLE 1
AVERAGE DAILY VEHICLE TRIPS***

MOBILITY ELEMENT ROADS		LEVELS OF SERVICE					
Road Classification	# of Travel Lanes	A	B	C	D	E	
Expressway (6.1)	6	<36,000	<54,000	<70,000	<86,000	<108,000	
Prime Arterial (6.2)	6	<22,200	<37,000	<44,600	<50,000	<57,000	
Major Road	w/ Raised Median (4.1A)	4	<14,800	<24,700	<29,600	<33,400	<37,000
	w/ Intermittent Turn Lanes (4.1B)	4	<13,700	<22,800	<27,400	<30,800	<34,200
Boulevard	w/ Raised Median (4.2A)	4	<18,000	<21,000	<24,000	<27,000	<30,000
	w/ Intermittent Turn Lanes (4.2B)	4	<16,800	<19,600	<22,500	<25,000	<28,000
Community Collector	w/ Raised Median (2.1A)	2	<10,000	<11,700	<13,400	<15,000	<19,000
	w/ Continuous Left Turn Lane (2.1B)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Intermittent Turn Lane (2.1C)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Passing Lane (2.1D)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	No Median (2.1E)	2	<1,900	<4,100	<7,100	<10,900	<16,200
Light Collector	w/ Raised Median (2.2A)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Continuous Left Turn Lane (2.2B)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Intermittent Turn Lane (2.2C)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	w/ Passing Lane (2.2D)	2	<3,000	<6,000	<9,500	<13,500	<19,000
	No Median (2.2E)	2	<1,900	<4,100	<7,100	<10,900	<16,200
	w/ Reduced Shoulder (2.2F)	2	<5,800	<6,800	<7,800	<8,700	<9,700
Minor Collector	w/ Raised Median (2.3A)	2	<3,000	<6,000	<7,000	<8,000	<9,000
	w/ Intermittent Turn Lane (2.3B)	2	<3,000	<6,000	<7,000	<8,000	<9,000
	No Median (2.3C)	2	<1,900	<4,100	<6,000	<7,000	<8,000
NON-MOBILITY ELEMENT ROADS**		LEVELS OF SERVICE					
Residential Collector	2	-	-	<4,500	-	-	
Rural Residential Collector***	2	-	-	<4,500	-	-	
Residential Road	2	-	-	<1,500	-	-	
Rural Residential Road***	2	-	-	<1,500	-	-	
Residential Cul-de-Sac or Loop Road	2	-	-	<200	-	-	

* The values shown are subject to adjustment based on the geometry of the roadway, side frictions, and other relevant factors as determined by the Director, Department of Public Works.

** Levels of service are not applied to residential streets since their primary purpose is to serve abutting lots, not carry through traffic. Levels of service normally apply to roads carrying through traffic between major trip generators and attractors.

*** Rural Residential Collectors and Rural Residential Roads are intended to serve areas with lot sizes of 2 acres or more which do not have a demand for on-street parking. On-street parking is not assured for these cross sections. Additional right-of-way is needed if on-street parking is in paved area.

**** See Tables 2A and 2B for roadway surfacing and right-of-way widths.

TABLE 2A: COUNTY OF SAN DIEGO - PUBLIC ROAD STANDARDS

CLASSIC CIRCULATION ELEMENT ROAD CLASSIFICATIONS

ROAD CLASSIFICATION	# LANES / LANE WIDTH	MEDIAN WIDTH	ROAD SURFACING WIDTH	R.O.W. WIDTH	PAVED SHOULDERS (# / WIDTH)	PARKWAY WIDTH	MIN. CURVE RADIUS	MAX. DESIRABLE GRADE	MIN. DESIGN SPEED (MPH)
Expressway (6.1)	6 / 12'	34'	126'	146'	2 / 10'	10'	1,700'	6%	65
Prime Arterial (6.2)	6 / 12'	14'	102'	122'	2 / 8'	10'	1,700'	6%	65
Major Road (4.1A)	4 / 12'	14'	78'	98'	2 / 8'	10'	1,200'	7%	55
Collector	4 / 12'	-	64'	84'	2 / 8'	10'	1,200'	7%	55
Town Collector	2 / 12'	12'	54'	74'	2 / 8'	10'	500'	9%	40
Light Collector	2 / 12'	-	40'	60'	2 / 8'	10'	700'	9%	45
Rural Collector	2 / 12'	-	40'	84'	2 / 8'	22'	500'	12%	40
Rural Light Collector	2 / 12'	-	40'	60'	2 / 8'	10'	500'	12%	40
Rural Mountain	2 / 12'	-	40'	100'	2 / 8'	30'	500'	12%	40
Recreational Parkway	2 / 12'	-	40'	100'	2 / 8'	30'	400'	12%	25

MODERN CIRCULATION ELEMENT ROAD CLASSIFICATIONS

Major Road										
*	With Intermittent Turn Lanes (4.1B)	4 / 12'	-	64' - 78'	84' - 98'	2 / 8'	10'	1,200'	7%	55
Boulevard										
***	With Raised Median (4.2A)	4 / 12'	14'	78'	106'	2 / 8'	14'	500'	9%	40
***	With Intermittent Turn Lanes (4.2B)	4 / 12'	-	64' - 78'	92' - 106'	2 / 8'	14'	500'	9%	40
Community Collector										
**	With Raised Median (2.1A)	2 / 12'	14'	54'	74'	2 / 8'	10'	700'	9%	45
**	With Continuous Left Turn Lane (2.1B)	2 / 12'	14'	54'	74'	2 / 8'	10'	700'	9%	45
***	With Intermittent Turn Lanes (2.1C)	2 / 12'	-	40' - 54'	60' - 74'	2 / 8'	10'	700'	9%	45
***	With Passing Lane (2.1D)	2 / 12'	-	40'	84'	2 / 8'	10'	700'	9%	45
+	No Median (2.1E)	2 / 12'	-	40'	60'	2 / 8'	10'	700'	9%	45
Light Collector										
**	With Raised Median (2.2A)	2 / 12'	14'	54'	78'	2 / 8'	10'	500'	9%	40
**	With Continuous Left Turn Lane (2.2B)	2 / 12'	14'	54'	78'	2 / 8'	10'	500'	9%	40
***	With Intermittent Turn Lanes (2.2C)	2 / 12'	-	40' - 54'	64' - 78'	2 / 8'	10'	500'	9%	40
***	With Passing Lane (2.2D)	2 / 12'	-	40'	88'	2 / 8'	10'	500'	9%	40
**	No Median (2.2E)	2 / 12'	-	40'	64'	2 / 8'	10'	500'	9%	40
***	With Reduced Shoulder (2.2F)	2 / 12'	-	40'	52'	2 / 2'	10'	500'	9%	40
Minor Collector										
***	With Raised Median (2.3A)	2 / 12'	14'	54'	82'	2 / 8'	10'	350'	12%	35
***	With Intermittent Turn Lanes (2.3B)	2 / 12'	-	40' - 54'	68' - 82'	2 / 8'	10'	350'	12%	35
***	No Median (2.3C)	2 / 12'	-	40'	68'	2 / 8'	10'	350'	12%	35

- NOTES:
- 1 Minimum longitudinal gradient shall be 1.0 percent for all road classificationis shown above.
 - 2 The maximum grade for a permanent cul-de-sac street turning area shall be 6 percent.
 - 3 The maximum grade for a temporary cul-de-sac street turning area shall be that of the classification of the road being constructed.
 - 4 For standards, see County Design Standard Drawing DS-2, DS-3, DS-4, and Section 4.5N of these Standards.
 - 5 Additional pavement and ROW may be required for CE Collectors (4 feet) and Light Collectors (12 feet) in Industrial/Commercial Zones.
 - 6 CE roads needing additional turn lanes will require an additional 12 to 14 feet of pavement and ROW for each lane.
 - 7 The maximum superelevation allowed on CE roads is 6%. Superelevation is not normally required on Non-CE roads.
 - 8 CE roads designated with Bike Lanes will require an additional 10 feet of pavement and ROW. This may be increased to 12' for Collector Roads and above based upon the provisions in Section 7.3 of these standards.
 - 9 The minimum curve radii, shown in the table above, are based on the design speed with 6% superelevation.
 - 10 Interim roads are to be a minimum of 28 feet A.C. within a 40 feet graded roadbed. They may be larger if traffic volumes require more travel lanes.

- LEGEND:
- * Similar to existing Collector Road
 - ** Similar to existing Town Collector
 - *** Similar to existing Rural Collector
 - + Same as existing Light Collector
 - ++ Similar to existing Rural Light Collector
 - +++ New Classification Standard

TABLE 2B: COUNTY OF SAN DIEGO - PUBLIC ROAD STANDARDS

NON-CIRCULATION ELEMENT ROAD CLASSIFICATIONS

ROAD CLASSIFICATION	# LANES / LANE WIDTH	MEDIAN WIDTH	R.O.W. WIDTH	ROAD SURFACING WIDTH	PAVED SHOULDER (# / WIDTH)	PARKWAY WIDTH	MINIMUM CURVE RADIUS	MAXIMUM DESIRABLE GRADE	MINIMUM DESIGN SPEED (MPH)
Residential Collector	2 / 12'	-	60'	40'	2 / 8'	10'	300'	12%	30
Residential	2 / 12'	-	56'	36'	2 / 6'	10'	200'	15%	30
Residential Cul-de-sac	2 / 12'	-	52'	32'	2 / 4'	10'	200'	15%	30
Residential Loop	2 / 12'	-	52'	32'	2 / 4'	10'	200'	15%	30
Industrial/Commerical Collector	4 / 12'	-	88'	68'	2 / 10'	10'	300'	8%	30
Industrial/Commerical	2 / 16'	-	72'	52'	2 / 10'	10'	200'	8%	30
Industrial/Commercial Cul-de-sac	2 / 16'	-	72'	52'	2 / 10'	10'	200'	8%	30
Frontage	2 / 12'	-	52' min	32' min	1 / 8'	10'	See above	See above	-
Alley	2 / 10'	-	20-30'	20-30'	None	None	50'	12%	n/a
Hillside Residential	See NOTE 4	-	-	-	-	-	-	-	-
Rural Collector *	2 / 12'	-	48'	28'	2 / 2'	10'	300'	12%	30
Rural Residential	2 / 12'	-	48'	28'	2 / 2'	10'	200'	15%	30

- NOTES: 1 Minimum longitudinal gradient shall be 1.0 percent for all road classificationis shown above.
 2 The maximum grade for a permanent cul-de-sac street turning area shall be 6 percent.
 3 The maximum grade for a temporary cul-de-sac street turning area shall be that of the classification of the road being constructed.
 4 For standards, see County Design Standard Drawing DS-2, DS-3, DS-4, and Section 4.5N of these Standards.
 5 The minimum curve radii, shown in the table above, are based on the design speed with 6% superelevation.
 6 Interim roads are to be a minimum of 28 feet A.C. within a 40 feet graded roadbed. They may be larger if traffic volumes require more travel lanes.

LEGEND: * Serves lots > 2 acres in size w/
no demand for on-street parking

APPENDIX C

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – EXISTING

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Existing AM
1: Centre City Parkway & Nutmeg St

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh 1.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔			↔	
Traffic Vol, veh/h	44	1	3	3	3	2	3	137	1	4	547	162
Future Vol, veh/h	44	1	3	3	3	2	3	137	1	4	547	162
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	1	4	4	4	2	4	163	1	5	651	193

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	931	928	748	931	1025	164	844	0	0	164	0	0
Stage 1	757	757	-	171	171	-	-	-	-	-	-	-
Stage 2	174	171	-	760	854	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	247	268	412	247	235	881	792	-	-	1414	-	-
Stage 1	400	416	-	831	757	-	-	-	-	-	-	-
Stage 2	828	757	-	398	375	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	241	265	412	242	232	881	792	-	-	1414	-	-
Mov Cap-2 Maneuver	241	265	-	242	232	-	-	-	-	-	-	-
Stage 1	398	413	-	827	753	-	-	-	-	-	-	-
Stage 2	818	753	-	391	372	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.8	17.8	0.2	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	792	-	-	248	290	1414	-	-
HCM Lane V/C Ratio	0.005	-	-	0.23	0.033	0.003	-	-
HCM Control Delay (s)	9.6	-	-	23.8	17.8	7.6	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.1	0	-	-

Existing AM
2: Country Club Ln & Golden Circle Dr

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh 9.2												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔			↔	↔
Traffic Vol, veh/h	0	12	139	448	4	0	32	0	101	0	2	0
Future Vol, veh/h	0	12	139	448	4	0	32	0	101	0	2	0
Conflicting Peds, #/hr	2	0	0	0	0	2	5	0	0	0	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	13	156	503	4	0	36	0	113	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	6	0	0	170	0	0	1109	1105	92	1161	1183	11
Stage 1	-	-	-	-	-	-	92	92	-	1013	1013	-
Stage 2	-	-	-	-	-	-	1017	1013	-	148	170	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1615	-	-	1407	-	-	187	211	965	172	189	1070
Stage 1	-	-	-	-	-	-	915	819	-	288	316	-
Stage 2	-	-	-	-	-	-	287	316	-	855	758	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1608	-	-	1407	-	-	133	135	965	109	121	1064
Mov Cap-2 Maneuver	-	-	-	-	-	-	133	135	-	109	121	-
Stage 1	-	-	-	-	-	-	915	819	-	288	203	-
Stage 2	-	-	-	-	-	-	182	203	-	754	758	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	8.9	20.2	35.3
HCM LOS			C	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	385	1608	-	-	1407	-	-	121
HCM Lane V/C Ratio	0.388	-	-	-	0.358	-	-	0.019
HCM Control Delay (s)	20.2	0	-	-	9	-	-	35.3
HCM Lane LOS	C	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	1.8	0	-	-	1.6	-	-	0.1

Existing AM
3: Country Club Ln & Gary Ln

Escondido Country Club
04/07/2017

Intersection									
Intersection Delay, s/veh	12								
Intersection LOS	B								
Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations		↘	↗		↗	↘		↘	↗
Traffic Vol, veh/h	0	18	111	0	384	16	0	44	75
Future Vol, veh/h	0	18	111	0	384	16	0	44	75
Peak Hour Factor	0.92	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	19	119	0	413	17	0	47	81
Number of Lanes	0	1	1	0	1	1	0	1	0
Approach	EB			WB			SB		
Opposing Approach	WB			EB					
Opposing Lanes	2			2			0		
Conflicting Approach Left	SB						WB		
Conflicting Lanes Left	1			0			2		
Conflicting Approach Right				SB			EB		
Conflicting Lanes Right	0			1			2		
HCM Control Delay	9			13.9			9.1		
HCM LOS	A			B			A		
Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1				
Vol Left, %	100%	0%	0%	0%	37%				
Vol Thru, %	0%	100%	100%	0%	0%				
Vol Right, %	0%	0%	0%	100%	63%				
Sign Control	Stop	Stop	Stop	Stop	Stop				
Traffic Vol by Lane	18	111	384	16	119				
LT Vol	18	0	0	0	44				
Through Vol	0	111	384	0	0				
RT Vol	0	0	0	16	75				
Lane Flow Rate	19	119	413	17	128				
Geometry Grp	7	7	7	7	2				
Degree of Util (X)	0.031	0.173	0.572	0.02	0.178				
Departure Headway (Hd)	5.737	5.233	4.986	4.283	5.001				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes				
Cap	622	683	723	833	715				
Service Time	3.487	2.983	2.726	2.022	3.043				
HCM Lane V/C Ratio	0.031	0.174	0.571	0.02	0.179				
HCM Control Delay	8.7	9.1	14.2	7.1	9.1				
HCM Lane LOS	A	A	B	A	A				
HCM 95th-tile Q	0.1	0.6	3.7	0.1	0.6				

Existing AM
4: Firestone Dr & Country Club Ln

Escondido Country Club
04/07/2017

Intersection							
Int Delay, s/veh	1.6						
Movement	EBT	EBR	WBL	WBT	NBL	NBR	
Lane Configurations	↕↔		↕	↕↔	↕↔	↕↔	
Traffic Vol, veh/h	158	5	98	401	2	39	
Future Vol, veh/h	158	5	98	401	2	39	
Conflicting Peds, #/hr	0	9	0	0	9	9	
Sign Control	Free	Free	Free	Free	Stop	Stop	
RT Channelized	-	None	-	None	-	None	
Storage Length	-	-	80	-	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	172	5	107	436	2	42	
Major/Minor	Major1		Major2		Minor1		
Conflicting Flow All	0	0	186	0	623	107	
Stage 1	-	-	-	-	183	-	
Stage 2	-	-	-	-	440	-	
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	-	-	1386	-	418	926	
Stage 1	-	-	-	-	830	-	
Stage 2	-	-	-	-	616	-	
Platoon blocked, %	-	-	-	-	-	-	
Mov Cap-1 Maneuver	-	-	1376	-	380	912	
Mov Cap-2 Maneuver	-	-	-	-	380	-	
Stage 1	-	-	-	-	824	-	
Stage 2	-	-	-	-	564	-	
Approach	EB		WB		NB		
HCM Control Delay, s	0		1.5		9.4		
HCM LOS					A		
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT		
Capacity (veh/h)	854	-	-	1376	-		
HCM Lane V/C Ratio	0.052	-	-	0.077	-		
HCM Control Delay (s)	9.4	-	-	7.8	-		
HCM Lane LOS	A	-	-	A	-		
HCM 95th %tile Q(veh)	0.2	-	-	0.3	-		

Existing AM
5: La Brea St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection	
Intersection Delay, s/veh	8.7
Intersection LOS	A

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Lane Configurations		↑↓			↔	↑↑		↔	
Traffic Vol, veh/h	0	194	3	0	9	477	0	9	16
Future Vol, veh/h	0	194	3	0	9	477	0	9	16
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	213	3	0	10	524	0	10	18
Number of Lanes	0	2	0	0	1	2	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	9.3	8.4	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3
Vol Left, %	36%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	96%	0%	100%	100%
Vol Right, %	64%	0%	4%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	25	129	68	9	239	239
LT Vol	9	0	0	9	0	0
Through Vol	0	129	65	0	239	239
RT Vol	16	0	3	0	0	0
Lane Flow Rate	27	142	74	10	262	262
Geometry Grp	7	8	8	7	7	7
Degree of Util (X)	0.044	0.214	0.111	0.015	0.35	0.223
Departure Headway (Hd)	5.705	5.418	5.387	5.305	4.804	3.065
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	627	664	666	677	752	1174
Service Time	3.442	3.146	3.115	3.018	2.517	0.778
HCM Lane V/C Ratio	0.043	0.214	0.111	0.015	0.348	0.223
HCM Control Delay	8.7	9.6	8.8	8.1	10.1	6.7
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	0.1	0.8	0.4	0	1.6	0.9

Existing AM
6: Nutmeg St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection	
Intersection Delay, s/veh	17.9
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↔	↑↓			↔	↑↓				↔				↔	
Traffic Vol, veh/h	0	15	167	28	0	300	425	24	0	10	31	156	0	48	134	63
Future Vol, veh/h	0	15	167	28	0	300	425	24	0	10	31	156	0	48	134	63
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	180	30	0	323	457	26	0	11	33	168	0	52	144	68
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB		NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	12.7	19.5	15.6	19.6
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	5%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	16%	0%	100%	67%	0%	100%	86%	55%
Vol Right, %	79%	0%	0%	33%	0%	0%	14%	26%
Sign Control	Stop							
Traffic Vol by Lane	197	15	111	84	300	283	166	245
LT Vol	10	15	0	0	300	0	0	48
Through Vol	31	0	111	56	0	283	142	134
RT Vol	156	0	0	28	0	0	24	63
Lane Flow Rate	212	16	120	90	323	305	178	263
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.433	0.037	0.26	0.189	0.664	0.584	0.336	0.558
Departure Headway (Hd)	7.355	8.325	7.806	7.562	7.41	6.895	6.79	7.632
Convergence, Y/N	Yes							
Cap	489	430	460	473	487	524	529	472
Service Time	5.108	6.086	5.567	5.324	5.159	4.644	4.539	5.382
HCM Lane V/C Ratio	0.434	0.037	0.261	0.19	0.663	0.582	0.336	0.557
HCM Control Delay	15.6	11.4	13.3	12.1	23.7	18.9	13	19.6
HCM Lane LOS	C	B	B	B	C	C	B	C
HCM 95th-tile Q	2.2	0.1	1	0.7	4.8	3.7	1.5	3.4

Existing AM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↔	↕	↕	↔	↕	↕	↔	↕	↕
Traffic Volume (veh/h)	55	347	77	266	451	92	57	276	77	178	775	143
Future Volume (veh/h)	55	347	77	266	451	92	57	276	77	178	775	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	60	377	84	289	490	100	62	300	84	193	842	155
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	76	658	289	339	1182	522	79	837	369	238	1154	516
Arrive On Green	0.04	0.19	0.19	0.19	0.33	0.33	0.04	0.24	0.24	0.13	0.33	0.33
Sat Flow, veh/h	1774	3539	1557	1774	3539	1563	1774	3539	1561	1774	3539	1583
Grp Volume(v), veh/h	60	377	84	289	490	100	62	300	84	193	842	155
Grp Sat Flow(s), veh/h/ln	1774	1770	1557	1774	1770	1563	1774	1770	1561	1774	1770	1583
Q Serve(g_s), s	2.4	6.9	3.3	11.2	7.6	3.2	2.5	5.0	3.1	7.5	15.0	5.2
Cycle Q Clear(g_c), s	2.4	6.9	3.3	11.2	7.6	3.2	2.5	5.0	3.1	7.5	15.0	5.2
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	76	658	289	339	1182	522	79	837	369	238	1154	516
V/C Ratio(X)	0.78	0.57	0.29	0.85	0.41	0.19	0.79	0.36	0.23	0.81	0.73	0.30
Avail Cap(c_a), veh/h	214	893	393	485	1434	633	162	992	438	361	1389	622
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.8	26.5	25.0	27.9	18.4	16.9	33.7	22.7	22.0	30.0	21.3	18.0
Incr Delay (d2), s/veh	15.9	0.8	0.5	9.7	0.2	0.2	15.6	0.3	0.3	8.1	1.6	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5	3.4	1.5	6.4	3.7	1.4	1.5	2.5	1.4	4.2	7.5	2.3
LnGrp Delay(d), s/veh	49.7	27.2	25.5	37.6	18.6	17.1	49.3	23.0	22.3	38.1	22.8	18.3
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	B
Approach Vol, veh/h	521			879			446			1190		
Approach Delay, s/veh	29.6			24.7			26.5			24.7		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.4	18.1	17.8	7.7	27.7	7.6	28.3					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	19.5	18.0	6.5	28.0	8.6	28.9					
Max Q Clear Time (g_c+I), s	7.0	13.2	8.9	4.5	17.0	4.4	9.6					
Green Ext Time (p_c), s	0.2	7.0	0.5	4.2	0.0	6.2	0.0	6.4				

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing AM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↕	↔	↕	↕	↔	↕	↕	↔	↕	↕
Traffic Volume (veh/h)	22	384	60	310	816	67	69	43	125	173	188	93
Future Volume (veh/h)	22	384	60	310	816	67	69	43	125	173	188	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	24	422	66	341	897	74	76	47	137	190	207	102
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	31	1203	187	438	935	771	99	259	220	212	239	118
Arrive On Green	0.02	0.39	0.39	0.13	0.50	0.50	0.06	0.14	0.14	0.12	0.20	0.20
Sat Flow, veh/h	1774	3071	477	3442	1863	1537	1774	1863	1580	1774	1179	581
Grp Volume(v), veh/h	24	242	246	341	897	74	76	47	137	190	0	309
Grp Sat Flow(s), veh/h/ln	1774	1770	1779	1721	1863	1537	1774	1863	1580	1774	0	1760
Q Serve(g_s), s	1.1	7.8	7.9	7.8	37.5	1.1	3.4	1.8	6.6	8.6	0.0	13.8
Cycle Q Clear(g_c), s	1.1	7.8	7.9	7.8	37.5	1.1	3.4	1.8	6.6	8.6	0.0	13.8
Prop In Lane	1.00	1.00	0.27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.33
Lane Grp Cap(c), veh/h	31	693	697	438	935	771	99	259	220	212	0	357
V/C Ratio(X)	0.78	0.35	0.35	0.78	0.96	0.10	0.76	0.18	0.62	0.90	0.00	0.87
Avail Cap(c_a), veh/h	88	693	697	637	954	787	147	386	327	212	0	430
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.7	17.4	17.4	34.3	19.4	3.0	37.7	30.8	32.9	35.2	0.0	31.3
Incr Delay (d2), s/veh	33.6	0.3	0.3	3.8	19.8	0.1	12.8	0.3	2.9	34.8	0.0	14.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	8	3.9	4.0	3.9	29.1	0.8	2.0	1.0	3.1	6.2	0.0	8.2
LnGrp Delay(d), s/veh	73.3	17.7	17.7	38.0	39.2	3.1	50.5	31.2	35.8	70.0	0.0	46.0
LnGrp LOS	E	B	B	D	D	A	D	C	D	E		D
Approach Vol, veh/h	512			1312			260			499		
Approach Delay, s/veh	20.3			36.9			39.3			55.1		
Approach LOS	C			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.8	14.8	36.3	9.0	20.9	5.9	45.2					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	16.8	15.0	30.5	6.7	19.8	4.0	41.5					
Max Q Clear Time (g_c+I), s	8.6	9.8	9.9	5.4	15.8	3.1	39.5					
Green Ext Time (p_c), s	0.0	0.6	0.6	2.7	0.1	0.7	0.0	1.2				

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing AM
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	155	479	1	20	805	26	2	1	11	151	3	453
Future Volume (veh/h)	155	479	1	20	805	26	2	1	11	151	3	453
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	168	521	1	22	875	28	2	1	12	164	3	492
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	129	1281	2	51	1084	35	34	17	44	570	10	515
Arrive On Green	0.07	0.35	0.35	0.03	0.31	0.31	0.03	0.03	0.03	0.33	0.33	0.33
Sat Flow, veh/h	1774	3624	7	1774	3500	112	1202	601	1570	1744	32	1575
Grp Volume(v), veh/h	168	254	268	22	442	461	3	0	12	167	0	492
Grp Sat Flow(s),veh/h/ln	1774	1770	1861	1774	1770	1843	1803	0	1570	1776	0	1575
Q Serve(g_s), s	6.0	9.0	9.0	1.0	19.0	19.0	0.1	0.0	0.6	5.8	0.0	25.3
Cycle Q Clear(g_c), s	6.0	9.0	9.0	1.0	19.0	19.0	0.1	0.0	0.6	5.8	0.0	25.3
Prop In Lane	1.00	0.00	1.00	1.00	0.06	0.67	1.00	0.98	1.00	0.98	1.00	1.00
Lane Grp Cap(c), veh/h	129	626	658	51	548	571	51	0	44	580	0	515
V/C Ratio(X)	1.30	0.41	0.41	0.43	0.81	0.81	0.06	0.00	0.27	0.29	0.00	0.96
Avail Cap(c_a), veh/h	129	626	658	129	606	631	589	0	513	580	0	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.3	20.2	20.2	39.5	26.2	26.2	39.1	0.0	39.3	20.7	0.0	27.2
Incr Delay (d2), s/veh	181.9	0.5	0.5	2.1	7.6	7.3	0.6	0.0	3.9	0.3	0.0	28.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	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	4.7	0.5	10.4	10.8	0.1	0.0	0.3	2.9	0.0	15.0	0.0
LnGrp Delay(d),s/veh	220.2	20.7	20.6	41.6	33.8	33.6	39.7	0.0	43.2	21.0	0.0	56.2
LnGrp LOS	F	C	C	D	C	C	D		D	C		E
Approach Vol, veh/h	690			925			15			659		
Approach Delay, s/veh	69.2			33.9			42.5			47.2		
Approach LOS	E			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	35.4	32.5	10.5	31.8	7.8							
Change Period (Y+Rc), s	4.5	6.2	5.5	4.5	6.2	5.5						
Max Green Setting (Gmax), s	28.3	27.0	6.0	28.3	27.0							
Max Q Clear Time (g_c+I), s	11.0	27.3	8.0	21.0	2.6							
Green Ext Time (p_c), s	0.0	9.0	0.0	0.0	4.3	0.0						

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing AM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	3	592	135	229	719	9	53	19	169	16	96	12
Future Volume (veh/h)	3	592	135	229	719	9	53	19	169	16	96	12
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	4	696	159	269	846	11	62	22	199	19	113	14
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9	924	211	317	1781	23	91	342	289	39	251	31
Arrive On Green	0.01	0.32	0.32	0.18	0.50	0.50	0.05	0.18	0.18	0.02	0.15	0.15
Sat Flow, veh/h	1774	2846	650	1774	3576	46	1774	1863	1576	1774	1623	201
Grp Volume(v), veh/h	4	433	422	269	419	438	62	22	199	19	0	127
Grp Sat Flow(s),veh/h/ln	1774	1770	1727	1774	1770	1853	1774	1863	1576	1774	0	1824
Q Serve(g_s), s	0.2	14.6	14.7	9.8	10.4	10.4	2.3	0.7	7.9	0.7	0.0	4.2
Cycle Q Clear(g_c), s	0.2	14.6	14.7	9.8	10.4	10.4	2.3	0.7	7.9	0.7	0.0	4.2
Prop In Lane	1.00	0.38	1.00	1.00	0.03	1.00	1.00	1.00	1.00	1.00	0.11	1.00
Lane Grp Cap(c), veh/h	9	574	560	317	881	923	91	342	289	39	0	282
V/C Ratio(X)	0.42	0.75	0.75	0.85	0.48	0.48	0.68	0.06	0.69	0.48	0.00	0.45
Avail Cap(c_a), veh/h	132	623	608	395	885	927	132	751	635	132	0	749
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	20.2	20.2	26.6	11.1	11.1	31.3	22.6	25.6	32.4	0.0	25.7
Incr Delay (d2), s/veh	27.0	4.8	4.9	13.3	0.5	0.5	8.8	0.1	2.2	8.8	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%)veh/ln	7.8	7.7	6.0	5.1	5.4	1.3	0.3	3.6	4.4	0.0	2.2	0.0
LnGrp Delay(d),s/veh	60.2	25.0	25.2	39.9	11.5	11.5	40.0	22.7	27.7	41.2	0.0	26.6
LnGrp LOS	E	C	C	D	B	B	D	C	C	D		C
Approach Vol, veh/h	859			1126			283			146		
Approach Delay, s/veh	25.2			18.3			30.0			28.5		
Approach LOS	C			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.7	7.4	15.4	4.9	39.4	5.5	17.3					
Change Period (Y+Rc), s	4.5	6.0	4.0	5.5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	23.6	5.0	28	5.0	33.5	5.0	27.0					
Max Q Clear Time (g_c+I), s	16.7	4.3	6.2	2.2	12.4	2.7	9.9					
Green Ext Time (p_c), s	0.2	5.1	0.0	1.1	0.0	11.4	0.0	1.1				

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Intersection Summary	
HCM 2010 Ctrl Delay	48.4
HCM 2010 LOS	D

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Notes

Existing AM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	79	1020	7	8	726	29	43	25	16	6	14	66
Future Volume (veh/h)	79	1020	7	8	726	29	43	25	16	6	14	66
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	86	1109	8	9	789	32	47	27	17	7	15	72
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	109	1857	13	17	1607	65	294	146	92	335	38	182
Arrive On Green	0.06	0.52	0.52	0.01	0.46	0.46	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	3602	26	1774	3466	141	1299	1069	673	1354	279	1338
Grp Volume(v), veh/h	86	545	572	9	403	418	47	0	44	7	0	87
Grp Sat Flow(s), veh/h/ln	1774	1770	1858	1774	1770	1837	1299	0	1742	1354	0	1616
Q Serve(g_s), s	1.9	8.6	8.6	0.2	6.3	6.3	1.4	0.0	0.9	0.2	0.0	2.0
Cycle Q Clear(g_c), s	1.9	8.6	8.6	0.2	6.3	6.3	3.3	0.0	0.9	1.1	0.0	2.0
Prop In Lane	1.00		0.01	1.00		0.08	1.00		0.39	1.00		0.83
Lane Grp Cap(c), veh/h	109	912	958	17	820	852	294	0	237	335	0	220
V/C Ratio(X)	0.79	0.60	0.60	0.53	0.49	0.49	0.16	0.00	0.19	0.02	0.00	0.40
Avail Cap(c_a), veh/h	325	1168	1226	182	1025	1065	641	0	704	697	0	653
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	18.4	6.8	6.8	19.7	7.4	7.4	17.2	0.0	15.3	15.7	0.0	15.7
Incr Delay (d2), s/veh	11.7	0.6	0.6	23.6	0.5	0.4	0.3	0.0	0.4	0.0	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3	4.2	4.5	0.2	3.1	3.2	0.5	0.0	0.5	0.1	0.0	0.9
LnGrp Delay(d), s/veh	30.1	7.4	7.4	43.3	7.9	7.9	17.5	0.0	15.6	15.8	0.0	16.9
LnGrp LOS	C	A	A	D	A	A	B		B	B		B
Approach Vol, veh/h	1203			830			91			94		
Approach Delay, s/veh	9.0			8.3			16.6			16.8		
Approach LOS	A			A			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.9	25.1		9.9	7.0	23.0		9.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	26.3	16.1		7.3	23.1		16.1					
Max Q Clear Time (g_c+I), s	10.6			4.0	3.9	8.3		5.3				
Green Ext Time (p_c), s	0.0	10.0		0.7	0.0	9.6		0.6				

Intersection Summary	
HCM 2010 Ctrl Delay	9.4
HCM 2010 LOS	A

Existing AM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	40	754	32	274	852	74	12	78	125	207	225	57
Future Volume (veh/h)	40	754	32	274	852	74	12	78	125	207	225	57
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	41	769	0	280	869	76	12	80	128	211	230	58
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	69	958	429	386	1526	134	26	191	162	255	431	366
Arrive On Green	0.04	0.27	0.00	0.22	0.46	0.46	0.01	0.10	0.10	0.14	0.23	0.23
Sat Flow, veh/h	1774	3539	1583	1774	3293	288	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	41	769	0	280	467	478	12	80	128	211	230	58
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1812	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	1.6	14.5	0.0	10.5	13.8	13.8	0.5	2.9	3.4	8.3	7.8	2.1
Cycle Q Clear(g_c), s	1.6	14.5	0.0	10.5	13.8	13.8	0.5	2.9	3.4	8.3	7.8	2.1
Prop In Lane	1.00		1.00	1.00		0.16	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	69	958	429	386	820	840	26	191	162	255	431	366
V/C Ratio(X)	0.59	0.80	0.00	0.72	0.57	0.57	0.46	0.42	0.79	0.83	0.53	0.16
Avail Cap(c_a), veh/h	149	1285	575	495	988	1012	124	806	685	371	1066	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	33.9	24.3	0.0	26.0	14.0	14.0	35.0	30.2	11.4	29.8	24.1	22.0
Incr Delay (d2), s/veh	5.9	2.4	0.0	3.2	0.5	0.5	8.9	1.1	6.3	8.3	0.8	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	9	7.4	0.0	5.5	6.7	6.9	0.3	1.5	2.5	4.6	4.1	0.9
LnGrp Delay(d), s/veh	39.8	26.8	0.0	29.2	14.5	14.5	43.9	31.2	17.6	38.1	24.9	22.1
LnGrp LOS	D	C		C	B	B	D	C	B	D	C	C
Approach Vol, veh/h	810			1225			220			499		
Approach Delay, s/veh	27.4			17.8			24.0			30.2		
Approach LOS	C			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.6	24.4	5.1	21.6	6.8	38.2	14.3	12.3				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	20.6	* 26	5.0	41.0	6.0	40.0	15.0	31.0				
Max Q Clear Time (g_c+I), s	16.5	2.5	9.8	3.6	15.8	10.3	5.4					
Green Ext Time (p_c), s	3.2	2.8	0.0	2.0	0.0	5.3	0.2	1.9				

Intersection Summary	
HCM 2010 Ctrl Delay	23.4
HCM 2010 LOS	C

Notes

Existing AM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	555	682	396	1122	0	0	0	0	184	1	223
Future Volume (veh/h)	0	555	682	396	1122	0	0	0	0	184	1	223
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	584	718	417	1181	0				274	0	150
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2109	942	496	2770	0				419	0	187
Arrive On Green	0.00	0.60	0.60	0.10	0.52	0.00				0.12	0.00	0.12
Sat Flow, veh/h	0	3632	1582	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	584	718	417	1181	0				274	0	150
Grp Sat Flow(s),veh/h/ln	0	1770	1582	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	8.8	37.0	13.1	22.5	0.0				8.1	0.0	10.2
Cycle Q Clear(g_c), s	0.0	8.8	37.0	13.1	22.5	0.0				8.1	0.0	10.2
Prop In Lane	0.00		1.00	1.00	0.00					1.00		1.00
Lane Grp Cap(c), veh/h	0	2109	942	496	2770	0				419	0	187
V/C Ratio(X)	0.00	0.28	0.76	0.84	0.43	0.00				0.65	0.00	0.80
Avail Cap(c_a), veh/h	0	2109	942	648	2770	0				600	0	268
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.62	0.62	0.76	0.76	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.8	16.5	48.4	11.0	0.0				46.3	0.0	47.2
Incr Delay (d2), s/veh	0.0	0.2	3.6	5.9	0.4	0.0				1.7	0.0	10.8
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	0.0	4.4	16.9	6.7	11.2	0.0				4.1	0.0	5.0
LnGrp Delay(d),s/veh	0.0	11.0	20.1	54.4	11.4	0.0				48.1	0.0	58.0
LnGrp LOS		B	C	D	B					D		E
Approach Vol, veh/h		1302			1598					424		
Approach Delay, s/veh		16.0			22.6					51.6		
Approach LOS		B			C					D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.6	71.3		18.1		91.9						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	55.1			18.6		80.5						
Max Q Clear Time (g_c+1), s	39.0			12.2		24.5						
Green Ext Time (p_c), s	0.7	12.2		0.9		26.5						
Intersection Summary												
HCM 2010 Ctrl Delay				23.7								
HCM 2010 LOS				C								
Notes												

Existing AM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑↑		↑	↑	↑	↑	↑
Traffic Volume (veh/h)	90	649	0	0	1114	87	404	1	221	0	0	0
Future Volume (veh/h)	90	649	0	0	1114	87	404	1	221	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			1863
Adj Flow Rate, veh/h	96	690	0	0	1185	93	504	0	157			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			0.94
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			2
Cap, veh/h	120	2580	0	0	2189	979	610	0	272			
Arrive On Green	0.14	1.00	0.00	0.00	0.62	0.62	0.17	0.00	0.17			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	96	690	0	0	1185	93	504	0	157			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	5.8	0.0	0.0	0.0	21.1	2.6	15.1	0.0	10.0			
Cycle Q Clear(g_c), s	5.8	0.0	0.0	0.0	21.1	2.6	15.1	0.0	10.0			
Prop In Lane	1.00		0.00	0.00	1.00		1.00		1.00			
Lane Grp Cap(c), veh/h	120	2580	0	0	2189	979	610	0	272			
V/C Ratio(X)	0.80	0.27	0.00	0.00	0.54	0.09	0.83	0.00	0.58			
Avail Cap(c_a), veh/h	214	2580	0	0	2189	979	868	0	387			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	0.85	0.85	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.8	0.0	0.0	0.0	12.0	8.5	44.0	0.0	41.9			
Incr Delay (d2), s/veh	10.9	0.2	0.0	0.0	0.8	0.2	4.5	0.0	1.9			
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	0.1	0.0	0.0	10.5	1.2	7.8	0.0	4.6			
LnGrp Delay(d),s/veh	57.7	0.2	0.0	0.0	12.8	8.7	48.5	0.0	43.8			
LnGrp LOS	E	A			B	A	D		D			
Approach Vol, veh/h		786			1278		661					
Approach Delay, s/veh		7.3			12.5		47.4					
Approach LOS		A			B		D					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		86.0			12.1	73.8		24.0				
Change Period (Y+Rc), s		5.8			4.7	5.8		5.1				
Max Green Setting (Gmax), s		72.2			13	54.2		26.9				
Max Q Clear Time (g_c+1), s		2.0			7.8	23.1		17.1				
Green Ext Time (p_c), s		22.1			0.1	16.5		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay					19.5							
HCM 2010 LOS					B							
Notes												

Existing AM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	27	755	194	194	1082	46	83	8	114	28	11	69
Future Volume (veh/h)	27	755	194	194	1082	46	83	8	114	28	11	69
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	29	821	211	211	1176	50	90	9	124	30	12	75
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	1189	306	262	1897	81	300	19	261	259	39	244
Arrive On Green	0.03	0.43	0.43	0.15	0.55	0.55	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	2788	717	1774	3459	147	1301	108	1487	1249	222	1390
Grp Volume(v), veh/h	29	521	511	211	601	625	90	0	133	30	0	87
Grp Sat Flow(s), veh/h/ln	1774	1770	1735	1774	1770	1837	1301	0	1594	1249	0	1612
Q Serve(g_s), s	0.9	12.9	12.9	6.2	12.5	12.6	3.5	0.0	4.0	1.2	0.0	2.5
Cycle Q Clear(g_c), s	0.9	12.9	12.9	6.2	12.5	12.6	6.0	0.0	4.0	5.2	0.0	2.5
Prop In Lane	1.00		0.41	1.00		0.08	1.00		0.93	1.00		0.86
Lane Grp Cap(c), veh/h	46	755	740	262	970	1007	300	0	279	259	0	283
V/C Ratio(X)	0.63	0.69	0.69	0.80	0.62	0.62	0.30	0.00	0.48	0.12	0.00	0.31
Avail Cap(c_a), veh/h	135	755	740	345	970	1007	507	0	532	457	0	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	12.6	12.6	22.2	8.3	8.3	22.0	0.0	20.0	22.4	0.0	19.4
Incr Delay (d2), s/veh	13.0	5.1	5.2	9.9	3.0	2.9	0.6	0.0	1.3	0.2	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6	7.3	7.2	3.8	6.8	7.1	1.3	0.0	1.9	0.4	0.0	1.2
LnGrp Delay(d), s/veh	39.0	17.7	17.8	32.1	11.3	11.2	22.6	0.0	21.3	22.6	0.0	20.0
LnGrp LOS	D	B	B	C	B	B	C		C	C		B
Approach Vol, veh/h	1061			1437			223			117		
Approach Delay, s/veh	18.3			14.3			21.8			20.7		
Approach LOS	B			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.5	27.5		14.0	5.9	34.1		14.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.0	23.0		18.0	4.1	29.4		18.0				
Max Q Clear Time (g_c+I), s	14.9	14.9		7.2	2.9	14.6		8.0				
Green Ext Time (p_c), s	0.1	6.6		1.3	0.0	11.0		1.2				

Intersection Summary												
HCM 2010 Ctrl Delay	16.7											
HCM 2010 LOS	B											

Existing AM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	21	753	307	246	850	170	143	315	102	183	1050	63
Future Volume (veh/h)	21	753	307	246	850	170	143	315	102	183	1050	63
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	776	316	254	876	175	147	325	105	189	1082	65
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	394	1279	572	296	963	192	208	1198	536	229	1193	534
Arrive On Green	0.11	0.36	0.36	0.11	0.44	0.44	0.06	0.34	0.34	0.07	0.34	0.34
Sat Flow, veh/h	3442	3539	1582	3442	2940	587	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	22	776	316	254	527	524	147	325	105	189	1082	65
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1770	1757	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	0.9	29.6	20.5	12.0	45.9	46.0	6.9	11.0	7.8	8.9	48.2	4.7
Cycle Q Clear(g_c), s	0.9	29.6	20.5	12.0	45.9	46.0	6.9	11.0	7.8	8.9	48.2	4.7
Prop In Lane	1.00		1.00	1.00		0.33	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	394	1279	572	296	580	576	208	1198	536	229	1193	534
V/C Ratio(X)	0.06	0.61	0.55	0.86	0.91	0.91	0.71	0.27	0.20	0.82	0.91	0.12
Avail Cap(c_a), veh/h	394	1279	572	398	616	611	209	1223	547	250	1266	566
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.72	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.1	43.1	25.6	72.1	44.2	44.2	76.1	39.8	38.7	76.1	52.2	37.8
Incr Delay (d2), s/veh	0.0	1.6	2.8	1.1	2.6	2.7	8.9	0.1	0.2	16.8	9.4	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5	14.7	9.4	5.7	22.8	22.7	3.5	5.4	3.4	4.8	25.2	2.1
LnGrp Delay(d), s/veh	65.1	44.7	28.4	73.2	46.9	46.9	84.9	39.9	38.9	92.8	61.6	37.9
LnGrp LOS	E	D	C	E	D	D	F	D	D	F	E	D
Approach Vol, veh/h	1114			1305			577			1336		
Approach Delay, s/veh	40.4			52.0			51.2			64.9		
Approach LOS	D			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.3	66.5	16.3	61.9	25.8	61.0	16.1	62.1				
Change Period (Y+Rc), s	6.1	6.9	6.3	* 6.3	6.9	* 6.9	5.1	6.3				
Max Green Setting (Gmax), s	19.5	52.5	10.0	* 59	14.0	* 57	12.0	57.0				
Max Q Clear Time (g_c+I), s	31.6	8.9	50.2	2.9	48.0	10.9	13.0					
Green Ext Time (p_c), s	0.2	9.9	0.4	5.5	6.5	5.9	0.0	3.4				

Intersection Summary												
HCM 2010 Ctrl Delay	52.9											
HCM 2010 LOS	D											

Existing AM
17: Broadway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		↔↔	↕↕	
Traffic Volume (veh/h)	256	711	95	172	1466	53	108	488	113	194	769	451
Future Volume (veh/h)	256	711	95	172	1466	53	108	488	113	194	769	451
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.92	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	301	836	112	202	1725	62	127	574	133	228	905	531
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	1287	172	246	1417	51	113	744	172	249	714	404
Arrive On Green	0.08	0.41	0.41	0.07	0.41	0.41	0.06	0.27	0.27	0.14	0.34	0.34
Sat Flow, veh/h	3442	3132	420	3442	3485	125	1774	2807	648	1774	2090	1181
Grp Volume(v), veh/h	301	472	476	202	872	915	127	361	346	228	761	675
Grp Sat Flow(s), veh/h/ln	1721	1770	1782	1721	1770	1840	1774	1770	1685	1774	1770	1501
Q Serve(g_s), s	12.5	35.4	35.4	9.6	67.1	67.1	10.5	31.1	31.3	20.9	56.4	56.4
Cycle Q Clear(g_c), s	12.5	35.4	35.4	9.6	67.1	67.1	10.5	31.1	31.3	20.9	56.4	56.4
Prop In Lane	1.00	0.24	1.00		0.07	1.00		0.38	1.00		0.79	
Lane Grp Cap(c), veh/h	261	727	732	246	720	748	113	469	447	249	605	513
V/C Ratio(X)	1.15	0.65	0.65	0.82	1.21	1.22	1.12	0.77	0.77	0.92	1.26	1.32
Avail Cap(c_a), veh/h	261	727	732	330	720	748	113	469	447	287	605	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.3	39.0	39.0	75.6	48.9	49.0	77.3	56.0	56.1	70.0	54.3	54.3
Incr Delay (d2), s/veh	97.3	3.4	3.4	11.6	108.1	112.0	122.3	7.6	8.3	29.9	129.1	155.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	19.5	18.0	18.1	4.9	54.4	57.4	9.0	16.2	15.6	12.3	49.2	45.5
LnGrp Delay(d), s/veh	173.6	42.4	42.4	87.2	157.0	161.0	199.5	63.6	64.3	99.8	183.4	209.8
LnGrp LOS	F	D	D	F	F	F	F	E	E	F	F	F
Approach Vol, veh/h	1249			1989			834			1664		
Approach Delay, s/veh	74.0			151.7			84.6			182.6		
Approach LOS	E			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.3	72.7	15.0	61.0	17.0	72.0	27.6	48.4				
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6				
Max Green Setting (Gmax), s	6.8	63.8	10.5	56.4	12.5	67.1	26.7	40.2				
Max Q Clear Time (g_c+M), s	6.8	37.4	12.5	58.4	14.5	69.1	22.9	33.3				
Green Ext Time (p_c), s	0.2	20.8	0.0	0.0	0.0	0.0	0.2	5.9				

Intersection Summary	
HCM 2010 Ctrl Delay	134.0
HCM 2010 LOS	F

Existing PM
1: Centre City Parkway & Nutmeg St

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔			↔↔			↔↔			↔↔		
Traffic Vol, veh/h	65	2	2	4	0	2	2	340	0	0	159	32
Future Vol, veh/h	65	2	2	4	0	2	2	340	0	0	159	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	2	2	5	0	2	2	405	0	0	189	38
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	619	618	208	621	637	405	227	0	0	405	0	0
Stage 1	208	208	-	410	410	-	-	-	-	-	-	-
Stage 2	411	410	-	211	227	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	401	405	832	400	395	646	1341	-	-	1154	-	-
Stage 1	794	730	-	619	595	-	-	-	-	-	-	-
Stage 2	618	595	-	791	716	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	399	404	832	397	394	646	1341	-	-	1154	-	-
Mov Cap-2 Maneuver	399	404	-	397	394	-	-	-	-	-	-	-
Stage 1	793	730	-	618	594	-	-	-	-	-	-	-
Stage 2	615	594	-	786	716	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	16.1			13			0			0		
HCM LOS	C			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1341	-	-	405	456	1154	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.203	0.016	-	-	-				
HCM Control Delay (s)	7.7	-	-	16.1	13	0	-	-				
HCM Lane LOS	A	-	-	C	B	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	0.7	0	0	-	-				

Existing PM
2: Country Club Ln & Golden Circle Dr

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh	11.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	0	10	69	157	12	0	117	0	272	0	0	0
Future Vol, veh/h	0	10	69	157	12	0	117	0	272	0	0	0
Conflicting Peds, #/hr	2	0	0	0	0	2	5	0	0	0	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	11	78	176	13	0	131	0	306	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	15	0	0	89	0	0	421	418	50	571	457	20
Stage 1	-	-	-	-	-	-	50	50	-	368	368	-
Stage 2	-	-	-	-	-	-	371	368	-	203	89	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2,218	-	-	2,218	-	-	3,518	4,018	3,318	3,518	4,018	3,318
Pot Cap-1 Maneuver	1603	-	-	1506	-	-	543	526	1018	432	500	1058
Stage 1	-	-	-	-	-	-	963	853	-	652	621	-
Stage 2	-	-	-	-	-	-	649	621	-	799	821	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1596	-	-	1506	-	-	492	464	1018	275	441	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	492	464	-	275	441	-
Stage 1	-	-	-	-	-	-	963	853	-	651	548	-
Stage 2	-	-	-	-	-	-	571	548	-	559	821	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			7.2			15.6			0		
HCM LOS	A			C			C			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	770	1596	-	-	1506	-	-	-				
HCM Lane V/C Ratio	0.568	-	-	-	0.117	-	-	-				
HCM Control Delay (s)	15.6	0	-	-	7.7	-	-	0				
HCM Lane LOS	C	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	3.6	0	-	-	0.4	-	-	-				

Existing PM
3: Country Club Ln & Gary Ln

Escondido Country Club
04/07/2017

Intersection										
Intersection Delay, s/veh	9.3									
Intersection LOS	A									
Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR	
Lane Configurations		↔	↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	48	235	0	155	45	0	32	37	
Future Vol, veh/h	0	48	235	0	155	45	0	32	37	
Peak Hour Factor	0.92	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	52	253	0	167	48	0	34	40	
Number of Lanes	0	1	1	0	1	1	0	1	0	
Approach	EB			WB			SB			
Opposing Approach	WB			EB						
Opposing Lanes	2			2			0			
Conflicting Approach Left	SB						WB			
Conflicting Lanes Left	1			0			2			
Conflicting Approach Right				SB			EB			
Conflicting Lanes Right	0			1			2			
HCM Control Delay	9.9			8.8			8.5			
HCM LOS	A			A			A			
Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1					
Vol Left, %	100%	0%	0%	0%	46%					
Vol Thru, %	0%	100%	100%	0%	0%					
Vol Right, %	0%	0%	0%	100%	54%					
Sign Control	Stop	Stop	Stop	Stop	Stop					
Traffic Vol by Lane	48	235	155	45	69					
LT Vol	48	0	0	0	32					
Through Vol	0	235	155	0	0					
RT Vol	0	0	0	45	37					
Lane Flow Rate	52	253	167	48	74					
Geometry Grp	7	7	7	7	2					
Degree of Util (X)	0.077	0.343	0.23	0.057	0.101					
Departure Headway (Hd)	5.393	4.891	4.977	4.273	4.883					
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes					
Cap	665	735	722	839	735					
Service Time	3.116	2.614	2.701	1.997	2.911					
HCM Lane V/C Ratio	0.078	0.344	0.231	0.057	0.101					
HCM Control Delay	8.6	10.2	9.2	7.3	8.5					
HCM Lane LOS	A	B	A	A	A					
HCM 95th-tile Q	0.2	1.5	0.9	0.2	0.3					

Existing PM
4: Firestone Dr & Country Club Ln

Escondido Country Club
04/07/2017

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑		↑↑		↑↑	
Traffic Vol, veh/h	313	9	38	198	8	65
Future Vol, veh/h	313	9	38	198	8	65
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	
Storage Length	-	-	80	-	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	340	10	41	215	9	71
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	350	0	535	175
Stage 1	-	-	-	-	345	-
Stage 2	-	-	-	-	190	-
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	-	-	1206	-	475	838
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	823	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1206	-	459	838
Mov Cap-2 Maneuver	-	-	-	-	459	-
Stage 1	-	-	-	-	688	-
Stage 2	-	-	-	-	795	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.3		10.2	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	768	-	-	1206	-	
HCM Lane V/C Ratio	0.103	-	-	0.034	-	
HCM Control Delay (s)	10.2	-	-	8.1	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-	

Existing PM
5: La Brea St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection									
Intersection Delay, s/veh	8.8								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Lane Configurations		↑↑			↑↑			↑↑	
Traffic Vol, veh/h	0	336	18	0	19	227	0	8	10
Future Vol, veh/h	0	336	18	0	19	227	0	8	10
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	369	20	0	21	249	0	9	11
Number of Lanes	0	2	0	0	1	2	0	1	0
Approach	EB			WB			NB		
Opposing Approach	WB			EB					
Opposing Lanes	3			2			0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			2		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			3		
HCM Control Delay	9.8			7.5			8.6		
HCM LOS	A			A			A		
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3			
Vol Left, %	44%	0%	0%	100%	0%	0%			
Vol Thru, %	0%	100%	86%	0%	100%	100%			
Vol Right, %	56%	0%	14%	0%	0%	0%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	18	224	130	19	114	114			
LT Vol	8	0	0	19	0	0			
Through Vol	0	224	112	0	114	114			
RT Vol	10	0	18	0	0	0			
Lane Flow Rate	20	246	143	21	125	125			
Geometry Grp	7	8	8	7	7	7			
Degree of Util (X)	0.031	0.344	0.196	0.031	0.17	0.11			
Departure Headway (Hd)	5.724	5.028	4.931	5.421	4.919	3.179			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	626	716	730	663	732	1130			
Service Time	3.457	2.746	2.649	3.134	2.633	0.892			
HCM Lane V/C Ratio	0.032	0.344	0.196	0.032	0.171	0.111			
HCM Control Delay	8.6	10.4	8.9	8.3	8.6	6.3			
HCM Lane LOS	A	B	A	A	A	A			
HCM 95th-tile Q	0.1	1.5	0.7	0.1	0.6	0.4			

Existing PM
6: Nutmeg St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection															
Intersection Delay, s/veh44.5															
Intersection LOS E															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Lane Configurations		↖	↗	↘		↖	↗	↘		↖	↗	↘		↖	↗
Traffic Vol, veh/h	0	35	278	33	0	162	181	35	0	52	133	364	0	17	51
Future Vol, veh/h	0	35	278	33	0	162	181	35	0	52	133	364	0	17	51
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	38	299	35	0	174	195	38	0	56	143	391	0	18	55
Number of Lanes	0	1	2	0	0	1	2	0	0	1	2	0	0	1	0
Approach	EB				WB				NB				SB		
Opposing Approach	WB				EB				SB				NB		
Opposing Lanes	3				3				1				1		
Conflicting Approach Left	SB				NB				EB				WB		
Conflicting Lanes Left	1				1				3				3		
Conflicting Approach Right	NB				SB				WB				EB		
Conflicting Lanes Right	1				1				3				3		
HCM Control Delay	14.9				14.5				88.8				13.3		
HCM LOS	B				B				F				B		
Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1							
Vol Left, %	9%	100%	0%	0%	100%	0%	0%	19%							
Vol Thru, %	24%	0%	100%	74%	0%	100%	63%	57%							
Vol Right, %	66%	0%	0%	26%	0%	0%	37%	24%							
Sign Control	Stop														
Traffic Vol by Lane	549	35	185	126	162	121	95	89							
LT Vol	52	35	0	0	162	0	0	17							
Through Vol	133	0	185	93	0	121	60	51							
RT Vol	364	0	0	33	0	0	35	21							
Lane Flow Rate	590	38	199	135	174	130	103	96							
Geometry Grp	7	7	7	7	7	7	7	7							
Degree of Util (X)	1.085	0.084	0.42	0.278	0.388	0.271	0.207	0.212							
Departure Headway (Hd)	6.616	8.562	8.038	7.846	8.498	7.975	7.707	8.334							
Convergence, Y/N	Yes														
Cap	549	421	450	461	427	453	468	434							
Service Time	4.396	6.262	5.738	5.546	6.198	5.675	5.407	6.034							
HCM Lane V/C Ratio	1.075	0.09	0.442	0.293	0.407	0.287	0.22	0.221							
HCM Control Delay	88.8	12	16.4	13.5	16.5	13.6	12.4	13.3							
HCM Lane LOS	F	B	C	B	C	B	B	B							
HCM 95th-ile Q	17.9	0.3	2	1.1	1.8	1.1	0.8	0.8							

Existing PM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
04/07/2017

Intersection													
Intersection Delay, s/veh44.5													
Intersection LOS E													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘	
Traffic Volume (veh/h)	124	357	61	142	245	90	132	397	178	128	264	39	
Future Volume (veh/h)	124	357	61	142	245	90	132	397	178	128	264	39	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	0.98	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	135	388	66	154	266	98	143	432	193	139	287	42	
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	177	734	323	202	784	346	188	842	372	182	831	372	
Arrive On Green	0.10	0.21	0.21	0.11	0.22	0.22	0.11	0.24	0.24	0.10	0.23	0.23	
Sat Flow, veh/h	1774	3539	1558	1774	3539	1563	1774	3539	1561	1774	3539	1583	
Grp Volume(v), veh/h	135	388	66	154	266	98	143	432	193	139	287	42	
Grp Sat Flow(s), veh/h/ln	1774	1770	1558	1774	1770	1563	1774	1770	1561	1774	1770	1583	
Q Serve(g_s), s	3.9	5.2	1.9	4.5	3.4	2.8	4.2	5.6	5.7	4.1	3.6	1.1	
Cycle Q Clear(g_c), s	3.9	5.2	1.9	4.5	3.4	2.8	4.2	5.6	5.7	4.1	3.6	1.1	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	177	734	323	202	784	346	188	842	372	182	831	372	
V/C Ratio(X)	0.76	0.53	0.20	0.76	0.34	0.28	0.76	0.51	0.52	0.76	0.35	0.11	
Avail Cap(c_a), veh/h	483	1230	541	550	1363	602	516	1496	660	483	1429	639	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	23.4	18.8	17.5	22.9	17.4	17.2	23.2	17.6	17.6	23.3	17.0	16.0	
Incr Delay (d2), s/veh	6.6	0.6	0.3	5.9	0.3	0.4	6.3	0.5	1.1	6.5	0.2	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	2.2	2.6	0.8	2.5	1.7	1.2	2.4	2.8	2.6	2.3	1.8	0.5	
LnGrp Delay(d), s/veh	30.0	19.4	17.8	28.8	17.7	17.7	29.4	18.1	18.8	29.7	17.2	16.1	
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B	
Approach Vol, veh/h	589				518				768				468
Approach Delay, s/veh	21.6				21.0				20.4				20.8
Approach LOS	C				C				C				C
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	17.2	10.6	15.5	10.1	17.0	9.8	16.3						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	22.5	16.5	18.5	15.5	21.5	14.5	20.5						
Max Q Clear Time (g_c+1), s	7.7	6.5	7.2	6.2	5.6	5.9	5.4						
Green Ext Time (p_c), s	0.2	4.9	0.3	3.7	0.2	5.1	0.2	4.3					
Intersection Summary													
HCM 2010 Ctrl Delay	20.9												
HCM 2010 LOS	C												

Existing PM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	36	656	44	191	647	142	58	103	228	91	65	22
Future Volume (veh/h)	36	656	44	191	647	142	58	103	228	91	65	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00	0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	40	721	48	210	711	156	64	113	251	100	71	24
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	55	1287	86	310	821	677	315	358	304	129	116	39
Arrive On Green	0.03	0.38	0.38	0.09	0.44	0.44	0.18	0.19	0.19	0.07	0.09	0.09
Sat Flow, veh/h	1774	3369	224	3442	1863	1535	1774	1863	1581	1774	1333	451
Grp Volume(v), veh/h	40	379	390	210	711	156	64	113	251	100	0	95
Grp Sat Flow(s), veh/h/ln	1774	1770	1823	1721	1863	1535	1774	1863	1581	1774	0	1783
Q Serve(g_s), s	1.5	11.5	11.5	4.0	23.6	2.7	2.1	3.6	10.4	3.8	0.0	3.5
Cycle Q Clear(g_c), s	1.5	11.5	11.5	4.0	23.6	2.7	2.1	3.6	10.4	3.8	0.0	3.5
Prop In Lane	1.00	0.12	1.00		1.00	1.00		1.00	1.00		0.25	
Lane Grp Cap(c), veh/h	55	676	696	310	821	677	315	358	304	129	0	155
V/C Ratio(X)	0.72	0.56	0.56	0.68	0.87	0.23	0.20	0.32	0.83	0.78	0.00	0.61
Avail Cap(c_a), veh/h	117	926	954	513	1130	931	315	477	404	220	0	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.8	16.6	16.6	30.2	17.3	4.8	24.0	23.8	26.5	31.2	0.0	30.1
Incr Delay (d2), s/veh	16.2	0.7	0.7	2.6	5.4	0.2	0.3	0.5	10.1	9.6	0.0	3.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0	5.7	5.9	2.0	13.3	1.6	1.1	1.9	5.4	2.2	0.0	1.9
LnGrp Delay(d), s/veh	49.1	17.4	17.3	32.7	22.7	5.0	24.3	24.3	36.6	40.8	0.0	34.0
LnGrp LOS	D	B	B	C	C	A	C	C	D	D		C
Approach Vol, veh/h	809			1077				428			195	
Approach Delay, s/veh	18.9			22.1				31.5			37.5	
Approach LOS	B			C				C			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.6	10.7	30.6	16.7	10.4	6.6	34.7					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	17.5	10.2	35.8	6.0	20.0	4.5	41.5					
Max Q Clear Time (g_c+I), s	12.4	6.0	13.5	4.1	5.5	3.5	25.6					
Green Ext Time (p_c), s	0.0	0.7	0.2	4.7	0.4	0.3	0.5	4.6				
Intersection Summary												
HCM 2010 Ctrl Delay				23.9								
HCM 2010 LOS				C								

Existing PM
9: EI Norte Pkwy & Country Club Ln

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	348	644	12	39	761	114	8	8	14	73	3	180
Future Volume (veh/h)	348	644	12	39	761	114	8	8	14	73	3	180
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00	1.00	1.00		0.99	1.00		0.99	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	378	700	13	42	827	124	9	9	15	79	3	196
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	407	1927	36	73	1093	164	38	38	66	274	10	251
Arrive On Green	0.23	0.54	0.54	0.04	0.35	0.35	0.04	0.04	0.04	0.16	0.16	0.16
Sat Flow, veh/h	1774	3554	66	1774	3086	463	909	909	1567	1712	65	1566
Grp Volume(v), veh/h	378	348	365	42	474	477	18	0	15	82	0	196
Grp Sat Flow(s), veh/h/ln	1774	1770	1851	1774	1770	1780	1817	0	1567	1777	0	1566
Q Serve(g_s), s	21.1	11.4	11.4	2.4	23.9	23.9	1.0	0.0	0.9	4.1	0.0	12.2
Cycle Q Clear(g_c), s	21.1	11.4	11.4	2.4	23.9	23.9	1.0	0.0	0.9	4.1	0.0	12.2
Prop In Lane	1.00	0.04	1.00		1.00	0.26	0.50		1.00	0.96		1.00
Lane Grp Cap(c), veh/h	407	959	1003	73	626	630	77	0	66	285	0	251
V/C Ratio(X)	0.93	0.36	0.36	0.58	0.76	0.76	0.23	0.00	0.23	0.29	0.00	0.78
Avail Cap(c_a), veh/h	569	1139	1191	159	730	734	484	0	418	474	0	417
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.2	13.2	13.2	47.7	28.9	28.9	46.9	0.0	46.9	37.4	0.0	40.8
Incr Delay (d2), s/veh	15.1	0.3	0.3	2.7	4.1	4.1	1.9	0.0	2.1	0.7	0.0	6.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0	5.6	5.8	1.2	12.4	12.5	0.5	0.0	0.4	2.1	0.0	5.7
LnGrp Delay(d), s/veh	53.3	13.5	13.5	50.3	33.0	33.0	48.8	0.0	48.9	38.1	0.0	47.1
LnGrp LOS	D	B	B	D	C	C	D		D	D		D
Approach Vol, veh/h	1091			993				33			278	
Approach Delay, s/veh	27.3			33.7				48.8			44.5	
Approach LOS	C			C				D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	17.6	10.7		21.7	27.7	42.1		9.8				
Change Period (Y+Rc), s	4.5	4.5		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	17.5	10.2		27.0	32.5	41.8		27.0				
Max Q Clear Time (g_c+I), s	13.4	6.2		14.2	23.1	25.9		3.0				
Green Ext Time (p_c), s	0.0	17.7		1.1	0.1	9.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				32.3								
HCM 2010 LOS				C								

Existing PM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↖↗	↗	↖	↖
Traffic Volume (veh/h)	10	734	84	175	772	24	118	84	205	21	28	11
Future Volume (veh/h)	10	734	84	175	772	24	118	84	205	21	28	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	12	864	99	206	908	28	139	99	241	25	33	13
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	26	1096	126	249	1642	51	174	384	325	49	172	68
Arrive On Green	0.01	0.34	0.34	0.14	0.47	0.47	0.10	0.21	0.21	0.03	0.14	0.14
Sat Flow, veh/h	1774	3190	366	1774	3502	108	1774	1863	1576	1774	1267	499
Grp Volume(v), veh/h	12	479	484	206	459	477	139	99	241	25	0	46
Grp Sat Flow(s),veh/h/ln	1774	1770	1786	1774	1770	1840	1774	1863	1576	1774	0	1767
Q Serve(g_s), s	0.5	16.8	16.8	7.8	12.8	12.8	5.3	3.1	9.9	1.0	0.0	1.6
Cycle Q Clear(g_c), s	0.5	16.8	16.8	7.8	12.8	12.8	5.3	3.1	9.9	1.0	0.0	1.6
Prop In Lane	1.00		0.20	1.00		0.06	1.00		1.00	1.00		0.28
Lane Grp Cap(c), veh/h	26	608	613	249	830	863	174	384	325	49	0	239
V/C Ratio(X)	0.45	0.79	0.79	0.83	0.55	0.55	0.80	0.26	0.74	0.51	0.00	0.19
Avail Cap(c_a), veh/h	129	654	660	296	830	863	180	769	651	129	0	691
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.7	20.4	20.4	28.8	13.1	13.1	30.4	23.0	25.7	33.1	0.0	26.5
Incr Delay (d2), s/veh	11.7	6.0	6.0	15.1	0.9	0.9	21.2	0.3	2.5	8.0	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	9.1	9.2	4.9	6.5	6.7	3.6	1.6	4.5	0.6	0.0	0.8
LnGrp Delay(d),s/veh	45.4	26.4	26.4	44.0	14.0	14.0	51.6	23.2	28.2	41.1	0.0	26.8
LnGrp LOS	D	C	C	D	B	B	D	C	C	D		C
Approach Vol, veh/h		975			1142			479			71	
Approach Delay, s/veh		26.7			19.4			34.0			31.8	
Approach LOS		C			B			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.7	10.8	14.3	5.5	38.4	5.9	19.2					
Change Period (Y+Rc), s	4.5	6.0	4.0	5.5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	25.5	7.0	27	5.0	32.0	5.0	28.5					
Max Q Clear Time (g_c+I), s	18.8	7.3	3.6	2.5	14.8	3.0	11.9					
Green Ext Time (p_c), s	0.1	4.9	0.0	1.3	0.0	11.1	0.0	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay					25.0							
HCM 2010 LOS					C							
Notes												

Existing PM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↖↗	↗	↖	↖
Traffic Volume (veh/h)	82	1060	23	19	967	15	29	8	14	14	20	68
Future Volume (veh/h)	82	1060	23	19	967	15	29	8	14	14	20	68
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	89	1152	25	21	1051	16	32	9	15	15	22	74
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	1918	42	37	1781	27	254	76	126	318	45	153
Arrive On Green	0.06	0.54	0.54	0.02	0.50	0.50	0.12	0.12	0.12	0.12	0.12	0.12
Sat Flow, veh/h	1774	3540	77	1774	3567	54	1294	628	1047	1378	376	1264
Grp Volume(v), veh/h	89	576	601	21	521	546	32	0	24	15	0	96
Grp Sat Flow(s),veh/h/ln	1774	1770	1847	1774	1770	1851	1294	0	1675	1378	0	1640
Q Serve(g_s), s	2.1	9.4	9.4	0.5	8.9	8.9	1.0	0.0	0.5	0.4	0.0	2.3
Cycle Q Clear(g_c), s	2.1	9.4	9.4	0.5	8.9	8.9	3.3	0.0	0.5	1.0	0.0	2.3
Prop In Lane	1.00		0.04	1.00		0.03	1.00		0.63	1.00		0.77
Lane Grp Cap(c), veh/h	112	959	1001	37	884	925	254	0	202	318	0	198
V/C Ratio(X)	0.79	0.60	0.60	0.57	0.59	0.59	0.13	0.00	0.12	0.05	0.00	0.49
Avail Cap(c_a), veh/h	229	1092	1140	171	1034	1082	587	0	633	672	0	619
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	19.7	6.6	6.6	20.7	7.6	7.6	19.1	0.0	16.7	17.1	0.0	17.5
Incr Delay (d2), s/veh	11.9	0.7	0.7	13.3	0.7	0.6	0.2	0.0	0.3	0.1	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	4.7	4.9	0.4	4.4	4.6	0.4	0.0	0.3	0.2	0.0	1.1
LnGrp Delay(d),s/veh	31.6	7.4	7.3	34.0	8.2	8.2	19.3	0.0	17.0	17.2	0.0	19.3
LnGrp LOS	C	A	A	C	A	A	B		B	B		B
Approach Vol, veh/h		1266			1088			56			111	
Approach Delay, s/veh		9.0			8.7			18.3			19.0	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.6			9.6	7.2	25.8		9.6				
Change Period (Y+Rc), s	4.5			4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	26.3			16.1	5.5	24.9		16.1				
Max Q Clear Time (g_c+I), s	11.4			4.3	4.1	10.9		5.3				
Green Ext Time (p_c), s	0.0	10.9		0.6	0.0	10.4		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay					9.5							
HCM 2010 LOS					A							
Notes												

Existing PM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↖	↖	↖↗	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	76	796	37	168	775	189	38	239	258	207	118	43
Future Volume (veh/h)	76	796	37	168	775	189	38	239	258	207	118	43
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	78	812	0	171	791	193	39	244	263	211	120	44
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1049	469	210	953	233	65	399	339	250	593	504
Arrive On Green	0.06	0.30	0.00	0.12	0.34	0.34	0.04	0.21	0.21	0.14	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	2821	688	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	78	812	0	171	496	488	39	244	263	211	120	44
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1740	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.4	16.4	0.0	7.3	20.2	20.2	1.7	9.3	12.2	9.1	3.7	1.1
Cycle Q Clear(g_c), s	3.4	16.4	0.0	7.3	20.2	20.2	1.7	9.3	12.2	9.1	3.7	1.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	114	1049	469	210	598	588	65	399	339	250	593	504
V/C Ratio(X)	0.69	0.77	0.00	0.81	0.83	0.83	0.60	0.61	0.78	0.85	0.20	0.09
Avail Cap(c_a), veh/h	159	1359	608	318	838	824	136	858	729	272	1001	851
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	25.1	0.0	33.6	23.8	23.8	37.1	27.8	28.9	32.7	19.4	9.6
Incr Delay (d2), s/veh	5.3	1.9	0.0	7.7	4.4	4.5	6.5	1.1	2.9	19.2	0.1	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	8	8.3	0.0	4.1	10.5	10.3	0.9	4.9	5.6	5.8	1.9	0.6
LnGrp Delay(d), s/veh	41.1	27.0	0.0	41.4	28.2	28.3	43.6	28.9	31.8	51.9	19.5	9.7
LnGrp LOS	D	C		D	C	C	D	C	C	D	B	A
Approach Vol, veh/h	890			1155			546			375		
Approach Delay, s/veh	28.2			30.2			31.3			36.6		
Approach LOS	C			C			C			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	28.2	6.9	29.9	10.0	31.4	15.0	21.7					
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	5.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	30.0	6.0	42.0	7.0	37.0	12.0	36.0					
Max Q Clear Time (g_c+I), s	18.4	3.7	5.7	5.4	22.2	11.1	14.2					
Green Ext Time (p_c), s	0.1	3.5	0.0	2.6	0.8	4.2	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay				30.6								
HCM 2010 LOS				C								
Notes												

Existing PM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↖	↖	↖↗	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	0	1136	389	259	1641	0	0	0	0	0	96	136
Future Volume (veh/h)	0	1136	389	259	1641	0	0	0	0	0	96	136
Number	5	2	12	1	6	16					7	4
Initial Q (Ob), veh	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
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0					1863	1863
Adj Flow Rate, veh/h	0	1196	409	273	1727	0					152	0
Adj No. of Lanes	0	2	1	2	2	0					2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95					0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0					2	2
Cap, veh/h	0	2413	1078	339	2912	0					277	0
Arrive On Green	0.00	0.68	0.68	0.20	1.00	0.00					0.08	0.00
Sat Flow, veh/h	0	3632	1582	3442	3632	0					3548	0
Grp Volume(v), veh/h	0	1196	409	273	1727	0					152	0
Grp Sat Flow(s), veh/h/ln	0	1770	1582	1721	1770	0					1774	0
Q Serve(g_s), s	0.0	17.9	12.2	8.3	0.0	0.0					4.5	0.0
Cycle Q Clear(g_c), s	0.0	17.9	12.2	8.3	0.0	0.0					4.5	0.0
Prop In Lane	0.00	1.00	1.00	1.00	0.00	0.00					1.00	1.00
Lane Grp Cap(c), veh/h	0	2413	1078	339	2912	0					277	0
V/C Ratio(X)	0.00	0.50	0.38	0.81	0.59	0.00					0.55	0.00
Avail Cap(c_a), veh/h	0	2413	1078	541	2912	0					577	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00					1.00	1.00
Upstream Filter(I)	0.00	0.58	0.58	0.38	0.38	0.00					1.00	0.00
Uniform Delay (d), s/veh	0.0	8.4	7.5	43.2	0.0	0.0					48.8	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.6	1.8	0.3	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
%ile BackOfQ(50%), veh/ln	0.0	8.8	5.4	4.0	0.1	0.0					2.3	0.0
LnGrp Delay(d), s/veh	0.0	8.8	8.1	45.0	0.3	0.0					50.5	0.0
LnGrp LOS		A	A	D	A						D	E
Approach Vol, veh/h	1605			2000						241		
Approach Delay, s/veh	8.7			6.4						53.0		
Approach LOS	A			A						D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	5.5	80.8		13.7		96.3						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	59.2			17.9		81.2						
Max Q Clear Time (g_c+I), s	19.9			8.0		2.0						
Green Ext Time (p_c), s	0.5	32.9		0.5		56.7						
Intersection Summary												
HCM 2010 Ctrl Delay				10.3								
HCM 2010 LOS				B								
Notes												

Existing PM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↕	↕	↕	↔	↔	↔
Traffic Volume (veh/h)	257	975	0	0	1001	233	899	1	514	0	0	0
Future Volume (veh/h)	257	975	0	0	1001	233	899	1	514	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	273	1037	0	0	1065	248	1127	0	365			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	384	2247	0	0	1293	579	1158	0	517			
Arrive On Green	0.43	1.00	0.00	0.00	0.37	0.37	0.33	0.00	0.33			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	273	1037	0	0	1065	248	1127	0	365			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	13.9	0.0	0.0	0.0	30.0	13.0	34.5	0.0	22.2			
Cycle Q Clear(g_c), s	13.9	0.0	0.0	0.0	30.0	13.0	34.5	0.0	22.2			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	384	2247	0	0	1293	579	1158	0	517			
V/C Ratio(X)	0.71	0.46	0.00	0.00	0.82	0.43	0.97	0.00	0.71			
Avail Cap(c_a), veh/h	384	2247	0	0	1293	579	1158	0	517			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.72	0.72	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.3	0.0	0.0	0.0	31.7	26.3	36.6	0.0	32.4			
Incr Delay (d2), s/veh	5.0	0.6	0.0	0.0	4.4	1.7	20.2	0.0	4.4			
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	0.2	0.0	0.0	15.4	5.9	20.2	0.0	10.3			
LnGrp Delay(d),s/veh	33.4	0.6	0.0	0.0	36.1	27.9	56.8	0.0	36.8			
LnGrp LOS	C	A			D	C	E		D			
Approach Vol, veh/h	1310			1313			1492					
Approach Delay, s/veh	7.4			34.6			51.9					
Approach LOS	A			C			D					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2				5		6		8			
Phs Duration (G+Y+Rc), s	75.7				29.7		46.0		41.0			
Change Period (Y+Rc), s	5.8				5.8		5.8		5.1			
Max Green Setting (Gmax), s	63.2				18.3		40		35.9			
Max Q Clear Time (g_c+I1), s	2.0				15.9		32.0		36.5			
Green Ext Time (p_c), s	9.9				1.4		4.6		0.0			
Intersection Summary												
HCM 2010 Ctrl Delay				32.2								
HCM 2010 LOS				C								
Notes												

Existing PM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↕	↕	↕	↔	↔	↔
Traffic Volume (veh/h)	110	1245	111	89	956	32	206	22	186	25	9	127
Future Volume (veh/h)	110	1245	111	89	956	32	206	22	186	25	9	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	120	1353	121	97	1039	35	224	24	202	27	10	138
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	1624	145	124	1669	56	315	43	358	245	27	376
Arrive On Green	0.09	0.49	0.49	0.07	0.48	0.48	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3287	293	1774	3491	118	1233	169	1419	1149	108	1488
Grp Volume(v), veh/h	120	726	748	97	527	547	224	0	226	27	0	148
Grp Sat Flow(s),veh/h/ln	1774	1770	1810	1774	1770	1839	1233	0	1587	1149	0	1596
Q Serve(g_s), s	4.9	25.9	26.2	4.0	16.3	16.3	13.0	0.0	9.1	1.5	0.0	5.6
Cycle Q Clear(g_c), s	4.9	25.9	26.2	4.0	16.3	16.3	18.6	0.0	9.1	10.7	0.0	5.6
Prop In Lane	1.00		0.16	1.00		0.06	1.00		0.89	1.00		0.93
Lane Grp Cap(c), veh/h	152	875	894	124	846	879	315	0	401	245	0	403
V/C Ratio(X)	0.79	0.83	0.84	0.78	0.62	0.62	0.71	0.00	0.56	0.11	0.00	0.37
Avail Cap(c_a), veh/h	205	875	894	157	846	879	315	0	401	245	0	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	16.0	16.1	33.7	14.3	14.3	30.5	0.0	24.0	28.6	0.0	22.7
Incr Delay (d2), s/veh	13.4	9.0	9.1	17.8	3.4	3.3	7.3	0.0	1.8	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0	14.7	15.2	2.6	8.7	9.0	5.1	0.0	4.2	0.5	0.0	2.5
LnGrp Delay(d),s/veh	46.4	25.0	25.2	51.5	17.7	17.6	37.8	0.0	25.8	28.8	0.0	23.2
LnGrp LOS	D	C	C	D	B	B	D		C	C		C
Approach Vol, veh/h	1594			1171			450			175		
Approach Delay, s/veh	26.7			20.4			31.8			24.1		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		2		4		5		6		8	
Phs Duration (G+Y+Rc), s	9.7		40.9		23.1		10.8		39.7		23.1	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	36.4		18.6		8.5		34.4		18.6			
Max Q Clear Time (g_c+I1), s	28.2		12.7		6.9		18.3		20.6			
Green Ext Time (p_c), s	0.0		7.1		1.7		0.0		12.9		0.0	
Intersection Summary												
HCM 2010 Ctrl Delay				25.1								
HCM 2010 LOS				C								
Notes												

Existing PM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (veh/h)	34	1017	180	195	756	120	324	615	435	180	215	21	
Future Volume (veh/h)	34	1017	180	195	756	120	324	615	435	180	215	21	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	35	1048	186	201	779	124	334	634	448	186	222	22	
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	631	1403	627	271	877	140	979	1101	493	226	301	135	
Arrive On Green	0.18	0.40	0.40	0.16	0.57	0.57	0.28	0.31	0.31	0.07	0.09	0.09	
Sat Flow, veh/h	3442	3539	1582	3442	3058	487	3442	3539	1583	3442	3539	1583	
Grp Volume(v), veh/h	35	1048	186	201	451	452	334	634	448	186	222	22	
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1770	1775	1721	1770	1583	1721	1770	1583	
Q Serve(g_s), s	1.4	41.9	5.3	9.2	36.5	36.5	12.7	24.8	44.8	8.8	10.1	2.1	
Cycle Q Clear(g_c), s	1.4	41.9	5.3	9.2	36.5	36.5	12.7	24.8	44.8	8.8	10.1	2.1	
Prop In Lane	1.00	1.00	1.00	1.00	0.27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	631	1403	627	271	508	509	979	1101	493	226	301	135	
V/C Ratio(X)	0.06	0.75	0.30	0.74	0.89	0.89	0.34	0.58	0.91	0.82	0.74	0.16	
Avail Cap(c_a), veh/h	631	1403	627	271	606	608	979	1246	558	246	1094	489	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.51	0.51	0.51	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	55.6	42.7	5.3	67.9	32.8	32.9	46.8	47.7	54.6	76.1	73.7	70.0	
Incr Delay (d2), s/veh	0.0	1.9	0.6	2.5	6.3	6.3	0.1	0.6	18.0	16.8	4.2	0.7	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	20.9	2.4	4.5	18.5	18.6	6.0	12.2	22.1	4.7	5.1	1.0	1.0	
LnGrp Delay(d), s/veh	55.6	44.6	6.0	70.4	39.1	39.1	46.8	48.3	72.6	92.9	77.9	70.7	
LnGrp LOS	E	D	A	E	D	D	D	D	E	F	E	E	
Approach Vol, veh/h	1269			1104				1416			430		
Approach Delay, s/veh	39.2			44.8				55.6			84.0		
Approach LOS	D			D				E			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	72.3	53.3	20.3	37.2	54.2	15.9	57.7						
Change Period (Y+Rc), s	6.9	6.3	* 6.3	6.9	* 6.9	5.1	6.3						
Max Green Setting (Gmax), s	57.7	18.9	* 51	14.0	* 57	11.8	58.1						
Max Q Clear Time (g_c+I), s	43.9	14.7	12.1	3.4	38.5	10.8	46.8						
Green Ext Time (p_c), s	0.1	8.9	2.8	1.9	7.3	8.0	0.0	4.5					
Intersection Summary													
HCM 2010 Ctrl Delay				50.8									
HCM 2010 LOS				D									
Notes													

Existing PM
17: Broadway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (veh/h)	363	1358	120	181	1123	47	144	450	265	117	504	170	
Future Volume (veh/h)	363	1358	120	181	1123	47	144	450	265	117	504	170	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	0.99	1.00	0.99	1.00	0.92	1.00	0.92	1.00	0.86	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	427	1598	141	213	1321	55	169	529	312	138	593	200	
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	459	1603	140	234	1460	61	182	515	303	149	573	192	
Arrive On Green	0.27	0.97	0.97	0.07	0.42	0.42	0.10	0.25	0.25	0.08	0.23	0.23	
Sat Flow, veh/h	3442	3290	287	3442	3462	144	1774	2071	1218	1774	2487	835	
Grp Volume(v), veh/h	427	852	887	213	674	702	169	452	389	138	421	372	
Grp Sat Flow(s), veh/h/ln	1721	1770	1808	1721	1770	1836	1774	1770	1520	1774	1770	1553	
Q Serve(g_s), s	20.0	54.8	80.4	10.1	58.8	59.0	15.6	41.0	41.0	12.7	38.0	38.0	
Cycle Q Clear(g_c), s	20.0	54.8	80.4	10.1	58.8	59.0	15.6	41.0	41.0	12.7	38.0	38.0	
Prop In Lane	1.00	1.00	0.16	1.00	1.00	0.08	1.00	1.00	1.00	0.80	1.00	0.54	
Lane Grp Cap(c), veh/h	459	862	881	234	746	774	182	440	378	149	408	358	
V/C Ratio(X)	0.93	0.99	1.01	0.91	0.90	0.91	0.93	1.03	1.03	0.92	1.03	1.04	
Avail Cap(c_a), veh/h	463	862	881	234	746	774	182	440	378	149	408	358	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	59.7	1.8	2.1	76.4	44.6	44.6	73.5	62.0	62.0	75.0	63.5	63.5	
Incr Delay (d2), s/veh	18.1	21.5	25.5	36.0	16.4	16.2	47.0	50.1	54.5	51.3	53.5	58.2	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	10.6	19.6	27.5	6.0	32.1	33.3	10.0	26.2	22.9	8.4	24.6	22.1	
LnGrp Delay(d), s/veh	77.8	23.3	27.6	112.4	61.0	60.8	120.5	112.1	116.5	126.3	117.0	121.7	
LnGrp LOS	E	C	F	F	E	E	F	F	F	F	F	F	
Approach Vol, veh/h	2166			1589				1010			931		
Approach Delay, s/veh	35.8			67.8				115.2			120.3		
Approach LOS	D			E				F			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	85.3	21.4	42.6	26.5	74.5	18.4	45.6						
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6					
Max Green Setting (Gmax), s	80.4	16.9	38.0	22.2	69.4	13.9	41.0						
Max Q Clear Time (g_c+I), s	82.4	17.6	40.0	22.0	61.0	14.7	43.0						
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0					
Intersection Summary													
HCM 2010 Ctrl Delay				72.6									
HCM 2010 LOS				E									
Notes													

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APPENDIX D
CUMULATIVE PROJECTS ASSIGNMENT

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INTERSECTION	DIRECTION	TOTAL CUMULATIVE						Escondido Growth						Sierra						Hallmark Communities (22 SF DU)					
		Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm
1. Nutmeg Street / Centre City Parkway	Sb	15	3	96	54	0	0	15	3	52	15	0	0			44	39								
	Wb	0	0	0	0	0	0	0	0	0	0	0	0												
	Nb	0	0	42	92	0	0	0	0	13	32	0	0			29	60								
	Eb	0	0	0	0	4	6	0	0	0	0	4	6												
1.9%																									
2. Country Club Lane / Golden Circle Drive	Sb	0	0	0	0	0	0	0	0	0	0	0	0												
	Wb	0	0	0	1	43	15	0	0	0	1	43	15												
	Nb	10	26	0	0	3	11	10	26	0	0	3	11												
	Eb	13	7	1	1	0	0	13	7	1	1	0	0												
3. Country Club Lane / Gary Lane	Sb	7	4	0	0	4	3	7	4	0	0	4	3												
	Wb	2	4	36	15	0	0	2	4	36	15	0	0												
	Nb	0	0	0	0	0	0	0	0	0	0	0	0												
	Eb	0	0	11	22	2	5	0	0	11	22	2	5												
4. Country Club Lane / Firestone Drive	Sb	0	0	0	0	0	0	0	0	0	0	0	0												
	Wb	0	0	38	19	9	4	0	0	38	19	9	4												
	Nb	4	6	0	0	0	1	4	6	0	0	0	1												
	Eb	0	1	15	30	0	0	0	1	15	30	0	0												
5. Country Club Lane / La Brea Street	Sb	0	0	0	0	0	0	0	0	0	0	0	0												
	Wb	0	0	45	22	1	2	0	0	45	22	1	2												
	Nb	2	1	0	0	1	1	2	1	0	0	1	1												
	Eb	0	2	18	32	0	0	0	2	18	32	0	0												
6. Country Club Lane / Nutmeg Street	Sb	6	2	13	5	5	2	6	2	13	5	5	2												
	Wb	2	3	40	17	29	15	2	3	40	17	29	15												
	Nb	15	35	3	13	1	5	15	35	3	13	1	5												
	Eb	3	3	16	26	1	3	3	3	16	26	1	3												
7. Country Club Lane / Centre City Parkway	Sb	29	18	103	50	17	12	14	4	74	25	17	12	15	14	29	25								
	Wb	9	9	43	23	35	34	9	9	43	23	25	13					10	21						
	Nb	7	17	45	77	5	13	7	17	26	38	5	13			19	39								
	Eb	7	6	33	34	5	12	7	6	33	34	5	12												
8. El Norte Parkway / Woodland Parkway	Sb	9	2	18	6	16	9	9	2	18	6	16	9												
	Wb	6	13	80	66	29	18	6	13	78	61	29	18									2	5		
	Nb	12	22	4	10	9	11	12	22	4	10	7	6											2	5
	Eb	11	6	41	64	2	3	6	4	36	62	2	3							5	2	5	2		
9. El Norte Parkway / Country Club Lane	Sb	43	17	0	0	14	7	43	17	0	0	14	7												
	Wb	2	11	78	77	2	4	2	11	76	72	2	4									2	5		
	Nb	1	1	0	1	0	1	1	1	0	1	0	1												
	Eb	0	1	51	63	15	33	0	1	46	61	15	33									5	2		

INTERSECTION	DIRECTION	TOTAL CUMULATIVE						Escondido Growth						Sierra						Hallmark Communities (22 SF DU)					
		Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm	Ram	Rpm	Tam	Tpm	Lam	Lpm
10. El Norte Parkway / Bennet Avenue	Sb	1	1	9	3	2	2	1	1	9	3	2	2												
	Wb	1	2	70	78	22	17	1	2	68	73	22	17									2	5		
	Nb	16	19	2	8	5	11	16	19	2	8	5	11												
	Eb	13	8	61	72	0	1	13	8	56	70	0	1									5	2		
11. El Norte Parkway / Nordahl Road	Sb	5	4	21	11	20	20	5	4	21	11	20	20												
	Wb	7	18	83	79	26	16	7	18	81	74	26	16									2	5		
	Nb	12	25	7	23	1	4	12	25	7	23	1	4												
	Eb	3	4	77	78	4	7	3	4	72	76	4	7									5	2		
12. El Norte Parkway / 15 SB Ramps	Sb	21	13	0	0	17	9	21	13	0	0	17	9												
	Wb	0	0	109	161	38	25	0	0	107	156	38	25									2	5		
	Nb	0	0	0	0	0	0	0	0	0	0	0	0												
	Eb	70	39	53	108	0	0	65	37	53	108	0	0							5	2				
13. El Norte Parkway / 15 NB Ramps	Sb	0	0	0	0	0	0	0	0	0	0	0	0												
	Wb	8	22	106	95	0	0	8	22	106	95	0	0												
	Nb	21	49	0	0	40	90	21	49	0	0	38	85											2	5
	Eb	0	0	62	93	9	24	0	0	62	93	9	24												
14. El Norte Parkway / 7 Oakes Road	Sb	7	12	1	1	3	2	7	12	1	1	3	2												
	Wb	4	3	103	91	18	8	4	3	103	91	18	8												
	Nb	11	18	1	2	8	20	11	18	1	2	8	20												
	Eb	18	11	72	118	3	10	18	11	72	118	3	10												
15. El Norte Parkway / Centre City Parkway	Sb	6	2	100	20	17	17	6	2	100	20	17	17												
	Wb	16	11	81	72	23	19	16	11	81	72	23	19												
	Nb	10	41	30	58	14	31	10	41	30	58	14	31												
	Eb	29	17	72	97	2	3	29	17	72	97	2	3												
16. El Norte Parkway / Broadway	Sb	43	16	73	48	18	11	43	16	73	48	18	11												
	Wb	5	4	139	107	16	17	5	4	139	107	16	17												
	Nb	11	25	46	43	10	14	11	25	46	43	10	14												
	Eb	9	11	68	129	24	34	9	11	68	129	24	34												
17. Rock Springs Road / Woodland Parkway	Sb	7	1	58	39	5	4	7	1	53	37	5	4									5	2		
	Wb	6	7	21	8	27	10	6	7	21	8	27	10												
	Nb	18	19	26	56	2	2	18	19	24	51	2	2									2	5		
	Eb	7	4	18	5	7	1	7	4	18	5	7	1												
18. Mission Avenue / Woodland Parkway	Sb	38	10	56	36	9	6	38	10	51	34	9	6									5	2		
	Wb	1	5	71	69	19	14	1	5	71	69	19	14												
	Nb	5	9	20	39	20	17	5	9	18	34	20	17									2	5		
	Eb	16	15	51	82	20	27	16	15	51	82	20	27												

**TABLE D-1
CUMULATIVE PROJECTS LIST**

Project Name	Description	Status
Newland Sierra	The Newland Sierra project includes a mix of single-family detached homes, attached townhomes, cluster homes, and age-targeted homes. The project also includes a retail center with approximately 81,000 square feet of commercial space and a K-8 school. The project is located north of Deer Springs Road and west of I-15 in unincorporated San Diego County.	Under review
Hallmark Communities (Borden Road 22)	The Hallmark Communities project is a 22-unit detached single-family home subdivision located at 1200 Borden Road in the city of San Marcos.	Under review

APPENDIX E

INTERSECTION ANALYSIS WORKSHEETS – EXISTING + PROJECT

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Intersection												
Int Delay, s/veh 1.4												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↕			↕		
Traffic Vol, veh/h	44	1	3	3	3	2	3	137	1	4	547	162
Future Vol, veh/h	44	1	3	3	3	2	3	137	1	4	547	162
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	1	4	4	4	2	4	163	1	5	651	193

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	931	928	748	931	1025	164	844	0	0	164	0	0
Stage 1	757	757	-	171	171	-	-	-	-	-	-	-
Stage 2	174	171	-	760	854	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	247	268	412	247	235	881	792	-	-	1414	-	-
Stage 1	400	416	-	831	757	-	-	-	-	-	-	-
Stage 2	828	757	-	398	375	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	241	265	412	242	232	881	792	-	-	1414	-	-
Mov Cap-2 Maneuver	241	265	-	242	232	-	-	-	-	-	-	-
Stage 1	398	413	-	827	753	-	-	-	-	-	-	-
Stage 2	818	753	-	391	372	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	23.8	17.8	0.2	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	792	-	-	248	290	1414	-	-
HCM Lane V/C Ratio	0.005	-	-	0.23	0.033	0.003	-	-
HCM Control Delay (s)	9.6	-	-	23.8	17.8	7.6	0	-
HCM Lane LOS	A	-	-	C	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.9	0.1	0	-	-

MOVEMENT SUMMARY

Site: 101 [2. EX+P AM]

2. Country Club / Golden Circle / Drwy A Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Country Club Ln											
3	L2	35	2.0	0.155	4.4	LOS A	0.7	18.8	0.14	0.04	35.0
8	T1	24	2.0	0.155	4.4	LOS A	0.7	18.8	0.14	0.04	35.0
18	R2	125	2.0	0.155	4.4	LOS A	0.7	18.8	0.14	0.04	33.9
Approach		184	2.0	0.155	4.4	LOS A	0.7	18.8	0.14	0.04	34.3
East: Country Club Ln											
1	L2	539	2.0	0.480	8.4	LOS A	3.5	88.6	0.31	0.15	31.1
6	T1	4	2.0	0.480	8.4	LOS A	3.5	88.6	0.31	0.15	31.1
16	R2	8	2.0	0.480	8.4	LOS A	3.5	88.6	0.31	0.15	30.3
Approach		551	2.0	0.480	8.4	LOS A	3.5	88.6	0.31	0.15	31.1
North: Proj Drwy A											
7	L2	16	2.0	0.111	6.9	LOS A	0.4	11.1	0.59	0.55	33.7
4	T1	53	2.0	0.111	6.9	LOS A	0.4	11.1	0.59	0.55	33.6
14	R2	1	2.0	0.111	6.9	LOS A	0.4	11.1	0.59	0.55	32.6
Approach		71	2.0	0.111	6.9	LOS A	0.4	11.1	0.59	0.55	33.6
West: Golden Circle Dr											
5	L2	1	2.0	0.270	9.4	LOS A	1.1	29.2	0.65	0.65	32.9
2	T1	13	2.0	0.270	9.4	LOS A	1.1	29.2	0.65	0.65	32.9
12	R2	151	2.0	0.270	9.4	LOS A	1.1	29.2	0.65	0.65	31.9
Approach		165	2.0	0.270	9.4	LOS A	1.1	29.2	0.65	0.65	32.0
All Vehicles		971	2.0	0.480	7.7	LOS A	3.5	88.6	0.36	0.24	32.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Existing + Proj AM
3: Country Club Ln & Gary Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↑	↑	↔	↔	↔		
Traffic Volume (veh/h)	26	132	429	24	75	85		
Future Volume (veh/h)	26	132	429	24	75	85		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	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	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	28	142	461	26	81	91		
Adj No. of Lanes	1	1	1	1	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	573	841	841	695	108	121		
Arrive On Green	0.45	0.45	0.45	0.45	0.14	0.14		
Sat Flow, veh/h	903	1863	1863	1540	780	876		
Grp Volume(v), veh/h	28	142	461	26	173	0		
Grp Sat Flow(s),veh/h/ln	903	1863	1863	1540	1666	0		
Q Serve(g_s), s	0.5	1.0	4.0	0.2	2.2	0.0		
Cycle Q Clear(g_c), s	4.5	1.0	4.0	0.2	2.2	0.0		
Prop In Lane	1.00			1.00	0.47	0.53		
Lane Grp Cap(c), veh/h	573	841	841	695	231	0		
V/C Ratio(X)	0.05	0.17	0.55	0.04	0.75	0.00		
Avail Cap(c_a), veh/h	906	1528	1528	1264	1367	0		
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	0.00		
Uniform Delay (d), s/veh	6.0	3.6	4.4	3.4	9.1	0.0		
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	4.8	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.1	0.5	2.1	0.1	1.3	0.0		
LnGrp Delay(d),s/veh	6.1	3.7	4.9	3.4	13.9	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h	170	487		173				
Approach Delay, s/veh	4.1	4.9		13.9				
Approach LOS	A	A		B				
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		14.4		7.5		14.4		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		18.0		18.0		18.0		
Max Q Clear Time (g_c+I1), s		6.5		4.2		6.0		
Green Ext Time (p_c), s		3.1		0.4		3.2		
Intersection Summary								
HCM 2010 Ctrl Delay				6.6				
HCM 2010 LOS				A				
Notes								

Existing + Proj AM
4: Firestone Dr & Country Club Ln

Escondido Country Club
06/19/2017

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↔
Traffic Vol, veh/h	201	14	0	503	0	54
Future Vol, veh/h	201	14	0	503	0	54
Conflicting Peds, #/hr	0	9	0	0	9	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	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	218	15	0	547	0	59
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	244
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	795
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	783
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	10			
HCM LOS						B
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	783	-	-	-		
HCM Lane V/C Ratio	0.075	-	-	-		
HCM Control Delay (s)	10	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.2	-	-	-		

MOVEMENT SUMMARY

Site: 101 [5. EX+P AM]

5. Country Club / La Brea / Drwy D Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: La Brea St											
3	L2	23	2.0	0.061	4.7	LOS A	0.2	6.3	0.43	0.30	34.2
8	T1	1	2.0	0.061	4.7	LOS A	0.2	6.3	0.43	0.30	34.1
18	R2	29	2.0	0.061	4.7	LOS A	0.2	6.3	0.43	0.30	33.1
Approach		53	2.0	0.061	4.7	LOS A	0.2	6.3	0.43	0.30	33.6
East: Country Club Ln											
1	L2	15	2.0	0.430	7.4	LOS A	3.0	75.7	0.19	0.07	34.0
6	T1	490	2.0	0.430	7.4	LOS A	3.0	75.7	0.19	0.07	33.9
16	R2	7	2.0	0.430	7.4	LOS A	3.0	75.7	0.19	0.07	32.9
Approach		512	2.0	0.430	7.4	LOS A	3.0	75.7	0.19	0.07	33.9
North: Proj Drwy D											
7	L2	16	2.0	0.049	5.9	LOS A	0.2	4.7	0.55	0.46	33.4
4	T1	10	2.0	0.049	5.9	LOS A	0.2	4.7	0.55	0.46	33.3
14	R2	7	2.0	0.049	5.9	LOS A	0.2	4.7	0.55	0.46	32.4
Approach		33	2.0	0.049	5.9	LOS A	0.2	4.7	0.55	0.46	33.2
West: Country Club Ln											
5	L2	5	2.0	0.251	5.3	LOS A	1.3	34.1	0.18	0.07	35.1
2	T1	272	2.0	0.251	5.3	LOS A	1.3	34.1	0.18	0.07	35.0
12	R2	17	2.0	0.251	5.3	LOS A	1.3	34.1	0.18	0.07	34.0
Approach		295	2.0	0.251	5.3	LOS A	1.3	34.1	0.18	0.07	35.0
All Vehicles		892	2.0	0.430	6.5	LOS A	3.0	75.7	0.22	0.10	34.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Existing + Proj AM 6: Nutmeg St & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗
Traffic Volume (veh/h)	16	217	59	342	405	25	22	33	156	50	145	56
Future Volume (veh/h)	16	217	59	342	405	25	22	33	156	50	145	56
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	17	233	63	368	435	27	24	35	168	54	156	60
Adj No. of Lanes	1	2	0	1	2	0	1	0	1	0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	30	578	152	445	1499	93	111	78	282	151	259	89
Arrive On Green	0.02	0.21	0.21	0.25	0.44	0.44	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1774	2755	726	1774	3381	209	89	335	1207	228	1106	381
Grp Volume(v), veh/h	17	148	148	368	227	235	227	0	0	270	0	0
Grp Sat Flow(s), veh/h/ln	1774	1770	1711	1774	1770	1820	1630	0	0	1714	0	0
Q Serve(g_s), s	0.4	3.2	3.3	8.7	3.6	3.6	0.0	0.0	0.0	0.7	0.0	0.0
Cycle Q Clear(g_c), s	0.4	3.2	3.3	8.7	3.6	3.6	5.4	0.0	0.0	6.0	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.11	0.11		0.74	0.20		0.22
Lane Grp Cap(c), veh/h	30	371	359	445	785	807	472	0	0	499	0	0
V/C Ratio(X)	0.56	0.40	0.41	0.83	0.29	0.29	0.48	0.00	0.00	0.54	0.00	0.00
Avail Cap(c_a), veh/h	160	720	697	622	1181	1214	741	0	0	778	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	21.6	15.1	15.1	15.7	7.9	7.9	15.0	0.0	0.0	15.3	0.0	0.0
Incr Delay (d2), s/veh	15.3	0.7	0.8	6.4	0.2	0.2	0.8	0.0	0.0	0.9	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.3	1.6	1.6	5.0	1.8	1.9	2.6	0.0	0.0	3.1	0.0	0.0
LnGrp Delay(d), s/veh	36.9	15.7	15.9	22.1	8.1	8.1	15.8	0.0	0.0	16.2	0.0	0.0
LnGrp LOS	D	B	B	C	A	A	B			B		
Approach Vol, veh/h	313			830				227			270	
Approach Delay, s/veh	17.0			14.3				15.8			16.2	
Approach LOS	B			B				B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.6	13.8		14.9	5.3	24.1		14.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	18.0		18.0	4.0	29.5		18.0				
Max Q Clear Time (g_c+I), s	5.3			8.0	2.4	5.6		7.4				
Green Ext Time (p_c), s	0.5	3.7		2.3	0.0	4.8		2.3				

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
N:\2614\Analysis\Intersection\Existing + Proj AM.syn

Synchro 9 Report

Existing + Proj AM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	62	359	111	266	456	92	276	77	178	775	147	
Future Volume (veh/h)	62	359	111	266	456	92	276	77	178	775	147	
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.98	1.00	0.99	1.00	0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	67	390	121	289	496	100	78	300	84	193	842	160
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	86	661	291	338	1163	514	100	865	382	237	1137	509
Arrive On Green	0.05	0.19	0.19	0.19	0.33	0.33	0.06	0.24	0.24	0.13	0.32	0.32
Sat Flow, veh/h	1774	3539	1557	1774	3539	1563	1774	3539	1561	1774	3539	1583
Grp Volume(v), veh/h	67	390	121	289	496	100	78	300	84	193	842	160
Grp Sat Flow(s), veh/h/ln	1774	1770	1557	1774	1770	1563	1774	1770	1561	1774	1770	1583
Q Serve(g_s), s	2.7	7.4	5.0	11.6	8.0	3.4	3.2	5.1	3.2	7.8	15.6	5.6
Cycle Q Clear(g_c), s	2.7	7.4	5.0	11.6	8.0	3.4	3.2	5.1	3.2	7.8	15.6	5.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	86	661	291	338	1163	514	100	865	382	237	1137	509
V/C Ratio(X)	0.78	0.59	0.42	0.86	0.43	0.19	0.78	0.35	0.22	0.82	0.74	0.31
Avail Cap(c_a), veh/h	208	868	382	471	1393	615	157	964	425	350	1349	604
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	34.5	27.3	26.3	28.8	19.2	17.7	34.2	22.9	22.2	30.9	22.2	18.8
Incr Delay (d2), s/veh	14.0	0.8	0.9	10.7	0.2	0.2	12.2	0.2	0.3	9.0	1.8	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	7	3.7	2.2	6.6	4.0	1.5	1.9	2.5	1.4	4.4	7.9	2.5
LnGrp Delay(d), s/veh	48.5	28.1	27.3	39.4	19.5	17.9	46.4	23.1	22.4	40.0	24.0	19.2
LnGrp LOS	D	C	C	D	B	B	D	C	C	D	C	B
Approach Vol, veh/h	578			885			462			1195		
Approach Delay, s/veh	30.3			25.8			26.9			25.9		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.4	18.5	18.2	8.6	28.1	8.1	28.6					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	19.5	18.0	6.5	28.0	8.6	28.9					
Max Q Clear Time (g_c+I), s	7.1	13.6	9.4	5.2	17.6	4.7	10.0					
Green Ext Time (p_c), s	0.2	7.0	0.4	4.2	0.0	6.0	0.0	6.7				

HCM 2010 Signalized Intersection Summary
N:\2614\Analysis\Intersection\Existing + Proj AM.syn

Synchro 9 Report

Intersection Summary	
HCM 2010 Ctrl Delay	26.9
HCM 2010 LOS	C

Existing + Proj AM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	25	404	60	324	841	67	69	43	132	173	188	93
Future Volume (veh/h)	25	404	60	324	841	67	69	43	132	173	188	93
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	27	444	66	356	924	74	76	47	145	190	207	102
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	35	1214	179	451	939	774	99	261	221	209	238	117
Arrive On Green	0.02	0.39	0.39	0.13	0.50	0.50	0.06	0.14	0.14	0.12	0.20	0.20
Sat Flow, veh/h	1774	3094	457	3442	1863	1537	1774	1863	1580	1774	1179	581
Grp Volume(v), veh/h	27	253	257	356	924	74	76	47	145	190	0	309
Grp Sat Flow(s), veh/h/ln	1774	1770	1782	1721	1863	1537	1774	1863	1580	1774	0	1760
Q Serve(g_s), s	1.2	8.3	8.4	8.3	40.2	1.1	3.5	1.8	7.2	8.7	0.0	14.0
Cycle Q Clear(g_c), s	1.2	8.3	8.4	8.3	40.2	1.1	3.5	1.8	7.2	8.7	0.0	14.0
Prop In Lane	1.00	1.00	0.26	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.33
Lane Grp Cap(c), veh/h	35	694	699	451	939	774	99	261	221	209	0	355
V/C Ratio(X)	0.78	0.36	0.37	0.79	0.98	0.10	0.76	0.18	0.65	0.91	0.00	0.87
Avail Cap(c_a), veh/h	86	694	699	451	939	774	144	380	322	209	0	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.2	17.7	17.8	34.7	20.1	3.1	38.3	31.2	33.5	35.9	0.0	31.8
Incr Delay (d2), s/veh	30.2	0.3	0.3	4.6	25.5	0.1	13.4	0.3	3.3	38.2	0.0	15.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	9	4.1	4.2	4.2	27.2	0.8	2.1	1.0	3.3	6.5	0.0	8.3
LnGrp Delay(d), s/veh	70.4	18.1	18.1	39.3	45.6	3.2	51.8	31.6	36.8	74.1	0.0	47.2
LnGrp LOS	E	B	B	D	D	A	D	C	D	E		D
Approach Vol, veh/h	537			1354			268			499		
Approach Delay, s/veh	20.7			41.6			40.1			57.5		
Approach LOS	C			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	15.3	36.8	9.1	21.1	6.1	46.0					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	16.8	15.0	30.5	6.7	19.8	4.0	41.5					
Max Q Clear Time (g_c+I), s	9.2	10.3	10.4	5.5	16.0	3.2	42.2					
Green Ext Time (p_c), s	0.0	0.6	0.5	2.8	0.1	0.6	0.0	0.0				

HCM 2010 Signalized Intersection Summary
N:\2614\Analysis\Intersection\Existing + Proj AM.syn

Synchro 9 Report

Intersection Summary	
HCM 2010 Ctrl Delay	40.2
HCM 2010 LOS	D

Existing + Proj AM
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	175	480	1	20	805	44	2	1	11	197	3	500
Future Volume (veh/h)	175	480	1	20	805	44	2	1	11	197	3	500
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	190	522	1	22	875	48	2	1	12	214	3	543
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	1287	2	51	1063	58	34	17	44	571	8	513
Arrive On Green	0.07	0.36	0.36	0.03	0.31	0.31	0.03	0.03	0.03	0.33	0.33	0.33
Sat Flow, veh/h	1774	3624	7	1774	3411	187	1202	601	1570	1751	25	1575
Grp Volume(v), veh/h	190	255	268	22	454	469	3	0	12	217	0	543
Grp Sat Flow(s), veh/h/ln	1774	1770	1861	1774	1770	1829	1803	0	1570	1775	0	1575
Q Serve(g_s), s	6.0	9.0	9.0	1.0	19.7	19.7	0.1	0.0	0.6	7.8	0.0	27.0
Cycle Q Clear(g_c), s	6.0	9.0	9.0	1.0	19.7	19.7	0.1	0.0	0.6	7.8	0.0	27.0
Prop In Lane	1.00	0.00	1.00	0.00	0.10	0.67	0.00	0.00	1.00	0.99	0.00	1.00
Lane Grp Cap(c), veh/h	128	628	661	51	551	570	51	0	44	579	0	513
V/C Ratio(X)	1.48	0.41	0.41	0.43	0.82	0.82	0.06	0.00	0.27	0.38	0.00	1.06
Avail Cap(c_a), veh/h	128	628	661	128	605	625	588	0	512	579	0	513
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	20.1	20.1	39.6	26.4	26.4	39.2	0.0	39.4	21.4	0.0	27.9
Incr Delay (d2), s/veh	252.4	0.5	0.5	2.1	8.7	8.4	0.6	0.0	3.9	0.5	0.0	56.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	9	4.5	4.7	0.5	10.9	11.2	0.1	0.0	0.3	3.9	0.0	19.6
LnGrp Delay(d), s/veh	290.8	20.6	20.6	41.7	35.1	34.8	39.8	0.0	43.3	21.9	0.0	83.9
LnGrp LOS	F	C	C	D	D	C	D		D	C		F
Approach Vol, veh/h	713			945			15			760		
Approach Delay, s/veh	92.6			35.1			42.6			66.2		
Approach LOS	F			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	35.6	32.5	10.5	32.0	7.8							
Change Period (Y+Rc), s	4.5	6.2	5.5	4.5	6.2	5.5						
Max Green Setting (Gmax), s	28.3	27.0	6.0	28.3	27.0							
Max Q Clear Time (g_c+I), s	11.0	29.0	8.0	21.7	2.6							
Green Ext Time (p_c), s	0.0	9.1	0.0	0.0	3.9	0.0						

Intersection Summary	
HCM 2010 Ctrl Delay	61.7
HCM 2010 LOS	E

Existing + Proj AM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	4	614	159	239	729	9	60	32	169	16	84	12
Future Volume (veh/h)	4	614	159	239	729	9	60	32	169	16	84	12
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	5	722	187	281	858	11	71	38	199	19	99	14
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	12	893	231	328	1792	23	96	341	288	39	240	34
Arrive On Green	0.01	0.32	0.32	0.18	0.50	0.50	0.05	0.18	0.18	0.02	0.15	0.15
Sat Flow, veh/h	1774	2766	716	1774	3577	46	1774	1863	1576	1774	1594	225
Grp Volume(v), veh/h	5	462	447	281	424	445	71	38	199	19	0	113
Grp Sat Flow(s), veh/h/ln	1774	1770	1713	1774	1770	1853	1774	1863	1576	1774	0	1820
Q Serve(g_s), s	0.2	16.2	16.2	10.4	10.7	10.7	2.7	1.2	8.0	0.7	0.0	3.8
Cycle Q Clear(g_c), s	0.2	16.2	16.2	10.4	10.7	10.7	2.7	1.2	8.0	0.7	0.0	3.8
Prop In Lane	1.00	0.42	1.00	0.00	0.02	1.00	0.00	1.00	1.00	0.00	0.00	1.00
Lane Grp Cap(c), veh/h	12	571	553	328	887	929	96	341	288	39	0	274
V/C Ratio(X)	0.43	0.81	0.81	0.86	0.48	0.48	0.74	0.11	0.69	0.48	0.00	0.41
Avail Cap(c_a), veh/h	131	615	595	389	887	929	131	741	627	131	0	737
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.6	21.1	21.1	26.8	11.1	11.1	31.6	23.1	25.9	32.8	0.0	26.1
Incr Delay (d2), s/veh	22.5	7.5	7.7	15.0	0.5	0.5	13.3	0.1	2.2	8.9	0.0	0.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2	9.0	8.8	6.4	5.3	5.6	1.7	0.6	3.6	0.4	0.0	2.0
LnGrp Delay(d), s/veh	56.1	28.5	28.8	41.8	11.6	11.6	44.9	23.2	28.1	41.7	0.0	26.8
LnGrp LOS	E	C	C	D	B	B	D	C	C	D		C
Approach Vol, veh/h	914			1150			308			132		
Approach Delay, s/veh	28.8			19.0			31.4			29.0		
Approach LOS	C			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.9	7.7	15.2	4.9	40.0	5.5	17.4					
Change Period (Y+Rc), s	4.5	6.0	4.0	5.5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	23.6	5.0	28	5.0	33.5	5.0	27.0					
Max Q Clear Time (g_c+I), s	18.2	4.7	5.8	2.2	12.7	2.7	10.0					
Green Ext Time (p_c), s	0.2	3.7	0.0	1.1	0.0	11.8	0.0	1.1				

Intersection Summary	
HCM 2010 Ctrl Delay	24.6
HCM 2010 LOS	C

Notes

Existing + Proj AM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	81	1042	7	8	736	37	43	25	16	26	14	76	
Future Volume (veh/h)	81	1042	7	8	736	37	43	25	16	26	14	76	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	88	1133	8	9	800	40	47	27	17	28	15	83	
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	111	1859	13	17	1588	79	290	153	96	341	36	197	
Arrive On Green	0.06	0.52	0.52	0.01	0.46	0.46	0.14	0.14	0.14	0.14	0.14	0.14	
Sat Flow, veh/h	1774	3602	25	1774	3431	172	1292	1070	674	1357	248	1372	
Grp Volume(v), veh/h	88	557	584	9	413	427	47	0	44	28	0	98	
Grp Sat Flow(s), veh/h/ln	1774	1770	1858	1774	1770	1832	1292	0	1744	1357	0	1621	
Q Serve(g_s), s	2.0	9.0	9.0	0.2	6.7	6.7	1.4	0.0	0.9	0.8	0.0	2.2	
Cycle Q Clear(g_c), s	2.0	9.0	9.0	0.2	6.7	6.7	3.6	0.0	0.9	1.7	0.0	2.2	
Prop In Lane	1.00	0.01	1.00	1.00	0.09	1.00	0.39	1.00	0.39	1.00	0.85	1.00	
Lane Grp Cap(c), veh/h	111	913	959	17	819	848	290	0	250	341	0	232	
V/C Ratio(X)	0.79	0.61	0.61	0.53	0.50	0.50	0.16	0.00	0.18	0.08	0.00	0.42	
Avail Cap(c_a), veh/h	318	1142	1200	179	1003	1039	616	0	689	683	0	640	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	18.8	7.0	7.0	20.1	7.7	7.7	17.6	0.0	15.3	16.1	0.0	15.9	
Incr Delay (d2), s/veh	11.9	0.7	0.6	23.7	0.5	0.5	0.3	0.0	0.3	0.1	0.0	1.2	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	3	4.5	4.7	0.2	3.3	3.4	0.5	0.0	0.5	0.3	0.0	1.1	
LnGrp Delay(d), s/veh	30.8	7.6	7.6	43.8	8.1	8.1	17.8	0.0	15.7	16.2	0.0	17.1	
LnGrp LOS	C	A	A	D	A	A	B		B	B		B	
Approach Vol, veh/h	1229			849				91			126		
Approach Delay, s/veh	9.3			8.5				16.8			16.9		
Approach LOS	A			A				B			B		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	4.9	25.5		10.3	7.0	23.4		10.3					
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5					
Max Green Setting (Gmax), s	26.3	16.1		7.3	23.1		16.1						
Max Q Clear Time (g_c+I), s	11.0	4.2		4.0	8.7		5.6						
Green Ext Time (p_c), s	0.0	10.0		0.8	0.0	9.6		0.7					

Intersection Summary		
HCM 2010 Ctrl Delay		9.7
HCM 2010 LOS		A

Existing + Proj AM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	40	784	45	274	865	85	18	82	125	233	274	57	
Future Volume (veh/h)	40	784	45	274	865	85	18	82	125	233	274	57	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	41	800	0	280	883	87	18	84	128	238	280	58	
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	68	969	434	379	1505	148	37	194	165	280	449	382	
Arrive On Green	0.04	0.27	0.00	0.21	0.46	0.46	0.02	0.10	0.10	0.16	0.24	0.24	
Sat Flow, veh/h	1774	3539	1583	1774	3255	321	1774	1863	1583	1774	1863	1583	
Grp Volume(v), veh/h	41	800	0	280	480	490	18	84	128	238	280	58	
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1806	1774	1863	1583	1774	1863	1583	
Q Serve(g_s), s	1.7	16.1	0.0	11.2	15.2	15.2	0.8	3.2	3.7	9.9	10.2	2.2	
Cycle Q Clear(g_c), s	1.7	16.1	0.0	11.2	15.2	15.2	0.8	3.2	3.7	9.9	10.2	2.2	
Prop In Lane	1.00	1.00	1.00	1.00	0.18	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	68	969	434	379	818	835	37	194	165	280	449	382	
V/C Ratio(X)	0.61	0.83	0.00	0.74	0.59	0.59	0.49	0.43	0.78	0.85	0.62	0.15	
Avail Cap(c_a), veh/h	140	1214	543	468	934	953	117	762	648	351	1008	857	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	35.9	25.8	0.0	27.8	15.0	15.0	36.7	31.8	12.5	31.0	25.7	22.6	
Incr Delay (d2), s/veh	6.3	3.6	0.0	4.2	0.6	0.6	7.2	1.1	5.7	13.8	1.1	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	0	8.3	0.0	5.9	7.5	7.6	0.4	1.7	2.6	5.9	5.3	1.0	
LnGrp Delay(d), s/veh	42.2	29.4	0.0	32.1	15.6	15.6	43.9	33.0	18.2	44.9	26.7	22.8	
LnGrp LOS	D	C		C	B	B	D	C	B	D	C	C	
Approach Vol, veh/h	841			1250				230			576		
Approach Delay, s/veh	30.0			19.3				25.6			33.8		
Approach LOS	C			B				C			C		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	31.2	25.8	5.6	23.3	6.9	40.0	16.0	12.9					
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0					
Max Green Setting (Gmax), s	30.0	* 26	5.0	41.0	6.0	40.0	15.0	31.0					
Max Q Clear Time (g_c+I), s	18.1	2.8	12.2	3.7	17.2	11.9	5.7						
Green Ext Time (p_c), s	3.0	2.6	0.0	2.3	0.0	5.4	0.2	2.2					

Intersection Summary		
HCM 2010 Ctrl Delay		25.8
HCM 2010 LOS		C

Notes

Existing + Proj AM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	567	725	396	1146	0	0	0	0	184	1	223
Future Volume (veh/h)	0	567	725	396	1146	0	0	0	0	184	1	223
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	597	763	417	1206	0				274	0	150
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2109	942	496	2770	0				419	0	187
Arrive On Green	0.00	0.60	0.60	0.10	0.52	0.00				0.12	0.00	0.12
Sat Flow, veh/h	0	3632	1582	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	597	763	417	1206	0				274	0	150
Grp Sat Flow(s), veh/h/ln	0	1770	1582	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	9.0	41.4	13.1	23.1	0.0				8.1	0.0	10.2
Cycle Q Clear(g_c), s	0.0	9.0	41.4	13.1	23.1	0.0				8.1	0.0	10.2
Prop In Lane	0.00			1.00	1.00	0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2109	942	496	2770	0				419	0	187
V/C Ratio(X)	0.00	0.28	0.81	0.84	0.44	0.00				0.65	0.00	0.80
Avail Cap(c_a), veh/h	0	2109	942	648	2770	0				600	0	268
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.58	0.58	0.75	0.75	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.8	17.4	48.4	11.2	0.0				46.3	0.0	47.2
Incr Delay (d2), s/veh	0.0	0.2	4.5	5.9	0.4	0.0				1.7	0.0	10.8
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	0.0	4.5	19.2	6.7	11.4	0.0				4.1	0.0	5.0
LnGrp Delay(d), s/veh	0.0	11.0	21.8	54.3	11.6	0.0				48.1	0.0	58.0
LnGrp LOS		B	C	D	B					D		E
Approach Vol, veh/h		1360			1623					424		
Approach Delay, s/veh		17.1			22.5					51.6		
Approach LOS		B			C					D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	20.6	71.3		18.1		91.9						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	55.1	5.1		18.6		80.5						
Max Q Clear Time (g_c+1), s	43.4			12.2		25.1						
Green Ext Time (p_c), s	0.7	9.5		0.9		27.9						
Intersection Summary												
HCM 2010 Ctrl Delay					24.0							
HCM 2010 LOS					C							
Notes												

Existing + Proj AM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑↑		↑	↑	↑	↑	↑
Traffic Volume (veh/h)	90	661	0	0	1119	87	424	1	221	0	0	0
Future Volume (veh/h)	90	661	0	0	1119	87	424	1	221	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), veh	0	0	0	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			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	96	703	0	0	1190	93	525	0	157			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	120	2559	0	0	2169	970	631	0	281			
Arrive On Green	0.14	1.00	0.00	0.00	0.61	0.61	0.18	0.00	0.18			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	96	703	0	0	1190	93	525	0	157			
Grp Sat Flow(s), veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	5.8	0.0	0.0	0.0	21.6	2.7	15.7	0.0	10.0			
Cycle Q Clear(g_c), s	5.8	0.0	0.0	0.0	21.6	2.7	15.7	0.0	10.0			
Prop In Lane	1.00				0.00	0.00	1.00	1.00	1.00			
Lane Grp Cap(c), veh/h	120	2559	0	0	2169	970	631	0	281			
V/C Ratio(X)	0.80	0.27	0.00	0.00	0.55	0.10	0.83	0.00	0.56			
Avail Cap(c_a), veh/h	214	2559	0	0	2169	970	868	0	387			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.94	0.94	0.00	0.00	0.85	0.85	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.8	0.0	0.0	0.0	12.4	8.8	43.6	0.0	41.3			
Incr Delay (d2), s/veh	10.9	0.2	0.0	0.0	0.8	0.2	5.1	0.0	1.7			
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	0.1	0.0	0.0	10.7	1.2	8.2	0.0	4.5			
LnGrp Delay(d), s/veh	57.7	0.2	0.0	0.0	13.3	8.9	48.7	0.0	43.0			
LnGrp LOS	E	A			B	A	D		D			
Approach Vol, veh/h	799				1283		682					
Approach Delay, s/veh	7.2				13.0		47.4					
Approach LOS	A				B		D					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		85.3			12.1	73.2		24.7				
Change Period (Y+Rc), s		5.8			4.7	5.8		5.1				
Max Green Setting (Gmax), s		72.2			* 13	54.2		26.9				
Max Q Clear Time (g_c+1), s		2.0			7.8	23.6		17.7				
Green Ext Time (p_c), s		22.5			0.1	16.5		1.8				
Intersection Summary												
HCM 2010 Ctrl Delay					19.8							
HCM 2010 LOS					B							
Notes												

Existing + Proj AM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↖	↖↗	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	27	767	194	194	1087	46	83	8	114	28	11	69
Future Volume (veh/h)	27	767	194	194	1087	46	83	8	114	28	11	69
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	29	834	211	211	1182	50	90	9	124	30	12	75
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	46	1194	302	262	1897	80	300	19	261	259	39	244
Arrive On Green	0.03	0.43	0.43	0.15	0.55	0.55	0.18	0.18	0.18	0.18	0.18	0.18
Sat Flow, veh/h	1774	2799	708	1774	3460	146	1301	108	1487	1249	222	1390
Grp Volume(v), veh/h	29	527	518	211	604	628	90	0	133	30	0	87
Grp Sat Flow(s), veh/h/ln	1774	1770	1737	1774	1770	1837	1301	0	1594	1249	0	1612
Q Serve(g_s), s	0.9	13.1	13.1	6.2	12.6	12.6	3.5	0.0	4.0	1.2	0.0	2.5
Cycle Q Clear(g_c), s	0.9	13.1	13.1	6.2	12.6	12.6	6.0	0.0	4.0	5.2	0.0	2.5
Prop In Lane	1.00	0.41	1.00	1.00	0.08	1.00	1.00	0.93	1.00	0.86	1.00	0.86
Lane Grp Cap(c), veh/h	46	755	741	262	970	1007	300	0	279	259	0	283
V/C Ratio(X)	0.63	0.70	0.70	0.80	0.62	0.62	0.30	0.00	0.48	0.12	0.00	0.31
Avail Cap(c_a), veh/h	135	755	741	345	970	1007	507	0	532	457	0	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.0	12.6	12.6	22.2	8.4	8.4	22.0	0.0	20.0	22.4	0.0	19.4
Incr Delay (d2), s/veh	13.0	5.3	5.4	9.9	3.0	2.9	0.6	0.0	1.3	0.2	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6	7.4	7.3	3.8	6.9	7.1	1.3	0.0	1.9	0.4	0.0	1.2
LnGrp Delay(d), s/veh	39.0	18.0	18.1	32.1	11.4	11.3	22.6	0.0	21.3	22.6	0.0	20.0
LnGrp LOS	D	B	B	C	B	B	C		C	C		B
Approach Vol, veh/h	1074			1443			223			117		
Approach Delay, s/veh	18.6			14.4			21.8			20.7		
Approach LOS	B			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.5	27.5		14.0	5.9	34.1		14.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.0	23.0		18.0	4.1	29.4		18.0				
Max Q Clear Time (g_c+I), s	15.1	15.1		7.2	2.9	14.6		8.0				
Green Ext Time (p_c), s	0.1	6.5		1.3	0.0	11.0		1.2				

Intersection Summary												
HCM 2010 Ctrl Delay	16.8											
HCM 2010 LOS	B											

Existing + Proj AM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↖	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗	↖↗
Traffic Volume (veh/h)	21	765	307	246	855	170	143	330	102	183	1084	63
Future Volume (veh/h)	21	765	307	246	855	170	143	330	102	183	1084	63
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	22	789	316	254	881	175	147	340	105	189	1118	65
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	370	1257	562	296	967	192	208	1220	546	229	1215	544
Arrive On Green	0.11	0.36	0.36	0.11	0.44	0.44	0.06	0.34	0.34	0.07	0.34	0.34
Sat Flow, veh/h	3442	3539	1582	3442	2943	584	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	22	789	316	254	530	526	147	340	105	189	1118	65
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1770	1758	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	0.9	30.5	20.8	12.0	46.2	46.2	6.9	11.5	7.7	8.9	50.0	4.6
Cycle Q Clear(g_c), s	0.9	30.5	20.8	12.0	46.2	46.2	6.9	11.5	7.7	8.9	50.0	4.6
Prop In Lane	1.00	1.00	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	370	1257	562	296	581	578	208	1220	546	229	1215	544
V/C Ratio(X)	0.06	0.63	0.56	0.86	0.91	0.91	0.71	0.28	0.19	0.82	0.92	0.12
Avail Cap(c_a), veh/h	370	1257	562	398	616	611	209	1223	547	250	1266	566
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.1	44.2	26.2	72.1	44.2	44.2	76.1	39.2	38.0	76.1	52.0	37.1
Incr Delay (d2), s/veh	0.0	1.7	2.9	1.1	2.7	2.7	8.9	0.1	0.2	16.8	10.8	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5	15.2	9.5	5.7	22.9	22.8	3.5	5.6	3.4	4.8	26.2	2.0
LnGrp Delay(d), s/veh	66.2	45.9	29.1	73.2	46.9	46.9	84.9	39.4	38.2	92.8	62.8	37.2
LnGrp LOS	E	D	C	E	D	D	F	D	D	F	E	D
Approach Vol, veh/h	1127			1310			592			1372		
Approach Delay, s/veh	41.6			52.0			50.5			65.7		
Approach LOS	D			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.3	65.5	16.3	63.0	24.6	61.1	16.1	63.2				
Change Period (Y+Rc), s	6.1	6.9	6.3	6.3	6.9	6.9	5.1	6.3				
Max Green Setting (Gmax), s	19.5	52.5	10.0	59	14.0	57	12.0	57.0				
Max Q Clear Time (g_c+I), s	32.5	8.9	52.0	2.9	48.2	10.9	13.5					
Green Ext Time (p_c), s	0.2	9.8	0.4	4.6	6.6	5.8	0.0	3.6				

Intersection Summary												
HCM 2010 Ctrl Delay	53.4											
HCM 2010 LOS	D											

Notes

Existing + Proj AM
17: Broadway & El Norte Pkwy

Escondido Country Club
06/19/2017



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		
Traffic Volume (veh/h)	256	723	95	172	1471	53	108	488	113	194	769	451	
Future Volume (veh/h)	256	723	95	172	1471	53	108	488	113	194	769	451	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	0.99	1.00	0.92	1.00	0.90	1.00	0.90		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	301	851	112	202	1731	62	127	574	133	228	905	531	
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	261	1290	170	246	1417	51	113	744	172	249	714	404	
Arrive On Green	0.08	0.41	0.41	0.07	0.41	0.41	0.06	0.27	0.27	0.14	0.34	0.34	
Sat Flow, veh/h	3442	3139	413	3442	3485	124	1774	2807	648	1774	2090	1181	
Grp Volume(v), veh/h	301	480	483	202	875	918	127	361	346	228	761	675	
Grp Sat Flow(s), veh/h/ln	1721	1770	1783	1721	1770	1840	1774	1770	1685	1774	1770	1501	
Q Serve(g_s), s	12.5	36.1	36.1	9.6	67.1	67.1	10.5	31.1	31.3	20.9	56.4	56.4	
Cycle Q Clear(g_c), s	12.5	36.1	36.1	9.6	67.1	67.1	10.5	31.1	31.3	20.9	56.4	56.4	
Prop In Lane	1.00	0.23	1.00	0.07	1.00	0.07	1.00	0.38	1.00	0.07	0.79		
Lane Grp Cap(c), veh/h	261	727	733	246	720	748	113	469	447	249	605	513	
V/C Ratio(X)	1.15	0.66	0.66	0.82	1.22	1.23	1.12	0.77	0.77	0.92	1.26	1.32	
Avail Cap(c_a), veh/h	261	727	733	330	720	748	113	469	447	287	605	513	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	76.3	39.3	39.3	75.6	48.9	49.0	77.3	56.0	56.1	70.0	54.3	54.3	
Incr Delay (d2), s/veh	96.9	3.5	3.4	11.6	109.7	113.8	122.3	7.6	8.3	29.9	129.1	155.5	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	18.3	18.4	4.9	54.7	57.7	9.0	16.2	15.6	12.3	49.2	45.5		
LnGrp Delay(d), s/veh	173.1	42.7	42.7	87.2	158.7	162.7	199.5	63.6	64.3	99.8	183.4	209.8	
LnGrp LOS	F	D	D	F	F	F	F	E	E	F	F	F	
Approach Vol, veh/h	1264			1995				834			1664		
Approach Delay, s/veh	73.8			153.3				84.6			182.6		
Approach LOS	E			F				F			F		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	72.7	15.0	61.0	17.0	72.0	27.6	48.4	
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6
Max Green Setting (Gmax), s	63.8	10.5	56.4	12.5	67.1	26.7	40.2	
Max Q Clear Time (g_c+I), s	38.1	12.5	58.4	14.5	69.1	22.9	33.3	
Green Ext Time (p_c), s	0.2	20.4	0.0	0.0	0.0	0.2	5.9	

Intersection Summary	
HCM 2010 Ctrl Delay	134.4
HCM 2010 LOS	F

Existing + Proj PM
1: Centre City Parkway & Nutmeg St

Escondido Country Club
06/19/2017

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔			↔↔			↔↔			↔↔		
Traffic Vol, veh/h	65	2	2	4	0	2	2	340	0	0	159	32
Future Vol, veh/h	65	2	2	4	0	2	2	340	0	0	159	32
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	2	2	5	0	2	2	405	0	0	189	38

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	619	618	208	621	637	405	227	0	0	405	0	0
Stage 1	208	208	-	410	410	-	-	-	-	-	-	-
Stage 2	411	410	-	211	227	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	401	405	832	400	395	646	1341	-	-	1154	-	-
Stage 1	794	730	-	619	595	-	-	-	-	-	-	-
Stage 2	618	595	-	791	716	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	399	404	832	397	394	646	1341	-	-	1154	-	-
Mov Cap-2 Maneuver	399	404	-	397	394	-	-	-	-	-	-	-
Stage 1	793	730	-	618	594	-	-	-	-	-	-	-
Stage 2	615	594	-	786	716	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	16.1	13	0	0
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1341	-	-	405	456	1154	-	-
HCM Lane V/C Ratio	0.002	-	-	0.203	0.016	-	-	-
HCM Control Delay (s)	7.7	-	-	16.1	13	0	-	-
HCM Lane LOS	A	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7	0	0	-	-

MOVEMENT SUMMARY

Site: 101 [2. EX+P PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Country Club Ln											
3	L2	127	2.0	0.454	7.7	LOS A	3.3	83.3	0.18	0.06	33.2
8	T1	78	2.0	0.454	7.7	LOS A	3.3	83.3	0.18	0.06	33.1
18	R2	338	2.0	0.454	7.7	LOS A	3.3	83.3	0.18	0.06	32.2
Approach		543	2.0	0.454	7.7	LOS A	3.3	83.3	0.18	0.06	32.5
East: Country Club Ln											
1	L2	198	2.0	0.243	6.1	LOS A	1.2	30.2	0.43	0.30	32.4
6	T1	13	2.0	0.243	6.1	LOS A	1.2	30.2	0.43	0.30	32.4
16	R2	25	2.0	0.243	6.1	LOS A	1.2	30.2	0.43	0.30	31.5
Approach		236	2.0	0.243	6.1	LOS A	1.2	30.2	0.43	0.30	32.3
North: Proj Drwy 1											
7	L2	11	2.0	0.055	4.8	LOS A	0.2	5.6	0.46	0.33	34.7
4	T1	34	2.0	0.055	4.8	LOS A	0.2	5.6	0.46	0.33	34.6
14	R2	1	2.0	0.055	4.8	LOS A	0.2	5.6	0.46	0.33	33.6
Approach		46	2.0	0.055	4.8	LOS A	0.2	5.6	0.46	0.33	34.6
West: Golden Circle Dr											
5	L2	1	2.0	0.093	4.7	LOS A	0.4	10.1	0.40	0.28	35.4
2	T1	11	2.0	0.093	4.7	LOS A	0.4	10.1	0.40	0.28	35.3
12	R2	75	2.0	0.093	4.7	LOS A	0.4	10.1	0.40	0.28	34.2
Approach		87	2.0	0.093	4.7	LOS A	0.4	10.1	0.40	0.28	34.4
All Vehicles		912	2.0	0.454	6.9	LOS A	3.3	83.3	0.28	0.15	32.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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 Project: N:\2614\Analysis\Intersection\SAP\Alt 1\Ex+P PM.sip7

Existing + Proj PM 3: Country Club Ln & Gary Ln

Escondido Country Club
06/19/2017



Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↕	↕	↕	↕	↕		
Traffic Volume (veh/h)	70	262	198	72	48	42		
Future Volume (veh/h)	70	262	198	72	48	42		
Number	5	2	6	16	7	14		
Initial Q (Ob), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	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	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	75	282	213	77	52	45		
Adj No. of Lanes	1	1	1	1	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	765	779	779	643	79	68		
Arrive On Green	0.42	0.42	0.42	0.42	0.09	0.09		
Sat Flow, veh/h	1080	1863	1863	1539	891	771		
Grp Volume(v), veh/h	75	282	213	77	98	0		
Grp Sat Flow(s), veh/h/ln	1080	1863	1863	1539	1680	0		
Q Serve(g_s), s	0.9	1.9	1.4	0.6	1.0	0.0		
Cycle Q Clear(g_c), s	2.3	1.9	1.4	0.6	1.0	0.0		
Prop In Lane	1.00			1.00	0.53	0.46		
Lane Grp Cap(c), veh/h	765	779	779	643	148	0		
V/C Ratio(X)	0.10	0.36	0.27	0.12	0.66	0.00		
Avail Cap(c_a), veh/h	1381	1840	1840	1520	1659	0		
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	0.00		
Uniform Delay (d), s/veh	4.2	3.6	3.5	3.2	8.0	0.0		
Incr Delay (d2), s/veh	0.1	0.3	0.2	0.1	5.0	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh/ln	0.3	1.0	0.7	0.2	0.7	0.0		
LnGrp Delay(d), s/veh	4.3	3.9	3.7	3.3	13.0	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h	357	290			98			
Approach Delay, s/veh	4.0	3.6			13.0			
Approach LOS	A	A			B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		12.1		6.1		12.1		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		18.0		18.0		18.0		
Max Q Clear Time (g_c+I1), s		4.3		3.0		3.4		
Green Ext Time (p_c), s		3.0		0.2		3.1		

Intersection Summary	
HCM 2010 Ctrl Delay	5.0
HCM 2010 LOS	A
Notes	

HCM 2010 Signalized Intersection Summary
 N:\2614\Analysis\Intersection\Existing + Proj PM.syn

Synchro 9 Report

Intersection						
Int Delay, s/veh	1.6					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↕		↔	
Traffic Vol, veh/h	351	14	0	287	0	106
Future Vol, veh/h	351	14	0	287	0	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	-	-	-	-	-	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	382	15	0	312	0	115
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	389
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	659
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	659
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	11.6			
HCM LOS						B
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	659	-	-	-		
HCM Lane V/C Ratio	0.175	-	-	-		
HCM Control Delay (s)	11.6	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.6	-	-	-		

MOVEMENT SUMMARY

Site: 101 [5. EX+P PM]

5. Country Club / La Brea / Drwy D Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: La Brea St											
3	L2	25	2.0	0.062	5.4	LOS A	0.2	6.2	0.51	0.41	33.5
8	T1	4	2.0	0.062	5.4	LOS A	0.2	6.2	0.51	0.41	33.4
18	R2	17	2.0	0.062	5.4	LOS A	0.2	6.2	0.51	0.41	32.5
Approach		47	2.0	0.062	5.4	LOS A	0.2	6.2	0.51	0.41	33.1
East: Country Club Ln											
1	L2	36	2.0	0.310	6.0	LOS A	1.8	45.1	0.22	0.09	34.5
6	T1	304	2.0	0.310	6.0	LOS A	1.8	45.1	0.22	0.09	34.4
16	R2	21	2.0	0.310	6.0	LOS A	1.8	45.1	0.22	0.09	33.4
Approach		361	2.0	0.310	6.0	LOS A	1.8	45.1	0.22	0.09	34.4
North: Proj Drwy D											
7	L2	9	2.0	0.021	4.7	LOS A	0.1	2.1	0.46	0.32	34.0
4	T1	5	2.0	0.021	4.7	LOS A	0.1	2.1	0.46	0.32	33.9
14	R2	3	2.0	0.021	4.7	LOS A	0.1	2.1	0.46	0.32	33.0
Approach		17	2.0	0.021	4.7	LOS A	0.1	2.1	0.46	0.32	33.8
West: Country Club Ln											
5	L2	18	2.0	0.392	7.0	LOS A	2.5	63.8	0.25	0.11	34.1
2	T1	400	2.0	0.392	7.0	LOS A	2.5	63.8	0.25	0.11	34.1
12	R2	37	2.0	0.392	7.0	LOS A	2.5	63.8	0.25	0.11	33.1
Approach		455	2.0	0.392	7.0	LOS A	2.5	63.8	0.25	0.11	34.0
All Vehicles		880	2.0	0.392	6.5	LOS A	2.5	63.8	0.25	0.12	34.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Sign Control. Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement. LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection). Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6. HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies. Gap-Acceptance Capacity: Traditional M1. HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Existing + Proj PM
6: Nutmeg St & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	37	306	49	179	232	38	89	138	364	18	55	19
Future Volume (veh/h)	37	306	49	179	232	38	89	138	364	18	55	19
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.97	1.00	0.98	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	40	329	53	192	249	41	96	148	391	19	59	20
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	579	92	239	888	144	151	195	444	157	451	137
Arrive On Green	0.03	0.19	0.19	0.13	0.29	0.29	0.45	0.45	0.45	0.45	0.45	0.45
Sat Flow, veh/h	1774	3046	485	1774	3038	492	182	437	992	188	1008	307
Grp Volume(v), veh/h	40	190	192	192	143	147	635	0	0	98	0	0
Grp Sat Flow(s), veh/h/ln	1774	1770	1761	1774	1770	1761	1611	0	0	1503	0	0
Q Serve(g_s), s	1.3	5.8	5.9	6.2	3.7	3.8	14.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.3	5.8	5.9	6.2	3.7	3.8	21.2	0.0	0.0	1.9	0.0	0.0
Prop In Lane	1.00	0.28	1.00	1.00	0.28	0.15	0.62	0.19	0.00	0.20	0.00	0.00
Lane Grp Cap(c), veh/h	58	336	335	239	517	515	790	0	0	745	0	0
V/C Ratio(X)	0.69	0.56	0.58	0.80	0.28	0.28	0.80	0.00	0.00	0.13	0.00	0.00
Avail Cap(c_a), veh/h	177	583	580	315	720	717	925	0	0	870	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	28.3	21.8	21.8	24.9	16.1	16.2	14.8	0.0	0.0	9.6	0.0	0.0
Incr Delay (d2), s/veh	13.8	1.5	1.6	10.7	0.3	0.3	4.5	0.0	0.0	0.1	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.9	2.9	3.0	3.7	1.8	1.9	10.3	0.0	0.0	0.9	0.0	0.0
LnGrp Delay(d), s/veh	42.1	23.2	23.4	35.5	16.4	16.5	19.3	0.0	0.0	9.6	0.0	0.0
LnGrp LOS	D	C	C	D	B	B	B			A		
Approach Vol, veh/h	422			482				635			98	
Approach Delay, s/veh	25.1			24.0				19.3			9.6	
Approach LOS	C			C				B			A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	15.8	15.8		31.0	6.4	21.8		31.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	19.5	19.5		31.5	5.9	24.1		31.5				
Max Q Clear Time (g_c+1), s	7.9	7.9		3.9	3.3	5.8		23.2				
Green Ext Time (p_c), s	0.1	3.1		6.0	0.0	3.9		3.3				
Intersection Summary												
HCM 2010 Ctrl Delay				21.6								
HCM 2010 LOS	C											

Existing + Proj PM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	130	363	80	142	261	90	176	397	178	128	264	52
Future Volume (veh/h)	130	363	80	142	261	90	176	397	178	128	264	52
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.98	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	141	395	87	154	284	98	191	432	193	139	287	57
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	746	328	202	780	344	246	845	373	182	718	321
Arrive On Green	0.10	0.21	0.21	0.11	0.22	0.22	0.14	0.24	0.24	0.10	0.20	0.20
Sat Flow, veh/h	1774	3539	1558	1774	3539	1563	1774	3539	1561	1774	3539	1583
Grp Volume(v), veh/h	141	395	87	154	284	98	191	432	193	139	287	57
Grp Sat Flow(s), veh/h/ln	1774	1770	1558	1774	1770	1563	1774	1770	1561	1774	1770	1583
Q Serve(g_s), s	4.2	5.3	2.5	4.5	3.7	2.8	5.6	5.7	5.8	4.1	3.8	1.6
Cycle Q Clear(g_c), s	4.2	5.3	2.5	4.5	3.7	2.8	5.6	5.7	5.8	4.1	3.8	1.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	185	746	328	202	780	344	246	845	373	182	718	321
V/C Ratio(X)	0.76	0.53	0.26	0.76	0.36	0.28	0.78	0.51	0.52	0.76	0.40	0.18
Avail Cap(c_a), veh/h	478	1216	535	544	1347	595	511	1479	652	478	1413	632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	18.9	17.8	23.2	17.8	17.5	22.4	17.8	17.8	23.5	18.6	17.7
Incr Delay (d2), s/veh	6.4	0.6	0.4	5.9	0.3	0.4	5.3	0.5	1.1	6.5	0.4	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.4	2.6	1.1	2.6	1.8	1.2	3.1	2.8	2.6	2.3	1.9	0.7
LnGrp Delay(d), s/veh	29.9	19.5	18.2	29.1	18.1	17.9	27.7	18.3	18.9	30.0	19.0	18.0
LnGrp LOS	C	B	B	C	B	B	C	B	B	C	B	B
Approach Vol, veh/h	623			536				816			483	
Approach Delay, s/veh	21.7			21.2				20.6			22.0	
Approach LOS	C			C				C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.4	10.6	15.8	12.0	15.4	10.1	16.4					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	22.5	16.5	18.5	15.5	21.5	14.5	20.5					
Max Q Clear Time (g_c+1), s	7.8	6.5	7.3	7.6	5.8	6.2	5.7					
Green Ext Time (p_c), s	0.2	5.0	0.3	3.9	0.3	5.1	0.2	4.5				
Intersection Summary												
HCM 2010 Ctrl Delay				21.3								
HCM 2010 LOS	C											

Existing + Proj PM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	37	701	44	200	662	142	58	103	252	91	65	22
Future Volume (veh/h)	37	701	44	200	662	142	58	103	252	91	65	22
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	41	770	48	220	727	156	64	113	277	100	71	24
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	1299	81	316	827	681	340	380	323	129	113	38
Arrive On Green	0.03	0.38	0.38	0.09	0.44	0.44	0.19	0.20	0.20	0.07	0.09	0.09
Sat Flow, veh/h	1774	3384	211	3442	1863	1535	1774	1863	1581	1774	1333	451
Grp Volume(v), veh/h	41	403	415	220	727	156	64	113	277	100	0	95
Grp Sat Flow(s), veh/h/ln	1774	1770	1826	1721	1863	1535	1774	1863	1581	1774	0	1783
Q Serve(g_s), s	1.7	13.2	13.2	4.5	25.8	3.0	2.2	3.7	12.3	4.0	0.0	3.7
Cycle Q Clear(g_c), s	1.7	13.2	13.2	4.5	25.8	3.0	2.2	3.7	12.3	4.0	0.0	3.7
Prop In Lane	1.00	0.12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	1.00
Lane Grp Cap(c), veh/h	56	679	701	316	827	681	340	380	323	129	0	152
V/C Ratio(X)	0.73	0.59	0.59	0.70	0.88	0.23	0.19	0.30	0.86	0.78	0.00	0.63
Avail Cap(c_a), veh/h	110	873	900	484	1065	878	340	449	381	208	0	491
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.8	17.8	17.8	32.0	18.4	5.2	24.6	24.5	27.9	33.1	0.0	32.1
Incr Delay (d2), s/veh	16.2	0.8	0.8	2.8	7.1	0.2	0.3	0.4	15.6	9.7	0.0	4.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.1	6.5	6.7	2.3	14.7	1.7	1.1	2.0	6.8	2.3	0.0	2.0
LnGrp Delay(d), s/veh	51.0	18.7	18.6	34.8	25.5	5.4	24.9	24.9	43.4	42.7	0.0	36.3
LnGrp LOS	D	B	B	C	C	A	C	C	D	D		D
Approach Vol, veh/h	859			1103				454			195	
Approach Delay, s/veh	20.2			24.5				36.2			39.6	
Approach LOS	C			C				D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.3	11.2	32.4	18.4	10.7	6.8	36.7					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	17.5	10.2	35.8	6.0	20.0	4.5	41.5					
Max Q Clear Time (g_c+1), s	14.3	6.5	15.2	4.2	5.7	3.7	27.8					
Green Ext Time (p_c), s	0.0	0.5	0.2	4.9	0.4	0.3	0.4	4.4				
Intersection Summary												
HCM 2010 Ctrl Delay	26.2											
HCM 2010 LOS	C											

Existing + Proj PM
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	411	648	12	39	761	170	8	8	14	102	3	207
Future Volume (veh/h)	411	648	12	39	761	170	8	8	14	102	3	207
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	447	704	13	42	827	185	9	9	15	111	3	225
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	470	2003	37	68	968	216	37	37	63	297	8	269
Arrive On Green	0.27	0.56	0.56	0.04	0.34	0.34	0.04	0.04	0.04	0.17	0.17	0.17
Sat Flow, veh/h	1774	3555	66	1774	2874	643	909	909	1565	1730	47	1567
Grp Volume(v), veh/h	447	350	367	42	509	503	18	0	15	114	0	225
Grp Sat Flow(s), veh/h/ln	1774	1770	1851	1774	1770	1747	1817	0	1565	1776	0	1567
Q Serve(g_s), s	28.9	12.6	12.6	2.7	31.3	31.3	1.1	0.0	1.1	6.6	0.0	16.2
Cycle Q Clear(g_c), s	28.9	12.6	12.6	2.7	31.3	31.3	1.1	0.0	1.1	6.6	0.0	16.2
Prop In Lane	1.00	0.04	1.00	1.00	1.00	0.37	0.50	1.00	0.97	1.00	0.97	1.00
Lane Grp Cap(c), veh/h	470	997	1043	68	596	588	73	0	63	305	0	269
V/C Ratio(X)	0.95	0.35	0.35	0.62	0.85	0.85	0.25	0.00	0.24	0.37	0.00	0.84
Avail Cap(c_a), veh/h	494	997	1043	138	634	626	421	0	362	411	0	363
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	42.1	13.9	13.9	55.2	36.0	36.0	54.3	0.0	54.2	42.7	0.0	46.7
Incr Delay (d2), s/veh	27.3	0.3	0.2	3.4	10.8	10.9	2.1	0.0	2.3	0.9	0.0	12.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	6.2	6.5	1.4	17.1	16.9	0.6	0.0	0.5	3.3	0.0	8.0
LnGrp Delay(d), s/veh	69.4	14.1	14.1	58.6	46.8	46.9	56.3	0.0	56.6	43.6	0.0	59.4
LnGrp LOS	E	B	B	E	D	D	E		E	D		E
Approach Vol, veh/h	1164			1054				33			339	
Approach Delay, s/veh	35.3			47.4				56.4			54.1	
Approach LOS	D			D				E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.9	11.9		25.6	35.4	45.5		10.2				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		5.5				
Max Green Setting (Gmax), s	17.5	10.2		27.0	32.5	41.8		27.0				
Max Q Clear Time (g_c+1), s	14.6	6.5		18.2	30.9	33.3		3.1				
Green Ext Time (p_c), s	0.0	18.9		1.1	0.0	6.0		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay	42.9											
HCM 2010 LOS	D											

Existing + Proj PM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	14	748	99	180	805	24	140	121	205	21	24	11
Future Volume (veh/h)	14	748	99	180	805	24	140	121	205	21	24	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.97	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	16	880	116	212	947	28	165	142	241	25	28	13
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	1072	141	255	1637	48	178	386	327	49	161	75
Arrive On Green	0.02	0.34	0.34	0.14	0.47	0.47	0.10	0.21	0.21	0.03	0.13	0.13
Sat Flow, veh/h	1774	3133	413	1774	3507	104	1774	1863	1576	1774	1199	557
Grp Volume(v), veh/h	16	497	499	212	478	497	165	142	241	25	0	41
Grp Sat Flow(s), veh/h/ln	1774	1770	1776	1774	1770	1841	1774	1863	1576	1774	0	1756
Q Serve(g_s), s	0.6	17.9	17.9	8.1	13.8	13.8	6.4	4.6	10.0	1.0	0.0	1.4
Cycle Q Clear(g_c), s	0.6	17.9	17.9	8.1	13.8	13.8	6.4	4.6	10.0	1.0	0.0	1.4
Prop In Lane	1.00	0.23	1.00	1.00	0.06	1.00	1.00	1.00	1.00	1.00	0.32	0.32
Lane Grp Cap(c), veh/h	34	606	608	255	826	859	178	386	327	49	0	236
V/C Ratio(X)	0.47	0.82	0.82	0.83	0.58	0.58	0.93	0.37	0.74	0.51	0.00	0.17
Avail Cap(c_a), veh/h	127	646	649	292	826	859	178	760	643	127	0	679
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.9	21.0	21.0	29.1	13.6	13.6	31.2	23.7	25.9	33.5	0.0	26.8
Incr Delay (d2), s/veh	9.9	7.9	7.9	16.4	1.1	1.1	47.1	0.4	2.4	8.1	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	10.4	10.0	10.1	5.1	6.9	7.2	5.4	2.4	4.5	0.6	0.0	0.7
LnGrp Delay(d), s/veh	43.8	28.9	28.9	45.5	14.7	14.7	78.3	24.2	28.3	41.6	0.0	27.0
LnGrp LOS	D	C	C	D	B	B	E	C	C	D		C
Approach Vol, veh/h	1012			1187			548			66		
Approach Delay, s/veh	29.1			20.2			42.3			32.5		
Approach LOS	C			C			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.5	29.9	11.0	14.4	5.8	38.6	5.9	19.5				
Change Period (Y+Rc), s	4.5	6.0	4.0	5.5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	25.5	7.0	27	5.0	32.0	5.0	28.5					
Max Q Clear Time (g_c+I), s	19.9	8.4	3.4	2.6	15.8	3.0	12.0					
Green Ext Time (p_c), s	0.1	4.0	0.0	1.4	0.0	11.0	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				28.0								
HCM 2010 LOS				C								
Notes												

Existing + Proj PM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	88	1074	23	19	1000	40	29	8	14	25	20	73
Future Volume (veh/h)	88	1074	23	19	1000	40	29	8	14	25	20	73
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	96	1167	25	21	1087	43	32	9	15	27	22	79
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	0	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	122	1939	42	37	1733	69	251	79	132	319	45	161
Arrive On Green	0.07	0.55	0.55	0.02	0.50	0.50	0.13	0.13	0.13	0.13	0.13	0.13
Sat Flow, veh/h	1774	3543	476	1774	3471	137	1288	629	1049	1381	357	1280
Grp Volume(v), veh/h	96	583	609	21	554	576	32	0	24	27	0	101
Grp Sat Flow(s), veh/h/ln	1774	1770	1849	1774	1770	1839	1288	0	1678	1381	0	1637
Q Serve(g_s), s	2.3	9.8	9.8	0.5	10.1	10.1	1.0	0.0	0.6	0.8	0.0	2.5
Cycle Q Clear(g_c), s	2.3	9.8	9.8	0.5	10.1	10.1	3.6	0.0	0.6	1.3	0.0	2.5
Prop In Lane	1.00	0.04	1.00	1.00	0.07	1.00	1.00	0.63	1.00	0.32	0.78	0.78
Lane Grp Cap(c), veh/h	122	969	1012	37	884	918	251	0	211	319	0	206
V/C Ratio(X)	0.79	0.60	0.60	0.58	0.63	0.63	0.13	0.00	0.11	0.08	0.00	0.49
Avail Cap(c_a), veh/h	222	1057	1104	165	1000	1039	560	0	613	651	0	598
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	6.7	6.7	21.4	8.0	8.0	19.6	0.0	17.1	17.7	0.0	17.9
Incr Delay (d2), s/veh	10.8	0.8	0.8	13.5	1.0	1.0	0.2	0.0	0.2	0.1	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	4.9	5.1	0.4	5.0	5.2	0.4	0.0	0.3	0.3	0.0	1.3
LnGrp Delay(d), s/veh	31.0	7.6	7.5	34.9	9.1	9.0	19.8	0.0	17.3	17.8	0.0	19.8
LnGrp LOS	C	A	A	C	A	A	B		B	B		B
Approach Vol, veh/h	1288			1151			56			128		
Approach Delay, s/veh	9.3			9.5			18.8			19.3		
Approach LOS	A			A			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.5	28.6		10.0	7.5	26.5		10.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	26.3	16.1		5.5	24.9	16.1						
Max Q Clear Time (g_c+I), s	11.8	4.5		4.3	12.1	5.6						
Green Ext Time (p_c), s	0.0	11.0		0.6	0.0	9.9		0.6				
Intersection Summary												
HCM 2010 Ctrl Delay				10.1								
HCM 2010 LOS				B								
Notes												

Existing + Proj PM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘	
Traffic Volume (veh/h)	76	814	45	168	817	223	57	248	258	222	139	43	
Future Volume (veh/h)	76	814	45	168	817	223	57	248	258	222	139	43	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	78	831	0	171	834	228	58	253	263	227	142	44	
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	111	1100	492	208	971	265	78	391	332	266	589	500	
Arrive On Green	0.06	0.31	0.00	0.12	0.35	0.35	0.04	0.21	0.21	0.15	0.32	0.32	
Sat Flow, veh/h	1774	3539	1583	1774	2748	751	1774	1863	1583	1774	1863	1583	
Grp Volume(v), veh/h	78	831	0	171	537	525	58	253	263	227	142	44	
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1729	1774	1863	1583	1774	1863	1583	
Q Serve(g_s), s	3.7	17.9	0.0	8.0	23.9	23.9	2.7	10.5	13.3	10.6	4.8	1.2	
Cycle Q Clear(g_c), s	3.7	17.9	0.0	8.0	23.9	23.9	2.7	10.5	13.3	10.6	4.8	1.2	
Prop In Lane	1.00		1.00	1.00		1.00	0.43	1.00		1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	111	1100	492	208	625	611	78	391	332	266	589	500	
V/C Ratio(X)	0.70	0.76	0.00	0.82	0.86	0.86	0.74	0.65	0.79	0.85	0.24	0.09	
Avail Cap(c_a), veh/h	146	1253	560	293	772	755	126	681	579	356	923	785	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	38.9	26.3	0.0	36.6	25.5	25.5	40.1	30.6	31.7	35.1	21.5	11.0	
Incr Delay (d2), s/veh	7.7	2.2	0.0	10.7	7.6	7.8	9.9	1.3	3.2	12.9	0.2	0.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	0.9	1.1	0.0	4.5	13.0	12.7	1.6	5.6	6.1	6.1	2.5	0.7	
LnGrp Delay(d), s/veh	46.7	28.5	0.0	47.3	33.1	33.3	50.0	31.9	34.9	48.0	21.6	11.1	
LnGrp LOS	D	C		D	C	C	D	C	C	D	C	B	
Approach Vol, veh/h	909			1233				574			413		
Approach Delay, s/veh	30.0			35.2				35.1			35.0		
Approach LOS	C			D				D			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	31.3	7.7	31.8	10.3	34.9	16.7	22.8						
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	5.0	5.0	4.0	5.0					
Max Green Setting (Gmax), s	30.0	6.0	42.0	7.0	37	17.0	31.0						
Max Q Clear Time (g_c+I), s	19.9	4.7	6.8	5.7	25.9	12.6	15.3						
Green Ext Time (p_c), s	0.1	3.3	0.0	2.8	0.7	4.0	0.2	2.5					
Intersection Summary													
HCM 2010 Ctrl Delay				33.6									
HCM 2010 LOS				C									
Notes													

Existing + Proj PM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘	
Traffic Volume (veh/h)	0	1142	413	259	1715	0	0	0	0	96	1	136	
Future Volume (veh/h)	0	1142	413	259	1715	0	0	0	0	96	1	136	
Number	5	2	12	1	6	16				7	4	14	
Initial Q (Ob), 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	0	1863	1863	1863	1863	0				1863	1863	1863	
Adj Flow Rate, veh/h	0	1202	435	273	1805	0				152	0	89	
Adj No. of Lanes	0	2	1	2	2	0				2	0	1	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95	
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2	
Cap, veh/h	0	2413	1078	339	2912	0				277	0	123	
Arrive On Green	0.00	0.68	0.68	0.20	1.00	0.00				0.08	0.00	0.08	
Sat Flow, veh/h	0	3632	1582	3442	3632	0				3548	0	1583	
Grp Volume(v), veh/h	0	1202	435	273	1805	0				152	0	89	
Grp Sat Flow(s), veh/h/ln	0	1770	1582	1721	1770	0				1774	0	1583	
Q Serve(g_s), s	0.0	18.0	13.3	8.3	0.0	0.0				4.5	0.0	6.0	
Cycle Q Clear(g_c), s	0.0	18.0	13.3	8.3	0.0	0.0				4.5	0.0	6.0	
Prop In Lane	0.00		1.00	1.00	0.00					1.00		1.00	
Lane Grp Cap(c), veh/h	0	2413	1078	339	2912	0				277	0	123	
V/C Ratio(X)	0.00	0.50	0.40	0.81	0.62	0.00				0.55	0.00	0.72	
Avail Cap(c_a), veh/h	0	2413	1078	541	2912	0				577	0	258	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00	
Upstream Filter(I)	0.00	0.58	0.58	0.34	0.34	0.00				1.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	8.4	7.7	43.2	0.0	0.0				48.8	0.0	49.5	
Incr Delay (d2), s/veh	0.0	0.4	0.6	1.6	0.3	0.0				1.7	0.0	7.7	
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	0.0	8.8	6.0	4.0	0.1	0.0				2.3	0.0	2.9	
LnGrp Delay(d), s/veh	0.0	8.9	8.3	44.8	0.3	0.0				50.5	0.0	57.2	
LnGrp LOS		A	A	D	A					D		E	
Approach Vol, veh/h	1637			2078							241		
Approach Delay, s/veh	8.7			6.2							53.0		
Approach LOS	A			A							D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4		6							
Phs Duration (G+Y+Rc), s	5.5	80.8		13.7		96.3							
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8							
Max Green Setting (Gmax), s	59.2	17.9		81.2									
Max Q Clear Time (g_c+I), s	20.0	8.0		2.0									
Green Ext Time (p_c), s	0.5	33.6		0.5		59.2							
Intersection Summary													
HCM 2010 Ctrl Delay				10.1									
HCM 2010 LOS				B									
Notes													

Existing + Proj PM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↘	↖	↗	↘			
Traffic Volume (veh/h)	257	981	0	0	1017	233	959	1	514	0	0	0
Future Volume (veh/h)	257	981	0	0	1017	233	959	1	514	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	273	1044	0	0	1082	248	1191	0	365			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	385	2247	0	0	1293	579	1158	0	517			
Arrive On Green	0.43	1.00	0.00	0.00	0.37	0.37	0.33	0.00	0.33			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	273	1044	0	0	1082	248	1191	0	365			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	13.9	0.0	0.0	0.0	30.7	13.0	35.9	0.0	22.2			
Cycle Q Clear(g_c), s	13.9	0.0	0.0	0.0	30.7	13.0	35.9	0.0	22.2			
Prop In Lane	1.00	0.00	0.00		1.00	1.00		1.00				
Lane Grp Cap(c), veh/h	385	2247	0	0	1293	579	1158	0	517			
V/C Ratio(X)	0.71	0.46	0.00	0.00	0.84	0.43	1.03	0.00	0.71			
Avail Cap(c_a), veh/h	385	2247	0	0	1293	579	1158	0	517			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.83	0.83	0.00	0.00	0.71	0.71	1.00	0.00	1.00			
Uniform Delay (d), s/veh	28.3	0.0	0.0	0.0	31.9	26.3	37.1	0.0	32.4			
Incr Delay (d2), s/veh	5.0	0.6	0.0	0.0	4.8	1.6	34.0	0.0	4.4			
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	0.2	0.0	0.0	15.9	5.9	23.0	0.0	10.3			
LnGrp Delay(d),s/veh	33.3	0.6	0.0	0.0	36.7	27.9	71.0	0.0	36.8			
LnGrp LOS	C	A			D	C	F		D			
Approach Vol, veh/h	1317			1330			1556					
Approach Delay, s/veh	7.4			35.0			63.0					
Approach LOS	A			D			E					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2				5		6		8			
Phs Duration (G+Y+Rc), s	75.7				29.7		46.0		41.0			
Change Period (Y+Rc), s	5.8				5.8		5.8		5.1			
Max Green Setting (Gmax), s	63.2				18.3		40		35.9			
Max Q Clear Time (g_c+I1), s	2.0				15.9		32.7		37.9			
Green Ext Time (p_c), s	10.0				1.4		4.4		0.0			
Intersection Summary												
HCM 2010 Ctrl Delay				36.7								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing + Proj PM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↘	↖	↗	↘			
Traffic Volume (veh/h)	110	1251	111	89	972	32	206	22	186	25	9	127
Future Volume (veh/h)	110	1251	111	89	972	32	206	22	186	25	9	127
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	120	1360	121	97	1057	35	224	24	202	27	10	138
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	152	1625	144	124	1670	55	315	43	358	245	27	376
Arrive On Green	0.09	0.49	0.49	0.07	0.48	0.48	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3288	291	1774	3493	116	1233	169	1419	1149	108	1488
Grp Volume(v), veh/h	120	729	752	97	535	557	224	0	226	27	0	148
Grp Sat Flow(s),veh/h/ln	1774	1770	1810	1774	1770	1839	1233	0	1587	1149	0	1596
Q Serve(g_s), s	4.9	26.1	26.5	4.0	16.7	16.7	13.0	0.0	9.1	1.5	0.0	5.6
Cycle Q Clear(g_c), s	4.9	26.1	26.5	4.0	16.7	16.7	18.6	0.0	9.1	10.7	0.0	5.6
Prop In Lane	1.00	0.16	1.00		0.06	1.00		0.89	1.00			0.93
Lane Grp Cap(c), veh/h	152	875	895	124	846	879	315	0	401	245	0	403
V/C Ratio(X)	0.79	0.83	0.84	0.78	0.63	0.63	0.71	0.00	0.56	0.11	0.00	0.37
Avail Cap(c_a), veh/h	205	875	895	157	846	879	315	0	401	245	0	403
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.0	16.0	16.1	33.7	14.4	14.4	30.5	0.0	24.0	28.6	0.0	22.7
Incr Delay (d2), s/veh	13.4	9.2	9.4	17.8	3.6	3.5	7.3	0.0	1.8	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0	14.8	15.5	2.6	8.9	9.2	5.1	0.0	4.2	0.5	0.0	2.5
LnGrp Delay(d),s/veh	46.4	25.2	25.5	51.5	18.0	17.8	37.8	0.0	25.8	28.8	0.0	23.2
LnGrp LOS	D	C	C	D	B	B	D		C	C		C
Approach Vol, veh/h	1601			1189			450			175		
Approach Delay, s/veh	26.9			20.6			31.8			24.1		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		2		4		5		6		8	
Phs Duration (G+Y+Rc), s	9.7		40.9		23.1		10.8		39.7		23.1	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	36.4		18.6		8.5		34.4		18.6			
Max Q Clear Time (g_c+I1), s	28.5		12.7		6.9		18.7		20.6			
Green Ext Time (p_c), s	0.0		7.0		1.7		0.0		12.7		0.0	
Intersection Summary												
HCM 2010 Ctrl Delay				25.2								
HCM 2010 LOS				C								

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing + Proj PM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	34	1023	180	195	772	120	324	659	435	180	234	21
Future Volume (veh/h)	34	1023	180	195	772	120	324	659	435	180	234	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	35	1055	186	201	796	124	334	679	448	186	241	22
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	615	1399	626	271	892	139	962	1105	494	226	323	144
Arrive On Green	0.18	0.40	0.40	0.16	0.58	0.58	0.28	0.31	0.31	0.07	0.09	0.09
Sat Flow, veh/h	3442	3539	1582	3442	3068	478	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	35	1055	186	201	459	461	334	679	448	186	241	22
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1770	1777	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.4	42.4	5.4	9.2	37.2	37.2	12.8	26.9	44.8	8.8	11.0	2.1
Cycle Q Clear(g_c), s	1.4	42.4	5.4	9.2	37.2	37.2	12.8	26.9	44.8	8.8	11.0	2.1
Prop In Lane	1.00	1.00	1.00	1.00	0.27	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	615	1399	626	271	514	517	962	1105	494	226	323	144
V/C Ratio(X)	0.06	0.75	0.30	0.74	0.89	0.89	0.35	0.61	0.91	0.82	0.75	0.15
Avail Cap(c_a), veh/h	615	1399	626	271	606	608	962	1246	558	246	1094	489
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	56.2	43.0	5.6	67.9	32.3	32.3	47.4	48.3	54.4	76.1	73.1	69.1
Incr Delay (d2), s/veh	0.0	1.9	0.6	2.2	5.9	5.9	0.1	0.8	17.6	16.8	4.1	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	2.5	4.5	18.8	18.9	6.1	13.3	22.0	4.7	5.5	1.0	1.0
LnGrp Delay(d), s/veh	56.3	44.9	6.2	70.1	38.2	38.2	47.5	49.1	72.0	92.9	77.2	69.7
LnGrp LOS	E	D	A	E	D	D	D	D	E	F	E	E
Approach Vol, veh/h	1276			1121			1461			449		
Approach Delay, s/veh	39.6			43.9			55.8			83.4		
Approach LOS	D			D			E			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	72.1	52.4	21.4	36.4	54.9	15.9	57.8					
Change Period (Y+Rc), s	6.1	6.9	6.3	6.3	6.9	6.9	5.1	6.3				
Max Green Setting (Gmax), s	57.7	18.9	51	14.0	57	11.8	58.1					
Max Q Clear Time (g_c+M), s	44.4	14.8	13.0	3.4	39.2	10.8	46.8					
Green Ext Time (p_c), s	0.1	8.7	2.8	2.1	7.3	7.9	0.0	4.8				
Intersection Summary												
HCM 2010 Ctrl Delay				50.8								
HCM 2010 LOS				D								
Notes												

Existing + Proj PM
17: Broadway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	363	1364	120	181	1139	47	144	450	265	117	504	170
Future Volume (veh/h)	363	1364	120	181	1139	47	144	450	265	117	504	170
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.99	1.00	0.99	1.00	0.92	1.00	0.92	1.00	0.86	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	427	1605	141	213	1340	55	169	529	312	138	593	200
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	459	1604	140	234	1461	60	182	515	303	149	573	192
Arrive On Green	0.27	0.97	0.97	0.07	0.42	0.42	0.10	0.25	0.25	0.08	0.23	0.23
Sat Flow, veh/h	3442	3292	286	3442	3464	142	1774	2071	1218	1774	2487	835
Grp Volume(v), veh/h	427	855	891	213	684	711	169	452	389	138	421	372
Grp Sat Flow(s), veh/h/ln	1721	1770	1808	1721	1770	1836	1774	1770	1520	1774	1770	1553
Q Serve(g_s), s	20.0	61.2	80.4	10.1	60.1	60.3	15.6	41.0	41.0	12.7	38.0	38.0
Cycle Q Clear(g_c), s	20.0	61.2	80.4	10.1	60.1	60.3	15.6	41.0	41.0	12.7	38.0	38.0
Prop In Lane	1.00	1.00	0.16	1.00	0.08	1.00	0.08	1.00	0.80	1.00	0.54	1.00
Lane Grp Cap(c), veh/h	459	862	881	234	746	775	182	440	378	149	408	358
V/C Ratio(X)	0.93	0.99	1.01	0.91	0.92	0.92	0.93	1.03	1.03	0.92	1.03	1.04
Avail Cap(c_a), veh/h	463	862	881	234	746	775	182	440	378	149	408	358
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	1.9	2.1	76.4	44.9	45.0	73.5	62.0	62.0	75.0	63.5	63.5
Incr Delay (d2), s/veh	17.8	22.1	26.3	36.0	17.9	17.7	47.0	50.1	54.5	51.3	53.5	58.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	10.6	21.2	27.7	6.0	32.9	34.4	10.0	26.2	22.9	8.4	24.6	22.1
LnGrp Delay(d), s/veh	77.6	24.0	28.4	112.4	62.8	62.7	120.5	112.1	116.5	126.3	117.0	121.7
LnGrp LOS	E	C	F	F	E	E	F	F	F	F	F	F
Approach Vol, veh/h	2173			1608			1010			931		
Approach Delay, s/veh	36.3			69.3			115.2			120.3		
Approach LOS	D			E			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	85.3	21.4	42.6	26.5	74.5	18.4	45.6					
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6				
Max Green Setting (Gmax), s	80.4	16.9	38.0	22.2	69.4	13.9	41.0					
Max Q Clear Time (g_c+M), s	82.4	17.6	40.0	22.0	62.3	14.7	43.0					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	6.7	0.0	0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				73.2								
HCM 2010 LOS				E								
Notes												

APPENDIX F

INTERSECTION ANALYSIS WORKSHEETS – EXISTING + CUMULATIVE PROJECTS

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Existing + Cuml AM
1: Centre City Parkway & Nutmeg St

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh 1.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔	↔	↔			↔	
Traffic Vol, veh/h	48	1	3	3	3	2	3	179	1	4	643	177
Future Vol, veh/h	48	1	3	3	3	2	3	179	1	4	643	177
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	1	4	4	4	2	4	213	1	5	765	211

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1104	1101	871	1104	1207	214	976	0	0	214	0	0
Stage 1	880	880	-	221	221	-	-	-	-	-	-	-
Stage 2	224	221	-	883	986	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	212	350	188	183	826	707	-	-	1356	-	-
Stage 1	342	365	-	781	720	-	-	-	-	-	-	-
Stage 2	779	720	-	340	326	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	183	209	350	183	181	826	707	-	-	1356	-	-
Mov Cap-2 Maneuver	183	209	-	183	181	-	-	-	-	-	-	-
Stage 1	340	362	-	777	716	-	-	-	-	-	-	-
Stage 2	769	716	-	333	323	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.1	21.6	0.2	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	707	-	-	189	226	1356	-	-
HCM Lane V/C Ratio	0.005	-	-	0.328	0.042	0.004	-	-
HCM Control Delay (s)	10.1	-	-	33.1	21.6	7.7	0	-
HCM Lane LOS	B	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0.1	0	-	-

Existing + Cuml AM
2: Country Club Ln & Golden Circle Dr

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh 10.5												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔	↔		↔	↔		↔			↔	
Traffic Vol, veh/h	0	13	152	491	4	0	35	0	111	0	2	0
Future Vol, veh/h	0	13	152	491	4	0	35	0	111	0	2	0
Conflicting Peds, #/hr	2	0	0	0	0	2	5	0	0	0	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	15	171	552	4	0	39	0	125	0	2	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	6	0	0	185	0	0	1214	1210	100	1272	1295	11
Stage 1	-	-	-	-	-	-	100	100	-	1110	1110	-
Stage 2	-	-	-	-	-	-	1114	1110	-	162	185	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1615	-	-	1390	-	-	158	183	956	144	162	1070
Stage 1	-	-	-	-	-	-	906	812	-	254	285	-
Stage 2	-	-	-	-	-	-	253	285	-	840	747	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1608	-	-	1390	-	-	107	110	956	86	98	1064
Mov Cap-2 Maneuver	-	-	-	-	-	-	107	110	-	86	98	-
Stage 1	-	-	-	-	-	-	906	812	-	254	172	-
Stage 2	-	-	-	-	-	-	150	172	-	730	747	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	9.2	26.3	42.6
HCM LOS			D	E

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	329	1608	-	-	1390	-	-	98
HCM Lane V/C Ratio	0.499	-	-	-	0.397	-	-	0.023
HCM Control Delay (s)	26.3	0	-	-	9.3	-	-	42.6
HCM Lane LOS	D	A	-	-	A	-	-	E
HCM 95th %tile Q(veh)	2.6	0	-	-	1.9	-	-	0.1

Existing + Cuml AM
3: Country Club Ln & Gary Ln

Escondido Country Club
04/07/2017

Intersection									
Intersection Delay, s/veh	13.3								
Intersection LOS	B								
Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations		↘	↗		↗	↘		↘	↗
Traffic Vol, veh/h	0	20	122	0	420	18	0	48	82
Future Vol, veh/h	0	20	122	0	420	18	0	48	82
Peak Hour Factor	0.92	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	131	0	452	19	0	52	88
Number of Lanes	0	1	1	0	1	1	0	1	0
Approach	EB			WB			SB		
Opposing Approach	WB			EB					
Opposing Lanes	2			2			0		
Conflicting Approach Left	SB						WB		
Conflicting Lanes Left	1			0			2		
Conflicting Approach Right				SB			EB		
Conflicting Lanes Right	0			1			2		
HCM Control Delay	9.3			15.7			9.5		
HCM LOS	A			C			A		
Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1				
Vol Left, %	100%	0%	0%	0%	37%				
Vol Thru, %	0%	100%	100%	0%	0%				
Vol Right, %	0%	0%	0%	100%	63%				
Sign Control	Stop	Stop	Stop	Stop	Stop				
Traffic Vol by Lane	20	122	420	18	130				
LT Vol	20	0	0	0	48				
Through Vol	0	122	420	0	0				
RT Vol	0	0	0	18	82				
Lane Flow Rate	22	131	452	19	140				
Geometry Grp	7	7	7	7	2				
Degree of Util (X)	0.035	0.194	0.632	0.023	0.199				
Departure Headway (Hd)	5.82	5.315	5.039	4.335	5.131				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes				
Cap	612	672	714	821	696				
Service Time	3.582	3.077	2.788	2.084	3.185				
HCM Lane V/C Ratio	0.036	0.195	0.633	0.023	0.201				
HCM Control Delay	8.8	9.4	16.1	7.2	9.5				
HCM Lane LOS	A	A	C	A	A				
HCM 95th-tile Q	0.1	0.7	4.5	0.1	0.7				

Existing + Cuml AM
4: Firestone Dr & Country Club Ln

Escondido Country Club
04/07/2017

Intersection									
Int Delay, s/veh	1.6								
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↕↕		↕	↕↕	↕↕				
Traffic Vol, veh/h	173	5	107	439	2	43			
Future Vol, veh/h	173	5	107	439	2	43			
Conflicting Peds, #/hr	0	9	0	0	9	9			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	80	-	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	188	5	116	477	2	47			
Major/Minor	Major1		Major2		Minor1				
Conflicting Flow All	0	0	202	0	680	115			
Stage 1	-	-	-	-	200	-			
Stage 2	-	-	-	-	480	-			
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	-	-	1367	-	385	916			
Stage 1	-	-	-	-	814	-			
Stage 2	-	-	-	-	588	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1357	-	347	902			
Mov Cap-2 Maneuver	-	-	-	-	347	-			
Stage 1	-	-	-	-	808	-			
Stage 2	-	-	-	-	534	-			
Approach	EB		WB		NB				
HCM Control Delay, s	0		1.5		9.5				
HCM LOS					A				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	842	-	-	1357	-				
HCM Lane V/C Ratio	0.058	-	-	0.086	-				
HCM Control Delay (s)	9.5	-	-	7.9	-				
HCM Lane LOS	A	-	-	A	-				
HCM 95th %tile Q(veh)	0.2	-	-	0.3	-				

Existing + Cuml AM
5: La Brea St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Lane Configurations		↕↔			↔↕	↕↔		↔↕	
Traffic Vol, veh/h	0	212	3	0	10	522	0	10	18
Future Vol, veh/h	0	212	3	0	10	522	0	10	18
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	233	3	0	11	574	0	11	20
Number of Lanes	0	2	0	0	1	2	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	9.6	8.7	8.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3
Vol Left, %	36%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	96%	0%	100%	100%
Vol Right, %	64%	0%	4%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	28	141	74	10	261	261
LT Vol	10	0	0	10	0	0
Through Vol	0	141	71	0	261	261
RT Vol	18	0	3	0	0	0
Lane Flow Rate	31	155	81	11	287	287
Geometry Grp	7	8	8	7	7	7
Degree of Util (X)	0.05	0.237	0.123	0.016	0.385	0.247
Departure Headway (Hd)	5.826	5.504	5.476	5.34	4.838	3.099
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	614	652	655	673	746	1162
Service Time	3.569	3.237	3.208	3.054	2.553	0.813
HCM Lane V/C Ratio	0.05	0.238	0.124	0.016	0.385	0.247
HCM Control Delay	8.9	9.9	9	8.1	10.6	6.8
HCM Lane LOS	A	A	A	A	B	A
HCM 95th-tile Q	0.2	0.9	0.4	0	1.8	1

Existing + Cuml AM
6: Nutmeg St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection	
Intersection Delay, s/veh	22.1
Intersection LOS	C

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↔	↕↔			↔↕	↕↔				↕↔				↕↔	
Traffic Vol, veh/h	0	16	183	31	0	329	465	26	0	11	34	171	0	53	147	69
Future Vol, veh/h	0	16	183	31	0	329	465	26	0	11	34	171	0	53	147	69
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	17	197	33	0	354	500	28	0	12	37	184	0	57	158	74
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB		NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	13.8	24.9	18.1	24.1
HCM LOS	B	C	C	C

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	5%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	16%	0%	100%	66%	0%	100%	86%	55%
Vol Right, %	79%	0%	0%	34%	0%	0%	14%	26%
Sign Control	Stop							
Traffic Vol by Lane	216	16	122	92	329	310	181	269
LT Vol	11	16	0	0	329	0	0	53
Through Vol	34	0	122	61	0	310	155	147
RT Vol	171	0	0	31	0	0	26	69
Lane Flow Rate	232	17	131	99	354	333	195	289
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.5	0.042	0.301	0.22	0.764	0.672	0.387	0.642
Departure Headway (Hd)	7.747	8.783	8.261	8.015	7.779	7.261	7.157	7.995
Convergence, Y/N	Yes							
Cap	465	406	433	446	463	497	500	451
Service Time	5.519	6.565	6.042	5.796	5.548	5.03	4.926	5.763
HCM Lane V/C Ratio	0.499	0.042	0.303	0.222	0.765	0.67	0.39	0.641
HCM Control Delay	18.1	12	14.6	13.1	31.7	23.8	14.4	24.1
HCM Lane LOS	C	B	B	B	D	C	B	C
HCM 95th-tile Q	2.7	0.1	1.3	0.8	6.5	4.9	1.8	4.4

Existing + Cuml AM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	60	380	84	301	494	101	62	321	84	195	878	172	
Future Volume (veh/h)	60	380	84	301	494	101	62	321	84	195	878	172	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00	1.00	0.99	1.00	0.99	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	65	413	91	327	537	110	67	349	91	212	954	187	
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	84	654	288	370	1225	541	86	837	369	253	1170	523	
Arrive On Green	0.05	0.18	0.18	0.21	0.35	0.35	0.05	0.24	0.24	0.14	0.33	0.33	
Sat Flow, veh/h	1774	3539	1557	1774	3539	1563	1774	3539	1561	1774	3539	1583	
Grp Volume(v), veh/h	65	413	91	327	537	110	67	349	91	212	954	187	
Grp Sat Flow(s), veh/h/ln	1774	1770	1557	1774	1770	1563	1774	1770	1561	1774	1770	1583	
Q Serve(g_s), s	2.9	8.5	4.0	14.1	9.2	3.9	3.0	6.6	3.7	9.2	19.5	7.1	
Cycle Q Clear(g_c), s	2.9	8.5	4.0	14.1	9.2	3.9	3.0	6.6	3.7	9.2	19.5	7.1	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	84	654	288	370	1225	541	86	837	369	253	1170	523	
V/C Ratio(X)	0.78	0.63	0.32	0.88	0.44	0.20	0.78	0.42	0.25	0.84	0.82	0.36	
Avail Cap(c_a), veh/h	193	806	355	438	1295	572	146	896	395	326	1254	561	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	37.2	29.7	27.9	30.3	19.9	18.2	37.2	25.6	24.5	33.0	24.2	20.1	
Incr Delay (d2), s/veh	14.3	1.1	0.6	16.9	0.2	0.2	14.1	0.3	0.3	14.0	4.0	0.4	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	7	4.2	1.8	8.6	4.5	1.7	1.8	3.2	1.6	5.5	10.2	3.1	
LnGrp Delay(d), s/veh	51.5	30.8	28.5	47.3	20.2	18.4	51.2	25.9	24.8	46.9	28.3	20.5	
LnGrp LOS	D	C	C	D	C	B	D	C	C	D	C	C	
Approach Vol, veh/h	569			974				507			1353		
Approach Delay, s/veh	32.8			29.1				29.0			30.1		
Approach LOS	C			C				C			C		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	23.2	21.0	19.1	8.3	30.6	8.2	31.8						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	20.0	19.5	18.0	6.5	28.0	8.6	28.9						
Max Q Clear Time (g_c+I), s	8.6	16.1	10.5	5.0	21.5	4.9	11.2						
Green Ext Time (p_c), s	0.2	7.2	0.3	4.0	0.0	4.6	0.0	6.8					

Intersection Summary												
HCM 2010 Ctrl Delay	30.1											
HCM 2010 LOS	C											

Existing + Cuml AM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	24	425	71	339	896	73	78	47	137	189	206	102	
Future Volume (veh/h)	24	425	71	339	896	73	78	47	137	189	206	102	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900	
Adj Flow Rate, veh/h	26	467	78	373	985	80	86	52	151	208	226	112	
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	33	1302	216	449	1006	831	107	268	227	226	248	123	
Arrive On Green	0.02	0.43	0.43	0.13	0.54	0.54	0.06	0.14	0.14	0.13	0.21	0.21	
Sat Flow, veh/h	1774	3039	505	3442	1863	1538	1774	1863	1580	1774	1177	583	
Grp Volume(v), veh/h	26	271	274	373	985	80	86	52	151	208	0	338	
Grp Sat Flow(s), veh/h/ln	1774	1770	1774	1721	1863	1538	1774	1863	1580	1774	0	1760	
Q Serve(g_s), s	1.5	10.9	11.1	11.2	54.7	1.4	5.1	2.6	9.6	12.3	0.0	19.9	
Cycle Q Clear(g_c), s	1.5	10.9	11.1	11.2	54.7	1.4	5.1	2.6	9.6	12.3	0.0	19.9	
Prop In Lane	1.00	0.28	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	0.33	
Lane Grp Cap(c), veh/h	33	758	760	449	1006	831	107	268	227	226	0	371	
V/C Ratio(X)	0.78	0.36	0.36	0.83	0.98	0.10	0.80	0.19	0.67	0.92	0.00	0.91	
Avail Cap(c_a), veh/h	67	758	760	601	1011	835	107	299	254	226	0	400	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	51.8	20.4	20.5	44.9	23.8	3.4	49.1	40.0	42.9	45.7	0.0	40.8	
Incr Delay (d2), s/veh	31.8	0.3	0.3	7.3	23.1	0.0	34.0	0.4	5.6	38.6	0.0	23.7	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	1.1	5.4	5.5	5.8	34.4	1.1	3.5	1.4	4.5	8.4	0.0	12.1	
LnGrp Delay(d), s/veh	83.5	20.7	20.8	52.2	46.9	3.5	83.2	40.3	48.5	84.3	0.0	64.5	
LnGrp LOS	F	C	C	D	D	A	F	D	D	F	E	E	
Approach Vol, veh/h	571			1438				289			546		
Approach Delay, s/veh	23.6			45.9				57.3			72.1		
Approach LOS	C			D				E			E		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	19.7	18.3	49.9	10.9	26.8	6.5	61.7						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	17.0	18.5	43.0	6.4	24.1	4.0	57.5						
Max Q Clear Time (g_c+I), s	11.6	13.2	13.1	7.1	21.9	3.5	56.7						
Green Ext Time (p_c), s	0.0	0.5	0.6	3.3	0.0	0.4	0.0	0.6					

Intersection Summary												
HCM 2010 Ctrl Delay	47.6											
HCM 2010 LOS	D											

Existing + Cuml AM
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	170	530	1	22	883	28	2	1	12	165	3	496
Future Volume (veh/h)	170	530	1	22	883	28	2	1	12	165	3	496
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	185	576	1	24	960	30	2	1	13	179	3	539
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	1294	2	54	1107	35	35	18	46	564	9	509
Arrive On Green	0.07	0.36	0.36	0.03	0.32	0.32	0.03	0.03	0.03	0.32	0.32	0.32
Sat Flow, veh/h	1774	3625	6	1774	3503	109	1202	601	1570	1746	29	1575
Grp Volume(v), veh/h	185	281	296	24	485	505	3	0	13	182	0	539
Grp Sat Flow(s), veh/h/ln	1774	1770	1862	1774	1770	1843	1803	0	1570	1775	0	1575
Q Serve(g_s), s	6.0	10.1	10.1	1.1	21.6	21.6	0.1	0.0	0.7	6.5	0.0	27.0
Cycle Q Clear(g_c), s	6.0	10.1	10.1	1.1	21.6	21.6	0.1	0.0	0.7	6.5	0.0	27.0
Prop In Lane	1.00	0.00	1.00	0.06	0.67	1.00	0.98	1.00	0.98	1.00	0.00	1.00
Lane Grp Cap(c), veh/h	127	632	665	54	559	582	53	0	46	574	0	509
V/C Ratio(X)	1.45	0.44	0.45	0.44	0.87	0.87	0.06	0.00	0.28	0.32	0.00	1.06
Avail Cap(c_a), veh/h	127	632	665	127	599	624	583	0	507	574	0	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.8	20.5	20.5	39.8	26.9	26.9	39.4	0.0	39.7	21.3	0.0	28.3
Incr Delay (d2), s/veh	241.6	0.6	0.6	2.1	12.5	12.1	0.5	0.0	4.0	0.4	0.0	56.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	5.3	0.6	12.4	12.9	0.1	0.0	0.3	3.2	0.0	19.7
LnGrp Delay(d), s/veh	280.4	21.1	21.1	41.9	39.4	39.0	40.0	0.0	43.7	21.7	0.0	84.8
LnGrp LOS	F	C	C	D	D	D	D		D	C		F
Approach Vol, veh/h	762			1014			16			721		
Approach Delay, s/veh	84.1			39.3			43.0			68.8		
Approach LOS	F			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	36.0		32.5	10.5	32.6		7.9				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	28.3			27.0	6.0	28.3		27.0				
Max Q Clear Time (g_c+I), s	12.1			29.0	8.0	23.6		2.7				
Green Ext Time (p_c), s	0.0	9.5		0.0	0.0	2.7		0.0				

Existing + Cuml AM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	3	653	148	251	789	10	58	21	185	18	105	13
Future Volume (veh/h)	3	653	148	251	789	10	58	21	185	18	105	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	4	768	174	295	928	12	68	25	218	21	124	15
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	9	889	201	340	1781	23	93	360	304	43	268	32
Arrive On Green	0.01	0.31	0.31	0.19	0.50	0.50	0.05	0.19	0.19	0.02	0.16	0.16
Sat Flow, veh/h	1774	2851	646	1774	3577	46	1774	1863	1576	1774	1628	197
Grp Volume(v), veh/h	4	477	465	295	459	481	68	25	218	21	0	139
Grp Sat Flow(s), veh/h/ln	1774	1770	1727	1774	1770	1853	1774	1863	1576	1774	0	1825
Q Serve(g_s), s	0.2	17.7	17.7	11.2	12.3	12.3	2.6	0.8	9.0	0.8	0.0	4.8
Cycle Q Clear(g_c), s	0.2	17.7	17.7	11.2	12.3	12.3	2.6	0.8	9.0	0.8	0.0	4.8
Prop In Lane	1.00	0.37	1.00	0.02	1.00	0.02	1.00	1.00	1.00	0.00	0.11	1.00
Lane Grp Cap(c), veh/h	9	552	538	340	881	923	93	360	304	43	0	300
V/C Ratio(X)	0.42	0.86	0.86	0.87	0.52	0.52	0.73	0.07	0.72	0.49	0.00	0.46
Avail Cap(c_a), veh/h	127	599	585	379	881	923	127	722	611	127	0	720
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	22.6	22.6	27.3	11.9	11.9	32.5	23.0	26.3	33.6	0.0	26.3
Incr Delay (d2), s/veh	27.1	11.8	12.1	17.5	0.6	0.6	12.8	0.1	2.4	8.6	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	10.4	10.2	7.1	6.0	6.3	1.6	0.4	4.1	0.5	0.0	0.0	2.5
LnGrp Delay(d), s/veh	61.6	34.4	34.7	44.9	12.5	12.5	45.3	23.1	28.7	42.2	0.0	27.2
LnGrp LOS	E	C	C	D	B	B	D	C	C	C		C
Approach Vol, veh/h	946			1235			311			160		
Approach Delay, s/veh	34.7			20.2			31.9			29.1		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.8	27.7	7.7	16.5	4.9	40.7	5.7	18.5				
Change Period (Y+Rc), s	4.5	6.0	4.0	*5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	23.6	5.0	*28	5.0	33.5	5.0	27.0					
Max Q Clear Time (g_c+I), s	19.7	4.6	6.8	2.2	14.3	2.8	11.0					
Green Ext Time (p_c), s	0.2	2.0	0.0	1.3	0.0	11.9	0.0	1.2				

Existing + Cuml AM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	79	1081	20	30	796	30	48	27	32	8	23	67	
Future Volume (veh/h)	79	1081	20	30	796	30	48	27	32	8	23	67	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	1.00	1.00	1.00	1.00	1.00	0.99	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	86	1175	22	33	865	33	52	29	35	9	25	73	
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	109	1812	34	54	1665	64	289	116	140	321	63	184	
Arrive On Green	0.06	0.51	0.51	0.03	0.48	0.48	0.15	0.15	0.15	0.15	0.15	0.15	
Sat Flow, veh/h	1774	3554	67	1774	3476	133	1286	769	928	1330	418	1221	
Grp Volume(v), veh/h	86	585	612	33	440	458	52	0	64	9	0	98	
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1770	1839	1286	0	1697	1330	0	1639	
Q Serve(g_s), s	2.1	10.6	10.6	0.8	7.5	7.5	1.7	0.0	1.5	0.3	0.0	2.4	
Cycle Q Clear(g_c), s	2.1	10.6	10.6	0.8	7.5	7.5	4.0	0.0	1.5	1.7	0.0	2.4	
Prop In Lane	1.00	0.04	1.00	1.00	0.07	1.00	1.00	0.55	1.00	0.74	1.00	1.00	
Lane Grp Cap(c), veh/h	109	902	944	54	847	881	289	0	256	321	0	247	
V/C Ratio(X)	0.79	0.65	0.65	0.62	0.52	0.52	0.18	0.00	0.25	0.03	0.00	0.40	
Avail Cap(c_a), veh/h	297	1066	1115	167	936	973	570	0	626	611	0	604	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	20.2	7.8	7.8	20.9	7.9	7.9	18.6	0.0	16.4	17.1	0.0	16.8	
Incr Delay (d2), s/veh	12.0	1.1	1.0	10.9	0.5	0.5	0.3	0.0	0.5	0.0	0.0	1.0	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4	5.3	5.5	0.5	3.8	3.9	0.6	0.0	0.7	0.1	0.0	1.1	
LnGrp Delay(d),s/veh	32.2	8.9	8.9	31.8	8.4	8.4	18.9	0.0	16.9	17.2	0.0	17.8	
LnGrp LOS	C	A	A	C	A	A	B		B	B		B	
Approach Vol, veh/h	1283			931				116			107		
Approach Delay, s/veh	10.4			9.2				17.8			17.7		
Approach LOS	B			A				B			B		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	5.8	26.8		11.1	7.2	25.4		11.1					
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5					
Max Green Setting (Gmax), s	26.3	16.1		7.3	23.1		16.1						
Max Q Clear Time (g_c+I), s	12.6	4.4		4.1	9.5		6.0						
Green Ext Time (p_c), s	0.0	9.7		0.9	0.0	9.6		0.8					

Intersection Summary												
HCM 2010 Ctrl Delay	10.6											
HCM 2010 LOS	B											

Existing + Cuml AM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	44	831	35	300	935	81	13	85	137	227	246	62	
Future Volume (veh/h)	44	831	35	300	935	81	13	85	137	227	246	62	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	45	848	0	306	954	83	13	87	140	232	251	63	
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	70	1013	453	383	1565	136	28	196	167	271	452	384	
Arrive On Green	0.04	0.29	0.00	0.22	0.48	0.48	0.02	0.11	0.11	0.15	0.24	0.24	
Sat Flow, veh/h	1774	3539	1583	1774	3295	287	1774	1863	1583	1774	1863	1583	
Grp Volume(v), veh/h	45	848	0	306	512	525	13	87	140	232	251	63	
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1812	1774	1863	1583	1774	1863	1583	
Q Serve(g_s), s	2.0	17.9	0.0	13.0	17.0	17.0	0.6	3.5	4.3	10.1	9.4	2.5	
Cycle Q Clear(g_c), s	2.0	17.9	0.0	13.0	17.0	17.0	0.6	3.5	4.3	10.1	9.4	2.5	
Prop In Lane	1.00	1.00	1.00	1.00	0.16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	70	1013	453	383	841	861	28	196	167	271	452	384	
V/C Ratio(X)	0.64	0.84	0.00	0.80	0.61	0.61	0.47	0.44	0.84	0.85	0.56	0.16	
Avail Cap(c_a), veh/h	112	1249	559	425	937	959	112	728	618	313	939	798	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	37.6	26.6	0.0	29.5	15.4	15.4	38.7	33.3	13.3	32.8	26.3	23.7	
Incr Delay (d2), s/veh	7.0	4.0	0.0	9.0	0.8	0.8	8.8	1.2	8.1	17.4	0.8	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1	9.3	0.0	7.3	8.4	8.6	0.3	1.9	3.1	6.3	4.9	1.1	
LnGrp Delay(d),s/veh	44.5	30.6	0.0	38.5	16.2	16.2	47.5	34.5	21.3	50.2	27.1	23.8	
LnGrp LOS	D	C		D	B	B	D	C	C	D	C	C	
Approach Vol, veh/h	893			1343				240			546		
Approach Delay, s/veh	31.3			21.3				27.5			36.5		
Approach LOS	C			C				C			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	21.1	27.7	5.2	24.3	7.1	42.7	16.1	13.4					
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0					
Max Green Setting (Gmax), s	28	5.0	40.0	5.0	42.0	14.0	31.0						
Max Q Clear Time (g_c+I), s	19.9	2.6	11.4	4.0	19.0	12.1	6.3						
Green Ext Time (p_c), s	2.2	2.9	0.0	2.2	0.0	5.9	0.1	2.1					

Intersection Summary												
HCM 2010 Ctrl Delay	27.5											
HCM 2010 LOS	C											

Notes

Existing + Cuml AM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	608	752	434	1231	0	0	0	0	201	1	244
Future Volume (veh/h)	0	608	752	434	1231	0	0	0	0	201	1	244
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	640	792	457	1296	0				299	0	164
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2039	911	534	2740	0				450	0	201
Arrive On Green	0.00	0.58	0.58	0.10	0.52	0.00				0.13	0.00	0.13
Sat Flow, veh/h	0	3632	1582	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	640	792	457	1296	0				299	0	164
Grp Sat Flow(s),veh/h/ln	0	1770	1582	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	10.3	46.8	14.4	25.7	0.0				8.8	0.0	11.1
Cycle Q Clear(g_c), s	0.0	10.3	46.8	14.4	25.7	0.0				8.8	0.0	11.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2039	911	534	2740	0				450	0	201
V/C Ratio(X)	0.00	0.31	0.87	0.86	0.47	0.00				0.66	0.00	0.82
Avail Cap(c_a), veh/h	0	2039	911	648	2740	0				600	0	268
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.55	0.55	0.68	0.68	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.1	19.8	48.1	12.2	0.0				45.8	0.0	46.8
Incr Delay (d2), s/veh	0.0	0.2	6.5	6.7	0.4	0.0				1.7	0.0	13.5
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	0.0	5.0	21.9	7.4	12.7	0.0				4.4	0.0	5.6
LnGrp Delay(d),s/veh	0.0	12.3	26.3	54.8	12.6	0.0				47.5	0.0	60.2
LnGrp LOS		B	C	D	B					D		E
Approach Vol, veh/h	1432				1753					463		
Approach Delay, s/veh	20.0				23.6					52.0		
Approach LOS	C				C					D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	69.2			19.1		90.9						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	55.1			18.6		80.5						
Max Q Clear Time (g_c+I), s	48.8			13.1		27.7						
Green Ext Time (p_c), s	0.7	5.7		0.9		30.3						
Intersection Summary												
HCM 2010 Ctrl Delay				25.8								
HCM 2010 LOS				C								
Notes												

Existing + Cuml AM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑			↑↑	↑↑				↑	↑	↑
Traffic Volume (veh/h)	99	711	0	0	1220	95	444	1	242	0	0	0
Future Volume (veh/h)	99	711	0	0	1220	95	444	1	242	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			1863
Adj Flow Rate, veh/h	105	756	0	0	1298	101	552	0	172			172
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			0.94
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			2
Cap, veh/h	130	2533	0	0	2122	949	658	0	293			293
Arrive On Green	0.15	1.00	0.00	0.00	0.60	0.60	0.19	0.00	0.19			0.19
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			1583
Grp Volume(v), veh/h	105	756	0	0	1298	101	552	0	172			172
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			1583
Q Serve(g_s), s	6.3	0.0	0.0	0.0	25.5	3.0	16.5	0.0	10.9			10.9
Cycle Q Clear(g_c), s	6.3	0.0	0.0	0.0	25.5	3.0	16.5	0.0	10.9			10.9
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			1.00
Lane Grp Cap(c), veh/h	130	2533	0	0	2122	949	658	0	293			293
V/C Ratio(X)	0.81	0.30	0.00	0.00	0.61	0.11	0.84	0.00	0.59			0.59
Avail Cap(c_a), veh/h	214	2533	0	0	2122	949	868	0	387			387
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.80	0.80	1.00	0.00	1.00			1.00
Uniform Delay (d), s/veh	46.2	0.0	0.0	0.0	13.9	9.4	43.2	0.0	40.9			40.9
Incr Delay (d2), s/veh	10.4	0.3	0.0	0.0	1.1	0.2	5.7	0.0	1.9			1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
%ile BackOfQ(50%),veh/ln	8.5	0.1	0.0	0.0	12.8	1.4	8.6	0.0	4.9			4.9
LnGrp Delay(d),s/veh	56.6	0.3	0.0	0.0	15.0	9.6	48.9	0.0	42.8			42.8
LnGrp LOS	E	A			B	A	D		D			
Approach Vol, veh/h	861				1399		724					
Approach Delay, s/veh	7.1				14.6		47.5					
Approach LOS	A				B		D					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		84.5			12.8	71.8		25.5				
Change Period (Y+Rc), s		5.8			4.7	5.8		5.1				
Max Green Setting (Gmax), s		72.2			* 13	54.2		26.9				
Max Q Clear Time (g_c+I), s		2.0			8.3	27.5		18.5				
Green Ext Time (p_c), s		26.5			0.1	16.8		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay					20.4							
HCM 2010 LOS					C							
Notes												

Existing + Cuml AM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	30	827	212	212	1185	50	91	9	125	31	12	76
Future Volume (veh/h)	30	827	212	212	1185	50	91	9	125	31	12	76
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	899	230	230	1288	54	99	10	136	34	13	83
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	1153	295	281	1878	79	303	20	277	258	41	260
Arrive On Green	0.03	0.41	0.41	0.16	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	2792	713	1774	3462	145	1291	109	1486	1234	218	1393
Grp Volume(v), veh/h	33	569	560	230	658	684	99	0	146	34	0	96
Grp Sat Flow(s), veh/h/ln	1774	1770	1736	1774	1770	1837	1291	0	1595	1234	0	1612
Q Serve(g_s), s	1.0	15.5	15.6	7.0	15.1	15.1	4.0	0.0	4.6	1.4	0.0	2.9
Cycle Q Clear(g_c), s	1.0	15.5	15.6	7.0	15.1	15.1	6.9	0.0	4.6	6.0	0.0	2.9
Prop In Lane	1.00	0.41	1.00	1.00	0.08	1.00	0.00	0.93	1.00	0.00	0.86	1.00
Lane Grp Cap(c), veh/h	51	731	717	281	960	997	303	0	297	258	0	300
V/C Ratio(X)	0.65	0.78	0.78	0.82	0.69	0.69	0.33	0.00	0.49	0.13	0.00	0.32
Avail Cap(c_a), veh/h	131	731	717	334	960	997	480	0	515	427	0	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	14.2	14.2	22.7	9.3	9.3	22.6	0.0	20.3	23.0	0.0	19.6
Incr Delay (d2), s/veh	13.0	8.1	8.3	12.8	4.0	3.8	0.6	0.0	1.3	0.2	0.0	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	7.1	8.9	4.4	8.2	8.7	1.5	0.0	2.1	0.5	0.0	1.3	0.0
LnGrp Delay(d), s/veh	39.8	22.2	22.4	35.4	13.2	13.1	23.2	0.0	21.6	23.2	0.0	20.2
LnGrp LOS	D	C	C	D	B	B	C		C	C		C
Approach Vol, veh/h	1162			1572			245			130		
Approach Delay, s/veh	22.8			16.4			22.2			21.0		
Approach LOS	C			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.3	27.5		14.9	6.1	34.7		14.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.0	18.0		18.0	4.1	29.4		18.0				
Max Q Clear Time (g_c+I+R), s	17.6	8.0		3.0	17.1		8.9					
Green Ext Time (p_c), s	0.1	4.8		1.4	0.0	10.0		1.3				

Intersection Summary	
HCM 2010 Ctrl Delay	19.5
HCM 2010 LOS	B

Existing + Cuml AM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	23	825	336	269	931	186	157	345	112	200	1150	69
Future Volume (veh/h)	23	825	336	269	931	186	157	345	112	200	1150	69
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	24	851	346	277	960	192	162	356	115	206	1186	71
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	290	1202	537	318	1008	201	206	1235	552	245	1249	559
Arrive On Green	0.08	0.34	0.34	0.12	0.46	0.46	0.06	0.35	0.35	0.07	0.35	0.35
Sat Flow, veh/h	3442	3539	1582	3442	2940	587	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	24	851	346	277	577	575	162	356	115	206	1186	71
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1770	1757	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.1	34.5	24.0	13.0	51.7	51.9	7.7	12.0	8.4	9.8	53.8	5.0
Cycle Q Clear(g_c), s	1.1	34.5	24.0	13.0	51.7	51.9	7.7	12.0	8.4	9.8	53.8	5.0
Prop In Lane	1.00	1.00	1.00	1.00	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	290	1202	537	318	607	603	206	1235	552	245	1249	559
V/C Ratio(X)	0.08	0.71	0.64	0.87	0.95	0.95	0.78	0.29	0.21	0.84	0.95	0.13
Avail Cap(c_a), veh/h	292	1202	537	398	616	611	209	1235	552	250	1266	566
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.62	0.62	0.62	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.7	47.4	28.6	71.4	43.6	43.6	76.5	38.9	37.7	75.7	52.0	36.2
Incr Delay (d2), s/veh	0.1	2.2	3.7	1.5	4.4	4.5	16.1	0.2	0.2	20.2	14.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	17.3	11.0	6.3	25.9	25.8	4.1	5.9	3.7	5.3	28.9	2.2
LnGrp Delay(d), s/veh	69.7	49.6	32.3	72.9	47.9	48.1	92.6	39.1	37.9	95.9	66.8	36.3
LnGrp LOS	E	D	C	E	D	D	F	D	D	F	E	D
Approach Vol, veh/h	1221			1429			633			1463		
Approach Delay, s/veh	45.1			52.9			52.6			69.4		
Approach LOS	D			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	3.3	62.9	16.2	64.5	20.8	63.5	16.9	63.9				
Change Period (Y+Rc), s	6.1	6.9	6.3	6.3	6.9	6.9	5.1	6.3				
Max Green Setting (Gmax), s	19.5	52.5	10.0	59	14.0	57	12.0	57.0				
Max Q Clear Time (g_c+I+R), s	17.6	36.5	9.7	55.8	3.1	53.9	11.8	14.0				
Green Ext Time (p_c), s	0.2	9.2	0.0	2.4	7.0	2.7	0.0	3.8				

Intersection Summary	
HCM 2010 Ctrl Delay	55.9
HCM 2010 LOS	E

Existing + Cuml AM
17: Broadway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		
Traffic Volume (veh/h)	280	779	104	188	1605	58	118	534	124	212	842	494	
Future Volume (veh/h)	280	779	104	188	1605	58	118	534	124	212	842	494	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	0.99	1.00	0.92	1.00	0.90	1.00	0.90		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	329	916	122	221	1888	68	139	628	146	249	991	581	
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	261	1271	169	264	1417	51	113	711	165	269	722	398	
Arrive On Green	0.08	0.41	0.41	0.08	0.41	0.41	0.06	0.25	0.25	0.15	0.34	0.34	
Sat Flow, veh/h	3442	3134	417	3442	3485	125	1774	2801	650	1774	2113	1163	
Grp Volume(v), veh/h	329	517	521	221	953	1003	139	396	378	249	820	752	
Grp Sat Flow(s), veh/h/ln	1721	1770	1782	1721	1770	1840	1774	1770	1681	1774	1770	1506	
Q Serve(g_s), s	12.5	40.5	40.5	10.5	67.1	67.1	10.5	35.5	35.7	22.9	56.4	56.4	
Cycle Q Clear(g_c), s	12.5	40.5	40.5	10.5	67.1	67.1	10.5	35.5	35.7	22.9	56.4	56.4	
Prop In Lane	1.00	0.23	1.00	1.00	0.07	1.00	0.39	1.00	0.39	1.00	0.77		
Lane Grp Cap(c), veh/h	261	718	723	264	720	748	113	449	427	269	605	515	
V/C Ratio(X)	1.26	0.72	0.72	0.84	1.32	1.34	1.23	0.88	0.89	0.93	1.36	1.46	
Avail Cap(c_a), veh/h	261	718	723	330	720	748	113	449	427	287	605	515	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	76.3	41.2	41.2	75.1	48.9	49.0	77.3	59.2	59.2	69.1	54.3	54.3	
Incr Delay (d2), s/veh	136.6	4.1	4.1	14.1	155.5	162.3	159.5	18.1	19.4	33.3	170.5	218.0	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	20.6	20.8	5.5	63.9	67.8	10.1	19.6	18.9	13.7	56.2	54.6		
LnGrp Delay(d), s/veh	212.8	45.3	45.2	89.3	204.4	211.3	236.7	77.3	78.6	102.4	224.8	272.3	
LnGrp LOS	F	D	D	F	F	F	F	E	E	F	F	F	
Approach Vol, veh/h	1367			2177				913			1821		
Approach Delay, s/veh	85.6			195.9				102.1			227.7		
Approach LOS	F			F				F			F		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.2	71.8	15.0	61.0	17.0	72.0	29.5	46.5
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6
Max Green Setting (Gmax), s	63.8	10.5	56.4	12.5	67.1	26.7	40.2	
Max Q Clear Time (g_c+I), s	42.5	12.5	58.4	14.5	69.1	24.9	37.7	
Green Ext Time (p_c), s	0.2	18.6	0.0	0.0	0.0	0.1	2.4	

Intersection Summary	
HCM 2010 Ctrl Delay	167.4
HCM 2010 LOS	F

Existing + Cuml PM
1: Centre City Parkway & Nutmeg St

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↔↔	↕↕			↕↕	
Traffic Vol, veh/h	71	2	2	4	0	2	2	432	0	0	213	35
Future Vol, veh/h	71	2	2	4	0	2	2	432	0	0	213	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	2	2	5	0	2	2	514	0	0	254	42

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	794	793	274	796	814	514	295	0	0	514	0	0
Stage 1	274	274	-	519	519	-	-	-	-	-	-	-
Stage 2	520	519	-	277	295	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	306	321	765	305	312	560	1266	-	-	1052	-	-
Stage 1	732	683	-	540	533	-	-	-	-	-	-	-
Stage 2	539	533	-	729	669	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	304	320	765	302	312	560	1266	-	-	1052	-	-
Mov Cap-2 Maneuver	304	320	-	302	312	-	-	-	-	-	-	-
Stage 1	731	683	-	539	532	-	-	-	-	-	-	-
Stage 2	536	532	-	724	669	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.3	15.3	0	0
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1266	-	-	309	357	1052	-	-
HCM Lane V/C Ratio	0.002	-	-	0.289	0.02	-	-	-
HCM Control Delay (s)	7.8	-	-	21.3	15.3	0	-	-
HCM Lane LOS	A	-	-	C	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	1.2	0.1	0	-	-

Existing + Cuml PM
2: Country Club Ln & Golden Circle Dr

Escondido Country Club
04/07/2017

Intersection												
Int Delay, s/veh	13											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	0	11	76	172	13	0	128	0	298	0	0	0
Future Vol, veh/h	0	11	76	172	13	0	128	0	298	0	0	0
Conflicting Peds, #/hr	2	0	0	0	0	2	5	0	0	0	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	12	85	193	15	0	144	0	335	0	0	0
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	17	0	0	98	0	0	461	458	55	625	501	22
Stage 1	-	-	-	-	-	-	55	55	-	403	403	-
Stage 2	-	-	-	-	-	-	406	403	-	222	98	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1600	-	-	1495	-	-	511	499	1012	397	472	1055
Stage 1	-	-	-	-	-	-	957	849	-	624	600	-
Stage 2	-	-	-	-	-	-	622	600	-	780	814	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1593	-	-	1495	-	-	459	434	1012	239	410	1049
Mov Cap-2 Maneuver	-	-	-	-	-	-	459	434	-	239	410	-
Stage 1	-	-	-	-	-	-	957	849	-	623	522	-
Stage 2	-	-	-	-	-	-	539	522	-	522	814	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0			7.2			18.2			0		
HCM LOS							C			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	743	1593	-	-	1495	-	-	-				
HCM Lane V/C Ratio	0.644	-	-	-	0.129	-	-	-				
HCM Control Delay (s)	18.2	0	-	-	7.8	-	-	0				
HCM Lane LOS	C	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	4.7	0	-	-	0.4	-	-	-				

Existing + Cuml PM
3: Country Club Ln & Gary Ln

Escondido Country Club
04/07/2017

Intersection										
Intersection Delay, s/veh	9.7									
Intersection LOS	A									
Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR	
Lane Configurations		↔	↔		↔	↔		↔	↔	
Traffic Vol, veh/h	0	53	257	0	170	49	0	35	41	
Future Vol, veh/h	0	53	257	0	170	49	0	35	41	
Peak Hour Factor	0.92	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93	
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	
Mvmt Flow	0	57	276	0	183	53	0	38	44	
Number of Lanes	0	1	1	0	1	1	0	1	0	
Approach	EB			WB			SB			
Opposing Approach	WB			EB						
Opposing Lanes	2			2			0			
Conflicting Approach Left	SB						WB			
Conflicting Lanes Left	1			0			2			
Conflicting Approach Right				SB			EB			
Conflicting Lanes Right	0			1			2			
HCM Control Delay	10.4			9			8.7			
HCM LOS	B			A			A			
Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1					
Vol Left, %	100%	0%	0%	0%	46%					
Vol Thru, %	0%	100%	100%	0%	0%					
Vol Right, %	0%	0%	0%	100%	54%					
Sign Control	Stop	Stop	Stop	Stop	Stop					
Traffic Vol by Lane	53	257	170	49	76					
LT Vol	53	0	0	0	35					
Through Vol	0	257	170	0	0					
RT Vol	0	0	0	49	41					
Lane Flow Rate	57	276	183	53	82					
Geometry Grp	7	7	7	7	2					
Degree of Util (X)	0.086	0.379	0.255	0.063	0.113					
Departure Headway (Hd)	5.437	4.934	5.029	4.326	4.989					
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes					
Cap	660	730	715	828	718					
Service Time	3.163	2.661	2.758	2.054	3.022					
HCM Lane V/C Ratio	0.086	0.378	0.256	0.064	0.114					
HCM Control Delay	8.7	10.7	9.5	7.3	8.7					
HCM Lane LOS	A	B	A	A	A					
HCM 95th-tile Q	0.3	1.8	1	0.2	0.4					

Existing + Cuml PM
4: Firestone Dr & Country Club Ln

Escondido Country Club
04/07/2017

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↔		↔↕		↕↔	
Traffic Vol, veh/h	343	10	42	217	9	71
Future Vol, veh/h	343	10	42	217	9	71
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	
Storage Length	-	-	80	-	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	373	11	46	236	10	77
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	384	0	587	192
Stage 1	-	-	-	-	378	-
Stage 2	-	-	-	-	209	-
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	-	-	1171	-	441	817
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	806	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	1171	-	424	817
Mov Cap-2 Maneuver	-	-	-	-	424	-
Stage 1	-	-	-	-	663	-
Stage 2	-	-	-	-	774	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	1.3	10.5			
HCM LOS			B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	740	-	-	1171	-	
HCM Lane V/C Ratio	0.118	-	-	0.039	-	
HCM Control Delay (s)	10.5	-	-	8.2	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-	

Existing + Cuml PM
5: La Brea St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection									
Intersection Delay, s/veh	9.2								
Intersection LOS	A								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Lane Configurations	↕↔		↔↕		↕↔		↕↔		
Traffic Vol, veh/h	0	368	20	0	21	249	0	9	11
Future Vol, veh/h	0	368	20	0	21	249	0	9	11
Peak Hour Factor	0.92	0.91	0.91	0.92	0.91	0.91	0.92	0.91	0.91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	404	22	0	23	274	0	10	12
Number of Lanes	0	2	0	0	1	2	0	1	0
Approach	EB	WB	NB						
Opposing Approach	WB		EB						
Opposing Lanes	3		2		0				
Conflicting Approach Left			NB		EB				
Conflicting Lanes Left	0		1		2				
Conflicting Approach Right	NB				WB				
Conflicting Lanes Right	1		0		3				
HCM Control Delay	10.2		7.7		8.8				
HCM LOS	B		A		A				
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3			
Vol Left, %	45%	0%	0%	100%	0%	0%			
Vol Thru, %	0%	100%	86%	0%	100%	100%			
Vol Right, %	55%	0%	14%	0%	0%	0%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	20	245	143	21	125	125			
LT Vol	9	0	0	21	0	0			
Through Vol	0	245	123	0	125	125			
RT Vol	11	0	20	0	0	0			
Lane Flow Rate	22	270	157	23	137	137			
Geometry Grp	7	8	8	7	7	7			
Degree of Util (X)	0.036	0.38	0.217	0.035	0.189	0.123			
Departure Headway (Hd)	5.854	5.079	4.981	5.47	4.968	3.227			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	611	709	721	657	724	1112			
Service Time	3.594	2.806	2.708	3.187	2.685	0.944			
HCM Lane V/C Ratio	0.036	0.381	0.218	0.035	0.189	0.123			
HCM Control Delay	8.8	10.9	9.1	8.4	8.8	6.4			
HCM Lane LOS	A	B	A	A	A	A			
HCM 95th %tile Q	0.1	1.8	0.8	0.1	0.7	0.4			

Existing + Cuml PM
6: Nutmeg St & Country Club Ln

Escondido Country Club
04/07/2017

Intersection															
Intersection Delay, s/veh 69															
Intersection LOS F															
Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBT	SBR
Lane Configurations		↔	↔			↔	↔				↔			↔	↔
Traffic Vol, veh/h	0	38	304	36	0	177	198	38	0	57	146	399	0	19	56
Future Vol, veh/h	0	38	304	36	0	177	198	38	0	57	146	399	0	19	56
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	41	327	39	0	190	213	41	0	61	157	429	0	20	60
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	0	1
Approach	EB				WB				NB				SB		
Opposing Approach	WB				EB				SB				NB		
Opposing Lanes	3				3				1				1		
Conflicting Approach Left	SB				NB				EB				WB		
Conflicting Lanes Left	1				1				3				3		
Conflicting Approach Right	NB				SB				WB				EB		
Conflicting Lanes Right	1				1				3				3		
HCM Control Delay	16.5				15.9				14.2				14.3		
HCM LOS	C				C				F				B		
Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1							
Vol Left, %	9%	100%	0%	0%	100%	0%	0%	19%							
Vol Thru, %	24%	0%	100%	74%	0%	100%	63%	57%							
Vol Right, %	66%	0%	0%	26%	0%	0%	37%	23%							
Sign Control	Stop														
Traffic Vol by Lane	602	38	203	137	177	132	104	98							
LT Vol	57	38	0	0	177	0	0	19							
Through Vol	146	0	203	101	0	132	66	56							
RT Vol	399	0	0	36	0	0	38	23							
Lane Flow Rate	647	41	218	148	190	142	112	105							
Geometry Grp	7	7	7	7	7	7	7	7							
Degree of Util (X)	1.243	0.093	0.464	0.306	0.429	0.299	0.231	0.242							
Departure Headway (Hd)	6.912	9.06	8.534	8.34	8.992	8.466	8.196	8.821							
Convergence, Y/N	Yes														
Cap	531	398	425	434	403	427	441	410							
Service Time	4.63	6.76	6.234	6.04	6.692	6.166	5.896	6.521							
HCM Lane V/C Ratio	1.218	0.103	0.513	0.341	0.471	0.333	0.254	0.256							
HCM Control Delay	147.2	12.7	18.4	14.7	18.3	14.7	13.3	14.3							
HCM Lane LOS	F	B	C	B	C	B	B	B							
HCM 95th-tile Q	25.3	0.3	2.4	1.3	2.1	1.2	0.9	0.9							

Existing + Cuml PM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
04/07/2017

Intersection													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (veh/h)	136	391	67	176	268	99	145	474	195	140	314	57	
Future Volume (veh/h)	136	391	67	176	268	99	145	474	195	140	314	57	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	0.98	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	148	425	73	191	291	108	158	515	212	152	341	62	
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	191	728	320	242	830	366	204	887	391	196	871	390	
Arrive On Green	0.11	0.21	0.21	0.14	0.23	0.23	0.11	0.25	0.25	0.11	0.25	0.25	
Sat Flow, veh/h	1774	3539	1558	1774	3539	1563	1774	3539	1562	1774	3539	1583	
Grp Volume(v), veh/h	148	425	73	191	291	108	158	515	212	152	341	62	
Grp Sat Flow(s), veh/h/ln	1774	1770	1558	1774	1770	1563	1774	1770	1562	1774	1770	1583	
Q Serve(g_s), s	4.9	6.6	2.4	6.3	4.2	3.4	5.3	7.7	7.1	5.1	4.9	1.9	
Cycle Q Clear(g_c), s	4.9	6.6	2.4	6.3	4.2	3.4	5.3	7.7	7.1	5.1	4.9	1.9	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	191	728	320	242	830	366	204	887	391	196	871	390	
V/C Ratio(X)	0.77	0.58	0.23	0.79	0.35	0.29	0.78	0.58	0.54	0.77	0.39	0.16	
Avail Cap(c_a), veh/h	424	1079	475	482	1196	528	453	1312	579	424	1254	561	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	26.3	21.8	20.1	25.3	19.4	19.1	26.1	19.9	19.7	26.3	19.1	17.9	
Incr Delay (d2), s/veh	6.5	0.7	0.4	5.6	0.3	0.4	6.2	0.6	1.2	6.4	0.3	0.2	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	8	3.3	1.0	3.5	2.0	1.5	2.9	3.9	3.2	2.8	2.4	0.8	
LnGrp Delay(d), s/veh	32.9	22.5	20.4	31.0	19.6	19.6	32.3	20.6	20.9	32.7	19.4	18.1	
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	B	B	
Approach Vol, veh/h	646				590				885				555
Approach Delay, s/veh	24.6				23.3				22.7				22.9
Approach LOS	C				C				C				C
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	19.7	12.8	17.0	11.5	19.4	11.0	18.7						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	22.5	16.5	18.5	15.5	21.5	14.5	20.5						
Max Q Clear Time (g_c+I), s	9.7	8.3	8.6	7.3	6.9	6.9	6.2						
Green Ext Time (p_c), s	0.2	5.5	0.3	3.8	0.2	5.9	0.2	4.7					
Intersection Summary													
HCM 2010 Ctrl Delay	23.3												
HCM 2010 LOS	C												

Existing + Cuml PM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	39	720	50	209	713	155	69	113	250	100	71	24
Future Volume (veh/h)	39	720	50	209	713	155	69	113	250	100	71	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00	0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	43	791	55	230	784	170	76	124	275	110	78	26
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	58	1351	94	318	861	710	337	370	314	140	117	39
Arrive On Green	0.03	0.40	0.40	0.09	0.46	0.46	0.19	0.20	0.20	0.08	0.09	0.09
Sat Flow, veh/h	1774	3358	233	3442	1863	1535	1774	1863	1581	1774	1338	446
Grp Volume(v), veh/h	43	417	429	230	784	170	76	124	275	110	0	104
Grp Sat Flow(s), veh/h/ln	1774	1770	1822	1721	1863	1535	1774	1863	1581	1774	0	1784
Q Serve(g_s), s	1.9	14.6	14.6	5.1	30.9	3.4	2.9	4.5	13.4	4.8	0.0	4.5
Cycle Q Clear(g_c), s	1.9	14.6	14.6	5.1	30.9	3.4	2.9	4.5	13.4	4.8	0.0	4.5
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	58	712	733	318	861	710	337	370	314	140	0	156
V/C Ratio(X)	0.74	0.59	0.59	0.72	0.91	0.24	0.23	0.33	0.87	0.79	0.00	0.67
Avail Cap(c_a), veh/h	101	800	824	443	977	805	337	412	350	191	0	451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.0	18.5	18.5	34.9	19.8	5.3	27.1	27.2	30.8	35.8	0.0	35.0
Incr Delay (d2), s/veh	16.8	0.9	0.9	3.5	11.5	0.2	0.3	0.5	19.7	13.9	0.0	4.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2	7.2	7.4	2.6	18.4	2.0	1.4	2.4	7.6	2.9	0.0	2.4
LnGrp Delay(d),s/veh	54.8	19.4	19.3	38.5	31.2	5.5	27.5	27.7	50.5	49.7	0.0	39.8
LnGrp LOS	D	B	B	D	C	A	C	C	D	D		D
Approach Vol, veh/h	889			1184				475			214	
Approach Delay, s/veh	21.1			28.9				40.9			44.9	
Approach LOS	C			C				D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.2	11.8	36.4	19.5	11.4	7.1	41.1					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	17.5	10.2	35.8	6.0	20.0	4.5	41.5					
Max Q Clear Time (g_c+1), s	15.4	7.1	16.6	4.9	6.5	3.9	32.9					
Green Ext Time (p_c), s	0.0	0.4	0.2	5.0	0.3	0.4	0.3	3.6				
Intersection Summary												
HCM 2010 Ctrl Delay	29.7											
HCM 2010 LOS	C											

Existing + Cuml PM
9: EI Norte Pkwy & Country Club Ln

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	381	707	13	43	838	125	9	9	15	80	3	197
Future Volume (veh/h)	381	707	13	43	838	125	9	9	15	80	3	197
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	414	768	14	47	911	136	10	10	16	87	3	214
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	439	1983	36	73	1085	162	39	39	66	286	10	261
Arrive On Green	0.25	0.56	0.56	0.04	0.35	0.35	0.04	0.04	0.04	0.17	0.17	0.17
Sat Flow, veh/h	1774	3556	65	1774	3088	461	909	909	1565	1718	59	1566
Grp Volume(v), veh/h	414	382	400	47	522	525	20	0	16	90	0	214
Grp Sat Flow(s), veh/h/ln	1774	1770	1851	1774	1770	1780	1817	0	1565	1777	0	1566
Q Serve(g_s), s	25.8	13.7	13.7	2.9	30.6	30.6	1.2	0.0	1.1	5.0	0.0	14.9
Cycle Q Clear(g_c), s	25.8	13.7	13.7	2.9	30.6	30.6	1.2	0.0	1.1	5.0	0.0	14.9
Prop In Lane	1.00		0.04	1.00		0.26	0.50		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	439	987	1032	73	622	625	77	0	66	296	0	261
V/C Ratio(X)	0.94	0.39	0.39	0.65	0.84	0.84	0.26	0.00	0.24	0.30	0.00	0.82
Avail Cap(c_a), veh/h	511	1023	1070	143	656	660	435	0	375	425	0	375
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.7	14.1	14.1	53.3	33.6	33.7	52.3	0.0	52.2	41.3	0.0	45.4
Incr Delay (d2), s/veh	23.2	0.3	0.3	3.5	9.4	9.3	2.1	0.0	2.2	0.7	0.0	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.5	6.8	7.1	1.5	16.5	16.6	0.7	0.0	0.5	2.5	0.0	7.2
LnGrp Delay(d),s/veh	64.8	14.4	14.4	56.8	43.0	43.0	54.4	0.0	54.5	42.0	0.0	55.6
LnGrp LOS	E	B	B	E	D	D	D		D	D		E
Approach Vol, veh/h	1196			1094				36			304	
Approach Delay, s/veh	31.8			43.6				54.4			51.6	
Approach LOS	C			D				D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	19.1	69.1		24.3	32.4	45.8		10.3				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	65.2	27.0		32.5	41.8	27.0		27.0				
Max Q Clear Time (g_c+1), s	15.7	16.9		27.8	32.6	3.2		3.2				
Green Ext Time (p_c), s	0.0	20.5		1.1	0.1	7.0		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay	39.3											
HCM 2010 LOS	D											

Existing + Cuml PM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↖↗	↗	↖	↖
Traffic Volume (veh/h)	11	806	92	192	850	26	129	92	224	23	31	12
Future Volume (veh/h)	11	806	92	192	850	26	129	92	224	23	31	12
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	13	948	108	226	1000	31	152	108	264	27	36	14
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	1170	133	266	1753	54	187	396	335	50	172	67
Arrive On Green	0.02	0.37	0.37	0.15	0.50	0.50	0.11	0.21	0.21	0.03	0.14	0.14
Sat Flow, veh/h	1774	3193	364	1774	3501	109	1774	1863	1577	1774	1273	495
Grp Volume(v), veh/h	13	525	531	226	505	526	152	108	264	27	0	50
Grp Sat Flow(s),veh/h/ln	1774	1770	1787	1774	1770	1840	1774	1863	1577	1774	0	1768
Q Serve(g_s), s	0.6	21.5	21.5	10.0	16.0	16.0	6.7	3.9	12.7	1.2	0.0	2.0
Cycle Q Clear(g_c), s	0.6	21.5	21.5	10.0	16.0	16.0	6.7	3.9	12.7	1.2	0.0	2.0
Prop In Lane	1.00	0.20	1.00	0.06	1.00	0.06	1.00	1.00	1.00	0.03	0.00	0.28
Lane Grp Cap(c), veh/h	28	649	655	266	886	921	187	396	335	50	0	239
V/C Ratio(X)	0.47	0.81	0.81	0.85	0.57	0.57	0.81	0.27	0.79	0.54	0.00	0.21
Avail Cap(c_a), veh/h	111	682	688	312	886	921	199	708	600	111	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.1	22.9	22.9	33.2	14.0	14.0	35.1	26.4	29.9	38.5	0.0	30.9
Incr Delay (d2), s/veh	11.7	7.0	7.0	17.4	1.0	0.9	21.2	0.3	3.1	8.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.6	11.7	6.2	8.0	8.3	4.4	2.0	5.8	0.7	0.0	0.0	1.0
LnGrp Delay(d),s/veh	50.8	29.9	29.8	50.7	15.0	14.9	56.3	26.7	33.0	47.2	0.0	31.2
LnGrp LOS	D	C	C	D	B	B	E	C	C	D		C
Approach Vol, veh/h	1069			1257			524			77		
Approach Delay, s/veh	30.1			21.4			38.5			36.8		
Approach LOS	C			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.5	35.4	12.4	15.9	5.8	46.1	6.3	22.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	30.9	9.0	27	5.0	40.0	5.0	30.5					
Max Q Clear Time (g_c+I), s	23.5	8.7	4.0	2.6	18.0	3.2	14.7					
Green Ext Time (p_c), s	0.1	5.9	0.0	1.4	0.0	14.5	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				28.0								
HCM 2010 LOS	C											
Notes												

Existing + Cuml PM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↖↗	↗	↖	↖
Traffic Volume (veh/h)	83	1132	31	36	1045	17	40	16	33	16	23	69
Future Volume (veh/h)	83	1132	31	36	1045	17	40	16	33	16	23	69
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	90	1230	34	39	1136	18	43	17	36	17	25	75
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	114	1855	51	61	1774	28	267	74	157	308	57	172
Arrive On Green	0.06	0.53	0.53	0.03	0.50	0.50	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	3515	97	1774	3564	56	1290	533	1128	1343	411	1234
Grp Volume(v), veh/h	90	619	645	39	564	590	43	0	53	17	0	100
Grp Sat Flow(s),veh/h/ln	1774	1770	1843	1774	1770	1851	1290	0	1661	1343	0	1645
Q Serve(g_s), s	2.3	11.5	11.5	1.0	10.6	10.6	1.4	0.0	1.3	0.5	0.0	2.5
Cycle Q Clear(g_c), s	2.3	11.5	11.5	1.0	10.6	10.6	3.9	0.0	1.3	1.8	0.0	2.5
Prop In Lane	1.00	0.05	1.00	0.03	1.00	0.03	1.00	0.00	0.68	1.00	0.00	0.75
Lane Grp Cap(c), veh/h	114	934	972	61	881	921	267	0	231	308	0	229
V/C Ratio(X)	0.79	0.66	0.66	0.64	0.64	0.64	0.16	0.00	0.23	0.06	0.00	0.44
Avail Cap(c_a), veh/h	216	1031	1074	161	976	1021	548	0	592	601	0	587
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.8	7.7	7.7	21.5	8.4	8.4	19.6	0.0	17.3	18.1	0.0	17.8
Incr Delay (d2), s/veh	11.6	1.4	1.4	10.7	1.2	1.2	0.3	0.0	0.5	0.1	0.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	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	6.1	0.7	5.3	5.5	0.5	0.0	0.6	0.2	0.0	0.0	1.2
LnGrp Delay(d),s/veh	32.4	9.1	9.1	32.2	9.6	9.5	19.9	0.0	17.8	18.2	0.0	19.1
LnGrp LOS	C	A	A	C	A	A	B		B	B		B
Approach Vol, veh/h	1354			1193			96			117		
Approach Delay, s/veh	10.7			10.3			18.7			19.0		
Approach LOS	B			B			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	28.3	28.3		10.8	7.4	27.0		10.8				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	26.3	16.1		5.5	24.9	16.1		16.1				
Max Q Clear Time (g_c+I), s	13.5	4.5		4.3	12.6	5.9		5.9				
Green Ext Time (p_c), s	0.0	10.2		0.8	0.0	9.9		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay				11.1								
HCM 2010 LOS	B											
Notes												

Existing + Cuml PM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	83	874	41	184	854	207	42	262	283	227	129	47
Future Volume (veh/h)	83	874	41	184	854	207	42	262	283	227	129	47
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	85	892	0	188	871	211	43	267	289	232	132	48
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	1114	498	225	1024	248	67	429	364	194	562	477
Arrive On Green	0.07	0.31	0.00	0.13	0.36	0.36	0.04	0.23	0.23	0.11	0.30	0.30
Sat Flow, veh/h	1774	3539	1583	1774	2826	684	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	85	892	0	188	545	537	43	267	289	232	132	48
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1741	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.9	19.0	0.0	8.5	23.4	23.4	2.0	10.6	14.1	9.0	4.4	1.3
Cycle Q Clear(g_c), s	3.9	19.0	0.0	8.5	23.4	23.4	2.0	10.6	14.1	9.0	4.4	1.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.39	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	120	1114	498	225	641	631	67	429	364	194	562	477
V/C Ratio(X)	0.71	0.80	0.00	0.83	0.85	0.85	0.64	0.62	0.79	1.20	0.24	0.10
Avail Cap(c_a), veh/h	151	1377	616	280	817	804	129	860	731	194	928	789
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.6	25.8	0.0	35.1	24.2	24.2	39.0	28.5	29.8	36.6	21.6	11.0
Incr Delay (d2), s/veh	9.2	2.6	0.0	14.9	6.4	6.6	7.2	1.1	2.9	127.2	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.2	9.7	0.0	5.1	12.5	12.3	1.1	5.5	6.4	11.2	2.3	0.8
LnGrp Delay(d), s/veh	46.8	28.4	0.0	50.0	30.6	30.8	46.2	29.6	32.8	163.8	21.8	11.1
LnGrp LOS	D	C		D	C	C	D	C	C	F	C	B
Approach Vol, veh/h	977			1270			599			412		
Approach Delay, s/veh	30.0			33.5			32.3			100.5		
Approach LOS	C			C			C			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.5	30.9	7.1	29.8	10.5	34.8	13.0	23.9				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	5.0	* 5	4.0	5.0				
Max Green Setting (Gmax), s	32.0	6.0	41.0	7.0	* 38	9.0	38.0					
Max Q Clear Time (g_c+I), s	21.0	4.0	6.4	5.9	25.4	11.0	16.1					
Green Ext Time (p_c), s	0.1	3.7	0.0	2.9	0.6	4.4	0.0	2.8				
Intersection Summary												
HCM 2010 Ctrl Delay				40.7								
HCM 2010 LOS				D								
Notes												

Existing + Cuml PM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	0	1244	428	284	1802	0	0	0	0	105	1	149
Future Volume (veh/h)	0	1244	428	284	1802	0	0	0	0	105	1	149
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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				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	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1309	451	299	1897	0				167	0	97
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2368	1058	364	2893	0				296	0	132
Arrive On Green	0.00	0.67	0.67	0.21	1.00	0.00				0.08	0.00	0.08
Sat Flow, veh/h	0	3632	1582	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	1309	451	299	1897	0				167	0	97
Grp Sat Flow(s), veh/h/ln	0	1770	1582	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	21.4	14.5	9.1	0.0	0.0				5.0	0.0	6.6
Cycle Q Clear(g_c), s	0.0	21.4	14.5	9.1	0.0	0.0				5.0	0.0	6.6
Prop In Lane	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2368	1058	364	2893	0				296	0	132
V/C Ratio(X)	0.00	0.55	0.43	0.82	0.66	0.00				0.56	0.00	0.73
Avail Cap(c_a), veh/h	0	2368	1058	541	2893	0				577	0	258
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.45	0.45	0.20	0.20	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.6	8.4	42.4	0.0	0.0				48.5	0.0	49.2
Incr Delay (d2), s/veh	0.0	0.4	0.6	1.3	0.2	0.0				1.7	0.0	7.7
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	0.0	10.5	6.4	4.4	0.1	0.0				2.5	0.0	3.2
LnGrp Delay(d), s/veh	0.0	10.0	9.0	43.7	0.2	0.0				50.2	0.0	56.9
LnGrp LOS		A	A	D	A					D		E
Approach Vol, veh/h	1760			2196						264		
Approach Delay, s/veh	9.7			6.2						52.7		
Approach LOS	A			A						D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	36.3	79.4		14.3		95.7						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	59.2	17.9		81.2								
Max Q Clear Time (g_c+I), s	23.4	8.6		2.0								
Green Ext Time (p_c), s	0.5	32.2		0.6		63.7						
Intersection Summary												
HCM 2010 Ctrl Delay				10.6								
HCM 2010 LOS				B								
Notes												

Existing + Cuml PM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖↗	↖	↖	↖↗	↖			
Traffic Volume (veh/h)	281	1068	0	0	1096	255	989	1	563	0	0	0
Future Volume (veh/h)	281	1068	0	0	1096	255	989	1	563	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	299	1136	0	0	1166	271	1239	0	400			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	453	2383	0	0	1293	579	1158	0	517			
Arrive On Green	0.51	1.00	0.00	0.00	0.37	0.37	0.33	0.00	0.33			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	299	1136	0	0	1166	271	1239	0	400			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	13.7	0.0	0.0	0.0	34.3	14.4	35.9	0.0	25.0			
Cycle Q Clear(g_c), s	13.7	0.0	0.0	0.0	34.3	14.4	35.9	0.0	25.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	453	2383	0	0	1293	579	1158	0	517			
V/C Ratio(X)	0.66	0.48	0.00	0.00	0.90	0.47	1.07	0.00	0.77			
Avail Cap(c_a), veh/h	453	2383	0	0	1293	579	1158	0	517			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.78	0.78	0.00	0.00	0.63	0.63	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.4	0.0	0.0	0.0	33.0	26.7	37.1	0.0	33.4			
Incr Delay (d2), s/veh	2.8	0.5	0.0	0.0	6.9	1.7	47.3	0.0	7.2			
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	0	0.2	0.0	0.0	17.9	6.6	25.1	0.0	11.9			
LnGrp Delay(d),s/veh	26.2	0.5	0.0	0.0	40.0	28.4	84.4	0.0	40.6			
LnGrp LOS	C	A			D	C	F		D			
Approach Vol, veh/h	1435			1437				1639				
Approach Delay, s/veh	5.9			37.8				73.7				
Approach LOS	A			D				E				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2				5		6		8			
Phs Duration (G+Y+Rc), s	79.9				33.9		46.0		41.0			
Change Period (Y+Rc), s	5.8				5.8		5.8		5.1			
Max Green Setting (Gmax), s	63.2				18.3		40		35.9			
Max Q Clear Time (g_c+I1), s	2.0				15.7		36.3		37.9			
Green Ext Time (p_c), s	11.5				1.6		2.7		0.0			
Intersection Summary												
HCM 2010 Ctrl Delay				40.7								
HCM 2010 LOS				D								
Notes												

Existing + Cuml PM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗			↖↗	↖	↖	↖↗	↖			
Traffic Volume (veh/h)	120	1363	122	97	1047	35	226	24	204	27	10	139
Future Volume (veh/h)	120	1363	122	97	1047	35	226	24	204	27	10	139
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	130	1482	133	105	1138	38	246	26	222	29	11	151
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1615	144	134	1656	55	300	42	357	224	27	373
Arrive On Green	0.09	0.49	0.49	0.08	0.47	0.47	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3286	293	1774	3492	117	1217	166	1420	1127	108	1488
Grp Volume(v), veh/h	130	793	822	105	577	599	246	0	248	29	0	162
Grp Sat Flow(s),veh/h/ln	1774	1770	1810	1774	1770	1839	1217	0	1587	1127	0	1596
Q Serve(g_s), s	5.3	30.6	31.3	4.3	18.8	18.8	12.3	0.0	10.3	1.7	0.0	6.3
Cycle Q Clear(g_c), s	5.3	30.6	31.3	4.3	18.8	18.8	18.6	0.0	10.3	12.0	0.0	6.3
Prop In Lane	1.00		0.16	1.00		0.06	1.00		0.90	1.00		0.93
Lane Grp Cap(c), veh/h	164	869	889	134	839	872	300	0	398	224	0	401
V/C Ratio(X)	0.79	0.91	0.92	0.79	0.69	0.69	0.82	0.00	0.62	0.13	0.00	0.40
Avail Cap(c_a), veh/h	204	869	889	156	839	872	300	0	398	224	0	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	17.4	17.6	33.7	15.2	15.2	32.0	0.0	24.6	30.0	0.0	23.1
Incr Delay (d2), s/veh	15.6	15.5	16.6	20.0	4.6	4.4	16.4	0.0	3.0	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	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	18.5	19.6	2.8	10.2	10.6	6.4	0.0	4.8	0.6	0.0	2.8
LnGrp Delay(d),s/veh	48.6	32.9	34.1	53.6	19.7	19.6	48.4	0.0	27.6	30.2	0.0	23.8
LnGrp LOS	D	C	C	D	B	B	D		C	C		C
Approach Vol, veh/h	1745			1281				494		191		
Approach Delay, s/veh	34.6			22.4				38.0		24.8		
Approach LOS	C			C				D		C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		2		4		5		6		8	
Phs Duration (G+Y+Rc), s	40.9		23.1		11.3		39.6		23.1			
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5			
Max Green Setting (Gmax), s	36.4		18.6		8.5		34.4		18.6			
Max Q Clear Time (g_c+I1), s	33.3		14.0		7.3		20.8		20.6			
Green Ext Time (p_c), s	0.0		2.9		1.6		0.0		11.8		0.0	
Intersection Summary												
HCM 2010 Ctrl Delay				30.4								
HCM 2010 LOS				C								
Notes												

Existing + Cuml PM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	37	1114	197	214	828	131	355	673	476	197	235	23
Future Volume (veh/h)	37	1114	197	214	828	131	355	673	476	197	235	23
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	38	1148	203	221	854	135	366	694	491	203	242	24
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	477	1312	586	271	937	148	1046	1176	526	242	324	145
Arrive On Green	0.14	0.37	0.37	0.16	0.61	0.61	0.30	0.33	0.33	0.07	0.09	0.09
Sat Flow, veh/h	3442	3539	1582	3442	3061	484	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	38	1148	203	221	494	495	366	694	491	203	242	24
Grp Sat Flow(s),veh/h/ln	1721	1770	1582	1721	1770	1776	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.6	49.9	6.0	10.2	40.4	40.4	13.7	26.9	49.5	9.6	11.0	2.3
Cycle Q Clear(g_c), s	1.6	49.9	6.0	10.2	40.4	40.4	13.7	26.9	49.5	9.6	11.0	2.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	477	1312	586	271	541	543	1046	1176	526	242	324	145
V/C Ratio(X)	0.08	0.88	0.35	0.82	0.91	0.91	0.35	0.59	0.93	0.84	0.75	0.17
Avail Cap(c_a), veh/h	477	1312	586	271	606	608	1046	1246	558	246	1094	489
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.33	0.33	0.33	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.9	48.4	5.7	68.3	30.1	30.1	44.7	45.8	53.3	75.8	73.1	69.1
Incr Delay (d2), s/veh	0.0	3.1	0.5	1.7	2.9	2.9	0.1	0.8	22.5	20.3	4.1	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8	25.0	2.7	4.9	19.8	19.8	6.5	13.2	25.0	5.3	5.6	1.0
LnGrp Delay(d),s/veh	61.9	51.4	6.2	70.0	33.0	32.9	44.8	46.5	75.9	96.1	77.2	69.8
LnGrp LOS	E	D	A	E	C	C	D	D	E	F	E	E
Approach Vol, veh/h	1389			1210			1551			469		
Approach Delay, s/veh	45.1			39.7			55.4			85.0		
Approach LOS	D			D			E			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	68.1	56.4	21.4	29.8	57.4	16.7	61.1					
Change Period (Y+Rc), s	6.1	6.9	6.3	6.3	6.9	6.9	5.1	6.3				
Max Green Setting (Gmax), s	57.7	18.9	51	14.0	57	11.8	58.1					
Max Q Clear Time (g_c+I1), s	51.9	15.7	13.0	3.6	42.4	11.6	51.5					
Green Ext Time (p_c), s	0.0	4.6	2.3	2.1	7.7	7.5	0.0	3.3				
Intersection Summary												
HCM 2010 Ctrl Delay	51.2											
HCM 2010 LOS	D											
Notes												

Existing + Cuml PM
17: Broadway & El Norte Pkwy

Escondido Country Club
04/07/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	397	1487	131	198	1230	51	158	493	290	128	552	186
Future Volume (veh/h)	397	1487	131	198	1230	51	158	493	290	128	552	186
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.99	1.00	1.00	0.99	1.00	0.92	1.00	1.00	0.86	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	467	1749	154	233	1447	60	186	580	341	151	649	219
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	463	1604	139	234	1456	60	182	515	303	149	572	193
Arrive On Green	0.27	0.97	0.97	0.07	0.42	0.42	0.10	0.25	0.25	0.08	0.23	0.23
Sat Flow, veh/h	3442	3292	286	3442	3463	143	1774	2072	1218	1774	2485	837
Grp Volume(v), veh/h	467	928	975	233	738	769	186	495	426	151	462	406
Grp Sat Flow(s),veh/h/ln	1721	1770	1808	1721	1770	1836	1774	1770	1520	1774	1770	1552
Q Serve(g_s), s	22.2	80.4	80.4	11.2	68.4	68.9	16.9	41.0	41.0	13.9	38.0	38.0
Cycle Q Clear(g_c), s	22.2	80.4	80.4	11.2	68.4	68.9	16.9	41.0	41.0	13.9	38.0	38.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	463	862	881	234	744	772	182	440	378	149	408	358
V/C Ratio(X)	1.01	1.08	1.11	1.00	0.99	1.00	1.02	1.13	1.13	1.01	1.13	1.14
Avail Cap(c_a), veh/h	463	862	881	234	744	772	182	440	378	149	408	358
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	60.3	2.1	2.1	76.9	47.5	47.7	74.1	62.0	62.0	75.6	63.5	63.5
Incr Delay (d2), s/veh	31.4	45.4	56.6	58.1	31.0	31.4	73.1	82.2	85.5	76.4	86.2	89.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.5	31.7	35.1	7.2	39.8	41.6	12.0	30.1	26.2	10.0	28.3	25.2
LnGrp Delay(d),s/veh	91.7	47.5	58.7	135.0	78.5	79.0	147.4	144.2	147.5	152.0	149.7	153.2
LnGrp LOS	F	F	F	F	E	E	F	F	F	F	F	F
Approach Vol, veh/h	2370			1740			1107			1019		
Approach Delay, s/veh	60.8			86.3			146.0			151.5		
Approach LOS	E			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	85.3	21.4	42.6	26.7	74.3	18.4	45.6					
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6				
Max Green Setting (Gmax), s	80.4	16.9	38.0	22.2	69.4	13.9	41.0					
Max Q Clear Time (g_c+I1), s	82.4	18.9	40.0	24.2	70.9	15.9	43.0					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	97.9											
HCM 2010 LOS	F											
Notes												

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APPENDIX G

INTERSECTION ANALYSIS WORKSHEETS – EXISTING + CUMULATIVE PROJECTS + PROJECT

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Intersection												
Int Delay, s/veh 1.8												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔		↔	↔		↔	↔		↔	↔	
Traffic Vol, veh/h	48	1	3	3	3	2	3	179	1	4	643	177
Future Vol, veh/h	48	1	3	3	3	2	3	179	1	4	643	177
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	57	1	4	4	4	2	4	213	1	5	765	211

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1104	1101	871	1104	1207	214	976	0	0	214	0	0
Stage 1	880	880	-	221	221	-	-	-	-	-	-	-
Stage 2	224	221	-	883	986	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	188	212	350	188	183	826	707	-	-	1356	-	-
Stage 1	342	365	-	781	720	-	-	-	-	-	-	-
Stage 2	779	720	-	340	326	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	183	209	350	183	181	826	707	-	-	1356	-	-
Mov Cap-2 Maneuver	183	209	-	183	181	-	-	-	-	-	-	-
Stage 1	340	362	-	777	716	-	-	-	-	-	-	-
Stage 2	769	716	-	333	323	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	33.1	21.6	0.2	0
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	707	-	-	189	226	1356	-	-
HCM Lane V/C Ratio	0.005	-	-	0.328	0.042	0.004	-	-
HCM Control Delay (s)	10.1	-	-	33.1	21.6	7.7	0	-
HCM Lane LOS	B	-	-	D	C	A	A	-
HCM 95th %tile Q(veh)	0	-	-	1.3	0.1	0	-	-

MOVEMENT SUMMARY

Site: 101 [2. NT+P AM]

2. Country Club / Golden Circle / Drwy A Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Country Club Ln											
3	L2	38	2.0	0.167	4.5	LOS A	0.8	20.6	0.14	0.05	35.0
8	T1	24	2.0	0.167	4.5	LOS A	0.8	20.6	0.14	0.05	34.9
18	R2	136	2.0	0.167	4.5	LOS A	0.8	20.6	0.14	0.05	33.9
Approach		198	2.0	0.167	4.5	LOS A	0.8	20.6	0.14	0.05	34.2
East: Country Club Ln											
1	L2	586	2.0	0.522	9.1	LOS A	4.1	103.2	0.34	0.17	30.8
6	T1	4	2.0	0.522	9.1	LOS A	4.1	103.2	0.34	0.17	30.7
16	R2	8	2.0	0.522	9.1	LOS A	4.1	103.2	0.34	0.17	30.0
Approach		598	2.0	0.522	9.1	LOS A	4.1	103.2	0.34	0.17	30.8
North: Proj Drwy A											
7	L2	16	2.0	0.118	7.4	LOS A	0.5	11.7	0.61	0.59	33.4
4	T1	53	2.0	0.118	7.4	LOS A	0.5	11.7	0.61	0.59	33.4
14	R2	1	2.0	0.118	7.4	LOS A	0.5	11.7	0.61	0.59	32.4
Approach		71	2.0	0.118	7.4	LOS A	0.5	11.7	0.61	0.59	33.4
West: Golden Circle Dr											
5	L2	1	2.0	0.311	10.5	LOS B	1.3	34.1	0.68	0.68	32.4
2	T1	14	2.0	0.311	10.5	LOS B	1.3	34.1	0.68	0.68	32.3
12	R2	165	2.0	0.311	10.5	LOS B	1.3	34.1	0.68	0.68	31.4
Approach		180	2.0	0.311	10.5	LOS B	1.3	34.1	0.68	0.68	31.5
All Vehicles		1047	2.0	0.522	8.4	LOS A	4.1	103.2	0.38	0.26	31.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Existing + Cuml + Proj AM
3: Country Club Ln & Gary Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↑	↑	↔	↔	↔		
Traffic Volume (veh/h)	28	143	465	26	79	92		
Future Volume (veh/h)	28	143	465	26	79	92		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	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	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	30	154	500	28	85	99		
Adj No. of Lanes	1	1	1	1	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	542	864	864	714	114	133		
Arrive On Green	0.46	0.46	0.46	0.46	0.15	0.15		
Sat Flow, veh/h	869	1863	1863	1540	765	891		
Grp Volume(v), veh/h	30	154	500	28	185	0		
Grp Sat Flow(s), veh/h/ln	869	1863	1863	1540	1664	0		
Q Serve(g_s), s	0.6	1.1	4.6	0.2	2.5	0.0		
Cycle Q Clear(g_c), s	5.2	1.1	4.6	0.2	2.5	0.0		
Prop In Lane	1.00			1.00	0.46	0.54		
Lane Grp Cap(c), veh/h	542	864	864	714	248	0		
V/C Ratio(X)	0.06	0.18	0.58	0.04	0.74	0.00		
Avail Cap(c_a), veh/h	812	1442	1442	1192	1288	0		
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	0.00		
Uniform Delay (d), s/veh	6.5	3.6	4.6	3.4	9.5	0.0		
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.0	4.4	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln0.1	0.6	2.4	0.1	1.4	0.0			
LnGrp Delay(d),s/veh	6.5	3.7	5.2	3.4	13.9	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h	184	528		185				
Approach Delay, s/veh	4.2	5.1		13.9				
Approach LOS	A	A		B				
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				15.3		8.0		15.3
Change Period (Y+Rc), s				4.5		4.5		4.5
Max Green Setting (Gmax), s				18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s				7.2		4.5		6.6
Green Ext Time (p_c), s				3.3		0.4		3.4
Intersection Summary								
HCM 2010 Ctrl Delay				6.7				
HCM 2010 LOS				A				
Notes								

Existing + Cuml + Proj AM
4: Firestone Dr & Country Club Ln

Escondido Country Club
06/19/2017

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑		↔
Traffic Vol, veh/h	216	14	0	541	0	58
Future Vol, veh/h	216	14	0	541	0	58
Conflicting Peds, #/hr	0	9	0	0	9	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	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	235	15	0	588	0	63
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	260
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	779
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	767
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	10.1			
HCM LOS			B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	767	-	-	-		
HCM Lane V/C Ratio	0.082	-	-	-		
HCM Control Delay (s)	10.1	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.3	-	-	-		

MOVEMENT SUMMARY

Site: 101 [5. NT+P AM]

5. Country Club / La Brea / Drwy D Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: La Brea St											
3	L2	24	2.0	0.066	4.8	LOS A	0.3	6.8	0.45	0.32	34.1
8	T1	1	2.0	0.066	4.8	LOS A	0.3	6.8	0.45	0.32	34.0
18	R2	32	2.0	0.066	4.8	LOS A	0.3	6.8	0.45	0.32	33.1
Approach		57	2.0	0.066	4.8	LOS A	0.3	6.8	0.45	0.32	33.5
East: Country Club Ln											
1	L2	16	2.0	0.465	8.0	LOS A	3.4	86.4	0.21	0.08	33.7
6	T1	529	2.0	0.465	8.0	LOS A	3.4	86.4	0.21	0.08	33.6
16	R2	7	2.0	0.465	8.0	LOS A	3.4	86.4	0.21	0.08	32.7
Approach		552	2.0	0.465	8.0	LOS A	3.4	86.4	0.21	0.08	33.6
North: Proj Drwy D											
7	L2	16	2.0	0.051	6.2	LOS A	0.2	4.9	0.57	0.49	33.3
4	T1	10	2.0	0.051	6.2	LOS A	0.2	4.9	0.57	0.49	33.2
14	R2	7	2.0	0.051	6.2	LOS A	0.2	4.9	0.57	0.49	32.3
Approach		33	2.0	0.051	6.2	LOS A	0.2	4.9	0.57	0.49	33.0
West: Country Club Ln											
5	L2	5	2.0	0.268	5.5	LOS A	1.5	37.1	0.19	0.07	35.0
2	T1	291	2.0	0.268	5.5	LOS A	1.5	37.1	0.19	0.07	34.9
12	R2	17	2.0	0.268	5.5	LOS A	1.5	37.1	0.19	0.07	33.9
Approach		314	2.0	0.268	5.5	LOS A	1.5	37.1	0.19	0.07	34.9
All Vehicles		955	2.0	0.465	6.9	LOS A	3.4	86.4	0.23	0.10	34.0

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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 Organisation: LINSOTT, LAW & GREENSPAN ENGINEERS | Processed: Friday, June 16, 2017 2:40:57 PM
 Project: N:\2614\Analysis\Intersection\SAP\Alt 1\Ex+C+P AM.sip7

Existing + Cuml + Proj AM
 6: Nutmeg St & Country Club Ln

Escondido Country Club
 06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗
Traffic Volume (veh/h)	17	233	62	379	437	27	23	36	171	55	159	61
Future Volume (veh/h)	17	233	62	379	437	27	23	36	171	55	159	61
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	18	251	67	408	470	29	25	39	184	59	171	66
Adj No. of Lanes	1	2	0	1	2	0	1	0	1	0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	32	578	151	475	1554	96	103	82	295	146	266	93
Arrive On Green	0.02	0.21	0.21	0.27	0.46	0.46	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	2762	720	1774	3382	208	86	337	1218	234	1102	383
Grp Volume(v), veh/h	18	159	159	408	245	254	248	0	0	296	0	0
Grp Sat Flow(s), veh/h/ln	1774	1770	1713	1774	1770	1820	1642	0	0	1718	0	0
Q Serve(g_s), s	0.5	3.7	3.9	10.5	4.2	4.2	0.0	0.0	0.0	0.9	0.0	0.0
Cycle Q Clear(g_c), s	0.5	3.7	3.9	10.5	4.2	4.2	6.3	0.0	0.0	7.2	0.0	0.0
Prop In Lane	1.00		0.42	1.00		0.11	0.10		0.74	0.20		0.22
Lane Grp Cap(c), veh/h	32	370	359	475	813	836	480	0	0	505	0	0
V/C Ratio(X)	0.57	0.43	0.44	0.86	0.30	0.30	0.52	0.00	0.00	0.59	0.00	0.00
Avail Cap(c_a), veh/h	148	663	641	572	1086	1117	686	0	0	718	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	23.4	16.5	16.6	16.7	8.2	8.2	16.3	0.0	0.0	16.5	0.0	0.0
Incr Delay (d2), s/veh	15.2	0.8	0.9	10.8	0.2	0.2	0.9	0.0	0.0	1.1	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.4	1.9	1.9	6.5	2.1	2.2	3.0	0.0	0.0	3.7	0.0	0.0
LnGrp Delay(d), s/veh	38.6	17.3	17.4	27.5	8.4	8.4	17.1	0.0	0.0	17.6	0.0	0.0
LnGrp LOS	D	B	B	C	A	A	B			B		
Approach Vol, veh/h	336			907				248			296	
Approach Delay, s/veh	18.5			17.0				17.1			17.6	
Approach LOS	B			B				B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.4	14.6		16.1	5.4	26.6		16.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	18.0	18.0		18.0	4.0	29.5		18.0				
Max Q Clear Time (g_c+I), s	5.9	9.2		2.5	6.2		8.3					
Green Ext Time (p_c), s	0.4	3.9		2.3	0.0	5.2		2.5				

Intersection Summary	
HCM 2010 Ctrl Delay	17.4
HCM 2010 LOS	B

HCM 2010 Signalized Intersection Summary
 N:\2614\Analysis\Intersection\Existing + Cuml + Proj AM.syn

Synchro 9 Report

Existing + Cuml + Proj AM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	67	392	118	301	499	101	77	321	84	195	878	176	
Future Volume (veh/h)	67	392	118	301	499	101	77	321	84	195	878	176	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	0.98	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	73	426	128	327	542	110	84	349	91	212	954	191	
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	94	655	288	368	1201	531	108	863	381	252	1151	515	
Arrive On Green	0.05	0.19	0.19	0.21	0.34	0.34	0.06	0.24	0.24	0.14	0.33	0.33	
Sat Flow, veh/h	1774	3539	1557	1774	3539	1563	1774	3539	1561	1774	3539	1583	
Grp Volume(v), veh/h	73	426	128	327	542	110	84	349	91	212	954	191	
Grp Sat Flow(s), veh/h/ln	1774	1770	1557	1774	1770	1563	1774	1770	1561	1774	1770	1583	
Q Serve(g_s), s	3.3	9.1	5.9	14.5	9.7	4.1	3.8	6.7	3.8	9.5	20.2	7.5	
Cycle Q Clear(g_c), s	3.3	9.1	5.9	14.5	9.7	4.1	3.8	6.7	3.8	9.5	20.2	7.5	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	94	655	288	368	1201	531	108	863	381	252	1151	515	
V/C Ratio(X)	0.78	0.65	0.44	0.89	0.45	0.21	0.78	0.40	0.24	0.84	0.83	0.37	
Avail Cap(c_a), veh/h	188	785	345	426	1260	556	142	872	385	317	1220	546	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	38.0	30.7	29.4	31.3	20.9	19.1	37.6	25.8	24.7	33.9	25.3	21.0	
Incr Delay (d2), s/veh	12.7	1.4	1.1	18.2	0.3	0.2	18.0	0.3	0.3	15.1	4.7	0.4	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	0.0	4.6	2.6	8.9	4.8	1.8	2.4	3.3	1.7	5.7	10.6	3.3	
LnGrp Delay(d), s/veh	50.7	32.1	30.5	49.5	21.2	19.2	55.6	26.1	25.0	49.0	30.0	21.5	
LnGrp LOS	D	C	C	D	C	B	E	C	C	D	C	C	
Approach Vol, veh/h	627			979				524			1357		
Approach Delay, s/veh	33.9			30.4				30.6			31.8		
Approach LOS	C			C				C			C		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	6.0	24.3	21.3	19.5	9.4	30.9	8.8	32.1					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	19.5	18.0	6.5	28.0	8.6	28.9						
Max Q Clear Time (g_c+I), s	8.7	16.5	11.1	5.8	22.2	5.3	11.7						
Green Ext Time (p_c), s	0.2	7.1	0.3	3.9	0.0	4.2	0.0	7.0					
Intersection Summary													
HCM 2010 Ctrl Delay				31.6									
HCM 2010 LOS	C												

Existing + Cuml + Proj AM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	27	445	71	353	921	73	78	47	144	189	206	102	
Future Volume (veh/h)	27	445	71	353	921	73	78	47	144	189	206	102	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900	
Adj Flow Rate, veh/h	30	489	78	388	1012	80	86	52	158	208	226	112	
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	38	1316	209	464	1012	836	105	269	228	219	245	122	
Arrive On Green	0.02	0.43	0.43	0.13	0.54	0.54	0.06	0.14	0.14	0.12	0.21	0.21	
Sat Flow, veh/h	1774	3061	486	3442	1863	1538	1774	1863	1580	1774	1177	583	
Grp Volume(v), veh/h	30	282	285	388	1012	80	86	52	158	208	0	338	
Grp Sat Flow(s), veh/h/ln	1774	1770	1777	1721	1863	1538	1774	1863	1580	1774	0	1760	
Q Serve(g_s), s	1.8	11.6	11.7	11.8	58.4	1.5	5.2	2.6	10.2	12.5	0.0	20.3	
Cycle Q Clear(g_c), s	1.8	11.6	11.7	11.8	58.4	1.5	5.2	2.6	10.2	12.5	0.0	20.3	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.33	
Lane Grp Cap(c), veh/h	38	761	764	464	1012	836	105	269	228	219	0	367	
V/C Ratio(X)	0.79	0.37	0.37	0.84	1.00	0.10	0.82	0.19	0.69	0.95	0.00	0.92	
Avail Cap(c_a), veh/h	66	761	764	624	1012	836	105	280	238	219	0	378	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	52.4	20.8	20.8	45.4	24.6	3.5	50.0	40.5	43.8	46.8	0.0	41.7	
Incr Delay (d2), s/veh	29.5	0.3	0.3	7.3	28.2	0.0	37.0	0.3	8.0	46.4	0.0	27.2	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	2	5.7	5.8	6.1	37.7	1.1	3.6	1.4	5.0	9.0	0.0	12.6	
LnGrp Delay(d), s/veh	82.0	21.1	21.1	52.7	32.7	3.6	87.1	40.9	51.8	93.3	0.0	68.9	
LnGrp LOS	F	C	C	D	D	A	F	D	D	F	E	E	
Approach Vol, veh/h	597			1480				296			546		
Approach Delay, s/veh	24.2			50.1				60.1			78.2		
Approach LOS	C			D				E			E		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	7.8	20.0	19.0	50.8	10.9	26.9	6.8	63.0					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	16.2	19.5	43.0	6.4	23.1	4.0	58.5						
Max Q Clear Time (g_c+I), s	12.2	13.8	13.7	7.2	22.3	3.8	60.4						
Green Ext Time (p_c), s	0.0	0.4	0.7	3.5	0.0	0.2	0.0	0.0					
Intersection Summary													
HCM 2010 Ctrl Delay				51.1									
HCM 2010 LOS	D												

Existing + Cuml + Proj AM
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	190	531	1	22	883	46	2	1	12	211	3	543
Future Volume (veh/h)	190	531	1	22	883	46	2	1	12	211	3	543
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	207	577	1	24	960	50	2	1	13	229	3	590
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	127	1299	2	54	1085	57	35	18	46	565	7	508
Arrive On Green	0.07	0.36	0.36	0.03	0.32	0.32	0.03	0.03	0.03	0.32	0.32	0.32
Sat Flow, veh/h	1774	3625	6	1774	3422	178	1202	601	1570	1752	23	1574
Grp Volume(v), veh/h	207	282	296	24	496	514	3	0	13	232	0	590
Grp Sat Flow(s),veh/h/ln	1774	1770	1862	1774	1770	1831	1803	0	1570	1775	0	1574
Q Serve(g_s), s	6.0	10.2	10.2	1.1	22.3	22.3	0.1	0.0	0.7	8.5	0.0	27.0
Cycle Q Clear(g_c), s	6.0	10.2	10.2	1.1	22.3	22.3	0.1	0.0	0.7	8.5	0.0	27.0
Prop In Lane	1.00	0.00	1.00	1.00	0.10	0.67	1.00	0.99	1.00	0.99	1.00	1.00
Lane Grp Cap(c), veh/h	127	634	667	54	561	581	53	0	46	573	0	508
V/C Ratio(X)	1.63	0.44	0.44	0.44	0.88	0.88	0.06	0.00	0.28	0.41	0.00	1.16
Avail Cap(c_a), veh/h	127	634	667	127	598	619	581	0	506	573	0	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.9	20.5	20.5	39.9	27.1	27.1	39.5	0.0	39.8	22.1	0.0	28.4
Incr Delay (d2), s/veh	315.4	0.6	0.6	2.1	14.4	14.0	0.5	0.0	4.0	0.6	0.0	92.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	5.0	5.3	0.6	13.1	13.5	0.1	0.0	0.3	4.3	0.0	24.8
LnGrp Delay(d),s/veh	354.2	21.1	21.1	41.9	41.5	41.1	40.0	0.0	43.7	22.7	0.0	121.1
LnGrp LOS	F	C	C	D	D	D	D		D	C		F
Approach Vol, veh/h	785			1034			16			822		
Approach Delay, s/veh	108.9			41.3			43.0			93.3		
Approach LOS	F			D			D			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	36.2			32.5	10.5	32.8		8.0				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	28.3			27.0	6.0	28.3		27.0				
Max Q Clear Time (g_c+I), s	12.2			29.0	8.0	24.3		2.7				
Green Ext Time (p_c), s	0.0	9.6		0.0	0.0	2.2		0.0				

Intersection Summary	
HCM 2010 Ctrl Delay	77.4
HCM 2010 LOS	E

Existing + Cuml + Proj AM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	4	675	172	261	799	10	65	34	185	18	84	13
Future Volume (veh/h)	4	675	172	261	799	10	65	34	185	18	84	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	5	794	202	307	940	12	76	40	218	21	99	15
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	12	875	222	349	1807	23	97	356	301	42	253	38
Arrive On Green	0.01	0.31	0.31	0.20	0.51	0.51	0.05	0.19	0.19	0.02	0.16	0.16
Sat Flow, veh/h	1774	2778	707	1774	3577	46	1774	1863	1576	1774	1578	239
Grp Volume(v), veh/h	5	506	490	307	465	487	76	40	218	21	0	114
Grp Sat Flow(s),veh/h/ln	1774	1770	1715	1774	1770	1853	1774	1863	1576	1774	0	1817
Q Serve(g_s), s	0.2	19.6	19.6	12.0	12.6	12.6	3.0	1.3	9.3	0.8	0.0	4.0
Cycle Q Clear(g_c), s	0.2	19.6	19.6	12.0	12.6	12.6	3.0	1.3	9.3	0.8	0.0	4.0
Prop In Lane	1.00	0.41	1.00	1.00	0.02	1.00	1.00	1.00	1.00	1.00	0.13	1.00
Lane Grp Cap(c), veh/h	12	557	540	349	894	936	97	356	301	42	0	291
V/C Ratio(X)	0.43	0.91	0.91	0.88	0.52	0.52	0.78	0.11	0.72	0.50	0.00	0.39
Avail Cap(c_a), veh/h	124	585	567	370	894	936	124	704	596	124	0	700
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.3	23.5	23.5	27.8	11.9	11.9	33.3	23.9	27.1	34.4	0.0	26.9
Incr Delay (d2), s/veh	22.7	17.6	18.1	20.0	0.6	0.6	21.4	0.1	2.5	8.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	12.3	12.0	7.8	6.2	6.5	2.1	0.7	4.2	0.5	0.0	2.0
LnGrp Delay(d),s/veh	58.0	41.1	41.5	47.9	12.5	12.5	54.7	24.0	29.6	43.1	0.0	27.5
LnGrp LOS	E	D	D	D	B	B	D	C	C	C		C
Approach Vol, veh/h	1001			1259			334			135		
Approach Delay, s/veh	41.4			21.1			34.6			29.9		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.6	28.5	7.9	16.5	5.0	42.1	5.7	18.7				
Change Period (Y+Rc), s	4.5	6.0	4.0	5.5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	23.6	5.0	5.0	28.0	5.0	33.5	5.0	27.0				
Max Q Clear Time (g_c+I), s	21.6	5.0	6.0	2.2	14.6	2.8	11.3					
Green Ext Time (p_c), s	0.1	0.9	0.0	1.2	0.0	12.2	0.0	1.1				

Intersection Summary	
HCM 2010 Ctrl Delay	30.6
HCM 2010 LOS	C

Notes

Existing + Cuml + Proj AM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↗	↖	↖	↗	
Traffic Volume (veh/h)	81	1103	20	30	806	38	48	27	32	28	23	77	
Future Volume (veh/h)	81	1103	20	30	806	38	48	27	32	28	23	77	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	88	1199	22	33	876	41	52	29	35	30	25	84	
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	112	1813	33	53	1643	77	285	120	145	326	59	197	
Arrive On Green	0.06	0.51	0.51	0.03	0.48	0.48	0.16	0.16	0.16	0.16	0.16	0.16	
Sat Flow, veh/h	1774	3556	65	1774	3443	161	1279	770	929	1332	376	1264	
Grp Volume(v), veh/h	88	597	624	33	450	467	52	0	64	30	0	109	
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1770	1834	1279	0	1699	1332	0	1640	
Q Serve(g_s), s	2.2	11.1	11.1	0.8	7.9	7.9	1.7	0.0	1.5	0.9	0.0	2.7	
Cycle Q Clear(g_c), s	2.2	11.1	11.1	0.8	7.9	7.9	4.4	0.0	1.5	2.4	0.0	2.7	
Prop In Lane	1.00		0.04	1.00		0.09	1.00		0.55	1.00		0.77	
Lane Grp Cap(c), veh/h	112	902	944	53	845	875	285	0	265	326	0	256	
V/C Ratio(X)	0.79	0.66	0.66	0.62	0.53	0.53	0.18	0.00	0.24	0.09	0.00	0.43	
Avail Cap(c_a), veh/h	291	1048	1096	164	920	954	549	0	616	601	0	594	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	20.5	8.0	8.0	21.3	8.1	8.1	18.9	0.0	16.4	17.5	0.0	16.9	
Incr Delay (d2), s/veh	11.6	1.3	1.2	11.0	0.5	0.5	0.3	0.0	0.5	0.1	0.0	1.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	4	5.6	5.9	0.6	3.9	4.0	0.6	0.0	0.7	0.3	0.0	1.3	
LnGrp Delay(d),s/veh	32.1	9.3	9.3	32.3	8.7	8.6	19.2	0.0	16.9	17.6	0.0	18.1	
LnGrp LOS	C	A	A	C	A	A	B		B	B		B	
Approach Vol, veh/h	1309			950				116			139		
Approach Delay, s/veh	10.8			9.5				17.9			18.0		
Approach LOS	B			A				B			B		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	5.8	27.2		11.4	7.3	25.7		11.4					
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5					
Max Green Setting (Gmax), s	26.3	16.1		7.3	23.1		16.1						
Max Q Clear Time (g_c+I), s	13.1	4.7		4.2	9.9		6.4						
Green Ext Time (p_c), s	0.0	9.6		1.0	0.0	9.6		0.9					

Intersection Summary		
HCM 2010 Ctrl Delay		11.0
HCM 2010 LOS		B

Existing + Cuml + Proj AM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↗	↖	↖	↗	
Traffic Volume (veh/h)	44	861	48	300	948	92	19	89	137	253	304	62	
Future Volume (veh/h)	44	861	48	300	948	92	19	89	137	253	304	62	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	45	879	0	306	967	94	19	91	140	258	310	63	
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	69	1001	448	383	1538	149	38	200	170	295	470	400	
Arrive On Green	0.04	0.28	0.00	0.22	0.47	0.47	0.02	0.11	0.11	0.17	0.25	0.25	
Sat Flow, veh/h	1774	3539	1583	1774	3259	317	1774	1863	1583	1774	1863	1583	
Grp Volume(v), veh/h	45	879	0	306	525	536	19	91	140	258	310	63	
Grp Sat Flow(s),veh/h/ln	1774	1770	1583	1774	1770	1806	1774	1863	1583	1774	1863	1583	
Q Serve(g_s), s	2.1	19.8	0.0	13.6	18.6	18.6	0.9	3.8	4.5	11.8	12.5	2.6	
Cycle Q Clear(g_c), s	2.1	19.8	0.0	13.6	18.6	18.6	0.9	3.8	4.5	11.8	12.5	2.6	
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		1.00	
Lane Grp Cap(c), veh/h	69	1001	448	383	835	852	38	200	170	295	470	400	
V/C Ratio(X)	0.65	0.88	0.00	0.80	0.63	0.63	0.50	0.45	0.82	0.87	0.66	0.16	
Avail Cap(c_a), veh/h	127	1102	493	425	848	865	106	692	588	319	915	777	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	39.6	28.6	0.0	31.0	16.6	16.6	40.4	35.0	14.2	34.0	28.0	24.3	
Incr Delay (d2), s/veh	7.6	7.5	0.0	9.0	1.3	1.3	7.4	1.2	7.2	21.1	1.2	0.1	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2	10.7	0.0	7.6	9.3	9.5	0.5	2.0	3.2	7.5	6.5	1.1	
LnGrp Delay(d),s/veh	47.1	36.1	0.0	40.1	17.9	17.8	47.8	36.1	21.4	55.0	29.2	24.4	
LnGrp LOS	D	D		D	B	B	D	D	C	E	C	C	
Approach Vol, veh/h	924			1367				250			631		
Approach Delay, s/veh	36.6			22.8				28.8			39.3		
Approach LOS	D			C				C			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	5.0	28.6	5.8	26.1	7.2	44.4	17.9	14.0					
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0					
Max Green Setting (Gmax), s	26.3	* 26	5.0	41.0	6.0	40.0	15.0	31.0					
Max Q Clear Time (g_c+I), s	21.8	2.9	14.5	4.1	20.6	13.8	6.5						
Green Ext Time (p_c), s	2.4	1.8	0.0	2.5	0.0	5.8	0.1	2.5					

Intersection Summary		
HCM 2010 Ctrl Delay		30.6
HCM 2010 LOS		C

Existing + Cuml + Proj AM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	620	795	434	1255	0	0	0	0	201	1	244
Future Volume (veh/h)	0	620	795	434	1255	0	0	0	0	201	1	244
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	653	837	457	1321	0				299	0	164
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2039	911	534	2740	0				450	0	201
Arrive On Green	0.00	0.58	0.58	0.10	0.52	0.00				0.13	0.00	0.13
Sat Flow, veh/h	0	3632	1582	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	653	837	457	1321	0				299	0	164
Grp Sat Flow(s), veh/h/ln	0	1770	1582	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	10.5	52.4	14.4	26.4	0.0				8.8	0.0	11.1
Cycle Q Clear(g_c), s	0.0	10.5	52.4	14.4	26.4	0.0				8.8	0.0	11.1
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2039	911	534	2740	0				450	0	201
V/C Ratio(X)	0.00	0.32	0.92	0.86	0.48	0.00				0.66	0.00	0.82
Avail Cap(c_a), veh/h	0	2039	911	648	2740	0				600	0	268
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.47	0.47	0.67	0.67	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	12.1	21.0	48.1	12.3	0.0				45.8	0.0	46.8
Incr Delay (d2), s/veh	0.0	0.2	8.5	6.6	0.4	0.0				1.7	0.0	13.5
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	0.0	5.2	24.9	7.3	13.0	0.0				4.4	0.0	5.6
LnGrp Delay(d), s/veh	0.0	12.3	29.5	54.7	12.7	0.0				47.5	0.0	60.2
LnGrp LOS		B	C	D	B					D		E
Approach Vol, veh/h		1490			1778					463		
Approach Delay, s/veh		22.0			23.5					52.0		
Approach LOS		C			C					D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	1.8	69.2		19.1		90.9						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	55.1	18.6		80.5								
Max Q Clear Time (g_c+1), s	54.4	13.1		28.4								
Green Ext Time (p_c), s	0.7	0.7		0.9		31.5						
Intersection Summary												
HCM 2010 Ctrl Delay				26.4								
HCM 2010 LOS				C								
Notes												

Existing + Cuml + Proj AM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑↑	↑↑	↑↑	↑↑	↑↑				↑	↑	↑
Traffic Volume (veh/h)	99	723	0	0	1225	95	464	1	242	0	0	0
Future Volume (veh/h)	99	723	0	0	1225	95	464	1	242	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	105	769	0	0	1303	101	574	0	172			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	130	2512	0	0	2102	940	678	0	303			
Arrive On Green	0.15	1.00	0.00	0.00	0.59	0.59	0.19	0.00	0.19			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	105	769	0	0	1303	101	574	0	172			
Grp Sat Flow(s), veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	6.3	0.0	0.0	0.0	26.0	3.0	17.2	0.0	10.8			
Cycle Q Clear(g_c), s	6.3	0.0	0.0	0.0	26.0	3.0	17.2	0.0	10.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	130	2512	0	0	2102	940	678	0	303			
V/C Ratio(X)	0.81	0.31	0.00	0.00	0.62	0.11	0.85	0.00	0.57			
Avail Cap(c_a), veh/h	214	2512	0	0	2102	940	868	0	387			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.92	0.92	0.00	0.00	0.80	0.80	1.00	0.00	1.00			
Uniform Delay (d), s/veh	46.2	0.0	0.0	0.0	14.4	9.7	42.9	0.0	40.4			
Incr Delay (d2), s/veh	10.4	0.3	0.0	0.0	1.1	0.2	6.3	0.0	1.7			
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	8.5	0.1	0.0	0.0	13.0	1.4	9.0	0.0	4.9			
LnGrp Delay(d), s/veh	56.6	0.3	0.0	0.0	15.5	9.9	49.2	0.0	42.0			
LnGrp LOS	E	A			B	A	D		D			
Approach Vol, veh/h		874			1404				746			
Approach Delay, s/veh		7.1			15.1				47.6			
Approach LOS		A			B				D			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		83.9			12.8	71.1		26.1				
Change Period (Y+Rc), s		5.8			4.7	5.8		5.1				
Max Green Setting (Gmax), s		72.2			* 13	54.2		26.9				
Max Q Clear Time (g_c+1), s		2.0			8.3	28.0		19.2				
Green Ext Time (p_c), s		26.9			0.1	16.7		1.9				
Intersection Summary												
HCM 2010 Ctrl Delay					20.8							
HCM 2010 LOS					C							
Notes												

Existing + Cuml + Proj AM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	30	839	212	212	1190	50	91	9	125	31	12	76
Future Volume (veh/h)	30	839	212	212	1190	50	91	9	125	31	12	76
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	33	912	230	230	1293	54	99	10	136	34	13	83
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	51	1157	291	281	1879	78	303	20	277	258	41	260
Arrive On Green	0.03	0.41	0.41	0.16	0.54	0.54	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	2801	706	1774	3462	144	1291	109	1486	1234	218	1393
Grp Volume(v), veh/h	33	576	566	230	660	687	99	0	146	34	0	96
Grp Sat Flow(s),veh/h/ln	1774	1770	1737	1774	1770	1837	1291	0	1595	1234	0	1612
Q Serve(g_s), s	1.0	15.8	15.8	7.0	15.2	15.2	4.0	0.0	4.6	1.4	0.0	2.9
Cycle Q Clear(g_c), s	1.0	15.8	15.8	7.0	15.2	15.2	6.9	0.0	4.6	6.0	0.0	2.9
Prop In Lane	1.00	0.41	1.00	1.00	0.08	1.00			0.93	1.00		0.86
Lane Grp Cap(c), veh/h	51	731	717	281	960	997	303	0	297	258	0	300
V/C Ratio(X)	0.65	0.79	0.79	0.82	0.69	0.69	0.33	0.00	0.49	0.13	0.00	0.32
Avail Cap(c_a), veh/h	131	731	717	334	960	997	480	0	515	427	0	521
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	26.8	14.2	14.2	22.7	9.3	9.3	22.6	0.0	20.3	23.0	0.0	19.6
Incr Delay (d2), s/veh	13.0	8.4	8.6	12.8	4.0	3.9	0.6	0.0	1.3	0.2	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.9	9.4	9.3	4.4	8.4	8.7	1.5	0.0	2.1	0.5	0.0	1.3
LnGrp Delay(d),s/veh	39.8	22.6	22.9	35.4	13.3	13.2	23.2	0.0	21.6	23.2	0.0	20.2
LnGrp LOS	D	C	C	D	B	B	C		C	C		C
Approach Vol, veh/h	1175			1577			245			130		
Approach Delay, s/veh	23.2			16.5			22.2			21.0		
Approach LOS	C			B			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	3.3	27.5		14.9	6.1	34.7		14.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	23.0	23.0		18.0	4.1	29.4		18.0				
Max Q Clear Time (g_c+I), s	17.8			8.0	3.0	17.2		8.9				
Green Ext Time (p_c), s	0.1	4.6		1.4	0.0	10.0		1.3				

Intersection Summary	
HCM 2010 Ctrl Delay	19.7
HCM 2010 LOS	B

Existing + Cuml + Proj AM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	23	837	336	269	936	186	157	360	112	200	1184	69
Future Volume (veh/h)	23	837	336	269	936	186	157	360	112	200	1184	69
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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		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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	24	863	346	277	965	192	162	371	115	206	1221	71
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	276	1190	532	318	1011	201	206	1247	558	245	1261	564
Arrive On Green	0.08	0.34	0.34	0.12	0.46	0.46	0.06	0.35	0.35	0.07	0.36	0.36
Sat Flow, veh/h	3442	3539	1582	3442	2943	585	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	24	863	346	277	580	577	162	371	115	206	1221	71
Grp Sat Flow(s),veh/h/ln	1721	1770	1582	1721	1770	1758	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.1	35.3	24.2	13.0	52.1	52.2	7.7	12.5	8.4	9.8	55.9	5.0
Cycle Q Clear(g_c), s	1.1	35.3	24.2	13.0	52.1	52.2	7.7	12.5	8.4	9.8	55.9	5.0
Prop In Lane	1.00	1.00	1.00	1.00	0.33	1.00		1.00	1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	1190	532	318	608	604	206	1247	558	245	1261	564
V/C Ratio(X)	0.09	0.73	0.65	0.87	0.95	0.96	0.79	0.30	0.21	0.84	0.97	0.13
Avail Cap(c_a), veh/h	292	1190	532	398	616	611	209	1247	558	250	1266	566
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	48.1	29.0	71.4	43.6	43.6	76.5	38.7	37.3	75.7	52.2	35.8
Incr Delay (d2), s/veh	0.1	2.4	3.7	1.5	4.5	4.7	16.1	0.2	0.2	20.2	18.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	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	17.7	11.1	6.3	26.1	26.0	4.1	6.2	3.7	5.3	30.5	2.2
LnGrp Delay(d),s/veh	70.3	50.5	32.7	72.9	48.1	48.3	92.6	38.8	37.5	95.9	70.3	35.9
LnGrp LOS	E	D	C	E	D	D	F	D	D	F	E	D
Approach Vol, veh/h	1233			1434			648			1498		
Approach Delay, s/veh	45.9			53.0			52.0			72.2		
Approach LOS	D			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	3.3	62.4	16.2	65.1	20.1	63.6	16.9	64.4				
Change Period (Y+Rc), s	6.1	6.9	6.3	6.3	6.9	6.9	5.1	6.3				
Max Green Setting (Gmax), s	19.0	52.5	10.0	59	14.0	57	12.0	57.0				
Max Q Clear Time (g_c+I), s	17.8	37.3	9.7	57.9	3.1	54.2	11.8	14.5				
Green Ext Time (p_c), s	0.2	9.0	0.0	0.9	7.1	2.4	0.0	4.0				

Intersection Summary	
HCM 2010 Ctrl Delay	57.0
HCM 2010 LOS	E

Existing + Cuml + Proj AM
17: Broadway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		↔↔	↕↕	
Traffic Volume (veh/h)	280	791	104	188	1610	58	118	534	124	212	842	494
Future Volume (veh/h)	280	791	104	188	1610	58	118	534	124	212	842	494
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.92	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	329	931	122	221	1894	68	139	628	146	249	991	581
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	1274	167	264	1417	51	113	711	165	269	722	398
Arrive On Green	0.08	0.41	0.41	0.08	0.41	0.41	0.06	0.25	0.25	0.15	0.34	0.34
Sat Flow, veh/h	3442	3141	412	3442	3485	124	1774	2801	650	1774	2113	1163
Grp Volume(v), veh/h	329	524	529	221	956	1006	139	396	378	249	820	752
Grp Sat Flow(s), veh/h/ln	1721	1770	1783	1721	1770	1840	1774	1770	1681	1774	1770	1506
Q Serve(g_s), s	12.5	41.3	41.3	10.5	67.1	67.1	10.5	35.5	35.7	22.9	56.4	56.4
Cycle Q Clear(g_c), s	12.5	41.3	41.3	10.5	67.1	67.1	10.5	35.5	35.7	22.9	56.4	56.4
Prop In Lane	1.00		0.23	1.00		0.07	1.00		0.39	1.00		0.77
Lane Grp Cap(c), veh/h	261	718	723	264	720	748	113	449	427	269	605	515
V/C Ratio(X)	1.26	0.73	0.73	0.84	1.33	1.34	1.23	0.88	0.89	0.93	1.36	1.46
Avail Cap(c_a), veh/h	261	718	723	330	720	748	113	449	427	287	605	515
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.64	0.64	0.64	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.3	41.4	41.4	75.1	48.9	49.0	77.3	59.2	59.2	69.1	54.3	54.3
Incr Delay (d2), s/veh	136.2	4.2	4.2	14.1	157.2	164.1	159.5	18.1	19.4	33.3	170.5	218.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh	10.9	20.9	21.2	5.5	64.2	68.2	10.1	19.6	18.9	13.7	56.2	54.6
LnGrp Delay(d), s/veh	212.5	45.6	45.6	89.3	206.2	213.0	236.7	77.3	78.6	102.4	224.8	272.3
LnGrp LOS	F	D	D	F	F	F	F	E	E	F	F	F
Approach Vol, veh/h	1382			2183			913			1821		
Approach Delay, s/veh	85.3			197.5			102.1			227.7		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	71.8	15.0	61.0	17.0	72.0	29.5	46.5				
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6				
Max Green Setting (Gmax), s	63.8	10.5	56.4	12.5	67.1	26.7	40.2					
Max Q Clear Time (g_c+10), s	43.3	12.5	58.4	14.5	69.1	24.9	37.7					
Green Ext Time (p_c), s	0.2	18.0	0.0	0.0	0.0	0.0	0.1	2.4				

Intersection Summary	
HCM 2010 Ctrl Delay	167.8
HCM 2010 LOS	F

Existing + Cuml + Proj PM
1: Centre City Parkway & Nutmeg St

Escondido Country Club
06/19/2017

Intersection												
Int Delay, s/veh	2.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕↕			↕↕		↔↔	↕↕			↕↕	
Traffic Vol, veh/h	71	2	2	4	0	2	2	432	0	0	213	35
Future Vol, veh/h	71	2	2	4	0	2	2	432	0	0	213	35
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	84	84	84	84	84	84	84	84	84	84	84	84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	85	2	2	5	0	2	2	514	0	0	254	42
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	794	793	274	796	814	514	295	0	0	514	0	0
Stage 1	274	274	-	519	519	-	-	-	-	-	-	-
Stage 2	520	519	-	277	295	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	306	321	765	305	312	560	1266	-	-	1052	-	-
Stage 1	732	683	-	540	533	-	-	-	-	-	-	-
Stage 2	539	533	-	729	669	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	304	320	765	302	312	560	1266	-	-	1052	-	-
Mov Cap-2 Maneuver	304	320	-	302	312	-	-	-	-	-	-	-
Stage 1	731	683	-	539	532	-	-	-	-	-	-	-
Stage 2	536	532	-	724	669	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	21.3			15.3			0			0		
HCM LOS	C			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1266	-	-	309	357	1052	-	-				
HCM Lane V/C Ratio	0.002	-	-	0.289	0.02	-	-	-				
HCM Control Delay (s)	7.8	-	-	21.3	15.3	0	-	-				
HCM Lane LOS	A	-	-	C	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	1.2	0.1	0	-	-				

MOVEMENT SUMMARY

Site: 101 [2. NT+P PM]

New Site
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Country Club Ln											
3	L2	139	2.0	0.488	8.3	LOS A	3.7	95.0	0.19	0.06	32.9
8	T1	78	2.0	0.488	8.3	LOS A	3.7	95.0	0.19	0.06	32.8
18	R2	366	2.0	0.488	8.3	LOS A	3.7	95.0	0.19	0.06	31.9
Approach		584	2.0	0.488	8.3	LOS A	3.7	95.0	0.19	0.06	32.3
East: Country Club Ln											
1	L2	214	2.0	0.264	6.4	LOS A	1.3	33.4	0.45	0.33	32.3
6	T1	14	2.0	0.264	6.4	LOS A	1.3	33.4	0.45	0.33	32.2
16	R2	25	2.0	0.264	6.4	LOS A	1.3	33.4	0.45	0.33	31.3
Approach		253	2.0	0.264	6.4	LOS A	1.3	33.4	0.45	0.33	32.2
North: Proj Drwy 1											
7	L2	11	2.0	0.057	5.0	LOS A	0.2	5.8	0.48	0.36	34.6
4	T1	34	2.0	0.057	5.0	LOS A	0.2	5.8	0.48	0.36	34.5
14	R2	1	2.0	0.057	5.0	LOS A	0.2	5.8	0.48	0.36	33.6
Approach		46	2.0	0.057	5.0	LOS A	0.2	5.8	0.48	0.36	34.5
West: Golden Circle Dr											
5	L2	1	2.0	0.105	4.9	LOS A	0.4	11.3	0.42	0.30	35.3
2	T1	12	2.0	0.105	4.9	LOS A	0.4	11.3	0.42	0.30	35.2
12	R2	83	2.0	0.105	4.9	LOS A	0.4	11.3	0.42	0.30	34.1
Approach		96	2.0	0.105	4.9	LOS A	0.4	11.3	0.42	0.30	34.3
All Vehicles		978	2.0	0.488	7.3	LOS A	3.7	95.0	0.29	0.17	32.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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 Project: N:\2614\Analysis\Intersection\SAP\Alt 1\Ex+C+P PM.sip7

Existing + Cuml + Proj PM 3: Country Club Ln & Gary Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↖	↗	↖	↗	↖	↗		
Traffic Volume (veh/h)	75	284	213	76	51	46		
Future Volume (veh/h)	75	284	213	76	51	46		
Number	5	2	6	16	7	14		
Initial Q (Ob), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	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	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	81	305	229	82	55	49		
Adj No. of Lanes	1	1	1	1	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	754	802	802	663	81	72		
Arrive On Green	0.43	0.43	0.43	0.43	0.09	0.09		
Sat Flow, veh/h	1060	1863	1863	1539	879	783		
Grp Volume(v), veh/h	81	305	229	82	105	0		
Grp Sat Flow(s), veh/h/ln	1060	1863	1863	1539	1678	0		
Q Serve(g_s), s	1.0	2.1	1.5	0.6	1.1	0.0		
Cycle Q Clear(g_c), s	2.5	2.1	1.5	0.6	1.1	0.0		
Prop In Lane	1.00			1.00	0.52	0.47		
Lane Grp Cap(c), veh/h	754	802	802	663	155	0		
V/C Ratio(X)	0.11	0.38	0.29	0.12	0.68	0.00		
Avail Cap(c_a), veh/h	1310	1779	1779	1470	1603	0		
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	0.00		
Uniform Delay (d), s/veh	4.3	3.7	3.5	3.2	8.3	0.0		
Incr Delay (d2), s/veh	0.1	0.3	0.2	0.1	5.2	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh/ln	0.3	1.1	0.8	0.3	0.7	0.0		
LnGrp Delay(d), s/veh	4.4	4.0	3.7	3.3	13.4	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h	386	311			105			
Approach Delay, s/veh	4.0	3.6			13.4			
Approach LOS	A	A			B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		12.6		6.2		12.6		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		18.0		18.0		18.0		
Max Q Clear Time (g_c+I1), s		4.5		3.1		3.5		
Green Ext Time (p_c), s		3.3		0.2		3.4		

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A
Notes	

HCM 2010 Signalized Intersection Summary
 N:\2614\Analysis\Intersection\Existing + Cuml + Proj PM.syn

Synchro 9 Report

Intersection						
Int Delay, s/veh 1.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↕		↔	
Traffic Vol, veh/h	381	15	0	306	0	112
Future Vol, veh/h	381	15	0	306	0	112
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	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	414	16	0	333	0	122
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	422
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	632
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	632
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	12.1			
HCM LOS						B
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	632	-	-	-		
HCM Lane V/C Ratio	0.193	-	-	-		
HCM Control Delay (s)	12.1	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.7	-	-	-		

MOVEMENT SUMMARY

Site: 101 [5. NT+P PM]

5. Country Club / La Brea / Drwy D Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: La Brea St											
3	L2	26	2.0	0.067	5.7	LOS A	0.3	6.8	0.53	0.44	33.4
8	T1	4	2.0	0.067	5.7	LOS A	0.3	6.8	0.53	0.44	33.3
18	R2	18	2.0	0.067	5.7	LOS A	0.3	6.8	0.53	0.44	32.4
Approach		49	2.0	0.067	5.7	LOS A	0.3	6.8	0.53	0.44	33.0
East: Country Club Ln											
1	L2	38	2.0	0.329	6.3	LOS A	1.9	49.1	0.22	0.09	34.4
6	T1	324	2.0	0.329	6.3	LOS A	1.9	49.1	0.22	0.09	34.3
16	R2	21	2.0	0.329	6.3	LOS A	1.9	49.1	0.22	0.09	33.3
Approach		383	2.0	0.329	6.3	LOS A	1.9	49.1	0.22	0.09	34.3
North: Proj Drwy D											
7	L2	9	2.0	0.022	4.8	LOS A	0.1	2.2	0.48	0.33	34.0
4	T1	5	2.0	0.022	4.8	LOS A	0.1	2.2	0.48	0.33	33.9
14	R2	3	2.0	0.022	4.8	LOS A	0.1	2.2	0.48	0.33	32.9
Approach		17	2.0	0.022	4.8	LOS A	0.1	2.2	0.48	0.33	33.7
West: Country Club Ln											
5	L2	18	2.0	0.425	7.5	LOS A	2.9	72.5	0.27	0.12	33.9
2	T1	435	2.0	0.425	7.5	LOS A	2.9	72.5	0.27	0.12	33.8
12	R2	39	2.0	0.425	7.5	LOS A	2.9	72.5	0.27	0.12	32.9
Approach		492	2.0	0.425	7.5	LOS A	2.9	72.5	0.27	0.12	33.8
All Vehicles		941	2.0	0.425	6.9	LOS A	2.9	72.5	0.27	0.13	33.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab). Roundabout LOS Method: Same as Sign Control. Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement. LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection). Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6). Roundabout Capacity Model: US HCM 6. HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies. Gap-Acceptance Capacity: Traditional M1. HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Existing + Cuml + Proj PM
6: Nutmeg St & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	40	332	52	197	246	41	94	151	399	20	61	20	
Future Volume (veh/h)	40	332	52	197	246	41	94	151	399	20	61	20	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.98	1.00	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900	
Adj Flow Rate, veh/h	43	357	56	212	265	44	101	162	429	22	66	22	
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0	
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	58	571	89	256	905	148	147	202	470	151	428	129	
Arrive On Green	0.03	0.19	0.19	0.14	0.30	0.30	0.47	0.47	0.47	0.47	0.47	0.47	
Sat Flow, veh/h	1774	3058	475	1774	3034	496	183	428	997	187	908	274	
Grp Volume(v), veh/h	43	205	208	212	153	156	692	0	0	110	0	0	
Grp Sat Flow(s),veh/h/ln	1774	1770	1763	1774	1770	1761	1608	0	0	1368	0	0	
Q Serve(g_s), s	1.6	7.3	7.4	7.9	4.5	4.7	20.4	0.0	0.0	0.0	0.0	0.0	
Cycle Q Clear(g_c), s	1.6	7.3	7.4	7.9	4.5	4.7	27.2	0.0	0.0	2.4	0.0	0.0	
Prop In Lane	1.00	0.27	1.00	0.28	0.15	0.62	0.20	0.62	0.20	0.20	0.20	0.20	
Lane Grp Cap(c), veh/h	58	331	330	256	528	525	818	0	0	708	0	0	
V/C Ratio(X)	0.74	0.62	0.63	0.83	0.29	0.30	0.85	0.00	0.00	0.16	0.00	0.00	
Avail Cap(c_a), veh/h	164	506	504	299	640	637	896	0	0	779	0	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	0.00	1.00	0.00	0.00	
Uniform Delay (d), s/veh	32.7	25.5	25.6	28.4	18.4	18.4	16.6	0.0	0.0	10.2	0.0	0.0	
Incr Delay (d2), s/veh	16.8	1.9	2.0	15.4	0.3	0.3	7.1	0.0	0.0	0.1	0.0	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	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	1.1	3.7	3.8	5.0	2.3	2.3	13.5	0.0	0.0	1.2	0.0	0.0	
LnGrp Delay(d),s/veh	49.6	27.4	27.6	43.8	18.7	18.7	23.7	0.0	0.0	10.3	0.0	0.0	
LnGrp LOS	D	C	C	D	B	B	C			B			
Approach Vol, veh/h	456			521				692			110		
Approach Delay, s/veh	29.6			28.9				23.7			10.3		
Approach LOS	C			C				C			B		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	17.3	17.3	17.3	36.7	6.7	24.9	36.7						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	19.5	19.5	19.5	35.5	6.3	24.7	35.5						
Max Q Clear Time (g_c+I), s	9.4	9.4	9.4	4.4	3.6	6.7	29.2						
Green Ext Time (p_c), s	0.1	3.1	3.1	7.0	0.0	4.2	3.0						
Intersection Summary													
HCM 2010 Ctrl Delay				25.9									
HCM 2010 LOS	C			C				C			B		

Existing + Cuml + Proj PM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	142	397	86	176	284	99	189	474	195	140	314	70	
Future Volume (veh/h)	142	397	86	176	284	99	189	474	195	140	314	70	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	154	432	93	191	309	108	205	515	212	152	341	76	
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	198	738	325	242	825	364	257	885	390	196	764	342	
Arrive On Green	0.11	0.21	0.21	0.14	0.23	0.23	0.14	0.25	0.25	0.11	0.22	0.22	
Sat Flow, veh/h	1774	3539	1558	1774	3539	1563	1774	3539	1562	1774	3539	1583	
Grp Volume(v), veh/h	154	432	93	191	309	108	205	515	212	152	341	76	
Grp Sat Flow(s),veh/h/ln	1774	1770	1558	1774	1770	1563	1774	1770	1562	1774	1770	1583	
Q Serve(g_s), s	5.2	6.7	3.1	6.4	4.5	3.5	6.8	7.8	7.2	5.1	5.1	2.4	
Cycle Q Clear(g_c), s	5.2	6.7	3.1	6.4	4.5	3.5	6.8	7.8	7.2	5.1	5.1	2.4	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	198	738	325	242	825	364	257	885	390	196	764	342	
V/C Ratio(X)	0.78	0.59	0.29	0.79	0.37	0.30	0.80	0.58	0.54	0.78	0.45	0.22	
Avail Cap(c_a), veh/h	421	1071	471	479	1187	524	450	1302	575	421	1244	557	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	26.4	21.8	20.4	25.5	19.7	19.3	25.3	20.1	19.9	26.5	20.8	19.8	
Incr Delay (d2), s/veh	6.4	0.7	0.5	5.7	0.3	0.4	5.6	0.6	1.2	6.4	0.4	0.3	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	2.9	3.3	1.4	3.5	2.2	1.5	3.8	3.9	3.2	2.8	2.6	1.1	
LnGrp Delay(d),s/veh	32.8	22.6	20.8	31.2	20.0	19.8	30.9	20.7	21.1	32.9	21.2	20.1	
LnGrp LOS	C	C	C	C	B	B	C	C	C	C	C	C	
Approach Vol, veh/h	679			608				932			569		
Approach Delay, s/veh	24.6			23.5				23.0			24.2		
Approach LOS	C			C				C			C		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	19.8	12.8	17.3	13.4	17.7	11.3	18.8						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	22.5	16.5	18.5	15.5	21.5	14.5	20.5						
Max Q Clear Time (g_c+I), s	9.8	8.4	8.7	8.8	7.1	7.2	6.5						
Green Ext Time (p_c), s	0.2	5.5	0.3	3.9	0.3	5.9	0.2	4.8					
Intersection Summary													
HCM 2010 Ctrl Delay				23.8									
HCM 2010 LOS	C			C				C			C		

Existing + Cuml + Proj PM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	40	765	50	218	728	155	69	113	274	100	71	24
Future Volume (veh/h)	40	765	50	218	728	155	69	113	274	100	71	24
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00	0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	44	841	55	240	800	170	76	124	301	110	78	26
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	59	1354	89	323	861	710	359	391	332	139	115	38
Arrive On Green	0.03	0.40	0.40	0.09	0.46	0.46	0.20	0.21	0.21	0.08	0.09	0.09
Sat Flow, veh/h	1774	3373	221	3442	1863	1535	1774	1863	1581	1774	1338	446
Grp Volume(v), veh/h	44	441	455	240	800	170	76	124	301	110	0	104
Grp Sat Flow(s),veh/h/ln	1774	1770	1824	1721	1863	1535	1774	1863	1581	1774	0	1784
Q Serve(g_s), s	2.0	16.6	16.6	5.7	33.7	3.6	3.0	4.7	15.5	5.1	0.0	4.7
Cycle Q Clear(g_c), s	2.0	16.6	16.6	5.7	33.7	3.6	3.0	4.7	15.5	5.1	0.0	4.7
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		0.25
Lane Grp Cap(c), veh/h	59	711	732	323	861	710	359	391	332	139	0	154
V/C Ratio(X)	0.75	0.62	0.62	0.74	0.93	0.24	0.21	0.32	0.91	0.79	0.00	0.68
Avail Cap(c_a), veh/h	96	761	784	421	928	765	359	391	332	181	0	428
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.9	19.9	19.9	36.8	21.1	5.8	27.7	27.9	32.1	37.7	0.0	36.9
Incr Delay (d2), s/veh	17.3	1.4	1.4	5.0	14.7	0.2	0.3	0.5	27.3	15.9	0.0	5.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3	8.4	8.6	2.9	20.6	2.1	1.5	2.5	9.3	3.1	0.0	2.5
LnGrp Delay(d),s/veh	57.2	21.3	21.2	41.8	35.8	5.9	28.0	28.3	59.4	53.6	0.0	42.0
LnGrp LOS	E	C	C	D	D	A	C	C	E	D		D
Approach Vol, veh/h		940			1210			501			214	
Approach Delay, s/veh		22.9			32.8			47.0			48.0	
Approach LOS		C			C			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	12.3	37.9	21.4	11.7	7.3	43.0					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	17.5	10.2	35.8	6.0	20.0	4.5	41.5					
Max Q Clear Time (g_c+I), s	17.5	7.7	18.6	5.0	6.7	4.0	35.7					
Green Ext Time (p_c), s	0.0	0.0	0.2	5.2	0.2	0.4	0.3	2.8				
Intersection Summary												
HCM 2010 Ctrl Delay				33.2								
HCM 2010 LOS				C								

Existing + Cuml + Proj PM
9: EI Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	444	711	13	43	838	181	9	9	15	109	3	224
Future Volume (veh/h)	444	711	13	43	838	181	9	9	15	109	3	224
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	483	773	14	47	911	197	10	10	16	118	3	243
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	0	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	474	1996	36	70	965	209	37	37	64	312	8	282
Arrive On Green	0.27	0.56	0.56	0.04	0.33	0.33	0.04	0.04	0.04	0.18	0.18	0.18
Sat Flow, veh/h	1774	3556	64	1774	2894	625	909	909	1564	1732	44	1567
Grp Volume(v), veh/h	483	385	402	47	557	551	20	0	16	121	0	243
Grp Sat Flow(s),veh/h/ln	1774	1770	1851	1774	1770	1750	1817	0	1564	1776	0	1567
Q Serve(g_s), s	32.5	14.8	14.8	3.2	37.2	37.3	1.3	0.0	1.2	7.3	0.0	18.3
Cycle Q Clear(g_c), s	32.5	14.8	14.8	3.2	37.2	37.3	1.3	0.0	1.2	7.3	0.0	18.3
Prop In Lane	1.00		0.03	1.00		0.36	0.50		1.00	0.98		1.00
Lane Grp Cap(c), veh/h	474	993	1039	70	590	584	75	0	64	320	0	282
V/C Ratio(X)	1.02	0.39	0.39	0.68	0.94	0.94	0.27	0.00	0.25	0.38	0.00	0.86
Avail Cap(c_a), veh/h	474	993	1039	133	608	601	403	0	347	394	0	348
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	44.6	15.0	15.0	57.7	39.4	39.4	56.6	0.0	56.5	43.9	0.0	48.4
Incr Delay (d2), s/veh	46.3	0.3	0.3	4.2	23.2	23.6	2.3	0.0	2.4	0.9	0.0	17.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9	7.2	7.6	1.6	21.9	21.7	0.7	0.0	0.6	3.7	0.0	9.3
LnGrp Delay(d),s/veh	90.9	15.3	15.2	61.9	62.6	63.1	58.9	0.0	58.9	44.8	0.0	65.7
LnGrp LOS	F	B	B	E	E	E	E		E	D		E
Approach Vol, veh/h		1270			1155			36			364	
Approach Delay, s/veh		44.0			62.8			58.9			58.7	
Approach LOS		D			E			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	27.4	74.5		27.4	37.0	46.8		10.5				
Change Period (Y+Rc), s	6.2	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	65.2	27.0		32.5	41.8	27.0		27.0				
Max Q Clear Time (g_c+I), s	16.8	20.3		34.5	39.3	16.8		3.3				
Green Ext Time (p_c), s	0.0	21.7		1.0	0.0	1.3		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay						53.8						
HCM 2010 LOS						D						

Existing + Cuml + Proj PM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	
Traffic Volume (veh/h)	15	820	107	197	883	26	151	129	224	23	24	11
Future Volume (veh/h)	15	820	107	197	883	26	151	129	224	23	24	11
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	18	965	126	232	1039	31	178	152	264	27	28	13
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	1133	148	271	1730	52	214	399	338	50	146	68
Arrive On Green	0.02	0.36	0.36	0.15	0.49	0.49	0.12	0.21	0.21	0.03	0.12	0.12
Sat Flow, veh/h	1774	3137	410	1774	3506	105	1774	1863	1577	1774	1198	556
Grp Volume(v), veh/h	18	544	547	232	524	546	178	152	264	27	0	41
Grp Sat Flow(s), veh/h/ln	1774	1770	1777	1774	1770	1841	1774	1863	1577	1774	0	1755
Q Serve(g_s), s	0.8	22.7	22.7	10.2	17.1	17.1	7.8	5.6	12.6	1.2	0.0	1.7
Cycle Q Clear(g_c), s	0.8	22.7	22.7	10.2	17.1	17.1	7.8	5.6	12.6	1.2	0.0	1.7
Prop In Lane	1.00		0.23	1.00		0.06	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	37	639	642	271	873	909	214	399	338	50	0	213
V/C Ratio(X)	0.49	0.85	0.85	0.86	0.60	0.60	0.83	0.38	0.78	0.54	0.00	0.19
Avail Cap(c_a), veh/h	113	670	673	304	873	909	222	710	601	133	0	592
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.8	23.6	23.6	33.0	14.6	14.6	34.4	26.9	29.7	38.4	0.0	31.6
Incr Delay (d2), s/veh	9.9	9.9	9.9	19.2	1.3	1.2	22.1	0.4	3.0	8.7	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5	12.8	12.9	6.4	8.6	8.9	5.2	2.9	5.8	0.7	0.0	0.8
LnGrp Delay(d), s/veh	48.7	33.5	33.5	52.2	15.9	15.8	56.5	27.4	32.7	47.1	0.0	31.9
LnGrp LOS	D	C	C	D	B	B	E	C	C	D		C
Approach Vol, veh/h	1109			1302			594			68		
Approach Delay, s/veh	33.7			22.3			38.4			38.0		
Approach LOS	C			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.7	34.9	13.7	14.7	6.1	45.5	6.3	22.1				
Change Period (Y+Rc), s	4.5	6.0	4.0	5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	30.3	10.0	27	5.1	38.9	6.0	30.5					
Max Q Clear Time (g_c+I), s	24.7	9.8	3.7	2.8	19.1	3.2	14.6					
Green Ext Time (p_c), s	0.1	4.2	0.0	1.6	0.0	13.9	0.0	1.4				
Intersection Summary												
HCM 2010 Ctrl Delay				29.9								
HCM 2010 LOS	C											
Notes												

Existing + Cuml + Proj PM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	
Traffic Volume (veh/h)	89	1146	31	36	1078	42	40	16	33	27	23	74
Future Volume (veh/h)	89	1146	31	36	1078	42	40	16	33	27	23	74
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	97	1246	34	39	1172	46	43	17	36	29	25	80
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	123	1873	51	60	1725	68	263	76	161	309	56	178
Arrive On Green	0.07	0.53	0.53	0.03	0.50	0.50	0.14	0.14	0.14	0.14	0.14	0.14
Sat Flow, veh/h	1774	3519	96	1774	3472	136	1284	534	1130	1346	391	1251
Grp Volume(v), veh/h	97	626	654	39	597	621	43	0	53	29	0	105
Grp Sat Flow(s), veh/h/ln	1774	1770	1846	1774	1770	1839	1284	0	1663	1346	0	1642
Q Serve(g_s), s	2.5	11.9	11.9	1.0	11.9	11.9	1.5	0.0	1.3	0.9	0.0	2.7
Cycle Q Clear(g_c), s	2.5	11.9	11.9	1.0	11.9	11.9	4.2	0.0	1.3	2.2	0.0	2.7
Prop In Lane	1.00		0.05	1.00		0.07	1.00		0.68	1.00		0.76
Lane Grp Cap(c), veh/h	123	942	983	60	879	914	263	0	237	309	0	234
V/C Ratio(X)	0.79	0.66	0.67	0.65	0.68	0.68	0.16	0.00	0.22	0.09	0.00	0.45
Avail Cap(c_a), veh/h	210	1004	1047	157	950	987	526	0	577	584	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.2	7.8	7.9	22.1	8.9	8.9	20.1	0.0	17.6	18.6	0.0	18.2
Incr Delay (d2), s/veh	10.5	1.5	1.5	11.0	1.8	1.7	0.3	0.0	0.5	0.1	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6	6.1	6.4	0.7	6.1	6.3	0.5	0.0	0.6	0.3	0.0	1.3
LnGrp Delay(d), s/veh	31.8	9.4	9.3	33.1	10.6	10.6	20.4	0.0	18.1	18.7	0.0	19.6
LnGrp LOS	C	A	A	C	B	B	C		B	B		B
Approach Vol, veh/h	1377			1257			96			134		
Approach Delay, s/veh	10.9			11.3			19.1			19.4		
Approach LOS	B			B			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	6.1	29.2		11.1	7.7	27.5		11.1				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	26.3	16.1		5.5	24.9	16.1						
Max Q Clear Time (g_c+I), s	13.9	4.7		4.5	13.9	6.2						
Green Ext Time (p_c), s	0.0	10.1		0.8	0.0	9.2		0.8				
Intersection Summary												
HCM 2010 Ctrl Delay				11.8								
HCM 2010 LOS	B											
Notes												

Existing + Cuml + Proj PM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	83	892	49	184	896	241	61	271	283	242	154	47
Future Volume (veh/h)	83	892	49	184	896	241	61	271	283	242	154	47
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	85	910	0	188	914	246	62	277	289	247	157	48
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	108	1124	503	219	1020	274	80	410	349	273	613	521
Arrive On Green	0.06	0.32	0.00	0.12	0.37	0.37	0.05	0.22	0.22	0.15	0.33	0.33
Sat Flow, veh/h	1774	3539	1583	1774	2759	741	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	85	910	0	188	586	574	62	277	289	247	157	48
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1731	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.6	23.0	0.0	10.1	30.4	30.5	3.4	13.3	17.0	13.3	6.0	1.5
Cycle Q Clear(g_c), s	4.6	23.0	0.0	10.1	30.4	30.5	3.4	13.3	17.0	13.3	6.0	1.5
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.43	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	108	1124	503	219	654	640	80	410	349	273	613	521
V/C Ratio(X)	0.79	0.81	0.00	0.86	0.90	0.90	0.78	0.68	0.83	0.90	0.26	0.09
Avail Cap(c_a), veh/h	109	1236	553	219	727	711	164	593	504	273	708	602
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.1	30.5	0.0	41.9	28.9	29.0	46.0	34.8	36.2	40.5	23.9	12.9
Incr Delay (d2), s/veh	29.3	3.6	0.0	27.0	12.5	13.1	11.3	1.4	6.5	30.4	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	11.8	0.0	6.6	17.1	16.8	1.9	7.0	8.0	8.8	3.1	0.8	0.8
LnGrp Delay(d), s/veh	74.4	34.2	0.0	68.9	41.5	42.0	57.3	36.2	42.7	70.9	24.1	13.0
LnGrp LOS	E	C		E	D	D	E	D	D	E	C	B
Approach Vol, veh/h		995			1348			628			452	
Approach Delay, s/veh		37.6			45.5			41.3			48.5	
Approach LOS		D			D			D			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.9	8.4	37.1	10.9	41.0	19.0	26.4					
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	5.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	34.0	9.0	37.0	6.0	40.0	15.0	31.0					
Max Q Clear Time (g_c+III), s	25.0	5.4	8.0	6.6	32.5	15.3	19.0					
Green Ext Time (p_c), s	0.0	3.4	0.0	3.1	0.0	3.5	0.0	2.5				
Intersection Summary												
HCM 2010 Ctrl Delay	42.8											
HCM 2010 LOS	D											
Notes												

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing + Cuml + Proj PM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖	↖
Traffic Volume (veh/h)	0	1250	452	284	1876	0	0	0	0	105	1	149
Future Volume (veh/h)	0	1250	452	284	1876	0	0	0	0	105	1	149
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00					1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1316	476	299	1975	0				167	0	97
Adj No. of Lanes	0	2	1	2	2	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2368	1058	364	2893	0				296	0	132
Arrive On Green	0.00	0.67	0.67	0.21	1.00	0.00				0.08	0.00	0.08
Sat Flow, veh/h	0	3632	1582	3442	3632	0				3548	0	1583
Grp Volume(v), veh/h	0	1316	476	299	1975	0				167	0	97
Grp Sat Flow(s), veh/h/ln	0	1770	1582	1721	1770	0				1774	0	1583
Q Serve(g_s), s	0.0	21.6	15.7	9.1	0.0	0.0				5.0	0.0	6.6
Cycle Q Clear(g_c), s	0.0	21.6	15.7	9.1	0.0	0.0				5.0	0.0	6.6
Prop In Lane	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	2368	1058	364	2893	0				296	0	132
V/C Ratio(X)	0.00	0.56	0.45	0.82	0.68	0.00				0.56	0.00	0.73
Avail Cap(c_a), veh/h	0	2368	1058	541	2893	0				577	0	258
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.53	0.53	0.16	0.16	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	9.6	8.6	42.4	0.0	0.0				48.5	0.0	49.2
Incr Delay (d2), s/veh	0.0	0.5	0.7	1.1	0.2	0.0				1.7	0.0	7.7
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	0.0	10.6	7.0	4.4	0.1	0.0				2.5	0.0	3.2
LnGrp Delay(d), s/veh	0.0	10.1	9.4	43.4	0.2	0.0				50.2	0.0	56.9
LnGrp LOS		B	A	D	A					D		E
Approach Vol, veh/h		1792			2274					264		
Approach Delay, s/veh		9.9			5.9					52.7		
Approach LOS		A			A					D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	36.3	79.4		14.3		95.7						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	59.2	17.9		81.2								
Max Q Clear Time (g_c+III), s	23.6	8.6		2.0								
Green Ext Time (p_c), s	0.5	32.6		0.6		65.6						
Intersection Summary												
HCM 2010 Ctrl Delay	10.4											
HCM 2010 LOS	B											
Notes												

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing + Cuml + Proj PM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↘	↖	↗	↘			
Traffic Volume (veh/h)	281	1074	0	0	1112	255	1049	1	563	0	0	0
Future Volume (veh/h)	281	1074	0	0	1112	255	1049	1	563	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	299	1143	0	0	1183	271	1303	0	400			
Adj No. of Lanes	1	2	0	0	2	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	453	2383	0	0	1293	579	1158	0	517			
Arrive On Green	0.51	1.00	0.00	0.00	0.37	0.37	0.33	0.00	0.33			
Sat Flow, veh/h	1774	3632	0	0	3632	1583	3548	0	1583			
Grp Volume(v), veh/h	299	1143	0	0	1183	271	1303	0	400			
Grp Sat Flow(s),veh/h/ln	1774	1770	0	0	1770	1583	1774	0	1583			
Q Serve(g_s), s	13.7	0.0	0.0	0.0	35.0	14.4	35.9	0.0	25.0			
Cycle Q Clear(g_c), s	13.7	0.0	0.0	0.0	35.0	14.4	35.9	0.0	25.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	453	2383	0	0	1293	579	1158	0	517			
V/C Ratio(X)	0.66	0.48	0.00	0.00	0.91	0.47	1.13	0.00	0.77			
Avail Cap(c_a), veh/h	453	2383	0	0	1293	579	1158	0	517			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.77	0.77	0.00	0.00	0.62	0.62	1.00	0.00	1.00			
Uniform Delay (d), s/veh	23.4	0.0	0.0	0.0	33.3	26.7	37.1	0.0	33.4			
Incr Delay (d2), s/veh	2.7	0.5	0.0	0.0	7.7	1.7	67.9	0.0	7.2			
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/lr	0	0.2	0.0	0.0	18.5	6.6	28.5	0.0	11.9			
LnGrp Delay(d),s/veh	26.2	0.5	0.0	0.0	41.0	28.4	105.0	0.0	40.6			
LnGrp LOS	C	A			D	C	F		D			
Approach Vol, veh/h	1442			1454				1703				
Approach Delay, s/veh	5.8			38.6				89.9				
Approach LOS	A			D				F				
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2				5		6		8			
Phs Duration (G+Y+Rc), s	79.9				33.9		46.0		41.0			
Change Period (Y+Rc), s	5.8				5.8		5.8		5.1			
Max Green Setting (Gmax), s	63.2				18.3		40		35.9			
Max Q Clear Time (g_c+I1), s	2.0				15.7		37.0		37.9			
Green Ext Time (p_c), s	11.6				1.6		2.3		0.0			
Intersection Summary												
HCM 2010 Ctrl Delay				47.3								
HCM 2010 LOS				D								
Notes												

Existing + Cuml + Proj PM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	120	1369	122	97	1063	35	226	24	204	27	10	139
Future Volume (veh/h)	120	1369	122	97	1063	35	226	24	204	27	10	139
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	130	1488	133	105	1155	38	246	26	222	29	11	151
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	164	1615	143	134	1657	55	300	42	357	224	27	373
Arrive On Green	0.09	0.49	0.49	0.08	0.47	0.47	0.25	0.25	0.25	0.25	0.25	0.25
Sat Flow, veh/h	1774	3288	292	1774	3494	115	1217	166	1420	1127	108	1488
Grp Volume(v), veh/h	130	796	825	105	585	608	246	0	248	29	0	162
Grp Sat Flow(s),veh/h/ln	1774	1770	1810	1774	1770	1839	1217	0	1587	1127	0	1596
Q Serve(g_s), s	5.3	30.8	31.6	4.3	19.2	19.2	12.3	0.0	10.3	1.7	0.0	6.3
Cycle Q Clear(g_c), s	5.3	30.8	31.6	4.3	19.2	19.2	18.6	0.0	10.3	1.0	0.0	6.3
Prop In Lane	1.00		0.16	1.00		0.06	1.00		0.90	1.00		0.93
Lane Grp Cap(c), veh/h	164	869	889	134	839	872	300	0	398	224	0	401
V/C Ratio(X)	0.79	0.92	0.93	0.79	0.70	0.70	0.82	0.00	0.62	0.13	0.00	0.40
Avail Cap(c_a), veh/h	204	869	889	156	839	872	300	0	398	224	0	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.9	17.4	17.6	33.7	15.3	15.3	32.0	0.0	24.6	30.0	0.0	23.1
Incr Delay (d2), s/veh	15.6	15.9	17.0	20.0	4.8	4.6	16.4	0.0	3.0	0.3	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%)veh/lr	3	18.7	19.8	2.8	10.4	10.7	6.4	0.0	4.8	0.6	0.0	2.8
LnGrp Delay(d),s/veh	48.6	33.3	34.6	53.6	20.0	19.9	48.4	0.0	27.6	30.2	0.0	23.8
LnGrp LOS	D	C	C	D	C	B	D		C	C		C
Approach Vol, veh/h	1751			1298				494		191		
Approach Delay, s/veh	35.1			22.7				38.0		24.8		
Approach LOS	D			C				D		C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		2		4		5		6		8	
Phs Duration (G+Y+Rc), s	40.9		23.1		11.3		39.6		23.1			
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5			
Max Green Setting (Gmax), s	36.4		18.6		8.5		34.4		18.6			
Max Q Clear Time (g_c+I1), s	33.6		14.0		7.3		21.2		20.6			
Green Ext Time (p_c), s	0.0		2.7		1.6		0.0		11.5		0.0	
Intersection Summary												
HCM 2010 Ctrl Delay				30.6								
HCM 2010 LOS				C								
Notes												

Existing + Cuml + Proj PM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (veh/h)	37	1120	197	214	844	131	355	717	476	197	254	23	
Future Volume (veh/h)	37	1120	197	214	844	131	355	717	476	197	254	23	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	38	1155	203	221	870	135	366	739	491	203	262	24	
Adj No. of Lanes	2	2	1	2	2	0	2	2	1	2	2	1	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	464	1310	585	271	949	147	1025	1178	527	242	347	155	
Arrive On Green	0.13	0.37	0.37	0.16	0.62	0.62	0.30	0.33	0.33	0.07	0.10	0.10	
Sat Flow, veh/h	3442	3539	1582	3442	3070	476	3442	3539	1583	3442	3539	1583	
Grp Volume(v), veh/h	38	1155	203	221	501	504	366	739	491	203	262	24	
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1770	1777	1721	1770	1583	1721	1770	1583	
Q Serve(g_s), s	1.6	50.4	6.1	10.2	41.2	41.2	13.8	29.1	49.5	9.6	11.9	2.3	
Cycle Q Clear(g_c), s	1.6	50.4	6.1	10.2	41.2	41.2	13.8	29.1	49.5	9.6	11.9	2.3	
Prop In Lane	1.00	1.00	1.00	1.00	0.27	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	464	1310	585	271	547	549	1025	1178	527	242	347	155	
V/C Ratio(X)	0.08	0.88	0.35	0.82	0.92	0.92	0.36	0.63	0.93	0.84	0.75	0.15	
Avail Cap(c_a), veh/h	464	1310	585	271	606	609	1025	1246	558	246	1094	489	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.33	0.33	0.33	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	62.4	48.6	6.0	68.3	29.6	29.6	45.5	46.4	53.2	75.8	72.5	68.1	
Incr Delay (d2), s/veh	0.0	3.2	0.5	1.7	3.0	3.0	0.1	1.0	22.3	20.3	4.0	0.6	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	8	25.1	2.7	4.9	20.1	20.2	6.6	14.3	25.0	5.3	6.0	1.0	
LnGrp Delay(d), s/veh	62.5	51.8	6.5	70.0	32.6	32.6	45.6	47.4	75.5	96.1	76.5	68.7	
LnGrp LOS	E	D	A	E	C	C	D	D	E	F	E	E	
Approach Vol, veh/h	1396			1226				1596			489		
Approach Delay, s/veh	45.5			39.4				55.6			84.2		
Approach LOS	D			D				E			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	68.0	55.5	22.5	29.1	57.9	16.7	61.2						
Change Period (Y+Rc), s	6.9	6.3	* 6.3	6.9	* 6.9	5.1	6.3						
Max Green Setting (Gmax), s	57.7	18.9	* 51	14.0	* 57	11.8	58.1						
Max Q Clear Time (g_c+I+2), s	52.4	15.8	13.9	3.6	43.2	11.6	51.5						
Green Ext Time (p_c), s	0.0	4.3	2.3	2.3	7.7	7.4	0.0	3.4					
Intersection Summary													
HCM 2010 Ctrl Delay				51.4									
HCM 2010 LOS				D									
Notes													

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Existing + Cuml + Proj PM
17: Broadway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	
Traffic Volume (veh/h)	397	1493	131	198	1246	51	158	493	290	128	552	186	
Future Volume (veh/h)	397	1493	131	198	1246	51	158	493	290	128	552	186	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	0.99	1.00	0.99	1.00	0.92	1.00	0.92	1.00	0.86	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	467	1756	154	233	1466	60	186	580	341	151	649	219	
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0	
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	463	1605	139	234	1457	60	182	515	303	149	572	193	
Arrive On Green	0.27	0.97	0.97	0.07	0.42	0.42	0.10	0.25	0.25	0.08	0.23	0.23	
Sat Flow, veh/h	3442	3294	285	3442	3465	141	1774	2072	1218	1774	2485	837	
Grp Volume(v), veh/h	467	932	978	233	747	779	186	495	426	151	462	406	
Grp Sat Flow(s), veh/h/ln	1721	1770	1809	1721	1770	1837	1774	1770	1520	1774	1770	1552	
Q Serve(g_s), s	22.2	80.4	80.4	11.2	69.4	69.4	16.9	41.0	41.0	13.9	38.0	38.0	
Cycle Q Clear(g_c), s	22.2	80.4	80.4	11.2	69.4	69.4	16.9	41.0	41.0	13.9	38.0	38.0	
Prop In Lane	1.00	1.00	0.16	1.00	0.08	1.00	0.08	1.00	0.80	1.00	0.54	1.00	
Lane Grp Cap(c), veh/h	463	862	881	234	744	772	182	440	378	149	408	358	
V/C Ratio(X)	1.01	1.08	1.11	1.00	1.00	1.01	1.02	1.13	1.13	1.01	1.13	1.14	
Avail Cap(c_a), veh/h	463	862	881	234	744	772	182	440	378	149	408	358	
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.48	0.48	0.48	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	60.3	2.1	2.1	76.9	47.8	47.8	74.1	62.0	62.0	75.6	63.5	63.5	
Incr Delay (d2), s/veh	31.0	46.6	58.0	58.1	33.9	34.4	73.1	82.2	85.5	76.4	86.2	89.7	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	
%ile BackOfQ(50%), veh/ln	12.5	32.0	35.5	7.2	40.9	42.6	12.0	30.1	26.2	10.0	28.3	25.2	
LnGrp Delay(d), s/veh	91.3	48.7	60.1	135.0	81.7	82.3	147.4	144.2	147.5	152.0	149.7	153.2	
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	F	
Approach Vol, veh/h	2377			1759				1107			1019		
Approach Delay, s/veh	61.8			89.0				146.0			151.5		
Approach LOS	E			F				F			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	85.3	21.4	42.6	26.7	74.3	18.4	45.6						
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6					
Max Green Setting (Gmax), s	80.4	16.9	38.0	22.2	69.4	13.9	41.0						
Max Q Clear Time (g_c+I+2), s	82.4	18.9	40.0	24.2	71.4	15.9	43.0						
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay				98.9									
HCM 2010 LOS				F									
Notes													

HCM 2010 Signalized Intersection Summary
N:\2614\Analysis\Intersection\Existing + Cuml + Proj PM.syn

Synchro 9 Report

APPENDIX H

INTERSECTION ANALYSIS WORKSHEETS – YEAR 2035 WITHOUT PROJECT

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Year 2035 AM
1: Centre City Parkway & Nutmeg St

Escondido Country Club
06/06/2017

Intersection												
Int Delay, s/veh	66.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	145	5	10	3	5	5	10	290	5	5	940	520
Future Vol, veh/h	145	5	10	3	5	5	10	290	5	5	940	520
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	158	5	11	3	5	5	11	315	5	5	1022	565

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1660	1657	1304	1663	1938	318	1587	0	0	321	0	0
Stage 1	1315	1315	-	340	340	-	-	-	-	-	-	-
Stage 2	345	342	-	1323	1598	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	-78	98	196	77	65	723	414	-	-	1239	-	-
Stage 1	194	228	-	675	639	-	-	-	-	-	-	-
Stage 2	671	638	-	192	166	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-67	88	196	64	59	723	414	-	-	1239	-	-
Mov Cap-2 Maneuver	-67	88	-	64	59	-	-	-	-	-	-	-
Stage 1	189	211	-	657	622	-	-	-	-	-	-	-
Stage 2	643	621	-	164	154	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 801.6	50	0.5	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	414	-	-	70	94	1239	-	-
HCM Lane V/C Ratio	0.026	-	-	2.484	0.15	0.004	-	-
HCM Control Delay (s)	13.9	-	-	\$ 801.6	50	7.9	0	-
HCM Lane LOS	B	-	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	16.9	0.5	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Year 2035 AM
2: Country Club Ln & Golden Circle Dr

Escondido Country Club
06/06/2017

Intersection												
Int Delay, s/veh	23.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔		↔		↔		↔		↔		↔	
Traffic Vol, veh/h	0	20	180	797	10	3	40	13	200	5	23	0
Future Vol, veh/h	0	20	180	797	10	3	40	13	200	5	23	0
Conflicting Peds, #/hr	2	0	0	0	0	2	5	0	0	0	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None									
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	22	196	866	11	3	43	14	217	5	25	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	16	0	0	217	0	0	1883	1869	120	1982	1964	20
Stage 1	-	-	-	-	-	-	120	120	-	1747	1747	-
Stage 2	-	-	-	-	-	-	1763	1749	-	235	217	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1602	-	-	1353	-	-	54	72	931	46	63	1058
Stage 1	-	-	-	-	-	-	884	796	-	109	140	-
Stage 2	-	-	-	-	-	-	107	140	-	768	723	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1595	-	-	1353	-	-	-	26	931	10	-23	1052
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	26	-	10	-23	-
Stage 1	-	-	-	-	-	-	884	796	-	109	50	-
Stage 2	-	-	-	-	-	-	-19	50	-	578	723	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.1		\$ 723.5
HCM LOS				F

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1595	-	-	1353	-	-	19
HCM Lane V/C Ratio	-	-	-	-	0.64	-	-	1.602
HCM Control Delay (s)	-	0	-	-	12.3	-	-	\$ 723.5
HCM Lane LOS	-	A	-	-	B	-	-	F
HCM 95th %tile Q(veh)	-	0	-	-	4.9	-	-	4.2

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Year 2035 AM
3: Country Club Ln & Gary Ln

Escondido Country Club
06/06/2017

Intersection									
Intersection Delay, s/veh	69.3								
Intersection LOS	F								
Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations		↘	↗		↗	↘		↘	↗
Traffic Vol, veh/h	0	26	219	0	730	18	0	50	85
Future Vol, veh/h	0	26	219	0	730	18	0	50	85
Peak Hour Factor	0.92	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	28	235	0	785	19	0	54	91
Number of Lanes	0	1	1	0	1	1	0	1	0
Approach	EB			WB			SB		
Opposing Approach	WB			EB					
Opposing Lanes	2			2			0		
Conflicting Approach Left	SB						WB		
Conflicting Lanes Left	1			0			2		
Conflicting Approach Right				SB			EB		
Conflicting Lanes Right	0			1			2		
HCM Control Delay	11.6			98.6			11.3		
HCM LOS	B			F			B		
Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1				
Vol Left, %	100%	0%	0%	0%	37%				
Vol Thru, %	0%	100%	100%	0%	0%				
Vol Right, %	0%	0%	0%	100%	63%				
Sign Control	Stop		Stop		Stop				
Traffic Vol by Lane	26	219	730	18	135				
LT Vol	26	0	0	0	50				
Through Vol	0	219	730	0	0				
RT Vol	0	0	0	18	85				
Lane Flow Rate	28	235	785	19	145				
Geometry Grp	7	7	7	7	2				
Degree of Util (X)	0.047	0.367	1.141	0.024	0.24				
Departure Headway (Hd)	6.348	5.841	5.232	4.527	6.279				
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes				
Cap	568	619	691	782	575				
Service Time	4.048	3.541	3.01	2.304	4.279				
HCM Lane V/C Ratio	0.049	0.38	1.136	0.024	0.252				
HCM Control Delay	9.4	11.9	100.8	7.4	11.3				
HCM Lane LOS	A	B	F	A	B				
HCM 95th-tile Q	0.1	1.7	24	0.1	0.9				

Year 2035 AM
4: Firestone Dr & Country Club Ln

Escondido Country Club
06/06/2017

Intersection									
Int Delay, s/veh	1.6								
Movement	EBT	EBR	WBL	WBT	NBL	NBR			
Lane Configurations	↕↕		↕	↕↕	↕↕				
Traffic Vol, veh/h	257	22	148	742	2	75			
Future Vol, veh/h	257	22	148	742	2	75			
Conflicting Peds, #/hr	0	9	0	0	9	9			
Sign Control	Free	Free	Free	Free	Stop	Stop			
RT Channelized	-	None	-	None	-	None			
Storage Length	-	-	80	-	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	279	24	161	807	2	82			
Major/Minor	Major1		Major2		Minor1				
Conflicting Flow All	0	0	312	0	1034	170			
Stage 1	-	-	-	-	300	-			
Stage 2	-	-	-	-	734	-			
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	-	-	1245	-	228	844			
Stage 1	-	-	-	-	725	-			
Stage 2	-	-	-	-	436	-			
Platoon blocked, %	-	-	-	-	-	-			
Mov Cap-1 Maneuver	-	-	1236	-	195	831			
Mov Cap-2 Maneuver	-	-	-	-	195	-			
Stage 1	-	-	-	-	720	-			
Stage 2	-	-	-	-	376	-			
Approach	EB		WB		NB				
HCM Control Delay, s	0		1.4		10.3				
HCM LOS					B				
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT				
Capacity (veh/h)	766	-	-	1236	-				
HCM Lane V/C Ratio	0.109	-	-	0.13	-				
HCM Control Delay (s)	10.3	-	-	8.3	-				
HCM Lane LOS	B	-	-	A	-				
HCM 95th %tile Q(veh)	0.4	-	-	0.4	-				

Year 2035 AM
5: La Brea St & Country Club Ln

Escondido Country Club
06/06/2017

Intersection	
Intersection Delay, s/veh	12.2
Intersection LOS	B

Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Lane Configurations		↕↔			↕	↕↔		↕	
Traffic Vol, veh/h	0	344	7	0	5	846	0	8	19
Future Vol, veh/h	0	344	7	0	5	846	0	8	19
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	374	8	0	5	920	0	9	21
Number of Lanes	0	2	0	0	1	2	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	3	2	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	2
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	3
HCM Control Delay	12.1	12.3	9.7
HCM LOS	B	B	A

Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3
Vol Left, %	30%	0%	0%	100%	0%	0%
Vol Thru, %	0%	100%	94%	0%	100%	100%
Vol Right, %	70%	0%	6%	0%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	229	122	5	423	423
LT Vol	8	0	0	5	0	0
Through Vol	0	229	115	0	423	423
RT Vol	19	0	7	0	0	0
Lane Flow Rate	29	249	132	5	460	460
Geometry Grp	7	8	8	7	7	7
Degree of Util (X)	0.053	0.414	0.218	0.008	0.641	0.418
Departure Headway (Hd)	6.533	5.972	5.931	5.519	5.017	3.276
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	544	598	602	649	722	1094
Service Time	4.328	3.747	3.707	3.25	2.748	1.006
HCM Lane V/C Ratio	0.053	0.416	0.219	0.008	0.637	0.42
HCM Control Delay	9.7	13	10.4	8.3	16.3	8.4
HCM Lane LOS	A	B	B	A	C	A
HCM 95th-tile Q	0.2	2	0.8	0	4.7	2.1

Year 2035 AM
6: Nutmeg St & Country Club Ln

Escondido Country Club
06/06/2017

Intersection	
Intersection Delay, s/veh	62.7
Intersection LOS	F

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↕	↕↔			↕	↕↔				↕↔					↕↔
Traffic Vol, veh/h	0	39	290	59	0	360	688	59	0	18	78	190	0	128	336	169
Future Vol, veh/h	0	39	290	59	0	360	688	59	0	18	78	190	0	128	336	169
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	42	312	63	0	387	740	63	0	19	84	204	0	138	361	182
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB		NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	24.3	103.8	49.6	401.8
HCM LOS	C	F	E	F

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	6%	100%	0%	0%	100%	0%	0%	20%
Vol Thru, %	27%	0%	100%	62%	0%	100%	80%	53%
Vol Right, %	66%	0%	0%	38%	0%	0%	20%	27%
Sign Control	Stop	Stop						
Traffic Vol by Lane	286	39	193	156	360	459	288	633
LT Vol	18	39	0	0	360	0	0	128
Through Vol	78	0	193	97	0	459	229	336
RT Vol	190	0	0	59	0	0	59	169
Lane Flow Rate	308	42	208	167	387	493	310	681
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.816	0.119	0.561	0.439	1.012	1.221	0.755	1.818
Departure Headway (Hd)	11.415	11.931	11.385	11.095	11.459	10.916	10.761	9.994
Convergence, Y/N	Yes	Yes						
Cap	320	302	320	326	321	335	338	368
Service Time	9.115	9.631	9.085	8.795	9.159	8.616	8.461	7.694
HCM Lane V/C Ratio	0.963	0.139	0.65	0.512	1.206	1.472	0.917	1.851
HCM Control Delay	49.6	16.2	27.7	22.2	89.1	155.4	40.2	401.8
HCM Lane LOS	E	C	D	C	F	F	E	F
HCM 95th-tile Q	6.8	0.4	3.2	2.1	11.2	17.7	5.9	42.6

Year 2035 AM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	93	518	116	350	685	130	75	400	100	250	1100	246
Future Volume (veh/h)	93	518	116	350	685	130	75	400	100	250	1100	246
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.98	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	101	563	126	380	745	141	82	435	109	272	1196	267
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	128	676	298	369	1156	511	96	823	363	295	1221	546
Arrive On Green	0.07	0.19	0.19	0.21	0.33	0.33	0.05	0.23	0.23	0.17	0.34	0.34
Sat Flow, veh/h	1774	3539	1558	1774	3539	1563	1774	3539	1561	1774	3539	1583
Grp Volume(v), veh/h	101	563	126	380	745	141	82	435	109	272	1196	267
Grp Sat Flow(s),veh/h/ln	1774	1770	1558	1774	1770	1563	1774	1770	1561	1774	1770	1583
Q Serve(g_s), s	5.0	13.6	6.3	18.5	16.0	5.9	4.1	9.6	5.1	13.4	29.8	11.8
Cycle Q Clear(g_c), s	5.0	13.6	6.3	18.5	16.0	5.9	4.1	9.6	5.1	13.4	29.8	11.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	128	676	298	369	1156	511	96	823	363	295	1221	546
V/C Ratio(X)	0.79	0.83	0.42	1.03	0.64	0.28	0.86	0.53	0.30	0.92	0.98	0.49
Avail Cap(c_a), veh/h	155	716	315	369	1156	511	96	823	363	295	1221	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	34.6	31.7	35.3	25.6	22.2	41.8	29.9	28.2	36.5	28.8	23.0
Incr Delay (d2), s/veh	19.6	8.0	1.0	54.9	1.2	0.3	49.5	0.6	0.5	32.8	20.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	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	2.8	14.6	8.0	2.6	3.3	4.7	2.3	9.3	18.0	5.2	2.6
LnGrp Delay(d),s/veh	60.2	42.6	32.6	90.2	26.8	22.5	91.2	30.5	28.6	69.3	49.8	23.6
LnGrp LOS	E	D	C	F	C	C	F	C	C	E	D	C
Approach Vol, veh/h	790			1266			626			1735		
Approach Delay, s/veh	43.3			45.3			38.1			48.8		
Approach LOS	D			D			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.2	23.0	21.5	9.3	35.2	10.9	33.6					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.7	18.5	18.0	4.8	30.7	7.8	28.7					
Max Q Clear Time (g_c+I), s	11.6	20.5	15.6	6.1	31.8	7.0	18.0					
Green Ext Time (p_c), s	0.0	7.1	0.0	1.4	0.0	0.0	6.8					

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Year 2035 AM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	27	560	90	471	1210	90	90	60	173	220	250	120
Future Volume (veh/h)	27	560	90	471	1210	90	90	60	173	220	250	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	29	609	98	512	1315	98	98	65	188	239	272	130
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	37	1388	223	574	1118	924	89	250	212	220	248	118
Arrive On Green	0.02	0.45	0.45	0.17	0.60	0.60	0.05	0.13	0.13	0.12	0.21	0.21
Sat Flow, veh/h	1774	3055	491	3442	1863	1539	1774	1863	1580	1774	1192	570
Grp Volume(v), veh/h	29	352	355	512	1315	98	98	65	188	239	0	402
Grp Sat Flow(s),veh/h/ln	1774	1770	1776	1721	1863	1539	1774	1863	1580	1774	0	1762
Q Serve(g_s), s	2.4	20.2	20.3	21.7	89.5	2.2	7.5	4.7	17.4	18.5	0.0	31.0
Cycle Q Clear(g_c), s	2.4	20.2	20.3	21.7	89.5	2.2	7.5	4.7	17.4	18.5	0.0	31.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.32
Lane Grp Cap(c), veh/h	37	804	807	574	1118	924	89	250	212	220	0	366
V/C Ratio(X)	0.79	0.44	0.44	0.89	1.18	0.11	1.10	0.26	0.89	1.09	0.00	1.10
Avail Cap(c_a), veh/h	48	804	807	718	1118	924	89	250	212	220	0	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	72.7	27.7	27.7	60.8	29.8	3.7	70.8	57.9	63.4	65.3	0.0	59.0
Incr Delay (d2), s/veh	47.1	0.4	0.4	11.5	88.8	0.0	124.3	0.5	33.2	85.4	0.0	75.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.0	10.0	10.0	11.2	73.2	1.6	6.8	2.4	9.6	14.3	0.0	22.8
LnGrp Delay(d),s/veh	119.7	28.1	28.1	118.6	3.7	195.2	58.5	96.7	150.7	0.0	134.8	
LnGrp LOS	F	C	C	E	F	A	F	E	F	F		F
Approach Vol, veh/h	736			1925			351			641		
Approach Delay, s/veh	31.7			100.4			117.1			140.7		
Approach LOS	C			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	24.5	29.4	72.2	12.0	35.5	7.6	94.0					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	31.1	62.4	7.5	31.0	4.0	89.5					
Max Q Clear Time (g_c+I), s	19.4	23.7	22.3	9.5	33.0	4.4	91.5					
Green Ext Time (p_c), s	0.0	0.1	1.2	4.7	0.0	0.0	0.0					

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗			↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	232	657	5	30	1103	45	5	5	15	290	5	730
Future Volume (veh/h)	232	657	5	30	1103	45	5	5	15	290	5	730
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	252	714	5	33	1199	49	5	5	16	315	5	793
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	1778	12	58	1313	54	32	32	55	466	7	419
Arrive On Green	0.15	0.49	0.49	0.03	0.38	0.38	0.03	0.03	0.03	0.27	0.27	0.27
Sat Flow, veh/h	1774	3602	25	1774	3465	142	909	909	1563	1748	28	1573
Grp Volume(v), veh/h	252	351	368	33	612	636	10	0	16	320	0	793
Grp Sat Flow(s), veh/h/ln	1774	1770	1858	1774	1770	1837	1817	0	1563	1775	0	1573
Q Serve(g_s), s	17.8	15.7	15.7	2.3	41.3	41.4	0.7	0.0	1.3	20.3	0.0	33.5
Cycle Q Clear(g_c), s	17.8	15.7	15.7	2.3	41.3	41.4	0.7	0.0	1.3	20.3	0.0	33.5
Prop In Lane	1.00		0.01	1.00		0.08	0.50		1.00	0.98		1.00
Lane Grp Cap(c), veh/h	261	873	917	58	671	696	64	0	55	473	0	419
V/C Ratio(X)	0.97	0.40	0.40	0.57	0.91	0.91	0.16	0.00	0.29	0.68	0.00	1.89
Avail Cap(c_a), veh/h	261	873	917	99	694	720	390	0	336	473	0	419
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	53.3	20.1	20.1	60.0	37.1	37.1	58.9	0.0	59.2	41.3	0.0	46.1
Incr Delay (d2), s/veh	45.8	0.4	0.3	3.2	16.3	16.0	1.4	0.0	3.5	4.0	0.0	410.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.0	7.8	8.2	1.2	23.3	24.1	0.4	0.0	0.6	10.5	0.0	62.4
LnGrp Delay(d), s/veh	99.1	20.5	20.5	63.2	53.4	53.1	60.3	0.0	62.7	45.3	0.0	456.9
LnGrp LOS	F	C	C	E	D	D	E		E	D		F
Approach Vol, veh/h	971			1281				26		1113		
Approach Delay, s/veh	40.9			53.5				61.7		338.6		
Approach LOS	D			D				E		F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	68.3			39.0	23.0	53.9		9.9				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	60.8			33.5	18.5	49.3		27.0				
Max Q Clear Time (g_c+1), s	17.7			35.5	19.8	43.4		3.3				
Green Ext Time (p_c), s	0.0	21.9		0.0	0.0	4.3		0.1				

Intersection Summary	
HCM 2010 Ctrl Delay	143.5
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗		↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	9	846	182	300	1026	15	76	19	220	20	114	22
Future Volume (veh/h)	9	846	182	300	1026	15	76	19	220	20	114	22
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	920	198	326	1115	16	83	21	239	22	124	24
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	21	1141	245	361	2096	30	105	348	294	40	228	44
Arrive On Green	0.01	0.40	0.40	0.20	0.59	0.59	0.06	0.19	0.19	0.02	0.15	0.15
Sat Flow, veh/h	1774	2884	620	1774	3571	51	1774	1863	1576	1774	1514	293
Grp Volume(v), veh/h	10	564	554	326	553	578	83	21	239	22	0	148
Grp Sat Flow(s), veh/h/ln	1774	1770	1734	1774	1770	1852	1774	1863	1576	1774	0	1807
Q Serve(g_s), s	0.6	28.8	28.9	18.2	19.1	19.1	4.7	0.9	14.8	1.2	0.0	7.7
Cycle Q Clear(g_c), s	0.6	28.8	28.9	18.2	19.1	19.1	4.7	0.9	14.8	1.2	0.0	7.7
Prop In Lane	1.00		0.36	1.00		0.03	1.00		1.00	1.00		0.16
Lane Grp Cap(c), veh/h	21	700	686	361	1039	1087	105	348	294	40	0	272
V/C Ratio(X)	0.47	0.81	0.81	0.90	0.53	0.53	0.79	0.06	0.81	0.55	0.00	0.54
Avail Cap(c_a), veh/h	87	739	724	445	1096	1147	105	503	426	87	0	479
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	49.9	27.3	27.3	39.5	12.6	12.6	47.3	34.0	39.7	49.2	0.0	40.0
Incr Delay (d2), s/veh	14.9	6.3	6.5	18.9	0.5	0.5	33.0	0.1	6.5	11.0	0.0	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.4	15.2	15.1	10.9	9.4	9.8	3.3	0.5	7.0	0.7	0.0	4.0
LnGrp Delay(d), s/veh	64.8	33.6	33.8	58.4	13.1	13.1	80.3	34.1	46.2	60.2	0.0	41.3
LnGrp LOS	E	C	C	E	B	B	F	C	D	E		D
Approach Vol, veh/h	1128			1457				343		170		
Approach Delay, s/veh	33.9			23.3				53.7		43.7		
Approach LOS	C			C				D		D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.2	46.3	10.0	20.3	5.7	65.7	6.3	24.0				
Change Period (Y+Rc), s	4.5	6.0	4.0	*5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	25.5	42.5	6.0	*27	5.0	63.0	5.0	27.5				
Max Q Clear Time (g_c+1), s	30.9	6.7	9.7	2.6	21.1	3.2	16.8					
Green Ext Time (p_c), s	0.5	9.4	0.0	1.3	0.0	23.7	0.0	1.1				

Intersection Summary	
HCM 2010 Ctrl Delay	31.6
HCM 2010 LOS	C

Notes

Year 2035 AM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	8	848	190	300	1030	7	80	35	220	0	150	21
Future Volume (veh/h)	8	848	190	300	1030	7	80	35	220	0	150	21
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	9	922	207	326	1120	8	87	38	239	0	163	23
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	16	1118	251	374	2127	15	242	46	287	104	329	46
Arrive On Green	0.01	0.39	0.39	0.21	0.59	0.59	0.21	0.21	0.21	0.00	0.21	0.21
Sat Flow, veh/h	1774	2874	645	1774	3602	26	1193	222	1395	1098	1598	225
Grp Volume(v), veh/h	9	567	562	326	550	578	87	0	277	0	0	186
Grp Sat Flow(s), veh/h/ln	1774	1770	1749	1774	1770	1858	1193	0	1617	1098	0	1823
Q Serve(g_s), s	0.4	20.0	20.1	12.3	12.8	12.8	4.8	0.0	11.4	0.0	0.0	6.3
Cycle Q Clear(g_c), s	0.4	20.0	20.1	12.3	12.8	12.8	11.1	0.0	11.4	0.0	0.0	6.3
Prop In Lane	1.00	0.37	1.00	0.01	1.00	0.01	1.00	0.86	1.00	0.00	0.12	1.00
Lane Grp Cap(c), veh/h	16	688	680	374	1045	1097	242	0	333	104	0	375
V/C Ratio(X)	0.55	0.82	0.83	0.87	0.53	0.53	0.36	0.00	0.83	0.00	0.00	0.50
Avail Cap(c_a), veh/h	102	711	703	447	1055	1108	273	0	375	132	0	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	34.3	19.1	19.1	26.5	8.5	8.5	29.3	0.0	26.4	0.0	0.0	24.4
Incr Delay (d2), s/veh	26.1	7.6	7.8	15.0	0.5	0.5	0.9	0.0	13.4	0.0	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3	11.2	11.1	7.6	6.3	6.6	1.7	0.0	6.3	0.0	0.0	3.3
LnGrp Delay(d), s/veh	60.4	26.7	26.9	41.5	8.9	8.9	30.2	0.0	39.8	0.0	0.0	25.4
LnGrp LOS	E	C	C	D	A	A	C		D			C
Approach Vol, veh/h	1138			1454			364			186		
Approach Delay, s/veh	27.1			16.2			37.5			25.4		
Approach LOS	C			B			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	31.5	18.8	5.1	45.5	18.8							
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	27.9	16.1	4.0	41.4	16.1							
Max Q Clear Time (g_c+M), s	22.1	8.3	2.4	14.8	13.4							
Green Ext Time (p_c), s	0.3	4.9	2.1	0.0	16.6	0.9						

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Year 2035 AM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	60	1080	47	320	1237	109	14	106	150	314	323	100
Future Volume (veh/h)	60	1080	47	320	1237	109	14	106	150	314	323	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	61	1102	0	327	1262	111	14	108	153	320	330	102
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	1204	539	368	1684	148	27	193	164	345	526	447
Arrive On Green	0.04	0.34	0.00	0.21	0.51	0.51	0.02	0.10	0.10	0.19	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3292	289	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	61	1102	0	327	677	696	14	108	153	320	330	102
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1811	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.2	36.7	0.0	22.0	37.2	37.5	1.0	6.8	8.0	21.8	19.0	6.1
Cycle Q Clear(g_c), s	4.2	36.7	0.0	22.0	37.2	37.5	1.0	6.8	8.0	21.8	19.0	6.1
Prop In Lane	1.00	1.00	1.00	1.00	0.16	1.00	0.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	78	1204	539	368	905	926	27	193	164	345	526	447
V/C Ratio(X)	0.78	0.92	0.00	0.89	0.75	0.75	0.51	0.56	0.93	0.93	0.63	0.23
Avail Cap(c_a), veh/h	101	1296	580	375	922	943	72	470	399	361	773	657
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	58.1	38.9	0.0	47.4	23.8	23.8	60.0	52.4	25.1	48.7	38.4	33.8
Incr Delay (d2), s/veh	22.3	9.7	0.0	21.6	3.2	3.2	10.5	1.9	15.9	28.8	0.9	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5	19.5	0.0	13.0	18.9	19.4	0.6	3.6	5.4	13.4	9.9	2.7
LnGrp Delay(d), s/veh	80.4	48.5	0.0	68.9	26.9	27.0	70.5	54.3	41.0	77.4	39.3	34.0
LnGrp LOS	F	D		E	C	C	E	D	D	E	D	C
Approach Vol, veh/h	1163			1700			275			752		
Approach Delay, s/veh	50.2			35.0			47.7			54.8		
Approach LOS	D			D			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.5	46.8	5.9	39.7	9.4	67.8	27.9	17.7				
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	23.0	45.0	5.0	51.0	7.0	64.0	25.0	31.0				
Max Q Clear Time (g_c+M), s	38.7	3.0	21.0	6.2	39.5	23.8	10.0					
Green Ext Time (p_c), s	1.4	3.1	0.0	2.9	0.0	8.7	0.1	2.7				

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Intersection Summary												
HCM 2010 Ctrl Delay	23.2			44.3								
HCM 2010 LOS	C			D								
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	0	748	927	500	1466	0	0	0	0	270	5	330
Future Volume (veh/h)	0	748	927	500	1466	0	0	0	0	270	5	330
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	787	976	526	1543	0				404	0	222
Adj No. of Lanes	0	3	1	2	3	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2512	781	580	3635	0				582	0	260
Arrive On Green	0.00	0.49	0.49	0.34	1.00	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	5253	1581	3442	5253	0				3548	0	1583
Grp Volume(v), veh/h	0	787	976	526	1543	0				404	0	222
Grp Sat Flow(s),veh/h/ln	0	1695	1581	1721	1695	0				1774	0	1583
Q Serve(g_s), s	0.0	8.3	44.5	13.1	0.0	0.0				9.7	0.0	12.3
Cycle Q Clear(g_c), s	0.0	8.3	44.5	13.1	0.0	0.0				9.7	0.0	12.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2512	781	580	3635	0				582	0	260
V/C Ratio(X)	0.00	0.31	1.25	0.91	0.42	0.00				0.69	0.00	0.85
Avail Cap(c_a), veh/h	0	2512	781	585	3635	0				635	0	283
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.40	0.40	0.69	0.69	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.6	22.8	29.2	0.0	0.0				35.5	0.0	36.6
Incr Delay (d2), s/veh	0.0	0.1	116.7	13.3	0.3	0.0				2.9	0.0	20.4
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	0.0	3.9	44.6	7.2	0.1	0.0				5.0	0.0	6.8
LnGrp Delay(d),s/veh	0.0	13.8	139.5	42.5	0.3	0.0				38.4	0.0	57.0
LnGrp LOS		B	F	D	A					D		E
Approach Vol, veh/h		1763			2069					626		
Approach Delay, s/veh		83.4			11.0					45.0		
Approach LOS		F			B					D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	50.3	50.3		19.9		70.1						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	43.0	43.0		16.1		63.0						
Max Q Clear Time (g_c+I), s	46.5	46.5		14.3		2.0						
Green Ext Time (p_c), s	0.0	0.0		0.5		43.1						
Intersection Summary												
HCM 2010 Ctrl Delay				44.4								
HCM 2010 LOS				D								
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑	↑↑↑					↑	↑	↑
Traffic Volume (veh/h)	125	893	0	0	1465	110	500	5	270	0	0	0
Future Volume (veh/h)	125	893	0	0	1465	110	500	5	270	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	133	950	0	0	1559	117	623	0	193			
Adj No. of Lanes	1	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	163	3387	0	0	2653	826	755	0	337			
Arrive On Green	0.18	1.00	0.00	0.00	0.52	0.52	0.21	0.00	0.21			
Sat Flow, veh/h	1774	5253	0	0	5253	1583	3548	0	1583			
Grp Volume(v), veh/h	133	950	0	0	1559	117	623	0	193			
Grp Sat Flow(s),veh/h/ln	1774	1695	0	0	1695	1583	1774	0	1583			
Q Serve(g_s), s	6.5	0.0	0.0	0.0	19.0	3.4	15.1	0.0	9.8			
Cycle Q Clear(g_c), s	6.5	0.0	0.0	0.0	19.0	3.4	15.1	0.0	9.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	163	3387	0	0	2653	826	755	0	337			
V/C Ratio(X)	0.81	0.28	0.00	0.00	0.59	0.14	0.83	0.00	0.57			
Avail Cap(c_a), veh/h	262	3387	0	0	2653	826	982	0	438			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	0.66	0.66	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.0	0.0	0.0	0.0	14.8	11.1	33.8	0.0	31.8			
Incr Delay (d2), s/veh	9.0	0.2	0.0	0.0	0.6	0.2	4.5	0.0	1.5			
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	0.1	0.0	0.0	9.0	1.5	7.8	0.0	4.4			
LnGrp Delay(d),s/veh	45.0	0.2	0.0	0.0	15.5	11.3	38.4	0.0	33.3			
LnGrp LOS	D	A			B	B	D		C			
Approach Vol, veh/h		1083			1676		816					
Approach Delay, s/veh		5.7			15.2		37.2					
Approach LOS		A			B		D					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		65.7			13.0	52.8		24.3				
Change Period (Y+Rc), s		5.8			4.7	5.8		5.1				
Max Green Setting (Gmax), s		54.2			13	36.2		24.9				
Max Q Clear Time (g_c+I), s		2.0			8.5	21.0		17.1				
Green Ext Time (p_c), s		31.5			0.1	12.6		2.1				
Intersection Summary												
HCM 2010 Ctrl Delay					17.3							
HCM 2010 LOS					B							
Notes												

Year 2035 AM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↗	↖	↖	↗
Traffic Volume (veh/h)	40	998	240	240	1415	60	100	10	140	40	15	100
Future Volume (veh/h)	40	998	240	240	1415	60	100	10	140	40	15	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	1085	261	261	1538	65	109	11	152	43	16	109
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	1288	308	303	2055	87	255	21	288	220	40	272
Arrive On Green	0.03	0.45	0.45	0.17	0.59	0.59	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	2834	678	1774	3461	146	1258	108	1487	1216	206	1404
Grp Volume(v), veh/h	43	675	671	261	784	819	109	0	163	43	0	125
Grp Sat Flow(s), veh/h/ln	1774	1770	1742	1774	1770	1837	1258	0	1595	1216	0	1610
Q Serve(g_s), s	1.8	25.1	25.5	10.7	24.1	24.4	6.2	0.0	6.8	2.5	0.0	5.1
Cycle Q Clear(g_c), s	1.8	25.1	25.5	10.7	24.1	24.4	11.2	0.0	6.8	9.3	0.0	5.1
Prop In Lane	1.00	0.39	1.00	1.00	0.08	1.00	1.00	0.93	1.00	0.00	0.87	1.00
Lane Grp Cap(c), veh/h	56	804	792	303	1051	1091	255	0	309	220	0	311
V/C Ratio(X)	0.77	0.84	0.85	0.86	0.75	0.75	0.43	0.00	0.53	0.20	0.00	0.40
Avail Cap(c_a), veh/h	102	804	792	345	1051	1091	316	0	387	280	0	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.8	17.9	18.0	30.0	11.0	11.1	31.2	0.0	27.0	31.2	0.0	26.3
Incr Delay (d2), s/veh	19.2	10.2	10.9	17.7	4.8	4.8	1.1	0.0	1.4	0.4	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2	14.5	14.5	6.7	13.0	13.5	2.2	0.0	3.1	0.9	0.0	2.3
LnGrp Delay(d), s/veh	55.1	28.2	28.9	47.7	15.9	15.9	32.4	0.0	28.4	31.6	0.0	27.1
LnGrp LOS	E	C	C	D	B	B	C		C	C		C
Approach Vol, veh/h	1389			1864			272			168		
Approach Delay, s/veh	29.4			20.3			30.0			28.3		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	37.2	38.4		18.9	6.9	48.8		18.9				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	33.9			18.1	4.3	44.1		18.1				
Max Q Clear Time (g_c+I10), s	27.5			11.3	3.8	26.4		13.2				
Green Ext Time (p_c), s	0.1	6.0		1.3	0.0	15.4		1.0				
Intersection Summary												
HCM 2010 Ctrl Delay				24.8								
HCM 2010 LOS				C								

Year 2035 AM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖	↗	↖	↖	↗
Traffic Volume (veh/h)	30	978	370	290	1185	210	170	385	120	230	1266	80
Future Volume (veh/h)	30	978	370	290	1185	210	170	385	120	230	1266	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	31	1008	381	299	1222	216	175	397	124	237	1305	82
Adj No. of Lanes	2	2	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	1170	523	341	1583	280	209	1229	550	259	1281	573
Arrive On Green	0.06	0.33	0.33	0.03	0.12	0.12	0.06	0.35	0.35	0.08	0.36	0.36
Sat Flow, veh/h	3442	3539	1582	3442	4347	768	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	31	1008	381	299	953	485	175	397	124	237	1305	82
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1695	1725	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.4	44.0	35.0	14.3	45.0	45.0	8.3	13.6	9.2	11.3	59.7	5.8
Cycle Q Clear(g_c), s	1.4	44.0	35.0	14.3	45.0	45.0	8.3	13.6	9.2	11.3	59.7	5.8
Prop In Lane	1.00	1.00	1.00	1.00	0.45	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	221	1170	523	341	1234	628	209	1229	550	259	1281	573
V/C Ratio(X)	0.14	0.86	0.73	0.88	0.77	0.77	0.84	0.32	0.23	0.92	1.02	0.14
Avail Cap(c_a), veh/h	292	1170	523	369	1234	628	209	1229	550	259	1281	573
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	51.7	48.7	78.8	65.9	65.9	76.7	39.6	38.1	75.8	52.7	35.4
Incr Delay (d2), s/veh	0.2	8.4	8.6	2.1	0.4	0.9	23.8	0.2	0.2	33.9	30.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	7	22.9	16.5	6.9	21.2	21.7	4.7	6.7	4.1	6.6	34.5	2.5
LnGrp Delay(d), s/veh	73.1	60.2	57.4	80.9	66.4	66.8	100.5	39.8	38.4	109.7	82.7	35.6
LnGrp LOS	E	E	E	F	E	E	F	D	D	F	F	D
Approach Vol, veh/h	1420			1737			696			1624		
Approach Delay, s/veh	59.7			69.0			54.8			84.3		
Approach LOS	E			E			D			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.5	61.4	15.1	66.0	16.9	67.0	17.5	63.6				
Change Period (Y+Rc), s	6.1	6.9	5.1	6.3	6.3	6.9	5.1	6.3				
Max Green Setting (Gmax), s	53.2	10.0	59.7	14.0	56.7	12.4	57.3					
Max Q Clear Time (g_c+I10), s	46.0	10.3	61.7	3.4	47.0	13.3	15.6					
Green Ext Time (p_c), s	0.1	7.0	0.0	0.0	0.0	9.4	0.0	23.9				
Intersection Summary												
HCM 2010 Ctrl Delay				69.3								
HCM 2010 LOS				E								

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		↔↔	↕↕	
Traffic Volume (veh/h)	320	918	120	220	1805	60	140	650	140	240	1020	570
Future Volume (veh/h)	320	918	120	220	1805	60	140	650	140	240	1020	570
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	1.00		0.92	1.00		0.90
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	348	998	130	239	1962	65	152	707	152	261	1109	620
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	1223	159	280	1379	45	124	743	160	278	759	387
Arrive On Green	0.08	0.39	0.39	0.08	0.39	0.39	0.07	0.26	0.26	0.16	0.35	0.35
Sat Flow, veh/h	3442	3144	409	3442	3496	115	1774	2851	612	1774	2182	1112
Grp Volume(v), veh/h	348	562	566	239	988	1039	152	439	420	261	879	850
Grp Sat Flow(s), veh/h/ln	1721	1770	1783	1721	1770	1841	1774	1770	1693	1774	1770	1525
Q Serve(g_s), s	12.5	46.9	46.9	11.3	65.1	65.1	11.5	40.2	40.3	24.0	57.4	57.4
Cycle Q Clear(g_c), s	12.5	46.9	46.9	11.3	65.1	65.1	11.5	40.2	40.3	24.0	57.4	57.4
Prop In Lane	1.00		0.23	1.00		0.06	1.00		0.36	1.00		0.73
Lane Grp Cap(c), veh/h	261	688	694	280	698	727	124	461	441	278	616	530
V/C Ratio(X)	1.33	0.82	0.82	0.85	1.41	1.43	1.23	0.95	0.95	0.94	1.43	1.60
Avail Cap(c_a), veh/h	261	688	694	311	698	727	124	461	441	278	616	530
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.46	0.46	0.46	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.3	45.1	45.2	74.8	49.9	50.0	76.7	60.0	60.0	68.7	53.8	53.8
Incr Delay (d2), s/veh	162.3	5.0	5.0	18.5	194.9	201.8	155.1	29.8	30.9	37.4	201.7	280.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	8	23.9	24.1	6.1	69.6	73.8	11.0	23.4	22.6	14.6	62.5	65.4
LnGrp Delay(d), s/veh	238.5	50.1	50.1	93.4	244.8	251.7	231.9	89.8	90.9	106.2	255.5	333.9
LnGrp LOS	F	D	D	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h	1476			2266			1011			1990		
Approach Delay, s/veh	94.5			232.0			111.6			269.4		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	69.1	16.0	62.0	17.0	70.0	30.4	47.6					
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6				
Max Green Setting (Gmax), s	62.7	11.5	57.4	12.5	65.1	25.9	43.0					
Max Q Clear Time (g_c+I), s	48.9	13.5	59.4	14.5	67.1	26.0	42.3					
Green Ext Time (p_c), s	0.1	12.8	0.0	0.0	0.0	0.0	0.7					

Intersection Summary	
HCM 2010 Ctrl Delay	194.9
HCM 2010 LOS	F

Intersection												
Int Delay, s/veh	79.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔			↔↔			↔↔			↔↔		
Traffic Vol, veh/h	250	5	10	4	0	5	10	680	0	0	350	120
Future Vol, veh/h	250	5	10	4	0	5	10	680	0	0	350	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	272	5	11	4	0	5	11	739	0	0	380	130

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1210	1207	446	1215	1272	739	511	0	0	739	0	0
Stage 1	446	446	-	761	761	-	-	-	-	-	-	-
Stage 2	764	761	-	454	511	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	-	159	183	612	158	168	417	1054	-	-	867	-
Stage 1	-	591	574	-	398	414	-	-	-	-	-	-
Stage 2	-	396	414	-	586	537	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	156	181	612	150	166	417	1054	-	-	867	-
Mov Cap-2 Maneuver	-	156	181	-	150	166	-	-	-	-	-	-
Stage 1	-	585	574	-	394	410	-	-	-	-	-	-
Stage 2	-	387	410	-	570	537	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 427.4	21.1	0.1	0
HCM LOS	F	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1054	-	-	161	233	867	-	-
HCM Lane V/C Ratio	0.01	-	-	1.789	0.042	-	-	-
HCM Control Delay (s)	8.5	-	-	\$ 427.4	21.1	0	-	-
HCM Lane LOS	A	-	-	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	21	0.1	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Year 2035 PM
2: Country Club Ln & Golden Circle Dr

Escondido Country Club
06/06/2017

Intersection												
Int Delay, s/veh	171.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔		↔	↔			↔			↔	↔
Traffic Vol, veh/h	0	15	90	378	20	7	150	28	520	0	9	0
Future Vol, veh/h	0	15	90	378	20	7	150	28	520	0	9	0
Conflicting Peds, #/hr	2	0	0	0	0	2	5	0	0	0	0	5
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	60	-	-	50	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	16	98	411	22	8	163	30	565	0	10	0

Major/Minor	Major1		Major2		Minor1			Minor2				
Conflicting Flow All	31	0	0	114	0	0	922	918	65	1212	963	33
Stage 1	-	-	-	-	-	-	65	65	-	849	849	-
Stage 2	-	-	-	-	-	-	857	853	-	363	114	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1582	-	-	1475	-	-	251	272	999	159	256	1041
Stage 1	-	-	-	-	-	-	946	841	-	356	377	-
Stage 2	-	-	-	-	-	-	352	376	-	656	801	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	1575	-	-	1475	-	-	189	196	999	48	184	1035
Mov Cap-2 Maneuver	-	-	-	-	-	-	189	196	-	48	184	-
Stage 1	-	-	-	-	-	-	946	841	-	356	377	-
Stage 2	-	-	-	-	-	-	244	271	-	275	801	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	7.8	294.3	25.7
HCM LOS			F	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	479	1575	-	-	1475	-	-	184
HCM Lane V/C Ratio	1.584	-	-	-	0.279	-	-	0.053
HCM Control Delay (s)	294.3	0	-	-	8.4	-	-	25.7
HCM Lane LOS	F	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	41.8	0	-	-	1.1	-	-	0.2

Year 2035 PM
3: Country Club Ln & Gary Ln

Escondido Country Club
06/06/2017

Intersection	
Intersection Delay, s/veh	18.6
Intersection LOS	C

Movement	EBU	EBL	EBT	WBU	WBT	WBR	SBU	SBL	SBR
Lane Configurations		↔	↔		↔	↔		↔	↔
Traffic Vol, veh/h	0	52	488	0	400	53	0	35	55
Future Vol, veh/h	0	52	488	0	400	53	0	35	55
Peak Hour Factor	0.92	0.93	0.93	0.92	0.93	0.93	0.92	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	56	525	0	430	57	0	38	59
Number of Lanes	0	1	1	0	1	1	0	1	0

Approach	EB	WB	SB
Opposing Approach	WB	EB	
Opposing Lanes	2	2	0
Conflicting Approach Left	SB		WB
Conflicting Lanes Left	1	0	2
Conflicting Approach Right		SB	EB
Conflicting Lanes Right	0	1	2
HCM Control Delay	21.9	16.2	10.3
HCM LOS	C	C	B

Lane	EBLn1	EBLn2	WBLn1	WBLn2	SBLn1
Vol Left, %	100%	0%	0%	0%	39%
Vol Thru, %	0%	100%	100%	0%	0%
Vol Right, %	0%	0%	0%	100%	61%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	52	488	400	53	90
LT Vol	52	0	0	0	35
Through Vol	0	488	400	0	0
RT Vol	0	0	0	53	55
Lane Flow Rate	56	525	430	57	97
Geometry Grp	7	7	7	7	2
Degree of Util (X)	0.089	0.766	0.639	0.074	0.164
Departure Headway (Hd)	5.757	5.253	5.351	4.645	6.096
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	617	682	667	761	592
Service Time	3.545	3.041	3.141	2.434	4.096
HCM Lane V/C Ratio	0.091	0.77	0.645	0.075	0.164
HCM Control Delay	9.1	23.3	17.3	7.8	10.3
HCM Lane LOS	A	C	C	A	B
HCM 95th-tile Q	0.3	7.2	4.6	0.2	0.6

Intersection						
Int Delay, s/veh	2.2					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕↕		↕↕		↕↕	
Traffic Vol, veh/h	542	26	73	418	29	90
Future Vol, veh/h	542	26	73	418	29	90
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	80	-	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	589	28	79	454	32	98
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	617	0	989	309
Stage 1	-	-	-	-	603	-
Stage 2	-	-	-	-	386	-
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	-	-	959	-	244	687
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	656	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	959	-	224	687
Mov Cap-2 Maneuver	-	-	-	-	224	-
Stage 1	-	-	-	-	509	-
Stage 2	-	-	-	-	602	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.4		16	
HCM LOS					C	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	457	-	-	959	-	
HCM Lane V/C Ratio	0.283	-	-	0.083	-	
HCM Control Delay (s)	16	-	-	9.1	-	
HCM Lane LOS	C	-	-	A	-	
HCM 95th %tile Q(veh)	1.2	-	-	0.3	-	

Intersection									
Intersection Delay, s/veh	12.3								
Intersection LOS	B								
Movement	EBU	EBT	EBR	WBU	WBL	WBT	NBU	NBL	NBR
Lane Configurations		↕↕			↕↕			↕↕	
Traffic Vol, veh/h	0	579	14	0	11	477	0	5	14
Future Vol, veh/h	0	579	14	0	11	477	0	5	14
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	629	15	0	12	518	0	5	15
Number of Lanes	0	2	0	0	1	2	0	1	0
Approach	EB			WB			NB		
Opposing Approach	WB			EB					
Opposing Lanes	3			2			0		
Conflicting Approach Left				NB			EB		
Conflicting Lanes Left	0			1			2		
Conflicting Approach Right	NB						WB		
Conflicting Lanes Right	1			0			3		
HCM Control Delay	15			9.2			9.5		
HCM LOS	B			A			A		
Lane	NBLn1	EBLn1	EBLn2	WBLn1	WBLn2	WBLn3			
Vol Left, %	26%	0%	0%	100%	0%	0%			
Vol Thru, %	0%	100%	93%	0%	100%	100%			
Vol Right, %	74%	0%	7%	0%	0%	0%			
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop			
Traffic Vol by Lane	19	386	207	11	239	239			
LT Vol	5	0	0	11	0	0			
Through Vol	0	386	193	0	239	239			
RT Vol	14	0	14	0	0	0			
Lane Flow Rate	21	420	225	12	259	259			
Geometry Grp	7	8	8	7	7	7			
Degree of Util (X)	0.037	0.634	0.337	0.019	0.377	0.251			
Departure Headway (Hd)	6.418	5.44	5.392	5.736	5.233	3.49			
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes			
Cap	553	659	664	623	687	1024			
Service Time	4.208	3.204	3.157	3.476	2.973	1.23			
HCM Lane V/C Ratio	0.038	0.637	0.339	0.019	0.377	0.253			
HCM Control Delay	9.5	17.2	10.9	8.6	11.1	7.4			
HCM Lane LOS	A	C	B	A	B	A			
HCM 95th-tile Q	0.1	4.5	1.5	0.1	1.8	1			

Intersection														
Intersection Delay, s/veh 199														
Intersection LOS F														

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations		↔	↕	↔		↔	↕	↔			↔	↕		↔	↕	↔
Traffic Vol, veh/h	0	89	492	54	0	200	392	97	0	93	225	440	0	49	128	59
Future Vol, veh/h	0	89	492	54	0	200	392	97	0	93	225	440	0	49	128	59
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	96	529	58	0	215	422	104	0	100	242	473	0	53	138	63
Number of Lanes	0	1	2	0	0	1	2	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	3	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	3	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	3
HCM Control Delay	45.6	33.4	527.9	39
HCM LOS	E	D	F	E

Lane	NBLn1	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBLn1
Vol Left, %	12%	100%	0%	0%	100%	0%	0%	21%
Vol Thru, %	30%	0%	100%	75%	0%	100%	57%	54%
Vol Right, %	58%	0%	0%	25%	0%	0%	43%	25%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	758	89	328	218	200	261	228	236
LT Vol	93	89	0	0	200	0	0	49
Through Vol	225	0	328	164	0	261	131	128
RT Vol	440	0	0	54	0	0	97	59
Lane Flow Rate	815	96	353	234	215	281	245	254
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	2.108	0.256	0.896	0.584	0.574	0.711	0.599	0.696
Departure Headway (Hd)	9.309	12.27	11.721	11.531	12.313	11.764	11.437	12.303
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	399	295	314	316	295	309	318	297
Service Time	7.06	9.97	9.421	9.231	10.013	9.464	9.137	10.003
HCM Lane V/C Ratio	2.043	0.325	1.124	0.741	0.729	0.909	0.77	0.855
HCM Control Delay	527.9	19.1	63.6	29.2	30.4	38.8	29.9	39
HCM Lane LOS	F	C	F	D	D	E	D	E
HCM 95th-ile Q	58.5	1	8.4	3.5	3.3	5.1	3.6	4.8



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	204	544	81	210	424	130	236	590	230	180	390	77
Future Volume (veh/h)	204	544	81	210	424	130	236	590	230	180	390	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00	0.99	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	222	591	88	228	461	141	257	641	250	196	424	84
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	780	343	271	792	350	302	914	403	238	787	352
Arrive On Green	0.15	0.22	0.22	0.15	0.22	0.22	0.17	0.26	0.26	0.13	0.22	0.22
Sat Flow, veh/h	1774	3539	1559	1774	3539	1563	1774	3539	1562	1774	3539	1583
Grp Volume(V), veh/h	222	591	88	228	461	141	257	641	250	196	424	84
Grp Sat Flow(s), veh/h/ln	1774	1770	1559	1774	1770	1563	1774	1770	1562	1774	1770	1583
Q Serve(g_s), s	9.3	12.0	3.6	9.6	8.9	5.9	10.8	12.6	10.9	8.3	8.1	3.3
Cycle Q Clear(g_c), s	9.3	12.0	3.6	9.6	8.9	5.9	10.8	12.6	10.9	8.3	8.1	3.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	265	780	343	271	792	350	302	914	403	238	787	352
V/C Ratio(X)	0.84	0.76	0.26	0.84	0.58	0.40	0.85	0.70	0.62	0.82	0.54	0.24
Avail Cap(c_a), veh/h	358	853	375	358	853	376	404	1083	478	335	945	423
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.8	28.0	24.7	31.6	26.6	25.4	30.9	25.8	25.1	32.4	26.4	24.5
Incr Delay (d2), s/veh	12.1	3.6	0.4	12.8	0.9	0.8	12.4	1.6	1.8	10.9	0.6	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	6.2	1.6	5.7	4.5	2.6	6.3	6.4	4.9	4.7	4.0	1.5
LnGrp Delay(d), s/veh	43.9	31.7	25.1	44.4	27.5	26.2	43.3	27.4	27.0	43.2	27.0	24.9
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h	901			830			1148			704		
Approach Delay, s/veh	34.0			31.9			30.9			31.2		
Approach LOS	C			C			C			C		

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	24.3	16.2	21.4	17.6	21.6	16.0	21.7	
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	
Max Green Setting (Gmax), s	23.5	15.5	18.5	17.5	20.5	15.5	18.5	
Max Q Clear Time (g_c+I10), s	14.6	11.6	14.0	12.8	10.1	11.3	10.9	
Green Ext Time (p_c), s	0.2	5.2	0.2	2.9	0.3	5.9	0.2	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	32.0
HCM 2010 LOS	C

Year 2035 PM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	49	1005	60	291	975	180	80	140	306	120	90	30	
Future Volume (veh/h)	49	1005	60	291	975	180	80	140	306	120	90	30	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00	0.97	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900	
Adj Flow Rate, veh/h	53	1092	65	316	1060	196	87	152	333	130	98	33	
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	68	1678	100	386	1058	874	242	279	237	142	125	42	
Arrive On Green	0.04	0.49	0.49	0.11	0.57	0.57	0.14	0.15	0.15	0.08	0.09	0.09	
Sat Flow, veh/h	1774	3395	202	3442	1863	1538	1774	1863	1580	1774	1334	449	
Grp Volume(v), veh/h	53	569	588	316	1060	196	87	152	333	130	0	131	
Grp Sat Flow(s), veh/h/ln	1774	1770	1827	1721	1863	1538	1774	1863	1580	1774	0	1783	
Q Serve(g_s), s	3.3	26.4	26.4	9.9	62.5	4.3	4.9	8.3	16.5	8.0	0.0	7.9	
Cycle Q Clear(g_c), s	3.3	26.4	26.4	9.9	62.5	4.3	4.9	8.3	16.5	8.0	0.0	7.9	
Prop In Lane	1.00	0.11	1.00		1.00	1.00		1.00	1.00		0.25		
Lane Grp Cap(c), veh/h	68	875	903	386	1058	874	242	279	237	142	0	167	
V/C Ratio(X)	0.78	0.65	0.65	0.82	1.00	0.22	0.36	0.54	1.40	0.92	0.00	0.78	
Avail Cap(c_a), veh/h	68	875	903	516	1058	874	242	279	237	142	0	272	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	52.4	20.7	20.7	47.7	23.8	4.6	43.1	43.3	46.7	50.2	0.0	48.8	
Incr Delay (d2), s/veh	43.6	1.7	1.7	7.6	28.0	0.1	0.9	2.2	205.6	51.1	0.0	7.8	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	12.4	13.2	13.6	5.1	40.0	1.9	2.5	4.4	20.7	5.9	0.0	4.3	
LnGrp Delay(d), s/veh	96.0	22.4	22.4	55.3	51.8	4.7	44.0	45.4	252.3	101.3	0.0	56.6	
LnGrp LOS	F	C	C	E	F	A	D	D	F	F		E	
Approach Vol, veh/h	1210			1572				572			261		
Approach Delay, s/veh	25.7			46.6				165.7			78.9		
Approach LOS	C			D				F			E		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	3.3	21.0	16.8	58.9	19.5	14.8	8.7	67.0					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	16.5	16.5	50.2	8.5	16.8	4.2	62.5						
Max Q Clear Time (g_c+I), s	18.5	11.9	28.4	6.9	9.9	5.3	64.5						
Green Ext Time (p_c), s	0.0	0.0	0.5	7.8	0.4	0.3	0.0	0.0					
Intersection Summary													
HCM 2010 Ctrl Delay				60.8									
HCM 2010 LOS				E									

Year 2035 PM
9: Country Club Ln & EI Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	573	880	15	50	1046	204	10	10	20	120	5	376	
Future Volume (veh/h)	573	880	15	50	1046	204	10	10	20	120	5	376	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00	1.00	1.00		0.99	1.00		0.99		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863	
Adj Flow Rate, veh/h	623	957	16	54	1137	222	11	11	22	130	5	409	
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	0	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	421	1917	32	71	1007	196	39	39	67	359	14	330	
Arrive On Green	0.24	0.54	0.54	0.04	0.34	0.34	0.04	0.04	0.04	0.21	0.21	0.21	
Sat Flow, veh/h	1774	3562	60	1774	2955	574	909	909	1563	1711	66	1570	
Grp Volume(v), veh/h	623	475	498	54	678	681	22	0	22	135	0	409	
Grp Sat Flow(s), veh/h/ln	1774	1770	1852	1774	1770	1759	1817	0	1563	1777	0	1570	
Q Serve(g_s), s	30.5	21.8	21.8	3.9	43.8	43.8	1.5	0.0	1.8	8.3	0.0	27.0	
Cycle Q Clear(g_c), s	30.5	21.8	21.8	3.9	43.8	43.8	1.5	0.0	1.8	8.3	0.0	27.0	
Prop In Lane	1.00	0.03	1.00		1.00	0.33	0.50		1.00	0.96		1.00	
Lane Grp Cap(c), veh/h	421	952	996	71	603	599	78	0	67	373	0	330	
V/C Ratio(X)	1.48	0.50	0.50	0.76	1.13	1.14	0.28	0.00	0.33	0.36	0.00	1.24	
Avail Cap(c_a), veh/h	421	952	996	141	603	599	382	0	328	373	0	330	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	49.0	18.8	18.8	61.1	42.4	42.4	59.6	0.0	59.7	43.4	0.0	50.8	
Incr Delay (d2), s/veh	228.5	0.5	0.5	6.2	76.2	80.0	2.3	0.0	3.3	0.7	0.0	131.4	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	11.6	10.7	11.2	2.0	34.0	34.5	0.8	0.0	0.8	4.2	0.0	23.7	
LnGrp Delay(d), s/veh	277.5	19.2	19.2	67.3	118.6	122.4	61.9	0.0	63.0	44.1	0.0	182.2	
LnGrp LOS	F	B	B	E	F	F	E		E	D		F	
Approach Vol, veh/h	1596			1413				44			544		
Approach Delay, s/veh	120.1			118.4				62.4			147.9		
Approach LOS	F			F				E			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	6.6	75.4		32.5	35.0	50.0		11.0					
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5					
Max Green Setting (Gmax), s	16.1	64.1		27.0	30.5	43.8		27.0					
Max Q Clear Time (g_c+I), s	23.8	29.0		32.5	45.8	3.8							
Green Ext Time (p_c), s	0.0	26.6		0.0	0.0	0.0		0.1					
Intersection Summary													
HCM 2010 Ctrl Delay				122.9									
HCM 2010 LOS				F									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖	↖↗	↖	↖	↖
Traffic Volume (veh/h)	21	1010	114	230	1105	30	158	93	270	20	30	8
Future Volume (veh/h)	21	1010	114	230	1105	30	158	93	270	20	30	8
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	23	1098	124	250	1201	33	172	101	293	22	33	9
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	41	1365	154	281	1978	54	201	398	337	40	172	47
Arrive On Green	0.02	0.43	0.43	0.16	0.56	0.56	0.11	0.21	0.21	0.02	0.12	0.12
Sat Flow, veh/h	1774	3197	361	1774	3516	97	1774	1863	1577	1774	1405	383
Grp Volume(v), veh/h	23	607	615	250	604	630	172	101	293	22	0	42
Grp Sat Flow(s), veh/h/ln	1774	1770	1788	1774	1770	1843	1774	1863	1577	1774	0	1788
Q Serve(g_s), s	1.4	32.7	32.8	15.1	24.8	24.8	10.4	4.9	19.6	1.3	0.0	2.3
Cycle Q Clear(g_c), s	1.4	32.7	32.8	15.1	24.8	24.8	10.4	4.9	19.6	1.3	0.0	2.3
Prop In Lane	1.00	0.20	1.00	1.00	0.05	1.00	1.00	1.00	1.00	1.00	0.21	0.21
Lane Grp Cap(c), veh/h	41	755	763	281	995	1037	201	398	337	40	0	219
V/C Ratio(X)	0.56	0.80	0.81	0.89	0.61	0.61	0.85	0.25	0.87	0.56	0.00	0.19
Avail Cap(c_a), veh/h	86	796	804	340	1048	1092	227	588	498	97	0	442
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.8	27.3	27.3	45.0	15.9	15.9	47.5	35.7	41.5	52.9	0.0	43.1
Incr Delay (d2), s/veh	11.6	5.7	5.8	21.1	1.0	1.0	23.7	0.2	9.5	11.6	0.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	17.1	17.3	9.0	12.4	12.9	6.4	2.6	9.4	0.8	0.0	1.2	0.0
LnGrp Delay(d), s/veh	64.4	33.0	33.1	66.1	16.9	16.9	71.3	35.9	50.9	64.5	0.0	43.4
LnGrp LOS	E	C	C	E	B	B	E	D	D	E	D	D
Approach Vol, veh/h	1245			1484			566			64		
Approach Delay, s/veh	33.7			25.2			54.4			50.6		
Approach LOS	C			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	52.6	16.4	18.4	7.0	67.4	6.4	28.3					
Change Period (Y+Rc), s	4.5	6.0	4.0	5.5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	49.1	14.0	27	5.3	64.7	6.0	34.5					
Max Q Clear Time (g_c+I), s	34.8	12.4	4.3	3.4	26.8	3.3	21.6					
Green Ext Time (p_c), s	0.2	11.8	0.1	1.4	0.0	25.1	0.0	1.2				
Intersection Summary												
HCM 2010 Ctrl Delay	33.7											
HCM 2010 LOS	C											
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗		↖	↖↗		↖	↖	↖↗	↖	↖	↖
Traffic Volume (veh/h)	19	1016	120	230	1107	5	170	140	270	9	50	8
Future Volume (veh/h)	19	1016	120	230	1107	5	170	140	270	9	50	8
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	21	1104	130	250	1203	5	185	152	293	10	54	9
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	34	1258	148	293	1953	8	392	138	266	106	377	63
Arrive On Green	0.02	0.39	0.39	0.17	0.54	0.54	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3191	375	1774	3615	15	1334	570	1099	941	1557	260
Grp Volume(v), veh/h	21	612	622	250	589	619	185	0	445	10	0	63
Grp Sat Flow(s), veh/h/ln	1774	1770	1797	1774	1770	1860	1334	0	1669	941	0	1817
Q Serve(g_s), s	0.8	21.8	21.9	9.3	15.6	15.6	8.6	0.0	16.5	0.0	0.0	1.9
Cycle Q Clear(g_c), s	0.8	21.8	21.9	9.3	15.6	15.6	10.5	0.0	16.5	16.5	0.0	1.9
Prop In Lane	1.00	0.21	1.00	1.00	0.01	1.00	1.00	0.66	1.00	0.14	0.14	0.14
Lane Grp Cap(c), veh/h	34	698	708	293	956	1005	392	0	404	106	0	440
V/C Ratio(X)	0.61	0.88	0.88	0.85	0.62	0.62	0.47	0.00	1.10	0.09	0.00	0.14
Avail Cap(c_a), veh/h	104	730	741	310	956	1005	392	0	404	106	0	440
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.2	19.1	19.1	27.6	10.8	10.8	24.4	0.0	25.8	34.1	0.0	20.3
Incr Delay (d2), s/veh	16.6	11.4	11.4	19.1	1.2	1.1	0.9	0.0	74.9	0.4	0.0	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	12.7	13.0	6.1	7.8	8.2	3.2	0.0	15.9	0.2	0.0	0.9	0.0
LnGrp Delay(d), s/veh	49.7	30.5	30.6	46.7	12.0	11.9	25.3	0.0	100.7	34.4	0.0	20.4
LnGrp LOS	D	C	C	D	B	B	C		F	C		C
Approach Vol, veh/h	1255			1458			630			73		
Approach Delay, s/veh	30.8			17.9			78.6			22.3		
Approach LOS	C			B			E			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	52.8	31.4		21.0	5.8	41.3		21.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.1	16.5		16.5	4.0	36.0		16.5				
Max Q Clear Time (g_c+I), s	23.9	18.5		2.8	17.6			18.5				
Green Ext Time (p_c), s	0.0	3.0		0.0	13.8			0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	33.9											
HCM 2010 LOS	C											
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	120	1092	52	200	1148	296	61	321	300	315	156	70
Future Volume (veh/h)	120	1092	52	200	1148	296	61	321	300	315	156	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	122	1114	0	204	1171	302	62	328	306	321	159	71
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	132	1191	533	270	1175	300	79	359	305	337	630	536
Arrive On Green	0.07	0.34	0.00	0.15	0.42	0.42	0.04	0.19	0.19	0.19	0.34	0.34
Sat Flow, veh/h	1774	3539	1583	1774	2793	712	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	122	1114	0	204	737	736	62	328	306	321	159	71
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1736	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	10.1	44.9	0.0	16.2	61.0	62.0	5.1	25.4	20.7	26.4	9.1	4.6
Cycle Q Clear(g_c), s	10.1	44.9	0.0	16.2	61.0	62.0	5.1	25.4	20.7	26.4	9.1	4.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	132	1191	533	270	744	730	79	359	305	337	630	536
V/C Ratio(X)	0.92	0.94	0.00	0.76	0.99	1.01	0.79	0.91	1.00	0.95	0.25	0.13
Avail Cap(c_a), veh/h	132	1248	558	270	744	730	120	392	333	337	630	536
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	67.8	47.4	0.0	59.9	42.4	42.7	69.7	58.3	31.5	59.1	35.3	33.8
Incr Delay (d2), s/veh	54.6	12.6	0.0	11.2	30.4	35.4	13.6	23.8	48.4	36.5	0.2	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0	24.0	0.0	8.8	36.0	36.8	2.8	15.5	14.0	16.3	4.7	2.0
LnGrp Delay(d), s/veh	122.4	59.9	0.0	71.1	72.8	78.1	83.4	82.1	79.9	95.6	35.4	33.9
LnGrp LOS	F	E		E	E	F	F	F	F	F	D	C
Approach Vol, veh/h	1236			1677			696			551		
Approach Delay, s/veh	66.1			74.9			81.2			70.3		
Approach LOS	E			E			F			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	54.6	10.6	54.9	15.0	67.0	32.0	33.4					
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	* 52	10.0	49.0	11.0	62.0	28.0	31.0					
Max Q Clear Time (g_c+I1), s	46.9	7.1	11.1	12.1	64.0	28.4	27.4					
Green Ext Time (p_c), s	2.0	2.7	0.0	3.6	0.0	0.0	1.0					
Intersection Summary												
HCM 2010 Ctrl Delay	72.7											
HCM 2010 LOS	E											
Notes												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	0	1469	511	330	2106	0	0	0	0	140	5	200
Future Volume (veh/h)	0	1469	511	330	2106	0	0	0	0	140	5	200
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00					1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	1546	538	347	2217	0				100	0	265
Adj No. of Lanes	0	3	1	2	3	0				1	0	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	3199	995	417	4032	0				192	0	342
Arrive On Green	0.00	0.63	0.63	0.24	1.00	0.00				0.11	0.00	0.11
Sat Flow, veh/h	0	5253	1582	3442	5253	0				1774	0	3167
Grp Volume(v), veh/h	0	1546	538	347	2217	0				100	0	265
Grp Sat Flow(s), veh/h/ln	0	1695	1582	1721	1695	0				1774	0	1583
Q Serve(g_s), s	0.0	17.8	21.0	10.5	0.0	0.0				5.9	0.0	9.0
Cycle Q Clear(g_c), s	0.0	17.8	21.0	10.5	0.0	0.0				5.9	0.0	9.0
Prop In Lane	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00
Lane Grp Cap(c), veh/h	0	3199	995	417	4032	0				192	0	342
V/C Ratio(X)	0.00	0.48	0.54	0.83	0.55	0.00				0.52	0.00	0.78
Avail Cap(c_a), veh/h	0	3199	995	666	4032	0				321	0	573
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.31	0.31	0.09	0.09	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	10.9	11.5	40.6	0.0	0.0				46.4	0.0	47.8
Incr Delay (d2), s/veh	0.0	0.2	0.7	0.5	0.0	0.0				2.2	0.0	3.8
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	0.0	8.4	9.3	4.9	0.0	0.0				3.0	0.0	4.1
LnGrp Delay(d), s/veh	0.0	11.0	12.1	41.1	0.0	0.0				48.6	0.0	51.5
LnGrp LOS		B	B	D	A					D		D
Approach Vol, veh/h	2084			2564			365			50.7		
Approach Delay, s/veh	11.3			5.6			50.7			D		
Approach LOS	B			A			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	75.0			17.0		93.0						
Change Period (Y+Rc), s	5.8			5.1		5.8						
Max Green Setting (Gmax), s	53.2			19.9		79.2						
Max Q Clear Time (g_c+I1), s	23.0			11.0		2.0						
Green Ext Time (p_c), s	0.8	28.8		0.9		69.2						
Intersection Summary												
HCM 2010 Ctrl Delay	11.3											
HCM 2010 LOS	B											
Notes												

Year 2035 PM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘		
Traffic Volume (veh/h)	365	1244	0	0	1254	300	1180	5	620	0	0	0
Future Volume (veh/h)	365	1244	0	0	1254	300	1180	5	620	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	388	1323	0	0	1334	319	1462	0	442			
Adj No. of Lanes	1	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	521	3112	0	0	1350	420	1351	0	603			
Arrive On Green	0.59	1.00	0.00	0.00	0.27	0.27	0.38	0.00	0.38			
Sat Flow, veh/h	1774	5253	0	0	5253	1583	3548	0	1583			
Grp Volume(v), veh/h	388	1323	0	0	1334	319	1462	0	442			
Grp Sat Flow(s),veh/h/ln	1774	1695	0	0	1695	1583	1774	0	1583			
Q Serve(g_s), s	17.6	0.0	0.0	0.0	28.7	20.4	41.9	0.0	26.4			
Cycle Q Clear(g_c), s	17.6	0.0	0.0	0.0	28.7	20.4	41.9	0.0	26.4			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	521	3112	0	0	1350	420	1351	0	603			
V/C Ratio(X)	0.74	0.43	0.00	0.00	0.99	0.76	1.08	0.00	0.73			
Avail Cap(c_a), veh/h	521	3112	0	0	1350	420	1351	0	603			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.43	0.43	1.00	0.00	1.00			
Uniform Delay (d), s/veh	19.7	0.0	0.0	0.0	40.2	37.2	34.0	0.0	29.2			
Incr Delay (d2), s/veh	4.8	0.4	0.0	0.0	13.6	5.6	49.8	0.0	4.6			
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	19.1	0.1	0.0	0.0	15.2	9.5	29.8	0.0	12.3			
LnGrp Delay(d),s/veh	24.5	0.4	0.0	0.0	53.8	42.7	83.9	0.0	33.8			
LnGrp LOS	C	A			D	D	F		C			
Approach Vol, veh/h	1711			1653			1904					
Approach Delay, s/veh	5.8			51.7			72.2					
Approach LOS	A			D			E					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		5		6		8					
Phs Duration (G+Y+Rc), s	73.2		38.2		35.0		47.0					
Change Period (Y+Rc), s	5.8		5.8		5.8		5.1					
Max Green Setting (Gmax), s	57.2		23.3		29		41.9					
Max Q Clear Time (g_c+I1), s	2.0		19.6		30.7		43.9					
Green Ext Time (p_c), s	14.5		2.6		0.0		0.0					
Intersection Summary												
HCM 2010 Ctrl Delay				44.2								
HCM 2010 LOS				D								
Notes												

Year 2035 PM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘		
Traffic Volume (veh/h)	150	1544	140	110	1194	40	250	30	230	30	10	180
Future Volume (veh/h)	150	1544	140	110	1194	40	250	30	230	30	10	180
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	163	1678	152	120	1298	43	272	33	250	33	11	196
Adj No. of Lanes	1	2	0	1	2	0	1	0	1	0	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1699	152	140	1704	56	268	52	395	202	24	424
Arrive On Green	0.11	0.52	0.52	0.08	0.49	0.49	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	3285	294	1774	3493	116	1169	185	1405	1092	85	1508
Grp Volume(v), veh/h	163	895	935	120	657	684	272	0	283	33	0	207
Grp Sat Flow(s),veh/h/ln	1774	1770	1810	1774	1770	1839	1169	0	1590	1092	0	1593
Q Serve(g_s), s	9.9	54.3	56.8	7.3	33.3	33.4	19.1	0.0	17.1	3.0	0.0	11.8
Cycle Q Clear(g_c), s	9.9	54.3	56.8	7.3	33.3	33.4	30.9	0.0	17.1	20.1	0.0	11.8
Prop In Lane	1.00		0.16	1.00		0.06	1.00		0.88	1.00		0.95
Lane Grp Cap(c), veh/h	192	915	936	140	863	897	268	0	447	202	0	447
V/C Ratio(X)	0.85	0.98	1.00	0.86	0.76	0.76	1.01	0.00	0.63	0.16	0.00	0.46
Avail Cap(c_a), veh/h	231	915	936	140	863	897	268	0	447	202	0	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.1	25.9	26.5	50.0	22.9	23.0	47.8	0.0	34.6	43.4	0.0	32.7
Incr Delay (d2), s/veh	21.4	24.7	29.3	37.3	6.3	6.1	58.5	0.0	2.9	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	32.6	35.9	5.1	17.7	18.4	12.5	0.0	7.9	0.9	0.0	5.3
LnGrp Delay(d),s/veh	69.5	50.6	55.8	87.3	29.2	29.0	106.3	0.0	37.5	43.8	0.0	33.4
LnGrp LOS	E	D	E	F	C	C	F		D	D		C
Approach Vol, veh/h	1993			1461			555			240		
Approach Delay, s/veh	54.6			33.9			71.2			34.9		
Approach LOS	D			C			E			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		2		4		5		6		8	
Phs Duration (G+Y+Rc), s	63.2		61.4		35.4		16.4		58.2		35.4	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	56.9		30.9		14.3		51.3		30.9			
Max Q Clear Time (g_c+I1), s	58.8		22.1		11.9		35.4		32.9			
Green Ext Time (p_c), s	0.0		0.0		3.0		0.1		14.5		0.0	
Intersection Summary												
HCM 2010 Ctrl Delay				48.5								
HCM 2010 LOS				D								
Notes												

Year 2035 PM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	40	1284	230	230	944	150	390	746	510	220	261	30
Future Volume (veh/h)	40	1284	230	230	944	150	390	746	510	220	261	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	41	1324	237	237	973	155	402	769	526	227	269	31
Adj No. of Lanes	2	2	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	544	1262	564	271	1206	192	1063	1219	545	248	356	159
Arrive On Green	0.16	0.36	0.36	0.16	0.55	0.55	0.31	0.34	0.34	0.07	0.10	0.10
Sat Flow, veh/h	3442	3539	1582	3442	4423	703	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	41	1324	237	237	745	383	402	769	526	227	269	31
Grp Sat Flow(s),veh/h/ln	1721	1770	1582	1721	1695	1736	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.7	58.9	7.4	11.1	29.4	29.6	15.1	30.0	53.8	10.8	12.2	3.0
Cycle Q Clear(g_c), s	1.7	58.9	7.4	11.1	29.4	29.6	15.1	30.0	53.8	10.8	12.2	3.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.40	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	544	1262	564	271	924	473	1063	1219	545	248	356	159
V/C Ratio(X)	0.08	1.05	0.42	0.87	0.81	0.81	0.38	0.63	0.96	0.91	0.76	0.19
Avail Cap(c_a), veh/h	544	1262	564	271	1171	600	1063	1233	552	248	1094	489
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.2	53.1	6.3	68.7	34.0	34.0	44.6	45.3	53.1	76.0	72.2	68.1
Incr Delay (d2), s/veh	0.0	39.1	2.3	3.0	0.7	1.4	0.1	1.1	29.4	34.5	3.9	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8	35.6	3.6	5.3	13.6	14.1	7.2	14.8	28.0	6.3	6.2	1.3
LnGrp Delay(d),s/veh	59.2	92.2	8.6	71.7	34.7	35.5	44.7	46.4	82.4	110.5	76.2	68.8
LnGrp LOS	E	F	A	E	C	D	D	D	F	F	E	E
Approach Vol, veh/h	1602			1365			1697			527		
Approach Delay, s/veh	79.0			41.4			57.2			90.5		
Approach LOS	E			D			E			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	65.8	57.3	22.9	33.0	51.9	17.0	63.1					
Change Period (Y+Rc), s	6.9	6.3	* 6.3	6.9	* 6.9	5.1	6.3					
Max Green Setting (Gmax), s	58.2	18.4	* 51	14.0	* 57	11.9	57.5					
Max Q Clear Time (g_c+I+I2), s	60.9	17.1	14.2	3.7	31.6	12.8	55.8					
Green Ext Time (p_c), s	0.0	0.0	1.1	2.4	8.3	12.3	0.0	1.0				
Intersection Summary												
HCM 2010 Ctrl Delay	63.1											
HCM 2010 LOS	E											
Notes												

Year 2035 PM
17: Broadway & El Norte Pkwy

Escondido Country Club
06/06/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	455	1614	165	230	1304	60	190	600	340	140	670	210
Future Volume (veh/h)	455	1614	165	230	1304	60	190	600	340	140	670	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.99	1.00	0.99	1.00	1.00	0.92	1.00	0.92	1.00	0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	495	1754	179	250	1417	65	207	652	370	152	728	228
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	473	1536	154	240	1397	64	177	568	322	134	624	195
Arrive On Green	0.14	0.47	0.47	0.07	0.41	0.41	0.10	0.27	0.27	0.08	0.24	0.24
Sat Flow, veh/h	3442	3245	325	3442	3445	158	1774	2109	1197	1774	2548	798
Grp Volume(v), veh/h	495	942	991	250	726	756	207	547	475	152	506	450
Grp Sat Flow(s),veh/h/ln	1721	1770	1801	1721	1770	1834	1774	1770	1536	1774	1770	1577
Q Serve(g_s), s	22.7	78.1	78.1	11.5	66.9	66.9	16.5	44.4	44.4	12.5	40.4	40.4
Cycle Q Clear(g_c), s	22.7	78.1	78.1	11.5	66.9	66.9	16.5	44.4	44.4	12.5	40.4	40.4
Prop In Lane	1.00	1.00	1.00	1.00	0.18	1.00	0.09	1.00	0.78	1.00	0.51	1.00
Lane Grp Cap(c), veh/h	473	838	852	240	717	743	177	476	413	134	433	386
V/C Ratio(X)	1.05	1.12	1.16	1.04	1.01	1.02	1.17	1.15	1.15	1.13	1.17	1.17
Avail Cap(c_a), veh/h	473	838	852	240	717	743	177	476	413	134	433	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.1	43.5	43.5	76.7	49.0	49.1	74.3	60.3	60.3	76.3	62.3	62.3
Incr Delay (d2), s/veh	33.6	60.6	76.7	69.6	36.7	37.2	119.6	88.9	91.7	117.1	97.4	99.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.0	52.3	57.0	7.8	40.0	41.6	14.0	33.4	29.4	10.5	31.5	28.3
LnGrp Delay(d),s/veh	104.8	104.1	120.1	146.3	85.7	86.3	193.9	149.2	152.0	193.4	159.7	161.9
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h	2428			1732			1229			1108		
Approach Delay, s/veh	110.8			94.7			157.8			165.3		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	83.0	21.0	45.0	27.2	71.8	17.0	49.0					
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6				
Max Green Setting (Gmax), s	78.1	16.5	40.4	22.7	66.9	12.5	44.4					
Max Q Clear Time (g_c+I+I2), s	80.1	18.5	42.4	24.7	68.9	14.5	46.4					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	124.7											
HCM 2010 LOS	F											
Notes												

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APPENDIX I

INTERSECTION ANALYSIS WORKSHEETS – YEAR 2035 WITH PROJECT

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Intersection												
Int Delay, s/veh	66.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↕		↕	↕		
Traffic Vol, veh/h	145	5	10	3	5	5	10	290	5	5	940	520
Future Vol, veh/h	145	5	10	3	5	5	10	290	5	5	940	520
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	158	5	11	3	5	5	11	315	5	5	1022	565

Major/Minor	Minor2		Minor1			Major1		Major2				
Conflicting Flow All	1660	1657	1304	1663	1938	318	1587	0	0	321	0	0
Stage 1	1315	1315	-	340	340	-	-	-	-	-	-	-
Stage 2	345	342	-	1323	1598	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	-78	98	196	77	65	723	414	-	-	1239	-	-
Stage 1	194	228	-	675	639	-	-	-	-	-	-	-
Stage 2	671	638	-	192	166	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-67	88	196	64	59	723	414	-	-	1239	-	-
Mov Cap-2 Maneuver	-67	88	-	64	59	-	-	-	-	-	-	-
Stage 1	189	211	-	657	622	-	-	-	-	-	-	-
Stage 2	643	621	-	164	154	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	\$ 801.6	50	0.5	0
HCM LOS	F	F		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	414	-	-	70	94	1239	-	-
HCM Lane V/C Ratio	0.026	-	-	2.484	0.15	0.004	-	-
HCM Control Delay (s)	13.9	-	-	\$ 801.6	50	7.9	0	-
HCM Lane LOS	B	-	-	F	F	A	A	-
HCM 95th %tile Q(veh)	0.1	-	-	16.9	0.5	0	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

MOVEMENT SUMMARY

Site: 101 [2. LT+P AM]

2. Country Club / Golden Circle / Drwy A Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Country Club Ln											
3	L2	43	2.0	0.243	4.9	LOS A	1.3	32.7	0.18	0.07	34.9
8	T1	38	2.0	0.243	4.9	LOS A	1.3	32.7	0.18	0.07	34.8
18	R2	233	2.0	0.243	4.9	LOS A	1.3	32.7	0.18	0.07	33.8
Approach		314	2.0	0.243	4.9	LOS A	1.3	32.7	0.18	0.07	34.1
East: Country Club Ln											
1	L2	918	2.0	0.757	15.1	LOS C	9.7	245.3	0.62	0.34	28.6
6	T1	11	2.0	0.757	15.1	LOS C	9.7	245.3	0.62	0.34	28.5
16	R2	11	2.0	0.757	15.1	LOS C	9.7	245.3	0.62	0.34	27.9
Approach		940	2.0	0.757	15.1	LOS C	9.7	245.3	0.62	0.34	28.6
North: Proj Drwy A											
7	L2	22	2.0	0.201	10.2	LOS B	0.8	19.4	0.69	0.69	32.2
4	T1	76	2.0	0.201	10.2	LOS B	0.8	19.4	0.69	0.69	32.1
14	R2	1	2.0	0.201	10.2	LOS B	0.8	19.4	0.69	0.69	31.2
Approach		99	2.0	0.201	10.2	LOS B	0.8	19.4	0.69	0.69	32.1
West: Golden Circle Dr											
5	L2	1	2.0	0.465	16.5	LOS C	2.2	56.5	0.78	0.85	29.8
2	T1	22	2.0	0.465	16.5	LOS C	2.2	56.5	0.78	0.85	29.8
12	R2	196	2.0	0.465	16.5	LOS C	2.2	56.5	0.78	0.85	29.0
Approach		218	2.0	0.465	16.5	LOS C	2.2	56.5	0.78	0.85	29.1
All Vehicles		1572	2.0	0.757	12.9	LOS B	9.7	245.3	0.56	0.38	29.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Year 2035 + Proj AM
3: Country Club Ln & Gary Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↕	↕	↕	↕	↕		
Traffic Volume (veh/h)	34	240	775	26	81	95		
Future Volume (veh/h)	34	240	775	26	81	95		
Number	5	2	6	16	7	14		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	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	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	37	258	833	28	87	102		
Adj No. of Lanes	1	1	1	1	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	380	1142	1142	946	115	135		
Arrive On Green	0.61	0.61	0.61	0.61	0.15	0.15		
Sat Flow, veh/h	639	1863	1863	1543	762	893		
Grp Volume(v), veh/h	37	258	833	28	190	0		
Grp Sat Flow(s), veh/h/ln	639	1863	1863	1543	1664	0		
Q Serve(g_s), s	1.6	2.4	12.0	0.3	4.2	0.0		
Cycle Q Clear(g_c), s	13.6	2.4	12.0	0.3	4.2	0.0		
Prop In Lane	1.00			1.00	0.46	0.54		
Lane Grp Cap(c), veh/h	380	1142	1142	946	252	0		
V/C Ratio(X)	0.10	0.23	0.73	0.03	0.75	0.00		
Avail Cap(c_a), veh/h	540	1607	1607	1331	783	0		
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	0.00		
Uniform Delay (d), s/veh	9.9	3.3	5.2	2.9	15.5	0.0		
Incr Delay (d2), s/veh	0.1	0.1	1.0	0.0	4.5	0.0		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	0.3	1.2	6.1	0.1	2.2	0.0		
LnGrp Delay(d),s/veh	10.0	3.4	6.2	2.9	20.1	0.0		
LnGrp LOS	B	A	A	A	C			
Approach Vol, veh/h	295	861		190				
Approach Delay, s/veh	4.3	6.1		20.1				
Approach LOS	A	A		C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		28.0		10.3		28.0		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		33.0		18.0		33.0		
Max Q Clear Time (g_c+I1), s		15.6		6.2		14.0		
Green Ext Time (p_c), s		7.8		0.4		8.2		
Intersection Summary								
HCM 2010 Ctrl Delay				7.7				
HCM 2010 LOS				A				
Notes								

Year 2035 + Proj AM
4: Firestone Dr & Country Club Ln

Escondido Country Club
06/19/2017

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕			↕		↕
Traffic Vol, veh/h	300	31	0	869	0	90
Future Vol, veh/h	300	31	0	869	0	90
Conflicting Peds, #/hr	0	9	0	0	9	9
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	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	326	34	0	945	0	98
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	361
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	684
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	674
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	11.2			
HCM LOS			B			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	674	-	-	-		
HCM Lane V/C Ratio	0.145	-	-	-		
HCM Control Delay (s)	11.2	-	-	-		
HCM Lane LOS	B	-	-	-		
HCM 95th %tile Q(veh)	0.5	-	-	-		

MOVEMENT SUMMARY

Site: 101 [5. LT+P AM]

5. Country Club / La Brea / Drwy D Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: La Brea St											
3	L2	22	2.0	0.066	4.9	LOS A	0.3	6.7	0.51	0.40	34.1
8	T1	1	2.0	0.066	4.9	LOS A	0.3	6.7	0.51	0.40	34.1
18	R2	33	2.0	0.066	4.9	LOS A	0.3	6.7	0.51	0.40	33.1
Approach		55	2.0	0.066	4.9	LOS A	0.3	6.7	0.51	0.40	33.5
East: Country Club Ln											
1	L2	11	2.0	0.671	11.5	LOS B	7.6	193.4	0.30	0.10	32.1
6	T1	864	2.0	0.671	11.5	LOS B	7.6	193.4	0.30	0.10	32.0
16	R2	7	2.0	0.671	11.5	LOS B	7.6	193.4	0.30	0.10	31.2
Approach		882	2.0	0.671	11.5	LOS B	7.6	193.4	0.30	0.10	32.0
North: Proj Drwy D											
7	L2	16	2.0	0.061	7.5	LOS A	0.2	5.7	0.64	0.63	32.6
4	T1	10	2.0	0.061	7.5	LOS A	0.2	5.7	0.64	0.63	32.6
14	R2	7	2.0	0.061	7.5	LOS A	0.2	5.7	0.64	0.63	31.7
Approach		33	2.0	0.061	7.5	LOS A	0.2	5.7	0.64	0.63	32.4
West: Country Club Ln											
5	L2	5	2.0	0.355	6.1	LOS A	2.2	55.4	0.19	0.07	34.7
2	T1	435	2.0	0.355	6.1	LOS A	2.2	55.4	0.19	0.07	34.7
12	R2	22	2.0	0.355	6.1	LOS A	2.2	55.4	0.19	0.07	33.7
Approach		462	2.0	0.355	6.1	LOS A	2.2	55.4	0.19	0.07	34.6
All Vehicles		1432	2.0	0.671	9.4	LOS A	7.6	193.4	0.28	0.12	32.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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 Project: N:\2614\Analysis\Intersection\SAP\Alt 1\2035+P AM.sip7

Year 2035 + Proj AM
 6: Nutmeg St & Country Club Ln

Escondido Country Club
 06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗	↖	↖↗	↗
Traffic Volume (veh/h)	40	340	90	419	651	60	30	80	190	130	355	154
Future Volume (veh/h)	40	340	90	419	651	60	30	80	190	130	355	154
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.97	1.00	0.98	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	43	366	97	451	700	65	32	86	204	140	382	166
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	54	444	116	417	1194	111	84	219	453	178	422	176
Arrive On Green	0.03	0.16	0.16	0.24	0.37	0.37	0.46	0.46	0.46	0.46	0.46	0.46
Sat Flow, veh/h	1774	2760	721	1774	3267	303	92	474	979	287	912	381
Grp Volume(v), veh/h	43	233	230	451	379	386	322	0	0	688	0	0
Grp Sat Flow(s), veh/h/ln	1774	1770	1711	1774	1770	1801	1545	0	0	1580	0	0
Q Serve(g_s), s	2.3	12.2	12.5	22.5	16.5	16.6	0.0	0.0	0.0	27.3	0.0	0.0
Cycle Q Clear(g_c), s	2.3	12.2	12.5	22.5	16.5	16.6	12.2	0.0	0.0	39.6	0.0	0.0
Prop In Lane	1.00	0.42	1.00	0.17	0.10				0.63	0.20	0.24	
Lane Grp Cap(c), veh/h	54	285	275	417	647	658	756	0	0	776	0	0
V/C Ratio(X)	0.79	0.82	0.84	1.08	0.59	0.59	0.43	0.00	0.00	0.89	0.00	0.00
Avail Cap(c_a), veh/h	122	333	322	417	647	658	784	0	0	805	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	46.0	38.8	38.9	36.6	24.5	24.5	17.1	0.0	0.0	24.3	0.0	0.0
Incr Delay (d2), s/veh	21.7	12.9	15.3	67.3	1.4	1.4	0.4	0.0	0.0	11.4	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	5	7.0	7.1	18.7	8.2	8.4	5.7	0.0	0.0	19.7	0.0	0.0
LnGrp Delay(d), s/veh	67.8	51.7	54.2	103.9	25.9	25.9	17.5	0.0	0.0	35.7	0.0	0.0
LnGrp LOS	E	D	D	F	C	C	B			D		
Approach Vol, veh/h	506			1216			322			688		
Approach Delay, s/veh	54.2			54.8			17.5			35.7		
Approach LOS	D			D			B			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		3	4	6		7	8				
Phs Duration (G+Y+Rc), s	48.7		27.0	19.9	48.7		7.4	39.5				
Change Period (Y+Rc), s	4.5		4.5	4.5	4.5		4.5	4.5				
Max Green Setting (Gmax), s	46.0		22.5	18.0	46.0		6.6	33.9				
Max Q Clear Time (g_c+I1), s	14.2		24.5	14.5	41.6		4.3	18.6				
Green Ext Time (p_c), s	9.1		0.0	0.8	2.7		0.0	6.9				
Intersection Summary												
HCM 2010 Ctrl Delay	45.5											
HCM 2010 LOS	D											

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Year 2035 + Proj AM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	100	530	150	350	690	130	90	400	100	250	1100	250	
Future Volume (veh/h)	100	530	150	350	690	130	90	400	100	250	1100	250	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	0.98	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	109	576	163	380	750	141	98	435	109	272	1196	272	
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	136	636	280	399	1161	513	115	860	379	305	1239	554	
Arrive On Green	0.08	0.18	0.18	0.23	0.33	0.33	0.07	0.24	0.24	0.17	0.35	0.35	
Sat Flow, veh/h	1774	3539	1557	1774	3539	1563	1774	3539	1561	1774	3539	1583	
Grp Volume(v), veh/h	109	576	163	380	750	141	98	435	109	272	1196	272	
Grp Sat Flow(s), veh/h/ln	1774	1770	1557	1774	1770	1563	1774	1770	1561	1774	1770	1583	
Q Serve(g_s), s	6.0	15.9	9.6	21.1	18.1	6.7	5.5	10.6	5.7	15.0	33.2	13.5	
Cycle Q Clear(g_c), s	6.0	15.9	9.6	21.1	18.1	6.7	5.5	10.6	5.7	15.0	33.2	13.5	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	136	636	280	399	1161	513	115	860	379	305	1239	554	
V/C Ratio(X)	0.80	0.91	0.58	0.95	0.65	0.27	0.85	0.51	0.29	0.89	0.97	0.49	
Avail Cap(c_a), veh/h	163	637	280	399	1161	513	115	860	379	351	1239	554	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	45.4	40.2	37.6	38.2	28.6	24.8	46.2	32.7	30.8	40.5	31.9	25.5	
Incr Delay (d2), s/veh	20.6	16.6	3.0	32.7	1.3	0.3	41.7	0.5	0.4	21.6	17.8	0.7	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	9.2	4.4	14.0	9.1	2.9	4.0	5.3	2.5	9.2	19.2	6.0	6.0	
LnGrp Delay(d), s/veh	66.0	56.8	40.6	70.9	29.9	25.1	87.9	33.1	31.2	62.0	49.7	26.2	
LnGrp LOS	E	E	D	E	C	C	F	C	C	E	D	C	
Approach Vol, veh/h	848			1271				642			1740		
Approach Delay, s/veh	54.8			41.6				41.2			47.9		
Approach LOS	D			D				D			D		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	21.7	28.8	27.0	22.5	11.0	39.5	12.2	37.3					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	21.7	22.5	18.0	6.5	35.0	9.2	31.3						
Max Q Clear Time (g_c+M), s	12.6	23.1	17.9	7.5	35.2	8.0	20.1						
Green Ext Time (p_c), s	0.2	7.1	0.0	0.0	0.0	0.0	7.2						
Intersection Summary													
HCM 2010 Ctrl Delay				46.5									
HCM 2010 LOS	D			D				D			D		

Year 2035 + Proj AM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	30	580	90	485	1235	90	90	60	180	220	250	120	
Future Volume (veh/h)	30	580	90	485	1235	90	90	60	180	220	250	120	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900	
Adj Flow Rate, veh/h	33	630	98	527	1342	98	98	65	196	239	272	130	
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	42	1385	215	589	1115	921	89	249	211	219	247	118	
Arrive On Green	0.02	0.45	0.45	0.17	0.60	0.60	0.05	0.13	0.13	0.12	0.21	0.21	
Sat Flow, veh/h	1774	3071	477	3442	1863	1539	1774	1863	1580	1774	1192	570	
Grp Volume(v), veh/h	33	636	365	527	1342	98	98	65	196	239	0	402	
Grp Sat Flow(s), veh/h/ln	1774	1770	1779	1721	1863	1539	1774	1863	1580	1774	0	1762	
Q Serve(g_s), s	2.8	21.2	21.2	22.4	89.5	2.2	7.5	4.7	18.4	18.5	0.0	31.0	
Cycle Q Clear(g_c), s	2.8	21.2	21.2	22.4	89.5	2.2	7.5	4.7	18.4	18.5	0.0	31.0	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.32	
Lane Grp Cap(c), veh/h	42	798	802	589	1115	921	89	249	211	219	0	365	
V/C Ratio(X)	0.78	0.45	0.46	0.89	1.20	0.11	1.10	0.26	0.93	1.09	0.00	1.10	
Avail Cap(c_a), veh/h	47	798	802	734	1115	921	89	249	211	219	0	365	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	72.6	28.3	28.4	60.6	30.0	3.8	71.0	58.1	64.1	65.5	0.0	59.3	
Incr Delay (d2), s/veh	52.2	0.4	0.4	11.6	100.5	0.1	125.6	0.6	42.2	86.5	0.0	77.0	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	10.5	10.5	11.6	76.9	1.6	6.8	2.5	10.5	14.3	0.0	22.8	22.8	
LnGrp Delay(d), s/veh	124.8	28.8	28.8	72.2	130.5	3.8	196.7	58.7	106.3	152.1	0.0	136.2	
LnGrp LOS	F	C	C	E	F	A	F	E	F	F	F	F	
Approach Vol, veh/h	761			1967				359			641		
Approach Delay, s/veh	32.9			108.6				122.3			142.1		
Approach LOS	C			F				F			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	23.0	24.5	30.1	71.9	12.0	35.5	8.1	94.0					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	20.0	31.9	61.6	7.5	31.0	4.0	89.5						
Max Q Clear Time (g_c+M), s	20.4	24.4	23.2	9.5	33.0	4.8	91.5						
Green Ext Time (p_c), s	0.0	0.0	1.2	4.8	0.0	0.0	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay				100.2									
HCM 2010 LOS	F			F				F			F		

Year 2035 + Proj AM
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗			↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	252	658	5	30	1103	63	5	5	15	336	5	777
Future Volume (veh/h)	252	658	5	30	1103	63	5	5	15	336	5	777
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	274	715	5	33	1199	68	5	5	16	365	5	845
Adj No. of Lanes	1	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	267	1776	12	56	1273	72	31	31	53	495	7	444
Arrive On Green	0.15	0.49	0.49	0.03	0.37	0.37	0.03	0.03	0.03	0.28	0.28	0.28
Sat Flow, veh/h	1774	3602	25	1774	3405	193	909	909	1562	1751	24	1573
Grp Volume(v), veh/h	274	351	369	33	623	644	10	0	16	370	0	845
Grp Sat Flow(s), veh/h/ln	1774	1770	1858	1774	1770	1828	1817	0	1562	1775	0	1573
Q Serve(g_s), s	20.5	17.1	17.1	2.5	46.3	46.5	0.7	0.0	1.4	25.8	0.0	38.5
Cycle Q Clear(g_c), s	20.5	17.1	17.1	2.5	46.3	46.5	0.7	0.0	1.4	25.8	0.0	38.5
Prop In Lane	1.00	0.01	1.00	1.00	0.11	0.50	1.00	0.99	1.00	0.99	1.00	1.00
Lane Grp Cap(c), veh/h	267	872	916	56	662	684	62	0	53	501	0	444
V/C Ratio(X)	1.03	0.40	0.40	0.59	0.94	0.94	0.16	0.00	0.30	0.74	0.00	1.90
Avail Cap(c_a), veh/h	267	872	916	94	679	701	360	0	309	501	0	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	57.9	21.9	21.9	65.2	41.2	41.3	63.9	0.0	64.3	44.3	0.0	48.9
Incr Delay (d2), s/veh	62.2	0.4	0.3	3.7	21.2	21.0	1.5	0.0	3.8	5.9	0.0	414.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6	8.5	8.9	1.3	26.6	27.4	0.4	0.0	0.6	13.5	0.0	67.9
LnGrp Delay(d), s/veh	120.2	22.2	22.2	68.8	62.4	62.3	65.4	0.0	68.0	50.2	0.0	463.0
LnGrp LOS	F	C	C	E	E	E	E		E	D		F
Approach Vol, veh/h	994			1300				26		1215		
Approach Delay, s/veh	49.2			62.5				67.0		337.3		
Approach LOS	D			E				E		F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8	73.4		44.0	25.0	57.2		10.1				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	3	65.6		38.5	20.5	52.3		27.0				
Max Q Clear Time (g_c+1), s	19.1			40.5	22.5	48.5		3.4				
Green Ext Time (p_c), s	0.0	23.1		0.0	0.0	2.5		0.1				

HCM 2010 Signalized Intersection Summary
N:\2614\Analysis\Intersection\Year 2035 + Proj AM.syn

Synchro 9 Report

Year 2035 + Proj AM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗			↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	10	868	206	310	1036	15	83	32	220	20	86	22
Future Volume (veh/h)	10	868	206	310	1036	15	83	32	220	20	86	22
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	943	224	337	1126	16	90	35	239	22	93	24
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	23	1164	276	370	2169	31	112	339	287	39	201	52
Arrive On Green	0.01	0.41	0.41	0.21	0.61	0.61	0.06	0.18	0.18	0.02	0.14	0.14
Sat Flow, veh/h	1774	2824	670	1774	3571	51	1774	1863	1576	1774	1425	368
Grp Volume(v), veh/h	11	590	577	337	558	584	90	35	239	22	0	117
Grp Sat Flow(s), veh/h/ln	1774	1770	1724	1774	1770	1852	1774	1863	1576	1774	0	1792
Q Serve(g_s), s	0.7	32.7	32.8	20.6	20.1	20.1	5.6	1.7	16.3	1.4	0.0	6.7
Cycle Q Clear(g_c), s	0.7	32.7	32.8	20.6	20.1	20.1	5.6	1.7	16.3	1.4	0.0	6.7
Prop In Lane	1.00	0.39	1.00	1.00	0.03	1.00	1.00	1.00	1.00	1.00	0.00	0.21
Lane Grp Cap(c), veh/h	23	729	710	370	1075	1125	112	339	287	39	0	253
V/C Ratio(X)	0.48	0.81	0.81	0.91	0.52	0.52	0.81	0.10	0.83	0.56	0.00	4.36
Avail Cap(c_a), veh/h	80	772	752	455	1147	1200	112	461	390	96	0	436
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	54.5	28.8	28.9	43.0	12.5	12.5	51.4	37.9	43.8	53.8	0.0	43.8
Incr Delay (d2), s/veh	14.6	6.2	6.4	19.9	0.5	0.4	33.5	0.1	9.7	11.8	0.0	1.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.4	17.2	16.8	12.2	9.9	10.4	3.8	0.9	7.9	0.8	0.0	3.4
LnGrp Delay(d), s/veh	69.1	35.0	35.3	62.9	13.0	13.0	84.9	38.0	53.6	65.6	0.0	44.8
LnGrp LOS	E	C	D	E	B	B	F	D	D	E		D
Approach Vol, veh/h	1178			1479				364		139		
Approach Delay, s/veh	35.5			24.3				59.8		48.1		
Approach LOS	D			C				E		D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	8	51.8	11.0	20.7	5.9	73.5	6.5	25.2				
Change Period (Y+Rc), s	4.5	6.0	4.0	5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	3	48.5	7.0	27	5.0	72.0	6.0	27.5				
Max Q Clear Time (g_c+1), s	19.1	34.8	7.6	8.7	2.7	22.1	3.4	18.3				
Green Ext Time (p_c), s	0.5	10.9	0.0	1.2	0.0	27.1	0.0	0.9				

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Intersection Summary												
HCM 2010 Ctrl Delay	153.2											
HCM 2010 LOS	F											

Intersection Summary												
HCM 2010 Ctrl Delay	33.6											
HCM 2010 LOS	C											

Notes

Year 2035 + Proj AM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	10	870	190	300	1040	15	80	35	220	20	150	31
Future Volume (veh/h)	10	870	190	300	1040	15	80	35	220	20	150	31
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	11	946	207	326	1130	16	87	38	239	22	163	34
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	19	1151	251	372	2133	30	232	47	295	150	316	66
Arrive On Green	0.01	0.40	0.40	0.21	0.60	0.60	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1774	2889	631	1774	3573	51	1181	222	1395	1098	1496	312
Grp Volume(v), veh/h	11	579	574	326	560	586	87	0	277	22	0	197
Grp Sat Flow(s), veh/h/ln	1774	1770	1751	1774	1770	1854	1181	0	1617	1098	0	1808
Q Serve(g_s), s	0.5	21.9	21.9	13.3	13.9	13.9	5.3	0.0	12.2	1.5	0.0	7.2
Cycle Q Clear(g_c), s	0.5	21.9	21.9	13.3	13.9	13.9	12.5	0.0	12.2	13.6	0.0	7.2
Prop In Lane	1.00	0.36	1.00	1.00	0.03	1.00	0.86	1.00	0.86	1.00	0.17	1.00
Lane Grp Cap(c), veh/h	19	705	697	372	1056	1107	232	0	342	150	0	382
V/C Ratio(X)	0.57	0.82	0.82	0.88	0.53	0.53	0.37	0.00	0.81	0.15	0.00	0.52
Avail Cap(c_a), veh/h	95	731	724	463	1098	1150	237	0	348	154	0	389
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	36.8	20.1	20.1	28.6	8.9	8.9	31.6	0.0	28.1	34.5	0.0	26.1
Incr Delay (d2), s/veh	23.5	7.3	7.4	14.6	0.4	0.4	1.0	0.0	13.2	0.4	0.0	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	12.0	12.0	8.0	6.8	7.1	1.8	0.0	6.6	0.5	0.0	3.7	0.0
LnGrp Delay(d), s/veh	60.3	27.4	27.6	43.2	9.3	9.3	32.6	0.0	41.3	35.0	0.0	27.2
LnGrp LOS	E	C	C	D	A	A	C		D	C		C
Approach Vol, veh/h	1164			1472			364			219		
Approach Delay, s/veh	27.8			16.8			39.2			28.0		
Approach LOS	C			B			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	20.2	34.3		20.3	5.3	49.1		20.3				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	30.9	16.1		4.0	46.4	16.1		16.1				
Max Q Clear Time (g_c+I), s	23.9	15.6		2.5	15.9	14.5		14.5				
Green Ext Time (p_c), s	0.4	5.8		0.2	18.5	0.6		0.6				

Year 2035 + Proj AM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	60	1110	60	320	1250	120	20	110	150	340	404	100
Future Volume (veh/h)	60	1110	60	320	1250	120	20	110	150	340	404	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	61	1133	0	327	1276	122	20	112	153	347	412	102
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	78	1206	540	334	1613	154	37	210	178	334	522	443
Arrive On Green	0.04	0.34	0.00	0.19	0.49	0.49	0.02	0.11	0.11	0.19	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	3266	311	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	61	1133	0	327	690	708	20	112	153	347	412	102
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1807	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.8	34.6	0.0	20.5	36.1	36.4	1.2	6.3	7.3	21.0	22.8	5.5
Cycle Q Clear(g_c), s	3.8	34.6	0.0	20.5	36.1	36.4	1.2	6.3	7.3	21.0	22.8	5.5
Prop In Lane	1.00	1.00	1.00	1.00	0.17	1.00	1.00	1.00	1.00	1.00	0.17	1.00
Lane Grp Cap(c), veh/h	78	1206	540	334	874	893	37	210	178	334	522	443
V/C Ratio(X)	0.78	0.94	0.00	0.98	0.79	0.79	0.54	0.53	0.86	1.04	0.79	0.23
Avail Cap(c_a), veh/h	79	1237	553	334	874	893	79	517	440	334	784	667
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	35.7	0.0	45.1	23.4	23.5	54.1	46.8	23.0	45.3	37.1	30.9
Incr Delay (d2), s/veh	36.3	13.3	0.0	43.6	4.7	4.8	9.0	1.6	8.6	59.9	2.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	19.1	0.0	14.0	18.6	19.3	0.7	3.4	4.6	15.8	12.0	2.4	0.0
LnGrp Delay(d), s/veh	89.1	49.0	0.0	88.7	28.2	28.3	63.1	48.3	31.6	105.2	39.7	31.1
LnGrp LOS	F	D		F	C	C	E	D	C	F	D	C
Approach Vol, veh/h	1194			1725			285			861		
Approach Delay, s/veh	51.0			39.7			40.4			65.1		
Approach LOS	D			D			D			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	43.0	6.3	36.3	8.9	60.1	25.0	17.6				
Change Period (Y+Rc), s	5.0	4.0	5.0	4.0	5.0	4.0	5.0	5.0				
Max Green Setting (Gmax), s	39	5.0	47.0	5.0	55.0	21.0	31.0					
Max Q Clear Time (g_c+I), s	36.6	3.2	24.8	5.8	38.4	23.0	9.3					
Green Ext Time (p_c), s	0.0	1.4	0.0	3.3	0.0	7.6	0.0	3.3				

Intersection Summary												
HCM 2010 Ctrl Delay	48.4											
HCM 2010 LOS	D											
Notes												

Year 2035 + Proj AM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑↑↑	↑	↑	↑↑	↑↑	↑↑				↑	↑	↑
Traffic Volume (veh/h)	0	760	970	500	1490	0	0	0	0	270	5	330
Future Volume (veh/h)	0	760	970	500	1490	0	0	0	0	270	5	330
Number	5	2	12	1	6	16				7	4	14
Initial Q (Ob), 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	0	1863	1863	1863	1863	0				1863	1863	1863
Adj Flow Rate, veh/h	0	800	1021	526	1568	0				404	0	222
Adj No. of Lanes	0	3	1	2	3	0				2	0	1
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2
Cap, veh/h	0	2516	782	577	3635	0				582	0	260
Arrive On Green	0.00	0.49	0.49	0.34	1.00	0.00				0.16	0.00	0.16
Sat Flow, veh/h	0	5253	1581	3442	5253	0				3548	0	1583
Grp Volume(v), veh/h	0	800	1021	526	1568	0				404	0	222
Grp Sat Flow(s),veh/h/ln	0	1695	1581	1721	1695	0				1774	0	1583
Q Serve(g_s), s	0.0	8.5	44.5	13.2	0.0	0.0				9.7	0.0	12.3
Cycle Q Clear(g_c), s	0.0	8.5	44.5	13.2	0.0	0.0				9.7	0.0	12.3
Prop In Lane	0.00		1.00	1.00		0.00				1.00		1.00
Lane Grp Cap(c), veh/h	0	2516	782	577	3635	0				582	0	260
V/C Ratio(X)	0.00	0.32	1.31	0.91	0.43	0.00				0.69	0.00	0.85
Avail Cap(c_a), veh/h	0	2516	782	577	3635	0				635	0	283
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.00	0.28	0.28	0.68	0.68	0.00				1.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	13.6	22.7	29.3	0.0	0.0				35.5	0.0	36.6
Incr Delay (d2), s/veh	0.0	0.1	139.9	13.9	0.3	0.0				2.9	0.0	20.4
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	0.0	3.9	49.8	7.3	0.1	0.0				5.0	0.0	6.8
LnGrp Delay(d),s/veh	0.0	13.7	162.7	43.2	0.3	0.0				38.4	0.0	57.0
LnGrp LOS		B	F	D	A					D		E
Approach Vol, veh/h		1821			2094					626		
Approach Delay, s/veh		97.2			11.0					45.0		
Approach LOS		F			B					D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	59.8	50.3		19.9		70.1						
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8						
Max Green Setting (Gmax), s	43.2	16.1		63.0								
Max Q Clear Time (g_c+I), s	46.5	14.3		2.0								
Green Ext Time (p_c), s	0.0	0.0		0.5		44.5						
Intersection Summary												
HCM 2010 Ctrl Delay				50.3								
HCM 2010 LOS				D								
Notes												

Year 2035 + Proj AM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↑	↑↑↑		↑↑↑	↑	↑	↑	↑	↑	↑	↑	↑
Traffic Volume (veh/h)	125	905	0	0	1470	110	520	5	270	0	0	0
Future Volume (veh/h)	125	905	0	0	1470	110	520	5	270	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			1.00
Adj Sat Flow, veh/h/ln	1863	1863	0	0	1863	1863	1863	1863	1863			1863
Adj Flow Rate, veh/h	133	963	0	0	1564	117	644	0	193			
Adj No. of Lanes	1	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			0.94
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			2
Cap, veh/h	163	3360	0	0	2626	818	774	0	346			
Arrive On Green	0.18	1.00	0.00	0.00	0.52	0.52	0.22	0.00	0.22			
Sat Flow, veh/h	1774	5253	0	0	5253	1583	3548	0	1583			
Grp Volume(v), veh/h	133	963	0	0	1564	117	644	0	193			
Grp Sat Flow(s),veh/h/ln	1774	1695	0	0	1695	1583	1774	0	1583			
Q Serve(g_s), s	6.5	0.0	0.0	0.0	19.3	3.5	15.6	0.0	9.8			
Cycle Q Clear(g_c), s	6.5	0.0	0.0	0.0	19.3	3.5	15.6	0.0	9.8			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	163	3360	0	0	2626	818	774	0	346			
V/C Ratio(X)	0.81	0.29	0.00	0.00	0.60	0.14	0.83	0.00	0.56			
Avail Cap(c_a), veh/h	262	3360	0	0	2626	818	982	0	438			
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.91	0.91	0.00	0.00	0.66	0.66	1.00	0.00	1.00			
Uniform Delay (d), s/veh	36.0	0.0	0.0	0.0	15.2	11.4	33.6	0.0	31.3			
Incr Delay (d2), s/veh	9.0	0.2	0.0	0.0	0.7	0.2	5.0	0.0	1.4			
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	0.1	0.0	0.0	9.1	1.5	8.1	0.0	4.4			
LnGrp Delay(d),s/veh	45.0	0.2	0.0	0.0	15.9	11.6	38.6	0.0	32.7			
LnGrp LOS	D	A			B	B	D		C			
Approach Vol, veh/h		1096			1681		837					
Approach Delay, s/veh		5.6			15.6		37.2					
Approach LOS		A			B		D					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2			5	6		8				
Phs Duration (G+Y+Rc), s		65.3			13.0	52.3		24.7				
Change Period (Y+Rc), s		5.8			4.7	5.8		5.1				
Max Green Setting (Gmax), s		54.2			13	36.2		24.9				
Max Q Clear Time (g_c+I), s		2.0			8.5	21.3		17.6				
Green Ext Time (p_c), s		31.8			0.1	12.5		2.0				
Intersection Summary												
HCM 2010 Ctrl Delay					17.6							
HCM 2010 LOS					B							
Notes												

Year 2035 + Proj AM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	40	1010	240	240	1420	60	100	10	140	40	15	100
Future Volume (veh/h)	40	1010	240	240	1420	60	100	10	140	40	15	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	1098	261	261	1543	65	109	11	152	43	16	109
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	56	1292	305	303	2056	86	255	21	288	220	40	272
Arrive On Green	0.03	0.45	0.45	0.17	0.59	0.59	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	1774	2842	671	1774	3461	145	1258	108	1487	1216	206	1404
Grp Volume(v), veh/h	43	681	678	261	787	821	109	0	163	43	0	125
Grp Sat Flow(s), veh/h/ln	1774	1770	1743	1774	1770	1837	1258	0	1595	1216	0	1610
Q Serve(g_s), s	1.8	25.5	25.9	10.7	24.2	24.5	6.2	0.0	6.8	2.5	0.0	5.1
Cycle Q Clear(g_c), s	1.8	25.5	25.9	10.7	24.2	24.5	11.2	0.0	6.8	9.3	0.0	5.1
Prop In Lane	1.00	0.39	1.00	1.00	0.08	1.00	1.00	0.93	1.00	0.00	0.87	1.00
Lane Grp Cap(c), veh/h	56	804	792	303	1051	1091	255	0	309	220	0	311
V/C Ratio(X)	0.77	0.85	0.86	0.86	0.75	0.75	0.43	0.00	0.53	0.20	0.00	0.40
Avail Cap(c_a), veh/h	102	804	792	345	1051	1091	316	0	387	280	0	391
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	35.8	18.0	18.2	30.0	11.1	11.1	31.2	0.0	27.0	31.2	0.0	26.3
Incr Delay (d2), s/veh	19.2	10.7	11.4	17.7	4.9	4.8	1.1	0.0	1.4	0.4	0.0	0.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2	14.7	14.8	6.7	13.0	13.6	2.2	0.0	3.1	0.9	0.0	2.3
LnGrp Delay(d), s/veh	55.1	28.7	29.6	47.7	16.0	15.9	32.4	0.0	28.4	31.6	0.0	27.1
LnGrp LOS	E	C	C	D	B	B	C		C	C		C
Approach Vol, veh/h	1402			1869			272			168		
Approach Delay, s/veh	30.0			20.4			30.0			28.3		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	7.2	38.4	18.9	6.9	48.8	18.9						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	33.9	18.1	4.3	44.1	18.1							
Max Q Clear Time (g_c+I10), s	27.9	11.3	3.8	26.5	13.2							
Green Ext Time (p_c), s	0.1	5.7	1.3	0.0	15.4	1.0						

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Year 2035 + Proj AM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗
Traffic Volume (veh/h)	30	990	370	290	1190	210	170	400	120	230	1300	80
Future Volume (veh/h)	30	990	370	290	1190	210	170	400	120	230	1300	80
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	31	1021	381	299	1227	216	175	412	124	237	1340	82
Adj No. of Lanes	2	2	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	221	1175	525	321	1565	276	209	1244	557	259	1296	580
Arrive On Green	0.06	0.33	0.33	0.03	0.12	0.12	0.06	0.35	0.35	0.08	0.37	0.37
Sat Flow, veh/h	3442	3539	1582	3442	4350	766	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	31	1021	381	299	956	487	175	412	124	237	1340	82
Grp Sat Flow(s), veh/h/ln	1721	1770	1582	1721	1695	1725	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.4	44.7	35.0	14.3	45.2	45.2	8.3	14.1	9.1	11.3	60.4	5.7
Cycle Q Clear(g_c), s	1.4	44.7	35.0	14.3	45.2	45.2	8.3	14.1	9.1	11.3	60.4	5.7
Prop In Lane	1.00	1.00	1.00	1.00	0.44	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	221	1175	525	321	1220	621	209	1244	557	259	1296	580
V/C Ratio(X)	0.14	0.87	0.73	0.93	0.78	0.78	0.84	0.33	0.22	0.92	1.03	0.14
Avail Cap(c_a), veh/h	292	1175	525	321	1220	621	209	1244	557	259	1296	580
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	51.7	48.5	79.4	66.5	66.5	76.7	39.3	37.6	75.8	52.3	35.0
Incr Delay (d2), s/veh	0.2	8.8	8.5	5.1	0.5	0.9	23.8	0.2	0.2	33.9	34.3	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.7	23.3	16.5	7.1	21.4	21.8	4.7	6.9	4.0	6.6	35.7	2.5
LnGrp Delay(d), s/veh	73.1	60.5	56.9	84.5	66.9	67.4	100.5	39.5	37.9	109.7	86.6	35.1
LnGrp LOS	E	E	E	F	E	E	F	D	D	F	F	D
Approach Vol, veh/h	1433			1742			711			1659		
Approach Delay, s/veh	59.8			70.1			54.2			87.3		
Approach LOS	E			E			D			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.1	61.7	15.1	66.7	16.9	66.3	17.5	64.3				
Change Period (Y+Rc), s	6.1	6.9	5.1	6.3	6.3	6.9	5.1	6.3				
Max Green Setting (Gmax), s	54.8	10.0	60.4	14.0	56.0	12.4	58.0					
Max Q Clear Time (g_c+I10), s	46.7	10.3	62.4	3.4	47.2	13.3	16.1					
Green Ext Time (p_c), s	0.0	7.9	0.0	0.0	0.0	8.5	0.0	24.9				

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		↔↔	↕↕		
Traffic Volume (veh/h)	320	930	120	220	1810	60	140	650	140	240	1020	570	
Future Volume (veh/h)	320	930	120	220	1810	60	140	650	140	240	1020	570	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	0.99	1.00	0.92	1.00	0.90	1.00	0.90		
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900	
Adj Flow Rate, veh/h	348	1011	130	239	1967	65	152	707	152	261	1109	620	
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	261	1225	157	279	1379	45	124	743	160	278	759	387	
Arrive On Green	0.08	0.39	0.39	0.08	0.39	0.39	0.07	0.26	0.26	0.16	0.35	0.35	
Sat Flow, veh/h	3442	3149	405	3442	3496	115	1774	2851	612	1774	2182	1112	
Grp Volume(v), veh/h	348	568	573	239	990	1042	152	439	420	261	879	850	
Grp Sat Flow(s), veh/h/ln	1721	1770	1784	1721	1770	1841	1774	1770	1693	1774	1770	1525	
Q Serve(g_s), s	12.5	47.6	47.7	11.3	65.1	65.1	11.5	40.2	40.3	24.0	57.4	57.4	
Cycle Q Clear(g_c), s	12.5	47.6	47.7	11.3	65.1	65.1	11.5	40.2	40.3	24.0	57.4	57.4	
Prop In Lane	1.00	0.23	1.00	0.06	1.00	0.36	1.00	0.73					
Lane Grp Cap(c), veh/h	261	689	694	279	698	727	124	461	441	278	616	530	
V/C Ratio(X)	1.33	0.82	0.83	0.86	1.42	1.43	1.23	0.95	0.95	0.94	1.43	1.60	
Avail Cap(c_a), veh/h	261	689	694	298	698	727	124	461	441	278	616	530	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	0.46	0.46	0.46	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	76.3	45.3	45.4	74.8	49.9	50.0	76.7	60.0	60.0	68.7	53.8	53.8	
Incr Delay (d2), s/veh	162.3	5.3	5.3	20.1	196.4	203.3	155.1	29.8	30.9	37.4	201.7	280.1	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	8	24.2	24.6	6.2	69.9	74.1	11.0	23.4	22.6	14.6	62.5	65.4	
LnGrp Delay(d), s/veh	238.6	50.6	50.6	94.9	246.4	253.2	231.9	89.8	90.9	106.2	255.5	333.9	
LnGrp LOS	F	D	D	F	F	F	F	F	F	F	F	F	
Approach Vol, veh/h	1489			2271				1011			1990		
Approach Delay, s/veh	94.5			233.6				111.6			269.4		
Approach LOS	F			F				F			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	7.9	69.1	16.0	62.0	17.0	70.0	30.4	47.6					
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6					
Max Green Setting (Gmax), s	3	63.3	11.5	57.4	12.5	65.1	25.9	43.0					
Max Q Clear Time (g_c+I), s	3	49.7	13.5	59.4	14.5	67.1	26.0	42.3					
Green Ext Time (p_c), s	0.1	12.6	0.0	0.0	0.0	0.0	0.0	0.7					
Intersection Summary													
HCM 2010 Ctrl Delay	195.3												
HCM 2010 LOS	F												

Intersection												
Int Delay, s/veh	79.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔			↔↔			↔↔			↔↔		
Traffic Vol, veh/h	250	5	10	4	0	5	10	680	0	0	350	120
Future Vol, veh/h	250	5	10	4	0	5	10	680	0	0	350	120
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	100	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	272	5	11	4	0	5	11	739	0	0	380	130
Major/Minor												
	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1210	1207	446	1215	1272	739	511	0	0	739	0	0
Stage 1	446	446	-	761	761	-	-	-	-	-	-	-
Stage 2	764	761	-	454	511	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	- 159	183	612	158	168	417	1054	-	-	867	-	-
Stage 1	591	574	-	398	414	-	-	-	-	-	-	-
Stage 2	396	414	-	586	537	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	- 156	181	612	150	166	417	1054	-	-	867	-	-
Mov Cap-2 Maneuver	- 156	181	-	150	166	-	-	-	-	-	-	-
Stage 1	585	574	-	394	410	-	-	-	-	-	-	-
Stage 2	387	410	-	570	537	-	-	-	-	-	-	-
Approach												
	EB			WB			NB			SB		
HCM Control Delay, s	\$ 427.4			21.1			0.1			0		
HCM LOS	F			C								
Minor Lane/Major Mvmt												
	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1054	-	-	161	233	867	-	-				
HCM Lane V/C Ratio	0.01	-	-	1.789	0.042	-	-	-				
HCM Control Delay (s)	8.5	-	-	\$ 427.4	21.1	0	-	-				
HCM Lane LOS	A	-	-	F	C	A	-	-				
HCM 95th %tile Q(veh)	0	-	-	21	0.1	0	-	-				
Notes												
-: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon												

MOVEMENT SUMMARY

Site: 101 [2. LT+P PM]

2. Country Club / Golden Circle / Drwy A Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Queue Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: Country Club Ln											
3	L2	163	2.0	0.669	11.4	LOS B	7.6	192.1	0.29	0.10	31.6
8	T1	109	2.0	0.669	11.4	LOS B	7.6	192.1	0.29	0.10	31.5
18	R2	608	2.0	0.669	11.4	LOS B	7.6	192.1	0.29	0.10	30.7
Approach		879	2.0	0.669	11.4	LOS B	7.6	192.1	0.29	0.10	30.9
East: Country Club Ln											
1	L2	438	2.0	0.483	9.2	LOS A	3.0	75.3	0.59	0.48	31.0
6	T1	22	2.0	0.483	9.2	LOS A	3.0	75.3	0.59	0.48	30.9
16	R2	33	2.0	0.483	9.2	LOS A	3.0	75.3	0.59	0.48	30.1
Approach		492	2.0	0.483	9.2	LOS A	3.0	75.3	0.59	0.48	30.9
North: Proj Drwy A											
7	L2	11	2.0	0.078	5.9	LOS A	0.3	7.7	0.57	0.52	34.3
4	T1	43	2.0	0.078	5.9	LOS A	0.3	7.7	0.57	0.52	34.2
14	R2	1	2.0	0.078	5.9	LOS A	0.3	7.7	0.57	0.52	33.2
Approach		55	2.0	0.078	5.9	LOS A	0.3	7.7	0.57	0.52	34.2
West: Golden Circle Dr											
5	L2	1	2.0	0.142	5.9	LOS A	0.6	15.0	0.55	0.48	34.7
2	T1	16	2.0	0.142	5.9	LOS A	0.6	15.0	0.55	0.48	34.7
12	R2	98	2.0	0.142	5.9	LOS A	0.6	15.0	0.55	0.48	33.6
Approach		115	2.0	0.142	5.9	LOS A	0.6	15.0	0.55	0.48	33.8
All Vehicles		1542	2.0	0.669	10.1	LOS B	7.6	192.1	0.42	0.27	31.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

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Year 2035 + Proj PM
 3: Country Club Ln & Gary Ln

Escondido Country Club
 06/19/2017

Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations	↔	↕	↕	↕	↕	↕		
Traffic Volume (veh/h)	74	515	443	80	51	60		
Future Volume (veh/h)	74	515	443	80	51	60		
Number	5	2	6	16	7	14		
Initial Q (Ob), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	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	1863	1863	1863	1863	1863	1900		
Adj Flow Rate, veh/h	80	554	476	86	55	65		
Adj No. of Lanes	1	1	1	1	0	0		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	0	0		
Cap, veh/h	621	1042	1042	862	71	84		
Arrive On Green	0.56	0.56	0.56	0.56	0.09	0.09		
Sat Flow, veh/h	843	1863	1863	1542	756	894		
Grp Volume(v), veh/h	80	554	476	86	121	0		
Grp Sat Flow(s), veh/h/ln	843	1863	1863	1542	1664	0		
Q Serve(g_s), s	1.6	4.8	3.9	0.7	1.8	0.0		
Cycle Q Clear(g_c), s	5.5	4.8	3.9	0.7	1.8	0.0		
Prop In Lane	1.00			1.00	0.45	0.54		
Lane Grp Cap(c), veh/h	621	1042	1042	862	157	0		
V/C Ratio(X)	0.13	0.53	0.46	0.10	0.77	0.00		
Avail Cap(c_a), veh/h	897	1651	1651	1367	1154	0		
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	0.00		
Uniform Delay (d), s/veh	5.0	3.6	3.4	2.7	11.5	0.0		
Incr Delay (d2), s/veh	0.1	0.4	0.3	0.0	7.9	0.0		
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%), veh/ln	0.4	2.4	2.1	0.3	1.2	0.0		
LnGrp Delay(d), s/veh	5.1	4.0	3.7	2.7	19.3	0.0		
LnGrp LOS	A	A	A	A	B			
Approach Vol, veh/h	634	562			121			
Approach Delay, s/veh	4.2	3.6			19.3			
Approach LOS	A	A			B			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		
Phs Duration (G+Y+Rc), s		19.0		6.9		19.0		
Change Period (Y+Rc), s		4.5		4.5		4.5		
Max Green Setting (Gmax), s		23.0		18.0		23.0		
Max Q Clear Time (g_c+I1), s		7.5		3.8		5.9		
Green Ext Time (p_c), s		6.8		0.3		7.2		
Intersection Summary								
HCM 2010 Ctrl Delay	5.3							
HCM 2010 LOS	A							
Notes								

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Intersection						
Int Delay, s/veh 1.6						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔		↕		↔	
Traffic Vol, veh/h	580	31	0	524	0	131
Future Vol, veh/h	580	31	0	524	0	131
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	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	630	34	0	570	0	142
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	-	-	-	647
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	-	-	-	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	-	-	3.318
Pot Cap-1 Maneuver	-	-	0	-	0	471
Stage 1	-	-	0	-	0	-
Stage 2	-	-	0	-	0	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	-	-	471
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	EB	WB	NB			
HCM Control Delay, s	0	0	15.9			
HCM LOS			C			
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT		
Capacity (veh/h)	471	-	-	-		
HCM Lane V/C Ratio	0.302	-	-	-		
HCM Control Delay (s)	15.9	-	-	-		
HCM Lane LOS	C	-	-	-		
HCM 95th %tile Q(veh)	1.3	-	-	-		

MOVEMENT SUMMARY

Site: 101 [5. LT+P PM]

5. Country Club / La Brea / Drwy D Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: La Brea St											
3	L2	22	2.0	0.072	6.2	LOS A	0.3	7.0	0.59	0.55	33.3
8	T1	4	2.0	0.072	6.2	LOS A	0.3	7.0	0.59	0.55	33.2
18	R2	22	2.0	0.072	6.2	LOS A	0.3	7.0	0.59	0.55	32.3
Approach		48	2.0	0.072	6.2	LOS A	0.3	7.0	0.59	0.55	32.9
East: Country Club Ln											
1	L2	27	2.0	0.468	7.6	LOS A	3.4	86.6	0.24	0.10	33.9
6	T1	558	2.0	0.468	7.6	LOS A	3.4	86.6	0.24	0.10	33.8
16	R2	21	2.0	0.468	7.6	LOS A	3.4	86.6	0.24	0.10	32.8
Approach		605	2.0	0.468	7.6	LOS A	3.4	86.6	0.24	0.10	33.8
North: Proj Drwy D											
7	L2	9	2.0	0.024	5.2	LOS A	0.1	2.3	0.55	0.44	33.7
4	T1	5	2.0	0.024	5.2	LOS A	0.1	2.3	0.55	0.44	33.6
14	R2	3	2.0	0.024	5.2	LOS A	0.1	2.3	0.55	0.44	32.7
Approach		17	2.0	0.024	5.2	LOS A	0.1	2.3	0.55	0.44	33.5
West: Country Club Ln											
5	L2	17	2.0	0.551	8.9	LOS A	4.7	118.6	0.28	0.11	33.3
2	T1	664	2.0	0.551	8.9	LOS A	4.7	118.6	0.28	0.11	33.2
12	R2	33	2.0	0.551	8.9	LOS A	4.7	118.6	0.28	0.11	32.3
Approach		714	2.0	0.551	8.9	LOS A	4.7	118.6	0.28	0.11	33.2
All Vehicles		1385	2.0	0.551	8.2	LOS A	4.7	118.6	0.28	0.12	33.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
 Roundabout LOS Method: Same as Sign Control.
 Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
 LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
 Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
 Roundabout Capacity Model: US HCM 6.
 HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
 Gap-Acceptance Capacity: Traditional M1.
 HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Year 2035 + Proj PM
6: Nutmeg St & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	91	520	70	231	429	100	130	230	440	50	135	54
Future Volume (veh/h)	91	520	70	231	429	100	130	230	440	50	135	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	98	559	75	248	461	108	140	247	473	54	145	58
Adj No. of Lanes	1	2	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	125	621	83	227	727	169	166	254	457	139	359	131
Arrive On Green	0.07	0.20	0.20	0.13	0.26	0.26	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	1774	3127	418	1774	2837	659	229	486	874	173	687	251
Grp Volume(v), veh/h	98	316	318	248	286	283	860	0	0	257	0	0
Grp Sat Flow(s), veh/h/ln	1774	1770	1775	1774	1770	1726	1589	0	0	1111	0	0
Q Serve(g_s), s	4.9	15.6	15.7	11.5	12.9	13.1	39.8	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.9	15.6	15.7	11.5	12.9	13.1	47.0	0.0	0.0	7.2	0.0	0.0
Prop In Lane	1.00	0.24	1.00	1.00	0.38	0.16	0.55	0.21	0.23	0.23	0.00	0.00
Lane Grp Cap(c), veh/h	125	351	353	227	454	443	878	0	0	630	0	0
V/C Ratio(X)	0.79	0.90	0.90	1.09	0.63	0.64	0.98	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	156	355	356	227	454	443	878	0	0	630	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.1	35.1	35.2	39.2	29.6	29.7	21.9	0.0	0.0	11.9	0.0	0.0
Incr Delay (d2), s/veh	18.7	24.4	25.2	86.5	2.8	3.1	25.4	0.0	0.0	0.4	0.0	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	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	10.0	10.2	11.0	6.6	6.6	27.2	0.0	0.0	3.6	0.0	0.0	0.0
LnGrp Delay(d), s/veh	59.8	59.5	60.4	125.7	32.4	32.8	47.3	0.0	0.0	12.4	0.0	0.0
LnGrp LOS	E	E	E	F	C	C	D			B		
Approach Vol, veh/h	732			817				860			257	
Approach Delay, s/veh	59.9			60.8				47.3			12.4	
Approach LOS	E			E				D			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		3		4		6		7		8	
Phs Duration (G+Y+Rc), s	51.5		16.0		22.3		51.5		10.8		27.5	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	47.0		11.5		18.0		47.0		7.9		21.6	
Max Q Clear Time (g_c+I1), s	49.0		13.5		17.7		9.2		6.9		15.1	
Green Ext Time (p_c), s	0.0		0.0		0.1		12.0		0.0		3.8	
Intersection Summary												
HCM 2010 Ctrl Delay	51.5											
HCM 2010 LOS	D											

Year 2035 + Proj PM
7: Centre City Parkway & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	210	550	100	210	440	130	280	590	230	180	390	90
Future Volume (veh/h)	210	550	100	210	440	130	280	590	230	180	390	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00	1.00	0.99	1.00	1.00	0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	228	598	109	228	478	141	304	641	250	196	424	98
Adj No. of Lanes	1	2	1	1	2	1	1	2	1	1	2	1
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	265	781	344	265	781	345	343	914	403	237	702	314
Arrive On Green	0.15	0.22	0.22	0.15	0.22	0.22	0.19	0.26	0.26	0.13	0.20	0.20
Sat Flow, veh/h	1774	3539	1559	1774	3539	1563	1774	3539	1562	1774	3539	1583
Grp Volume(v), veh/h	228	598	109	228	478	141	304	641	250	196	424	98
Grp Sat Flow(s), veh/h/ln	1774	1770	1559	1774	1770	1563	1774	1770	1562	1774	1770	1583
Q Serve(g_s), s	9.5	12.0	4.4	9.5	9.2	5.8	12.6	12.4	10.7	8.1	8.2	4.0
Cycle Q Clear(g_c), s	9.5	12.0	4.4	9.5	9.2	5.8	12.6	12.4	10.7	8.1	8.2	4.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	265	781	344	265	781	345	343	914	403	237	702	314
V/C Ratio(X)	0.86	0.77	0.32	0.86	0.61	0.41	0.89	0.70	0.62	0.83	0.60	0.31
Avail Cap(c_a), veh/h	265	843	371	265	843	372	345	955	421	289	843	377
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	31.4	27.6	24.7	31.4	26.5	25.2	29.7	25.4	24.8	31.9	27.6	25.9
Incr Delay (d2), s/veh	23.6	3.9	0.5	23.6	1.2	0.8	23.1	2.2	2.6	15.2	0.9	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	2.0	6.4	4.6	2.6	8.4	6.3	4.9	5.0	4.1	1.8	1.8
LnGrp Delay(d), s/veh	55.0	31.6	25.2	55.0	27.7	26.0	52.8	27.6	27.4	47.1	28.4	26.4
LnGrp LOS	D	C	C	D	C	C	D	C	C	D	C	C
Approach Vol, veh/h	935			847				1195			718	
Approach Delay, s/veh	36.5			34.7				34.0			33.3	
Approach LOS	D			C				C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		2		3		4		5		8	
Phs Duration (G+Y+Rc), s	24.0		15.8		21.2		19.1		19.5		15.8	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	20.4		11.3		18.0		14.7		18.0		11.3	
Max Q Clear Time (g_c+I1), s	14.4		11.5		14.0		14.6		10.2		11.2	
Green Ext Time (p_c), s	0.1		3.9		0.0		2.7		0.0		4.2	
Intersection Summary												
HCM 2010 Ctrl Delay	34.7											
HCM 2010 LOS	C											

Year 2035 + Proj PM
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	50	1050	60	300	990	180	80	140	330	120	90	30	
Future Volume (veh/h)	50	1050	60	300	990	180	80	140	330	120	90	30	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	0.97	1.00	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900	
Adj Flow Rate, veh/h	54	1141	65	326	1076	196	87	152	359	130	98	33	
Adj No. of Lanes	1	2	0	2	1	1	1	1	1	1	1	0	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	69	1567	89	393	998	823	265	315	267	135	128	43	
Arrive On Green	0.04	0.46	0.46	0.11	0.54	0.54	0.15	0.17	0.17	0.08	0.10	0.10	
Sat Flow, veh/h	1774	3404	194	3442	1863	1538	1774	1863	1581	1774	1334	449	
Grp Volume(v), veh/h	54	593	613	326	1076	196	87	152	359	130	0	131	
Grp Sat Flow(s), veh/h/ln	1774	1770	1829	1721	1863	1538	1774	1863	1581	1774	0	1783	
Q Serve(g_s), s	3.0	27.2	27.2	9.3	53.5	4.4	4.4	7.4	16.9	7.3	0.0	7.2	
Cycle Q Clear(g_c), s	3.0	27.2	27.2	9.3	53.5	4.4	4.4	7.4	16.9	7.3	0.0	7.2	
Prop In Lane	1.00	0.11	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	1.00	
Lane Grp Cap(c), veh/h	69	815	842	393	998	823	265	315	267	135	0	171	
V/C Ratio(X)	0.78	0.73	0.73	0.83	1.08	0.24	0.33	0.48	1.34	0.96	0.00	0.77	
Avail Cap(c_a), veh/h	71	815	842	431	998	823	265	315	267	135	0	302	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	47.6	21.9	21.9	43.3	23.2	5.1	38.0	37.5	41.5	46.0	0.0	44.1	
Incr Delay (d2), s/veh	40.9	3.3	3.2	11.9	52.1	0.1	0.7	1.1	177.1	66.0	0.0	6.9	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	3	13.9	14.4	5.0	41.6	2.5	2.2	3.9	20.5	6.0	0.0	3.9	
LnGrp Delay(d), s/veh	88.5	25.2	25.1	55.2	75.3	5.2	38.7	38.7	218.6	112.0	0.0	51.0	
LnGrp LOS	F	C	C	E	F	A	D	D	F	F		D	
Approach Vol, veh/h	1260			1598				598			261		
Approach Delay, s/veh	27.9			62.6				146.7			81.4		
Approach LOS	C			E				F			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	21.4	15.9	50.5	19.4	14.1	8.4	58.0						
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5						
Max Green Setting (Gmax), s	16.9	12.5	45.0	7.6	16.9	4.0	53.5						
Max Q Clear Time (g_c+1), s	18.9	11.3	29.2	6.4	9.2	5.0	55.5						
Green Ext Time (p_c), s	0.0	0.0	0.2	7.0	0.4	0.3	0.0						
Intersection Summary													
HCM 2010 Ctrl Delay				65.7									
HCM 2010 LOS				E									

Year 2035 + Proj PM
9: EI Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	636	884	15	50	1046	260	10	10	20	149	5	403	
Future Volume (veh/h)	636	884	15	50	1046	260	10	10	20	149	5	403	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00	
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863	
Adj Flow Rate, veh/h	691	961	16	54	1137	283	11	11	22	162	5	438	
Adj No. of Lanes	1	2	0	1	2	0	0	1	1	1	0	1	
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	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	454	2025	34	69	990	244	38	38	65	335	10	305	
Arrive On Green	0.26	0.57	0.57	0.04	0.35	0.35	0.04	0.04	0.04	0.19	0.19	0.19	
Sat Flow, veh/h	1774	3562	59	1774	2813	694	909	909	1561	1723	53	1569	
Grp Volume(v), veh/h	691	477	500	54	711	709	22	0	22	167	0	438	
Grp Sat Flow(s), veh/h/ln	1774	1770	1852	1774	1770	1738	1817	0	1561	1777	0	1569	
Q Serve(g_s), s	35.5	22.1	22.1	4.2	48.8	48.8	1.6	0.0	1.9	11.6	0.0	27.0	
Cycle Q Clear(g_c), s	35.5	22.1	22.1	4.2	48.8	48.8	1.6	0.0	1.9	11.6	0.0	27.0	
Prop In Lane	1.00	0.03	1.00	1.00	1.00	0.40	0.50	1.00	0.97	1.00	0.25	1.00	
Lane Grp Cap(c), veh/h	454	1006	1053	69	622	611	75	0	65	346	0	305	
V/C Ratio(X)	1.52	0.47	0.47	0.78	1.14	1.16	0.29	0.00	0.34	0.48	0.00	1.43	
Avail Cap(c_a), veh/h	454	1006	1053	133	622	611	354	0	304	346	0	305	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	51.6	17.7	17.7	66.1	45.0	45.0	64.5	0.0	64.7	49.7	0.0	55.9	
Incr Delay (d2), s/veh	246.1	0.4	0.4	6.9	82.4	89.0	2.6	0.0	3.7	1.3	0.0	213.5	
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	10.9	11.4	2.2	37.9	38.4	0.9	0.0	0.9	5.8	0.0	0.0	29.8	
LnGrp Delay(d), s/veh	297.7	18.1	18.1	73.0	127.4	133.9	67.1	0.0	68.3	50.9	0.0	269.4	
LnGrp LOS	F	B	B	E	F	F	E		E	D		F	
Approach Vol, veh/h	1668			1474				44			605		
Approach Delay, s/veh	133.9			128.5				67.7			209.1		
Approach LOS	F			F				E			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4	5	6		8					
Phs Duration (G+Y+Rc), s	85.1			32.5	40.0	55.0		11.3					
Change Period (Y+Rc), s	6.2			5.5	4.5	6.2		5.5					
Max Green Setting (Gmax), s	73.9			27.0	35.5	48.8		27.0					
Max Q Clear Time (g_c+1), s	24.1			29.0	37.5	50.8		3.9					
Green Ext Time (p_c), s	0.0	31.8		0.0	0.0	0.0		0.1					
Intersection Summary													
HCM 2010 Ctrl Delay				143.1									
HCM 2010 LOS				F									

Year 2035 + Proj PM
10: Bennett Ave/Private Dwy & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	25	1024	129	235	1138	30	180	130	270	20	17	8
Future Volume (veh/h)	25	1024	129	235	1138	30	180	130	270	20	17	8
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.97	1.00		0.98	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	27	1113	140	255	1237	33	196	141	293	22	18	9
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	45	1338	168	286	1970	53	225	400	338	40	128	64
Arrive On Green	0.03	0.42	0.42	0.16	0.56	0.56	0.13	0.21	0.21	0.02	0.11	0.11
Sat Flow, veh/h	1774	3154	396	1774	3519	94	1774	1863	1577	1774	1166	583
Grp Volume(v), veh/h	27	623	630	255	622	648	196	141	293	22	0	27
Grp Sat Flow(s), veh/h/ln	1774	1770	1781	1774	1770	1843	1774	1863	1577	1774	0	1748
Q Serve(g_s), s	1.7	34.3	34.5	15.4	26.1	26.2	11.9	7.1	19.7	1.3	0.0	1.5
Cycle Q Clear(g_c), s	1.7	34.3	34.5	15.4	26.1	26.2	11.9	7.1	19.7	1.3	0.0	1.5
Prop In Lane	1.00		0.22	1.00		0.05	1.00		1.00	1.00		0.33
Lane Grp Cap(c), veh/h	45	751	755	286	991	1032	225	400	338	40	0	192
V/C Ratio(X)	0.60	0.83	0.83	0.89	0.63	0.63	0.87	0.35	0.87	0.56	0.00	0.14
Avail Cap(c_a), veh/h	100	777	781	338	1014	1056	243	603	511	97	0	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	52.8	28.1	28.1	45.0	16.4	16.4	47.0	36.6	41.5	53.1	0.0	44.1
Incr Delay (d2), s/veh	11.8	7.4	7.5	22.0	1.3	1.3	25.9	0.4	8.6	11.7	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0	18.3	18.5	9.3	13.0	13.5	7.4	3.7	9.4	0.8	0.0	0.8
LnGrp Delay(d), s/veh	64.7	35.4	35.6	67.0	17.7	17.6	72.9	37.0	50.1	64.7	0.0	44.4
LnGrp LOS	E	D	D	E	B	B	E	D	D	E	D	D
Approach Vol, veh/h	1280			1525			630			49		
Approach Delay, s/veh	36.2			25.9			54.3			53.5		
Approach LOS	D			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	52.2	52.5	17.9	17.0	7.3	67.4	6.4	28.5				
Change Period (Y+Rc), s	4.5	6.0	4.0	5	4.5	6.0	4.0	5.0				
Max Green Setting (Gmax), s	48.1	15.0	27	6.2	62.8	6.0	35.5					
Max Q Clear Time (g_c+I), s	36.5	13.9	3.5	3.7	28.2	3.3	21.7					
Green Ext Time (p_c), s	0.2	10.0	0.1	1.5	0.0	24.4	0.0	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay				35.2								
HCM 2010 LOS				D								
Notes												

Year 2035 + Proj PM
11: Rees Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	25	1030	120	230	1140	30	170	140	270	20	50	13
Future Volume (veh/h)	25	1030	120	230	1140	30	170	140	270	20	50	13
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	27	1120	130	250	1239	33	185	152	293	22	54	14
Adj No. of Lanes	1	2	0	1	2	0	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	42	1263	146	293	1892	50	387	138	266	105	345	89
Arrive On Green	0.02	0.40	0.40	0.17	0.54	0.54	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1774	3197	370	1774	3522	94	1328	570	1099	941	1427	370
Grp Volume(v), veh/h	27	619	631	250	622	650	185	0	445	22	0	68
Grp Sat Flow(s), veh/h/ln	1774	1770	1797	1774	1770	1846	1328	0	1669	941	0	1797
Q Serve(g_s), s	1.0	22.2	22.3	9.3	17.1	17.2	8.7	0.0	16.5	0.0	0.0	2.0
Cycle Q Clear(g_c), s	1.0	22.2	22.3	9.3	17.1	17.2	10.7	0.0	16.5	16.5	0.0	2.0
Prop In Lane	1.00		0.21	1.00		0.05	1.00		1.00	1.00		0.21
Lane Grp Cap(c), veh/h	42	699	710	293	950	992	387	0	403	105	0	434
V/C Ratio(X)	0.65	0.89	0.89	0.85	0.65	0.66	0.48	0.00	1.10	0.21	0.00	0.16
Avail Cap(c_a), veh/h	107	728	740	309	950	992	387	0	403	105	0	434
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	33.1	19.2	19.2	27.7	11.3	11.3	24.6	0.0	25.9	34.1	0.0	20.4
Incr Delay (d2), s/veh	15.7	12.3	12.4	19.2	1.6	1.6	0.9	0.0	75.7	1.0	0.0	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.7	13.1	13.5	6.1	8.7	9.1	3.3	0.0	16.0	0.4	0.0	1.0
LnGrp Delay(d), s/veh	48.7	31.5	31.6	46.9	12.9	12.9	25.6	0.0	101.6	35.1	0.0	20.6
LnGrp LOS	D	C	C	D	B	B	C		F	D		C
Approach Vol, veh/h	1277			1522			630			90		
Approach Delay, s/veh	31.9			18.5			79.3			24.1		
Approach LOS	C			B			E			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.8	31.5		21.0	6.1	41.2		21.0				
Change Period (Y+Rc), s	4.5	4.5		4.5	4.5	4.5		4.5				
Max Green Setting (Gmax), s	28.1	16.5		16.5	4.1	35.9		16.5				
Max Q Clear Time (g_c+I), s	24.3	18.5		3.0	19.2		18.5					
Green Ext Time (p_c), s	0.0	2.7		0.0	0.0	13.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay				34.4								
HCM 2010 LOS				C								
Notes												

Year 2035 + Proj PM
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	120	1110	60	200	1190	330	80	330	300	330	196	70	
Future Volume (veh/h)	120	1110	60	200	1190	330	80	330	300	330	196	70	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	
Adj Flow Rate, veh/h	122	1133	0	204	1214	337	82	337	306	337	200	71	
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	1	1	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	113	1217	545	226	1142	312	104	389	331	298	593	504	
Arrive On Green	0.06	0.34	0.00	0.13	0.42	0.42	0.06	0.21	0.21	0.17	0.32	0.32	
Sat Flow, veh/h	1774	3539	1583	1774	2748	751	1774	1863	1583	1774	1863	1583	
Grp Volume(v), veh/h	122	1133	0	204	775	776	82	337	306	337	200	71	
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1729	1774	1863	1583	1774	1863	1583	
Q Serve(g_s), s	8.0	38.7	0.0	14.2	52.0	52.0	5.7	21.9	17.5	21.0	10.3	4.0	
Cycle Q Clear(g_c), s	8.0	38.7	0.0	14.2	52.0	52.0	5.7	21.9	17.5	21.0	10.3	4.0	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	113	1217	545	226	735	718	104	389	331	298	593	504	
V/C Ratio(X)	1.08	0.93	0.00	0.90	1.05	1.08	0.79	0.87	0.92	1.13	0.34	0.14	
Avail Cap(c_a), veh/h	113	1272	569	226	735	718	170	461	392	298	595	506	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Uniform Delay (d), s/veh	58.6	39.6	0.0	53.8	36.6	36.6	58.2	47.8	26.4	52.1	32.6	30.4	
Incr Delay (d2), s/veh	106.4	11.8	0.0	34.5	48.2	57.6	9.6	13.3	24.4	92.7	0.2	0.1	
Initial Q Delay(d3), s/veh	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%), veh/ln	3	20.9	0.0	9.1	35.2	36.2	3.1	12.7	10.5	17.9	5.3	1.8	
LnGrp Delay(d), s/veh	165.1	51.4	0.0	88.3	84.8	94.1	67.8	61.1	50.9	144.8	32.8	30.5	
LnGrp LOS	F	D		F	F	F	E	E	D	F	C	C	
Approach Vol, veh/h	1255			1755				725			608		
Approach Delay, s/veh	62.4			89.3				57.5			94.6		
Approach LOS	E			F				E			F		
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	48.1	11.3	44.9	12.0	57.0	25.0	31.2						
Change Period (Y+Rc), s	5.0	5.0	4.0	5.0	4.0	5.0	4.0	5.0					
Max Green Setting (Gmax), s	45	12.0	40.0	8.0	52.0	21.0	31.0						
Max Q Clear Time (g_c+I), s	40.7	7.7	12.3	10.0	54.0	23.0	23.9						
Green Ext Time (p_c), s	0.0	2.4	0.0	3.8	0.0	0.0	2.3						
Intersection Summary													
HCM 2010 Ctrl Delay	77.0												
HCM 2010 LOS	E												
Notes													

Year 2035 + Proj PM
13: I-15 SB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔	
Traffic Volume (veh/h)	0	1475	535	330	2180	0	0	0	0	140	5	200	
Future Volume (veh/h)	0	1475	535	330	2180	0	0	0	0	140	5	200	
Number	5	2	12	1	6	16				7	4	14	
Initial Q (Ob), 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				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	0	1863	1863	1863	1863	0				1863	1863	1863	
Adj Flow Rate, veh/h	0	1553	563	347	2295	0				100	0	265	
Adj No. of Lanes	0	3	1	2	3	0				1	0	2	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95				0.95	0.95	0.95	
Percent Heavy Veh, %	0	2	2	2	2	0				2	2	2	
Cap, veh/h	0	3199	995	417	4032	0				192	0	342	
Arrive On Green	0.00	0.63	0.63	0.24	1.00	0.00				0.11	0.00	0.11	
Sat Flow, veh/h	0	5253	1582	3442	5253	0				1774	0	3167	
Grp Volume(v), veh/h	0	1553	563	347	2295	0				100	0	265	
Grp Sat Flow(s), veh/h/ln	0	1695	1582	1721	1695	0				1774	0	1583	
Q Serve(g_s), s	0.0	17.9	22.5	10.5	0.0	0.0				5.9	0.0	9.0	
Cycle Q Clear(g_c), s	0.0	17.9	22.5	10.5	0.0	0.0				5.9	0.0	9.0	
Prop In Lane	0.00	1.00	1.00	1.00	0.00	0.00				1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	0	3199	995	417	4032	0				192	0	342	
V/C Ratio(X)	0.00	0.49	0.57	0.83	0.57	0.00				0.52	0.00	0.78	
Avail Cap(c_a), veh/h	0	3199	995	666	4032	0				321	0	573	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00				1.00	1.00	1.00	
Upstream Filter(I)	0.00	0.26	0.26	0.09	0.09	0.00				1.00	0.00	1.00	
Uniform Delay (d), s/veh	0.0	10.9	11.7	40.6	0.0	0.0				46.4	0.0	47.8	
Incr Delay (d2), s/veh	0.0	0.1	0.6	0.5	0.1	0.0				2.2	0.0	3.8	
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	0.0	8.4	9.9	4.9	0.0	0.0				3.0	0.0	4.1	
LnGrp Delay(d), s/veh	0.0	11.0	12.3	41.1	0.1	0.0				48.6	0.0	51.5	
LnGrp LOS		B	B	D	A					D		D	
Approach Vol, veh/h	2116			2642				365					
Approach Delay, s/veh	11.4			5.4				50.7					
Approach LOS	B			A				D					
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2		4		6							
Phs Duration (G+Y+Rc), s	75.0			17.0		93.0							
Change Period (Y+Rc), s	4.7	5.8		5.1		5.8							
Max Green Setting (Gmax), s	53.2			19.9		79.2							
Max Q Clear Time (g_c+I), s	24.5			11.0		2.0							
Green Ext Time (p_c), s	0.8	27.6		0.9		70.2							
Intersection Summary													
HCM 2010 Ctrl Delay	11.1												
HCM 2010 LOS	B												
Notes													

Year 2035 + Proj PM
14: I-15 NB Ramps & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘		
Traffic Volume (veh/h)	365	1250	0	0	1270	300	1240	5	620	0	0	0
Future Volume (veh/h)	365	1250	0	0	1270	300	1240	5	620	0	0	0
Number	5	2	12	1	6	16	3	8	18			
Initial Q (Ob), 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	1863	1863	0	0	1863	1863	1863	1863	1863			
Adj Flow Rate, veh/h	388	1330	0	0	1351	319	1526	0	442			
Adj No. of Lanes	1	3	0	0	3	1	2	0	1			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94			
Percent Heavy Veh, %	2	2	0	0	2	2	2	2	2			
Cap, veh/h	952	4327	0	0	1331	415	1384	0	618			
Arrive On Green	0.18	0.28	0.00	0.00	0.26	0.26	0.39	0.00	0.39			
Sat Flow, veh/h	1774	5253	0	0	5253	1583	3548	0	1583			
Grp Volume(v), veh/h	388	1330	0	0	1351	319	1526	0	442			
Grp Sat Flow(s),veh/h/ln	1774	1695	0	0	1695	1583	1774	0	1583			
Q Serve(g_s), s	21.3	22.6	0.0	0.0	28.8	20.5	42.9	0.0	26.0			
Cycle Q Clear(g_c), s	21.3	22.6	0.0	0.0	28.8	20.5	42.9	0.0	26.0			
Prop In Lane	1.00		0.00	0.00		1.00	1.00		1.00			
Lane Grp Cap(c), veh/h	952	4327	0	0	1331	415	1384	0	618			
V/C Ratio(X)	0.41	0.31	0.00	0.00	1.01	0.77	1.10	0.00	0.72			
Avail Cap(c_a), veh/h	952	4327	0	0	1331	415	1384	0	618			
HCM Platoon Ratio	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00			
Upstream Filter(I)	0.84	0.84	0.00	0.00	0.42	0.42	1.00	0.00	1.00			
Uniform Delay (d), s/veh	29.8	14.0	0.0	0.0	40.6	37.5	33.5	0.0	28.4			
Incr Delay (d2), s/veh	0.2	0.2	0.0	0.0	19.7	5.8	57.5	0.0	3.9			
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	10.6	10.7	0.0	0.0	15.9	9.6	32.0	0.0	12.0			
LnGrp Delay(d),s/veh	30.0	14.2	0.0	0.0	60.3	43.3	91.0	0.0	32.3			
LnGrp LOS	C	B			F	D	F		C			
Approach Vol, veh/h	1718			1670			1968					
Approach Delay, s/veh	17.8			57.1			77.9					
Approach LOS	B			E			E					
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		5		6		8					
Phs Duration (G+Y+Rc), s	100.5		65.9		34.6		48.0					
Change Period (Y+Rc), s	5.8		5.8		5.8		5.1					
Max Green Setting (Gmax), s	56.2		22.7		29		42.9					
Max Q Clear Time (g_c+I1), s	24.6		23.3		30.8		44.9					
Green Ext Time (p_c), s	12.6		0.0		0.0		0.0					
Intersection Summary												
HCM 2010 Ctrl Delay				52.1								
HCM 2010 LOS				D								
Notes												

Year 2035 + Proj PM
15: 7 Oaks Rd & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘			↖ ↗ ↘		
Traffic Volume (veh/h)	150	1550	140	110	1210	40	250	30	230	30	10	180
Future Volume (veh/h)	150	1550	140	110	1210	40	250	30	230	30	10	180
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.98	1.00		0.99	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	163	1685	152	120	1315	43	272	33	250	33	11	196
Adj No. of Lanes	1	2	0	1	2	0	1	1	0	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	192	1700	151	140	1705	56	268	52	395	202	24	424
Arrive On Green	0.11	0.52	0.52	0.08	0.49	0.49	0.28	0.28	0.28	0.28	0.28	0.28
Sat Flow, veh/h	1774	3286	293	1774	3495	114	1169	185	1405	1092	85	1508
Grp Volume(v), veh/h	163	898	939	120	665	693	272	0	283	33	0	207
Grp Sat Flow(s),veh/h/ln	1774	1770	1810	1774	1770	1839	1169	0	1590	1092	0	1593
Q Serve(g_s), s	9.9	54.7	56.9	7.3	33.9	34.0	19.1	0.0	17.1	3.0	0.0	11.8
Cycle Q Clear(g_c), s	9.9	54.7	56.9	7.3	33.9	34.0	30.9	0.0	17.1	20.1	0.0	11.8
Prop In Lane	1.00		0.16	1.00		0.06	1.00		0.88	1.00		0.95
Lane Grp Cap(c), veh/h	192	915	936	140	863	897	268	0	447	202	0	447
V/C Ratio(X)	0.85	0.98	1.00	0.86	0.77	0.77	1.01	0.00	0.63	0.16	0.00	0.46
Avail Cap(c_a), veh/h	231	915	936	140	863	897	268	0	447	202	0	447
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	48.1	26.0	26.6	50.0	23.1	23.1	47.8	0.0	34.6	43.4	0.0	32.7
Incr Delay (d2), s/veh	21.4	25.5	30.2	37.3	6.6	6.4	58.5	0.0	2.9	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.0	32.9	36.2	5.1	18.0	18.7	12.5	0.0	7.9	0.9	0.0	5.3
LnGrp Delay(d),s/veh	69.5	51.5	56.8	87.3	29.7	29.5	106.3	0.0	37.5	43.8	0.0	33.4
LnGrp LOS	E	D	F	F	C	C	F		D	D		C
Approach Vol, veh/h	2000			1478			555			240		
Approach Delay, s/veh	55.4			34.3			71.2			34.9		
Approach LOS	E			C			E			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1		2		4		5		6		8	
Phs Duration (G+Y+Rc), s	63.2		61.4		35.4		16.4		58.2		35.4	
Change Period (Y+Rc), s	4.5		4.5		4.5		4.5		4.5		4.5	
Max Green Setting (Gmax), s	58.9		30.9		14.3		51.3		30.9			
Max Q Clear Time (g_c+I1), s	58.9		22.1		11.9		36.0		32.9			
Green Ext Time (p_c), s	0.0		0.0		3.0		0.1		14.0			
Intersection Summary												
HCM 2010 Ctrl Delay				49.0								
HCM 2010 LOS				D								
Notes												

Year 2035 + Proj PM
16: Centre City Parkway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	40	1290	230	230	960	150	390	790	510	220	280	30
Future Volume (veh/h)	40	1290	230	230	960	150	390	790	510	220	280	30
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	41	1330	237	237	990	155	402	814	526	227	289	31
Adj No. of Lanes	2	2	1	2	3	0	2	2	1	2	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	534	1262	564	271	1221	191	1041	1220	546	248	379	169
Arrive On Green	0.16	0.36	0.36	0.16	0.55	0.55	0.30	0.34	0.34	0.07	0.11	0.11
Sat Flow, veh/h	3442	3539	1582	3442	4435	693	3442	3539	1583	3442	3539	1583
Grp Volume(v), veh/h	41	1330	237	237	756	389	402	814	526	227	289	31
Grp Sat Flow(s),veh/h/ln	1721	1770	1582	1721	1695	1738	1721	1770	1583	1721	1770	1583
Q Serve(g_s), s	1.7	58.8	7.6	11.1	29.9	30.0	15.2	32.3	53.8	10.8	13.1	2.9
Cycle Q Clear(g_c), s	1.7	58.8	7.6	11.1	29.9	30.0	15.2	32.3	53.8	10.8	13.1	2.9
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	534	1262	564	271	933	478	1041	1220	546	248	379	169
V/C Ratio(X)	0.08	1.05	0.42	0.87	0.81	0.81	0.39	0.67	0.96	0.91	0.76	0.18
Avail Cap(c_a), veh/h	534	1262	564	271	1171	600	1041	1233	552	248	1094	489
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.6	53.1	6.6	68.7	33.6	33.6	45.4	46.0	53.1	76.0	71.6	67.1
Incr Delay (d2), s/veh	0.0	40.8	2.3	3.0	0.7	1.4	0.1	1.5	29.3	34.5	3.8	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8	35.9	3.7	5.3	13.8	14.3	7.3	16.1	28.0	6.3	6.6	1.3
LnGrp Delay(d),s/veh	59.6	93.9	8.9	71.7	34.3	35.1	45.5	47.5	82.3	110.5	75.5	67.7
LnGrp LOS	E	F	A	E	C	D	D	D	F	F	E	E
Approach Vol, veh/h	1608			1382			1742			547		
Approach Delay, s/veh	80.5			40.9			57.6			89.6		
Approach LOS	F			D			E			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	65.7	56.2	24.0	32.5	52.3	17.0	63.2					
Change Period (Y+Rc), s	6.1	6.9	6.3	* 6.3	6.9	* 6.9	5.1	6.3				
Max Green Setting (Gmax), s	58.2	18.4	* 51	14.0	* 57	11.9	57.5					
Max Q Clear Time (g_c+I+I2), s	60.8	17.2	15.1	3.7	32.0	12.8	55.8					
Green Ext Time (p_c), s	0.0	0.0	1.0	2.6	8.3	12.4	0.0	1.1				
Intersection Summary												
HCM 2010 Ctrl Delay	63.5											
HCM 2010 LOS	E											
Notes												

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Year 2035 + Proj PM
17: Broadway & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	455	1620	165	230	1320	60	190	600	340	140	670	210
Future Volume (veh/h)	455	1620	165	230	1320	60	190	600	340	140	670	210
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.92	1.00	1.00	0.87
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	495	1761	179	250	1435	65	207	652	370	152	728	228
Adj No. of Lanes	2	2	0	2	2	0	1	2	0	1	2	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	457	1537	153	240	1415	64	177	568	322	134	624	195
Arrive On Green	0.13	0.47	0.47	0.07	0.41	0.41	0.10	0.27	0.27	0.08	0.24	0.24
Sat Flow, veh/h	3442	3246	324	3442	3448	156	1774	2109	1197	1774	2548	798
Grp Volume(v), veh/h	495	1761	179	250	1435	65	207	652	370	152	728	228
Grp Sat Flow(s),veh/h/ln	1721	1770	1801	1721	1770	1834	1774	1770	1536	1774	1770	1577
Q Serve(g_s), s	21.9	78.1	78.1	11.5	67.7	67.7	16.5	44.4	44.4	12.5	40.4	40.4
Cycle Q Clear(g_c), s	21.9	78.1	78.1	11.5	67.7	67.7	16.5	44.4	44.4	12.5	40.4	40.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	457	838	852	240	726	752	177	476	413	134	433	386
V/C Ratio(X)	1.08	1.13	1.17	1.04	1.01	1.02	1.17	1.15	1.15	1.13	1.17	1.17
Avail Cap(c_a), veh/h	457	838	852	240	726	752	177	476	413	134	433	386
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.23	0.23	0.23	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.6	43.5	43.5	76.7	48.6	48.7	74.3	60.3	60.3	76.3	62.3	62.3
Incr Delay (d2), s/veh	47.0	61.9	78.3	69.6	36.5	37.1	119.6	88.9	91.7	117.1	97.4	99.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	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	52.6	57.4	7.8	40.4	42.0	14.0	33.4	29.4	10.5	31.5	28.3
LnGrp Delay(d),s/veh	118.5	105.3	121.8	146.3	85.1	85.7	193.9	149.2	152.0	193.4	159.7	161.9
LnGrp LOS	F	F	F	F	F	F	F	F	F	F	F	F
Approach Vol, veh/h	2435			1750			1229			1108		
Approach Delay, s/veh	114.7			94.1			157.8			165.3		
Approach LOS	F			F			F			F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	83.0	21.0	45.0	26.4	72.6	17.0	49.0					
Change Period (Y+Rc), s	4.5	4.9	4.5	4.6	4.5	4.9	4.5	4.6				
Max Green Setting (Gmax), s	78.1	16.5	40.4	21.9	67.7	12.5	44.4					
Max Q Clear Time (g_c+I+I2), s	80.1	18.5	42.4	23.9	69.7	14.5	46.4					
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0					
Intersection Summary												
HCM 2010 Ctrl Delay	125.9											
HCM 2010 LOS	F											
Notes												

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

APPENDIX J

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – NEAR-TERM DRIVEWAYS

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Access - Ex + Proj AM
18: Proj Drwy E & Gary Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	119	1	4	34	4	6
Future Vol, veh/h	119	1	4	34	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	-	-	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	129	1	4	37	4	7

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	130	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	1455	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1455	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	874	-	-	1455	-
HCM Lane V/C Ratio	0.012	-	-	0.003	-
HCM Control Delay (s)	9.2	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Access - Ex + Proj AM
19: Proj Drwy F & Country Club Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.8						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	244	10	11	523	23	26
Future Vol, veh/h	244	10	11	523	23	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	150	-	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	265	11	12	568	25	28

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	276	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.22	-
Pot Cap-1 Maneuver	-	-	1284	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1284	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	11.6
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	602	-	-	1284	-
HCM Lane V/C Ratio	0.088	-	-	0.009	-
HCM Control Delay (s)	11.6	-	-	7.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Access - Ex + Proj AM
20: La Brea St & Proj Drwy G

The Villages
06/19/2017

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↕	
Traffic Vol, veh/h	13	19	29	6	8	24
Future Vol, veh/h	13	19	29	6	8	24
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	-	-	-	-	-
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	14	21	32	7	9	26
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	78	35	0	0	38	0
Stage 1	35	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	925	1038	-	-	1572	-
Stage 1	987	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	919	1038	-	-	1572	-
Mov Cap-2 Maneuver	919	-	-	-	-	-
Stage 1	987	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.8		0		1.8	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	986	1572	-	-
HCM Lane V/C Ratio	-	-	0.035	0.006	-	-
HCM Control Delay (s)	-	-	8.8	7.3	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-	-

Access - Ex + Proj AM
21: Gary Lane & Proj Drwy B/Proj Drwy C

The Villages
06/19/2017

Intersection												
Int Delay, s/veh	2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	0	27	10	0	0	11	36	4	0	122	0
Future Vol, veh/h	0	0	27	10	0	0	11	36	4	0	122	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	29	11	0	0	12	39	4	0	133	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	198	200	133	212	198	41	133	0	0	43	0	0
Stage 1	133	133	-	65	65	-	-	-	-	-	-	-
Stage 2	65	67	-	147	133	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	761	696	916	745	698	1030	1452	-	-	1566	-	-
Stage 1	870	786	-	946	841	-	-	-	-	-	-	-
Stage 2	946	839	-	856	786	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	756	690	916	717	692	1030	1452	-	-	1566	-	-
Mov Cap-2 Maneuver	756	690	-	717	692	-	-	-	-	-	-	-
Stage 1	863	786	-	938	834	-	-	-	-	-	-	-
Stage 2	938	832	-	829	786	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.1			10.1			1.6			0		
HCM LOS	A			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1452	-	-	916	717	1566	-	-	-	-	-	-
HCM Lane V/C Ratio	0.008	-	-	0.032	0.015	-	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	9.1	10.1	0	-	-	-	-	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-	-	-	-	-

Access - Ex + Proj PM
18: Proj Drwy E & Gary Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	69	3	10	93	2	4
Future Vol, veh/h	69	3	10	93	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	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	75	3	11	101	2	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	78	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	1520	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1520	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	906	-	-	1520	-
HCM Lane V/C Ratio	0.007	-	-	0.007	-
HCM Control Delay (s)	9	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Access - Ex + Proj PM
19: Proj Drwy F & Country Club Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	427	29	33	298	12	14
Future Vol, veh/h	427	29	33	298	12	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	150	-	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	464	32	36	324	13	15

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	496	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.22	-
Pot Cap-1 Maneuver	-	-	1064	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1064	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	12.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	495	-	-	1064	-
HCM Lane V/C Ratio	0.057	-	-	0.034	-
HCM Control Delay (s)	12.7	-	-	8.5	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Access - Ex + Proj PM
20: La Brea St & Proj Drwy G

The Villages
06/19/2017

Intersection						
Int Delay, s/veh	2.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	7	10	32	16	25	44
Future Vol, veh/h	7	10	32	16	25	44
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	-	-	-	-	-
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	8	11	35	17	27	48
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	145	43	0	0	52	0
Stage 1	43	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	847	1027	-	-	1554	-
Stage 1	979	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	832	1027	-	-	1554	-
Mov Cap-2 Maneuver	832	-	-	-	-	-
Stage 1	979	-	-	-	-	-
Stage 2	905	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		2.7		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT		
Capacity (veh/h)	-	- 937	1554	-		
HCM Lane V/C Ratio	-	- 0.02	0.017	-		
HCM Control Delay (s)	-	- 8.9	7.4	0		
HCM Lane LOS	-	- A	A	A		
HCM 95th %tile Q(veh)	-	- 0.1	0.1	-		

Access - Ex + Proj PM
21: Gary Lane & Proj Drwy B/Proj Drwy C

The Villages
06/19/2017

Intersection												
Int Delay, s/veh	1.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	0	14	5	0	0	33	97	13	0	71	0
Future Vol, veh/h	0	0	14	5	0	0	33	97	13	0	71	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	15	5	0	0	36	105	14	0	77	0
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	261	268	77	269	261	112	77	0	0	120	0	0
Stage 1	77	77	-	184	184	-	-	-	-	-	-	-
Stage 2	184	191	-	85	77	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	692	638	984	684	644	941	1522	-	-	1468	-	-
Stage 1	932	831	-	818	747	-	-	-	-	-	-	-
Stage 2	818	742	-	923	831	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	679	622	984	661	628	941	1522	-	-	1468	-	-
Mov Cap-2 Maneuver	679	622	-	661	628	-	-	-	-	-	-	-
Stage 1	909	831	-	798	728	-	-	-	-	-	-	-
Stage 2	798	723	-	909	831	-	-	-	-	-	-	-
Approach	EB	WB			NB			SB				
HCM Control Delay, s	8.7	10.5			1.7			0				
HCM LOS	A	B										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR					
Capacity (veh/h)	1522	-	-	984	661	1468	-					
HCM Lane V/C Ratio	0.024	-	-	0.015	0.008	-	-					
HCM Control Delay (s)	7.4	0	-	8.7	10.5	0	-					
HCM Lane LOS	A	A	-	A	B	A	-					
HCM 95th %tile Q(veh)	0.1	-	-	0	0	0	-					

Access - Ex + Cuml + Proj AM
18: Proj Drwy E & Gary Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	130	1	4	37	4	6
Future Vol, veh/h	130	1	4	37	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	-	-	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	141	1	4	40	4	7

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	142	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	1441	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1441	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9.3
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	845	-	-	1441	-
HCM Lane V/C Ratio	0.013	-	-	0.003	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Access - Ex + Cuml + Proj AM
19: Proj Drwy F & Country Club Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	263	10	11	569	23	26
Future Vol, veh/h	263	10	11	569	23	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	150	-	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	286	11	12	618	25	28

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	297	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.22	-
Pot Cap-1 Maneuver	-	-	1261	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1261	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	11.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	573	-	-	1261	-
HCM Lane V/C Ratio	0.093	-	-	0.009	-
HCM Control Delay (s)	11.9	-	-	7.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Access - Ex + Cuml + Proj AM
20: La Brea St & Proj Drwy G

The Villages
06/19/2017

Intersection						
Int Delay, s/veh	3.3					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↕	
Traffic Vol, veh/h	13	19	31	6	8	25
Future Vol, veh/h	13	19	31	6	8	25
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	-	-	-	-	-
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	14	21	34	7	9	27
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	82	37	0	0	40	0
Stage 1	37	-	-	-	-	-
Stage 2	45	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	920	1035	-	-	1570	-
Stage 1	985	-	-	-	-	-
Stage 2	977	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	914	1035	-	-	1570	-
Mov Cap-2 Maneuver	914	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	971	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.8		0		1.8	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	982	1570	-	-
HCM Lane V/C Ratio	-	-	0.035	0.006	-	-
HCM Control Delay (s)	-	-	8.8	7.3	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-	-

Access - Ex + Cuml + Proj AM
21: Gary Lane & Proj Drwy B/Proj Drwy C

The Villages
06/19/2017

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	0	27	10	0	0	11	39	4	0	133	0
Future Vol, veh/h	0	0	27	10	0	0	11	39	4	0	133	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	29	11	0	0	12	42	4	0	145	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	213	216	145	227	213	45	145	0	0	47	0	0
Stage 1	145	145	-	68	68	-	-	-	-	-	-	-
Stage 2	68	71	-	159	145	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	744	682	902	728	684	1025	1437	-	-	1560	-	-
Stage 1	858	777	-	942	838	-	-	-	-	-	-	-
Stage 2	942	836	-	843	777	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	739	676	902	699	678	1025	1437	-	-	1560	-	-
Mov Cap-2 Maneuver	739	676	-	699	678	-	-	-	-	-	-	-
Stage 1	850	777	-	934	830	-	-	-	-	-	-	-
Stage 2	934	828	-	816	777	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.1			10.2			1.5			0		
HCM LOS	A			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1437	-	-	902	699	1560	-	-	-	-	-	-
HCM Lane V/C Ratio	0.008	-	-	0.033	0.016	-	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	9.1	10.2	0	-	-	-	-	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-	-	-	-	-

Access - Ex + Cuml + Proj PM
18: Proj Drwy E & Gary Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	76	3	10	102	2	4
Future Vol, veh/h	76	3	10	102	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	-	-	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	83	3	11	111	2	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	86	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	1510	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1510	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9.1
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	893	-	-	1510	-
HCM Lane V/C Ratio	0.007	-	-	0.007	-
HCM Control Delay (s)	9.1	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Access - Ex + Cuml + Proj PM
19: Proj Drwy F & Country Club Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.7						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	463	29	33	320	12	14
Future Vol, veh/h	463	29	33	320	12	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	150	-	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	503	32	36	348	13	15

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	535	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.22	-
Pot Cap-1 Maneuver	-	-	1029	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1029	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	13.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	466	-	-	1029	-
HCM Lane V/C Ratio	0.061	-	-	0.035	-
HCM Control Delay (s)	13.2	-	-	8.6	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0.1	-

Access - Ex + Cuml + Proj PM
20: La Brea St & Proj Drwy G

The Villages
06/19/2017

Intersection						
Int Delay, s/veh	2.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↕	
Traffic Vol, veh/h	7	10	34	16	25	48
Future Vol, veh/h	7	10	34	16	25	48
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	-	-	-	-	-
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	8	11	37	17	27	52
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	153	46	0	0	54	0
Stage 1	46	-	-	-	-	-
Stage 2	107	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	839	1023	-	-	1551	-
Stage 1	976	-	-	-	-	-
Stage 2	917	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	824	1023	-	-	1551	-
Mov Cap-2 Maneuver	824	-	-	-	-	-
Stage 1	976	-	-	-	-	-
Stage 2	900	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	8.9	0		2.5		
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	930	1551	-	
HCM Lane V/C Ratio	-	-	0.02	0.018	-	
HCM Control Delay (s)	-	-	8.9	7.4	0	
HCM Lane LOS	-	-	A	A	A	
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-	

Access - Ex + Cuml + Proj PM
21: Gary Lane & Proj Drwy B/Proj Drwy C

The Villages
06/19/2017

Intersection												
Int Delay, s/veh	1.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↕			↕		
Traffic Vol, veh/h	0	0	14	5	0	0	33	106	13	0	78	0
Future Vol, veh/h	0	0	14	5	0	0	33	106	13	0	78	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	15	5	0	0	36	115	14	0	85	0
Major/Minor	Minor2	Minor1		Major1		Major2						
Conflicting Flow All	279	286	85	286	279	122	85	0	0	129	0	0
Stage 1	85	85	-	194	194	-	-	-	-	-	-	-
Stage 2	194	201	-	92	85	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	673	623	974	666	629	929	1512	-	-	1457	-	-
Stage 1	923	824	-	808	740	-	-	-	-	-	-	-
Stage 2	808	735	-	915	824	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	660	607	974	643	613	929	1512	-	-	1457	-	-
Mov Cap-2 Maneuver	660	607	-	643	613	-	-	-	-	-	-	-
Stage 1	899	824	-	787	721	-	-	-	-	-	-	-
Stage 2	787	716	-	901	824	-	-	-	-	-	-	-
Approach	EB	WB		NB		SB						
HCM Control Delay, s	8.8	10.6		1.6		0						
HCM LOS	A	B										
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1512	-	-	974	643	1457	-	-				
HCM Lane V/C Ratio	0.024	-	-	0.016	0.008	-	-	-				
HCM Control Delay (s)	7.4	0	-	8.8	10.6	0	-	-				
HCM Lane LOS	A	A	-	A	B	A	-	-				
HCM 95th %tile Q(veh)	0.1	-	-	0	0	0	-	-				

APPENDIX K

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – LONG-TERM DRIVEWAYS

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Access - Year 2035 + Proj AM
18: Proj Drwy E & Gary Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.6						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	135	1	4	44	4	6
Future Vol, veh/h	135	1	4	44	4	6
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	
Storage Length	-	-	-	-	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	147	1	4	48	4	7

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	148	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	1434	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1434	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.3
HCM LOS	A		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	849	-	-	1434	-
HCM Lane V/C Ratio	0.013	-	-	0.003	-
HCM Control Delay (s)	9.3	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Access - Year 2035 + Proj AM
19: Proj Drwy F & Country Club Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.6						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	379	10	11	891	23	26
Future Vol, veh/h	379	10	11	891	23	26
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	
Storage Length	-	-	150	-	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	412	11	12	968	25	28

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	423	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.22	-
Pot Cap-1 Maneuver	-	-	1133	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1133	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	15.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	410	-	-	1133	-
HCM Lane V/C Ratio	0.13	-	-	0.011	-
HCM Control Delay (s)	15.1	-	-	8.2	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Access - Year 2035 + Proj AM
20: La Brea St & Proj Drwy G

The Villages
06/19/2017

Intersection						
Int Delay, s/veh	3.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	13	19	31	6	8	24
Future Vol, veh/h	13	19	31	6	8	24
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	-	-	-	-	-
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	14	21	34	7	9	26
Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	80	37	0	0	40	0
Stage 1	37	-	-	-	-	-
Stage 2	43	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	4.12	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	2.218	-
Pot Cap-1 Maneuver	922	1035	-	-	1570	-
Stage 1	985	-	-	-	-	-
Stage 2	979	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	916	1035	-	-	1570	-
Mov Cap-2 Maneuver	916	-	-	-	-	-
Stage 1	985	-	-	-	-	-
Stage 2	973	-	-	-	-	-
Approach	WB		NB		SB	
HCM Control Delay, s	8.8		0		1.8	
HCM LOS	A					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	983	1570	-	-
HCM Lane V/C Ratio	-	-	0.035	0.006	-	-
HCM Control Delay (s)	-	-	8.8	7.3	0	-
HCM Lane LOS	-	-	A	A	A	-
HCM 95th %tile Q(veh)	-	-	0.1	0	-	-

Access - Year 2035 + Proj AM
21: Gary Lane & Proj Drwy B/Proj Drwy C

The Villages
06/19/2017

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↕			↕			↕			↕		
Traffic Vol, veh/h	0	0	27	10	0	0	11	46	4	0	138	0
Future Vol, veh/h	0	0	27	10	0	0	11	46	4	0	138	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	29	11	0	0	12	50	4	0	150	0
Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	226	228	150	241	226	52	150	0	0	54	0	0
Stage 1	150	150	-	76	76	-	-	-	-	-	-	-
Stage 2	76	78	-	165	150	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	729	671	896	713	673	1016	1431	-	-	1551	-	-
Stage 1	853	773	-	933	832	-	-	-	-	-	-	-
Stage 2	933	830	-	837	773	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	724	665	896	685	667	1016	1431	-	-	1551	-	-
Mov Cap-2 Maneuver	724	665	-	685	667	-	-	-	-	-	-	-
Stage 1	845	773	-	925	825	-	-	-	-	-	-	-
Stage 2	925	823	-	810	773	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	9.2			10.3			1.4			0		
HCM LOS	A			B								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR				
Capacity (veh/h)	1431	-	-	896	685	1551	-	-	-	-	-	-
HCM Lane V/C Ratio	0.008	-	-	0.033	0.016	-	-	-	-	-	-	-
HCM Control Delay (s)	7.5	0	-	9.2	10.3	0	-	-	-	-	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-	-	-	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0	0	-	-	-	-	-	-

Access - Year 2035 + Proj PM
18: Proj Drwy E & Gary Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.6						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	90	3	10	105	2	4
Future Vol, veh/h	90	3	10	105	2	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	-	-	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	98	3	11	114	2	4

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	101	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.12	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.218	-
Pot Cap-1 Maneuver	-	-	1491	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	1491	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	875	-	-	1491	-
HCM Lane V/C Ratio	0.007	-	-	0.007	-
HCM Control Delay (s)	9.1	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Access - Year 2035 + Proj PM
19: Proj Drwy F & Country Club Lane

The Villages
06/19/2017

Intersection						
Int Delay, s/veh 0.6						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↕		↕		↕	
Traffic Vol, veh/h	681	29	33	545	12	14
Future Vol, veh/h	681	29	33	545	12	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	- None		- None		-	None
Storage Length	-	-	150	-	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	740	32	36	592	13	15

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	772	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	-	4.14	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	-	2.22	-
Pot Cap-1 Maneuver	-	-	839	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	839	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	18.1
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	302	-	-	839	-
HCM Lane V/C Ratio	0.094	-	-	0.043	-
HCM Control Delay (s)	18.1	-	-	9.5	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Access - Year 2035 + Proj PM
20: La Brea St & Proj Drwy G

The Villages
06/19/2017

Intersection						
Int Delay, s/veh	2.7					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔		↕		↕	
Traffic Vol, veh/h	7	10	33	16	25	32
Future Vol, veh/h	7	10	33	16	25	32
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	-	-	-	-	-
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	8	11	36	17	27	35

Major/Minor	Minor1	Major1	Major2
Conflicting Flow All	134	45	0 0 53 0
Stage 1	45	-	- - - -
Stage 2	89	-	- - - -
Critical Hdwy	6.42	6.22	- - 4.12 -
Critical Hdwy Stg 1	5.42	-	- - - -
Critical Hdwy Stg 2	5.42	-	- - - -
Follow-up Hdwy	3.518	3.318	- - 2.218 -
Pot Cap-1 Maneuver	860	1025	- - 1553 -
Stage 1	977	-	- - - -
Stage 2	934	-	- - - -
Platoon blocked, %	-	-	- - - -
Mov Cap-1 Maneuver	845	1025	- - 1553 -
Mov Cap-2 Maneuver	845	-	- - - -
Stage 1	977	-	- - - -
Stage 2	917	-	- - - -

Approach	WB	NB	SB
HCM Control Delay, s	8.9	0	3.2
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	942	1553	-
HCM Lane V/C Ratio	-	-	0.02	0.017	-
HCM Control Delay (s)	-	-	8.9	7.4	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0.1	-

Access - Year 2035 + Proj PM
21: Gary Lane & Proj Drwy B/Proj Drwy C

The Villages
06/19/2017

Intersection												
Int Delay, s/veh	1.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔			↕			↕		
Traffic Vol, veh/h	0	0	14	5	0	0	33	109	13	0	92	0
Future Vol, veh/h	0	0	14	5	0	0	33	109	13	0	92	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None									
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	15	5	0	0	36	118	14	0	100	0

Major/Minor	Minor2	Minor1	Major1	Major2
Conflicting Flow All	297 304 100	305 297 126	100 0 0	133 0 0
Stage 1	100 100 -	197 197 -	- - -	- - -
Stage 2	197 204 -	108 100 -	- - -	- - -
Critical Hdwy	7.12 6.52 6.22	7.12 6.52 6.22	4.12 - -	4.12 - -
Critical Hdwy Stg 1	6.12 5.52 -	6.12 5.52 -	- - -	- - -
Critical Hdwy Stg 2	6.12 5.52 -	6.12 5.52 -	- - -	- - -
Follow-up Hdwy	3.518 4.018 3.318	3.518 4.018 3.318	2.218 - -	2.218 - -
Pot Cap-1 Maneuver	655 609 956	647 615 924	1493 - -	1452 - -
Stage 1	906 812 -	805 738 -	- - -	- - -
Stage 2	805 733 -	897 812 -	- - -	- - -
Platoon blocked, %	-	-	- - -	- - -
Mov Cap-1 Maneuver	642 593 956	624 599 924	1493 - -	1452 - -
Mov Cap-2 Maneuver	642 593 -	624 599 -	- - -	- - -
Stage 1	882 812 -	784 719 -	- - -	- - -
Stage 2	784 714 -	883 812 -	- - -	- - -

Approach	EB	WB	NB	SB
HCM Control Delay, s	8.8	10.8	1.6	0
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1493	-	-	956	624	1452	-	-
HCM Lane V/C Ratio	0.024	-	-	0.016	0.009	-	-	-
HCM Control Delay (s)	7.5	0	-	8.8	10.8	0	-	-
HCM Lane LOS	A	A	-	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0	0	0	-	-

APPENDIX L

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – POST-MITIGATION

Existing + Cuml + Proj AM - Post-Mit
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	27	445	71	353	921	73	78	47	144	189	206	102
Future Volume (veh/h)	27	445	71	353	921	73	78	47	144	189	206	102
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	30	489	78	388	1012	80	86	52	158	208	226	112
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	140	636	101	444	1341	580	118	290	246	255	274	136
Arrive On Green	0.08	0.21	0.21	0.25	0.38	0.38	0.07	0.16	0.16	0.14	0.23	0.23
Sat Flow, veh/h	1774	3061	486	1774	3539	1532	1774	1863	1580	1774	1177	583
Grp Volume(v), veh/h	30	282	285	388	1012	80	86	52	158	208	0	338
Grp Sat Flow(s), veh/h/ln	1774	1770	1777	1774	1770	1532	1774	1863	1580	1774	0	1760
Q Serve(g_s), s	1.2	11.1	11.2	15.6	18.4	1.5	3.5	1.8	6.9	8.4	0.0	13.5
Cycle Q Clear(g_c), s	1.2	11.1	11.2	15.6	18.4	1.5	3.5	1.8	6.9	8.4	0.0	13.5
Prop In Lane	1.00		0.27	1.00		1.00		1.00		1.00		0.33
Lane Grp Cap(c), veh/h	140	368	369	444	1341	580	118	290	246	255	0	410
V/C Ratio(X)	0.21	0.77	0.77	0.87	0.75	0.14	0.73	0.18	0.64	0.82	0.00	0.82
Avail Cap(c_a), veh/h	146	514	516	754	2241	970	227	515	437	443	0	701
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.0	27.7	27.7	26.7	20.0	5.0	33.9	27.2	29.3	30.8	0.0	27.0
Incr Delay (d2), s/veh	0.8	4.5	4.7	6.1	0.9	0.1	8.4	0.3	2.8	6.3	0.0	4.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.6	5.9	6.0	8.3	9.2	1.0	2.0	0.9	3.2	4.6	0.0	7.1
LnGrp Delay(d), s/veh	32.7	32.2	32.4	32.7	20.9	5.1	42.4	27.5	32.1	37.1	0.0	31.2
LnGrp LOS	C	C	C	C	C	A	D	C	C	D		C
Approach Vol, veh/h		597			1480			296			546	
Approach Delay, s/veh		32.3			23.1			34.3			33.5	
Approach LOS		C			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.1	16.0	23.0	19.9	9.4	21.8	10.4	32.6				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	20.5	31.5	21.5	9.5	29.5	6.1	46.9				
Max Q Clear Time (g_c+1t), s	10.4	8.9	17.6	13.2	5.5	15.5	3.2	20.4				
Green Ext Time (p_c), s	0.4	0.8	1.0	2.1	0.4	1.7	1.0	7.6				
Intersection Summary												
HCM 2010 Ctrl Delay					28.1							
HCM 2010 LOS					C							

Existing + Cuml + Proj AM - Post-Mit
9: EI Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕		↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	190	531	1	22	883	46	2	1	12	211	3	543
Future Volume (veh/h)	190	531	1	22	883	46	2	1	12	211	3	543
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	207	577	1	24	960	50	2	1	13	229	3	590
Adj No. of Lanes	2	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	1299	2	54	1086	57	35	18	46	565	7	508
Arrive On Green	0.07	0.36	0.36	0.03	0.32	0.32	0.03	0.03	0.03	0.32	0.32	0.32
Sat Flow, veh/h	3442	3625	6	1774	3422	178	1202	601	1570	1752	23	1574
Grp Volume(v), veh/h	207	282	296	24	496	514	3	0	13	232	0	590
Grp Sat Flow(s), veh/h/ln	1721	1770	1862	1774	1770	1831	1803	0	1570	1775	0	1574
Q Serve(g_s), s	5.0	10.2	10.2	1.1	22.3	22.3	0.1	0.0	0.7	8.5	0.0	27.0
Cycle Q Clear(g_c), s	5.0	10.2	10.2	1.1	22.3	22.3	0.1	0.0	0.7	8.5	0.0	27.0
Prop In Lane	1.00		0.00	1.00		1.00	0.10	0.67		1.00	0.99	1.00
Lane Grp Cap(c), veh/h	247	634	667	54	561	581	53	0	46	573	0	508
V/C Ratio(X)	0.84	0.44	0.44	0.44	0.88	0.88	0.06	0.00	0.28	0.41	0.00	1.16
Avail Cap(c_a), veh/h	247	634	667	127	598	619	581	0	506	573	0	508
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	38.4	20.5	20.5	39.9	27.1	27.1	39.5	0.0	39.8	22.1	0.0	28.4
Incr Delay (d2), s/veh	20.8	0.6	0.6	2.1	14.4	14.0	0.5	0.0	4.0	0.6	0.0	92.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.1	5.0	5.3	0.6	13.1	13.5	0.1	0.0	0.3	4.3	0.0	24.8
LnGrp Delay(d), s/veh	59.2	21.1	21.1	41.9	41.5	41.1	40.0	0.0	43.7	22.7	0.0	121.1
LnGrp LOS	E	C	C	D	D	D	D		D	C		F
Approach Vol, veh/h		785			1034			16			822	
Approach Delay, s/veh		31.1			41.3			43.0			93.3	
Approach LOS		C			D			D			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	36.2		32.5	10.5	32.8		8.0				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	6.0	28.3		27.0	6.0	28.3		27.0				
Max Q Clear Time (g_c+1t), s	3.1	12.2		29.0	7.0	24.3		2.7				
Green Ext Time (p_c), s	0.0	9.6		0.0	0.0	2.2		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay						54.4						
HCM 2010 LOS						D						

Existing + Cuml + Proj AM - Post-Mit
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

	↖	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↖↗	↖	↖	↖↗		↖	↖	↖	↖↗	↖	↖	
Traffic Volume (veh/h)	44	861	48	300	948	92	19	89	137	253	304	62	
Future Volume (veh/h)	44	861	48	300	948	92	19	89	137	253	304	62	
Number	5	2	12	1	6	16	3	8	18	7	4	14	
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900	
Adj Flow Rate, veh/h	45	879	0	306	967	94	19	91	140	258	310	63	
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	2	1	0	
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	69	1002	448	383	1540	150	38	319	271	348	377	77	
Arrive On Green	0.04	0.28	0.00	0.22	0.47	0.47	0.02	0.17	0.17	0.10	0.25	0.25	
Sat Flow, veh/h	1774	3539	1583	1774	3259	317	1774	1863	1583	3442	1503	306	
Grp Volume(v), veh/h	45	879	0	306	525	536	19	91	140	258	0	373	
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1806	1774	1863	1583	1721	0	1809	
Q Serve(g_s), s	2.1	19.7	0.0	13.6	18.5	18.5	0.9	3.5	4.0	6.1	0.0	16.2	
Cycle Q Clear(g_c), s	2.1	19.7	0.0	13.6	18.5	18.5	0.9	3.5	4.0	6.1	0.0	16.2	
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Lane Grp Cap(c), veh/h	69	1002	448	383	836	853	38	319	271	348	0	454	
V/C Ratio(X)	0.65	0.88	0.00	0.80	0.63	0.63	0.50	0.29	0.52	0.74	0.00	0.82	
Avail Cap(c_a), veh/h	128	1106	495	426	851	868	107	694	590	620	0	891	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	39.4	28.4	0.0	30.9	16.5	16.5	40.3	30.1	11.1	36.3	0.0	29.4	
Incr Delay (d2), s/veh	7.5	7.4	0.0	8.9	1.3	1.3	7.4	0.4	1.1	2.3	0.0	2.8	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%)veh/ln	1.2	10.7	0.0	7.6	9.3	9.5	0.5	1.9	2.7	3.0	0.0	8.4	
LnGrp Delay(d),s/veh	47.0	35.8	0.0	39.8	17.8	17.7	47.7	30.4	12.2	38.7	0.0	32.2	
LnGrp LOS	D	D		D	B	B	D	C	B	D		C	
Approach Vol, veh/h		924			1367			250				631	
Approach Delay, s/veh		36.4			22.7			21.5				34.9	
Approach LOS		D			C			C				C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	23.0	28.6	5.8	25.9	7.2	44.3	12.4	19.2					
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0					
Max Green Setting (Gmax), s	20.0	* 26	5.0	41.0	6.0	40.0	15.0	31.0					
Max Q Clear Time (g_c+1t), s	15.6	21.7	2.9	18.2	4.1	20.5	8.1	6.0					
Green Ext Time (p_c), s	2.4	1.9	0.0	2.7	0.0	5.8	0.4	2.7					
Intersection Summary													
HCM 2010 Ctrl Delay					29.0								
HCM 2010 LOS					C								
Notes													

HCM 2010 Signalized Intersection Summary
N:\2614\Analysis\Intersection\Post-Mitigation\Existing + Cuml + Proj AM.syn

Synchro 9 Report

Existing + Cuml + Proj PM - Post-Mit
8: Woodland Pkwy & Borden Rd/El Norte Pkwy

Escondido Country Club
06/19/2017

	↖	→	↘	↙	←	↖	↗	↘	↙	↖	↗	↘	↙
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations	↖	↖↗	↖	↖	↖↗		↖	↖	↖	↖↗	↖	↖	
Traffic Volume (veh/h)	40	765	50	218	728	155	69	113	274	100	71	24	
Future Volume (veh/h)	40	765	50	218	728	155	69	113	274	100	71	24	
Number	7	4	14	3	8	18	5	2	12	1	6	16	
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.96	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	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	44	841	55	240	800	170	76	124	301	110	78	26	
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0	
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	
Cap, veh/h	275	1011	66	286	1082	467	369	406	344	141	120	40	
Arrive On Green	0.16	0.30	0.30	0.16	0.31	0.31	0.21	0.22	0.22	0.08	0.09	0.09	
Sat Flow, veh/h	1774	3373	221	1774	3539	1527	1774	1863	1581	1774	1338	446	
Grp Volume(v), veh/h	44	441	455	240	800	170	76	124	301	110	0	104	
Grp Sat Flow(s), veh/h/ln	1774	1770	1824	1774	1770	1527	1774	1863	1581	1774	0	1784	
Q Serve(g_s), s	1.6	17.3	17.3	9.8	15.1	4.6	2.6	4.2	13.7	4.5	0.0	4.2	
Cycle Q Clear(g_c), s	1.6	17.3	17.3	9.8	15.1	4.6	2.6	4.2	13.7	4.5	0.0	4.2	
Prop In Lane	1.00	1.00	0.12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.25	
Lane Grp Cap(c), veh/h	275	530	547	286	1082	467	369	406	344	141	0	159	
V/C Ratio(X)	0.16	0.83	0.83	0.84	0.74	0.36	0.21	0.31	0.87	0.78	0.00	0.65	
Avail Cap(c_a), veh/h	275	630	649	417	1783	769	369	463	393	226	0	458	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	27.2	24.3	24.3	30.3	23.2	10.2	24.4	24.4	28.1	33.6	0.0	32.8	
Incr Delay (d2), s/veh	0.3	8.1	7.8	9.7	1.0	0.5	0.3	0.4	17.5	9.0	0.0	4.5	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%)veh/ln	0.8	9.6	9.9	5.6	7.5	2.4	1.3	2.2	7.6	2.6	0.0	2.2	
LnGrp Delay(d),s/veh	27.5	32.4	32.2	39.9	24.2	10.7	24.7	24.8	45.7	42.6	0.0	37.2	
LnGrp LOS	C	C	C	D	C	B	C	C	D	D		D	
Approach Vol, veh/h		940			1210			501				214	
Approach Delay, s/veh		32.0			25.4			37.3				40.0	
Approach LOS		C			C			D				D	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2	3	4	5	6	7	8					
Phs Duration (G+Y+Rc), s	10.4	20.7	16.5	26.8	20.0	11.1	16.1	27.3					
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5					
Max Green Setting (Gmax), s	9.5	18.5	17.5	26.5	8.9	19.1	6.5	37.5					
Max Q Clear Time (g_c+1t), s	6.5	15.7	11.8	19.3	4.6	6.2	3.6	17.1					
Green Ext Time (p_c), s	0.1	0.5	0.3	3.0	0.9	0.4	1.5	5.7					
Intersection Summary													
HCM 2010 Ctrl Delay										30.8			
HCM 2010 LOS										C			
Notes													

HCM 2010 Signalized Intersection Summary
N:\2614\Analysis\Intersection\Post-Mitigation\Existing + Cuml + Proj PM.syn

Synchro 9 Report

Existing + Cuml + Proj PM - Post-Mit
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	444	711	13	43	838	181	9	9	15	109	3	224
Future Volume (veh/h)	444	711	13	43	838	181	9	9	15	109	3	224
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	483	773	14	47	911	197	10	16	118	3	243	
Adj No. of Lanes	2	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	546	1794	32	78	1128	244	40	40	70	328	8	297
Arrive On Green	0.16	0.50	0.50	0.04	0.39	0.39	0.04	0.04	0.04	0.19	0.19	0.19
Sat Flow, veh/h	3442	3556	64	1774	2895	626	909	909	1568	1732	44	1568
Grp Volume(v), veh/h	483	385	402	47	557	551	20	0	16	121	0	243
Grp Sat Flow(s), veh/h/ln	1721	1770	1851	1774	1770	1751	1817	0	1568	1776	0	1568
Q Serve(g_s), s	13.7	13.7	13.7	2.6	27.9	28.0	1.1	0.0	1.0	5.9	0.0	14.8
Cycle Q Clear(g_c), s	13.7	13.7	13.7	2.6	27.9	28.0	1.1	0.0	1.0	5.9	0.0	14.8
Prop In Lane	1.00		0.03	1.00		0.36	0.50		1.00	0.98		1.00
Lane Grp Cap(c), veh/h	546	893	934	78	689	682	81	0	70	337	0	297
V/C Ratio(X)	0.88	0.43	0.43	0.60	0.81	0.81	0.25	0.00	0.23	0.36	0.00	0.82
Avail Cap(c_a), veh/h	1122	1158	1211	162	742	735	492	0	425	481	0	425
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	41.0	15.6	15.6	46.8	27.1	27.1	46.0	0.0	46.0	35.1	0.0	38.7
Incr Delay (d2), s/veh	1.9	0.4	0.4	2.8	6.4	6.5	1.9	0.0	2.0	0.8	0.0	9.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	6.7	6.7	7.0	1.3	14.8	14.7	0.6	0.0	0.5	3.0	0.0	7.1
LnGrp Delay(d), s/veh	43.0	16.0	16.0	49.6	33.5	33.6	47.9	0.0	48.0	35.9	0.0	47.7
LnGrp LOS	D	B	B	D	C	C	D		D	D		D
Approach Vol, veh/h	1270			1155				36		364		
Approach Delay, s/veh	26.3			34.2				47.9		43.8		
Approach LOS	C			C				D		D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.9	56.5		24.4	20.3	45.0		9.9				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	9.1	65.2		27.0	32.5	41.8		27.0				
Max Q Clear Time (g_c+1t), s	4.6	15.7		16.8	15.7	30.0		3.1				
Green Ext Time (p_c), s	0.0	21.9		1.4	0.1	8.9		0.1				

Intersection Summary			
HCM 2010 Ctrl Delay		32.0	
HCM 2010 LOS		C	

Existing + Cuml + Proj PM - Post-Mit
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	83	892	49	184	896	241	61	271	283	242	154	47
Future Volume (veh/h)	83	892	49	184	896	241	61	271	283	242	154	47
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	85	910	0	188	914	246	62	277	289	247	157	48
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	126	1214	543	225	1068	287	80	424	360	325	380	116
Arrive On Green	0.07	0.34	0.00	0.13	0.39	0.39	0.04	0.23	0.23	0.09	0.28	0.28
Sat Flow, veh/h	1774	3539	1583	1774	2759	741	1774	1863	1583	3442	1370	419
Grp Volume(v), veh/h	85	910	0	188	586	574	62	277	289	247	0	205
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1731	1774	1863	1583	1721	0	1789
Q Serve(g_s), s	4.0	19.7	0.0	9.0	26.2	26.3	3.0	11.7	14.9	6.1	0.0	8.1
Cycle Q Clear(g_c), s	4.0	19.7	0.0	9.0	26.2	26.3	3.0	11.7	14.9	6.1	0.0	8.1
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	126	1214	543	225	685	670	80	424	360	325	0	496
V/C Ratio(X)	0.67	0.75	0.00	0.84	0.85	0.86	0.78	0.65	0.80	0.76	0.00	0.41
Avail Cap(c_a), veh/h	164	1473	659	308	880	860	185	667	567	398	0	662
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	39.2	25.1	0.0	36.9	24.3	24.3	40.9	30.3	31.6	38.2	0.0	25.5
Incr Delay (d2), s/veh	5.4	1.6	0.0	12.2	6.2	6.5	11.4	1.3	3.4	6.0	0.0	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	2.2	9.9	0.0	5.1	13.9	13.6	1.7	6.2	6.8	3.2	0.0	4.0
LnGrp Delay(d), s/veh	44.6	26.7	0.0	49.1	30.5	30.8	52.3	31.6	35.0	44.3	0.0	25.9
LnGrp LOS	D	C		D	C	C	D	C	C	D		C
Approach Vol, veh/h	995			1348				628		452		
Approach Delay, s/veh	28.2			33.2				35.2		35.9		
Approach LOS	C			C				D		D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	34.7	7.9	29.0	11.1	38.5	12.2	24.7				
Change Period (Y+Rc), s	4.0	5.0	4.0	5.0	5.0	*5	4.0	5.0				
Max Green Setting (Gmax), s	15.0	36.0	9.0	32.0	8.0	*43	10.0	31.0				
Max Q Clear Time (g_c+1t), s	11.0	21.7	5.0	10.1	6.0	28.3	8.1	16.9				
Green Ext Time (p_c), s	0.1	4.4	0.0	3.1	1.0	5.2	0.1	2.8				

Intersection Summary			
HCM 2010 Ctrl Delay		32.5	
HCM 2010 LOS		C	

Notes

Year 2035 + Proj AM - Post-Mit
8: Woodland Pkwy & Borden Rd/EI Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↔	↔
Traffic Volume (veh/h)	30	580	90	485	1235	90	90	60	180	220	250	120
Future Volume (veh/h)	30	580	90	485	1235	90	90	60	180	220	250	120
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	33	630	98	527	1342	98	98	65	196	239	272	130
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	120	773	120	494	1638	710	116	302	256	267	295	141
Arrive On Green	0.07	0.25	0.25	0.28	0.46	0.46	0.07	0.16	0.16	0.15	0.25	0.25
Sat Flow, veh/h	1774	3071	477	1774	3539	1535	1774	1863	1580	1774	1192	570
Grp Volume(v), veh/h	33	363	365	527	1342	98	98	65	196	239	0	402
Grp Sat Flow(s), veh/h/ln	1774	1770	1779	1774	1770	1535	1774	1863	1580	1774	0	1762
Q Serve(g_s), s	2.0	22.1	22.2	31.9	37.6	2.4	6.3	3.5	13.6	15.2	0.0	25.5
Cycle Q Clear(g_c), s	2.0	22.1	22.2	31.9	37.6	2.4	6.3	3.5	13.6	15.2	0.0	25.5
Prop In Lane	1.00		0.27	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	120	445	448	494	1638	710	116	302	256	267	0	436
V/C Ratio(X)	0.28	0.81	0.82	1.07	0.82	0.14	0.84	0.22	0.76	0.90	0.00	0.92
Avail Cap(c_a), veh/h	120	952	956	494	2765	1200	116	325	276	286	0	477
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	50.8	40.3	40.4	41.3	26.6	5.8	52.9	41.7	45.9	47.8	0.0	42.1
Incr Delay (d2), s/veh	1.2	3.7	3.7	59.5	1.1	0.1	40.2	0.4	11.3	27.1	0.0	22.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.0	11.2	11.3	23.7	18.5	1.7	4.4	1.8	6.7	9.4	0.0	15.1
LnGrp Delay(d), s/veh	52.0	44.0	44.1	100.8	27.7	5.9	93.2	42.0	57.2	74.8	0.0	64.6
LnGrp LOS	D	D	D	F	C	A	F	D	E	E		E
Approach Vol, veh/h		761			1967			359			641	
Approach Delay, s/veh		44.4			46.2			64.3			68.4	
Approach LOS		D			D			E			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.7	23.1	36.4	33.3	12.0	32.8	12.2	57.5				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	18.5	20.0	31.9	61.6	7.5	31.0	4.0	89.5				
Max Q Clear Time (g_c+I1), s	17.2	15.6	33.9	24.2	8.3	27.5	4.0	39.6				
Green Ext Time (p_c), s	0.1	0.6	0.0	4.7	0.0	0.8	0.0	13.4				
Intersection Summary												
HCM 2010 Ctrl Delay				51.4								
HCM 2010 LOS				D								

Year 2035 + Proj AM - Post-Mit
9: EI Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↕	↔	↕	↕	↔	↔	↔
Traffic Volume (veh/h)	252	658	5	30	1103	63	5	5	15	336	5	777
Future Volume (veh/h)	252	658	5	30	1103	63	5	5	15	336	5	777
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	274	715	5	33	1199	68	5	5	16	365	5	845
Adj No. of Lanes	2	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	291	1561	11	56	1295	73	31	31	53	598	8	538
Arrive On Green	0.08	0.43	0.43	0.03	0.38	0.38	0.03	0.03	0.03	0.34	0.34	0.34
Sat Flow, veh/h	3442	3602	25	1774	3405	193	909	909	1562	1751	24	1575
Grp Volume(v), veh/h	274	351	369	33	623	644	10	0	16	370	0	845
Grp Sat Flow(s), veh/h/ln	1721	1770	1858	1774	1770	1828	1817	0	1562	1775	0	1575
Q Serve(g_s), s	10.8	19.1	19.1	2.5	45.8	45.9	0.7	0.0	1.4	23.6	0.0	46.5
Cycle Q Clear(g_c), s	10.8	19.1	19.1	2.5	45.8	45.9	0.7	0.0	1.4	23.6	0.0	46.5
Prop In Lane	1.00		0.01	1.00		0.11	0.50		1.00	0.99		1.00
Lane Grp Cap(c), veh/h	291	767	805	56	673	695	62	0	53	607	0	538
V/C Ratio(X)	0.94	0.46	0.46	0.59	0.93	0.93	0.16	0.00	0.30	0.61	0.00	1.57
Avail Cap(c_a), veh/h	291	767	805	94	693	716	361	0	310	607	0	538
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	62.0	27.3	27.3	65.0	40.3	40.4	63.8	0.0	64.2	37.3	0.0	44.8
Incr Delay (d2), s/veh	37.1	0.5	0.5	3.7	18.2	18.0	1.5	0.0	3.8	1.9	0.0	265.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	9.5	9.9	1.3	25.7	26.6	0.4	0.0	0.6	11.8	0.0	59.8
LnGrp Delay(d), s/veh	99.1	27.8	27.7	68.7	58.5	58.4	65.3	0.0	67.9	39.2	0.0	310.3
LnGrp LOS	F	C	C	E	E	E	E		E	D		F
Approach Vol, veh/h		994			1300			26			1215	
Approach Delay, s/veh		47.4			58.7			66.9			227.8	
Approach LOS		D			E			E			F	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	8.8	65.2		52.0	16.0	58.0		10.1				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	7.2	57.6		46.5	11.5	53.3		27.0				
Max Q Clear Time (g_c+I1), s	4.5	21.1		48.5	12.8	47.9		3.4				
Green Ext Time (p_c), s	0.0	20.4		0.0	0.0	3.9		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				113.7								
HCM 2010 LOS				F								

Year 2035 + Proj AM - Post-Mit
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↔	↔
Traffic Volume (veh/h)	60	1110	60	320	1250	120	20	110	150	340	404	100
Future Volume (veh/h)	60	1110	60	320	1250	120	20	110	150	340	404	100
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	61	1133	0	327	1276	122	20	112	153	347	412	102
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	2	1	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	74	1159	519	313	1536	146	36	403	342	414	456	113
Arrive On Green	0.04	0.33	0.00	0.18	0.47	0.47	0.02	0.22	0.22	0.12	0.32	0.32
Sat Flow, veh/h	1774	3539	1583	1774	3266	311	1774	1863	1583	3442	1443	357
Grp Volume(v), veh/h	61	1133	0	327	690	708	20	112	153	347	0	514
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1807	1774	1863	1583	1721	0	1800
Q Serve(g_s), s	4.1	37.7	0.0	21.0	40.3	40.7	1.3	6.0	6.7	11.7	0.0	32.5
Cycle Q Clear(g_c), s	4.1	37.7	0.0	21.0	40.3	40.7	1.3	6.0	6.7	11.7	0.0	32.5
Prop In Lane	1.00		1.00	1.00		1.00	0.17	1.00	1.00	1.00		0.20
Lane Grp Cap(c), veh/h	74	1159	519	313	832	850	36	403	342	414	0	569
V/C Ratio(X)	0.82	0.98	0.00	1.05	0.83	0.83	0.55	0.28	0.45	0.84	0.00	0.90
Avail Cap(c_a), veh/h	74	1159	519	313	832	850	74	485	412	607	0	710
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.6	39.6	0.0	49.0	27.4	27.5	57.8	38.9	18.1	51.2	0.0	39.0
Incr Delay (d2), s/veh	47.9	21.0	0.0	63.2	6.8	7.0	9.5	0.3	0.7	5.8	0.0	12.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	3.0	21.8	0.0	15.7	21.1	21.9	0.8	3.1	4.0	5.9	0.0	18.1
LnGrp Delay(d), s/veh	104.5	60.6	0.0	112.2	34.2	34.4	67.3	39.2	18.7	57.1	0.0	51.3
LnGrp LOS	F	E		F	C	C	E	D	B	E		D
Approach Vol, veh/h	1194			1725				285		861		
Approach Delay, s/veh	62.9			49.1				30.2		53.6		
Approach LOS	E			D				C		D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	44.0	6.4	42.7	9.0	61.0	18.3	30.7				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	21.0	* 39	5.0	47.0	5.0	55.0	21.0	31.0				
Max Q Clear Time (g_c+I1), s	23.0	39.7	3.3	34.5	6.1	42.7	13.7	8.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	3.1	0.0	6.4	0.6	3.8				
Intersection Summary												
HCM 2010 Ctrl Delay				52.8								
HCM 2010 LOS				D								
Notes												

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Year 2035 + Proj PM - Post-Mit
8: Woodland Pkwy & Borden Rd/El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↔	↔
Traffic Volume (veh/h)	50	1050	60	300	990	180	80	140	330	120	90	30
Future Volume (veh/h)	50	1050	60	300	990	180	80	140	330	120	90	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	54	1141	65	326	1076	196	87	152	359	130	98	33
Adj No. of Lanes	1	2	0	1	2	1	1	1	1	1	1	0
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
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	317	1181	67	356	1306	565	310	345	292	153	129	43
Arrive On Green	0.18	0.35	0.35	0.20	0.37	0.37	0.17	0.18	0.18	0.09	0.10	0.10
Sat Flow, veh/h	1774	3404	194	1774	3539	1531	1774	1863	1581	1774	1334	449
Grp Volume(v), veh/h	54	593	613	326	1076	196	87	152	359	130	0	131
Grp Sat Flow(s), veh/h/ln	1774	1770	1829	1774	1770	1531	1774	1863	1581	1774	0	1783
Q Serve(g_s), s	2.6	32.7	32.8	17.9	27.4	6.6	4.2	7.2	18.4	7.2	0.0	7.1
Cycle Q Clear(g_c), s	2.6	32.7	32.8	17.9	27.4	6.6	4.2	7.2	18.4	7.2	0.0	7.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00	1.00	1.00	1.00		0.25
Lane Grp Cap(c), veh/h	317	614	634	356	1306	565	310	345	292	153	0	173
V/C Ratio(X)	0.17	0.97	0.97	0.92	0.82	0.35	0.28	0.44	1.23	0.85	0.00	0.76
Avail Cap(c_a), veh/h	317	614	634	366	1651	714	310	345	292	153	0	346
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	31.9	31.9	38.9	28.5	11.8	35.6	36.0	40.5	44.8	0.0	43.8
Incr Delay (d2), s/veh	0.3	27.9	27.6	26.7	2.8	0.4	0.5	0.9	128.8	33.4	0.0	6.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	1.3	20.7	21.4	11.4	13.8	3.4	2.1	3.8	18.5	5.0	0.0	3.8
LnGrp Delay(d), s/veh	34.9	59.8	59.5	65.6	31.3	12.1	36.1	36.9	169.4	78.2	0.0	50.5
LnGrp LOS	C	E	E	E	C	B	D	D	F	E		D
Approach Vol, veh/h	1260			1598				598		261		
Approach Delay, s/veh	58.6			35.9				116.3		64.3		
Approach LOS	E			D				F		E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.1	22.9	24.5	39.0	21.9	14.1	22.3	41.2				
Change Period (Y+Rc), s	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5				
Max Green Setting (Gmax), s	8.6	18.4	20.5	34.5	7.7	19.3	8.6	46.4				
Max Q Clear Time (g_c+I1), s	9.2	20.4	19.9	34.8	6.2	9.1	4.6	29.4				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.0	0.4	0.4	2.6	7.3				
Intersection Summary												
HCM 2010 Ctrl Delay				58.5								
HCM 2010 LOS				E								
Notes												

HCM 2010 Signalized Intersection Summary
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Synchro 9 Report

Year 2035 + Proj PM - Post-Mit
9: El Norte Pkwy & Country Club Ln

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	636	884	15	50	1046	260	10	10	20	149	5	403
Future Volume (veh/h)	636	884	15	50	1046	260	10	10	20	149	5	403
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		0.99	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	691	961	16	54	1137	283	11	11	22	162	5	438
Adj No. of Lanes	2	2	0	1	2	0	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	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	658	2025	34	69	1172	289	38	38	65	335	10	305
Arrive On Green	0.19	0.57	0.57	0.04	0.42	0.42	0.04	0.04	0.04	0.19	0.19	0.19
Sat Flow, veh/h	3442	3562	59	1774	2814	694	909	909	1561	1723	53	1569
Grp Volume(v), veh/h	691	477	500	54	711	709	22	0	22	167	0	438
Grp Sat Flow(s), veh/h/ln	1721	1770	1852	1774	1770	1739	1817	0	1561	1777	0	1569
Q Serve(g_s), s	26.5	22.1	22.1	4.2	54.4	55.7	1.6	0.0	1.9	11.6	0.0	27.0
Cycle Q Clear(g_c), s	26.5	22.1	22.1	4.2	54.4	55.7	1.6	0.0	1.9	11.6	0.0	27.0
Prop In Lane	1.00		0.03	1.00		0.40	0.50		1.00	0.97		1.00
Lane Grp Cap(c), veh/h	658	1006	1053	69	737	724	75	0	65	346	0	305
V/C Ratio(X)	1.05	0.47	0.47	0.78	0.97	0.98	0.29	0.00	0.34	0.48	0.00	1.43
Avail Cap(c_a), veh/h	658	1006	1053	133	737	725	354	0	304	346	0	305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	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	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.1	17.7	17.7	66.1	39.5	39.9	64.5	0.0	64.6	49.6	0.0	55.9
Incr Delay (d2), s/veh	49.2	0.4	0.4	6.9	24.8	28.1	2.5	0.0	3.7	1.3	0.0	213.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	17.0	10.9	11.4	2.2	31.6	32.4	0.9	0.0	0.9	5.8	0.0	29.8
LnGrp Delay(d), s/veh	105.3	18.1	18.1	72.9	64.3	68.0	67.1	0.0	68.3	50.9	0.0	269.2
LnGrp LOS	F	B	B	E	E	E	E		E	D		F
Approach Vol, veh/h	1668			1474				44		605		
Approach Delay, s/veh	54.2			66.4				67.7		208.9		
Approach LOS	D			E				E		F		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.9	85.0		32.5	31.0	64.0		11.3				
Change Period (Y+Rc), s	4.5	6.2		5.5	4.5	6.2		5.5				
Max Green Setting (Gmax), s	10.4	73.9		27.0	26.5	57.8		27.0				
Max Q Clear Time (g_c+I1), s	6.2	24.1		29.0	28.5	57.7		3.9				
Green Ext Time (p_c), s	0.0	31.8		0.0	0.1			0.1				

Intersection Summary	
HCM 2010 Ctrl Delay	83.8
HCM 2010 LOS	F

Year 2035 + Proj PM - Post-Mit
12: Nordahl Rd/Nutmeg St & El Norte Pkwy

Escondido Country Club
06/19/2017

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↕	↔	↔	↕	↔	↔	↕	↔	↔	↕	↔
Traffic Volume (veh/h)	120	1110	60	200	1190	330	80	330	300	330	196	70
Future Volume (veh/h)	120	1110	60	200	1190	330	80	330	300	330	196	70
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Ob), veh	0	0	0	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	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	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	122	1133	0	204	1214	337	82	337	306	337	200	71
Adj No. of Lanes	1	2	1	1	2	0	1	1	1	1	2	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	142	1251	560	320	1269	346	104	391	333	358	336	119
Arrive On Green	0.08	0.35	0.00	0.18	0.46	0.46	0.06	0.21	0.21	0.10	0.26	0.26
Sat Flow, veh/h	1774	3539	1583	1774	2748	751	1774	1863	1583	3442	1314	466
Grp Volume(v), veh/h	122	1133	0	204	774	777	82	337	306	337	0	271
Grp Sat Flow(s), veh/h/ln	1774	1770	1583	1774	1770	1729	1774	1863	1583	1721	0	1780
Q Serve(g_s), s	8.5	38.0	0.0	13.3	52.3	54.8	5.7	21.8	15.8	12.1	0.0	16.7
Cycle Q Clear(g_c), s	8.5	38.0	0.0	13.3	52.3	54.8	5.7	21.8	15.8	12.1	0.0	16.7
Prop In Lane	1.00		1.00	1.00		0.43	1.00		1.00	1.00		0.26
Lane Grp Cap(c), veh/h	142	1251	560	320	817	798	104	391	333	358	0	455
V/C Ratio(X)	0.86	0.91	0.00	0.64	0.95	0.97	0.79	0.86	0.92	0.94	0.00	0.60
Avail Cap(c_a), veh/h	142	1389	621	320	822	803	170	462	393	358	0	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	56.7	38.4	0.0	47.4	32.2	32.8	58.0	47.6	21.7	55.6	0.0	40.8
Incr Delay (d2), s/veh	37.1	8.0	0.0	3.8	19.7	25.0	9.6	12.9	23.6	32.4	0.0	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	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	20.0	0.0	6.9	29.9	31.6	3.1	12.6	10.4	7.4	0.0	8.4
LnGrp Delay(d), s/veh	93.8	46.4	0.0	51.2	51.9	57.8	67.7	60.5	45.4	87.9	0.0	42.6
LnGrp LOS	F	D		D	D	E	E	E	D	F		D
Approach Vol, veh/h	1255			1755				725		608		
Approach Delay, s/veh	51.0			54.4				54.9		67.7		
Approach LOS	D			D				D		E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.5	49.1	11.3	36.9	14.0	62.6	17.0	31.2				
Change Period (Y+Rc), s	5.0	* 5	4.0	5.0	4.0	5.0	4.0	5.0				
Max Green Setting (Gmax), s	19.0	* 49	12.0	32.0	10.0	58.0	13.0	31.0				
Max Q Clear Time (g_c+I1), s	15.3	40.0	7.7	18.7	10.5	56.8	14.1	23.8				
Green Ext Time (p_c), s	2.7	4.1	0.0	3.4	0.0	0.9	0.0	2.4				

Intersection Summary	
HCM 2010 Ctrl Delay	55.4
HCM 2010 LOS	E