

TRANSPORTATION IMPACT ANALYSIS
2200 S. ESCONDIDO BOULEVARD
Escondido, California
February 17, 2021

LLG Ref. 3-20-3256

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EXECUTIVE SUMMARY

The 2200 S. Escondido Boulevard Project proposes the development of 62 condominiums. The project site is located on the east side of S. Escondido Boulevard, north of Brotherton Road at 2200 S. Escondido Boulevard. Access is proposed via two full access driveways on S. Escondido Boulevard, one located along the northern boundary of the site and one approximately at the mid-point of the frontage along S. Escondido Boulevard.

VMT ANALYSIS

The City is in the process of finalizing City specific standards for conducting Vehicle Miles Travelled (VMT) analysis and guidelines have not yet been adopted at this time. Following consultation with the City, an analysis was conducted using ITE 2019 Guidelines which have received wide acceptance from the transportation profession. The Project is consistent with the General Plan and generates 496 daily trips.

The Project is located within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor, the existing stop at the Escondido Boulevard / Sunset Drive intersection. This stop is served by route 350 with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods, meeting the definition of an “existing major stop”.

Sidewalks are present along the east side of S. Escondido Boulevard to about 800 feet north of the Project site. The project will provide a sidewalk along the Project frontage. Thus, there will remain a gap of approximately 600 feet with no sidewalk (see photos in Appendix H). The Project will provide an ADA compliant path of travel along this 600 feet to close this gap, as well as a 2'-3' wide shoulder where available (see exhibit in *Appendix H*). Based on the proximity of the transit stop, the enhanced connectivity should allow the Project to be screened out from requiring a VMT analysis.

TRAFFIC LEVEL OF SERVICE (LOS) ANALYSIS

A traffic LOS analysis was also conducted. The Project study area for the traffic analysis includes the following intersections and street segments:

INTERSECTIONS

1. Felicita Avenue / Centre City Parkway
2. Felicita Avenue / Escondido Boulevard
3. Centre City Parkway / West Connector to Escondido Boulevard
4. East Connector to Centre City Parkway / Escondido Boulevard
5. Brotherton Road / Centre City Parkway
6. Brotherton Road / Escondido Boulevard
7. Citracado Parkway / Centre City Parkway
8. Citracado Parkway / Escondido Boulevard

SEGMENTS

1. **Centre City Parkway:** Felicita Avenue to Brotherton Road
2. **Centre City Parkway:** Brotherton Road to Citracado Parkway
3. **Escondido Boulevard:** Felicita Avenue to Centre City Parkway Connector
4. **Escondido Boulevard:** Centre City Parkway Connector to Brotherton Road
5. **Escondido Boulevard:** Brotherton Road to Citracado Parkway

PROJECT TRIP GENERATION AND DISTRIBUTION

Project trip generation was estimated using the *SANDAG Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (April 2002)*. The Project is calculated to generate 496 daily trips with 40 trips (8 inbound/32 outbound) in AM peak hour and 45 trips (32 inbound/13 outbound) during PM peak hour.

The Project traffic distribution as shown on *Figure 8-1* was based on the site location, and access to I-15, existing traffic patterns, and access to other potential destinations such as shopping, work, school, etc.

CUMULATIVE PROJECTS

Based on discussions with the City Staff and research in the vicinity, three (3) Cumulative projects were included for Near-Term Opening Day (Year 2022) analysis.

CONCLUSIONS

All study area intersections are calculated to operate at LOS D or better and no substantial effect was identified.

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1.0 INTRODUCTION

Linscott, Law and Greenspan, Engineers (LLG) has prepared this transportation impact analysis to assess the impacts to the street system as a result of the proposed 2200 S. Escondido Boulevard Condominiums located within the City of Escondido. The Project proposes the development of 62 condominiums.

The traffic analysis presented in this report includes the following:

- Project Description
- Existing Conditions
- Analysis Approach and Methodology
- CEQA Vehicle Miles Travelled (VMT) Analysis
- Substantial Effect Criteria
- Analysis of Existing Conditions
- Trip Generation/Distribution/Assignment
- Cumulative Projects Discussion
- Analysis of Near-Term Scenarios
- Analysis of Long-Term Scenarios
- Project Access
- Active Transportation
- Conclusions

2.0 PROJECT DESCRIPTION

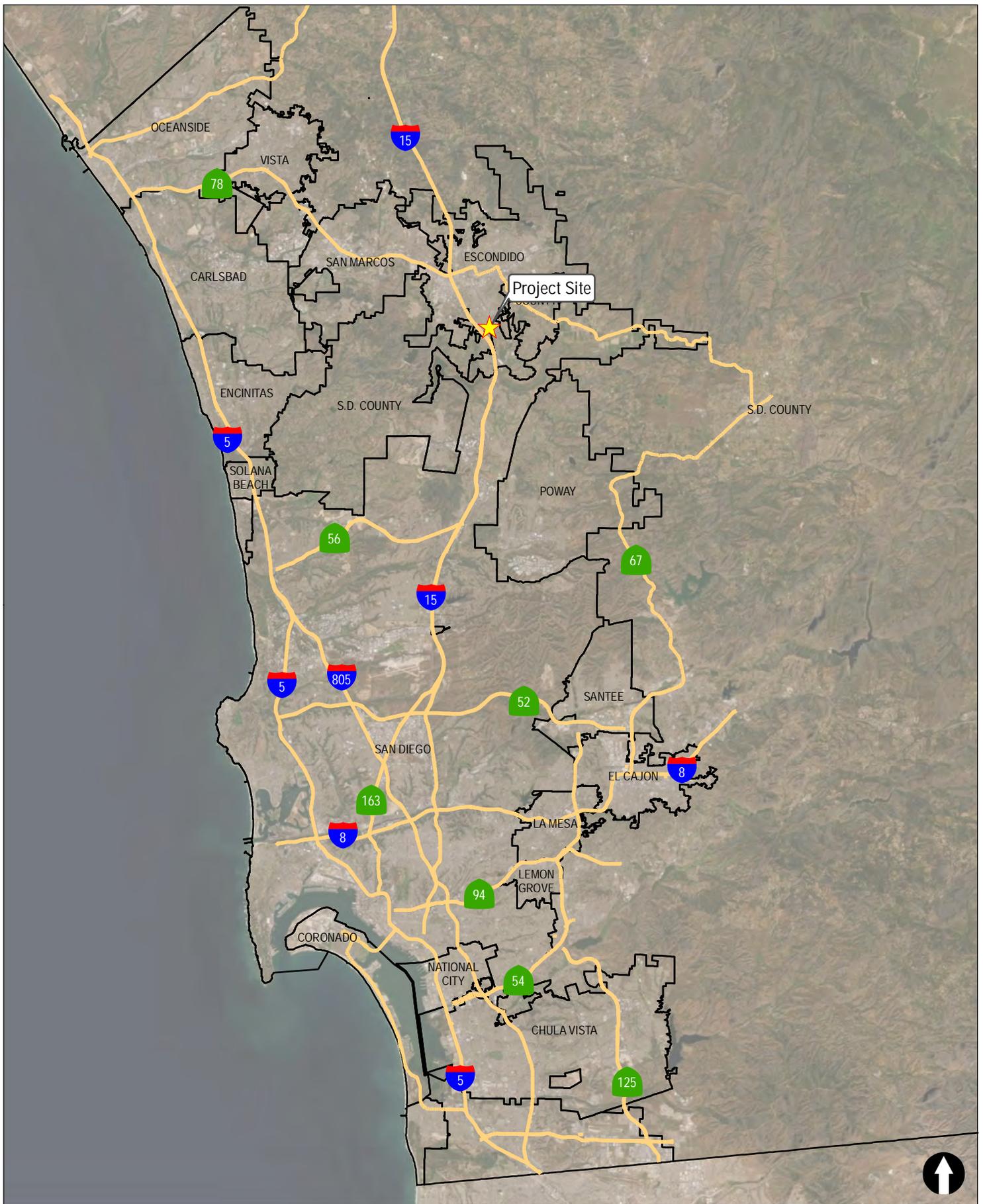
The project site is located on the east side of Centre City Parkway, north of Brotherton Road. The site reference address is 2200 S. Escondido Boulevard. The Project proposes the development of 62 condominiums.

The Gross building square footage for all the buildings, as shown on the site plan is 99,506 SF. This does not include decks or garages. Based on this square footage, the FAR is 0.658 $\{99,506 \text{ SF} / (3.47 \text{ AC} * 43,560 \text{ SF/AC})\}$.

Vehicular access is proposed via two full access driveways on Escondido Boulevard, one located along the northern boundary of the site and one approximately at the mid-point of the frontage along Escondido Boulevard.

Construction of the project is expected to occur over a period of 29 months. Construction would begin in February 2021 with demolition of the existing on-site uses, and is expected to be completed in December 2023. The first units are proposed for occupation by July 2022.

Figure 2-1 shows the Project vicinity and *Figure 2-2* illustrates, in more detail, the site location. *Figure 2-3* shows the Project's site plan.



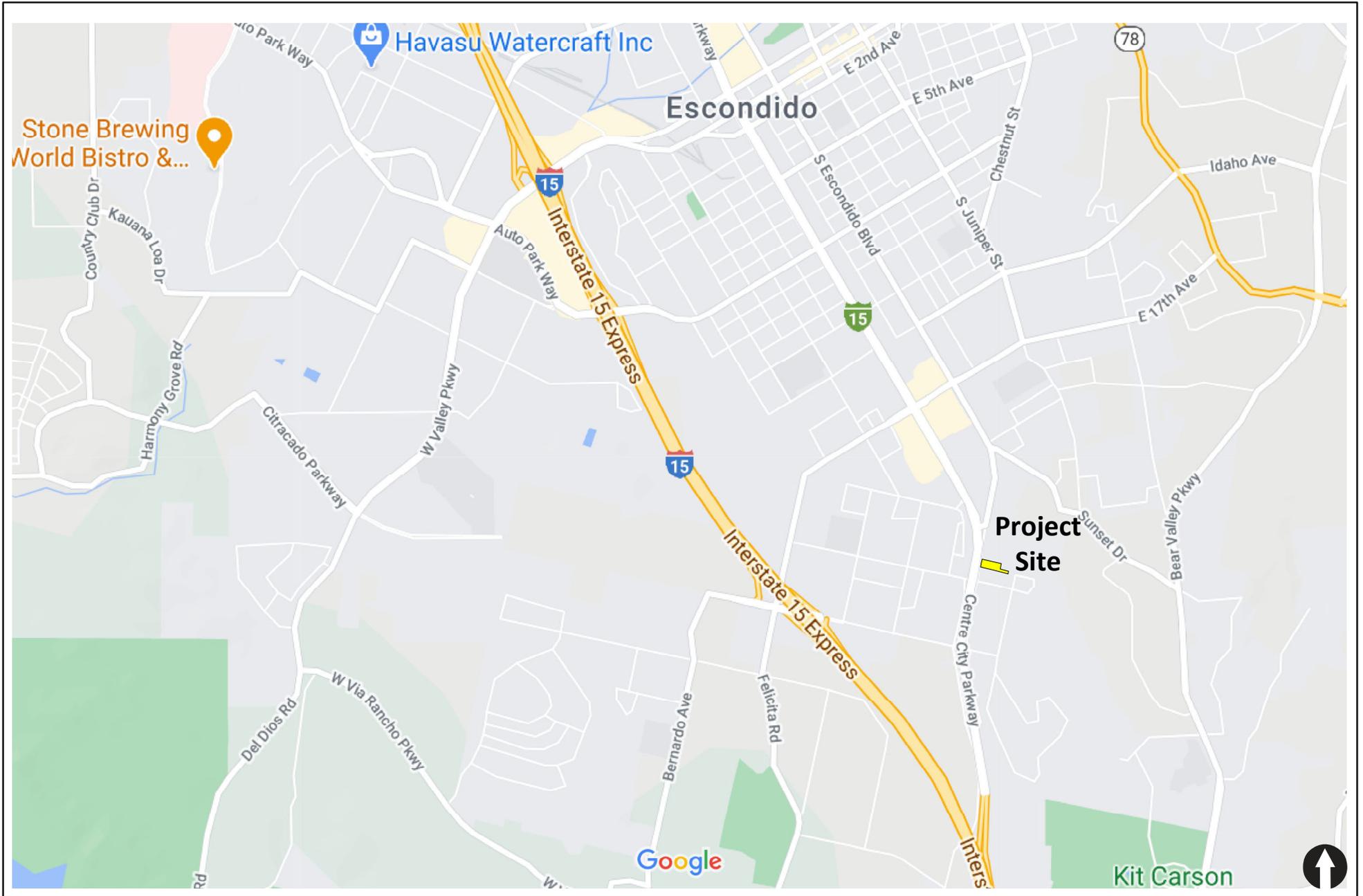


Figure 2-2

Project Area Map



TREE LEGEND

SYMBOL	BOTANICAL/COMMON NAME	SIZE / FORM	QUANTITY
(Symbol)	OLEA EUROAEA COMMON OLIVE	LARGE FIELD DUG LOW BRANCHING MULTI	1
(Symbol)	OLEA 'WILSON' WILSON OLIVE TREE	24" BOX / 36" BOX STANDARD	45
(Symbol)	PINUS HALEPENSIS ALEPPO PINE	24" BOX / 36" BOX LOW BRANCHING	12
(Symbol)	MAGNOLIA GRANDIFLORA 'LITTLE GEM' MAGNOLIA	36" BOX STANDARD	16
(Symbol)	TRISTANIA CONFERTA BRISBANE BOX	24" BOX / 36" BOX LOW BRANCHING STANDARD	20
(Symbol)	PODOCARPUS 'HENKELI' LONG LEAFED YELLOWWOOD OR	15 GAL / 24" BOX COLUMNAR	96
(Symbol)	PRUNUS CAROLINIANA CAROLIAN LAUREL CHERRY	15 GAL / 24" BOX COLUMNAR	

SHRUB LEGEND

BOTANICAL/COMMON NAME	BOTANICAL/COMMON NAME
AGAVE ATTENUATA FOXTAIL AGAVE	KALANCHOE LUCIAE PADDLE PLANT
AGAVE DESMETTIANA VAREGATED DWARF AGAVE	PHOTINIA F. 'RED ROBIN' RED ROBIN PHOTINIA
ALOPE PETROCOLA STONE ALOE	MISCANTHUS SINENSIS 'MORNING LIGHT' MORNING LIGHT MAIDEN GRASS
AGAVE VILMORINIANA OCTOPUS AGAVE	NANADINA DOMESTICA 'GULF STREAM' GULF STREAM HEAVENLY BAMBOO
BUSBUS M. 'GREEN BEAUTY' GREEN BEAUTY BOXWOOD	MULLENBERGIA CAPLARIIS 'SEAGAL BUSH' PINK MULLENGRASS
BERBERIS 'GOLDEN ABUNDANCE' GOLDEN ABUNDANCE OREGON GRAPE	MULLENBERGIA RIGENS REEF GRASS
CALLISTEMON 'LITTLE JOHN' DWARF CALLISTEMON	PITTOSPORUM TOBIIRA 'VAREGATED JAPANESE MOCK ORANGE'
CORDYLINAE HYBRIDA 'FESTIVAL' FESTIVAL BURGUNDY CORDYLINAE	PODOCARPUS MACROPHYLLUS SHRUBBY YEW PODOCARPUS
CAREX PRAEGRACILIS CALIFORNIA FIELD SEDGE	PRUNUS COMPACTA COMPACT CAROLINA CHERRY LAUREL
DIANELLA TASMANICA WHITE STRIPED TASMAN FLAX LILY	ROSA 'ICEBERG RED' RED ICEBERG ROSE
OLEA EUROPEA 'MONTRA' LITTLE OLIVE	ROSA MEDIOBIBAN WHITE MEIOLAND ROSE
DODONEA VISCOSA PURPUREA PURPLE LEAFED HOP BUSH	STRELITZIA REGINAE BIRD OF PARADISE
HESPERALOE PARVIFLORA 'BRICKLIGHT' RED YUCCA	VIBURNUM TINUS 'VAREGATUM' VAREGATED LAURUSTINUS
JUNIPERUS CHINENSIS SPARTAN BLUE POINT JUNIPER	XYLISMA CONGESTUM COMPACT SHINY XYLISMA
JUNIPERUS CHINENSIS 'WHICHTA BLUE' WHICHTA BLUE JUNIPER	YUCCA FILAMENTOSA 'COLOR GUARD' COLOR GUARD ADAMS NEEDLE
	YUCCA RECURVIFOLIA 'MARGRITAVILLE' CURVE LEAF YUCCA

- LEGEND**
- 1 NEIGHBORHOOD SIGN WALLS
 - 2 NATURAL CONCRETE SIDEWALK
 - 3 ASPHALTIC CONCRETE DRIVEWAY
 - 4 SOLID MASONRY PERIMETER WALL
 - 5 PLANTING AREA
 - 6 PLANTING POCKET AT GARAGE
 - 7 NATURAL CONCRETE WALK
 - 8 SEATING BENCHES
 - 9 GROUP SEATING AREA WITH TABLES & CHAIRS
 - 10 OVERHEAD SHADE TRELLIS
 - 11 PEDESTAL BBQ (2 TOTAL)
 - 12 ACTIVITY LAWN AREA
 - 13 ASPHALTIC CONCRETE OR PERMEABLE PAVER VEHICULAR PARKING
 - 14 NATURAL CONCRETE PARK WALKWAY
 - 15 CLUSTER MAIL BOX LOCATION
 - 16 NATURAL CONCRETE UNIT PATIO WITH LOW HEDGE SCREEN
 - 17 NATURAL CONCRETE PASEO WALK
 - 18 ENTRY STAIR WITH SOLID MASONRY CHEEK WALL AND HANDRAIL
 - 19 BIKE RACKS LOCATION (HOLDS 16 TOTAL)
 - 20 TUBULAR STEEL FENCING WITH SOLID MASONRY END PILASTERS

PERCENTAGE OF LANDSCAPE AREA

SHRUB AREA: TOTAL: 0.78 ACRES OR 34,043.56 SQ. FT
 TURF AREA: TOTAL: 0.16 ACRES OR 6833.54 SQ. FT

TOTAL LANDSCAPE AREA: 0.94 ACRES OR 40,877 SQ. FT
 TOTAL SITE AREA: 3.30 ACRES OR 143,648.76 SQ. FT.

PERCENTAGE OF LANDSCAPE AREA REQUIRED: 10%
 PERCENTAGE OF LANDSCAPE AREA PROPOSED: 28%

site plan
Scale: 1" = 20'-0"

Escondido | Preliminary Landscape Plan

Warrington Homes | 3090 Pullman st., Costa Mesa, CA 92626 | July 27, 2020



N:\3256\Figures
Date: 08/28/20

L-1



0 10 20 40

Summers & Murphy & Partners, Inc.
LANDSCAPE ARCHITECTS
3611 LOCUST AVE SUITE 300

Figure 2-3
Site Plan

2200 S. ESCONDIDO BOULEVARD

3.0 EXISTING CONDITIONS

Effective evaluation of the traffic impacts associated with the proposed project requires an understanding of the existing transportation system within the project area. *Figure 3-1* shows an existing conditions diagram, including signalized/un-signalized intersections and lane configurations.

3.1 Existing Transportation Conditions

The facilities analyzed in this report fall under the jurisdiction of the City of Escondido. The following is a brief description of the streets and the traffic they serve including vehicles, cyclists and pedestrians in the project area:

Centre City Parkway is classified as a Super Major Road on the City of Escondido *General Plan Circulation Element* within the study area. Centre City Parkway is constructed as a 4-lane divided roadway with sidewalks, curbs, gutters, and bike lanes. On-street parking is prohibited. There is no posted speed limit; the prima facie speed limit is 65 mph.

Escondido Boulevard is classified as a Collector on the City of Escondido *General Plan Circulation Element* within the study area between Felicita Road and the Centre City Parkway Connector, approximately 800 feet north of the Project site. South of the Connector to Citracado Parkway, Escondido Boulevard is classified as a Local Collector.

Escondido Boulevard is constructed as a 4-lane undivided roadway with on-street parking, sidewalks, curbs, and gutters between Felicita Road and the Centre City Parkway Connector. South of the connector, Escondido Boulevard transitions to a 2-Lane road with curb and gutter on the west side. On-street parking is permitted north of the connector. Bike lanes are not provided, and the posted speed limit is 40 mph.

A connector currently exists between Escondido Boulevard and Centre City Parkway approximately 1,000 feet north of Brotherton Road. A review of the traffic at these connector intersections indicates that in general, some southbound traffic on Escondido Boulevard uses the connector to continue south on Centre City Parkway or they continue south on Escondido Boulevard to Citracado Parkway and access Centre City Parkway at the signal and northbound traffic on Centre City Parkway uses the connector to continue north on Escondido Boulevard.

A review of collision records from the Statewide Integrated Traffic Records System (SWITRS) indicated 14 collisions at the Connector / Centre City Parkway, Connector / Escondido Boulevard intersections and the Connector segment between Centre City Parkway and Escondido Boulevard within the five-year period between January 1, 2014 and December 31, 2018. The types of collisions included 1 headon collision, 12 Broadside collisions and one collision involved an overturned vehicle. One of the broadside collisions involved a fatality and the remaining collisions involved a total of 24 injuries.

The City currently has a grant application to reconfigure the Brotherton Road / Centre City

Parkway intersection. This includes installing traffic signals at the Centre City Parkway / Brotherton Road and Escondido Boulevard / Brotherton Road intersections and allowing east-west through and turning movements. It also proposed to prohibit westbound left turns from the Escondido Boulevard connector to southbound Centre City Parkway.

Felicita Avenue is classified as a Collector west of Escondido Boulevard and as a Major Road east of Escondido Boulevard on the City of Escondido *General Plan Circulation Element*. Between Gamble Lane and Brotherton Road it is currently constructed as a two-lane roadway with center two-way left-turn lane. From Brotherton Road to Quince Street it is constructed as a two-lane roadway with painted double-yellow centerline. From Quince Street to Escondido Boulevard, it is classified as a Major Road and is built as a four-lane roadway. On-street parking is generally prohibited, though allowed in a few limited areas between Brotherton Road and Centre City Parkway. Sidewalks, curbs, gutters, and bike lanes are provided. The posted speed limit is 35 mph.

Citracado Parkway is classified as a Collector east of I-15 and as a Major Road west of I-15 on the City of Escondido *General Plan Circulation Element*. Citracado Parkway is currently constructed as a 2-lane undivided roadway east of I-15 with a rural cross-section. On-street parking is not permitted, and bike lanes are not provided. The posted speed limit is 30 mph.

Brotherton Road is an unclassified local road on the City of Escondido Circulation Element. It is constructed as a two-lane undivided roadway, primarily with a rural cross-section. On-street parking permitted east of Alexander Drive. Bike lanes are not provided. The posted speed limit is 25 mph.

3.2 Existing Traffic Volumes

Due to the current Covid situation, traffic counts conducted in 2020 do not reflect the normal traffic volumes. Hence, research was conducted to identify historical traffic volume counts in the Project study area. Counts conducted in September 2019 when area schools were in session were utilized, where available.

Following are the Project Study Area intersections and segments:

INTERSECTIONS

1. Felicita Avenue / Centre City Parkway
2. Felicita Avenue / Escondido Boulevard
3. Centre City Parkway / West Connector to Escondido Boulevard
4. East Connector to Centre City Parkway / Escondido Boulevard
5. Brotherton Road / Centre City Parkway
6. Brotherton Road / Escondido Boulevard

7. Citracado Parkway / Centre City Parkway
8. Citracado Parkway / Escondido Boulevard

SEGMENTS

1. **Centre City Parkway:** Felicita Avenue to Brotherton Road
2. **Centre City Parkway:** Brotherton Road to Citracado Parkway
3. **Escondido Boulevard:** Felicita Avenue to Centre City Parkway Connector
4. **Escondido Boulevard:** Centre City Parkway Connector to Brotherton Road
5. **Escondido Boulevard:** Brotherton Road to Citracado Parkway

Counts conducted September 2019 when area schools were in session are available at the following intersections and segments:

INTERSECTIONS

3. Centre City Parkway / West Connector to Escondido Boulevard
5. Brotherton Road / Centre City Parkway
6. Brotherton Road / Escondido Boulevard
7. Citracado Parkway / Centre City Parkway
8. Citracado Parkway / Escondido Boulevard

SEGMENTS

1. **Centre City Parkway:** Felicita Avenue to Brotherton Road
2. **Centre City Parkway:** Brotherton Road to Citracado Parkway
4. **Escondido Boulevard:** Centre City Parkway Connector to Brotherton Road
5. **Escondido Boulevard:** Brotherton Road to Citracado Parkway

There were three intersections and one segment where historical counts were not available. The following method was adopted to develop traffic volumes that reflect non-Covid traffic volumes:

1. Current 2020 (during Covid) counts were conducted at all intersections where counts are not available and also at some locations where counts are available.
2. A relationship factor between the Pre-Covid counts and current (during Covid) counts was developed by dividing the Pre-Covid counts by the Current 2020 (during Covid) counts.
3. This relationship (factor) was applied to the intersections for which Pre-Covid counts are not available.

Table 3-1 summarizes the Year 2019 (Pre-Covid) and 2020 (current) total entering volumes at the Study area intersections. The calculated factor is the ratio of the Year 2019 to the Year 2020 Total Entering Volumes. The Applied factor is the factor applied to the Year 2020 volumes (each movement at the intersection) to develop the Pre-Covid volumes. The final volumes used in the analysis are shown in the last two columns. Volumes for only the Felicita Avenue / Centre City

Parkway, Felicita Avenue / Escondido Boulevard and Centre City Parkway / Connector to Escondido Boulevard intersections were adjusted for the effect of Covid.

Table 3-2 summarizes the Year 2019 (Pre-Covid) and 2020 (current) total segment volumes. Year 2018 volumes available at the two Centre City Parkway segments and year 2019 volumes available for the two Escondido Boulevard segments were used in the analysis. Only the segment of Escondido Boulevard from Felicita Road to Centre City Parkway Connector is not available. Hence the factor calculated for the next southern segment, Centre City Parkway Connector to Brotherton Road was applied.

Study area intersections peak hour and segment volumes adjusted for the Year 2020 are depicted on **Figure 3-2**. **Appendix A** contains the count sheets.

**TABLE 3-1
FACTORS FOR DEVELOPING PRE-COVID PEAK HOUR INTERSECTION VOLUMES**

Intersection	2019 (Pre-Covid) Total Entering Volume		2020 (Covid) Total Entering Volume		Calculated Covid Factor ^a		Applied Factor ^b		Adjusted Entering / Used Volumes	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1. Felicita Ave / Centre City Pkwy	-	-	1,891	2,819	-	-	1.96	1.27	3700	3579
2. Felicita Ave / Escondido Blvd	-	-	1,498	2,160	-	-	1.57	1.27	2,351	2,744
3. Centre City Pkwy / Conn to Escondido Blvd	2,084	2,308	1,417	1,903	1.47	1.21	-	-	2,084	2,308
4. Conn to Centre City Pkwy / Escondido Blvd	-	-	484	786	-	-	1.47	1.21	711	954
5. Brotherton Rd / Centre City Pkwy	2,088	2,513	1,453	2,051	1.44	1.23	-	-	2,088	2,513
6. Brotherton Rd / Escondido Blvd	454	637	232	502	1.96	1.27	-	-	454	637
7. Citracado Pkwy / Centre City Pkwy	2,414	2,753	1,538	2,168	1.57	1.27	-	-	2,414	2,753
8. Citracado Pkwy / Escondido Blvd	449	422							449	422

Footnotes:

- a. Covid Factor calculated by dividing 2019 (Pre-Covid) Total Entering Volume by 2020 (Covid) Total Entering Volume.
- b. Covid Factor to be applied chosen by proximity to the intersection to which the factor is being applied.

General Notes:

- Volumes adjusted for Covid
- Pre-Covid volume counts

**TABLE 3-2
PRE-COVID SEGMENT VOLUMES**

Segment	Existing Volumes				
	Pre-Covid		2020 (Covid)	Calculated Covid Factor ^a	Used in Analysis
	2018	2019			
Escondido Boulevard					
Felicita Ave to Centre City Pkwy Connector	-	-	9,194	68%	18,000 ^b
Centre City Pkwy Connector to Brotherton Rd	-	4,861	3,291	68%	4,861
Brotherton Rd to Citracado Pkwy	-	3,538		68%	3,538

Footnotes:

- a. Covid Factor calculated by dividing 2019 (Pre-Covid) Total Entering Volume by 2020 (Covid) Total Entering Volume.
- b. Using the Covid Factor, an ADT of 13,521 is calculated. Based on discussions with the City, the ADT on this segment is 16,000 to 18,000. Therefore, the ADT of 18,000 was used in the analysis.

General Notes:

-  Volumes adjusted for Covid
-  Pre-Covid volume counts

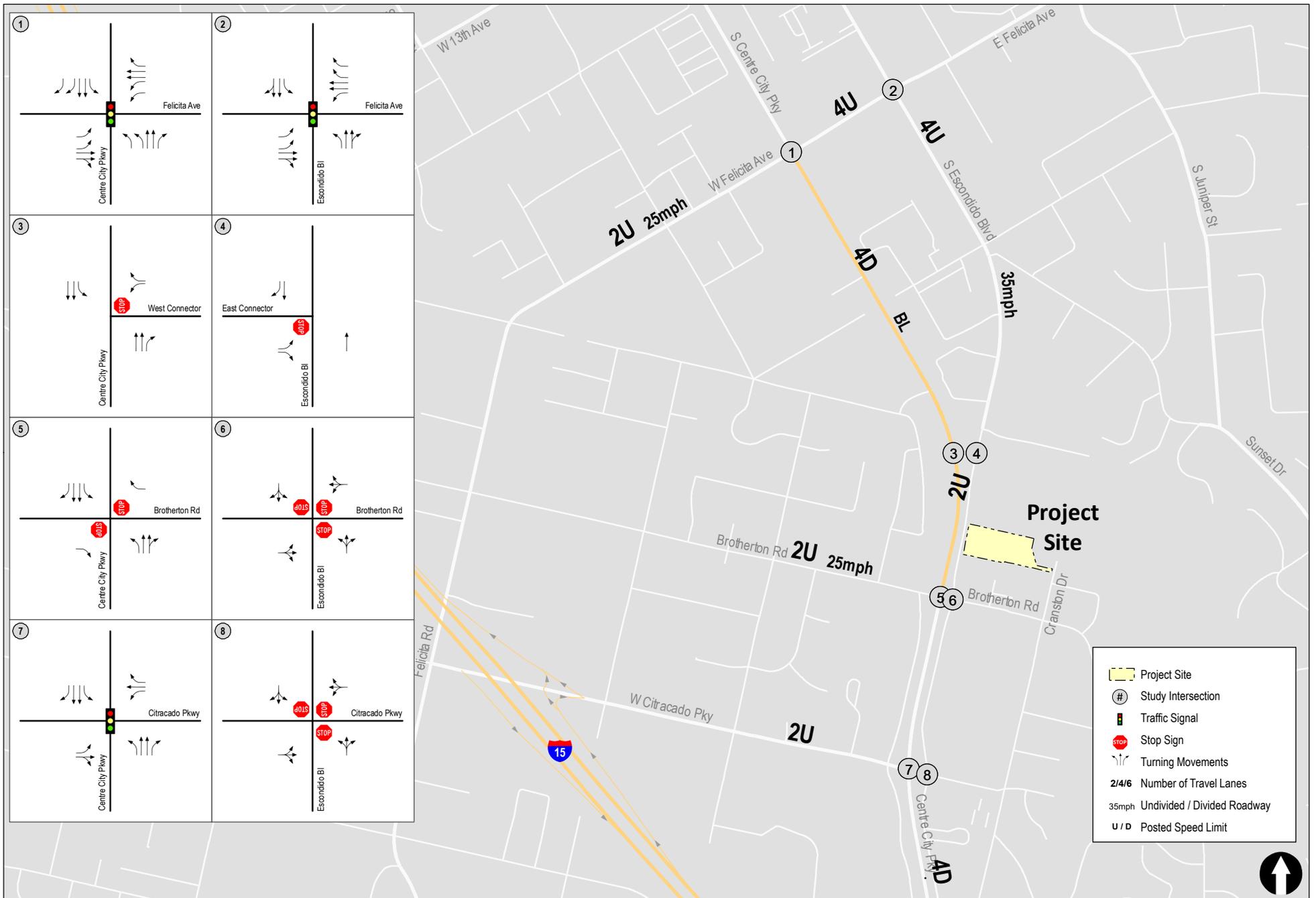


Figure 3-1

Existing Conditions Diagram

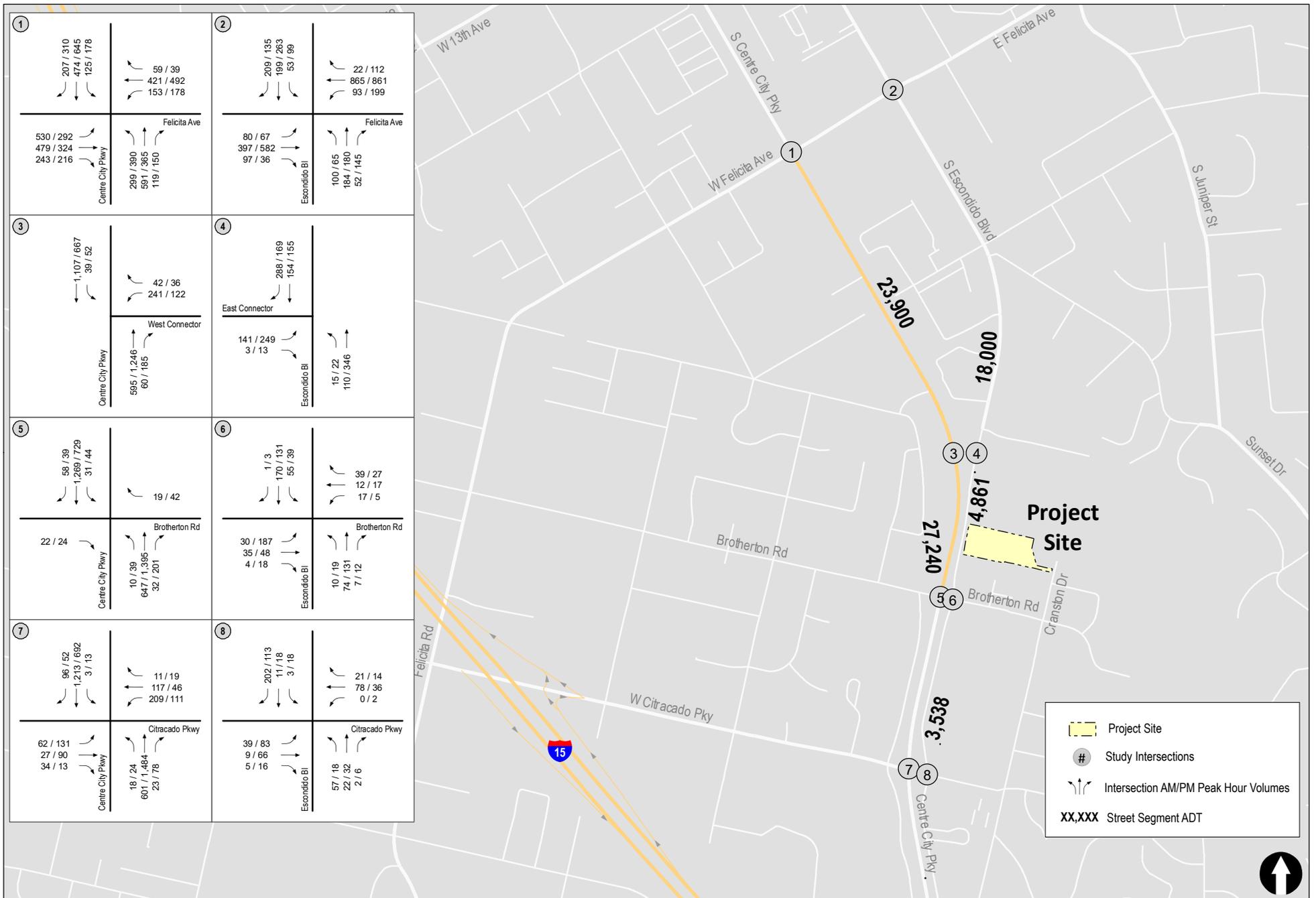


Figure 3-2

Existing Traffic Volumes

2200 S. ESCONDIDO BOULEVARD

4.0 ANALYSIS APPROACH AND METHODOLOGY

4.1 CEQA Transportation Impact Analysis

Currently, there is a regional VMT analysis process in place. The City is refining the process to narrow down the current choices to developing City Specific guidelines, but those guidelines have not been adopted at the time of this report. Therefore, based on consultation with the City, the 2019 ITE Guidelines for Transportation Studies in the San Diego Region were used for conducting this VMT assessment. Following is a description of the ITE guidelines.

4.1.1 VMT Analysis

The SB 743 legislation specified that the Governor's Office of Planning and Research (OPR) prepare guidelines for the implementation of SB 743. During the period from the passage of SB 743 in 2013 to the fall of 2018, OPR prepared various sets of guidelines and sought public comments from stakeholders. At the time of preparation of these transportation impact study guidelines, guidance regarding the changes to CEQA initiated by SB 743 were contained in the following documents:

- *CEQA Guidelines Revisions:*

Revisions to the CEQA Guidelines were adopted into CEQA in December 2018 through a formal process conducted by the Natural Resources Agency. Additional changes can only be made through a future CEQA update process.

- *Technical Advisory on Evaluating Transportation Impacts in CEQA (Technical Advisory):*

The technical advisory provides recommendations for the preparation of transportation impact analyses under SB 743. It is not formally included in CEQA and can be revised by OPR at any time without going through a formal process. Updated versions of the technical advisory are expected to be issued by OPR as new information becomes available and as California agencies gain experience in applying SB 743 to actual projects. As of the time of preparation of these transportation impact study guidelines, the current version of the technical advisory was dated December 2018.

The recommended methodology for conducting a VMT analysis is based on guidance prepared by the California Governor's Office of Planning and Research (OPR) as provided in the published Technical Advisory on Evaluating Transportation Impacts in CEQA. At the time of writing of these guidelines, the current version of OPR's technical advisory was dated December 2018. The guidance recommended by OPR has been modified to be better suited to local conditions in the San Diego region. These modifications are noted in the details described later in this chapter.

The basic process is to compare a project's estimated VMT/capita or VMT/employee to average values on a regional, citywide, or community basis. The target is to achieve a project VMT/capita or VMT/employee that is 85% or less of the appropriate average based on suggestions in these guidelines. Note that lead agencies have discretion for choosing a VMT metric and threshold. The selection should represent how VMT reduction is balanced against other objectives of the lead

agency and be supported by substantial evidence. The methodology for determining VMT/capita or VMT/employee is related to the project's expected daily trip generation. The remainder of this section of the guidelines is divided into individual components that describe different aspects of the methodology. Other methodologies for VMT analysis could be considered at the discretion of the lead agency. However, it is recommended that any VMT methodologies within a particular analysis use consistent methodologies and that VMT analysis consider the differences between trip-based VMT analysis methodologies and tour-based VMT methodologies, as described in OPR's technical advisory.

The minimum project size for VMT analysis would be based on statewide guidance provided by OPR. In OPR's technical advisory, the minimum project size is based a categorical exemption in CEQA that allows expansion of existing structures under certain circumstances. On page 12 of the December 2018 technical advisory, footnote 19, the following language describes the situation: "CEQA provides a categorical exemption for existing facilities, including additions to existing structures of up to 10,000 square feet, so long as the project is in an area where public infrastructure is available to allow for maximum planned development and the project is not in an environmentally sensitive area. [CEQA Guidelines, § 15301, subd. (e)(2).]"

OPR uses a general office building as the appropriate project type for the determination of minimum project size based on the exemption described above. Typical ITE trip generation rates are then applied to a 10,000 square-foot general office building which yields a minimum project size based on 110 daily trips.

If this alternative is used in the City of Escondido, it is recommended that the use of regional or local trip generation rates be considered in addition to the typical trip generation rate used by OPR. For example, using the SANDAG trip generation manual (Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002), a standard commercial office would generate 20 daily trips per 1,000 square feet. **Therefore, a 10,000 square-foot office would be expected to generate 200 daily trips and projects that generate less than 200 daily trips would not require a VMT analysis and would be presumed to have less than significant VMT impacts.**

4.1.2 Projects Located Near Transit Stations

OPR's technical advisory contains the following guidance regarding projects located near transit stations. Proposed CEQA Guideline Section 15064.3, subdivision (b)(1), states that lead agencies generally should presume that certain projects (including residential, retail, and office projects, as well as projects that are a mix of these uses) proposed within ½ mile of an existing major transit stop or an existing stop along a high quality transit corridor will have a less-than-significant impact on VMT. This presumption would not apply, however, if project-specific or location-specific information indicates that the project will still generate significant levels of VMT.

An existing major transit stop is defined as “a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.”

For the purposes of these guidelines, the distance between the project site and the transit station is typically based on direct walking distance without missing sidewalks or physical barriers.

Typically, a major transit stop would be considered to be applicable for this purpose if the transit stop were assumed to be in place in SANDAG’s RTIP scenario (see Methodology for VMT analysis for further discussion of this scenario).

4.1.3 Methodology for VMT Analysis

As mentioned above, it is recommended that VMT thresholds for SB 743 analysis will be developed by comparisons to average VMT/capita (for residential projects) or VMT/employee (for employment projects). The analysis can be conducted by comparing either the project VMT/capita or VMT/employee to both the San Diego regional average and the average for the city or community in which the project is located. It is recommended that if the project average is lower than either 85% of the regional average or 85% of the average for the city or community in which the project is located, the VMT impacts of the project can be presumed to be less than significant. Since this is the basis for the presumption of “less than significance,” it will be up to each city in the San Diego region and the County to adopt this recommended presumption and either define its jurisdiction as a single community for the purposes of determining VMT thresholds or subdivide its jurisdiction into smaller communities for the purpose of SB 743 analysis.

The VMT methodology recommended above differs from the statewide guidance recommended by OPR in the following ways:

- OPR recommends that VMT/capita comparisons for residential projects be made both on a regional and citywide basis. These guidelines recommend that a city may choose to do comparisons at a community level rather than at the citywide level. This recommendation applies to all cities within San Diego County and provides the lead agencies flexibility and discretion for selecting the threshold that is appropriate for their agency, based on their values and substantial evidence. Many communities within cities in the San Diego Region have a size and population that is comparable to a typical city on a statewide basis. The unincorporated area of San Diego County also has a governing structure in place for its communities, and the choice to do VMT/capita comparisons at a community level is also recommended to be extended to the unincorporated area of the County. The Cities of Encinitas and Chula Vista are also examples of cities that have distinct communities which have been treated differently for various historical planning considerations.
- OPR recommends that VMT/employee comparisons for employment projects be conducted at a regional basis only, as compared to VMT/capita comparisons that are made both at a regional and citywide basis. These guidelines recommend that VMT/employee comparisons

be made at both the regional and at the citywide level (or community level as described above). The San Diego Region is the third largest region in California (after the Los Angeles Area and the San Francisco Bay Area). While some employment trips are made across the region (or even outside the region), there is a large incentive to live and work within a relatively short distance, even within the same city or community, to avoid the relatively long commute distances that can be experienced by traveling across the region during peak commute hours.

- OPR recommends that the VMT/capita comparisons for projects in unincorporated county areas be based on the region's VMT/capita or the average VMT/capita of all cities within the county. These guidelines recommend that VMT/capita and VMT/employee comparisons for projects in the unincorporated area of San Diego County be made to the overall average VMT/capita and VMT/employee for the unincorporated area of the county (or for individual communities if the County decides to use individual communities rather than the entire unincorporated area for VMT comparisons). San Diego County is one of the largest counties in California in terms of geography and also one of the most diverse in terms of topography and climate. While the VMT/capita comparison recommended by OPR may make sense for some counties in California, the comparisons between unincorporated areas and averages of the cities make less sense in San Diego County, where there are great differences in terms of distance and other factors between rural and urban areas of the county.

The recommended methodology for calculation of VMT depends on the size of the project as determined by the project's trip generation calculated in terms of ADT. The project's trip generation should be calculated using standard practice. For projects with a trip generation of less than 2,400 ADT, the recommended VMT analysis methodology is the SANDAG VMT calculation tool. SANDAG has prepared an online tool that calculates average VMT/capita and VMT/employee at the census tract level. Analysts would use this tool to determine the project's VMT/employee or VMT/capita to be compared to community, city, and/or regional averages.

Definitions of VMT/capita and VMT/employee that are used in SANDAG's VMT calculation tool are as follows:

- VMT/Capita: Includes all vehicle-based person trips grouped and summed to the home location of individuals who are drivers or passengers on each trip. It includes home-based and non-home-based trips. The VMT for each home is then summed for all homes in a particular census tract and divided by the population of that census tract to arrive at Resident VMT/Capita.
- VMT/Employee: Includes all vehicle-based person trips grouped and summed to the work location of individuals on the trip. This includes all trips, not just work-related trips. The VMT for each work location is then summed for all work locations in a particular census tract and divided by the number of employees of that census tract to arrive at Employee VMT/Employee.

The recommended methodology for projects over 2,400 ADT is to run the regional transportation model with and without the project to determine the project's net increase in VMT and then use that value to determine VMT/employee or VMT/capita to be compared to community, city, and/or regional averages.

4.2 Transportation Analysis

The City of Escondido's published Traffic Impact Analysis Guidelines provide the following direction on report approach and methodology:

1. The traffic study should utilize the Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region (April 2002) published by SANDAG, to determine the project traffic volume.
2. The traffic study should utilize the following scenarios to determine project traffic impacts at intersections and along roadway segments.
 - a. Existing Condition (based on new traffic counts)
 - b. Existing + Project Traffic Condition
 - c. Opening Year (2022) (Existing + Cumulative Projects) without Project Condition
 - d. Opening Year (2022) with Project Traffic Condition
 - e. Year 2035 Without Project Condition
 - f. Year 2035 With Project Traffic Condition
3. Highway Capacity Manual should be utilized to determine level of service for intersections.
4. The study area should include at least all major intersections (signalized and un-signalized) adjacent to the site. The tables below contain the trigger-points to identify if a roadway segment or intersection should be included in the Traffic Impact Analysis. **Table 4-1** below contains the trigger-points for roadway segments within the City of Escondido for different street classifications based on ADT added to the segment. **Table 4-2** below contains the trigger-points for intersections based on peak hour volumes.

**TABLE 4-1
TRAFFIC IMPACT ANALYSIS ADT THRESHOLDS FOR ROADWAY SEGMENTS**

Street Classification	Lanes	Cross Sections (ft.)	TIA Trigger-Points (ADT generation)
Prime Arterial	(8 lanes)	116/136 (NP)	900
	(6 lanes)	106/126 (NP)	800
Major Road	(6 lanes)	90/110 (NP)	700
	(4 lanes)	82/102 (NP)	500
Collector	(4 lanes)	64/84 (NP)	500
	(4 lanes)	(WP)	250
Local Collector and all other	(2 lanes)	42/66 (NP)	200
		(WP)	

General Notes:

1. NP = No parking on street
2. WP = With parking on street

**TABLE 4-2
TRAFFIC IMPACT ANALYSIS ADT THRESHOLDS FOR INTERSECTIONS**

Intersection Classification (Minor leg of the intersection)	TIA Trigger-Points (AM or PM peak hour trips added to any leg)
Prime Arterial	50
Major Road	40
Collector	30
Local Collector	20

4.3 Methodology

The City of Escondido utilizes the following methodology for evaluating traffic operations.

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. LOS provides an index to the operational qualities of a roadway segment or an intersection. LOS designations range from A to F, with LOS A representing the best operating conditions and LOS F representing the worst operating conditions. LOS designation is reported differently for signalized intersections and roadway segments.

The analysis conducted in this report utilized the published Highway Capacity Manual (HCM) methodology for evaluating signalized intersections. They also utilize LOS criteria for circulation element roadways based on published capacity tables. The following is a discussion of the both methodologies:

4.3.1 Signalized Intersections

For signalized intersections, LOS criteria are stated in terms of the average control delay per vehicle for a 15-minute analysis period. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay.

Table 4–3 summarizes the signalized intersections levels of service descriptions. **Table 4–4** depicts the intersection LOS and corresponding delay ranges, which are based on overall intersection delay (signalized intersections) and the average control delay for any particular minor movement (unsignalized intersections), respectively. LOS relative to signalized and unsignalized intersection is further described below.

LOS A describes operations with very low delay, (i.e. less than 10.0 seconds per vehicle). This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.

LOS B describes operations with delay in the range 10.1 seconds and 20.0 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.

LOS C describes operations with delay in the range 20.1 seconds and 35.0 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear. *Signal cycle failure (or overflow) is an interrupted traffic condition in which a number of queued vehicles are unable to depart due to insufficient capacity during a signal cycle.* The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.

LOS D describes operations with delay in the range 35.1 seconds and 55.0 seconds per vehicle. At level D, the influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or higher volume (demand) / capacity (v/c) ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are frequent.

LOS E describes operations with delay in the range of 55.1 seconds to 80.0 seconds per vehicle. This is considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high v/c ratios. Individual cycle failures are frequent occurrences.

LOS F describes operations with delay in excess of over 80.0 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with over-saturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high v/c ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels.

**TABLE 4-3
INTERSECTION LEVEL OF SERVICE DESCRIPTIONS**

Level of Service	Description
A	Occurs when progression is extremely favorable and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Occurs generally with good progression and/or short cycle lengths. More vehicles stop than for LOS A, causing higher levels of average delay.
C	Results generally when there is fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear in this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Results generally in noticeable congestion. Longer delays may result from some combination of unfavorable progression, long cycle lengths, or high volume-to-capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Considered to be the limit of acceptable delay. These high delay values generally indicate poor progression, long cycle lengths, and high volume-to-capacity ratios. Individual cycle failures are frequent occurrences.
F	Considered to be unacceptable to most drivers. This condition often occurs with oversaturation (i.e., when arrival flow rates exceed the capacity of the intersection). It may also occur at high volume-to-capacity ratios below 1.00 with many individual cycle failures. Poor progression and long cycle lengths may also be major contributing causes to such delay levels

**TABLE 4-4
INTERSECTION LOS & DELAY RANGES**

LOS	Delay (seconds/vehicle)	
	Signalized Intersections	Unsignalized Intersections
A	≤ 10.0	≤ 10.0
B	10.1 to 20.0	10.1 to 15.0
C	20.1 to 35.0	15.1 to 25.0
D	35.1 to 55.0	25.1 to 35.0
E	55.1 to 80.0	35.1 to 50.0
F	≥ 80.1	≥ 50.1

Source: Highway Capacity Manual, 6th Edition.

4.3.2 Unsignalized Intersections

For unsignalized intersections, LOS is determined by the computed or measured control delay and is defined for each minor movement: LOS is not defined for the intersection as a whole. Level of Service F exists when there are insufficient gaps of suitable size to allow a side street demand to safely cross through a major street traffic stream. This level of service is generally evident from extremely long control delays experienced by side-street traffic and by queuing on the minor-street approaches. The method, however, is based on a constant critical gap size; that is, the critical gap remains constant no matter how long the side-street motorist waits. LOS F may also appear in the form of side-street vehicles selecting smaller-than-usual gaps. In such cases, safety may be a problem, and some disruption to the major traffic stream may result. It is important to note that LOS F may not always result in long queues, but may result in adjustments to normal gap acceptance behavior, which are more difficult to observe in the field than queuing.

4.3.3 Street Segments

Street segment analysis is based upon the comparison of daily traffic volumes (ADTs) to the City of Escondido's *Roadway Classification, Level of Service, and ADT Table (Table 4-5)*. This table provides segment capacities for different street classifications, based on traffic volumes and roadway characteristics.

TABLE 4-5
CITY OF ESCONDIDO ROADWAY CLASSIFICATION, LEVEL OF SERVICE AND AVERAGE DAILY TRIP THRESHOLDS
STREET CLASSIFICATION LANES CROSS SECTIONS LEVEL OF SERVICE

Street Classification	Lanes	Cross Sections ¹	Level of Service/ADT Threshold				
			A	B	C	D	E
Prime Arterial	(8 lanes)	116/136 (NP)	23,800	37,800	51,800	62,300	70,000
Prime Arterial	(6 lanes)	106/126 (NP)	20,400	32,400	44,400	53,400	60,000
Super Major Road	(6 lanes)	90/110 (NP)	17,000	27,000	37,000	44,500	50,000
Major Road	(4 lanes)	82/102 (NP)	12,600	20,000	27,400	32,900	37,000
Collector	(4 lanes)	64/84 (NP)	11,600	18,500	25,300	30,400	34,200
Collector	(4 lanes)	(WP)	6,800	10,800	14,800	17,800	20,000
Local Collector	(2 lanes)	42/66 (NP)	5,100	8,100	11,100	13,400	15,000
Local Collector	(2 lanes)	(WP)	3,400	5,400	7,400	8,900	10,000
Rural Collector	(2 lanes)						

1. Cross sections define the configuration of a proposed roadway at right angles to the centerline. Street cross sections assist in choosing the appropriate design standards for a particular street.

NP = No Parking WP = With Parking

ADT = Average Daily Trips

LOS	V/C Ratio
A	0.00 ≥ 0.34
B	0.35 ≥ 0.54
C	0.55 ≥ 0.74
D	0.75 ≥ 0.89
E	0.90 ≥ 1.00
F	>1.00

5.0 CEQA VMT ASSESSMENT

Following is the VMT analysis.

5.1 Project Size

The Project is calculated to generate a total of 496 ADT. This is more than the minimum 200 ADT that would not require a VMT analysis or presumed to have less than significant VMT impacts per the ITE guidelines (Section 4.1.1). Hence, the Project is not screened out on the basis of Project size.

5.2 Projects Located Near Transit Stations

The Project is located within a ½ mile distance of the Escondido Boulevard / Sunset Drive intersection. This intersection is served by Route 350, which operates at a 15-minute frequency throughout the day between 4:00 AM and 1:00 AM, Monday through Friday and meets the criteria of a high-quality transit corridor.

Route 350 connects to a major transit hub, the Escondido Transit Center, which is approximately 2 miles from the site and connects residents to the beaches in Oceanside, and trains to Los Angeles or San Diego. Residents can also connect to an Express Bus to downtown San Diego.

As noted above, the Project is located within a ½ mile of an existing transit stop along a high quality transit corridor. However, there is currently a gap of about 800 feet in the sidewalk between the Project site and the bus stop. The project will provide a sidewalk along the Project frontage. Thus, there will remain a gap of approximately 600 feet with no sidewalk (see photos in *Appendix H*). The Project will provide an ADA compliant path of travel along this 600 feet to close this gap, as well as a small shoulder were available (see exhibit in *Appendix H*).

With the construction of this sidewalk, the Project will provide a continuous sidewalk to the bus stop, which should allow the Project to qualify for the transit access connectivity, but only if the sidewalk is constructed as required. Therefore, the Project would be is screened out and a detailed transportation VMT analysis would not be required.

6.0 SUBSTANTIAL EFFECT CRITERIA

For purposes of this TIA, the criteria established in Appendix G of the CEQA Guidelines (14 CCR 15000 et seq.), Transportation, will apply to the analysis of direct, indirect, and cumulative effects. As such, a substantial effect to transportation and traffic-related facilities would result if the Project would:

- A. Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities.
- B. Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b) (regarding the use of vehicles miles traveled (VMT) as a criterion for analyzing transportation impacts).
- C. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment).
- D. Result in inadequate emergency access.

For Item A, the Project’s consistency (i.e., potential conflicts) with relevant programs, plans, ordinances, and/or policies relating to transit, roadway, bicycle, and pedestrian facilities is addressed in this section.

Specific to roadway conflicts, the Project’s consistency with the General Plan Mobility and Infrastructure Element will be addressed, as well as consistency with the City’s Traffic Impact Analysis Requirements Guidelines. A component of this analysis includes consideration of whether LOS targets identified in the General Plan and Traffic Guidelines would be achieved or whether the Project would conflict with such targets. To assist in that analysis, the Substantial Effect Criteria shown in **Table 6-1** below are utilized to assess potential conflicts and related impacts.

**TABLE 6-1
CITY OF ESCONDIDO TRANSPORTATION SUBSTANTIAL EFFECT CRITERIA**

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: See City of Escondido.

Notes: V/C = volume to capacity ratio (use LOS E for capacity).

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

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

7.0 ANALYSIS OF EXISTING CONDITIONS

7.1 Peak Hour Intersection Operations

Table 7-1 summarizes the existing peak hour intersection operations. As shown in *Table 7-1*, all the study area signalized and All-Way-Stop-Controlled (AWSC) intersections are calculated to currently operate at LOS C or better during both the AM and PM peak hours. The minor street movements at all Two-Way Stop Controlled (TWSC) intersections are calculated to operate at LOS C or better during both the AM and PM peak hours.

It may be noted that the delay and LOS reported are for the westbound right-turn movement at intersection #3 and eastbound right-turn movement at intersection #4 and not the left-turn movement(s). This is because the Project does not add any traffic to the left-turn movements and therefore analysis is not warranted.

Appendix B contains the Existing intersection analysis worksheets.

7.2 Daily Street Segment Operations

Table 7-2 summarizes the existing segment operations along the key study area roadways. As shown in *Table 7-2*, all roadway segments are calculated to currently operate LOS C or better on a daily basis.

**TABLE 7-1
EXISTING INTERSECTION OPERATIONS**

Intersection	Control Type	Movement	Peak Hour	Delay ^a	LOS ^b
1. Felicita Ave / Centre City Pkwy	Signal	Overall	AM	29.8	C
		Overall	PM	29.0	C
2. Felicita Ave / Escondido Blvd	Signal	Overall	AM	28.0	C
		Overall	PM	29.0	C
3. Centre City Pkwy / Connect to Escondido Blvd	MSSC ^c	SBL	AM	9.3	A
		WBR ^d	AM	10.7	B
		SBL	PM	14.8	B
		WBR ^d	PM	15.1	C
4. Connect to Centre City Pkwy / Escondido Blvd	MSSC	NBL	AM	8.3	A
		EBR ^d	AM	9.1	A
		NBL	PM	8.1	A
		EBR ^d	PM	9.2	A
5. Brotherton Rd / Centre City Pkwy	MSSC	EB	AM	16.7	C
		EB	PM	19.2	C
6. Brotherton Rd / Escondido Blvd	AWSC ^e	NB	AM	9.0	A
		NB	PM	10.8	B
7. Citracado Pkwy / Centre City Pkwy	Signal	Overall	AM	21.0	C
		Overall	PM	20.0	B
8. Citracado Pkwy / Escondido Blvd	AWSC	NB	AM	8.3	A
		NB	PM	8.3	A

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. MSSC- Minor Street Stop Control. Delays and LOS for movements to which the Project adds traffic are reported.
- d. The Project adds traffic to the right-turn movement and zero traffic to the left-turn movement. Therefore, the delay and LOS only for the right-turn movement is reported.
- e. AWSC- All Way Stop Control

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 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

**TABLE 7-2
EXISTING STREET SEGMENT OPERATIONS**

Street Segment	Functional Class	Capacity (LOS E) ^a	ADT ^b	LOS ^c	V/C ^d
Centre City Parkway					
Felicita Ave to Brotherton Rd	4-Lane Super Major Road	37,000	23,900	C	0.646
Brotherton Rd to Citracado Pkwy	4-Lane Super Major Road	37,000	27,240	C	0.736
Escondido Boulevard					
Felicita Ave to Centre City Pkwy Connect	4-Lane Collector	34,200	18,000	B	0.526
Centre City Pkwy Connect to Brotherton Rd	2-Lane Collector	15,000	4,861	A	0.324
Brotherton Rd to Citracado Pkwy	2-Lane Collector	15,000	3,538	A	0.236

Footnotes:

- a. Capacities based on the City of Escondido Roadway Classification Table.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to Capacity.

8.0 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. It should be noted that no trip credit was taken or applied for the existing land uses currently on-site.

8.1 Trip Generation

The project proposes to develop 62 multi-family residential dwelling units. The Project traffic generation calculations were conducted using the trip generation rates published in SANDAG's *Brief Guide of Vehicular Traffic Generation Rates for San Diego Region (April 2002)*. Based on the project description, the *Condominium* category was used, which SANDAG specifies as 8 ADT/unit.

Table 8-1 shows a summary of the Project traffic generation. As tabulated the proposed Project is calculated to generate 496 daily trips with 40 trips (8 inbound/32 outbound) in AM peak hour and 45 trips (32 inbound/13 outbound) during PM peak hour.

8.2 Trip Distribution/Assignment

The Project traffic distribution was based on the site location, and access to I-15, existing traffic patterns, and access to other potential destinations as summarized below:

- 50% of the Project would be oriented to the north of the Project site, 25% each on Centre City Parkway and Escondido Boulevard,
- There is a large amount of retail at the Centre City Parkway / Felicita Avenue and Escondido Boulevard / Felicita Avenue intersections,
- 3% each of the Project traffic on Centre City Parkway and Escondido Boulevard are captured by the retail as shown on *Figure 8-1*,
- 22% each continue north of Felicita Avenue on Centre City Parkway and Escondido Boulevard,
- 50% of the Project would be oriented to the south of the Project site, 15% oriented to the west on Citracado Parkway towards I-15 North, and 30% towards I-15 South on Centre City Parkway, and
- 5% of the Project traffic is assumed to be oriented to/from by the Miller Elementary School at the northwest corner of Felicita Avenue/Brotherton Road.

Figure 8-1 shows the Project trip distribution percentages. **Figure 8-2** shows the Project traffic volumes. **Figure 8-3** shows Existing + Project traffic volumes.

**TABLE 8-1
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
Multi-Family Residential ^a	62 DU	8 /DU	496	8%	20:80	8	32	40	9%	70:30	32	13	45

Footnotes:

- a. Rates based on SANDAG's Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002 (Condominium category utilized).

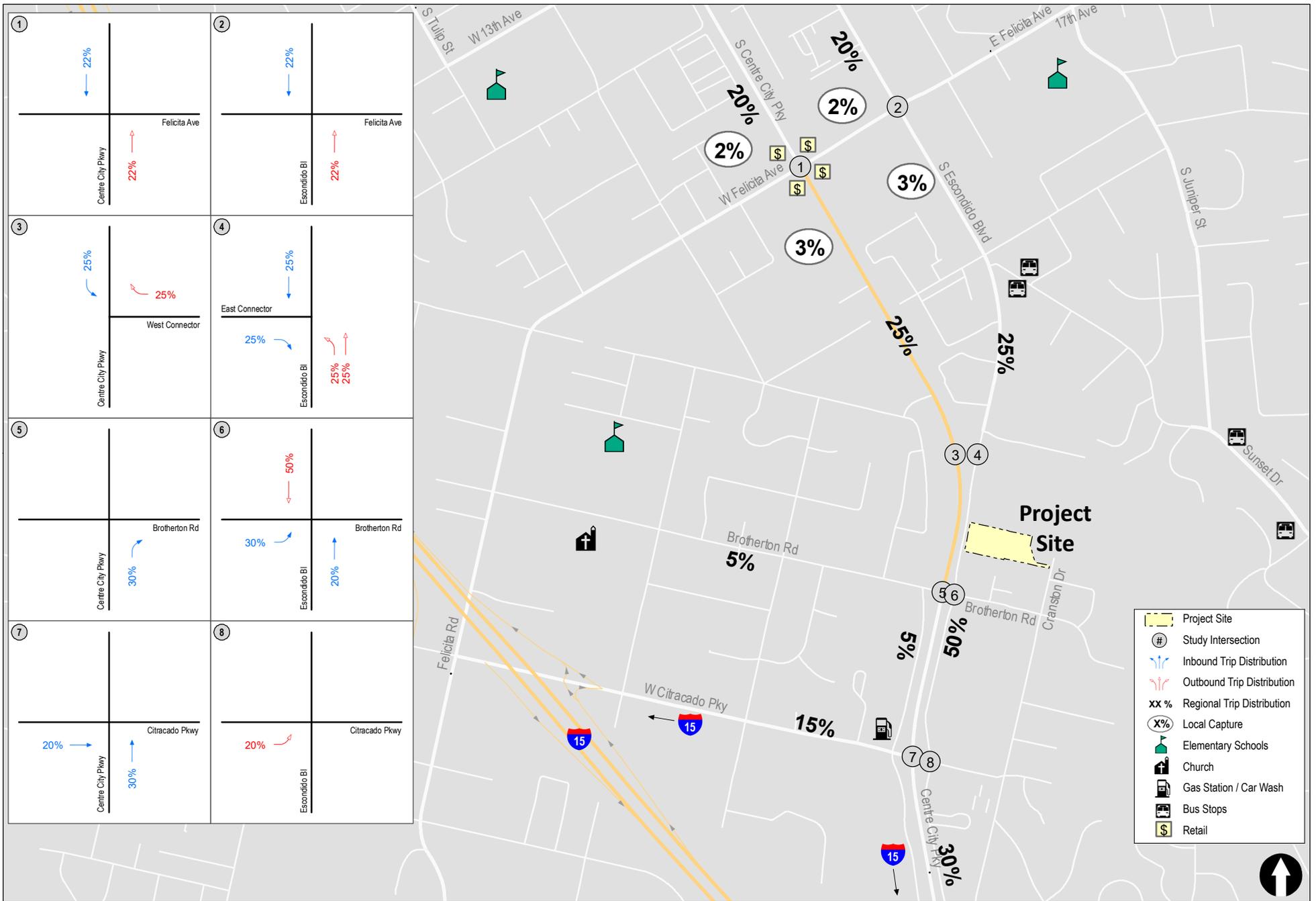


Figure 8-1

Project Traffic Distribution

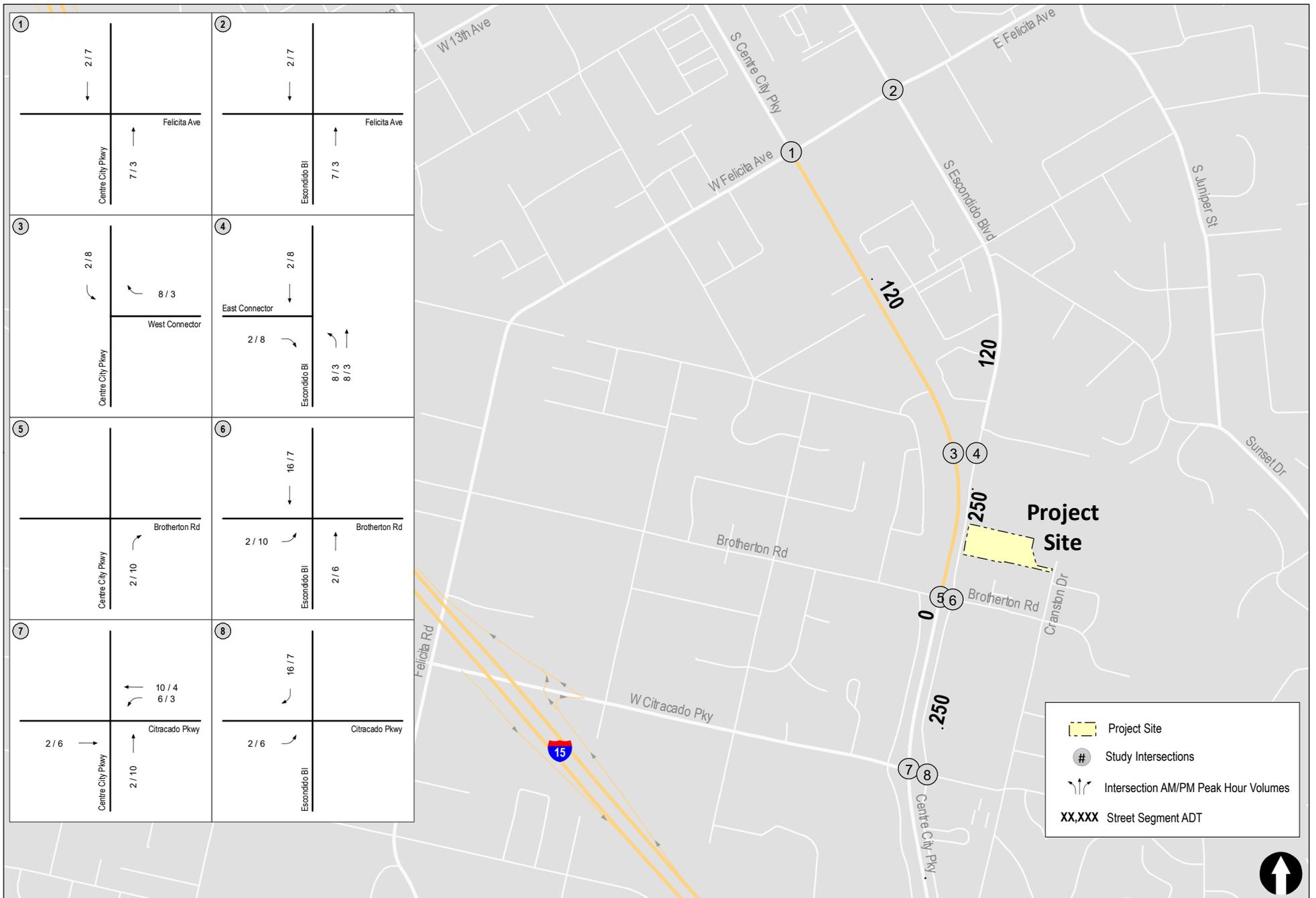


Figure 8-2

Project Traffic Volumes

2200 S. ESCONDIDO BOULEVARD

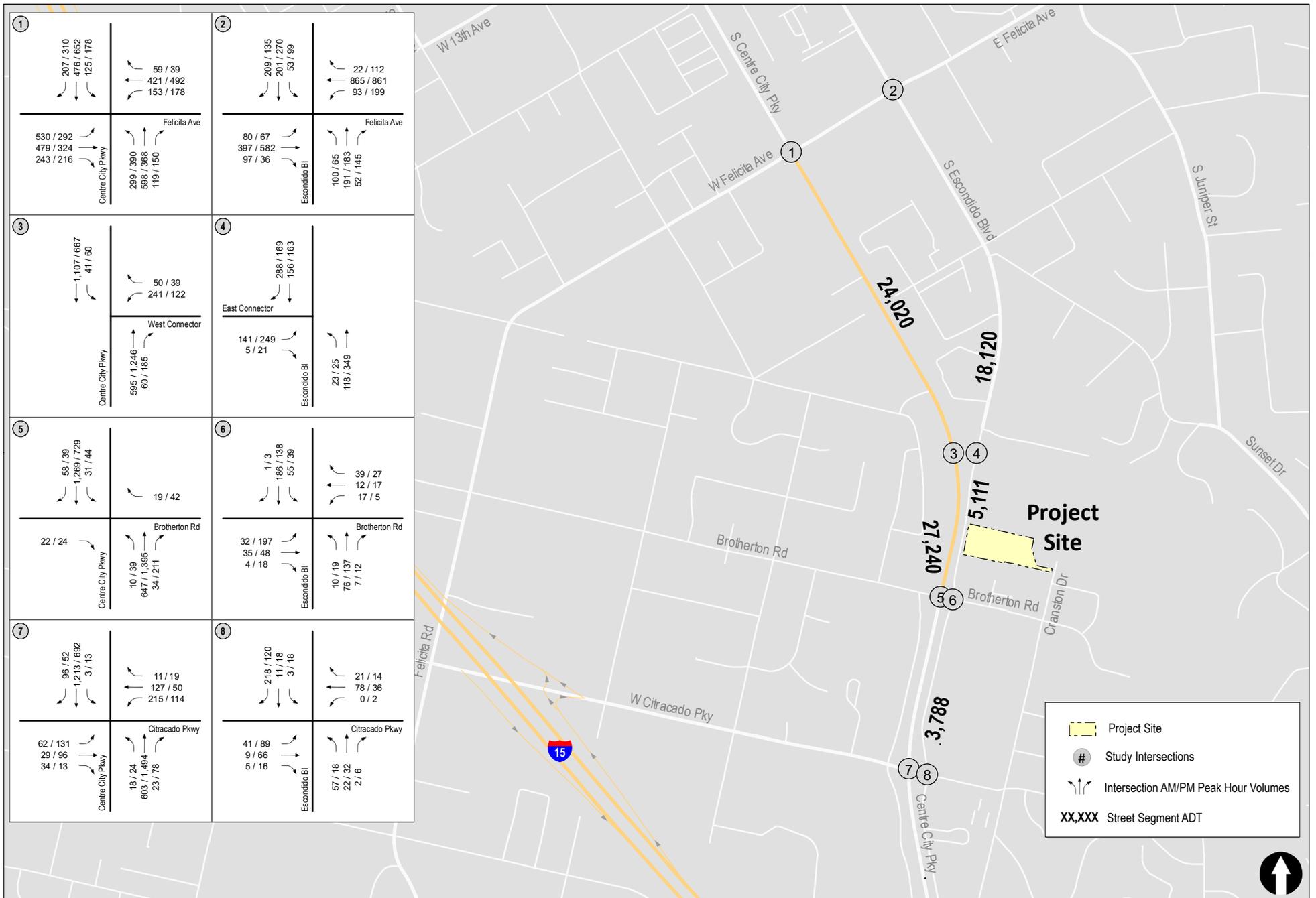


Figure 8-3

Existing + Project Traffic Volumes

2200 S. ESCONDIDO BOULEVARD

9.0 CUMULATIVE PROJECTS DISCUSSION

Cumulative projects are other projects in the study area that will add traffic to the local circulation system in the near future. LLG researched potential cumulative projects within the City of Escondido to identify the potential discretionary projects which should be included in the analysis. Based on the research and discussions with City staff, the following cumulative projects were determined to add traffic to the study area and were therefore included in this analysis.

1. Del Prado I & II:

A multi-family subdivision with 113 homes generally located on the southwest corner of S. Centre City Parkway and Brotherton Road.

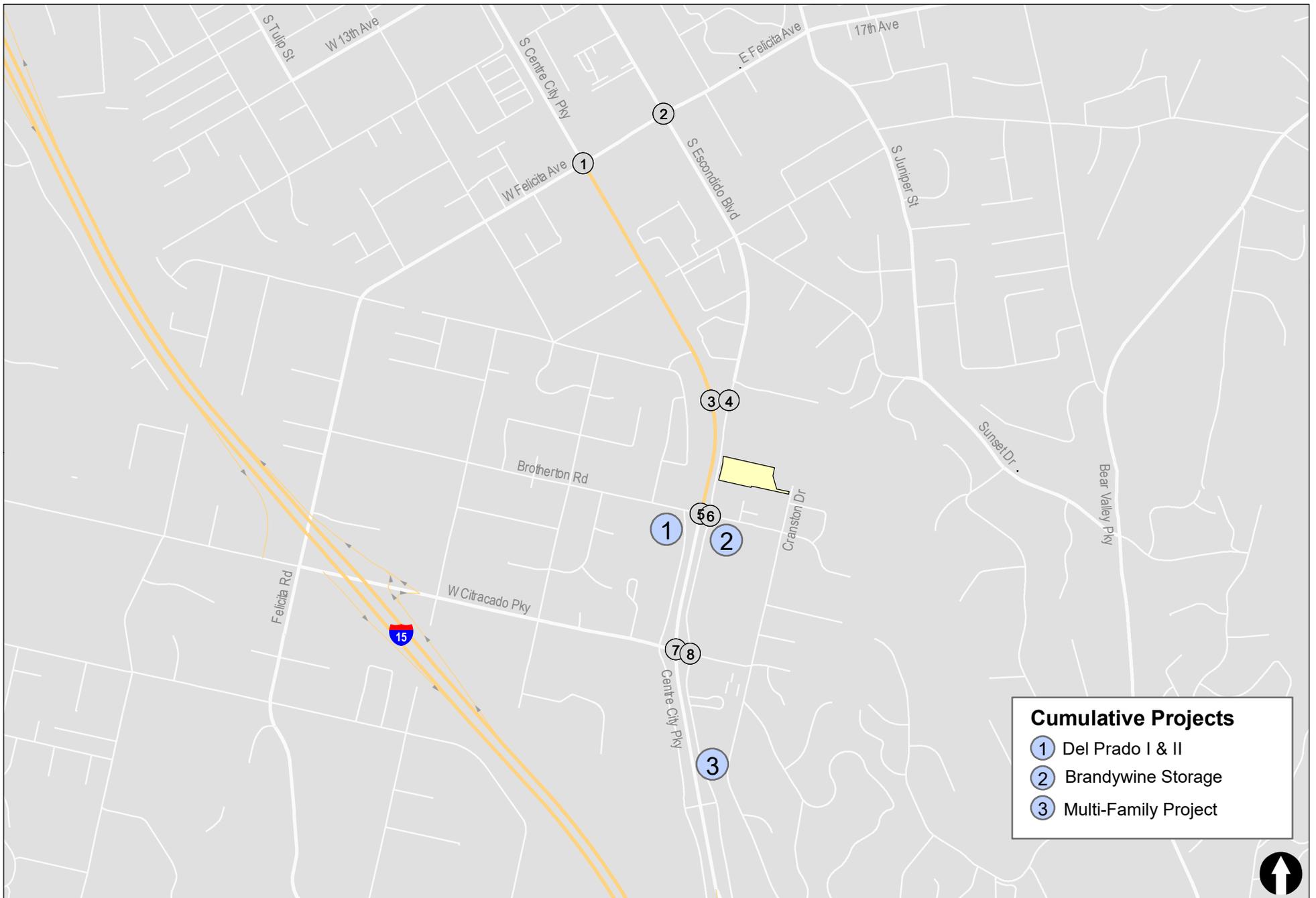
2. Brandywine Storage:

The Brandywine Storage project includes 78,067 sf of storage space and 4 single family homes. This project is generally located on the southeast corner of S. Escondido Blvd and Brotherton Road.

3. Multi-Family Project:

The proposed multi-family project of 42 units is located at 2608 S. Escondido Boulevard.

Figure 9-1 is the Cumulative Projects Location Map. **Figure 9-2** shows the Cumulative projects traffic volumes. **Figure 9-3** shows the Near-Term (Existing + Cumulative Projects) without Project traffic volumes. **Figure 9-4** shows the Near-Term + Project traffic volumes.



Cumulative Projects

- ① Del Prado I & II
- ② Brandywine Storage
- ③ Multi-Family Project



Figure 9-1

Cumulative Projects Location Map

2200 S. ESCONDIDO BOULEVARD

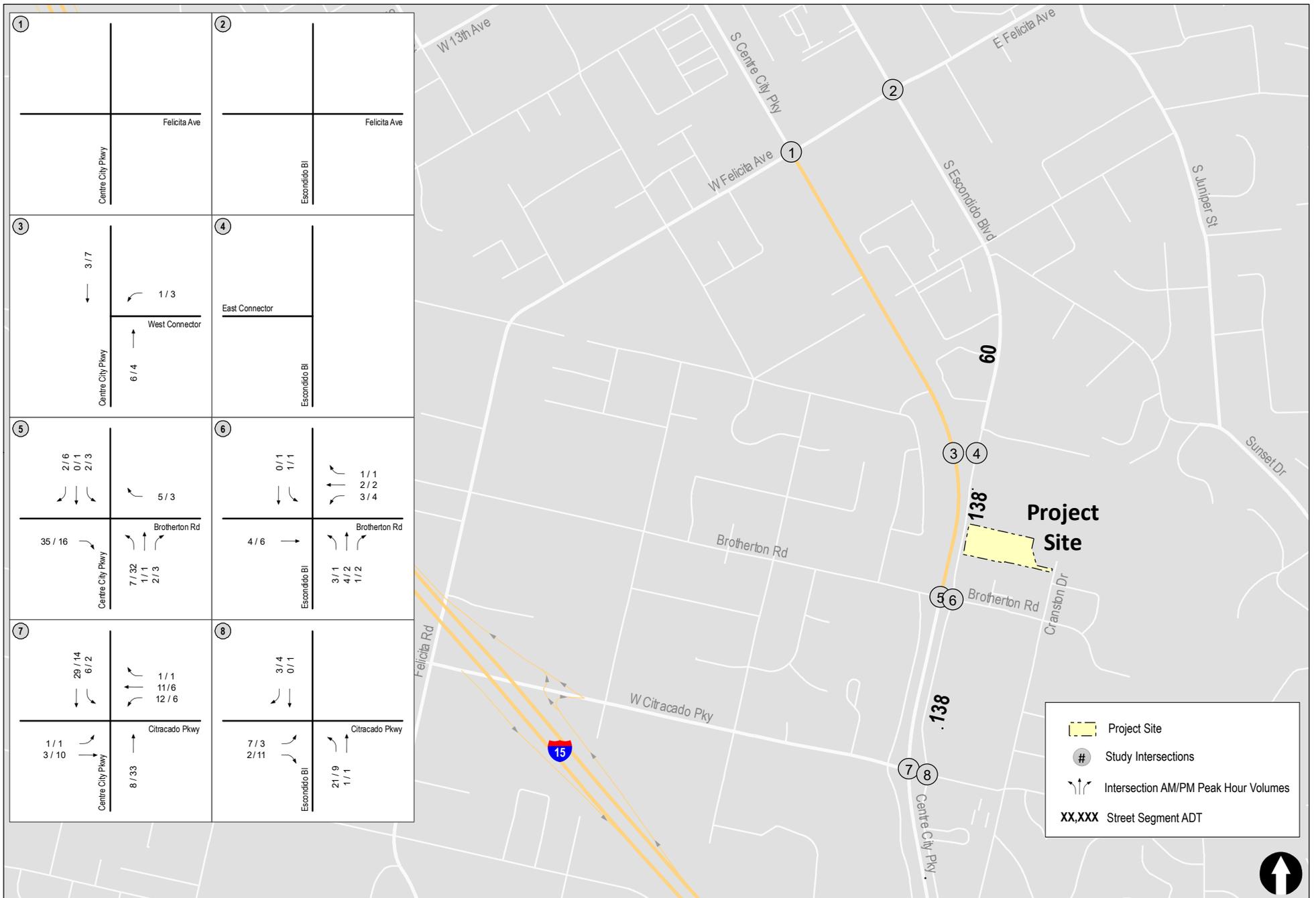


Figure 9-2

Cumulative Projects Traffic Volumes

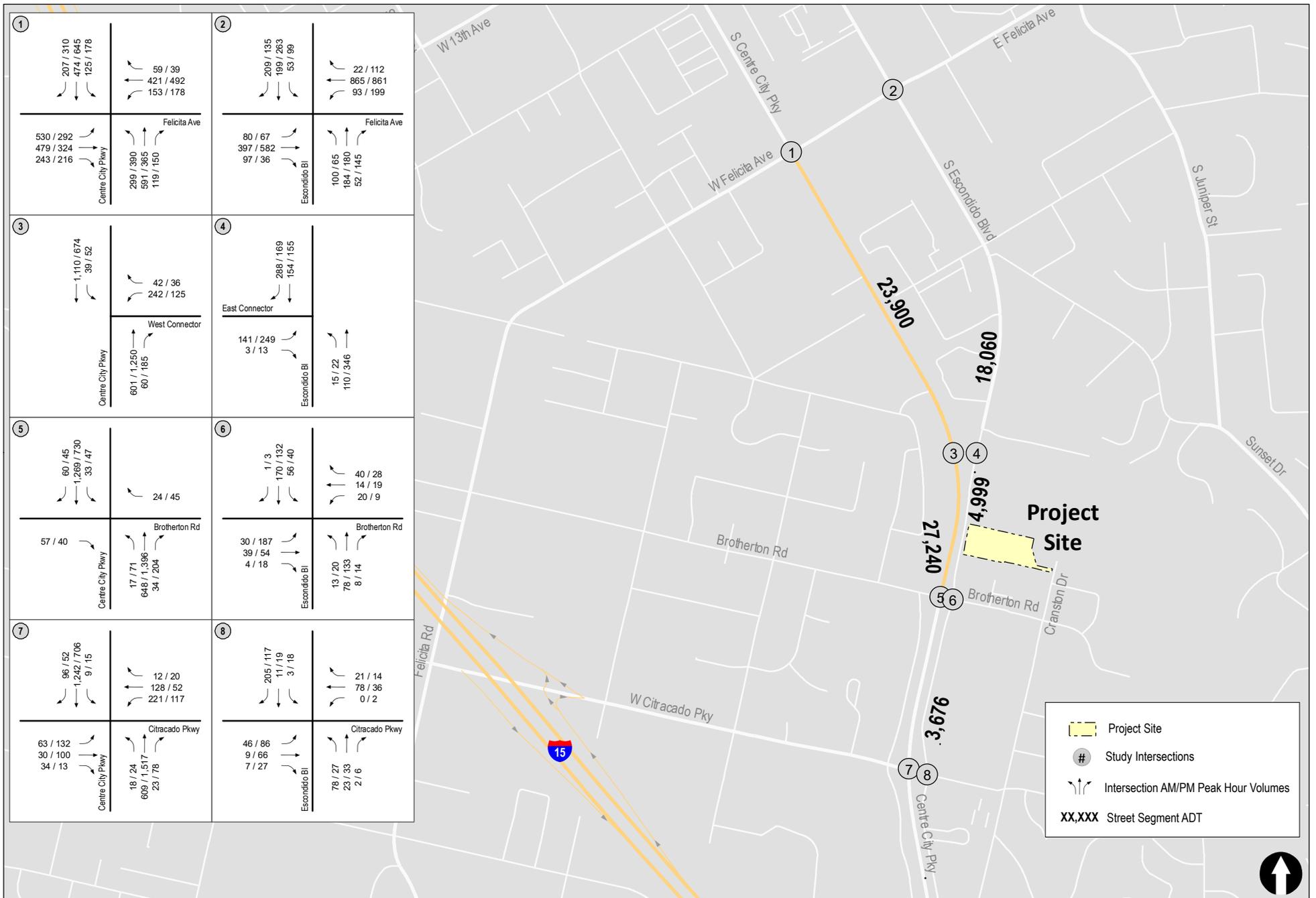
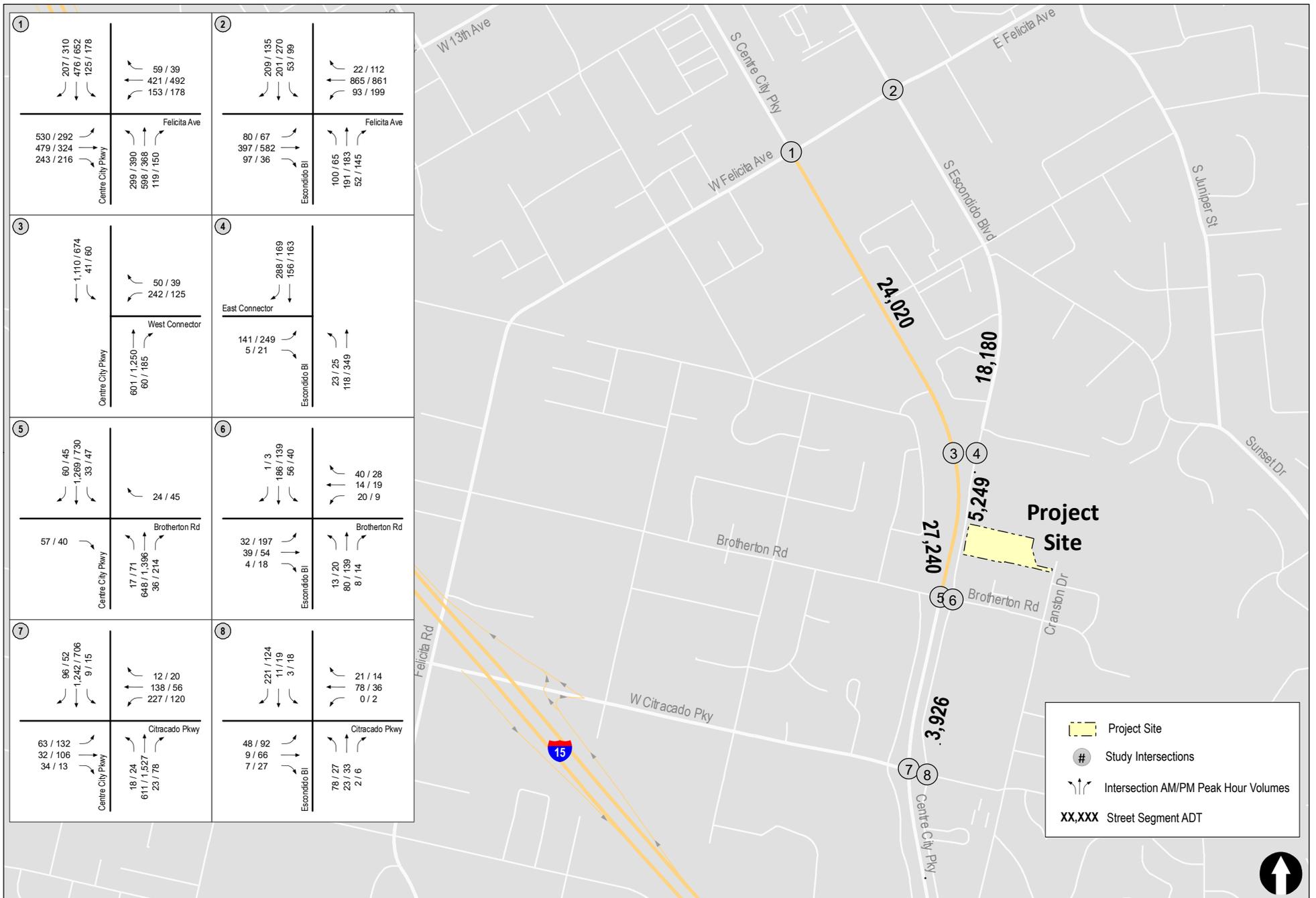


Figure 9-3

Opening Year (2022) without Project Traffic Volumes

2200 S. ESCONDIDO BOULEVARD



10.0 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.

10.1 Existing + Project Conditions

10.1.1 Peak Hour Intersection Operations

Table 10–1 summarizes the Existing + Project intersection operations. As seen in *Table 10–1*, with the addition of Project traffic, all the study area signalized and AWSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours.

The minor street movements at all MSSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours.

Appendix C contains the Existing + Project intersection analysis worksheets.

10.1.2 Daily Street Segment Operations

Table 10–2 summarizes the Existing + Project traffic roadway segment operations. *Table 10–2* shows that with the addition of Project traffic, all the study area street segments are calculated to continue to operate at LOS C or better.

10.2 Opening Year (2022) (Existing + Cumulative Projects) without Project Conditions

10.2.1 Peak Hour Intersection Analysis

Table 10–1 summarizes the Opening Year (2022) without project traffic peak hour intersection operations. *Table 10–1* shows that in the Opening Year (2022) without Project, all the study area signalized and AWSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours.

The minor street movements at all MSSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours.

Appendix D contains the Opening Year (2022) without Project intersection analysis worksheets.

10.2.2 Daily Street Segment Operations

Table 10–2 summarizes the Opening Year (2022) without Project traffic roadway segment operations. *Table 10–2* shows that in the Opening Year (2022) without Project traffic all the study area street segments are calculated to continue to operate at LOS C or better.

10.3 Opening Year (2022) + Project Conditions

10.3.1 Peak Hour Intersection Operations

Table 10–1 summarizes the Opening Year (2022) with Project intersection operations. *Table 10–1* shows that in the Opening Year (2022) with Project traffic, all the study area signalized and AWSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours.

The minor street movements at all MSSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours.

Appendix E contains the Opening Year (2022) with Project intersection analysis worksheets.

10.3.2 Daily Street Segment Operations

Table 10–2 summarizes the Opening Year (2022) with Project traffic roadway segment operations. As seen in *Table 10–2*, in the Opening Year (2022) with Project traffic, all the study area street segments are calculated to continue to operate at LOS C or better.

**TABLE 10-1
NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Control Type	Movement	Peak Hour	Existing		Existing + Project		Δ^c	Opening Year (2022) without Project		Opening Year (2022) with Project		Δ^c	Substantial Effect?
				Delay ^a	LOS ^b	Delay	LOS		Delay	LOS	Delay	LOS		
1. Felicita Ave / Centre City Pkwy	Signal	Overall	AM	29.8	C	31.1	C	1.3	29.8	C	29.8	C	0.0	No
		Overall	PM	29.0	C	29.5	C	0.5	29.8	C	31.5	C	1.7	No
2. Felicita Ave / Escondido Blvd	Signal	Overall	AM	28.0	C	28.0	C	0.0	28.0	C	28.0	C	0.0	No
		Overall	PM	29.0	C	29.0	C	0.0	29.0	C	29.0	C	0.0	No
3. Centre City Pkwy / Connector to Escondido Blvd	MSSC ^d	SBL	AM	9.3	A	9.3	A	0.0	9.3	A	9.3	A	0.0	No
		WBR ^e	AM	10.7	B	10.8	B	0.1	10.8	B	10.9	B	0.1	No
		SBL	PM	14.8	B	15.1	C	0.3	14.9	B	15.1	C	0.2	No
		WBR ^e	PM	15.1	C	15.1	C	0.0	15.2	C	15.3	C	0.1	No
4. Connector to Centre City Pkwy / Escondido Blvd	MSSC	NBL	AM	8.3	A	8.3	A	0.0	8.3	A	8.3	A	0.0	No
		EBR ^e	AM	9.1	A	9.1	A	0.0	9.1	A	9.1	A	0.0	No
		NBL	PM	8.1	A	8.2	A	0.1	8.1	A	8.2	A	0.1	No
		EBR ^e	PM	9.2	A	9.3	A	0.1	9.2	A	9.3	A	0.1	No
5. Brotherton Rd / Centre City Pkwy	MSSC	EB	AM	16.7	C	16.7	C	0.0	18.8	C	18.8	C	0.0	No
		EB	PM	19.2	C	19.3	C	0.1	19.4	C	19.5	C	0.1	No
6. Brotherton Rd / Escondido Blvd	AWSC ^f	NB	AM	9.0	A	9.2	A	0.2	9.1	A	9.3	A	0.2	No
		NB	PM	10.8	B	11.1	B	0.3	10.9	B	11.3	B	0.4	No

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**TABLE 10-1 (CONTINUED)
NEAR-TERM INTERSECTION OPERATIONS**

Intersection	Control Type	Movement	Peak Hour	Existing		Existing + Project		Δ ^c	Opening Year (2022) without Project		Opening Year (2022) with Project		Δ ^c	Substantial Effect?
				Delay ^a	LOS ^b	Delay	LOS		Delay	LOS	Delay	LOS		
CONTINUED FROM PREVIOUS PAGE														
7. Citracado Pkwy / Centre City Pkwy	Signal	Overall	AM	21.0	C	21.5	C	0.5	22.5	C	23.0	C	0.5	No
		Overall	PM	20.0	B	20.6	C	0.6	21.4	C	22.2	C	0.8	No
8. Citracado Pkwy / Escondido Blvd	AWSC	NB	AM	8.3	A	8.6	A	0.3	8.4	A	8.7	A	0.3	No
		NB	PM	8.3	A	8.5	A	0.2	8.5	A	8.7	A	0.2	No

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. "Δ" denotes the Project-induced increase in Delay
- d. MSSC- Minor Street Stop Control. Delays and LOS for movements to which the Project adds traffic are reported.
- e. The Project adds traffic to the right-turn movement and zero traffic to the left-turn movement. Therefore, the delay and LOS only for the right-turn movement is reported.
- f. AWSC- All Way Stop Control

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 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

**TABLE 10-2
NEAR-TERM STREET SEGMENT OPERATIONS**

Street Segment	Capacity (LOS E) ^a	Existing			Existing + Project				Opening Year (2022) without Project			Opening Year (2022) with Project				Substantial Effect?
		ADT ^b	LOS ^c	V/C ^d	ADT	LOS	V/C	Δ ^e	ADT	LOS	V/C	ADT	LOS	V/C	Δ ^e	
Centre City Parkway																
Felicita Ave to Brotherton Rd	37,000	23,900	C	0.646	24,020	C	0.649	0.003	23,900	C	0.646	24,020	C	0.649	0.003	None
Brotherton Rd to Citracado Pkwy	37,000	27,240	C	0.736	27,240	C	0.736	0.000	27,240	C	0.736	27,240	C	0.736	0.000	None
Escondido Boulevard																
Felicita Ave to Centre City Pkwy Connector	34,200	18,000	B	0.526	18,120	B	0.530	0.004	18,060	B	0.528	18,180	B	0.532	0.004	None
Centre City Pkwy Connector to Brotherton Rd	15,000	4,861	A	0.324	5,111	B	0.341	0.017	4,999	A	0.333	5,249	B	0.350	0.017	None
Brotherton Rd to Citracado Pkwy	15,000	3,538	A	0.236	3,788	A	0.253	0.017	3,676	A	0.245	3,926	A	0.262	0.017	None

Footnotes:

- a. Capacities based on the City of Escondido Roadway Classification Table.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to Capacity.
- e. “Δ” denotes the Project-induced increase in V/C.

11.0 ANALYSIS OF LONG-TERM (YEAR 2035) SCENARIOS

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

11.1 Long-Term (Year 2035) Traffic Volumes

Long-Term (Year 2035) volumes were obtained from The SANDAG Series 13 and 14 models and the higher of the two was used in the analysis. The volume for the segment of Escondido Boulevard between Brotherton Road and Citracado Parkway is lower than the existing volume in both the Series 13 and 14 models. Hence, the existing volume on this segment was increased by 10% to estimate the Year 2035 volumes. *Table 11-1* summarizes the Year 2035 volumes used in the analysis 2035 without Project traffic volumes.

**TABLE 11-1
LONG-TERM SEGMENT VOLUMES**

Segment	Series 13	Series 14	Utilized
Centre City Parkway			
Felicita Ave to Brotherton Rd	31,100	34,100	34,100
Brotherton Rd to Citracado Pkwy	31,300	35,400	35,400
Escondido Boulevard			
Felicita Ave to Centre City Pkwy Connector	14,100	21,500	21,500
Centre City Pkwy Connector to Brotherton Rd	5,200	9,500	9,500
Brotherton Rd to Citracado Pkwy	1,100	1,700	3,892

Year 2035 peak hour turning movement volumes were estimated using a template in Excel developed by LLG to determine peak hour traffic at an intersection from future (Year 2035) ADT volumes using the relationship between existing peak hour turn movements and the existing ADT volumes. This same relationship can be assumed to generally continue in the future. For example, if the segment ADT on the roadway is forecast to double by the Year 2035, it is reasonable to assume that the peak hour intersection turning movement volumes will generally double. The Project traffic was added to the Year 2035 without Project traffic volumes to obtain Year 2035 + Project traffic volumes.

Figure 11-1 depicts the Year 2035 Without Project traffic volumes, while *Figure 11-2* depicts the Year 2035 With Project traffic volumes.

11.2 Long-Term (Year 2035) without Project Conditions

11.2.1 Peak Hour Intersection Analysis

Table 11–2 summarizes the Year 2035 without Project peak hour intersection operations. *Table 11–2* shows that in the Year 2035 without Project traffic, the following study area signalized / AWSC intersections are calculated to operate at LOS D:

- Felicita Avenue / Centre City Parkway – LOS D during the AM and PM peak hours
- Felicita Avenue / Escondido Boulevard – LOS D during the AM and PM peak hours
- Brotherton Road / Centre City Parkway – LOS D during the AM and PM peak hours

The minor street movements at all MSSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours except the following:

- Centre City Parkway / Connector to Escondido Boulevard – Southbound left-turn movement, LOS D during the PM peak hour

Appendix F contains the Year 2035 without Project intersection analysis worksheets.

11.2.2 Daily Street Segment Operations

Table 11–3 summarizes the Year 2035 without Project roadway segment operations. *Table 11–3* shows that in the Year 2035 without Project traffic, the following study area street segments are calculated to continue to operate at LOS D:

- Segment #1: **Centre City Parkway**, Felicita Avenue to Brotherton Road – LOS E
- Segment #2: **Centre City Parkway**, Brotherton Avenue to Citracado Parkway – LOS E

11.3 Long-Term (Year 2035) + Project Conditions

11.3.1 Peak Hour Intersection Operations

Table 11–2 summarizes the Year 2035 with Project peak hour intersection operations. *Table 11–2* shows that with the addition of Project traffic, the following study area signalized / AWSC intersections are calculated to operate at LOS D:

- Felicita Avenue / Centre City Parkway – LOS D during the AM and PM peak hours
- Felicita Avenue / Escondido Boulevard – LOS D during the AM and PM peak hours
- Brotherton Road / Centre City Parkway – LOS D during the AM and PM peak hours

The minor street movements at all MSSC intersections are calculated to operate at LOS C or better during both the AM and PM peak hours except the following:

- Centre City Parkway / Connector to Escondido Boulevard – Southbound left-turn movement, LOS D during the PM peak hour

The increase in delay due to the Project at the above intersections is less than 2 seconds, the allowable threshold. Therefore, the Project does not have a substantial effect at these intersections.

Appendix G contains the Year 2035 with Project intersection analysis worksheets.

11.3.2 Daily Street Segment Operations

Table 11-3 summarizes the Year 2035 with Project roadway segment operations. *Table 11-3* shows that all with the addition of Project traffic, the following study area street segments are calculated to continue to operate at LOS D:

- Segment #1: **Centre City Parkway**, Felicita Avenue to Brotherton Road – LOS E
- Segment #2: **Centre City Parkway**, Brotherton Road to Citracado Parkway – LOS E

The increase in V/C ratio on the above segments due to the Project traffic is less than the allowable threshold of 0.02. Therefore, the Project does not have a substantial effect at these segments.

**TABLE 11-2
LONG-TERM (YEAR 2035) INTERSECTION OPERATIONS**

Intersection	Control Type	Movement	Peak Hour	Long-Term (Year 2035) without Project		Long-Term (Year 2035) with Project		Δ ^c	Substantial Effect?
				Delay	LOS	Delay	LOS		
1. Felicita Ave / Centre City Pkwy	Signal	Overall	AM	43.6	D	43.7	D	0.1	No
		Overall	PM	50.2	D	50.4	D	0.2	No
2. Felicita Ave / Escondido Blvd	Signal	Overall	AM	37.3	D	37.3	D	0.0	No
		Overall	PM	37.7	D	37.8	D	0.1	No
3. Centre City Pkwy / Connector to Escondido Blvd	MSSC ^d	SBL	AM	10.7	B	10.8	B	0.1	No
		WBR ^e	AM	12.3	B	12.4	B	0.1	No
		SBL	PM	27.2	D	28.4	D	1.2	No
		WBR ^e	PM	23.0	C	23.3	C	0.3	No
4. Connector to Centre City Pkwy / Escondido Blvd	MSSC	NBL	AM	9.3	A	9.3	A	0.0	No
		EBR ^e	AM	10.0	A	10.1	B	0.1	No
		NBL	PM	8.7	A	8.8	A	0.1	No
		EBR ^e	PM	10.1	B	10.2	B	0.1	No
5. Brotherton Rd / Centre City Pkwy	MSSC	EB	AM	25.4	D	25.4	D	0.0	No
		EB	PM	32.0	D	32.4	D	0.4	No
6. Brotherton Rd / Escondido Blvd	AWSC	NB	AM	11.2	B	11.5	B	0.3	No
		NB	PM	16.9	C	18.0	C	1.1	No

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**TABLE 11-2 (CONTINUED)
LONG-TERM (YEAR 2035) INTERSECTION OPERATIONS**

Intersection	Control Type	Movement	Peak Hour	Long-Term (Year 2035) without Project		Long-Term (Year 2035) with Project		Δ^c	Substantial Effect?
				Delay	LOS	Delay	LOS		
CONTINUED FROM PREVIOUS PAGE									
7. Citracado Pkwy / Centre City Pkwy	Signal	Overall	AM	30.8	C	31.6	C	0.8	No
		Overall	PM	31.3	C	32.4	C	1.1	No
8. Citracado Pkwy / Escondido Blvd	AWSC	NB	AM	8.8	A	9.2	A	0.4	No
		NB	PM	8.9	A	9.1	A	0.2	No

Footnotes:

- a. Average delay expressed in seconds per vehicle.
- b. Level of Service.
- c. “ Δ ” denotes the Project-induced increase in Delay
- d. MSSC- Minor Street Stop Control. Delays and LOS for movements to which the Project adds traffic are reported.
- e. The Project adds traffic to the right-turn movement and zero traffic to the left-turn movement. Therefore, the delay and LOS only for the right-turn movement is reported.
- f. AWSC- All Way Stop Control

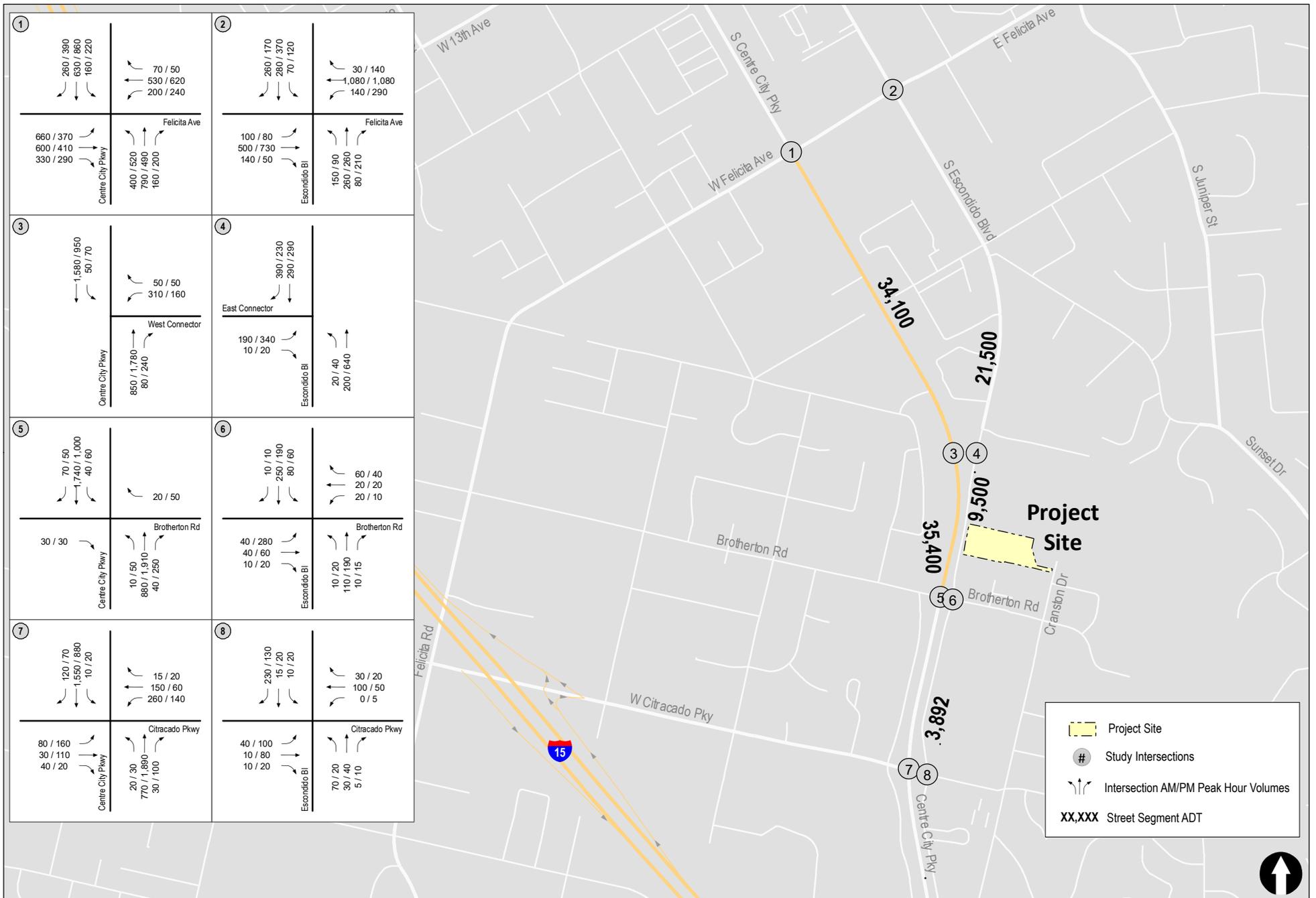
SIGNALIZED		UNSIGNALIZED	
Delay	LOS	Delay	LOS
0.0 ≤ 10.0	A	0.0 ≤ 10.0	A
10.1 to 20.0	B	10.1 to 15.0	B
20.1 to 35.0	C	15.1 to 25.0	C
35.1 to 55.0	D	25.1 to 35.0	D
55.1 to 80.0	E	35.1 to 50.0	E
≥ 80.1	F	≥ 50.1	F

**TABLE 11-3
LONG-TERM STREET SEGMENT OPERATIONS**

Street Segment	Capacity (LOS E) ^a	Long-Term w/o Project			Long -Term + Project			Δ ^e	Substantial Effect?
		ADT	LOS	V/C	ADT	LOS	V/C		
Centre City Parkway									
Felicita Ave to Brotherton Rd	37,000	34,100	E	0.922	34,220	E	0.925	0.003	No
Brotherton Rd to Citracado Pkwy	37,000	35,400	E	0.957	35,400	E	0.957	0.000	No
Escondido Boulevard									
Felicita Ave to Centre City Pkwy Connector	34,200	21,500	C	0.629	21,620	C	0.632	0.003	No
Centre City Pkwy Connector to Brotherton Rd	15,000	9,500	C	0.633	9,750	C	0.650	0.017	No
Brotherton Rd to Citracado Pkwy	15,000	3,892	A	0.259	4,142	A	0.276	0.017	No

Footnotes:

- a. Capacities based on the City of Escondido Roadway Classification Table.
- b. Average Daily Traffic Volumes.
- c. Level of Service.
- d. Volume to Capacity.
- e. "Δ" denotes the Project-induced increase in V/C.



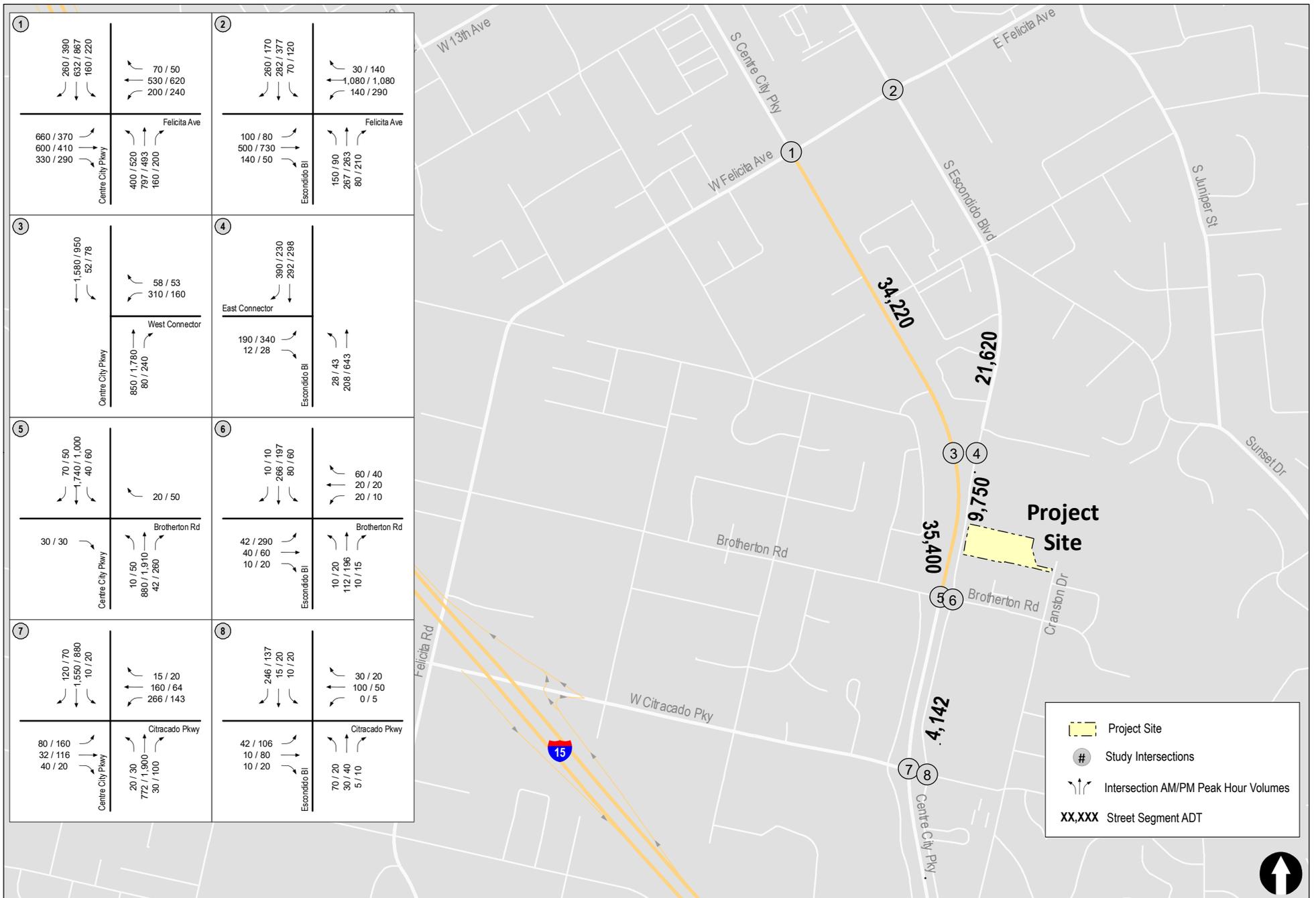


Figure 11-2

Long-Term with Project Traffic Volumes

12.0 PROJECT ACCESS

As described in Section 2 Project Description, Project access is proposed via two full access driveways on Escondido Boulevard, one located along the northern boundary of the site and one approximately at the mid-point of the frontage along Escondido Boulevard.

Southbound left-turns into the Project site will occur from the southbound through lane. An exclusive left-turn lane is not warranted since the maximum volume in this movement is 16 vehicles during the PM peak hour.

13.0 ACTIVE TRANSPORTATION

13.1 Pedestrian Mobility

Pedestrian connectivity around the Project and the surrounding community area was assessed.

Figure 13-1 depicts the Existing Pedestrian Network including missing sidewalks and *Figure 13-2* depicts the Existing Pedestrian Activity.

As seen on *Figure 13-1* sidewalks are provided in the study area as described below:

- **Felicita Avenue** – Sidewalks are provided along both sides of Felicita Avenue in the Project study area.
- **Brotherton Avenue** – Sidewalks are provided along sections of Brotherton Avenue in the Project study area. The sections of Brotherton Road with missing sidewalks are indicated on *Figure 13-1*
- **Centre City Parkway** - Sidewalks are not provided along Centre City Parkway in the Project study area; however, walking in the bike lane is not prohibited.

Escondido Boulevard – There is a gap of 800 feet in the sidewalk between the Project site and the existing sidewalk north of the connector, on the east side of S. Escondido Boulevard.

A sidewalk is also provided along the west side of Escondido Boulevard between Felicita Avenue and the Centre City Parkway Connector, except for a 100-foot missing portion just north of the connector. On the east side, a sidewalk is provided between Felicita Avenue and approximately 200 feet north of the connector. Sidewalks are not provided on either side of Escondido Boulevard south of the Connector.

- South of the Project site, no sidewalk is provided on the west side of Escondido Boulevard. A sidewalk is again provided on the east side of Escondido Boulevard approximately 270 feet north of Brotherton Road to 280 feet south of Citracado Parkway, except for a 280-foot missing section between Brotherton Road and Citracado Parkway.

It may be noted that pedestrian activity in the Project vicinity is limited as the sidewalk system is discontinuous as described above and shown on *Figure 13-1*.

As shown on the *Figure 2-3* Conceptual site plan, the Project will provide a sidewalk along the Project frontage. Thus, there will remain a gap of approximately 600 feet with no sidewalk (see photos in *Appendix H*). The Project will provide an ADA compliant path of travel along this 600 feet to close this gap, as well as a 2'-3' wide shoulder where available (see exhibit in *Appendix H*).

13.2 Bicycle Mobility

Figure 13-3 depicts the Existing Bicycle Network and *Figure 13-4* depicts the Existing Bicycle Activity. As seen on *Figure 13-3*, Class II bike lanes are provided along Centre City Parkway and Felicita Avenue within the project study area.

There are currently no existing dedicated bicycle lanes on Escondido Boulevard, Brotherton Road, or Citracado Parkway within the project study area. However, based on a review of the City of Escondido *Bicycle Master Plan*, October 2012, Bike lanes are not proposed but Class III bike routes are planned in the near future along Escondido Boulevard and Citracado Parkway.

13.3 Transit Mobility

Public transit is available in the project vicinity. The City of Escondido's transit center is located 2 miles north of the Project site at the northwest corner of N. Quince Street and W. Valley Parkway. The Escondido Transit Center is a bus and train station located in Downtown Escondido, California. It serves as the current eastern terminus of the North County Transit District's (NCTD) SPRINTER light rail line. Multiple transit services via NCTD Breeze, NCTD, and MTS bus transit lines are provided.

The nearest bus stops to the project site are located on both sides of Sunset Drive, just east of Escondido Boulevard / intersection, about 2,300 feet from the Project site. These stops are served by NCTD route 350 that runs between the Escondido Transit Center and the Del Lago Transit Center. This route operates at a 15-minute frequency Monday through Friday from 4:30 AM through 1:00 AM. On Saturdays and Sundays, Route 350 operates at 30-minute frequency between 6 AM and 10 PM. Shelters with a bench are currently provided at the current bus stops in both directions at the Escondido Boulevard / Sunset Drive intersection. The Route 350 map and schedule are included in *Appendix I*.

The NCTD SPRINTER Light Rail Line runs to Oceanside. The SPRINTER runs every 30 minutes in each direction Monday through Friday from approximately 4:00 AM to 9:00 PM. Saturday, Sunday, and holiday trains operate every 30 minutes between 10:00 AM and 6:00 PM and hourly before 10:00 AM and after 6:00 PM.

The Sprinter station is located adjacent to the Escondido Transit Center, which is connected to the Project by NCTD route 350 and the future sidewalk connection.

Bike and pedestrian access are available to the Escondido Transit Center. Bike access is available to the Escondido Transit Center along the bike lane is on Centre City Parkway. Pedestrian access and bike access will be available on Escondido Boulevard as discussed in Section 13.1 to the Bus Stop at the Escondido Boulevard / Sunset Drive intersection. Patrons can travel by route 350 to the Escondido Transit Center located approximately 2 miles from the bus stop. From the Escondido Transit Center, residents can reach the beaches in Oceanside, and connect to trains to Los Angeles or San Diego. Residents can also connect to an Express Bus to downtown San Diego.

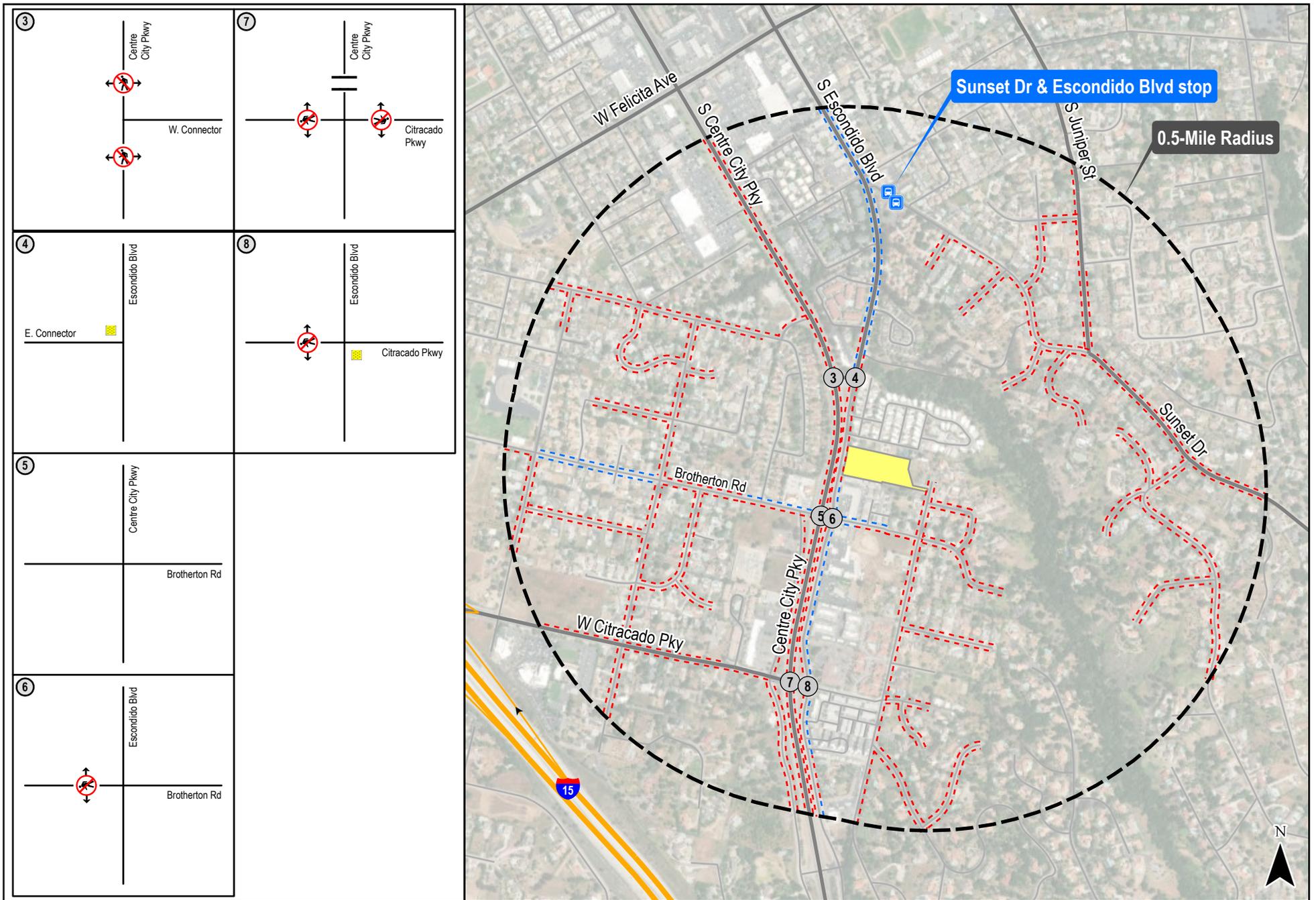


Figure 13-1
Existing Pedestrian Network

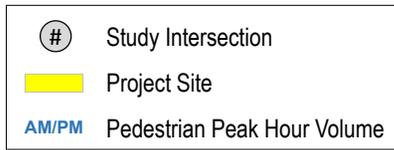
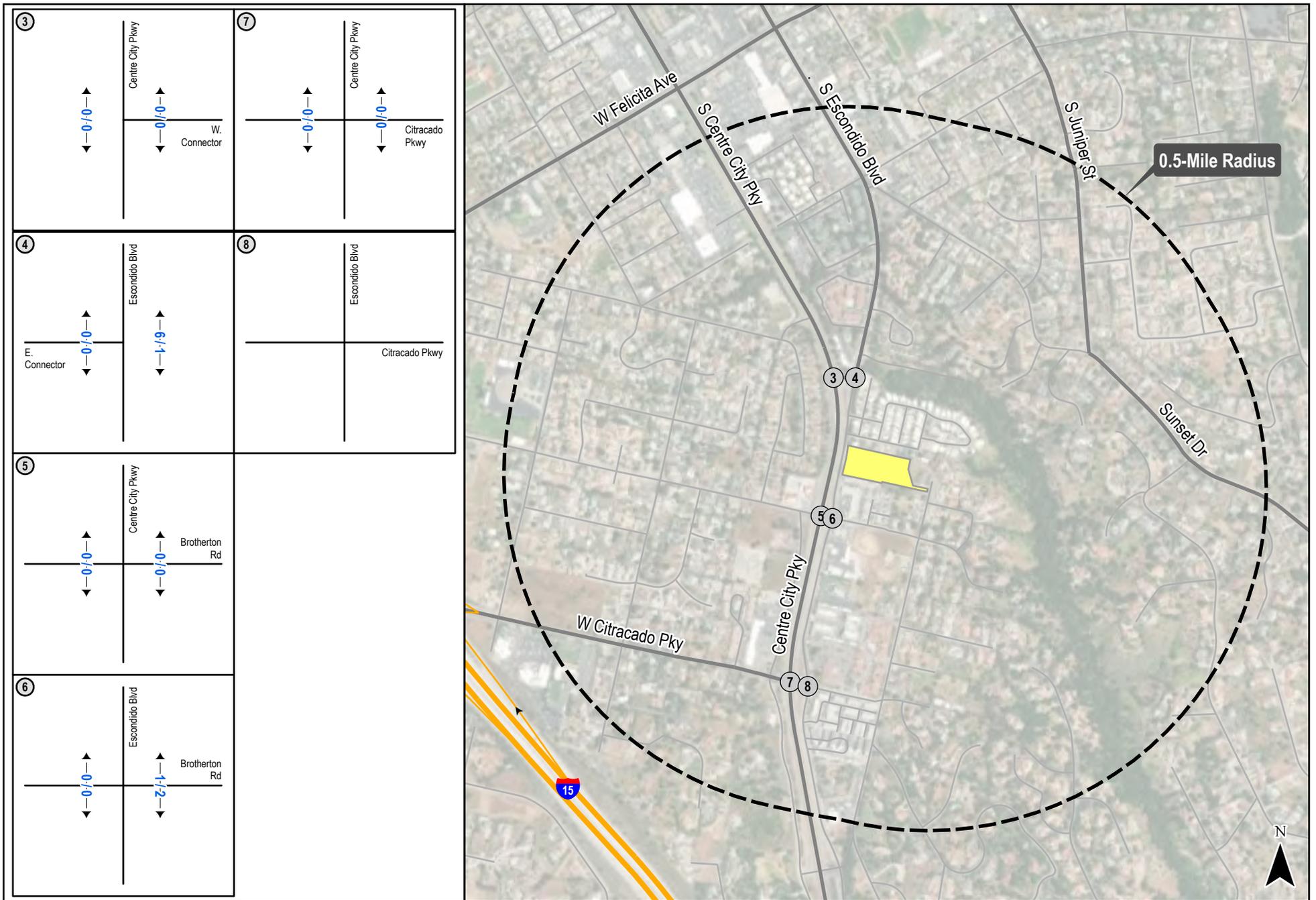


Figure 13-2
Existing Pedestrian Activity

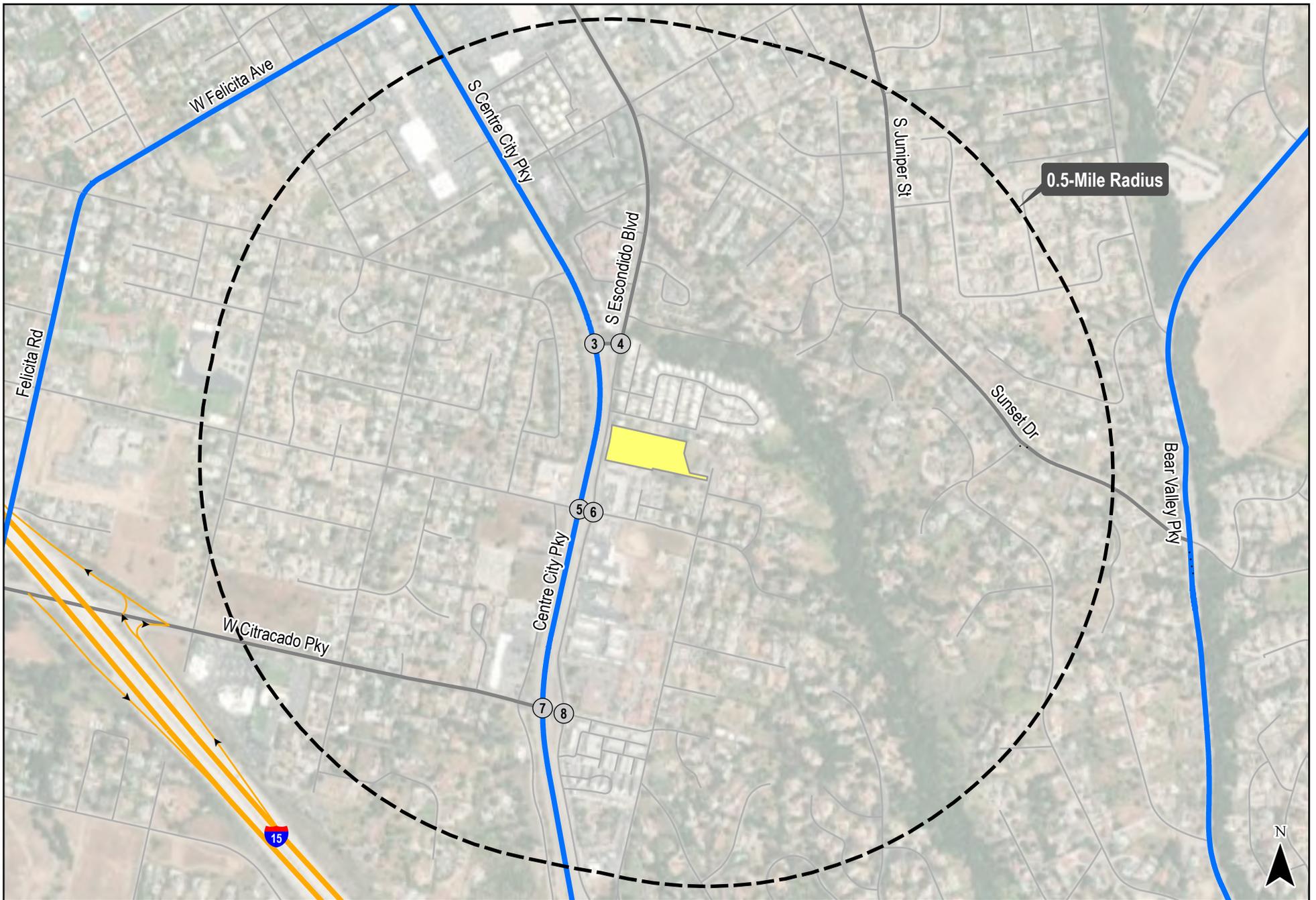


Figure 13-3
Existing Bicycle Network

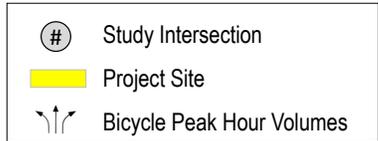
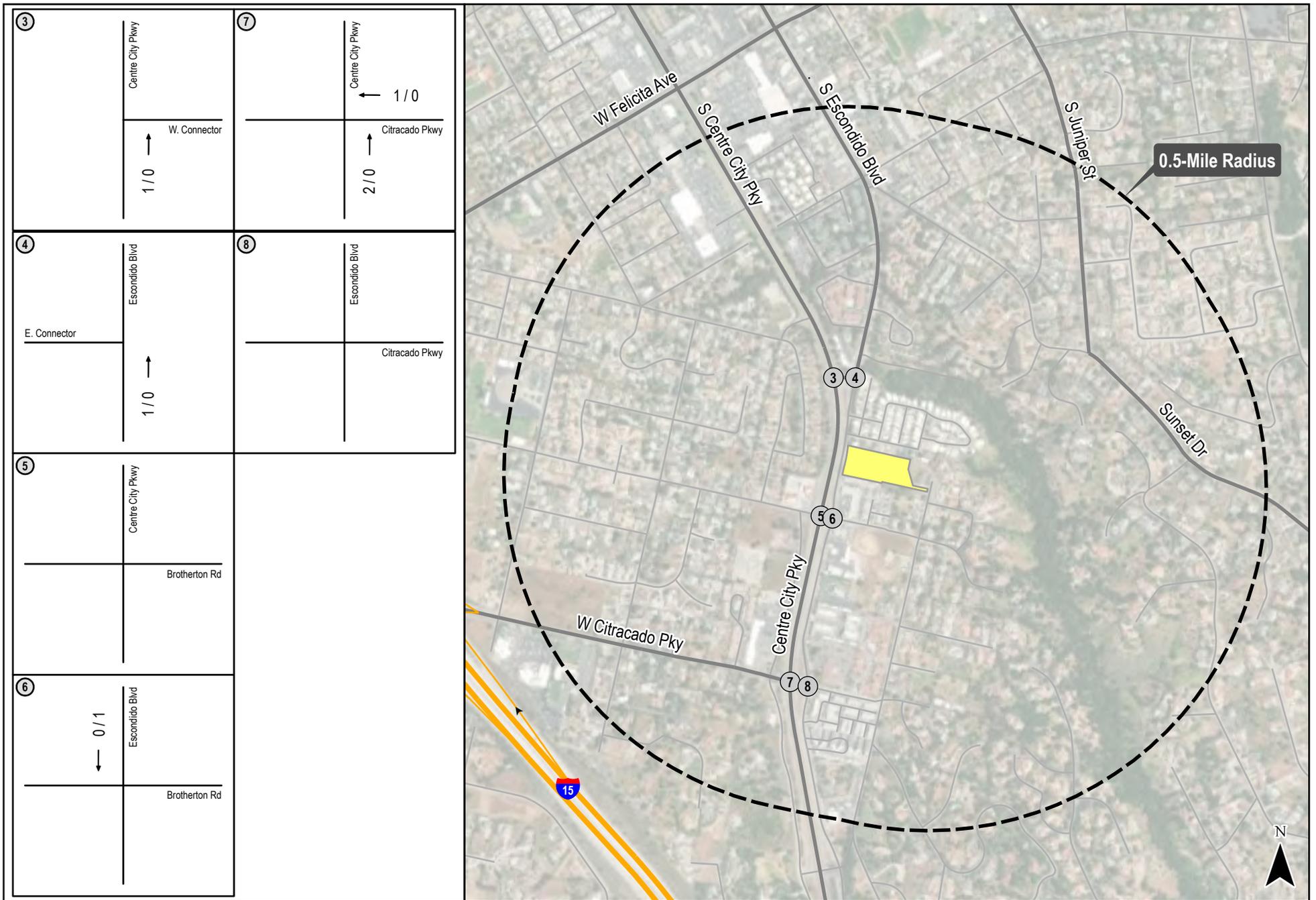


Figure 13-4
Existing Bicycle Activity

14.0 CONCLUSIONS

The Project as proposed is conditionally screened out from requiring a VMT analysis and therefore does not have a CEQA related VMT impact, as explained below:

The Project is located within a ½ mile walking distance of an existing major transit stop or an existing stop along a high quality transit corridor, the existing stop at the Escondido Boulevard / Sunset Drive intersection. There is a currently a gap of about 800 feet in the sidewalk between the Project site and the bus stop. The project will provide a sidewalk along the Project frontage. Thus, there will remain a gap of approximately 600 feet with no sidewalk (*Appendix H*). The Project will provide an ADA compliant path of travel along this 600 feet to close this gap, as well as a 2'-3' wide shoulder where available (*Appendix H*).

With the construction of the sidewalk, the Project will provide a continuous sidewalk to the bus stop, which should allow the Project to qualify for transit access screening. Therefore, the Project would be screened out and a detailed transportation VMT analysis would not be required.

Based on the established criteria, no substantial effects are calculated in terms of intersection and segment capacity for the project. Therefore, mitigation measures are not required.

TECHNICAL APPENDICES
2200 S. ESCONDIDO BOULEVARD
Escondido, California
February 17, 2021

LLG Ref. 3-20-3256

**Linscott, Law &
Greenspan, Engineers**

4542 Ruffner Street
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San Diego, CA 92111

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APPENDICES

APPENDIX

- A. Intersection Manual and Segment Count Sheets
- B. Peak Hour Intersection Analysis Worksheets – Existing
- C. Peak Hour Intersection Analysis Worksheets – Existing + Project
- D. Peak Hour Intersection Analysis Worksheets – Opening Year (2022) without Project
- E. Peak Hour Intersection Analysis Worksheets – Opening Year (2022) with Project
- F. Peak Hour Intersection Analysis Worksheets – Long-Term without Project
- G. Peak Hour Intersection Analysis Worksheets – Long-Term with Project
- H. Photos of Existing Shoulder on S. Escondido Boulevard Along the Project Frontage and Exhibit depicting the Proposed AC Sidewalk Exhibit
- I. Route 350 Map and Schedule

APPENDIX A
INTERSECTION MANUAL AND SEGMENT COUNT SHEETS

YEAR 2019 COUNT SHEETS



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: Centre City Parkway
E/W: S Escondido Connector

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

Vehicle Counts

	Centre City Parkway Northbound			Centre City Parkway Southbound			S Escondido Connector Eastbound			S Escondido Connector Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	113	18	9	343	0	0	0	0	64	0	9	556
7:15 AM	0	154	8	7	265	0	0	0	0	61	0	10	505
7:30 AM	0	147	19	12	252	0	0	0	0	58	0	13	501
7:45 AM	0	181	15	11	247	0	0	0	0	58	0	10	522
8:00 AM	0	154	20	8	268	0	0	0	0	83	0	13	546
8:15 AM	0	154	20	6	251	0	0	0	0	65	0	7	503
8:30 AM	0	152	22	8	211	0	0	0	0	43	0	8	444
8:45 AM	0	175	26	9	238	0	0	0	0	42	0	6	496
TOTAL VOLUMES:	0	1230	148	70	2075	0	0	0	0	474	0	76	4073

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	595	60	39	1107	0	0	0	0	241	0	42	2084

PEAK HR FACTOR:	0.835			0.814			0.000			0.969			0.937
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Bicycle Counts

	Centre City Parkway Northbound			Centre City Parkway Southbound			S Escondido Connector Eastbound			S Escondido Connector Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	1	0	0	0	0	0	0	0	0	2
7:45 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	2	0	1	1	0	0	0	0	0	0	0	4

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	2	0	1	1	0	0	0	0	0	0	0	4

Pedestrian Counts

	Centre City Parkway North Leg	Centre City Parkway South Leg	S Escondido Connector East Leg	S Escondido Connector West Leg	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0

PEAK VOLUMES:	North Leg	South Leg	East Leg	West Leg	TOTAL
	0	0	0	0	0



PO Box 1178
 Corona, CA 92880
 951-268-6268

Location: Escondido
 N/S: Centre City Parkway
 E/W: S Escondido Connector

Date: 9/10/2019
 Day: TUESDAY
 Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
 Peak Hour: 4:45 PM to 5:45 PM

Vehicle Counts

	Centre City Parkway Northbound			Centre City Parkway Southbound			S Escondido Connector Eastbound			S Escondido Connector Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	284	62	9	138	0	0	0	0	30	0	12	535
4:15 PM	0	269	36	6	149	0	0	0	0	23	0	9	492
4:30 PM	0	314	31	20	146	0	0	0	0	16	0	6	533
4:45 PM	0	344	46	13	174	0	0	0	0	23	0	6	606
5:00 PM	0	313	48	10	169	0	0	0	0	33	0	11	585
5:15 PM	0	294	44	14	180	0	0	0	0	35	0	8	575
5:30 PM	0	295	47	15	144	0	0	0	0	31	1	11	544
5:45 PM	0	254	50	15	174	0	0	0	0	34	0	7	534
TOTAL VOLUMES:	0	2367	364	102	1274	0	0	0	0	225	1	70	4404

PM Peak Hr Begins at: 4:45 PM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1246	185	52	667	0	0	0	0	122	1	36	2310

PEAK HR FACTOR:	0.918			0.927			0.000			0.903			0.953
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Bicycle Counts

	Centre City Parkway Northbound			Centre City Parkway Southbound			S Escondido Connector Eastbound			S Escondido Connector Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	0	0	0	0	0	0	0	0	1
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	0	0	0	0	0	1

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	0	0	0	0	0	0	0	0	1

Pedestrian Counts

	Centre City Parkway North Leg		Centre City Parkway South Leg		S Escondido Connector East Leg		S Escondido Connector West Leg		TOTAL
	North	South	North	South	East	West	East	West	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	1	0	0	0	1
4:45 PM	0	0	0	0	1	0	0	0	1
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	2	0	0	0	2

PEAK VOLUMES:	North Leg		South Leg		East Leg		West Leg		TOTAL
	0	0	0	0	1	0	0	0	1



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: Centre City Pkwy
E/W: Brotherton Road

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

Vehicle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	1	128	4	3	392	15	0	0	8	0	0	5	556
7:15 AM	3	163	7	8	304	15	0	0	6	0	0	4	510
7:30 AM	3	162	7	9	292	15	0	0	4	0	0	3	495
7:45 AM	3	194	14	11	281	13	0	0	4	0	0	7	527
8:00 AM	2	156	7	6	342	10	0	0	8	0	0	9	540
8:15 AM	5	172	12	4	315	6	0	0	4	0	0	5	523
8:30 AM	6	176	10	8	245	4	0	0	4	0	0	5	458
8:45 AM	3	199	11	7	267	10	0	0	2	0	0	8	507
TOTAL VOLUMES:	26	1350	72	56	2438	88	0	0	40	0	0	46	4116

AM Peak Hr Begins at: 700 AM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	10	647	32	31	1269	58	0	0	22	0	0	19	2088

PEAK HR FACTOR:	0.816	0.828	0.688	0.679	0.939
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Bicycle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45 AM	0	1	0	0	0	1	0	0	0	0	0	0	2
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	1	0	0	0	0	0	0	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	1	0	0	0	1	0	0	0	0	0	0	2

Pedestrian Counts

	Centre City Pkwy North Leg	Centre City Pkwy South Leg	Brotherton Road East Leg	Brotherton Road West Leg	TOTAL
7:00 AM	0	0	0	0	0
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	1	0	0	1
8:15 AM	0	0	0	0	0
8:30 AM	0	0	0	0	0
8:45 AM	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	0	0	0	0	0



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: Centre City Pkwy
E/W: Brotherton Road

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:45 PM to 5:45 PM

Vehicle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	6	349	37	12	150	9	0	0	3	0	0	4	570
4:15 PM	10	299	48	11	153	17	0	0	2	0	0	10	550
4:30 PM	7	343	63	5	139	12	0	0	5	0	0	7	581
4:45 PM	12	383	51	12	179	12	0	0	1	0	0	8	658
5:00 PM	9	355	42	11	189	10	0	0	12	0	0	10	638
5:15 PM	12	327	54	14	195	6	0	0	5	0	0	12	625
5:30 PM	6	330	54	7	166	11	0	0	6	0	0	12	592
5:45 PM	6	301	37	11	200	5	0	0	4	0	0	6	570
TOTAL VOLUMES:	68	2687	386	83	1371	82	0	0	38	0	0	69	4784

PM Peak Hr Begins at: 445 PM

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	39	1395	201	44	729	39	0	0	24	0	0	42	2513

PEAK HR FACTOR:	0.916	0.944	0.500	0.875	0.955
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Bicycle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	1	0	0	0	0	0	0	0	1	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	1	0	0	0	0	0	0	0	1	2

	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
PEAK VOLUMES:	0	0	0	1	0	0	0	0	0	0	0	1	2

Pedestrian Counts

	Centre City Pkwy North Leg	Centre City Pkwy South Leg	Brotherton Road East Leg	Brotherton Road West Leg	TOTAL
4:00 PM	0	0	0	0	0
4:15 PM	2	0	0	0	2
4:30 PM	1	0	0	0	1
4:45 PM	1	0	0	0	1
5:00 PM	0	0	0	0	0
5:15 PM	0	0	0	0	0
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	4	0	0	0	4

	North Leg	South Leg	East Leg	West Leg	TOTAL
PEAK VOLUMES:	1	0	0	0	1



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: S. Escondido Blvd
E/W: Brotherton Road

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:15 AM to 8:15 AM

Vehicle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	2	10	0	6	38	0	3	4	0	3	3	5	74
7:15 AM	3	22	1	8	39	0	6	7	2	4	1	4	97
7:30 AM	2	21	0	18	39	0	7	8	1	7	1	14	118
7:45 AM	2	19	3	11	43	0	10	14	1	3	5	17	128
8:00 AM	3	12	3	18	49	1	7	6	0	3	5	4	111
8:15 AM	2	9	1	6	26	1	9	6	1	1	2	6	70
8:30 AM	3	14	3	4	24	0	7	7	4	2	2	2	72
8:45 AM	4	11	4	3	27	1	7	11	0	2	3	5	78
TOTAL VOLUMES:	21	118	15	74	285	3	56	63	9	25	22	57	748

AM Peak Hr Begins at: 7:15 AM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	10	74	7	55	170	1	30	35	4	17	12	39	454

PEAK HR FACTOR:	0.875			0.831			0.690			0.680			0.887
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Bicycle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	1	0	0	0	0	0	0	0	1

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	1	0	0	0	0	0	0	0	1

Pedestrian Counts

	S. Escondido Blvd North Leg	S. Escondido Blvd South Leg	Brotherton Road East Leg	Brotherton Road West Leg	TOTAL
7:00 AM	0	0	1	0	1
7:15 AM	0	0	0	0	0
7:30 AM	0	0	0	0	0
7:45 AM	0	0	0	0	0
8:00 AM	0	0	0	0	0
8:15 AM	0	0	1	0	1
8:30 AM	0	0	0	0	0
8:45 AM	0	0	1	0	1
TOTAL VOLUMES:	0	0	3	0	3

PEAK VOLUMES:	North Leg	South Leg	East Leg	West Leg	TOTAL
	0	0	0	0	0



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: S. Escondido Blvd
E/W: Brotherton Road

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Vehicle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	1	37	2	6	27	0	33	12	5	5	3	7	138
4:15 PM	4	32	2	4	33	1	46	8	5	4	5	12	156
4:30 PM	1	38	5	9	35	0	57	8	4	1	7	7	172
4:45 PM	5	34	3	7	38	1	48	11	4	1	3	9	164
5:00 PM	8	26	2	10	32	1	36	14	4	1	4	6	144
5:15 PM	5	33	2	13	26	1	46	15	6	2	3	5	157
5:30 PM	5	27	4	5	29	1	47	14	3	6	5	7	153
5:45 PM	4	31	2	7	37	0	39	8	3	1	2	8	142
TOTAL VOLUMES:	33	258	22	61	257	5	352	90	34	21	32	61	1226

PM Peak Hr Begins at: 4:30 PM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	19	131	12	39	131	3	187	48	18	5	17	27	637

PEAK HR FACTOR:	0.920			0.940			0.917			0.817			0.926
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Bicycle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Brotherton Road Eastbound			Brotherton Road Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	1	1
5:00 PM	1	0	0	0	0	0	0	0	1	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	3	0	0	0	0	0	0	0	3
TOTAL VOLUMES:	1	0	0	0	4	0	0	0	1	0	0	1	7

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	1	0	0	0	0	0	0	0	1	0	0	1	3

Pedestrian Counts

	S. Escondido Blvd North Leg	S. Escondido Blvd South Leg	Brotherton Road East Leg	Brotherton Road West Leg	TOTAL
4:00 PM	0	0	4	0	4
4:15 PM	0	0	0	0	0
4:30 PM	0	1	0	0	1
4:45 PM	0	0	1	1	2
5:00 PM	0	0	0	0	0
5:15 PM	0	0	1	0	1
5:30 PM	0	0	0	0	0
5:45 PM	0	0	0	0	0
TOTAL VOLUMES:	0	1	6	1	8

PEAK VOLUMES:	North Leg	South Leg	East Leg	West Leg	TOTAL
	0	1	2	1	4



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: Centre City Pkwy
E/W: Citracado Parkway

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

Vehicle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	3	121	5	0	387	21	14	2	8	61	38	1	661
7:15 AM	4	149	6	0	275	32	13	8	9	43	26	2	567
7:30 AM	9	145	2	2	271	22	17	8	8	52	31	4	571
7:45 AM	2	186	10	1	280	21	18	9	9	53	22	4	615
8:00 AM	4	134	6	7	319	17	16	7	9	51	20	4	594
8:15 AM	4	173	7	1	298	19	12	7	4	37	16	0	578
8:30 AM	1	165	12	2	250	15	17	8	2	31	14	6	523
8:45 AM	4	193	8	0	262	16	9	9	6	36	8	6	557
TOTAL VOLUMES:	31	1266	56	13	2342	163	116	58	55	364	175	27	4666

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	18	601	23	3	1213	96	62	27	34	209	117	11	2414

PEAK HR FACTOR:	0.811			0.804			0.854			0.843			0.913
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Bicycle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	0	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	1	0	0	0	0	1
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	0	0	0	1	0	0	0	0	2

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	0	0	0	1	0	0	0	0	2

Pedestrian Counts

	Centre City Pkwy North Leg		Centre City Pkwy South Leg		Citracado Parkway East Leg		Citracado Parkway West Leg		TOTAL
	NL	NT	SL	ST	EL	ET	WL	WT	
7:00 AM	1	0	0	0	0	0	1	0	2
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	1	0	0	0	0	0	0	0	1
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	2	0	0	0	0	0	1	0	3

PEAK VOLUMES:	North Leg		South Leg		East Leg		West Leg		TOTAL
	2		0		0		1		3



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: Centre City Pkwy
E/W: Citracado Parkway

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
Peak Hour: 4:30 PM to 5:30 PM

Vehicle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	3	346	23	4	137	14	26	30	4	27	14	3	631
4:15 PM	6	326	23	2	144	11	35	22	5	24	12	2	612
4:30 PM	5	373	19	2	146	8	32	23	2	30	12	5	657
4:45 PM	8	391	22	1	170	14	41	26	3	23	14	3	716
5:00 PM	8	365	23	6	180	14	27	17	5	26	11	5	687
5:15 PM	3	355	14	4	196	16	31	24	3	32	9	6	693
5:30 PM	3	358	22	6	156	11	22	15	5	25	9	5	637
5:45 PM	6	327	31	10	181	20	31	17	0	29	17	5	674
TOTAL VOLUMES:	42	2841	177	35	1310	108	245	174	27	216	98	34	5307

PM Peak Hr Begins at: 4:30 PM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	24	1484	78	13	692	52	131	90	13	111	46	19	2753

PEAK HR FACTOR:	0.942			0.876			0.836			0.936			0.961
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Bicycle Counts

	Centre City Pkwy Northbound			Centre City Pkwy Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0	0	0	0	0

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	0	0	0	0	0	0	0	0	0	0	0	0

Pedestrian Counts

	Centre City Pkwy North Leg		Centre City Pkwy South Leg		Citracado Parkway East Leg		Citracado Parkway West Leg		TOTAL
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	0	0	0	0	0	0	0	0

PEAK VOLUMES:	North Leg		South Leg		East Leg		West Leg		TOTAL
	0	0	0	0	0	0	0	0	0



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: S. Escondido Blvd
E/W: Citracado Parkway

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 7:00 AM to 9:00 AM
Peak Hour: 7:00 AM to 8:00 AM

Vehicle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	20	6	0	0	4	52	4	2	0	0	28	6	122
7:15 AM	8	3	0	0	2	44	14	0	1	0	19	4	95
7:30 AM	16	9	2	2	3	51	6	3	3	0	16	5	116
7:45 AM	13	4	0	1	2	55	15	4	1	0	15	6	116
8:00 AM	18	1	0	2	1	46	10	5	5	0	12	4	104
8:15 AM	14	2	1	1	0	32	10	3	2	0	11	2	78
8:30 AM	8	1	0	1	1	29	18	1	3	0	9	3	74
8:45 AM	6	8	0	1	2	25	12	4	1	1	19	0	79
TOTAL VOLUMES:	103	34	3	8	15	334	89	22	16	1	129	30	784

AM Peak Hr Begins at: 700 AM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	57	22	2	3	11	202	39	9	5	0	78	21	449

PEAK HR FACTOR:	0.750			0.931			0.663			0.728			0.920
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Bicycle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
7:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30 AM	0	1	0	0	1	0	0	0	0	0	0	0	2
7:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	1	0	0	0	0	0	0	0	2

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	0	0	0	0	0	2

Pedestrian Counts

	S. Escondido Blvd North Leg			S. Escondido Blvd South Leg			Citracado Parkway East Leg			Citracado Parkway West Leg			TOTAL
7:00 AM	1			0			2			0			3
7:15 AM	0			0			0			0			0
7:30 AM	0			0			1			0			1
7:45 AM	0			0			0			0			0
8:00 AM	0			0			0			0			0
8:15 AM	0			0			1			0			1
8:30 AM	0			0			0			0			0
8:45 AM	0			0			0			0			0
TOTAL VOLUMES:	1			0			4			0			5

PEAK VOLUMES:	North Leg	South Leg	East Leg	West Leg	TOTAL
	1	0	3	0	4



PO Box 1178
Corona, CA 92880
951-268-6268

Location: Escondido
N/S: S. Escondido Blvd
E/W: Citracado Parkway

Date: 9/10/2019
Day: TUESDAY
Project # 143-19548

TURNING MOVEMENT COUNT

Count Period: 4:00 PM to 6:00 PM
Peak Hour: 5:00 PM to 6:00 PM

Vehicle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	5	3	1	2	3	30	39	11	3	0	8	3	108
4:15 PM	7	9	1	5	4	23	28	10	4	0	8	2	101
4:30 PM	4	12	4	2	9	21	28	9	4	0	8	7	108
4:45 PM	4	5	4	0	7	33	27	11	3	3	4	0	101
5:00 PM	2	4	1	5	3	34	24	14	6	1	12	5	111
5:15 PM	5	11	2	4	5	28	18	14	2	0	6	5	100
5:30 PM	6	9	3	3	3	21	15	16	0	1	8	3	88
5:45 PM	5	8	0	6	7	30	26	22	8	0	10	1	123
TOTAL VOLUMES:	38	61	16	27	41	220	205	107	30	5	64	26	840

PM Peak Hr Begins at: 500 PM

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	18	32	6	18	18	113	83	66	16	2	36	14	422

PEAK HR FACTOR:	0.778			0.866			0.737			0.722			0.858
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Bicycle Counts

	S. Escondido Blvd Northbound			S. Escondido Blvd Southbound			Citracado Parkway Eastbound			Citracado Parkway Westbound			TOTAL
	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	
4:00 PM	0	0	0	0	1	0	0	0	0	0	0	0	1
4:15 PM	0	0	0	0	0	0	0	0	0	1	0	0	1
4:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
4:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:00 PM	0	1	0	0	1	0	0	0	0	0	0	0	2
5:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES:	0	1	0	0	2	0	0	0	0	1	0	0	4

PEAK VOLUMES:	NL	NT	NR	SL	ST	SR	EL	ET	ER	WL	WT	WR	TOTAL
	0	1	0	0	1	0	0	0	0	0	0	0	2

Pedestrian Counts

	S. Escondido Blvd North Leg			S. Escondido Blvd South Leg			Citracado Parkway East Leg			Citracado Parkway West Leg			TOTAL
4:00 PM	1			0			2			0			3
4:15 PM	0			0			2			0			2
4:30 PM	0			0			0			0			0
4:45 PM	0			0			2			0			2
5:00 PM	0			0			0			0			0
5:15 PM	0			0			4			0			4
5:30 PM	0			0			1			0			1
5:45 PM	0			0			1			0			1
TOTAL VOLUMES:	1			0			12			0			13

PEAK VOLUMES:	North Leg	South Leg	East Leg	West Leg	TOTAL
	0	0	6	0	6



City of Escondido
 South Escondido Boulevard
 B/ South Escondido Connector - Brotherton Road

File Name 001
 Site Code: 143-19548
 24 Hour Directional Volume Count

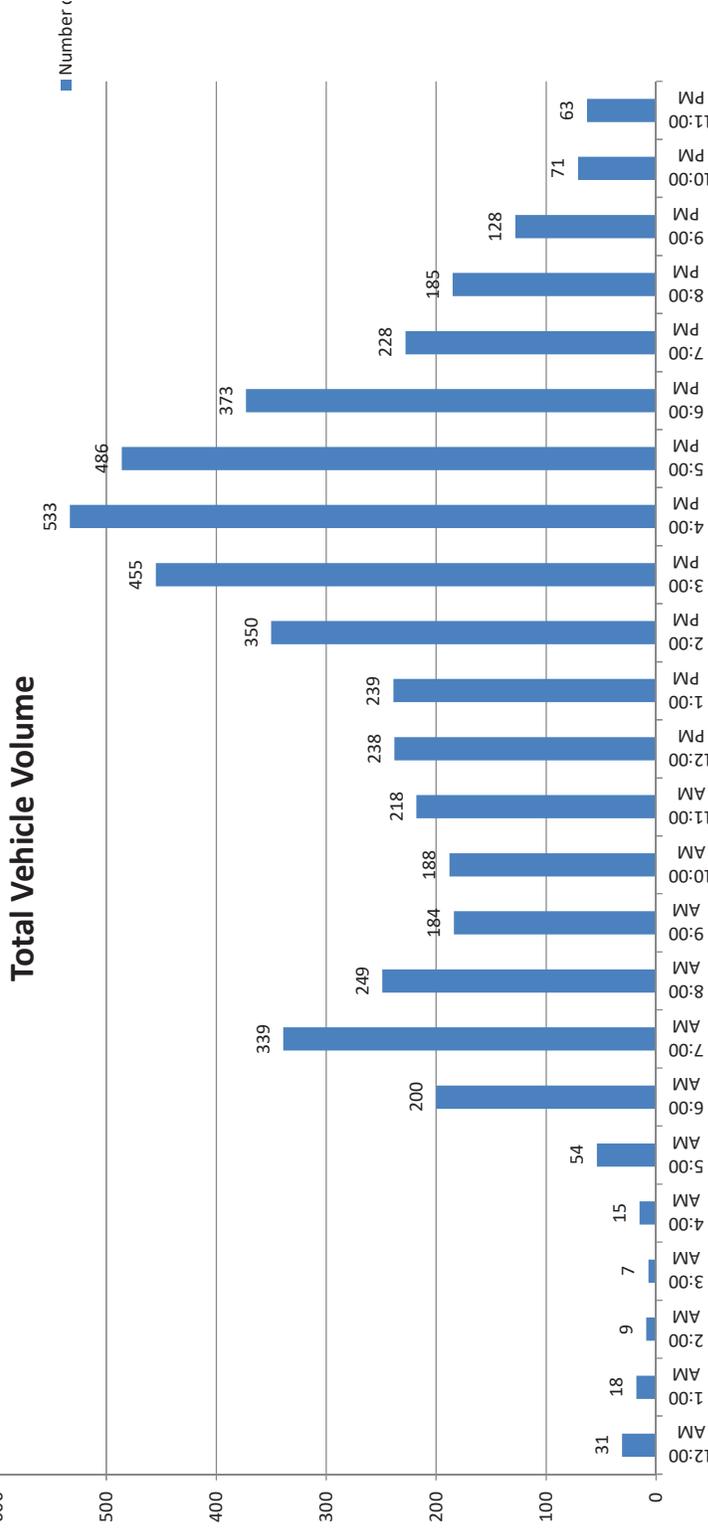
Date: 9/10/2019	Northbound				Southbound				Combined Totals	
	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Morning	Afternoon
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	6	28			6	31				
12:15	4	20			4	22				
12:30	4	38			0	25				
12:45	4	39	18	125	3	35	13	113	31	238
1:00	2	27			5	29				
1:15	4	31			4	23				
1:30	1	35			1	31				
1:45	1	35	8	128	0	28	10	111	18	239
2:00	0	38			0	36				
2:15	3	53			1	25				
2:30	2	65			0	25				
2:45	1	69	6	225	2	39	3	125	9	350
3:00	1	79			2	56				
3:15	1	75			0	32				
3:30	2	71			1	35				
3:45	0	78	4	303	0	29	3	152	7	455
4:00	2	79			2	41				
4:15	1	88			1	28				
4:30	3	110			2	44				
4:45	2	98	8	375	2	45	7	158	15	533
5:00	2	70			3	42				
5:15	3	84			12	37				
5:30	4	84			8	40				
5:45	6	87	15	325	16	42	39	161	54	486
6:00	6	78			16	40				
6:15	13	53			35	30				
6:30	17	55			40	32				
6:45	14	45	50	231	59	40	150	142	200	373
7:00	18	35			44	24				
7:15	31	49			47	31				
7:30	44	38			57	15				
7:45	44	19	137	141	54	17	202	87	339	228
8:00	23	28			65	24				
8:15	22	22			32	17				
8:30	23	33			28	22				
8:45	26	21	94	104	30	18	155	81	249	185
9:00	11	24			20	12				
9:15	23	26			33	15				
9:30	19	20			30	12				
9:45	27	14	80	84	21	5	104	44	184	128
10:00	29	14			28	12				
10:15	19	8			19	7				
10:30	12	12			27	9				
10:45	31	6	91	40	23	3	97	31	188	71
11:00	34	12			24	10				
11:15	18	12			31	7				
11:30	31	5			28	5				
11:45	27	9	110	38	25	3	108	25	218	63
Totals	621	2119			891	1230				
Combined Totals		2740				2121				
ADT										4861
AM Peak Hour	715	AM			715	AM				
Volume	142				223					
P.H.F.	0.807				0.858					
PM Peak Hour		400	PM			430	PM			
Volume		375				168				
P.H.F.		0.852				0.933				
Percentage	22.7%	77.3%			42.0%	58.0%				



24 Hour Volume Plot

South Escondido Boulevard
B/ South Escondido Connector - Brotherton Road
 9/10/2019

Start Time	9/10/2019
12:00 AM	31
1:00 AM	18
2:00 AM	9
3:00 AM	7
4:00 AM	15
5:00 AM	54
6:00 AM	200
7:00 AM	339
8:00 AM	249
9:00 AM	184
10:00 AM	188
11:00 AM	218
12:00 PM	238
1:00 PM	239
2:00 PM	350
3:00 PM	455
4:00 PM	533
5:00 PM	486
6:00 PM	373
7:00 PM	228
8:00 PM	185
9:00 PM	128
10:00 PM	71
11:00 PM	63
Total	4861



Volumes represent the combined totals for both directions



City of Escondido
 South Escondido Boulevard
 B/ Brotherton Road - Citricado Parkway

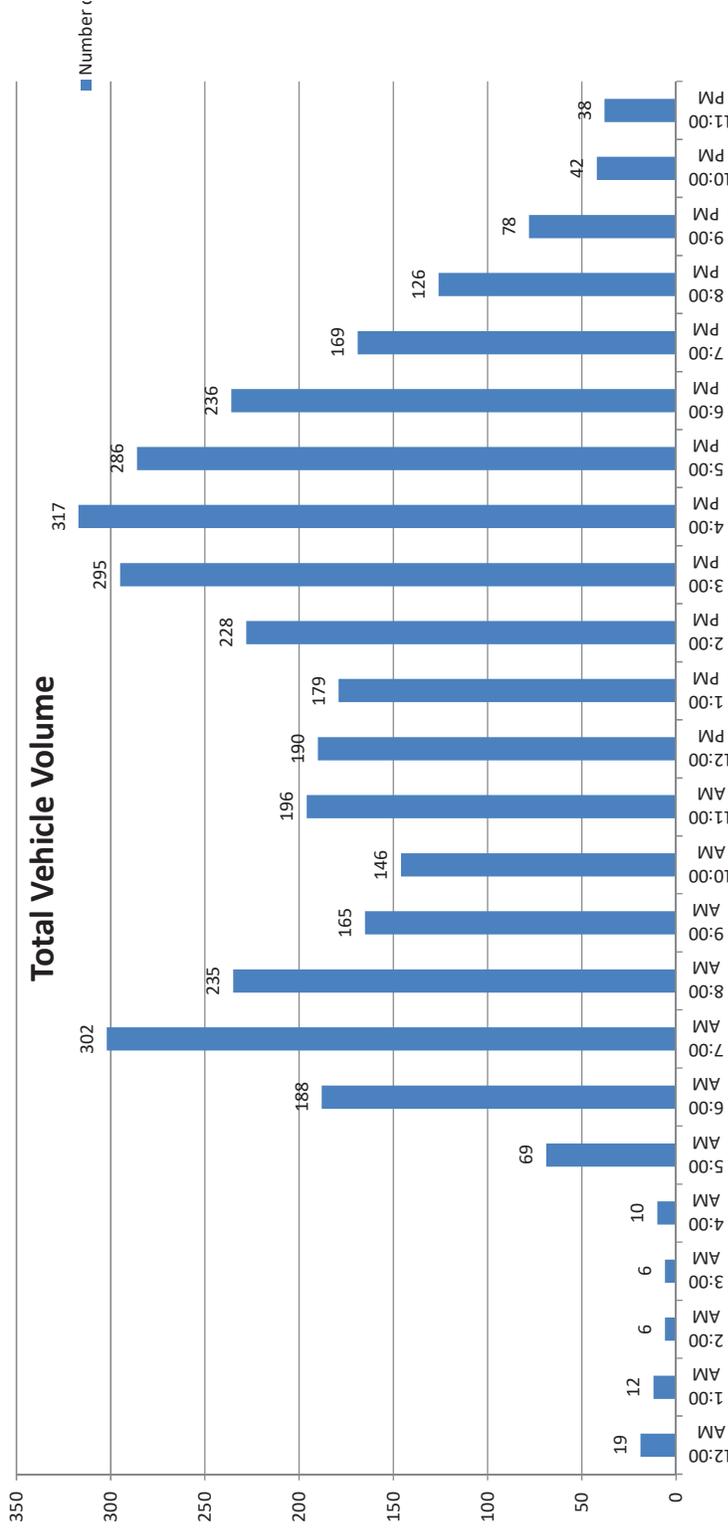
File Name 002
 Site Code: 143-19548
 24 Hour Directional Volume Count

Date: 9/10/2019	Northbound				Southbound				Combined Totals	
	15 Minute Totals		Hourly Totals		15 Minute Totals		Hourly Totals		Morning	Afternoon
Time	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00	2	19			5	27				
12:15	1	15			3	20				
12:30	4	24			0	39				
12:45	2	18	9	76	2	28	10	114	19	190
1:00	1	13			4	31				
1:15	0	14			5	23				
1:30	1	17			0	29				
1:45	1	21	3	65	0	31	9	114	12	179
2:00	0	22			0	25				
2:15	3	26			1	23				
2:30	0	34			0	27				
2:45	1	36	4	118	1	35	2	110	6	228
3:00	0	43			2	52				
3:15	0	39			3	31				
3:30	0	35			0	37				
3:45	0	31	0	148	1	27	6	147	6	295
4:00	0	42			1	38				
4:15	2	45			2	34				
4:30	2	46			3	39				
4:45	0	33	4	166	0	40	6	151	10	317
5:00	4	27			5	40				
5:15	1	34			20	33				
5:30	1	38			16	38				
5:45	2	33	8	132	20	43	61	154	69	286
6:00	4	19			21	31				
6:15	6	31			35	39				
6:30	10	30			47	31				
6:45	10	19	30	99	55	36	158	137	188	236
7:00	13	20			59	31				
7:15	19	25			59	29				
7:30	19	15			53	14				
7:45	22	17	73	77	58	18	229	92	302	169
8:00	16	7			63	18				
8:15	14	15			37	14				
8:30	22	14			32	28				
8:45	20	12	72	48	31	18	163	78	235	126
9:00	12	7			19	13				
9:15	17	11			29	17				
9:30	12	7			28	14				
9:45	16	7	57	32	32	2	108	46	165	78
10:00	17	5			25	9				
10:15	9	3			21	7				
10:30	14	4			24	3				
10:45	13	5	53	17	23	6	93	25	146	42
11:00	19	2			31	8				
11:15	10	6			36	3				
11:30	18	5			25	7				
11:45	21	4	68	17	36	3	128	21	196	38
Totals	381	995			973	1189				
Combined Totals		1376				2162				
ADT										3538
AM Peak Hour	715	AM			715	AM				
Volume	76				233					
P.H.F.	0.864				0.925					
PM Peak Hour		400	PM			245	PM			
Volume		166				155				
P.H.F.		0.902				0.745				
Percentage	27.7%	72.3%			45.0%	55.0%				



24 Hour Volume Plot
South Escondido Boulevard
B/ Brotherton Road - Citricado Parkway
 9/10/2019

Start Time	9/10/2019
12:00 AM	19
1:00 AM	12
2:00 AM	6
3:00 AM	6
4:00 AM	10
5:00 AM	69
6:00 AM	188
7:00 AM	302
8:00 AM	235
9:00 AM	165
10:00 AM	146
11:00 AM	196
12:00 PM	190
1:00 PM	179
2:00 PM	228
3:00 PM	295
4:00 PM	317
5:00 PM	286
6:00 PM	236
7:00 PM	169
8:00 PM	126
9:00 PM	78
10:00 PM	42
11:00 PM	38
Total	3538



Volumes represent the combined totals for both directions

YEAR 2020 COUNT SHEETS

Intersection Turning Movement - Peak Hour Vehicle Count



Location:	#01	File Name:	ITM-20-022-01
Intersection:	Centre City Parkway / Felicita Avenue	Project:	LLG Ref. 3-20-3256
Date of Count:	Tuesday, August 11, 2020		Escondido

AM	Centre City Parkway Southbound			Felicita Avenue Westbound			Centre City Parkway Northbound			Felicita Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	12	28	15	7	30	8	33	76	8	78	63	28	386
7:15	12	46	16	11	39	11	35	77	14	78	85	30	454
7:30	19	62	15	19	42	6	31	87	10	87	63	27	468
7:45	24	76	22	16	43	7	31	53	10	85	68	31	466
8:00	18	46	26	11	44	8	44	76	12	71	61	25	442
8:15	12	63	27	17	48	7	36	90	19	69	68	30	486
8:30	18	64	26	23	53	7	40	67	18	62	64	29	471
8:45	16	69	27	27	70	8	33	69	12	69	53	40	493
Total	131	454	174	131	369	62	283	595	103	599	525	240	3666
Approach%	17.3	59.8	22.9	23.3	65.7	11.0	28.8	60.7	10.5	43.9	38.5	17.6	
Total%	3.6	12.4	4.7	3.6	10.1	1.7	7.7	16.2	2.8	16.3	14.3	6.5	

AM Intersection Peak Hour: 08:00 to 09:00

Volume	64	242	106	78	215	30	153	302	61	271	246	124	1,892
Approach%	15.5	58.7	25.7	24.1	66.6	9.3	29.7	58.5	11.8	42.3	38.4	19.3	
Total%	3.4	12.8	5.6	4.1	11.4	1.6	8.1	16.0	3.2	14.3	13.0	6.6	
PHF			0.92			0.77			0.89			0.96	0.00

PM	Centre City Parkway Southbound			Felicita Avenue Westbound			Centre City Parkway Northbound			Felicita Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	22	136	73	42	105	7	60	82	24	44	66	47	708
16:15	38	153	66	39	98	3	89	75	27	48	58	22	716
16:30	33	124	55	37	97	13	66	61	32	56	51	51	676
16:45	29	115	69	36	100	5	71	69	30	44	77	56	701
17:00	40	116	54	28	93	10	81	83	29	82	69	41	726
17:15	34	102	50	44	78	7	70	80	28	56	65	49	663
17:30	39	120	51	40	106	10	71	67	20	70	59	44	697
17:45	40	122	62	51	100	6	77	72	23	51	68	39	711
Total	275	988	480	317	777	61	585	589	213	451	513	349	5598
Approach%	15.8	56.7	27.5	27.4	67.3	5.3	42.2	42.5	15.4	34.3	39.1	26.6	
Total%	4.9	17.6	8.6	5.7	13.9	1.1	10.5	10.5	3.8	8.1	9.2	6.2	

PM Intersection Peak Hour: 16:15 to 17:15

Volume	140	508	244	140	388	31	307	288	118	230	255	170	2,819
Approach%	15.7	57.0	27.4	25.0	69.4	5.5	43.1	40.4	16.5	35.1	38.9	26.0	
Total%	5.0	18.0	8.7	5.0	13.8	1.1	10.9	10.2	4.2	8.2	9.0	6.0	
PHF			0.87			0.95			0.92			0.85	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #01	File Name: ITM-20-022-01
	Intersection: Centre City Parkway / Felicita Avenue	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Centre City Parkway Southbound				Felicita Avenue Westbound				Centre City Parkway Northbound				Felicita Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	2
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
7:45	0	0	1	0	2	0	1	0	2	0	0	0	1	0	0	0	0	5
8:00	0	0	0	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
8:15	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	5
8:30	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
8:45	0	0	0	0	1	0	0	0	4	2	0	0	0	0	0	0	0	5
Ped Total	3				5				9				3				20	
Bike Total		0	1	0		0	1	0		2	2	0		0	1	0		7

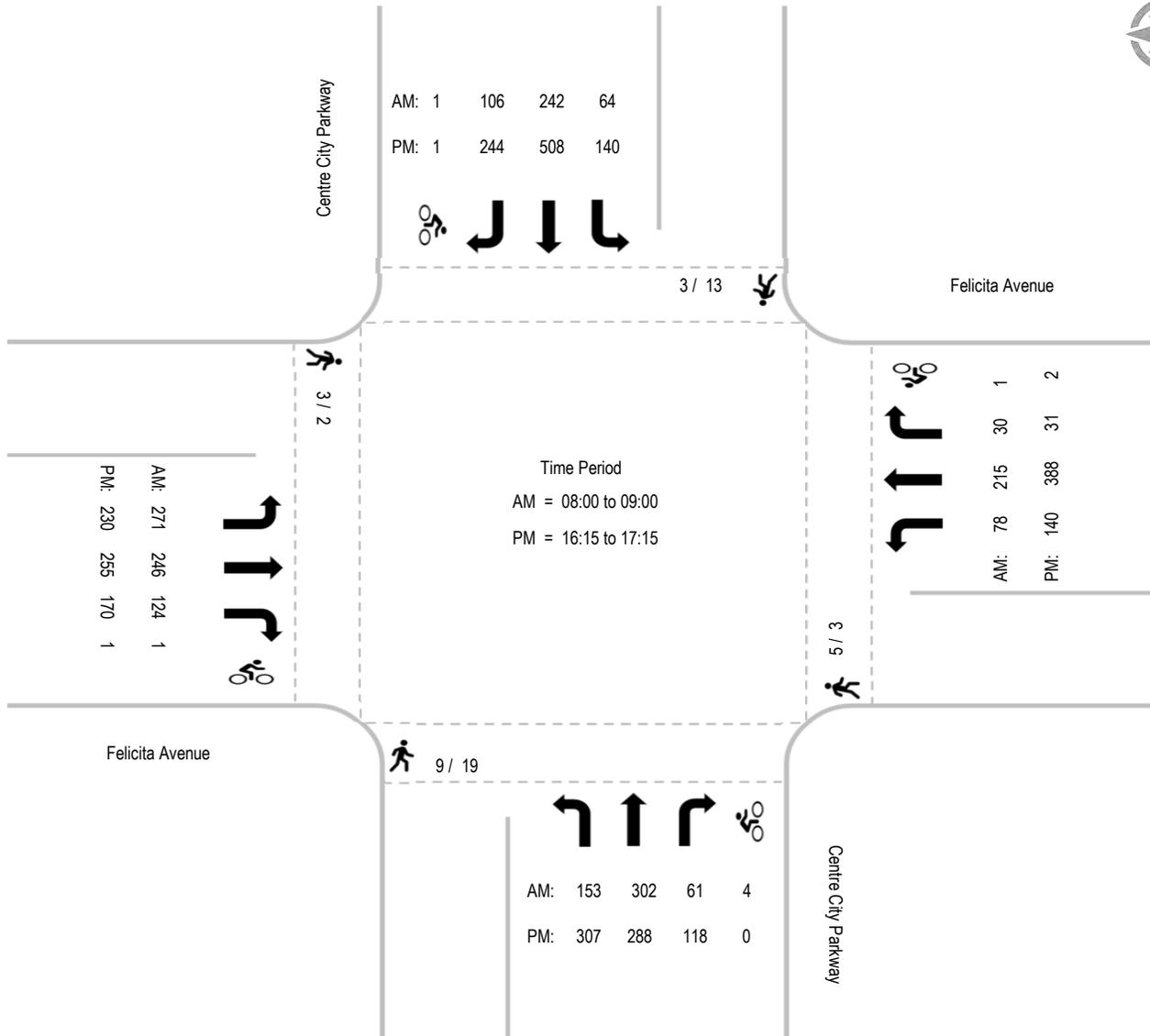
PM	Centre City Parkway Southbound				Felicita Avenue Westbound				Centre City Parkway Northbound				Felicita Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	2	0	1	0	0	0	0	0	3	0	0	0	0	0	0	0	0	5
16:15	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	3
16:30	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	5
16:45	3	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	5
17:00	2	0	0	0	0	1	0	0	6	0	0	0	1	0	0	0	0	9
17:15	2	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	0	5
17:30	1	0	0	0	1	1	0	0	1	0	0	0	1	0	0	0	0	4
17:45	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	0	1
Ped Total	13				3				19				2				37	
Bike Total		0	1	0		2	0	0		0	0	0		0	1	0		4

Intersection Turning Movement - Peak Hour Summary



Location: #01
 Intersection: Centre City Parkway / Felicita Avenue
 Date of Count: Tuesday, August 11, 2020

File Name: ITM-20-022-01
 Project: LLG Ref. 3-20-3256
 Escondido



Intersection Turning Movement - Peak Hour Vehicle Count



Location:	#02	File Name:	ITM-20-022-02
Intersection:	Escondido Boulevard / Felicita Avenue	Project:	LLG Ref. 3-20-3256
Date of Count:	Tuesday, August 11, 2020		Escondido

AM	Escondido Boulevard Southbound			Felicita Avenue Westbound			Escondido Boulevard Northbound			Felicita Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	9	25	29	11	133	2	20	16	6	11	54	16	332
7:15	6	25	31	17	156	3	14	24	11	9	61	19	376
7:30	8	33	27	13	150	2	19	32	8	11	61	8	372
7:45	8	32	43	11	136	5	18	36	11	18	61	16	395
8:00	12	37	32	18	109	4	13	25	3	13	70	19	355
8:15	8	29	26	16	116	4	20	26	17	23	70	20	375
8:30	4	28	22	10	116	10	23	25	9	15	73	21	356
8:45	6	30	23	17	101	7	19	32	9	26	77	17	364
Total	61	239	233	113	1017	37	146	216	74	126	527	136	2925
Approach%	11.4	44.8	43.7	9.7	87.1	3.2	33.5	49.5	17.0	16.0	66.8	17.2	
Total%	2.1	8.2	8.0	3.9	34.8	1.3	5.0	7.4	2.5	4.3	18.0	4.6	

AM Intersection Peak Hour: 07:15 to 08:15

Volume	34	127	133	59	551	14	64	117	33	51	253	62	1,498
Approach%	11.6	43.2	45.2	9.5	88.3	2.2	29.9	54.7	15.4	13.9	69.1	16.9	
Total%	2.3	8.5	8.9	3.9	36.8	0.9	4.3	7.8	2.2	3.4	16.9	4.1	
PHF			0.89			0.89			0.82			0.90	0.00

PM	Escondido Boulevard Southbound			Felicita Avenue Westbound			Escondido Boulevard Northbound			Felicita Avenue Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	22	50	29	34	155	22	9	28	30	10	97	6	492
16:15	14	54	23	35	173	23	15	45	28	17	93	6	526
16:30	19	51	32	33	167	18	13	36	36	12	116	6	539
16:45	18	50	30	38	171	22	11	22	26	11	116	9	524
17:00	27	52	21	51	167	25	12	39	24	13	133	7	571
17:15	25	33	25	27	148	24	16	53	22	10	105	7	495
17:30	20	53	24	40	163	29	10	41	28	16	96	5	525
17:45	25	25	26	36	158	29	11	32	29	18	90	9	488
Total	170	368	210	294	1302	192	97	296	223	107	846	55	4160
Approach%	22.7	49.2	28.1	16.4	72.8	10.7	15.7	48.1	36.2	10.6	83.9	5.5	
Total%	4.1	8.8	5.0	7.1	31.3	4.6	2.3	7.1	5.4	2.6	20.3	1.3	

PM Intersection Peak Hour: 16:15 to 17:15

Volume	78	207	106	157	678	88	51	142	114	53	458	28	2,160
Approach%	19.9	52.9	27.1	17.0	73.5	9.5	16.6	46.3	37.1	9.8	85.0	5.2	
Total%	3.6	9.6	4.9	7.3	31.4	4.1	2.4	6.6	5.3	2.5	21.2	1.3	
PHF			0.96			0.95			0.87			0.88	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #02	File Name: ITM-20-022-02
	Intersection: Escondido Boulevard / Felicita Avenue	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Escondido Boulevard Southbound				Felicita Avenue Westbound				Escondido Boulevard Northbound				Felicita Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
7:15	0	1	1	0	5	0	0	0	1	0	0	0	1	0	0	0	0	2
7:30	0	0	0	0	5	0	0	0	0	0	0	0	1	0	0	0	0	0
7:45	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	3	0	0	0	4	0	1	0	2	0	0	0	0	0	2	0	0	3
8:15	4	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	0
8:30	1	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0
8:45	4	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0
Ped Total	13				19				6				5					43
Bike Total		1	1	0		0	2	0		0	0	0		0	3	0		7

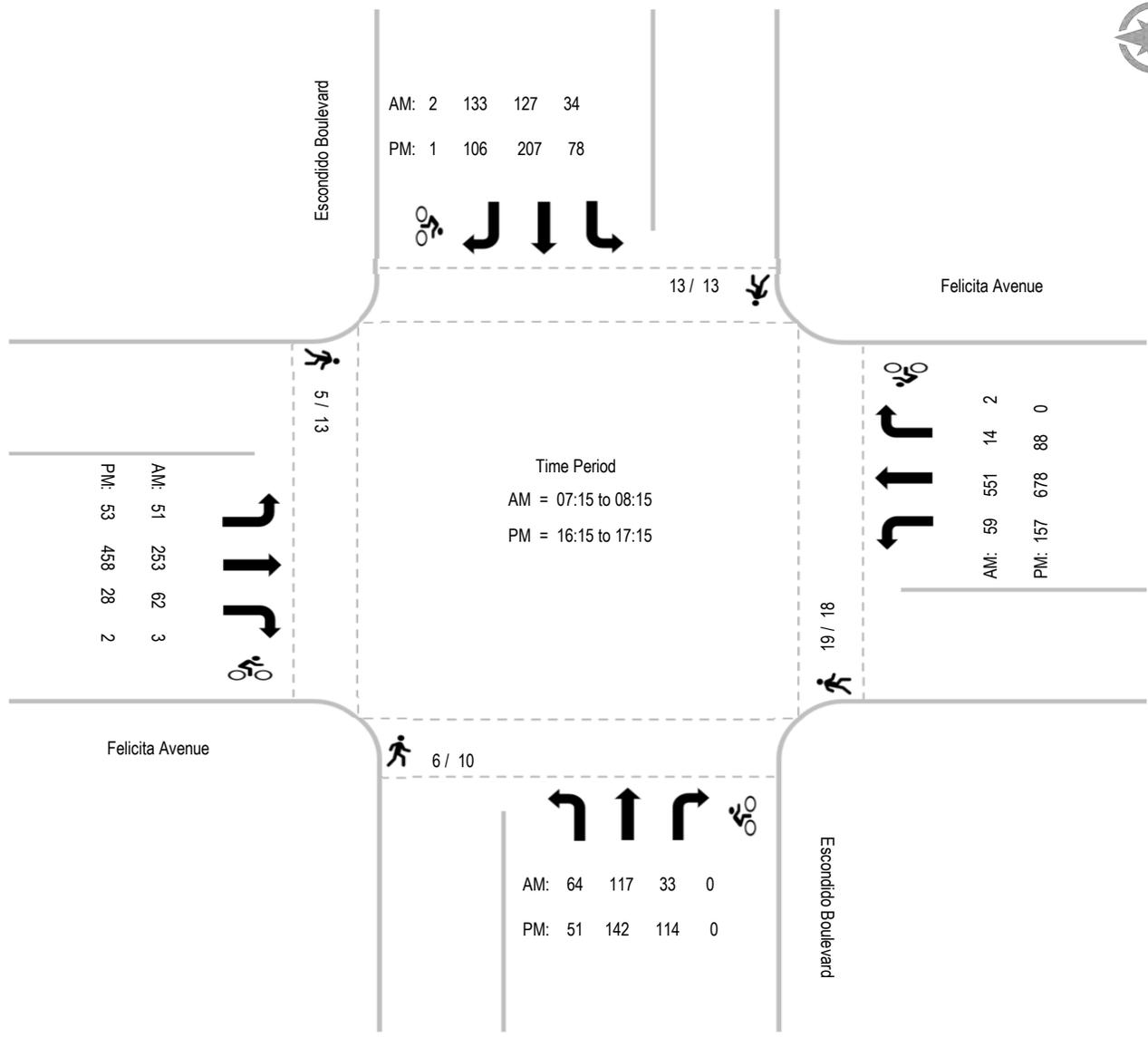
PM	Escondido Boulevard Southbound				Felicita Avenue Westbound				Escondido Boulevard Northbound				Felicita Avenue Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	5	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0
16:15	1	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	0	0
16:30	5	0	0	0	4	0	0	0	1	0	0	0	1	0	0	0	0	0
16:45	0	0	0	0	2	0	0	0	1	0	0	0	3	0	0	0	0	0
17:00	2	0	0	1	0	0	0	0	7	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	3	0	1	0	0	0
17:30	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	3	0	0	0	1	0	0	0	1	0	1	0	0	0
Ped Total	13				18				10				13					54
Bike Total		0	0	1		0	0	0		0	0	0		0	2	0		3

Intersection Turning Movement - Peak Hour Summary



Location: #02
 Intersection: Escondido Boulevard / Felicita Avenue
 Date of Count: Tuesday, August 11, 2020

File Name: ITM-20-022-02
 Project: LLG Ref. 3-20-3256
 Escondido



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #03	File Name: ITM-20-022-03
	Intersection: Centre City Parkway & Connector to Escondido Boulevard	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Centre City Parkway Southbound			Connector.Escondido Blvd Westbound			Centre City Parkway Northbound			- Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	1	173	0	36	0	7	0	51	10	0	0	0	278
7:15	5	183	0	40	0	4	0	88	23	0	0	0	343
7:30	3	211	0	44	0	3	0	89	15	0	0	0	365
7:45	3	174	0	49	0	7	0	129	20	0	0	0	382
8:00	6	151	0	46	0	3	0	99	22	0	0	0	327
8:15	7	152	0	54	0	6	0	93	22	0	0	0	334
8:30	7	153	0	35	0	3	0	35	18	0	0	0	251
8:45	10	144	0	35	0	5	0	118	19	0	0	0	331
Total	42	1341	0	339	0	38	0	702	149	0	0	0	2611
Approach%	3.0	97.0	-	89.9	-	10.1	-	82.5	17.5	-	-	-	
Total%	1.6	51.4	-	13.0	-	1.5	-	26.9	5.7	-	-	-	

AM Intersection Peak Hour: 07:15 to 08:15

Volume	17	719	-	179	-	17	-	405	80	-	-	-	1,417
Approach%	2.3	97.7	-	91.3	-	8.7	-	83.5	16.5	-	-	-	
Total%	1.2	50.7	-	12.6	-	1.2	-	28.6	5.6	-	-	-	
PHF			0.86			0.88			0.81			#DIV/0!	0.00

PM	Centre City Parkway Southbound			Connector.Escondido Blvd Westbound			Centre City Parkway Northbound			- Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	10	139	0	38	0	5	0	239	45	0	0	0	476
16:15	7	159	0	41	0	13	0	247	48	0	0	0	515
16:30	10	138	0	24	0	7	0	225	50	0	0	0	454
16:45	20	127	0	29	0	4	0	219	50	0	0	0	449
17:00	13	192	0	21	0	8	0	218	33	0	0	0	485
17:15	10	150	0	28	0	7	0	189	42	0	0	0	426
17:30	14	136	0	25	0	4	0	231	36	0	0	0	446
17:45	12	143	0	27	0	5	0	220	22	0	0	0	429
Total	96	1184	0	233	0	53	0	1788	326	0	0	0	3680
Approach%	7.5	92.5	-	81.5	-	18.5	-	84.6	15.4	-	-	-	
Total%	2.6	32.2	-	6.3	-	1.4	-	48.6	8.9	-	-	-	

PM Intersection Peak Hour: 16:15 to 17:15

Volume	50	616	-	115	-	32	-	909	181	-	-	-	1,903
Approach%	7.5	92.5	-	78.2	-	21.8	-	83.4	16.6	-	-	-	
Total%	2.6	32.4	-	6.0	-	1.7	-	47.8	9.5	-	-	-	
PHF			0.81			0.68			0.92			#DIV/0!	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count



Location: #03	File Name: ITM-20-022-03
Intersection: Centre City Parkway & Connector to Escondido Boulevard	Project: LLG Ref. 3-20-3256
Date of Count: Tuesday, August 11, 2020	Escondido

AM	Centre City Parkway Southbound				Connector.Escondido Blvd Westbound				Centre City Parkway Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				1				0				0				1	
Bike Total		0	1	0		0	0	0		0	1	0		0	0	0		2

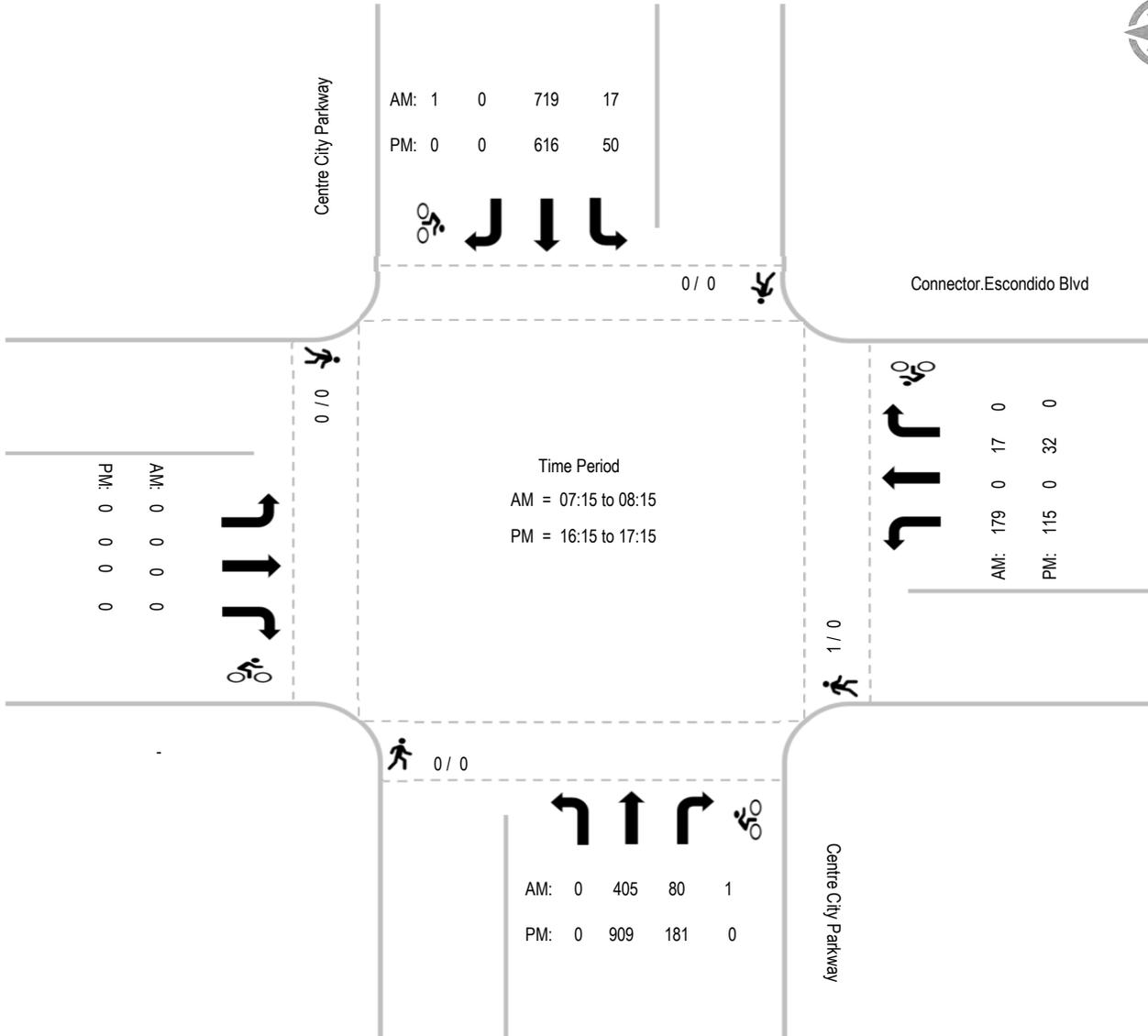
PM	Centre City Parkway Southbound				Connector.Escondido Blvd Westbound				Centre City Parkway Northbound				- Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				0				0				0				0	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

Intersection Turning Movement - Peak Hour Summary



Location: #03
Intersection: Centre City Parkway & Connector to Escondido Boulevard
Date of Count: Tuesday, August 11, 2020

File Name: ITM-20-022-03
Project: LLG Ref. 3-20-3256
 Escondido



Intersection Turning Movement - Peak Hour Vehicle Count



Location:	#04	File Name:	ITM-20-022-04
Intersection:	Escondido Blvd & Connector to Centre City Parkway	Project:	LLG Ref. 3-20-3256
Date of Count:	Tuesday, August 11, 2020		Escondido

AM	Escondido Boulevard Southbound			Connector.Centre.City.Pkwy Westbound			Escondido Boulevard Northbound			Connector.Centre.City.Pkwy Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	0	27	40	0	0	0	1	15	0	9	0	1	93
7:15	0	21	41	0	0	0	1	18	0	23	0	1	105
7:30	0	25	47	0	0	0	2	20	0	18	0	1	113
7:45	0	30	47	0	0	0	5	18	0	29	0	0	129
8:00	0	26	49	0	0	0	1	14	0	18	0	1	109
8:15	0	24	53	0	0	0	2	23	0	31	0	0	133
8:30	0	23	34	0	0	0	3	24	0	20	0	2	106
8:45	0	21	49	0	0	0	2	17	0	26	0	0	115
Total	0	197	360	0	0	0	17	149	0	174	0	6	903
Approach%	-	35.4	64.6	-	-	-	10.2	89.8	-	96.7	-	3.3	
Total%	-	21.8	39.9	-	-	-	1.9	16.5	-	19.3	-	0.7	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	-	105	196	-	-	-	10	75	-	96	-	2	484
Approach%	-	34.9	65.1	-	-	-	11.8	88.2	-	98.0	-	2.0	
Total%	-	21.7	40.5	-	-	-	2.1	15.5	-	19.8	-	0.4	
PHF			0.98			#DIV/0!			0.85			0.79	0.00

PM	Escondido Boulevard Southbound			Connector.Centre.City.Pkwy Westbound			Escondido Boulevard Northbound			Connector.Centre.City.Pkwy Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	0	38	38	0	0	0	3	82	0	50	0	1	212
16:15	0	31	47	0	0	0	7	89	0	56	0	2	232
16:30	0	23	28	0	0	0	2	60	0	44	0	3	160
16:45	0	36	26	0	0	0	6	54	0	55	0	5	182
17:00	0	35	30	0	0	0	1	62	0	40	0	2	170
17:15	0	31	31	0	0	0	3	68	0	46	0	1	180
17:30	0	34	19	0	0	0	3	65	0	45	0	5	171
17:45	0	29	26	0	0	0	3	54	0	27	0	1	140
Total	0	257	245	0	0	0	28	534	0	363	0	20	1447
Approach%	-	51.2	48.8	-	-	-	5.0	95.0	-	94.8	-	5.2	
Total%	-	17.8	16.9	-	-	-	1.9	36.9	-	25.1	-	1.4	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	-	128	139	-	-	-	18	285	-	205	-	11	786
Approach%	-	47.9	52.1	-	-	-	5.9	94.1	-	94.9	-	5.1	
Total%	-	16.3	17.7	-	-	-	2.3	36.3	-	26.1	-	1.4	
PHF			0.86			#DIV/0!			0.79			0.90	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #04	File Name: ITM-20-022-04
	Intersection: Escondido Blvd & Connector to Centre City Parkway	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Escondido Boulevard Southbound				Connector.Centre.City.Pkwy Westbound				Escondido Boulevard Northbound				Connector.Centre.City.Pkwy Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0
7:30	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4	0	0
7:45	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2	0	0
8:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	0				9				0				0			9		
Bike Total		0	0	0		0	0	0		0	1	0		0	0		0	1

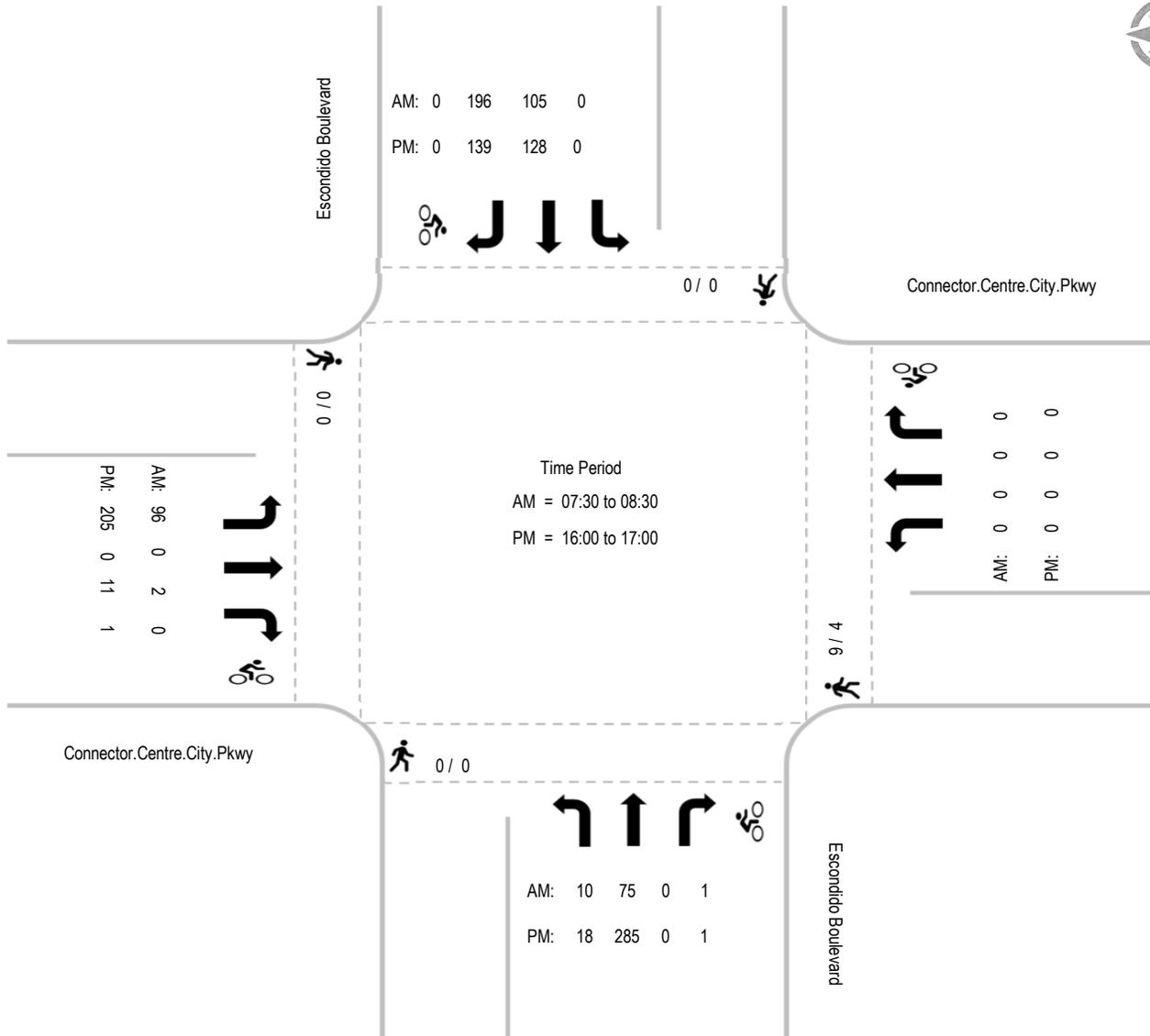
PM	Escondido Boulevard Southbound				Connector.Centre.City.Pkwy Westbound				Escondido Boulevard Northbound				Connector.Centre.City.Pkwy Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0
17:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
17:30	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0
17:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0	0
Ped Total	0				4				0				0			4		
Bike Total		0	0	0		0	0	0		0	1	0		0	0	1		2

Intersection Turning Movement - Peak Hour Summary



Location: #04
 Intersection: Escondido Blvd & Connector to Centre City Parkway
 Date of Count: Tuesday, August 11, 2020

File Name: ITM-20-022-04
 Project: LLG Ref. 3-20-3256
 Escondido



Intersection Turning Movement - Peak Hour Vehicle Count



Location: #05	File Name: ITM-20-022-05
Intersection: Centre City Parkway & Citracado Parkway	Project: LLG Ref. 3-20-3256
Date of Count: Tuesday, August 11, 2020	Escondido

AM	Centre City Parkway Southbound			Citracado Parkway Westbound			Centre City Parkway Northbound			Citracado Parkway Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	2	174	13	33	15	4	1	59	1	9	7	3	321
7:15	0	188	12	25	19	2	1	90	3	14	5	3	362
7:30	2	216	19	36	16	2	2	101	3	9	6	0	412
7:45	1	177	14	38	14	5	3	109	2	20	4	3	390
8:00	6	164	10	27	8	8	6	97	4	12	12	3	357
8:15	5	173	15	28	10	5	1	109	8	11	9	5	379
8:30	4	147	21	31	10	8	2	103	7	12	5	4	354
8:45	2	150	16	19	16	5	1	113	10	10	4	4	350
Total	22	1389	120	237	108	39	17	781	38	97	52	25	2925
Approach%	1.4	90.7	7.8	61.7	28.1	10.2	2.0	93.4	4.5	55.7	29.9	14.4	
Total%	0.8	47.5	4.1	8.1	3.7	1.3	0.6	26.7	1.3	3.3	1.8	0.9	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	14	730	58	129	48	20	12	416	17	52	31	11	1,538
Approach%	1.7	91.0	7.2	65.5	24.4	10.2	2.7	93.5	3.8	55.3	33.0	11.7	
Total%	0.9	47.5	3.8	8.4	3.1	1.3	0.8	27.0	1.1	3.4	2.0	0.7	
PHF			0.85			0.86			0.94			0.87	0.00

PM	Centre City Parkway Southbound			Citracado Parkway Westbound			Centre City Parkway Northbound			Citracado Parkway Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	5	148	13	26	8	4	2	305	15	23	19	4	572
16:15	8	149	23	25	19	4	4	302	13	26	14	4	591
16:30	6	127	12	13	14	1	9	263	17	24	21	7	514
16:45	6	113	15	27	17	7	3	241	18	23	14	7	491
17:00	10	155	14	23	17	9	9	251	11	17	19	3	538
17:15	5	146	13	19	16	3	3	226	11	32	24	0	498
17:30	11	125	11	15	13	9	5	257	13	27	16	4	506
17:45	9	148	8	20	19	3	1	222	11	30	19	3	493
Total	60	1111	109	168	123	40	36	2067	109	202	146	32	4203
Approach%	4.7	86.8	8.5	50.8	37.2	12.1	1.6	93.4	4.9	53.2	38.4	8.4	
Total%	1.4	26.4	2.6	4.0	2.9	1.0	0.9	49.2	2.6	4.8	3.5	0.8	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	25	537	63	91	58	16	18	1,111	63	96	68	22	2,168
Approach%	4.0	85.9	10.1	55.2	35.2	9.7	1.5	93.2	5.3	51.6	36.6	11.8	
Total%	1.2	24.8	2.9	4.2	2.7	0.7	0.8	51.2	2.9	4.4	3.1	1.0	
PHF			0.87			0.81			0.93			0.89	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #05	File Name: ITM-20-022-05
	Intersection: Centre City Parkway & Citracado Parkway	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Centre City Parkway Southbound				Citracado Parkway Westbound				Centre City Parkway Northbound				Citracado Parkway Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	
7:30	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1	1	
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:15	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2	
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Total	1				0				0			0				1		
Bike Total		0	0	0		0	1	1		0	0	2		0	0		4	

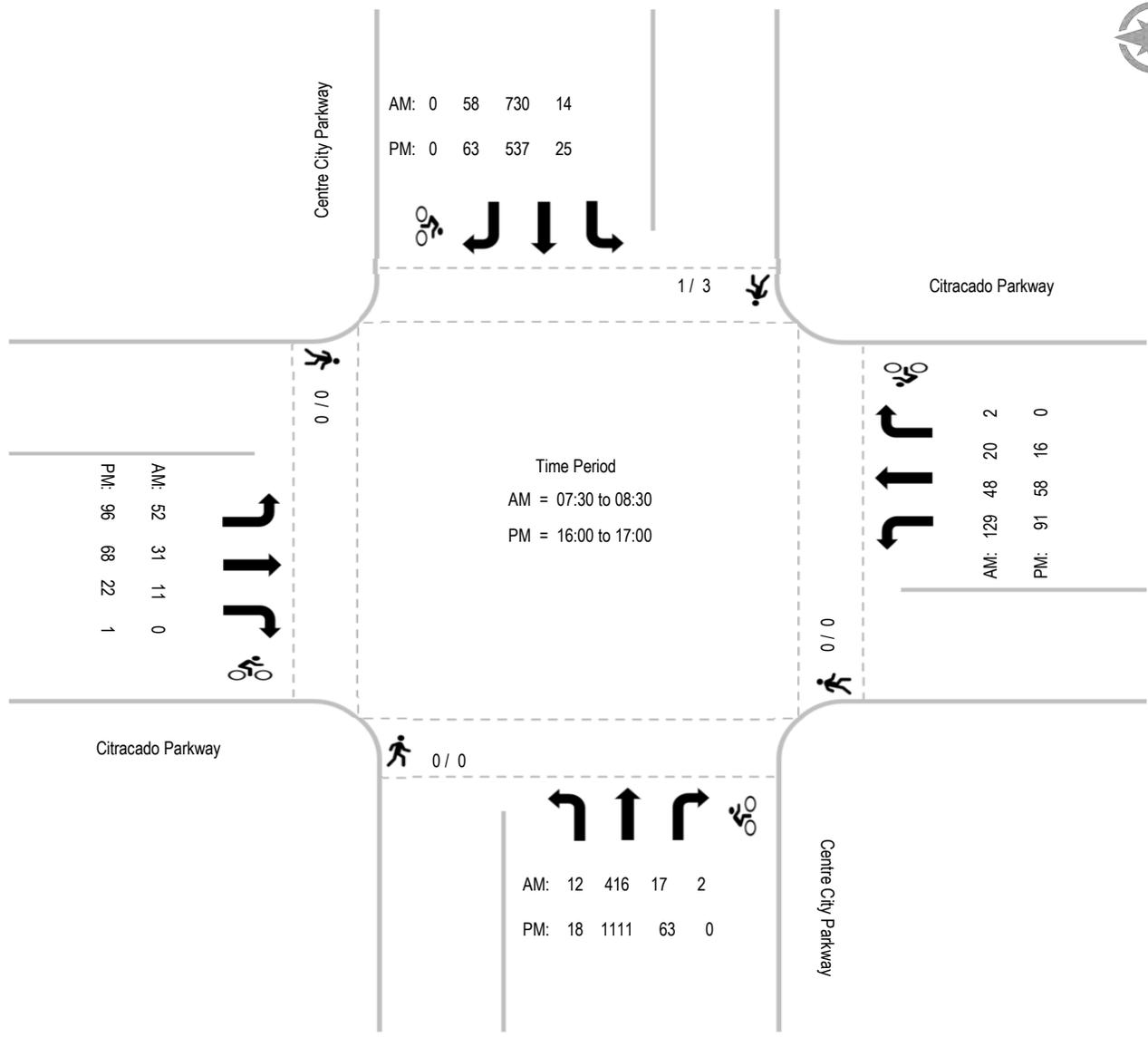
PM	Centre City Parkway Southbound				Citracado Parkway Westbound				Centre City Parkway Northbound				Citracado Parkway Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
16:45	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
17:30	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ped Total	3				0				0			0				3		
Bike Total		0	0	0		0	0	0		0	0	0		0	1	0	1	

Intersection Turning Movement - Peak Hour Summary



Location: #05
 Intersection: Centre City Parkway & Citracado Parkway
 Date of Count: Tuesday, August 11, 2020

File Name: ITM-20-022-05
 Project: LLG Ref. 3-20-3256
 Escondido



Intersection Turning Movement - Peak Hour Vehicle Count



Location: #06	File Name: ITM-20-022-06
Intersection: Centre City Parkway & Brotherton Road	Project: LLG Ref. 3-20-3256
Date of Count: Tuesday, August 11, 2020	Escondido

AM	Centre City Parkway Southbound			Brotherton Road Westbound			Centre City Parkway Northbound			Brotherton Road Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	8	195	7	0	0	1	0	68	8	0	0	2	289
7:15	5	206	4	0	0	4	0	99	7	0	0	1	326
7:30	7	254	7	0	0	5	0	118	6	0	1	4	402
7:45	9	186	9	0	0	2	4	141	8	0	0	3	362
8:00	5	184	1	0	0	4	3	107	8	0	0	2	314
8:15	5	198	5	0	0	3	2	151	6	0	0	5	375
8:30	4	170	5	0	0	3	7	107	11	0	0	6	313
8:45	2	176	6	0	0	2	3	130	5	0	0	4	328
Total	45	1569	44	0	0	24	19	921	59	0	1	27	2709
Approach%	2.7	94.6	2.7	-	-	100.0	1.9	92.2	5.9	-	3.6	96.4	
Total%	1.7	57.9	1.6	-	-	0.9	0.7	34.0	2.2	-	0.0	1.0	

AM Intersection Peak Hour: 07:30 to 08:30

Volume	26	822	22	-	-	14	9	517	28	-	1	14	1,453
Approach%	3.0	94.5	2.5	-	-	100.0	1.6	93.3	5.1	-	6.7	93.3	
Total%	1.8	56.6	1.5	-	-	1.0	0.6	35.6	1.9	-	0.1	1.0	
PHF			0.81			0.70			0.87			0.75	0.00

PM	Centre City Parkway Southbound			Brotherton Road Westbound			Centre City Parkway Northbound			Brotherton Road Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	5	164	14	0	0	6	10	288	51	0	0	4	542
16:15	8	172	11	0	0	6	5	295	54	0	0	8	559
16:30	6	144	3	0	0	7	7	268	37	0	0	3	475
16:45	6	136	9	0	0	8	3	267	41	0	0	5	475
17:00	17	183	17	0	0	7	10	240	38	0	0	2	514
17:15	10	151	7	0	0	3	9	236	29	0	0	10	455
17:30	9	134	4	0	0	9	5	265	37	0	0	4	467
17:45	9	153	9	0	0	10	5	222	32	0	0	7	447
Total	70	1237	74	0	0	56	54	2081	319	0	0	43	3934
Approach%	5.1	89.6	5.4	-	-	100.0	2.2	84.8	13.0	-	-	100.0	
Total%	1.8	31.4	1.9	-	-	1.4	1.4	52.9	8.1	-	-	1.1	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	25	616	37	-	-	27	25	1,118	183	-	-	20	2,051
Approach%	3.7	90.9	5.5	-	-	100.0	1.9	84.3	13.8	-	-	100.0	
Total%	1.2	30.0	1.8	-	-	1.3	1.2	54.5	8.9	-	-	1.0	
PHF			0.89			0.84			0.94			0.63	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #06	File Name: ITM-20-022-06
	Intersection: Centre City Parkway & Brotherton Road	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Centre City Parkway Southbound				Brotherton Road Westbound				Centre City Parkway Northbound				Brotherton Road Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:00	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	2	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	3				0					1				1			5	
Bike Total		0	0	0		0	0	0		0	0	0		0	0	0		0

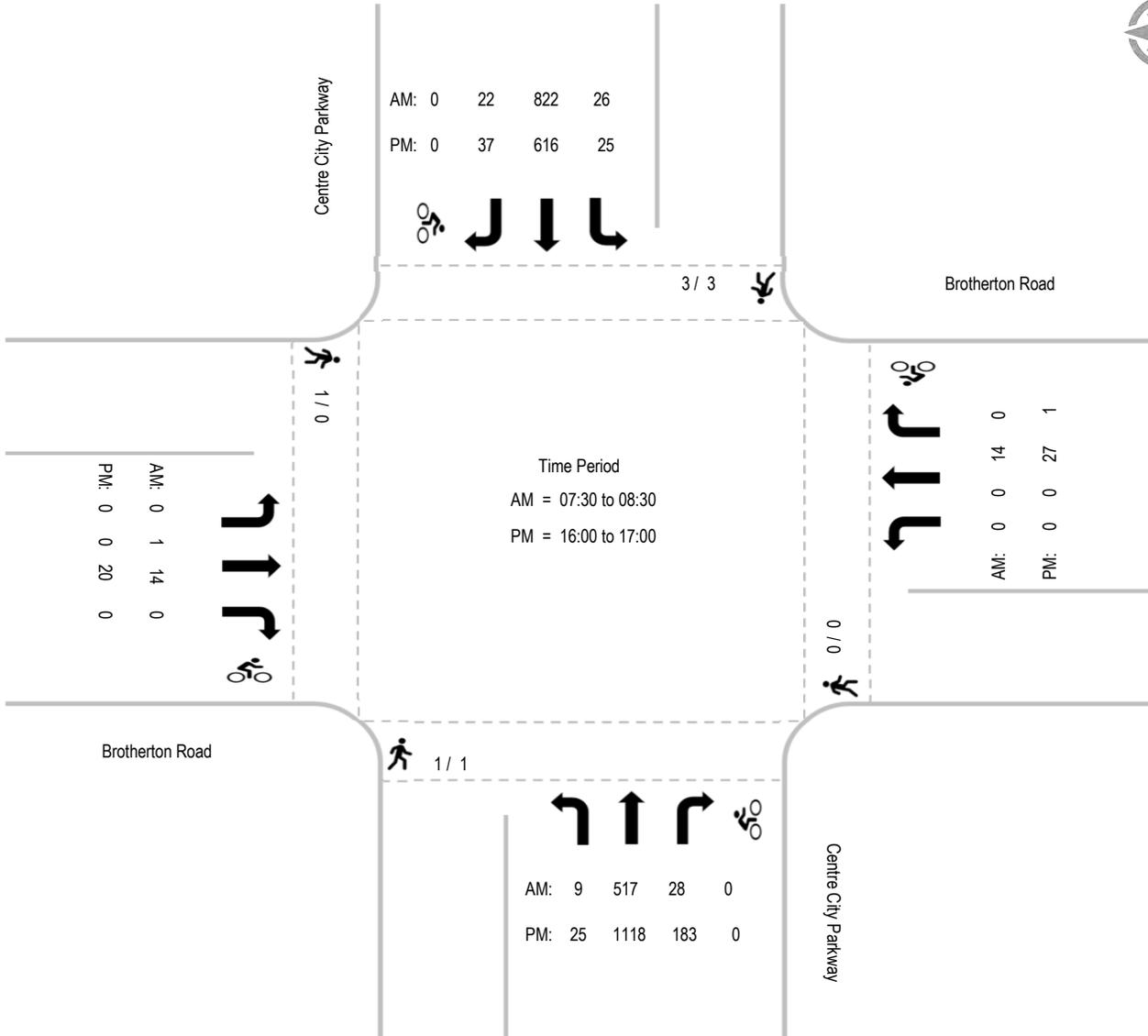
PM	Centre City Parkway Southbound				Brotherton Road Westbound				Centre City Parkway Northbound				Brotherton Road Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	1	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	2	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	3				0					1				0			4	
Bike Total		0	0	0		0	1	0		0	0	0		0	0	0		1

Intersection Turning Movement - Peak Hour Summary



Location: #06
 Intersection: Centre City Parkway & Brotherton Road
 Date of Count: Tuesday, August 11, 2020

File Name: ITM-20-022-06
 Project: LLG Ref. 3-20-3256
 Escondido



Intersection Turning Movement - Peak Hour Vehicle Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #07	File Name: ITM-20-022-07
	Intersection: Escondido Boulevard & Brotherton Road	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Escondido Boulevard Southbound			Brotherton Road Westbound			Escondido Boulevard Northbound			Brotherton Road Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
7:00	0	29	0	0	0	0	1	10	1	6	0	9	56
7:15	0	25	0	0	0	0	3	16	0	6	0	5	55
7:30	0	25	2	0	0	0	3	14	0	10	0	3	57
7:45	0	30	0	0	0	0	2	9	0	16	0	5	62
8:00	0	26	2	0	0	0	3	11	0	9	0	4	55
8:15	0	21	1	0	0	0	3	16	0	7	0	6	54
8:30	1	25	1	0	0	0	1	19	0	11	0	3	61
8:45	0	19	0	0	0	0	2	10	0	3	0	4	38
Total	1	200	6	0	0	0	18	105	1	68	0	39	438
Approach%	0.5	96.6	2.9	-	-	-	14.5	84.7	0.8	63.6	-	36.4	
Total%	0.2	45.7	1.4	-	-	-	4.1	24.0	0.2	15.5	-	8.9	

AM Intersection Peak Hour: 07:45 to 08:45

Volume	1	102	4	-	-	-	9	55	-	43	-	18	232
Approach%	0.9	95.3	3.7	-	-	-	14.1	85.9	-	70.5	-	29.5	
Total%	0.4	44.0	1.7	-	-	-	3.9	23.7	-	18.5	-	7.8	
PHF			0.89			#DIV/0!			0.80			0.73	0.00

PM	Escondido Boulevard Southbound			Brotherton Road Westbound			Escondido Boulevard Northbound			Brotherton Road Eastbound			Total
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	
16:00	3	29	0	2	2	7	4	33	2	49	10	0	141
16:15	3	30	0	6	1	3	3	30	1	50	7	3	137
16:30	6	18	1	0	3	2	3	23	0	32	10	2	100
16:45	7	29	0	5	4	4	5	20	3	31	12	4	124
17:00	7	28	0	1	3	6	2	28	0	32	15	7	129
17:15	6	26	0	3	2	5	1	28	3	31	8	4	117
17:30	8	27	0	2	5	5	4	30	1	30	10	3	125
17:45	7	23	1	2	3	3	6	21	2	26	11	3	108
Total	47	210	2	21	23	35	28	213	12	281	83	26	981
Approach%	18.1	81.1	0.8	26.6	29.1	44.3	11.1	84.2	4.7	72.1	21.3	6.7	
Total%	4.8	21.4	0.2	2.1	2.3	3.6	2.9	21.7	1.2	28.6	8.5	2.7	

PM Intersection Peak Hour: 16:00 to 17:00

Volume	19	106	1	13	10	16	15	106	6	162	39	9	502
Approach%	15.1	84.1	0.8	33.3	25.6	41.0	11.8	83.5	4.7	77.1	18.6	4.3	
Total%	3.8	21.1	0.2	2.6	2.0	3.2	3.0	21.1	1.2	32.3	7.8	1.8	
PHF			0.88			0.75			0.81			0.88	0.00

Intersection Turning Movement - Bicycle & Pedestrian Count

LINSCOTT LAW & GREENSPAN <i>engineers</i>	Location: #07	File Name: ITM-20-022-07
	Intersection: Escondido Boulevard & Brotherton Road	Project: LLG Ref. 3-20-3256
	Date of Count: Tuesday, August 11, 2020	Escondido

AM	Escondido Boulevard Southbound				Brotherton Road Westbound				Escondido Boulevard Northbound				Brotherton Road Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
7:00	1	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	2	1
7:15	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
7:30	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	3	0
7:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
8:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2	0
8:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped Total	2				5				2							0	9	
Bike Total		0	2	0		0	0	0		0	0	0		0	0	0		2

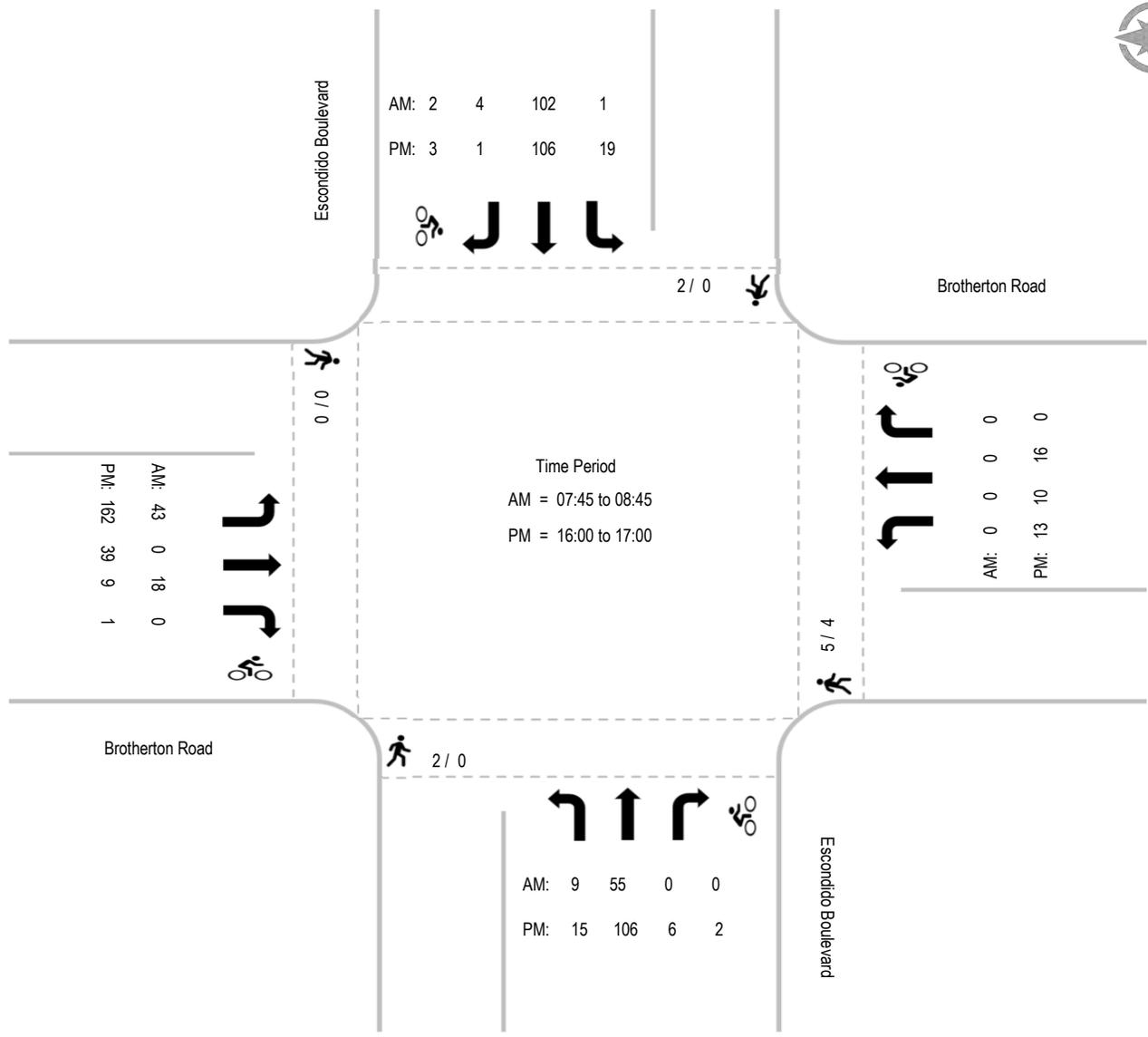
PM	Escondido Boulevard Southbound				Brotherton Road Westbound				Escondido Boulevard Northbound				Brotherton Road Eastbound				Totals	
	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	B-Left	B-Thru	B-Right	Ped	Bicycle
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	1	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15	0	0	2	0	1	0	0	0	0	0	1	0	0	0	0	0	1	3
17:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1
17:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0
Ped Total	0				4				0							0	4	
Bike Total		0	3	0		0	0	0		0	1	1		0	0	1		6

Intersection Turning Movement - Peak Hour Summary



Location: #07
 Intersection: Escondido Boulevard & Brotherton Road
 Date of Count: Tuesday, August 11, 2020

File Name: ITM-20-022-07
 Project: LLG Ref. 3-20-3256
 Escondido



Linscott, Law & Greenspan, Engineers

4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Centre City Parkway, between Felicita Road and Brotherton Road**

Date: Tuesday, August 11, 2020		Total Daily Volume: 18964																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
92	44	63	83	175	432	925	1155	1052	1062	1063	1146	1212	1272	1372	1550	1567	1559	1093	808	546	332	215	146
32	12	13	8	18	72	182	246	250	269	251	292	305	317	328	348	404	438	324	219	159	106	61	41
17	16	17	27	39	94	219	276	283	243	261	273	313	292	352	364	418	354	288	215	154	96	57	41
19	12	23	26	54	141	274	329	247	293	252	270	298	324	343	443	384	385	236	204	118	78	61	34
24	4	10	22	64	125	250	304	272	257	299	311	296	339	349	395	361	382	245	170	115	52	36	30

Date: Tuesday, August 11, 2020		Total Daily Volume: 9497																				Description: Northbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
58	32	29	35	29	90	191	397	435	485	508	543	602	689	754	987	964	893	590	478	318	189	118	83
17	8	7	2	3	17	30	67	102	104	122	131	162	155	161	218	246	233	187	139	84	59	34	18
9	11	7	10	7	19	42	89	107	115	122	128	159	166	194	238	260	197	144	118	95	62	40	29
14	10	10	13	10	27	60	109	102	135	123	138	138	184	195	282	238	242	116	125	71	44	30	18
18	3	5	10	9	27	59	132	124	131	141	146	143	184	204	249	220	221	143	96	68	24	14	18

Date: Tuesday, August 11, 2020		Total Daily Volume: 9467																				Description: Southbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
34	12	34	48	146	342	734	758	617	577	555	603	610	583	618	563	603	666	503	330	228	143	97	63
15	4	6	6	15	55	152	179	148	165	129	161	143	162	167	130	158	205	137	80	75	47	27	23
8	5	10	17	32	75	177	187	176	128	139	145	154	126	158	126	158	157	144	97	59	34	17	12
5	2	13	13	44	114	214	220	145	158	129	132	160	140	148	161	146	143	120	79	47	34	31	16
6	1	5	12	55	98	191	172	148	126	158	165	153	155	145	146	141	161	102	74	47	28	22	12

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Centre City Parkway, between Brotherton Road and Citracado Parkway**

Date: Tuesday, August 11, 2020		Total Daily Volume: 22045																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
85	54	83	94	226	534	1128	1332	1273	1178	1194	1274	1403	1430	1556	1794	1941	1767	1247	912	661	420	269	190
11	14	20	14	24	90	203	274	316	309	287	316	367	339	376	414	495	472	367	250	193	132	86	62
26	18	20	22	45	115	291	332	329	272	287	317	358	324	398	416	541	430	349	244	191	118	71	50
20	16	27	33	72	182	324	371	305	306	272	319	339	390	391	511	459	443	265	225	142	94	66	39
28	6	16	25	85	147	310	355	323	291	348	322	339	377	391	453	446	422	266	193	135	76	46	39

Date: Tuesday, August 11, 2020		Total Daily Volume: 11704																				Description: Northbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
64	41	46	36	36	98	232	474	516	571	585	656	731	820	915	1194	1297	1108	744	585	433	251	156	115
9	10	12	5	6	16	38	82	121	137	134	153	195	176	204	274	337	284	224	172	120	76	48	34
17	13	10	6	7	20	55	110	126	138	143	162	190	200	224	275	352	270	196	152	129	78	51	35
17	12	14	15	12	33	67	124	130	148	132	169	171	226	232	351	308	300	156	150	97	56	34	21
21	6	10	10	11	29	72	158	139	148	176	172	175	218	255	294	300	254	168	111	87	41	23	25

Date: Tuesday, August 11, 2020		Total Daily Volume: 10341																				Description: Southbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
21	13	37	58	190	436	896	858	757	607	609	618	672	610	641	600	644	659	503	327	228	169	113	75
2	4	8	9	18	74	165	192	195	172	153	163	172	163	172	140	158	188	143	78	73	56	38	28
9	5	10	16	38	95	236	222	203	134	144	155	168	124	174	141	189	160	153	92	62	40	20	15
3	4	13	18	60	149	257	247	175	158	140	150	168	164	159	160	151	143	109	75	45	38	32	18
7	0	6	15	74	118	238	197	184	143	172	150	164	159	136	159	146	168	98	82	48	35	23	14

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Escondido Boulevard, between Felicita Road and Brotherton Road**

Date: Tuesday, August 11, 2020		Total Daily Volume: 9194																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
38	20	38	21	39	168	336	450	477	482	525	609	640	671	629	699	765	730	552	481	380	207	152	85
16	4	11	7	4	32	66	85	127	118	126	164	165	136	149	165	172	175	134	130	111	68	58	23
8	4	9	6	9	38	78	114	120	130	144	144	159	168	151	158	216	187	145	149	108	64	36	23
6	7	7	5	11	52	89	124	102	129	106	135	160	186	152	178	190	191	148	108	80	42	34	23
8	5	11	3	15	46	103	127	128	105	149	166	156	181	177	198	187	177	125	94	81	33	24	16

Date: Tuesday, August 11, 2020		Total Daily Volume: 5007																				Description: Northbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
22	13	27	9	13	78	148	220	227	283	284	339	327	390	384	403	461	399	300	252	208	96	79	45
11	3	8	2	2	18	36	39	53	66	71	86	87	86	85	95	108	101	73	61	65	28	38	12
3	4	6	3	3	18	31	55	56	69	87	92	82	88	92	92	124	108	80	88	50	35	17	11
5	3	5	1	5	23	44	63	54	82	48	74	82	108	93	109	116	100	75	54	46	18	12	14
3	3	8	3	3	19	37	63	64	66	78	87	76	108	114	107	113	90	72	49	47	15	12	8

Date: Tuesday, August 11, 2020		Total Daily Volume: 4187																				Description: Southbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
16	7	11	12	26	90	188	230	250	199	241	270	313	281	245	296	304	331	252	229	172	111	73	40
5	1	3	5	2	14	30	46	74	52	55	78	78	50	64	70	64	74	61	69	46	40	20	11
5	0	3	3	6	20	47	59	64	61	57	52	77	80	59	66	92	79	65	61	58	29	19	12
1	4	2	4	6	29	45	61	48	47	58	61	78	78	59	69	74	91	73	54	34	24	22	9
5	2	3	0	12	27	66	64	64	39	71	79	80	73	63	91	74	87	53	45	34	18	12	8

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4542 Ruffner Street, Suite 100, San Diego, CA 92111

Average Daily Traffic

Location: **Escondido Boulevard, between Brotherton Road and Citracado Parkway**

Date: Tuesday, August 11, 2020		Total Daily Volume: 3291																				Description: Total Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
9	14	11	8	18	42	134	199	189	184	189	214	219	210	234	241	283	259	211	159	96	97	45	26
1	4	3	1	1	11	23	55	47	35	51	51	62	42	51	57	69	68	60	37	23	31	13	10
2	5	3	4	4	13	28	53	44	54	34	56	60	60	73	64	82	68	61	48	27	30	13	9
1	4	4	3	6	6	40	50	60	53	51	49	54	58	60	56	63	63	45	45	21	15	9	6
5	1	1	0	7	12	43	41	38	42	53	58	43	50	50	64	69	60	45	29	25	21	10	1

Date: Tuesday, August 11, 2020		Total Daily Volume: 1367																				Description: Northbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
2	9	5	2	4	11	24	59	72	71	73	87	87	91	108	109	144	121	95	77	37	43	23	13
0	3	2	0	0	3	4	16	16	14	20	20	30	15	21	21	36	28	31	21	11	15	9	6
0	5	0	2	0	5	3	16	19	22	14	24	23	23	28	36	46	33	21	18	8	10	6	2
1	1	2	0	2	0	9	18	25	19	20	20	18	31	32	25	33	32	21	23	8	9	2	5
1	0	1	0	2	3	8	9	12	16	19	23	16	22	27	27	29	28	22	15	10	9	6	0

Date: Tuesday, August 11, 2020		Total Daily Volume: 1924																				Description: Southbound Volume	
0:00	1:00	2:00	3:00	4:00	5:00	6:00	7:00	8:00	9:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
7	5	6	6	14	31	110	140	117	113	116	127	132	119	126	132	139	138	116	82	59	54	22	13
1	1	1	1	1	8	19	39	31	21	31	31	32	27	30	36	33	40	29	16	12	16	4	4
2	0	3	2	4	8	25	37	25	32	20	32	37	37	45	28	36	35	40	30	19	20	7	7
0	3	2	3	4	6	31	32	35	34	31	29	36	27	28	31	30	31	24	22	13	6	7	1
4	1	0	0	5	9	35	32	26	26	34	35	27	28	23	37	40	32	23	14	15	12	4	1

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APPENDIX B

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – EXISTING

HCM 6th Signalized Intersection Summary

1: Center City Parkway & Felicita Avenue

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	530	479	243	153	421	59	299	591	119	125	474	207
Future Volume (veh/h)	530	479	243	153	421	59	299	591	119	125	474	207
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	552	499	253	199	547	77	336	664	134	136	515	225
Peak Hour Factor	0.96	0.96	0.96	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	648	686	346	289	697	411	421	1112	629	217	902	700
Arrive On Green	0.19	0.30	0.30	0.08	0.20	0.20	0.12	0.31	0.31	0.06	0.25	0.25
Sat Flow, veh/h	3456	2286	1154	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	552	387	365	199	547	77	336	664	134	136	515	225
Grp Sat Flow(s),veh/h/ln	1728	1777	1663	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.6	14.6	14.7	4.2	10.9	2.8	7.1	11.8	4.2	2.9	9.5	6.9
Cycle Q Clear(g_c), s	11.6	14.6	14.7	4.2	10.9	2.8	7.1	11.8	4.2	2.9	9.5	6.9
Prop In Lane	1.00		0.69	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	648	533	499	289	697	411	421	1112	629	217	902	700
V/C Ratio(X)	0.85	0.73	0.73	0.69	0.78	0.19	0.80	0.60	0.21	0.63	0.57	0.32
Avail Cap(c_a), veh/h	716	582	544	415	855	481	439	1112	629	240	902	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	1.00	1.00
Uniform Delay (d), s/veh	29.4	23.4	23.5	33.4	28.6	21.6	32.0	21.7	14.9	34.2	24.4	13.6
Incr Delay (d2), s/veh	9.0	4.1	4.6	2.9	3.9	0.2	9.6	2.4	0.8	4.3	2.6	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	5.4	6.4	6.1	1.8	4.8	1.0	3.4	5.0	1.5	1.3	4.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	27.6	28.0	36.3	32.5	21.8	41.6	24.1	15.7	38.6	27.0	14.8
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1304			823			1134			876	
Approach Delay, s/veh		32.3			32.4			28.3			25.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	27.9	10.8	27.0	13.6	23.5	18.5	19.2				
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	5.2	23.3	9.0	24.5	9.5	19.0	15.5	18.0				
Max Q Clear Time (g_c+I1), s	4.9	13.8	6.2	16.7	9.1	11.5	13.6	12.9				
Green Ext Time (p_c), s	0.0	3.4	0.2	2.9	0.1	2.6	0.5	1.7				
Intersection Summary												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↘		↖ ↑	↑ ↑	↗	↖ ↗	↑ ↘		↖ ↗	↑ ↘	
Traffic Volume (veh/h)	80	397	97	93	865	22	100	184	52	53	199	209
Future Volume (veh/h)	80	397	97	93	865	22	100	184	52	53	199	209
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	441	108	104	972	25	122	224	63	60	224	235
Peak Hour Factor	0.90	0.90	0.90	0.89	0.89	0.89	0.82	0.82	0.82	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	829	201	133	1092	566	155	874	240	89	498	444
Arrive On Green	0.06	0.29	0.29	0.07	0.31	0.31	0.09	0.32	0.32	0.05	0.28	0.28
Sat Flow, veh/h	3456	2835	689	1781	3554	1585	1781	2754	757	1781	1777	1585
Grp Volume(v), veh/h	89	275	274	104	972	25	122	143	144	60	224	235
Grp Sat Flow(s),veh/h/ln	1728	1777	1746	1781	1777	1585	1781	1777	1734	1781	1777	1585
Q Serve(g_s), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.0	4.2	2.2	7.0	8.5
Cycle Q Clear(g_c), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.0	4.2	2.2	7.0	8.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	207	520	511	133	1092	566	155	564	550	89	498	444
V/C Ratio(X)	0.43	0.53	0.54	0.78	0.89	0.04	0.79	0.25	0.26	0.67	0.45	0.53
Avail Cap(c_a), veh/h	255	520	511	179	1127	582	171	564	550	131	498	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	20.1	20.1	30.8	22.4	14.2	30.3	17.2	17.2	31.7	20.1	20.6
Incr Delay (d2), s/veh	1.4	1.0	1.1	14.4	8.9	0.0	19.8	1.1	1.2	8.6	2.9	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	0.7	3.5	3.5	2.1	8.1	0.2	2.7	1.7	1.7	1.1	3.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	21.1	21.2	45.2	31.3	14.3	50.1	18.3	18.4	40.2	23.0	25.1
LnGrp LOS	C	C	C	D	C	B	D	B	B	D	C	C
Approach Vol, veh/h		638			1101			409			519	
Approach Delay, s/veh		22.7			32.2			27.8			25.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	26.0	9.6	24.3	10.4	23.5	8.6	25.3				
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	5.0	20.5	6.8	19.7	6.5	19.0	5.0	21.5				
Max Q Clear Time (g_c+1), s	1.2	6.2	5.9	10.9	6.6	10.5	3.7	19.7				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.2	0.0	1.8	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	10.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	241	42	595	60	39	1107
Future Vol, veh/h	241	42	595	60	39	1107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	75	-	140	120	-
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	262	46	647	65	42	1203

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1333	324	0	0	712	0
Stage 1	647	-	-	-	-	-
Stage 2	686	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 145	672	-	-	884	-
Stage 1	483	-	-	-	-	-
Stage 2	461	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	~ 138	672	-	-	884	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	439	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	74.1	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	273	672	884	-
HCM Lane V/C Ratio	-	-	0.96	0.068	0.048	-
HCM Control Delay (s)	-	-	85.1	10.7	9.3	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	9.2	0.2	0.2	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗
Traffic Vol, veh/h	141	3	15	110	154	288
Future Vol, veh/h	141	3	15	110	154	288
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	85	85	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	178	4	18	129	157	294

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	322	157	451	0	-	0
Stage 1	157	-	-	-	-	-
Stage 2	165	-	-	-	-	-
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	672	889	1109	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	661	889	1109	-	-	-
Mov Cap-2 Maneuver	661	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	864	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1109	-	661	889	-	-
HCM Lane V/C Ratio	0.016	-	0.27	0.004	-	-
HCM Control Delay (s)	8.3	-	12.4	9.1	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.1	0	-	-

HCM 6th TWSC
5: Center City Parkway & Brotherton Road

08/31/2020

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕↔		↗	↕↕	↗
Traffic Vol, veh/h	0	0	22	0	0	19	10	647	32	31	1269	58
Future Vol, veh/h	0	0	22	0	0	19	10	647	32	31	1269	58
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	70	70	70	87	87	87	81	81	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	29	0	0	27	11	744	37	38	1567	232

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	784	-	-	391	1799	0	0	781	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	336	0	0	608	339	-	-	832	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	336	-	-	608	339	-	-	832	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	16.7		11.2		0.2		0.2			
HCM LOS	C		B							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	339	-	-	336	608	832	-
HCM Lane V/C Ratio	0.034	-	-	0.087	0.045	0.046	-
HCM Control Delay (s)	16	-	-	16.7	11.2	9.5	-
HCM Lane LOS	C	-	-	C	B	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0.1	-

HCM Unsignalized Intersection Capacity Analysis

6: Escondido Boulevard & Brotherton Road

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	30	35	4	17	12	39	10	74	7	55	170	1
Future Volume (vph)	30	35	4	17	12	39	10	74	7	55	170	1
Peak Hour Factor	0.73	0.73	0.73	0.92	0.92	0.92	0.80	0.80	0.80	0.89	0.89	0.89
Hourly flow rate (vph)	41	48	5	18	13	42	13	93	9	62	191	1

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	94	73	115	254
Volume Left (vph)	41	18	13	62
Volume Right (vph)	5	42	9	1
Hadj (s)	0.09	-0.26	0.01	0.08
Departure Headway (s)	5.0	4.6	4.6	4.5
Degree Utilization, x	0.13	0.09	0.15	0.32
Capacity (veh/h)	667	705	736	758
Control Delay (s)	8.7	8.1	8.4	9.7
Approach Delay (s)	8.7	8.1	8.4	9.7
Approach LOS	A	A	A	A

Intersection Summary			
Delay		9.0	
Level of Service		A	
Intersection Capacity Utilization	31.8%		ICU Level of Service A
Analysis Period (min)		15	

HCM 6th Signalized Intersection Summary
 7: Center City Parkway & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	27	34	209	117	11	18	601	23	3	1213	96
Future Volume (veh/h)	62	27	34	209	117	11	18	601	23	3	1213	96
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	31	39	243	136	13	19	639	24	4	1427	113
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	53	66	285	333	282	39	1835	1072	10	1776	875
Arrive On Green	0.05	0.07	0.07	0.16	0.18	0.18	0.02	0.52	0.52	0.01	0.50	0.50
Sat Flow, veh/h	1781	753	947	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	71	0	70	243	136	13	19	639	24	4	1427	113
Grp Sat Flow(s),veh/h/ln	1781	0	1700	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.9	0.0	2.9	9.6	4.7	0.5	0.8	7.7	0.4	0.2	24.4	2.5
Cycle Q Clear(g_c), s	2.9	0.0	2.9	9.6	4.7	0.5	0.8	7.7	0.4	0.2	24.4	2.5
Prop In Lane	1.00		0.56	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	119	285	333	282	39	1835	1072	10	1776	875
V/C Ratio(X)	0.76	0.00	0.59	0.85	0.41	0.05	0.49	0.35	0.02	0.42	0.80	0.13
Avail Cap(c_a), veh/h	226	0	421	312	554	469	123	1835	1072	123	1776	875
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	0.00	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	34.0	0.0	32.7	29.7	26.5	24.7	35.1	10.4	3.9	36.0	15.2	7.8
Incr Delay (d2), s/veh	11.9	0.0	4.5	18.6	0.8	0.1	9.1	0.5	0.0	26.9	4.0	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	1.5	0.0	1.3	5.4	2.1	0.2	0.4	2.8	0.1	0.1	9.6	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	45.9	0.0	37.3	48.2	27.3	24.8	44.2	10.9	3.9	62.9	19.1	8.1
LnGrp LOS	D	A	D	D	C	C	D	B	A	E	B	A
Approach Vol, veh/h		141			392			682			1544	
Approach Delay, s/veh		41.6			40.2			11.6			18.4	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	42.0	16.1	9.6	6.1	40.8	8.3	17.4				
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	36.3	36.3	12.7	18.0	5.0	36.3	9.2	21.5				
Max Q Clear Time (g_c+1/2), s	9.7	9.7	11.6	4.9	2.8	26.4	4.9	6.7				
Green Ext Time (p_c), s	0.0	4.8	0.1	0.2	0.0	6.9	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay											21.0	
HCM 6th LOS											C	

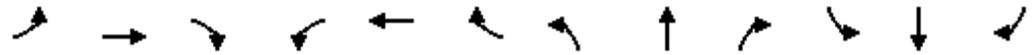
HCM Unsignalized Intersection Capacity Analysis
 8: Escondido Boulevard & Citracado Parkway

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	39	9	5	0	78	21	57	22	2	3	11	202
Future Volume (vph)	39	9	5	0	78	21	57	22	2	3	11	202
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	42	10	5	0	85	23	62	24	2	3	12	220
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	57	108	62	26	235							
Volume Left (vph)	42	0	62	0	3							
Volume Right (vph)	5	23	0	2	220							
Hadj (s)	0.13	-0.09	0.53	-0.02	-0.53							
Departure Headway (s)	4.9	4.6	5.6	5.1	4.0							
Degree Utilization, x	0.08	0.14	0.10	0.04	0.26							
Capacity (veh/h)	678	724	611	674	856							
Control Delay (s)	8.3	8.3	8.0	7.1	8.4							
Approach Delay (s)	8.3	8.3	7.7		8.4							
Approach LOS	A	A	A		A							
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			36.2%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM 6th Signalized Intersection Summary
 1: Center City Parkway & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↔		↔↔	↕↕	↔	↔↔	↕↕	↔	↔↔	↕↕	↔
Traffic Volume (veh/h)	292	324	216	178	492	39	390	365	150	178	645	310
Future Volume (veh/h)	292	324	216	178	492	39	390	365	150	178	645	310
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	344	381	254	187	518	41	424	397	163	205	741	356
Peak Hour Factor	0.85	0.85	0.85	0.95	0.95	0.95	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	480	316	275	685	443	511	1225	672	300	1008	641
Arrive On Green	0.12	0.23	0.23	0.08	0.19	0.19	0.15	0.34	0.34	0.09	0.28	0.28
Sat Flow, veh/h	3456	2054	1351	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	344	329	306	187	518	41	424	397	163	205	741	356
Grp Sat Flow(s),veh/h/ln	1728	1777	1627	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.9	12.3	12.5	3.7	9.7	1.3	8.4	5.8	4.7	4.1	13.3	12.2
Cycle Q Clear(g_c), s	6.9	12.3	12.5	3.7	9.7	1.3	8.4	5.8	4.7	4.1	13.3	12.2
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	415	380	275	685	443	511	1225	672	300	1008	641
V/C Ratio(X)	0.83	0.79	0.81	0.68	0.76	0.09	0.83	0.32	0.24	0.68	0.74	0.56
Avail Cap(c_a), veh/h	417	504	462	319	907	542	515	1225	672	431	1008	641
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	30.3	25.4	25.5	31.6	26.9	18.8	29.2	17.0	13.0	31.3	22.9	16.1
Incr Delay (d2), s/veh	12.8	7.0	8.4	4.7	2.6	0.1	10.9	0.7	0.9	2.7	4.8	3.5
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	3.5	5.7	5.5	1.7	4.2	0.5	4.1	2.3	1.7	1.7	5.9	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	32.4	33.9	36.3	29.5	18.9	40.1	17.7	13.9	34.0	27.6	19.6
LnGrp LOS	D	C	C	D	C	B	D	B	B	C	C	B
Approach Vol, veh/h		979			746			984			1302	
Approach Delay, s/veh		36.6			30.6			26.7			26.4	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	28.8	10.1	21.0	14.9	24.5	13.0	18.1				
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	8.8	21.7	6.5	20.0	10.5	20.0	8.5	18.0				
Max Q Clear Time (g_c+I1), s	6.1	7.8	5.7	14.5	10.4	15.3	8.9	11.7				
Green Ext Time (p_c), s	0.2	2.7	0.0	1.9	0.0	2.6	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗		↖	↖↖	↖	↖	↖↖		↖	↖↖	
Traffic Volume (veh/h)	67	582	36	199	861	112	65	180	145	99	263	135
Future Volume (veh/h)	67	582	36	199	861	112	65	180	145	99	263	135
Initial Q (Qb), 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
Work Zone On Approach		No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	661	41	209	906	118	75	207	167	103	274	141
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.87	0.87	0.87	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	802	50	251	1139	625	100	540	414	132	688	344
Arrive On Green	0.06	0.24	0.24	0.14	0.32	0.32	0.06	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	3456	3399	211	1781	3554	1585	1781	1915	1468	1781	2294	1147
Grp Volume(v), veh/h	76	345	357	209	906	118	75	191	183	103	210	205
Grp Sat Flow(s),veh/h/ln	1728	1777	1832	1781	1777	1585	1781	1777	1606	1781	1777	1664
Q Serve(g_s), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.8	6.2	3.8	6.3	6.6
Cycle Q Clear(g_c), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.8	6.2	3.8	6.3	6.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.91	1.00		0.69
Lane Grp Cap(c), veh/h	195	419	432	251	1139	625	100	501	453	132	533	499
V/C Ratio(X)	0.39	0.82	0.82	0.83	0.80	0.19	0.75	0.38	0.40	0.78	0.39	0.41
Avail Cap(c_a), veh/h	256	475	490	251	1187	646	137	501	453	145	533	499
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	30.7	24.4	24.4	28.2	20.9	13.3	31.3	19.5	19.6	30.7	18.7	18.8
Incr Delay (d2), s/veh	1.3	10.2	10.0	20.6	3.7	0.1	14.0	2.2	2.7	21.8	2.2	2.5
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	0.6	6.1	6.3	4.6	6.6	1.1	1.5	2.6	2.5	2.4	2.8	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	34.6	34.4	48.7	24.6	13.5	45.3	21.7	22.3	52.5	20.9	21.3
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		778			1233			449			518	
Approach Delay, s/veh		34.3			27.6			25.9			27.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	14.0	20.4	8.3	24.7	8.3	26.1				
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	5.5	19.0	9.5	18.0	5.2	19.3	5.0	22.5				
Max Q Clear Time (g_c+1), s	11.8	8.2	9.7	14.4	4.8	8.6	3.4	17.7				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.5	0.0	1.8	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay					29.0							
HCM 6th LOS					C							

Intersection						
Int Delay, s/veh	5.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	122	36	1246	185	52	667
Future Vol, veh/h	122	36	1246	185	52	667
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	130	125	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	133	39	1354	201	57	725

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1831	677	0	0	1555
Stage 1	1354	-	-	-	-
Stage 2	477	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 68	395	-	-	422
Stage 1	205	-	-	-	-
Stage 2	590	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 59	395	-	-	422
Mov Cap-2 Maneuver	155	-	-	-	-
Stage 1	205	-	-	-	-
Stage 2	510	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	77.3	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1WBLn2	SBL	SBT	
Capacity (veh/h)	-	-	155	395	422
HCM Lane V/C Ratio	-	-	0.856	0.099	0.134
HCM Control Delay (s)	-	-	95.7	15.1	14.8
HCM Lane LOS	-	-	F	C	B
HCM 95th %tile Q(veh)	-	-	5.8	0.3	0.5

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	7.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	249	13	22	346	155	169
Future Vol, veh/h	249	13	22	346	155	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	79	79	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	277	14	28	438	180	197

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	674	180	377	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	494	-	-	-	-	-
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	420	863	1181	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	407	863	1181	-	-	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.6	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1181	-	407	863	-	-
HCM Lane V/C Ratio	0.024	-	0.68	0.017	-	-
HCM Control Delay (s)	8.1	-	30.7	9.2	-	-
HCM Lane LOS	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	4.9	0.1	-	-

HCM 6th TWSC
5: Center City Parkway & Brotherton Road

08/31/2020

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	24	0	0	42	39	1395	201	44	729	39
Future Vol, veh/h	0	0	24	0	0	42	39	1395	201	44	729	39
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	84	84	84	94	94	94	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	38	0	0	50	41	1484	214	49	819	44

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	410	-	-	849	863	0	0	1698	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	591	0	0	304	775	-	-	371	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	591	-	-	304	775	-	-	371	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	11.5		19.2		0.2		0.9			
HCM LOS	B		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	775	-	-	591	304	371	-	-
HCM Lane V/C Ratio	0.054	-	-	0.064	0.164	0.133	-	-
HCM Control Delay (s)	9.9	-	-	11.5	19.2	16.2	-	-
HCM Lane LOS	A	-	-	B	C	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.6	0.5	-	-

HCM Unsignalized Intersection Capacity Analysis
 6: Escondido Boulevard & Brotherton Road

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	187	48	18	5	17	27	19	131	12	39	131	3
Future Volume (vph)	187	48	18	5	17	27	19	131	12	39	131	3
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.81	0.81	0.81	0.88	0.88	0.88
Hourly flow rate (vph)	213	55	20	7	23	36	23	162	15	44	149	3
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	288	66	200	196								
Volume Left (vph)	213	7	23	44								
Volume Right (vph)	20	36	15	3								
Hadj (s)	0.14	-0.27	0.01	0.07								
Departure Headway (s)	5.2	5.2	5.2	5.2								
Degree Utilization, x	0.42	0.09	0.29	0.29								
Capacity (veh/h)	651	619	647	637								
Control Delay (s)	11.9	8.7	10.3	10.3								
Approach Delay (s)	11.9	8.7	10.3	10.3								
Approach LOS	B	A	B	B								
Intersection Summary												
Delay			10.8									
Level of Service			B									
Intersection Capacity Utilization			43.2%	ICU Level of Service								A
Analysis Period (min)			15									

HCM 6th Signalized Intersection Summary

7: Center City Parkway & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	90	13	111	46	19	24	1484	78	13	692	52
Future Volume (veh/h)	131	90	13	111	46	19	24	1484	78	13	692	52
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	147	101	15	137	57	23	26	1596	84	15	795	60
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	148	22	172	163	138	50	1958	1026	32	1922	1020
Arrive On Green	0.10	0.09	0.09	0.10	0.09	0.09	0.03	0.55	0.55	0.02	0.54	0.54
Sat Flow, veh/h	1781	1591	236	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	147	0	116	137	57	23	26	1596	84	15	795	60
Grp Sat Flow(s),veh/h/ln	1781	0	1828	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.0	0.0	4.6	5.6	2.1	1.0	1.1	27.3	1.5	0.6	9.9	1.0
Cycle Q Clear(g_c), s	6.0	0.0	4.6	5.6	2.1	1.0	1.1	27.3	1.5	0.6	9.9	1.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	0	170	172	163	138	50	1958	1026	32	1922	1020
V/C Ratio(X)	0.81	0.00	0.68	0.80	0.35	0.17	0.52	0.82	0.08	0.47	0.41	0.06
Avail Cap(c_a), veh/h	194	0	444	191	452	383	134	1958	1026	120	1922	1020
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(l)	1.00	0.00	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	32.7	0.0	32.7	33.0	32.0	31.5	35.7	13.6	4.9	36.2	10.1	4.9
Incr Delay (d2), s/veh	20.6	0.0	4.7	19.1	1.3	0.6	8.2	3.9	0.2	10.4	0.7	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	3.6	0.0	2.2	3.3	1.0	0.4	0.6	10.3	0.4	0.4	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.3	0.0	37.4	52.0	33.3	32.1	44.0	17.5	5.1	46.6	10.8	5.0
LnGrp LOS	D	A	D	D	C	C	D	B	A	D	B	A
Approach Vol, veh/h		263			217			1706			870	
Approach Delay, s/veh		46.3			45.0			17.3			11.0	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	45.5	11.7	11.4	6.6	44.8	12.1	11.0				
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	40.9	8.0	18.1	5.6	40.3	8.1	18.0					
Max Q Clear Time (g_c+1), s	29.3	7.6	6.6	3.1	11.9	8.0	4.1					
Green Ext Time (p_c), s	0.0	8.5	0.0	0.4	0.0	6.5	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay				20.0								
HCM 6th LOS				B								

HCM Unsignalized Intersection Capacity Analysis

8: Escondido Boulevard & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘			↕	
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	83	66	16	2	36	14	18	32	6	18	18	113
Future Volume (vph)	83	66	16	2	36	14	18	32	6	18	18	113
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	90	72	17	2	39	15	20	35	7	20	20	123
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	179	56	20	42	163							
Volume Left (vph)	90	2	20	0	20							
Volume Right (vph)	17	15	0	7	123							
Hadj (s)	0.08	-0.12	0.53	-0.08	-0.39							
Departure Headway (s)	4.6	4.5	5.7	5.1	4.3							
Degree Utilization, x	0.23	0.07	0.03	0.06	0.19							
Capacity (veh/h)	745	740	592	660	794							
Control Delay (s)	8.9	7.9	7.7	7.3	8.3							
Approach Delay (s)	8.9	7.9	7.4		8.3							
Approach LOS	A	A	A		A							
Intersection Summary												
Delay			8.3									
Level of Service			A									
Intersection Capacity Utilization			37.9%		ICU Level of Service		A					
Analysis Period (min)			15									

APPENDIX C

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – EXISTING + PROJECT

HCM 6th Signalized Intersection Summary
 1: Center City Parkway & Felicita Avenue

Existing + Project AM
 01/07/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 	 	
Traffic Volume (veh/h)	530	479	243	153	421	59	299	598	119	125	476	207
Future Volume (veh/h)	530	479	243	153	421	59	299	598	119	125	476	207
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	552	499	253	199	547	77	336	672	134	136	517	225
Peak Hour Factor	0.96	0.96	0.96	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	629	673	340	283	691	406	419	1162	648	213	951	712
Arrive On Green	0.18	0.29	0.29	0.08	0.19	0.19	0.12	0.33	0.33	0.06	0.27	0.27
Sat Flow, veh/h	3456	2286	1154	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	552	387	365	199	547	77	336	672	134	136	517	225
Grp Sat Flow(s),veh/h/ln	1728	1777	1663	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.9	15.1	15.2	4.3	11.2	2.9	7.3	12.0	4.2	2.9	9.6	7.0
Cycle Q Clear(g_c), s	11.9	15.1	15.2	4.3	11.2	2.9	7.3	12.0	4.2	2.9	9.6	7.0
Prop In Lane	1.00		0.69	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	629	523	489	283	691	406	419	1162	648	213	951	712
V/C Ratio(X)	0.88	0.74	0.75	0.70	0.79	0.19	0.80	0.58	0.21	0.64	0.54	0.32
Avail Cap(c_a), veh/h	631	568	532	338	835	470	429	1162	648	235	951	712
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	30.5	24.4	24.4	34.3	29.4	22.3	32.8	21.4	14.6	35.1	24.0	13.5
Incr Delay (d2), s/veh	13.3	4.7	5.2	5.1	4.3	0.2	10.4	2.1	0.7	4.9	2.2	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	5.9	6.7	6.4	2.0	5.0	1.1	3.5	5.1	1.5	1.4	4.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.8	29.1	29.6	39.4	33.7	22.5	43.1	23.5	15.3	40.0	26.3	14.7
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1304			823			1142			878	
Approach Delay, s/veh		35.5			34.0			28.3			25.4	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	29.6	10.8	27.0	13.8	25.0	18.4	19.4				
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	5.2	24.8	7.5	24.5	9.5	20.5	14.0	18.0				
Max Q Clear Time (g_c+I1), s	4.9	14.0	6.3	17.2	9.3	11.6	13.9	13.2				
Green Ext Time (p_c), s	0.0	3.8	0.1	2.8	0.0	2.9	0.0	1.7				
Intersection Summary												
HCM 6th Ctrl Delay				31.1								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
2: Escondido Boulevard & Felicita Avenue

Existing + Project AM
01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖	↕↕	↗	↖	↕↕		↖	↕↕	
Traffic Volume (veh/h)	80	397	97	93	865	22	100	191	52	53	201	209
Future Volume (veh/h)	80	397	97	93	865	22	100	191	52	53	201	209
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	441	108	104	972	25	122	233	63	60	226	235
Peak Hour Factor	0.90	0.90	0.90	0.89	0.89	0.89	0.82	0.82	0.82	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	829	201	133	1092	566	155	882	233	89	498	444
Arrive On Green	0.06	0.29	0.29	0.07	0.31	0.31	0.09	0.32	0.32	0.05	0.28	0.28
Sat Flow, veh/h	3456	2835	689	1781	3554	1585	1781	2780	735	1781	1777	1585
Grp Volume(v), veh/h	89	275	274	104	972	25	122	147	149	60	226	235
Grp Sat Flow(s),veh/h/ln	1728	1777	1746	1781	1777	1585	1781	1777	1738	1781	1777	1585
Q Serve(g_s), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.2	4.3	2.2	7.1	8.5
Cycle Q Clear(g_c), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.2	4.3	2.2	7.1	8.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	207	520	511	133	1092	566	155	564	551	89	498	444
V/C Ratio(X)	0.43	0.53	0.54	0.78	0.89	0.04	0.79	0.26	0.27	0.67	0.45	0.53
Avail Cap(c_a), veh/h	255	520	511	179	1127	582	171	564	551	131	498	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	20.1	20.1	30.8	22.4	14.2	30.3	17.2	17.3	31.7	20.1	20.6
Incr Delay (d2), s/veh	1.4	1.0	1.1	14.4	8.9	0.0	19.8	1.1	1.2	8.6	3.0	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	0.7	3.5	3.5	2.1	8.1	0.2	2.7	1.8	1.8	1.1	3.2	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	21.1	21.2	45.2	31.3	14.3	50.1	18.3	18.5	40.2	23.1	25.1
LnGrp LOS	C	C	C	D	C	B	D	B	B	D	C	C
Approach Vol, veh/h		638			1101			418			521	
Approach Delay, s/veh		22.7			32.2			27.7			26.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	26.0	9.6	24.3	10.4	23.5	8.6	25.3				
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	20.5	20.5	6.8	19.7	6.5	19.0	5.0	21.5				
Max Q Clear Time (g_c+1), s	11.2	6.3	5.9	10.9	6.6	10.5	3.7	19.7				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.2	0.0	1.8	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay					28.0							
HCM 6th LOS					C							

Intersection						
Int Delay, s/veh	10.5					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↕	↗	↘	↕
Traffic Vol, veh/h	241	50	595	60	41	1107
Future Vol, veh/h	241	50	595	60	41	1107
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	75	-	140	120	-
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	262	54	647	65	45	1203

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1339	324	0	0	712	0
Stage 1	647	-	-	-	-	-
Stage 2	692	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 144	672	-	-	884	-
Stage 1	483	-	-	-	-	-
Stage 2	458	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	~ 137	672	-	-	884	-
Mov Cap-2 Maneuver	271	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	435	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	74.1	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	271	672	884	-
HCM Lane V/C Ratio	-	-	0.967	0.081	0.05	-
HCM Control Delay (s)	-	-	87.2	10.8	9.3	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	9.4	0.3	0.2	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗
Traffic Vol, veh/h	141	5	23	118	156	288
Future Vol, veh/h	141	5	23	118	156	288
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	85	85	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	178	6	27	139	159	294

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	352	159	453	0	-	0
Stage 1	159	-	-	-	-	-
Stage 2	193	-	-	-	-	-
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	646	886	1108	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	629	886	1108	-	-	-
Mov Cap-2 Maneuver	629	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1108	-	629	886	-	-
HCM Lane V/C Ratio	0.024	-	0.284	0.007	-	-
HCM Control Delay (s)	8.3	-	13	9.1	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	0	-	-

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	22	0	0	19	10	647	34	31	1269	58
Future Vol, veh/h	0	0	22	0	0	19	10	647	34	31	1269	58
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	70	70	70	87	87	87	81	81	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	29	0	0	27	11	744	39	38	1567	232

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	784	-	-	392	1799	0	0	783	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	336	0	0	607	339	-	-	831	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	336	-	-	607	339	-	-	831	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	16.7		11.2		0.2		0.2	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	339	-	-	336	607	831	-	-
HCM Lane V/C Ratio	0.034	-	-	0.087	0.045	0.046	-	-
HCM Control Delay (s)	16	-	-	16.7	11.2	9.5	-	-
HCM Lane LOS	C	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.3	0.1	0.1	-	-

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	35	4	17	12	39	10	76	7	55	186	1
Future Vol, veh/h	32	35	4	17	12	39	10	76	7	55	186	1
Peak Hour Factor	0.73	0.73	0.73	0.92	0.92	0.92	0.80	0.80	0.80	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	48	5	18	13	42	13	95	9	62	209	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.8	8.2	8.5	9.9
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	45%	25%	23%
Vol Thru, %	82%	49%	18%	77%
Vol Right, %	8%	6%	57%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	93	71	68	242
LT Vol	10	32	17	55
Through Vol	76	35	12	186
RT Vol	7	4	39	1
Lane Flow Rate	116	97	74	272
Geometry Grp	1	1	1	1
Degree of Util (X)	0.15	0.135	0.096	0.342
Departure Headway (Hd)	4.637	4.983	4.67	4.529
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	771	718	765	794
Service Time	2.678	3.025	2.714	2.563
HCM Lane V/C Ratio	0.15	0.135	0.097	0.343
HCM Control Delay	8.5	8.8	8.2	9.9
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.5	0.3	1.5

HCM 6th Signalized Intersection Summary
 7: Center City Parkway & Citracado Parkway

Existing + Project AM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	62	29	34	215	127	11	18	603	23	3	1213	96
Future Volume (veh/h)	62	29	34	215	127	11	18	603	23	3	1213	96
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	71	33	39	250	148	13	19	641	24	4	1427	113
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	56	66	292	342	290	39	1824	1073	10	1766	870
Arrive On Green	0.05	0.07	0.07	0.16	0.18	0.18	0.02	0.51	0.51	0.01	0.50	0.50
Sat Flow, veh/h	1781	781	923	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	71	0	72	250	148	13	19	641	24	4	1427	113
Grp Sat Flow(s),veh/h/ln	1781	0	1704	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.9	0.0	3.0	10.0	5.1	0.5	0.8	7.8	0.4	0.2	24.7	2.5
Cycle Q Clear(g_c), s	2.9	0.0	3.0	10.0	5.1	0.5	0.8	7.8	0.4	0.2	24.7	2.5
Prop In Lane	1.00		0.54	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	121	292	342	290	39	1824	1073	10	1766	870
V/C Ratio(X)	0.76	0.00	0.59	0.86	0.43	0.04	0.49	0.35	0.02	0.42	0.81	0.13
Avail Cap(c_a), veh/h	224	0	420	310	550	466	122	1824	1073	122	1766	870
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	0.00	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	34.2	0.0	32.9	29.7	26.5	24.6	35.3	10.6	3.9	36.2	15.5	8.0
Incr Delay (d2), s/veh	12.1	0.0	4.6	19.8	0.9	0.1	9.1	0.5	0.0	26.9	4.1	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	1.5	0.0	1.4	5.7	2.3	0.2	0.4	2.9	0.1	0.1	9.7	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.3	0.0	37.5	49.5	27.4	24.7	44.4	11.1	3.9	63.2	19.6	8.3
LnGrp LOS	D	A	D	D	C	C	D	B	A	E	B	A
Approach Vol, veh/h		143			411			684			1544	
Approach Delay, s/veh		41.8			40.8			11.8			18.8	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	4.9	42.0	16.5	9.7	6.1	40.8	8.3	17.8				
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	36.3	36.3	12.7	18.0	5.0	36.3	9.2	21.5				
Max Q Clear Time (g_c+1/2), s	9.8	9.8	12.0	5.0	2.8	26.7	4.9	7.1				
Green Ext Time (p_c), s	0.0	4.8	0.1	0.2	0.0	6.7	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay											21.5	
HCM 6th LOS											C	

Intersection												
Intersection Delay, s/veh	8.6											
Intersection LOS	A											

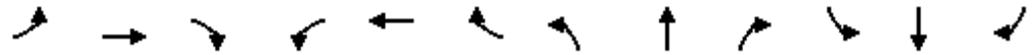
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	41	9	5	0	78	21	57	22	2	3	11	218
Future Vol, veh/h	41	9	5	0	78	21	57	22	2	3	11	218
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	45	10	5	0	85	23	62	24	2	3	12	237
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.4	8.4	8.7	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	75%	0%	1%
Vol Thru, %	0%	92%	16%	79%	5%
Vol Right, %	0%	8%	9%	21%	94%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	57	24	55	99	232
LT Vol	57	0	41	0	3
Through Vol	0	22	9	78	11
RT Vol	0	2	5	21	218
Lane Flow Rate	62	26	60	108	252
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.097	0.037	0.082	0.138	0.28
Departure Headway (Hd)	5.63	5.068	4.909	4.629	3.995
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	637	706	729	774	900
Service Time	3.36	2.798	2.946	2.663	2.018
HCM Lane V/C Ratio	0.097	0.037	0.082	0.14	0.28
HCM Control Delay	9	8	8.4	8.4	8.6
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.3	0.1	0.3	0.5	1.2

HCM 6th Signalized Intersection Summary
 1: Center City Parkway & Felicita Avenue

Existing + Project PM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗		↖↗	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖
Traffic Volume (veh/h)	292	324	216	178	492	39	390	368	150	178	652	310
Future Volume (veh/h)	292	324	216	178	492	39	390	368	150	178	652	310
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	344	381	254	187	518	41	424	400	163	205	749	356
Peak Hour Factor	0.85	0.85	0.85	0.95	0.95	0.95	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	437	487	320	274	675	438	520	1248	682	298	1020	655
Arrive On Green	0.13	0.24	0.24	0.08	0.19	0.19	0.15	0.35	0.35	0.09	0.29	0.29
Sat Flow, veh/h	3456	2054	1351	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	344	329	306	187	518	41	424	400	163	205	749	356
Grp Sat Flow(s),veh/h/ln	1728	1777	1627	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.1	12.7	12.9	3.9	10.1	1.4	8.7	6.0	4.8	4.2	13.9	12.4
Cycle Q Clear(g_c), s	7.1	12.7	12.9	3.9	10.1	1.4	8.7	6.0	4.8	4.2	13.9	12.4
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	437	421	386	274	675	438	520	1248	682	298	1020	655
V/C Ratio(X)	0.79	0.78	0.79	0.68	0.77	0.09	0.82	0.32	0.24	0.69	0.73	0.54
Avail Cap(c_a), veh/h	496	520	476	335	874	527	590	1248	682	449	1020	655
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	31.0	26.1	26.2	32.8	28.1	19.7	30.1	17.4	13.2	32.5	23.6	16.2
Incr Delay (d2), s/veh	7.3	6.1	7.3	4.2	3.1	0.1	7.8	0.7	0.8	2.8	4.7	3.2
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	3.3	5.8	5.5	1.7	4.4	0.5	4.0	2.4	1.7	1.8	6.2	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.3	32.2	33.5	37.0	31.2	19.8	37.9	18.0	14.1	35.3	28.3	19.4
LnGrp LOS	D	C	C	D	C	B	D	B	B	D	C	B
Approach Vol, veh/h		979			746			987			1310	
Approach Delay, s/veh		34.8			32.0			25.9			27.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.8	30.2	10.3	21.9	15.5	25.5	13.8	18.4				
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	24.0	7.1	21.4	12.5	21.0	10.5	18.0				
Max Q Clear Time (g_c+I1), s	6.2	8.0	5.9	14.9	10.7	15.9	9.1	12.1				
Green Ext Time (p_c), s	0.2	2.9	0.1	2.2	0.3	2.8	0.2	1.8				

Intersection Summary

HCM 6th Ctrl Delay	29.5
HCM 6th LOS	C

HCM 6th Signalized Intersection Summary
2: Escondido Boulevard & Felicita Avenue

Existing + Project PM
01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕↕	↖	↖	↕↕		↖	↕↕	
Traffic Volume (veh/h)	67	582	36	199	861	112	65	183	145	99	270	135
Future Volume (veh/h)	67	582	36	199	861	112	65	183	145	99	270	135
Initial Q (Qb), 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
Work Zone On Approach		No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	661	41	209	906	118	75	210	167	103	281	141
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.87	0.87	0.87	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	802	50	251	1139	625	100	543	411	132	694	339
Arrive On Green	0.06	0.24	0.24	0.14	0.32	0.32	0.06	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	3456	3399	211	1781	3554	1585	1781	1927	1458	1781	2314	1130
Grp Volume(v), veh/h	76	345	357	209	906	118	75	193	184	103	214	208
Grp Sat Flow(s),veh/h/ln	1728	1777	1832	1781	1777	1585	1781	1777	1608	1781	1777	1667
Q Serve(g_s), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.9	6.3	3.8	6.5	6.7
Cycle Q Clear(g_c), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.9	6.3	3.8	6.5	6.7
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.91	1.00		0.68
Lane Grp Cap(c), veh/h	195	419	432	251	1139	625	100	501	453	132	533	500
V/C Ratio(X)	0.39	0.82	0.82	0.83	0.80	0.19	0.75	0.38	0.41	0.78	0.40	0.42
Avail Cap(c_a), veh/h	256	475	490	251	1187	646	137	501	453	145	533	500
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	30.7	24.4	24.4	28.2	20.9	13.3	31.3	19.5	19.6	30.7	18.8	18.9
Incr Delay (d2), s/veh	1.3	10.2	10.0	20.6	3.7	0.1	14.0	2.2	2.7	21.8	2.2	2.5
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	0.6	6.1	6.3	4.6	6.6	1.1	1.5	2.6	2.5	2.4	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	34.6	34.4	48.7	24.6	13.5	45.3	21.7	22.3	52.5	21.0	21.4
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		778			1233			452			525	
Approach Delay, s/veh		34.3			27.6			25.9			27.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	14.0	20.4	8.3	24.7	8.3	26.1				
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	5.5	19.0	9.5	18.0	5.2	19.3	5.0	22.5				
Max Q Clear Time (g_c+1), s	11.8	8.3	9.7	14.4	4.8	8.7	3.4	17.7				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.5	0.0	1.9	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay											29.0	
HCM 6th LOS											C	

Intersection						
Int Delay, s/veh	5.9					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	122	39	1246	185	60	667
Future Vol, veh/h	122	39	1246	185	60	667
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	75	-	140	120	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	100	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	133	39	1354	201	65	725

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1847	677	0	0	1555	0
Stage 1	1354	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 66	395	-	-	422	-
Stage 1	205	-	-	-	-	-
Stage 2	579	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	~ 56	395	-	-	422	-
Mov Cap-2 Maneuver	152	-	-	-	-	-
Stage 1	205	-	-	-	-	-
Stage 2	490	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	81.2	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	152	395	422	-
HCM Lane V/C Ratio	-	-	0.872	0.099	0.155	-
HCM Control Delay (s)	-	-	100.6	15.1	15.1	-
HCM Lane LOS	-	-	F	C	C	-
HCM 95th %tile Q(veh)	-	-	5.9	0.3	0.5	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	8.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↖	↖	↗
Traffic Vol, veh/h	249	21	25	349	163	169
Future Vol, veh/h	249	21	25	349	163	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	79	79	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	277	23	32	442	190	197

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	696	190	387	0	-	0
Stage 1	190	-	-	-	-	-
Stage 2	506	-	-	-	-	-
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	408	852	1171	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	393	852	1171	-	-	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	606	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.3	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1171	-	393	852	-	-
HCM Lane V/C Ratio	0.027	-	0.704	0.027	-	-
HCM Control Delay (s)	8.2	-	33.2	9.3	-	-
HCM Lane LOS	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	5.2	0.1	-	-

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	24	0	0	42	39	1395	211	44	729	39
Future Vol, veh/h	0	0	24	0	0	42	39	1395	211	44	729	39
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	84	84	84	94	94	94	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	38	0	0	50	41	1484	224	49	819	44

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	410	-	-	854	863	0	0	1708	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	591	0	0	302	775	-	-	368	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	591	-	-	302	775	-	-	368	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	11.5		19.3		0.2		0.9			
HCM LOS	B		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	775	-	-	591	302	368	-	-
HCM Lane V/C Ratio	0.054	-	-	0.064	0.166	0.134	-	-
HCM Control Delay (s)	9.9	-	-	11.5	19.3	16.3	-	-
HCM Lane LOS	A	-	-	B	C	C	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.6	0.5	-	-

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	197	48	18	5	17	27	19	137	12	39	138	3
Future Vol, veh/h	197	48	18	5	17	27	19	137	12	39	138	3
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.81	0.81	0.81	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	224	55	20	7	23	36	23	169	15	44	157	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.3	8.8	10.5	10.6
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	75%	10%	22%
Vol Thru, %	82%	18%	35%	77%
Vol Right, %	7%	7%	55%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	168	263	49	180
LT Vol	19	197	5	39
Through Vol	137	48	17	138
RT Vol	12	18	27	3
Lane Flow Rate	207	299	65	205
Geometry Grp	1	1	1	1
Degree of Util (X)	0.301	0.438	0.095	0.3
Departure Headway (Hd)	5.229	5.272	5.216	5.284
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	687	687	686	681
Service Time	3.261	3.272	3.253	3.317
HCM Lane V/C Ratio	0.301	0.435	0.095	0.301
HCM Control Delay	10.5	12.3	8.8	10.6
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.3	2.2	0.3	1.3

HCM 6th Signalized Intersection Summary
 7: Center City Parkway & Citracado Parkway

Existing + Project PM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	131	96	13	114	50	19	24	1494	78	13	692	52
Future Volume (veh/h)	131	96	13	114	50	19	24	1494	78	13	692	52
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	147	108	15	141	62	23	26	1606	84	15	795	60
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	182	156	22	176	174	148	50	1943	1023	32	1907	1013
Arrive On Green	0.10	0.10	0.10	0.10	0.09	0.09	0.03	0.55	0.55	0.02	0.54	0.54
Sat Flow, veh/h	1781	1607	223	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	147	0	123	141	62	23	26	1606	84	15	795	60
Grp Sat Flow(s),veh/h/ln	1781	0	1830	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.1	0.0	4.9	5.8	2.3	1.0	1.1	28.1	1.5	0.6	10.0	1.1
Cycle Q Clear(g_c), s	6.1	0.0	4.9	5.8	2.3	1.0	1.1	28.1	1.5	0.6	10.0	1.1
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	182	0	178	176	174	148	50	1943	1023	32	1907	1013
V/C Ratio(X)	0.81	0.00	0.69	0.80	0.36	0.16	0.52	0.83	0.08	0.47	0.42	0.06
Avail Cap(c_a), veh/h	192	0	441	190	448	380	133	1943	1023	119	1907	1013
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	0.00	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	33.0	0.0	32.8	33.1	31.9	31.3	36.0	14.1	5.0	36.5	10.4	5.1
Incr Delay (d2), s/veh	20.9	0.0	4.8	20.2	1.2	0.5	8.3	4.2	0.2	10.4	0.7	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	3.6	0.0	2.3	3.4	1.1	0.4	0.6	10.8	0.4	0.4	3.6	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.9	0.0	37.6	53.3	33.1	31.8	44.3	18.3	5.1	46.9	11.1	5.2
LnGrp LOS	D	A	D	D	C	C	D	B	A	D	B	A
Approach Vol, veh/h		270			226			1716			870	
Approach Delay, s/veh		46.5			45.6			18.0			11.3	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.8	45.5	11.9	11.8	6.6	44.8	12.2	11.5				
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	40.9	8.0	18.1	5.6	40.3	8.1	18.0					
Max Q Clear Time (g_c+1), s	30.1	7.8	6.9	3.1	12.0	8.1	4.3					
Green Ext Time (p_c), s	0.0	8.0	0.0	0.4	0.0	6.5	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay											20.6	
HCM 6th LOS											C	

Intersection												
Intersection Delay, s/veh	8.5											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	89	66	16	2	36	14	18	32	6	18	18	120
Future Vol, veh/h	89	66	16	2	36	14	18	32	6	18	18	120
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	97	72	17	2	39	15	20	35	7	20	20	130
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	9	7.9	8.4	8.3
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	52%	4%	12%
Vol Thru, %	0%	84%	39%	69%	12%
Vol Right, %	0%	16%	9%	27%	77%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	18	38	171	52	156
LT Vol	18	0	89	2	18
Through Vol	0	32	66	36	18
RT Vol	0	6	16	14	120
Lane Flow Rate	20	41	186	57	170
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.031	0.059	0.236	0.071	0.2
Departure Headway (Hd)	5.755	5.14	4.573	4.526	4.249
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	623	697	786	791	844
Service Time	3.485	2.87	2.598	2.557	2.273
HCM Lane V/C Ratio	0.032	0.059	0.237	0.072	0.201
HCM Control Delay	8.7	8.2	9	7.9	8.3
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	0.9	0.2	0.7

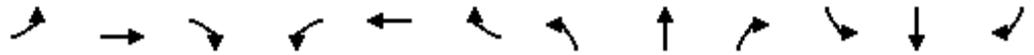
APPENDIX D

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – OPENING DAY (YEAR 2022) WITHOUT PROJECT

HCM 6th Signalized Intersection Summary

1: Center City Parkway & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	530	479	243	153	421	59	299	591	119	125	474	207
Future Volume (veh/h)	530	479	243	153	421	59	299	591	119	125	474	207
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	552	499	253	199	547	77	336	664	134	136	515	225
Peak Hour Factor	0.96	0.96	0.96	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	648	686	346	289	697	411	421	1112	629	217	902	700
Arrive On Green	0.19	0.30	0.30	0.08	0.20	0.20	0.12	0.31	0.31	0.06	0.25	0.25
Sat Flow, veh/h	3456	2286	1154	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	552	387	365	199	547	77	336	664	134	136	515	225
Grp Sat Flow(s),veh/h/ln	1728	1777	1663	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.6	14.6	14.7	4.2	10.9	2.8	7.1	11.8	4.2	2.9	9.5	6.9
Cycle Q Clear(g_c), s	11.6	14.6	14.7	4.2	10.9	2.8	7.1	11.8	4.2	2.9	9.5	6.9
Prop In Lane	1.00		0.69	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	648	533	499	289	697	411	421	1112	629	217	902	700
V/C Ratio(X)	0.85	0.73	0.73	0.69	0.78	0.19	0.80	0.60	0.21	0.63	0.57	0.32
Avail Cap(c_a), veh/h	716	582	544	415	855	481	439	1112	629	240	902	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	1.00	1.00
Uniform Delay (d), s/veh	29.4	23.4	23.5	33.4	28.6	21.6	32.0	21.7	14.9	34.2	24.4	13.6
Incr Delay (d2), s/veh	9.0	4.1	4.6	2.9	3.9	0.2	9.6	2.4	0.8	4.3	2.6	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	5.4	6.4	6.1	1.8	4.8	1.0	3.4	5.0	1.5	1.3	4.1	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	27.6	28.0	36.3	32.5	21.8	41.6	24.1	15.7	38.6	27.0	14.8
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1304			823			1134			876	
Approach Delay, s/veh		32.3			32.4			28.3			25.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	27.9	10.8	27.0	13.6	23.5	18.5	19.2				
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	5.2	23.3	9.0	24.5	9.5	19.0	15.5	18.0				
Max Q Clear Time (g_c+I1), s	4.9	13.8	6.2	16.7	9.1	11.5	13.6	12.9				
Green Ext Time (p_c), s	0.0	3.4	0.2	2.9	0.1	2.6	0.5	1.7				
Intersection Summary												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↘		↖ ↑	↑ ↑	↖	↖	↑ ↘		↖	↑ ↘	
Traffic Volume (veh/h)	80	397	97	93	865	22	100	184	52	53	199	209
Future Volume (veh/h)	80	397	97	93	865	22	100	184	52	53	199	209
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	441	108	104	972	25	122	224	63	60	224	235
Peak Hour Factor	0.90	0.90	0.90	0.89	0.89	0.89	0.82	0.82	0.82	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	829	201	133	1092	566	155	874	240	89	498	444
Arrive On Green	0.06	0.29	0.29	0.07	0.31	0.31	0.09	0.32	0.32	0.05	0.28	0.28
Sat Flow, veh/h	3456	2835	689	1781	3554	1585	1781	2754	757	1781	1777	1585
Grp Volume(v), veh/h	89	275	274	104	972	25	122	143	144	60	224	235
Grp Sat Flow(s),veh/h/ln	1728	1777	1746	1781	1777	1585	1781	1777	1734	1781	1777	1585
Q Serve(g_s), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.0	4.2	2.2	7.0	8.5
Cycle Q Clear(g_c), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.0	4.2	2.2	7.0	8.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.44	1.00		1.00
Lane Grp Cap(c), veh/h	207	520	511	133	1092	566	155	564	550	89	498	444
V/C Ratio(X)	0.43	0.53	0.54	0.78	0.89	0.04	0.79	0.25	0.26	0.67	0.45	0.53
Avail Cap(c_a), veh/h	255	520	511	179	1127	582	171	564	550	131	498	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	20.1	20.1	30.8	22.4	14.2	30.3	17.2	17.2	31.7	20.1	20.6
Incr Delay (d2), s/veh	1.4	1.0	1.1	14.4	8.9	0.0	19.8	1.1	1.2	8.6	2.9	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	0.7	3.5	3.5	2.1	8.1	0.2	2.7	1.7	1.7	1.1	3.1	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	21.1	21.2	45.2	31.3	14.3	50.1	18.3	18.4	40.2	23.0	25.1
LnGrp LOS	C	C	C	D	C	B	D	B	B	D	C	C
Approach Vol, veh/h		638			1101			409			519	
Approach Delay, s/veh		22.7			32.2			27.8			25.9	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	26.0	9.6	24.3	10.4	23.5	8.6	25.3				
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	5.0	20.5	6.8	19.7	6.5	19.0	5.0	21.5				
Max Q Clear Time (g_c+1), s	11.2	6.2	5.9	10.9	6.6	10.5	3.7	19.7				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.2	0.0	1.8	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	10.6					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	242	42	601	60	39	1110
Future Vol, veh/h	242	42	601	60	39	1110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	75	-	140	120	-
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	263	46	653	65	42	1207

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1341	327	0	0	718
Stage 1	653	-	-	-	-
Stage 2	688	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 144	669	-	-	879
Stage 1	480	-	-	-	-
Stage 2	460	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 137	669	-	-	879
Mov Cap-2 Maneuver	271	-	-	-	-
Stage 1	480	-	-	-	-
Stage 2	438	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	76.7	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	271	669	879	-
HCM Lane V/C Ratio	-	-	0.971	0.068	0.048	-
HCM Control Delay (s)	-	-	88.1	10.8	9.3	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	9.4	0.2	0.2	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	3.1					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗		↑	↑	↗
Traffic Vol, veh/h	141	3	15	110	154	288
Future Vol, veh/h	141	3	15	110	154	288
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	85	85	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	178	4	18	129	157	294

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	322	157	451	0	-	0
Stage 1	157	-	-	-	-	-
Stage 2	165	-	-	-	-	-
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	672	889	1109	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	864	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	661	889	1109	-	-	-
Mov Cap-2 Maneuver	661	-	-	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	864	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.3	1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1109	-	661	889	-	-
HCM Lane V/C Ratio	0.016	-	0.27	0.004	-	-
HCM Control Delay (s)	8.3	-	12.4	9.1	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	1.1	0	-	-

HCM 6th TWSC
5: Center City Parkway & Brotherton Road

08/31/2020

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕↔		↗	↕↕	↗
Traffic Vol, veh/h	0	0	57	0	0	24	17	648	34	33	1269	60
Future Vol, veh/h	0	0	57	0	0	24	17	648	34	33	1269	60
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	70	70	70	87	87	87	81	81	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	76	0	0	34	20	745	39	41	1567	240

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	784	-	-	392	1807	0	0	784	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	336	0	0	607	337	-	-	830	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	336	-	-	607	337	-	-	830	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.8		11.3		0.4		0.2	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	337	-	-	336	607	830	-	-
HCM Lane V/C Ratio	0.058	-	-	0.226	0.056	0.049	-	-
HCM Control Delay (s)	16.3	-	-	18.8	11.3	9.6	-	-
HCM Lane LOS	C	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.2	0.2	-	-

HCM Unsignalized Intersection Capacity Analysis
 6: Escondido Boulevard & Brotherton Road

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	30	39	4	20	14	40	13	78	8	56	170	1
Future Volume (vph)	30	39	4	20	14	40	13	78	8	56	170	1
Peak Hour Factor	0.73	0.73	0.73	0.92	0.92	0.92	0.80	0.80	0.80	0.89	0.89	0.89
Hourly flow rate (vph)	41	53	5	22	15	43	16	98	10	63	191	1
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	99	80	124	255								
Volume Left (vph)	41	22	16	63								
Volume Right (vph)	5	43	10	1								
Hadj (s)	0.09	-0.23	0.01	0.08								
Departure Headway (s)	5.0	4.7	4.7	4.6								
Degree Utilization, x	0.14	0.10	0.16	0.33								
Capacity (veh/h)	661	692	728	749								
Control Delay (s)	8.8	8.3	8.6	9.8								
Approach Delay (s)	8.8	8.3	8.6	9.8								
Approach LOS	A	A	A	A								
Intersection Summary												
Delay			9.1									
Level of Service			A									
Intersection Capacity Utilization			31.8%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM 6th Signalized Intersection Summary

7: Center City Parkway & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	30	34	221	128	12	18	609	23	9	1242	96
Future Volume (veh/h)	63	30	34	221	128	12	18	609	23	9	1242	96
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	34	39	257	149	14	19	648	24	11	1461	113
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	57	65	298	349	296	39	1783	1061	24	1754	866
Arrive On Green	0.05	0.07	0.07	0.17	0.19	0.19	0.02	0.50	0.50	0.01	0.49	0.49
Sat Flow, veh/h	1781	795	912	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	72	0	73	257	149	14	19	648	24	11	1461	113
Grp Sat Flow(s),veh/h/ln	1781	0	1706	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.9	0.0	3.0	10.3	5.2	0.5	0.8	8.1	0.4	0.4	25.9	2.6
Cycle Q Clear(g_c), s	2.9	0.0	3.0	10.3	5.2	0.5	0.8	8.1	0.4	0.4	25.9	2.6
Prop In Lane	1.00		0.53	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	122	298	349	296	39	1783	1061	24	1754	866
V/C Ratio(X)	0.77	0.00	0.60	0.86	0.43	0.05	0.49	0.36	0.02	0.45	0.83	0.13
Avail Cap(c_a), veh/h	223	0	419	311	551	467	121	1783	1061	121	1754	866
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	0.00	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	34.3	0.0	33.0	29.7	26.4	24.5	35.5	11.1	4.1	35.9	16.0	8.1
Incr Delay (d2), s/veh	12.5	0.0	4.6	20.6	0.8	0.1	9.1	0.6	0.0	12.5	4.8	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	1.6	0.0	1.4	5.9	2.3	0.2	0.4	3.0	0.1	0.3	10.4	0.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	46.8	0.0	37.6	50.3	27.2	24.5	44.6	11.7	4.1	48.4	20.8	8.4
LnGrp LOS	D	A	D	D	C	C	D	B	A	D	C	A
Approach Vol, veh/h		145			420			691			1585	
Approach Delay, s/veh		42.2			41.3			12.3			20.1	
Approach LOS		D			D			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	41.3	16.8	9.8	6.1	40.7	8.3	18.2				
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	36.2	36.2	12.8	18.0	5.0	36.2	9.2	21.6				
Max Q Clear Time (g_c+1), s	10.1	10.1	12.3	5.0	2.8	27.9	4.9	7.2				
Green Ext Time (p_c), s	0.0	4.9	0.0	0.2	0.0	6.1	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay											22.5	
HCM 6th LOS											C	

HCM Unsignalized Intersection Capacity Analysis

8: Escondido Boulevard & Citracado Parkway

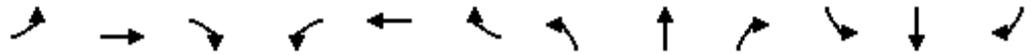
08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	46	9	7	0	78	21	78	23	2	3	11	205
Future Volume (vph)	46	9	7	0	78	21	78	23	2	3	11	205
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	10	8	0	85	23	85	25	2	3	12	223
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	68	108	85	27	238							
Volume Left (vph)	50	0	85	0	3							
Volume Right (vph)	8	23	0	2	223							
Hadj (s)	0.11	-0.09	0.53	-0.02	-0.53							
Departure Headway (s)	4.9	4.7	5.7	5.1	4.1							
Degree Utilization, x	0.09	0.14	0.13	0.04	0.27							
Capacity (veh/h)	667	707	606	668	840							
Control Delay (s)	8.5	8.5	8.3	7.1	8.6							
Approach Delay (s)	8.5	8.5	8.0		8.6							
Approach LOS	A	A	A		A							
Intersection Summary												
Delay			8.4									
Level of Service			A									
Intersection Capacity Utilization			37.9%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM 6th Signalized Intersection Summary

1: Center City Parkway & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↕↔		↔↔	↕↕	↔	↔↔	↕↕	↔	↔↔	↕↕	↔
Traffic Volume (veh/h)	292	324	216	178	492	39	390	365	150	178	645	310
Future Volume (veh/h)	292	324	216	178	492	39	390	365	150	178	645	310
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	344	381	254	187	518	41	424	397	163	205	741	356
Peak Hour Factor	0.85	0.85	0.85	0.95	0.95	0.95	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	417	480	316	275	685	443	511	1225	672	300	1008	641
Arrive On Green	0.12	0.23	0.23	0.08	0.19	0.19	0.15	0.34	0.34	0.09	0.28	0.28
Sat Flow, veh/h	3456	2054	1351	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	344	329	306	187	518	41	424	397	163	205	741	356
Grp Sat Flow(s),veh/h/ln	1728	1777	1627	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.9	12.3	12.5	3.7	9.7	1.3	8.4	5.8	4.7	4.1	13.3	12.2
Cycle Q Clear(g_c), s	6.9	12.3	12.5	3.7	9.7	1.3	8.4	5.8	4.7	4.1	13.3	12.2
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	417	415	380	275	685	443	511	1225	672	300	1008	641
V/C Ratio(X)	0.83	0.79	0.81	0.68	0.76	0.09	0.83	0.32	0.24	0.68	0.74	0.56
Avail Cap(c_a), veh/h	417	504	462	319	907	542	515	1225	672	431	1008	641
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	30.3	25.4	25.5	31.6	26.9	18.8	29.2	17.0	13.0	31.3	22.9	16.1
Incr Delay (d2), s/veh	12.8	7.0	8.4	4.7	2.6	0.1	10.9	0.7	0.9	2.7	4.8	3.5
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	3.5	5.7	5.5	1.7	4.2	0.5	4.1	2.3	1.7	1.7	5.9	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.1	32.4	33.9	36.3	29.5	18.9	40.1	17.7	13.9	34.0	27.6	19.6
LnGrp LOS	D	C	C	D	C	B	D	B	B	C	C	B
Approach Vol, veh/h		979			746			984			1302	
Approach Delay, s/veh		36.6			30.6			26.7			26.4	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.6	28.8	10.1	21.0	14.9	24.5	13.0	18.1				
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	8.8	21.7	6.5	20.0	10.5	20.0	8.5	18.0				
Max Q Clear Time (g_c+I1), s	6.1	7.8	5.7	14.5	10.4	15.3	8.9	11.7				
Green Ext Time (p_c), s	0.2	2.7	0.0	1.9	0.0	2.6	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↖ ↗		↖ ↗	↖ ↗	↖ ↗	↖ ↗	↖ ↗		↖ ↗	↖ ↗	
Traffic Volume (veh/h)	67	582	36	199	861	112	65	180	145	99	263	135
Future Volume (veh/h)	67	582	36	199	861	112	65	180	145	99	263	135
Initial Q (Qb), 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
Work Zone On Approach		No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	661	41	209	906	118	75	207	167	103	274	141
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.87	0.87	0.87	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	802	50	251	1139	625	100	540	414	132	688	344
Arrive On Green	0.06	0.24	0.24	0.14	0.32	0.32	0.06	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	3456	3399	211	1781	3554	1585	1781	1915	1468	1781	2294	1147
Grp Volume(v), veh/h	76	345	357	209	906	118	75	191	183	103	210	205
Grp Sat Flow(s),veh/h/ln	1728	1777	1832	1781	1777	1585	1781	1777	1606	1781	1777	1664
Q Serve(g_s), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.8	6.2	3.8	6.3	6.6
Cycle Q Clear(g_c), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.8	6.2	3.8	6.3	6.6
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.91	1.00		0.69
Lane Grp Cap(c), veh/h	195	419	432	251	1139	625	100	501	453	132	533	499
V/C Ratio(X)	0.39	0.82	0.82	0.83	0.80	0.19	0.75	0.38	0.40	0.78	0.39	0.41
Avail Cap(c_a), veh/h	256	475	490	251	1187	646	137	501	453	145	533	499
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	30.7	24.4	24.4	28.2	20.9	13.3	31.3	19.5	19.6	30.7	18.7	18.8
Incr Delay (d2), s/veh	1.3	10.2	10.0	20.6	3.7	0.1	14.0	2.2	2.7	21.8	2.2	2.5
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	0.6	6.1	6.3	4.6	6.6	1.1	1.5	2.6	2.5	2.4	2.8	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	34.6	34.4	48.7	24.6	13.5	45.3	21.7	22.3	52.5	20.9	21.3
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		778			1233			449			518	
Approach Delay, s/veh		34.3			27.6			25.9			27.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	14.0	20.4	8.3	24.7	8.3	26.1				
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	5.5	19.0	9.5	18.0	5.2	19.3	5.0	22.5				
Max Q Clear Time (g_c+1), s	11.8	8.2	9.7	14.4	4.8	8.6	3.4	17.7				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.5	0.0	1.8	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay											29.0	
HCM 6th LOS											C	

Intersection						
Int Delay, s/veh	6.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	125	36	1250	185	52	674
Future Vol, veh/h	125	36	1250	185	52	674
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	75	-	140	120	-
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	136	39	1359	201	57	733

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1840	680	0	0	1560
Stage 1	1359	-	-	-	-
Stage 2	481	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 67	393	-	-	420
Stage 1	204	-	-	-	-
Stage 2	588	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 58	393	-	-	420
Mov Cap-2 Maneuver	154	-	-	-	-
Stage 1	204	-	-	-	-
Stage 2	508	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	82.4	0	1.1
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	154	393	420	-
HCM Lane V/C Ratio	-	-	0.882	0.1	0.135	-
HCM Control Delay (s)	-	-	101.8	15.2	14.9	-
HCM Lane LOS	-	-	F	C	B	-
HCM 95th %tile Q(veh)	-	-	6.1	0.3	0.5	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	7.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔		↑	↑	↔
Traffic Vol, veh/h	249	13	22	346	155	169
Future Vol, veh/h	249	13	22	346	155	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	79	79	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	277	14	28	438	180	197

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	674	180	377	0	-	0
Stage 1	180	-	-	-	-	-
Stage 2	494	-	-	-	-	-
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	420	863	1181	-	-	-
Stage 1	851	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	407	863	1181	-	-	-
Mov Cap-2 Maneuver	407	-	-	-	-	-
Stage 1	825	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	29.6	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1181	-	407	863	-	-
HCM Lane V/C Ratio	0.024	-	0.68	0.017	-	-
HCM Control Delay (s)	8.1	-	30.7	9.2	-	-
HCM Lane LOS	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	4.9	0.1	-	-

HCM 6th TWSC
5: Center City Parkway & Brotherton Road

08/31/2020

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	40	0	0	45	71	1396	204	47	730	45
Future Vol, veh/h	0	0	40	0	0	45	71	1396	204	47	730	45
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	84	84	84	94	94	94	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	63	0	0	54	76	1485	217	53	820	51

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	410	-	-	851	871	0	0	1702	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	591	0	0	303	770	-	-	370	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	591	-	-	303	770	-	-	370	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	11.8		19.4		0.4		0.9	
HCM LOS	B		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	770	-	-	591	303	370	-	-
HCM Lane V/C Ratio	0.098	-	-	0.107	0.177	0.143	-	-
HCM Control Delay (s)	10.2	-	-	11.8	19.4	16.3	-	-
HCM Lane LOS	B	-	-	B	C	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.4	0.6	0.5	-	-

HCM Unsignalized Intersection Capacity Analysis

6: Escondido Boulevard & Brotherton Road

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	187	54	18	9	19	28	20	133	14	40	132	3
Future Volume (vph)	187	54	18	9	19	28	20	133	14	40	132	3
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.81	0.81	0.81	0.88	0.88	0.88
Hourly flow rate (vph)	213	61	20	12	25	37	25	164	17	45	150	3

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	294	74	206	198
Volume Left (vph)	213	12	25	45
Volume Right (vph)	20	37	17	3
Hadj (s)	0.14	-0.23	0.01	0.07
Departure Headway (s)	5.2	5.2	5.2	5.3
Degree Utilization, x	0.43	0.11	0.30	0.29
Capacity (veh/h)	645	605	640	628
Control Delay (s)	12.1	8.9	10.5	10.5
Approach Delay (s)	12.1	8.9	10.5	10.5
Approach LOS	B	A	B	B

Intersection Summary			
Delay		10.9	
Level of Service		B	
Intersection Capacity Utilization	43.7%	ICU Level of Service	A
Analysis Period (min)		15	

HCM 6th Signalized Intersection Summary

7: Center City Parkway & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	100	13	117	52	20	24	1517	78	15	706	52
Future Volume (veh/h)	132	100	13	117	52	20	24	1517	78	15	706	52
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	112	15	144	64	25	26	1631	84	17	811	60
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	160	21	179	181	153	50	1926	1018	35	1898	1010
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.03	0.54	0.54	0.02	0.53	0.53
Sat Flow, veh/h	1781	1615	216	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	148	0	127	144	64	25	26	1631	84	17	811	60
Grp Sat Flow(s),veh/h/ln	1781	0	1831	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.1	0.0	5.1	6.0	2.4	1.1	1.1	29.3	1.5	0.7	10.4	1.1
Cycle Q Clear(g_c), s	6.1	0.0	5.1	6.0	2.4	1.1	1.1	29.3	1.5	0.7	10.4	1.1
Prop In Lane	1.00		0.12	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	0	181	179	181	153	50	1926	1018	35	1898	1010
V/C Ratio(X)	0.81	0.00	0.70	0.80	0.35	0.16	0.52	0.85	0.08	0.48	0.43	0.06
Avail Cap(c_a), veh/h	191	0	439	189	446	378	132	1926	1018	118	1898	1010
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	0.00	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	33.1	0.0	32.9	33.2	31.9	31.3	36.2	14.6	5.1	36.6	10.6	5.2
Incr Delay (d2), s/veh	21.3	0.0	4.8	21.0	1.2	0.5	8.3	4.8	0.2	9.8	0.7	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	3.6	0.0	2.4	3.5	1.1	0.4	0.6	11.4	0.5	0.4	3.8	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.4	0.0	37.7	54.2	33.1	31.8	44.5	19.4	5.3	46.4	11.3	5.3
LnGrp LOS	D	A	D	D	C	C	D	B	A	D	B	A
Approach Vol, veh/h		275			233			1741			888	
Approach Delay, s/veh		46.7			46.0			19.1			11.6	
Approach LOS		D			D			B			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	45.4	12.1	12.0	6.6	44.8	12.3	11.8				
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	40.9	40.9	8.0	18.1	5.6	40.3	8.1	18.0				
Max Q Clear Time (g_c+1/2), s	31.3	31.3	8.0	7.1	3.1	12.4	8.1	4.4				
Green Ext Time (p_c), s	0.0	7.3	0.0	0.4	0.0	6.6	0.0	0.2				
Intersection Summary												
HCM 6th Ctrl Delay											21.4	
HCM 6th LOS											C	

HCM Unsignalized Intersection Capacity Analysis

8: Escondido Boulevard & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↗	↘			↕	
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	86	66	27	2	36	14	27	33	6	18	19	117
Future Volume (vph)	86	66	27	2	36	14	27	33	6	18	19	117
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	93	72	29	2	39	15	29	36	7	20	21	127
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	194	56	29	43	168							
Volume Left (vph)	93	2	29	0	20							
Volume Right (vph)	29	15	0	7	127							
Hadj (s)	0.04	-0.12	0.53	-0.08	-0.40							
Departure Headway (s)	4.6	4.6	5.8	5.2	4.3							
Degree Utilization, x	0.25	0.07	0.05	0.06	0.20							
Capacity (veh/h)	743	728	586	652	783							
Control Delay (s)	9.1	7.9	7.9	7.3	8.4							
Approach Delay (s)	9.1	7.9	7.5		8.4							
Approach LOS	A	A	A		A							
Intersection Summary												
Delay			8.5									
Level of Service			A									
Intersection Capacity Utilization			39.1%	ICU Level of Service	A							
Analysis Period (min)			15									

APPENDIX E

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – OPENING DAY (YEAR 2022) WITH PROJECT

HCM 6th Signalized Intersection Summary
 1: Center City Parkway & Felicita Avenue

Near Term + Project AM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗		↖↗	↖↗	↖	↖↗	↖↗	↖	↖↗	↖↗	↖
Traffic Volume (veh/h)	530	479	243	153	421	59	299	598	119	125	476	207
Future Volume (veh/h)	530	479	243	153	421	59	299	598	119	125	476	207
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	552	499	253	199	547	77	336	672	134	136	517	225
Peak Hour Factor	0.96	0.96	0.96	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	648	686	346	289	697	411	421	1112	629	217	902	700
Arrive On Green	0.19	0.30	0.30	0.08	0.20	0.20	0.12	0.31	0.31	0.06	0.25	0.25
Sat Flow, veh/h	3456	2286	1154	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	552	387	365	199	547	77	336	672	134	136	517	225
Grp Sat Flow(s),veh/h/ln	1728	1777	1663	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.6	14.6	14.7	4.2	10.9	2.8	7.1	12.0	4.2	2.9	9.5	6.9
Cycle Q Clear(g_c), s	11.6	14.6	14.7	4.2	10.9	2.8	7.1	12.0	4.2	2.9	9.5	6.9
Prop In Lane	1.00		0.69	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	648	533	499	289	697	411	421	1112	629	217	902	700
V/C Ratio(X)	0.85	0.73	0.73	0.69	0.78	0.19	0.80	0.60	0.21	0.63	0.57	0.32
Avail Cap(c_a), veh/h	716	582	544	415	855	481	439	1112	629	240	902	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	1.00	1.00
Uniform Delay (d), s/veh	29.4	23.4	23.5	33.4	28.6	21.6	32.0	21.8	14.9	34.2	24.4	13.6
Incr Delay (d2), s/veh	9.0	4.1	4.6	2.9	3.9	0.2	9.6	2.4	0.8	4.3	2.6	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	5.4	6.4	6.1	1.8	4.8	1.0	3.4	5.1	1.5	1.3	4.2	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	38.4	27.6	28.0	36.3	32.5	21.8	41.6	24.2	15.7	38.6	27.0	14.8
LnGrp LOS	D	C	C	D	C	C	D	C	B	D	C	B
Approach Vol, veh/h		1304			823			1142			878	
Approach Delay, s/veh		32.3			32.4			28.3			25.7	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.2	27.9	10.8	27.0	13.6	23.5	18.5	19.2				
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	5.2	23.3	9.0	24.5	9.5	19.0	15.5	18.0				
Max Q Clear Time (g_c+I1), s	4.9	14.0	6.2	16.7	9.1	11.5	13.6	12.9				
Green Ext Time (p_c), s	0.0	3.4	0.2	2.9	0.1	2.6	0.5	1.7				
Intersection Summary												
HCM 6th Ctrl Delay				29.8								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
2: Escondido Boulevard & Felicita Avenue

Near Term + Project AM
01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖ ↗	↑ ↘		↖ ↑	↑ ↑	↗	↖ ↗	↑ ↘		↖ ↗	↑ ↘	
Traffic Volume (veh/h)	80	397	97	93	865	22	100	191	52	53	201	209
Future Volume (veh/h)	80	397	97	93	865	22	100	191	52	53	201	209
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	89	441	108	104	972	25	122	233	63	60	226	235
Peak Hour Factor	0.90	0.90	0.90	0.89	0.89	0.89	0.82	0.82	0.82	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	207	829	201	133	1092	566	155	882	233	89	498	444
Arrive On Green	0.06	0.29	0.29	0.07	0.31	0.31	0.09	0.32	0.32	0.05	0.28	0.28
Sat Flow, veh/h	3456	2835	689	1781	3554	1585	1781	2780	735	1781	1777	1585
Grp Volume(v), veh/h	89	275	274	104	972	25	122	147	149	60	226	235
Grp Sat Flow(s),veh/h/ln	1728	1777	1746	1781	1777	1585	1781	1777	1738	1781	1777	1585
Q Serve(g_s), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.2	4.3	2.2	7.1	8.5
Cycle Q Clear(g_c), s	1.7	8.8	8.9	3.9	17.7	0.7	4.6	4.2	4.3	2.2	7.1	8.5
Prop In Lane	1.00		0.39	1.00		1.00	1.00		0.42	1.00		1.00
Lane Grp Cap(c), veh/h	207	520	511	133	1092	566	155	564	551	89	498	444
V/C Ratio(X)	0.43	0.53	0.54	0.78	0.89	0.04	0.79	0.26	0.27	0.67	0.45	0.53
Avail Cap(c_a), veh/h	255	520	511	179	1127	582	171	564	551	131	498	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	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.7	20.1	20.1	30.8	22.4	14.2	30.3	17.2	17.3	31.7	20.1	20.6
Incr Delay (d2), s/veh	1.4	1.0	1.1	14.4	8.9	0.0	19.8	1.1	1.2	8.6	3.0	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	0.7	3.5	3.5	2.1	8.1	0.2	2.7	1.8	1.8	1.1	3.2	3.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.1	21.1	21.2	45.2	31.3	14.3	50.1	18.3	18.5	40.2	23.1	25.1
LnGrp LOS	C	C	C	D	C	B	D	B	B	D	C	C
Approach Vol, veh/h		638			1101			418			521	
Approach Delay, s/veh		22.7			32.2			27.7			26.0	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.9	26.0	9.6	24.3	10.4	23.5	8.6	25.3				
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	20.5	20.5	6.8	19.7	6.5	19.0	5.0	21.5				
Max Q Clear Time (g_c+1), s	11.2	6.3	5.9	10.9	6.6	10.5	3.7	19.7				
Green Ext Time (p_c), s	0.0	1.4	0.0	2.2	0.0	1.8	0.0	1.2				

Intersection Summary

HCM 6th Ctrl Delay	28.0
HCM 6th LOS	C

Intersection						
Int Delay, s/veh	10.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	242	50	601	60	41	1110
Future Vol, veh/h	242	50	601	60	41	1110
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	130	125	-
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	263	54	653	65	45	1207

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1347	327	0	0	718	0
Stage 1	653	-	-	-	-	-
Stage 2	694	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 142	669	-	-	879	-
Stage 1	480	-	-	-	-	-
Stage 2	457	-	-	-	-	-
Platoon blocked, %			-	-		
Mov Cap-1 Maneuver	~ 135	669	-	-	879	-
Mov Cap-2 Maneuver	269	-	-	-	-	-
Stage 1	480	-	-	-	-	-
Stage 2	434	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	76.7	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	269	669	879	-
HCM Lane V/C Ratio	-	-	0.978	0.081	0.051	-
HCM Control Delay (s)	-	-	90.3	10.9	9.3	-
HCM Lane LOS	-	-	F	B	A	-
HCM 95th %tile Q(veh)	-	-	9.6	0.3	0.2	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	3.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↶	↷		↶	↶	↷
Traffic Vol, veh/h	141	5	23	118	156	288
Future Vol, veh/h	141	5	23	118	156	288
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	79	79	85	85	98	98
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	178	6	27	139	159	294

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	352	159	453	0	-	0
Stage 1	159	-	-	-	-	-
Stage 2	193	-	-	-	-	-
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	646	886	1108	-	-	-
Stage 1	870	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	629	886	1108	-	-	-
Mov Cap-2 Maneuver	629	-	-	-	-	-
Stage 1	847	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.9	1.4	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1108	-	629	886	-	-
HCM Lane V/C Ratio	0.024	-	0.284	0.007	-	-
HCM Control Delay (s)	8.3	-	13	9.1	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	1.2	0	-	-

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	57	0	0	24	17	648	36	33	1269	60
Future Vol, veh/h	0	0	57	0	0	24	17	648	36	33	1269	60
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	70	70	70	87	87	87	81	81	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	76	0	0	34	20	745	41	41	1567	240

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	784	-	-	393	1807	0	0	786	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	336	0	0	606	337	-	-	829	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	336	-	-	606	337	-	-	829	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	18.8		11.3		0.4		0.2	
HCM LOS	C		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	337	-	-	336	606	829	-	-
HCM Lane V/C Ratio	0.058	-	-	0.226	0.057	0.049	-	-
HCM Control Delay (s)	16.3	-	-	18.8	11.3	9.6	-	-
HCM Lane LOS	C	-	-	C	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.9	0.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	9.3
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	32	39	4	20	14	40	13	80	8	56	186	1
Future Vol, veh/h	32	39	4	20	14	40	13	80	8	56	186	1
Peak Hour Factor	0.73	0.73	0.73	0.92	0.92	0.92	0.80	0.80	0.80	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	44	53	5	22	15	43	16	100	10	63	209	1
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	8.3	8.6	10
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	43%	27%	23%
Vol Thru, %	79%	52%	19%	77%
Vol Right, %	8%	5%	54%	0%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	101	75	74	243
LT Vol	13	32	20	56
Through Vol	80	39	14	186
RT Vol	8	4	40	1
Lane Flow Rate	126	103	80	273
Geometry Grp	1	1	1	1
Degree of Util (X)	0.164	0.143	0.106	0.347
Departure Headway (Hd)	4.677	5.019	4.732	4.575
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	764	712	754	784
Service Time	2.722	3.068	2.782	2.612
HCM Lane V/C Ratio	0.165	0.145	0.106	0.348
HCM Control Delay	8.6	8.9	8.3	10
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.5	0.4	1.6

HCM 6th Signalized Intersection Summary
 7: Center City Parkway & Citracado Parkway

Near Term + Project AM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	32	34	227	138	12	18	611	23	9	1242	96
Future Volume (veh/h)	63	32	34	227	138	12	18	611	23	9	1242	96
Initial Q (Qb), 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
Work Zone On Approach	No			No			No			No		
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	72	37	39	264	160	14	19	650	24	11	1461	113
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	93	61	64	304	359	304	39	1772	1061	24	1743	860
Arrive On Green	0.05	0.07	0.07	0.17	0.19	0.19	0.02	0.50	0.50	0.01	0.49	0.49
Sat Flow, veh/h	1781	834	879	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	72	0	76	264	160	14	19	650	24	11	1461	113
Grp Sat Flow(s),veh/h/ln	1781	0	1712	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	2.9	0.0	3.2	10.7	5.6	0.5	0.8	8.3	0.4	0.5	26.3	2.6
Cycle Q Clear(g_c), s	2.9	0.0	3.2	10.7	5.6	0.5	0.8	8.3	0.4	0.5	26.3	2.6
Prop In Lane	1.00		0.51	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	0	125	304	359	304	39	1772	1061	24	1743	860
V/C Ratio(X)	0.77	0.00	0.61	0.87	0.45	0.05	0.49	0.37	0.02	0.45	0.84	0.13
Avail Cap(c_a), veh/h	222	0	417	309	547	464	121	1772	1061	121	1743	860
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	0.00	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	34.6	0.0	33.2	29.8	26.4	24.3	35.7	11.4	4.1	36.1	16.3	8.3
Incr Delay (d2), s/veh	12.7	0.0	4.7	21.9	0.9	0.1	9.2	0.6	0.0	12.5	5.0	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	1.6	0.0	1.4	6.2	2.5	0.2	0.4	3.1	0.1	0.3	10.6	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	47.2	0.0	37.8	51.7	27.2	24.4	44.9	11.9	4.1	48.6	21.3	8.6
LnGrp LOS	D	A	D	D	C	C	D	B	A	D	C	A
Approach Vol, veh/h	148			438			693			1585		
Approach Delay, s/veh	42.4			41.9			12.6			20.6		
Approach LOS	D			D			B			C		
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.5	41.3	17.1	9.9	6.1	40.7	8.4	18.7				
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	36.2	36.2	12.8	18.0	5.0	36.2	9.2	21.6				
Max Q Clear Time (g_c+1/2), s	10.3	10.3	12.7	5.2	2.8	28.3	4.9	7.6				
Green Ext Time (p_c), s	0.0	4.9	0.0	0.2	0.0	5.8	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay	23.0											
HCM 6th LOS	C											

Intersection												
Intersection Delay, s/veh	8.7											
Intersection LOS	A											

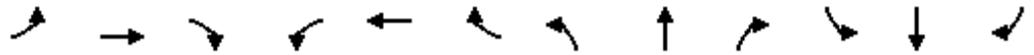
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	48	9	7	0	78	21	78	23	2	3	11	221
Future Vol, veh/h	48	9	7	0	78	21	78	23	2	3	11	221
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	52	10	8	0	85	23	85	25	2	3	12	240
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.6	8.5	9	8.7
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	75%	0%	1%
Vol Thru, %	0%	92%	14%	79%	5%
Vol Right, %	0%	8%	11%	21%	94%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	78	25	64	99	235
LT Vol	78	0	48	0	3
Through Vol	0	23	9	78	11
RT Vol	0	2	7	21	221
Lane Flow Rate	85	27	70	108	255
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.133	0.039	0.096	0.141	0.288
Departure Headway (Hd)	5.666	5.106	4.977	4.717	4.056
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	632	701	718	758	886
Service Time	3.401	2.841	3.022	2.759	2.085
HCM Lane V/C Ratio	0.134	0.039	0.097	0.142	0.288
HCM Control Delay	9.3	8	8.6	8.5	8.7
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.5	0.1	0.3	0.5	1.2

HCM 6th Signalized Intersection Summary
 1: Center City Parkway & Felicita Avenue

Near Term + Project PM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕	↖	↖↗	↕	↖	↖↗	↕	↖
Traffic Volume (veh/h)	292	324	216	178	492	39	390	368	150	178	652	310
Future Volume (veh/h)	292	324	216	178	492	39	390	368	150	178	652	310
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	344	381	254	187	518	41	424	400	163	205	749	356
Peak Hour Factor	0.85	0.85	0.85	0.95	0.95	0.95	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	372	476	313	272	721	459	507	1248	682	299	1034	632
Arrive On Green	0.11	0.23	0.23	0.08	0.20	0.20	0.15	0.35	0.35	0.09	0.29	0.29
Sat Flow, veh/h	3456	2054	1351	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	344	329	306	187	518	41	424	400	163	205	749	356
Grp Sat Flow(s),veh/h/ln	1728	1777	1627	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	7.1	12.5	12.7	3.8	9.7	1.3	8.5	5.9	4.7	4.1	13.5	12.5
Cycle Q Clear(g_c), s	7.1	12.5	12.7	3.8	9.7	1.3	8.5	5.9	4.7	4.1	13.5	12.5
Prop In Lane	1.00		0.83	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	372	412	377	272	721	459	507	1248	682	299	1034	632
V/C Ratio(X)	0.92	0.80	0.81	0.69	0.72	0.09	0.84	0.32	0.24	0.69	0.72	0.56
Avail Cap(c_a), veh/h	372	497	455	275	895	536	507	1248	682	425	1034	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	31.6	25.9	26.0	32.1	26.6	18.5	29.7	17.0	12.9	31.7	22.8	16.7
Incr Delay (d2), s/veh	28.4	7.5	9.0	6.9	2.1	0.1	11.6	0.7	0.8	2.8	4.4	3.6
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	4.3	5.9	5.6	1.8	4.1	0.5	4.2	2.4	1.7	1.8	6.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.0	33.4	35.0	39.0	28.7	18.6	41.2	17.6	13.8	34.5	27.2	20.3
LnGrp LOS	E	C	C	D	C	B	D	B	B	C	C	C
Approach Vol, veh/h		979			746			987			1310	
Approach Delay, s/veh		43.3			30.7			27.1			26.5	
Approach LOS		D			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.7	29.6	10.1	21.1	15.0	25.3	12.2	19.0				
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	8.8	22.5	5.7	20.0	10.5	20.8	7.7	18.0				
Max Q Clear Time (g_c+I1), s	6.1	7.9	5.8	14.7	10.5	15.5	9.1	11.7				
Green Ext Time (p_c), s	0.2	2.8	0.0	1.9	0.0	2.9	0.0	1.9				

Intersection Summary												
HCM 6th Ctrl Delay				31.5								
HCM 6th LOS				C								

HCM 6th Signalized Intersection Summary
2: Escondido Boulevard & Felicita Avenue

Near Term + Project PM
01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗		↖	↖↖	↖	↖	↖↖		↖	↖↖	
Traffic Volume (veh/h)	67	582	36	199	861	112	65	183	145	99	270	135
Future Volume (veh/h)	67	582	36	199	861	112	65	183	145	99	270	135
Initial Q (Qb), 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
Work Zone On Approach		No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	76	661	41	209	906	118	75	210	167	103	281	141
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.87	0.87	0.87	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	195	802	50	251	1139	625	100	543	411	132	694	339
Arrive On Green	0.06	0.24	0.24	0.14	0.32	0.32	0.06	0.28	0.28	0.07	0.30	0.30
Sat Flow, veh/h	3456	3399	211	1781	3554	1585	1781	1927	1458	1781	2314	1130
Grp Volume(v), veh/h	76	345	357	209	906	118	75	193	184	103	214	208
Grp Sat Flow(s),veh/h/ln	1728	1777	1832	1781	1777	1585	1781	1777	1608	1781	1777	1667
Q Serve(g_s), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.9	6.3	3.8	6.5	6.7
Cycle Q Clear(g_c), s	1.4	12.4	12.4	7.7	15.7	3.3	2.8	5.9	6.3	3.8	6.5	6.7
Prop In Lane	1.00		0.11	1.00		1.00	1.00		0.91	1.00		0.68
Lane Grp Cap(c), veh/h	195	419	432	251	1139	625	100	501	453	132	533	500
V/C Ratio(X)	0.39	0.82	0.82	0.83	0.80	0.19	0.75	0.38	0.41	0.78	0.40	0.42
Avail Cap(c_a), veh/h	256	475	490	251	1187	646	137	501	453	145	533	500
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	30.7	24.4	24.4	28.2	20.9	13.3	31.3	19.5	19.6	30.7	18.8	18.9
Incr Delay (d2), s/veh	1.3	10.2	10.0	20.6	3.7	0.1	14.0	2.2	2.7	21.8	2.2	2.5
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	0.6	6.1	6.3	4.6	6.6	1.1	1.5	2.6	2.5	2.4	2.8	2.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	32.0	34.6	34.4	48.7	24.6	13.5	45.3	21.7	22.3	52.5	21.0	21.4
LnGrp LOS	C	C	C	D	C	B	D	C	C	D	C	C
Approach Vol, veh/h		778			1233			452			525	
Approach Delay, s/veh		34.3			27.6			25.9			27.3	
Approach LOS		C			C			C			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.5	23.5	14.0	20.4	8.3	24.7	8.3	26.1				
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	5.5	19.0	9.5	18.0	5.2	19.3	5.0	22.5				
Max Q Clear Time (g_c+1), s	11.8	8.3	9.7	14.4	4.8	8.7	3.4	17.7				
Green Ext Time (p_c), s	0.0	1.7	0.0	1.5	0.0	1.9	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay											29.0	
HCM 6th LOS											C	

Intersection						
Int Delay, s/veh	6.4					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	125	39	1250	185	60	674
Future Vol, veh/h	125	39	1250	185	60	674
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	75	-	140	120	-
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	136	42	1359	201	65	733

Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1856	680	0	0	1560	0
Stage 1	1359	-	-	-	-	-
Stage 2	497	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	~ 65	393	-	-	420	-
Stage 1	204	-	-	-	-	-
Stage 2	577	-	-	-	-	-
Platoon blocked, %			-	-	-	-
Mov Cap-1 Maneuver	~ 55	393	-	-	420	-
Mov Cap-2 Maneuver	151	-	-	-	-	-
Stage 1	204	-	-	-	-	-
Stage 2	488	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	85.3	0	1.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	151	393	420
HCM Lane V/C Ratio	-	-	0.9	0.108	0.155
HCM Control Delay (s)	-	-	107.1	15.3	15.1
HCM Lane LOS	-	-	F	C	C
HCM 95th %tile Q(veh)	-	-	6.3	0.4	0.5

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	8.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↖	↖	↗
Traffic Vol, veh/h	249	21	25	349	163	169
Future Vol, veh/h	249	21	25	349	163	169
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	90	79	79	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	277	23	32	442	190	197

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	696	190	387	0	-	0
Stage 1	190	-	-	-	-	-
Stage 2	506	-	-	-	-	-
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	408	852	1171	-	-	-
Stage 1	842	-	-	-	-	-
Stage 2	606	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	393	852	1171	-	-	-
Mov Cap-2 Maneuver	393	-	-	-	-	-
Stage 1	812	-	-	-	-	-
Stage 2	606	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.3	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1171	-	393	852	-	-
HCM Lane V/C Ratio	0.027	-	0.704	0.027	-	-
HCM Control Delay (s)	8.2	-	33.2	9.3	-	-
HCM Lane LOS	A	-	D	A	-	-
HCM 95th %tile Q(veh)	0.1	-	5.2	0.1	-	-

Intersection												
Int Delay, s/veh	1.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	40	0	0	45	71	1396	214	47	730	45
Future Vol, veh/h	0	0	40	0	0	45	71	1396	214	47	730	45
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	84	84	84	94	94	94	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	63	0	0	54	76	1485	228	53	820	51

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	410	-	-	857	871	0	0	1713	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	591	0	0	301	770	-	-	366	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	591	-	-	301	770	-	-	366	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB			
HCM Control Delay, s	11.8		19.5		0.4		0.9			
HCM LOS	B		C							

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	770	-	-	591	301	366	-	-
HCM Lane V/C Ratio	0.098	-	-	0.107	0.178	0.144	-	-
HCM Control Delay (s)	10.2	-	-	11.8	19.5	16.5	-	-
HCM Lane LOS	B	-	-	B	C	C	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.4	0.6	0.5	-	-

Intersection	
Intersection Delay, s/veh	11.3
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	197	54	18	9	19	28	20	139	14	40	139	3
Future Vol, veh/h	197	54	18	9	19	28	20	139	14	40	139	3
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.81	0.81	0.81	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	224	61	20	12	25	37	25	172	17	45	158	3
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.6	9	10.7	10.8
HCM LOS	B	A	B	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	73%	16%	22%
Vol Thru, %	80%	20%	34%	76%
Vol Right, %	8%	7%	50%	2%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	173	269	56	182
LT Vol	20	197	9	40
Through Vol	139	54	19	139
RT Vol	14	18	28	3
Lane Flow Rate	214	306	75	207
Geometry Grp	1	1	1	1
Degree of Util (X)	0.314	0.45	0.11	0.308
Departure Headway (Hd)	5.286	5.297	5.314	5.353
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	679	682	673	672
Service Time	3.318	3.326	3.353	3.386
HCM Lane V/C Ratio	0.315	0.449	0.111	0.308
HCM Control Delay	10.7	12.6	9	10.8
HCM Lane LOS	B	B	A	B
HCM 95th-tile Q	1.3	2.3	0.4	1.3

HCM 6th Signalized Intersection Summary
 7: Center City Parkway & Citracado Parkway

Near Term + Project PM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	132	106	13	120	56	20	24	1527	78	15	706	52
Future Volume (veh/h)	132	106	13	120	56	20	24	1527	78	15	706	52
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	148	119	15	148	69	25	26	1642	84	17	811	60
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	183	167	21	183	192	163	49	1911	1016	35	1883	1003
Arrive On Green	0.10	0.10	0.10	0.10	0.10	0.10	0.03	0.54	0.54	0.02	0.53	0.53
Sat Flow, veh/h	1781	1628	205	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	148	0	134	148	69	25	26	1642	84	17	811	60
Grp Sat Flow(s),veh/h/ln	1781	0	1833	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	6.2	0.0	5.4	6.2	2.6	1.1	1.1	30.2	1.5	0.7	10.6	1.1
Cycle Q Clear(g_c), s	6.2	0.0	5.4	6.2	2.6	1.1	1.1	30.2	1.5	0.7	10.6	1.1
Prop In Lane	1.00		0.11	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	183	0	188	183	192	163	49	1911	1016	35	1883	1003
V/C Ratio(X)	0.81	0.00	0.71	0.81	0.36	0.15	0.53	0.86	0.08	0.48	0.43	0.06
Avail Cap(c_a), veh/h	190	0	436	187	443	375	131	1911	1016	117	1883	1003
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(l)	1.00	0.00	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	33.4	0.0	33.0	33.4	31.8	31.1	36.5	15.1	5.2	36.9	10.9	5.3
Incr Delay (d2), s/veh	21.6	0.0	4.9	22.0	1.1	0.4	8.4	5.3	0.2	9.8	0.7	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	3.7	0.0	2.6	3.7	1.2	0.4	0.6	11.9	0.5	0.4	3.9	0.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	55.0	0.0	37.9	55.4	32.9	31.5	44.8	20.4	5.3	46.7	11.6	5.4
LnGrp LOS	E	A	D	E	C	C	D	C	A	D	B	A
Approach Vol, veh/h		282			242			1752			888	
Approach Delay, s/veh		46.9			46.5			20.0			11.9	
Approach LOS		D			D			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	6.0	45.4	12.3	12.3	6.6	44.8	12.3	12.3				
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	40.9	40.9	8.0	18.1	5.6	40.3	8.1	18.0				
Max Q Clear Time (g_c+1), s	32.2	32.2	8.2	7.4	3.1	12.6	8.2	4.6				
Green Ext Time (p_c), s	0.0	6.8	0.0	0.4	0.0	6.6	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay											22.2	
HCM 6th LOS											C	

Intersection												
Intersection Delay, s/veh	8.7											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	92	66	27	2	36	14	27	33	6	18	19	124
Future Vol, veh/h	92	66	27	2	36	14	27	33	6	18	19	124
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	100	72	29	2	39	15	29	36	7	20	21	135
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	9.2	8	8.5	8.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	50%	4%	11%
Vol Thru, %	0%	85%	36%	69%	12%
Vol Right, %	0%	15%	15%	27%	77%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	27	39	185	52	161
LT Vol	27	0	92	2	18
Through Vol	0	33	66	36	19
RT Vol	0	6	27	14	124
Lane Flow Rate	29	42	201	57	175
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.047	0.061	0.256	0.072	0.209
Departure Headway (Hd)	5.801	5.189	4.584	4.593	4.302
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	617	690	784	779	835
Service Time	3.535	2.923	2.612	2.628	2.33
HCM Lane V/C Ratio	0.047	0.061	0.256	0.073	0.21
HCM Control Delay	8.8	8.3	9.2	8	8.5
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.2	1	0.2	0.8

APPENDIX F

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – LONG-TERM WITHOUT PROJECT

HCM 6th Signalized Intersection Summary

1: Center City Parkway & Felicita Avenue

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 	 	
Traffic Volume (veh/h)	660	600	330	200	530	70	400	790	160	160	630	260
Future Volume (veh/h)	660	600	330	200	530	70	400	790	160	160	630	260
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	688	625	344	260	688	91	449	888	180	174	685	283
Peak Hour Factor	0.96	0.96	0.96	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	749	720	396	334	730	424	491	1121	653	215	837	717
Arrive On Green	0.22	0.33	0.33	0.10	0.21	0.21	0.14	0.32	0.32	0.06	0.24	0.24
Sat Flow, veh/h	3456	2211	1217	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	688	502	467	260	688	91	449	888	180	174	685	283
Grp Sat Flow(s),veh/h/ln	1728	1777	1651	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	17.5	23.9	23.9	6.6	17.2	4.0	11.5	20.5	6.8	4.5	16.4	10.7
Cycle Q Clear(g_c), s	17.5	23.9	23.9	6.6	17.2	4.0	11.5	20.5	6.8	4.5	16.4	10.7
Prop In Lane	1.00		0.74	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	749	579	538	334	730	424	491	1121	653	215	837	717
V/C Ratio(X)	0.92	0.87	0.87	0.78	0.94	0.21	0.91	0.79	0.28	0.81	0.82	0.39
Avail Cap(c_a), veh/h	749	579	538	365	730	424	491	1121	653	215	837	717
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	28.5	28.5	39.7	35.2	25.6	38.1	28.1	17.5	41.7	32.6	16.4
Incr Delay (d2), s/veh	16.4	13.2	14.1	9.6	20.4	0.2	21.5	5.8	1.0	20.2	8.7	1.6
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	8.9	11.9	11.2	3.2	9.3	1.5	6.3	9.3	2.6	2.5	7.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	41.8	42.6	49.3	55.6	25.8	59.6	33.9	18.6	61.8	41.3	18.1
LnGrp LOS	D	D	D	D	E	C	E	C	B	E	D	B
Approach Vol, veh/h		1657			1039			1517			1142	
Approach Delay, s/veh		45.8			51.4			39.7			38.7	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	32.9	13.2	33.8	17.3	25.7	24.0	23.0				
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	5.6	28.4	9.5	28.5	12.8	21.2	19.5	18.5				
Max Q Clear Time (g_c+I1), s	6.5	22.5	8.6	25.9	13.5	18.4	19.5	19.2				
Green Ext Time (p_c), s	0.0	3.2	0.1	1.5	0.0	1.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.6									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔	↑↑	↔	↔	↑↓		↔	↑↓	
Traffic Volume (veh/h)	100	500	140	140	1080	30	150	260	80	70	280	260
Future Volume (veh/h)	100	500	140	140	1080	30	150	260	80	70	280	260
Initial Q (Qb), 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
Work Zone On Approach		No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	556	156	157	1213	34	183	317	98	79	315	292
Peak Hour Factor	0.90	0.90	0.90	0.89	0.89	0.89	0.82	0.82	0.82	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	842	235	193	1273	658	213	808	245	102	424	379
Arrive On Green	0.06	0.31	0.31	0.11	0.36	0.36	0.12	0.30	0.30	0.06	0.24	0.24
Sat Flow, veh/h	3456	2742	767	1781	3554	1585	1781	2685	816	1781	1777	1585
Grp Volume(v), veh/h	111	360	352	157	1213	34	183	208	207	79	315	292
Grp Sat Flow(s),veh/h/ln	1728	1777	1732	1781	1777	1585	1781	1777	1724	1781	1777	1585
Q Serve(g_s), s	2.5	14.0	14.1	6.9	26.5	1.0	8.0	7.4	7.6	3.5	13.1	13.7
Cycle Q Clear(g_c), s	2.5	14.0	14.1	6.9	26.5	1.0	8.0	7.4	7.6	3.5	13.1	13.7
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	198	545	532	193	1273	658	213	535	519	102	424	379
V/C Ratio(X)	0.56	0.66	0.66	0.81	0.95	0.05	0.86	0.39	0.40	0.77	0.74	0.77
Avail Cap(c_a), veh/h	217	545	532	235	1273	659	213	535	519	204	424	379
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	36.5	24.0	24.0	34.7	24.9	13.9	34.4	22.0	22.1	37.0	28.0	28.3
Incr Delay (d2), s/veh	2.7	2.9	3.1	16.1	15.4	0.0	28.1	2.1	2.3	11.7	11.2	14.1
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	1.1	6.0	6.0	3.8	13.1	0.4	5.0	3.3	3.3	1.8	6.7	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	26.9	27.1	50.8	40.3	13.9	62.5	24.1	24.4	48.7	39.2	42.4
LnGrp LOS	D	C	C	D	D	B	E	C	C	D	D	D
Approach Vol, veh/h		823			1404			598			686	
Approach Delay, s/veh		28.6			40.8			36.0			41.6	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	28.4	13.1	28.9	14.0	23.5	9.1	33.0				
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	19.4	10.5	23.0	9.5	19.0	5.0	28.5					
Max Q Clear Time (g_c+1), s	9.6	8.9	16.1	10.0	15.7	4.5	28.5					
Green Ext Time (p_c), s	0.0	1.7	0.1	2.5	0.0	1.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay					37.3							
HCM 6th LOS					D							

Intersection						
Int Delay, s/veh	52					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	310	50	850	80	50	1580
Future Vol, veh/h	310	50	850	80	50	1580
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	130	125	-
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	337	54	924	87	54	1717

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1891	462	0	0	1011
Stage 1	924	-	-	-	-
Stage 2	967	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 62	547	-	-	681
Stage 1	347	-	-	-	-
Stage 2	~ 329	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 57	547	-	-	681
Mov Cap-2 Maneuver	~ 174	-	-	-	-
Stage 1	347	-	-	-	-
Stage 2	~ 303	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	420.5	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	174	547	681	-
HCM Lane V/C Ratio	-	-	1.937	0.099	0.08	-
HCM Control Delay (s)	-	-	\$ 486.3	12.3	10.7	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	25.4	0.3	0.3	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	3.5					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	190	10	20	200	290	390
Future Vol, veh/h	190	10	20	200	290	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	207	11	22	217	315	424

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	576	315	739	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	261	-	-	-	-	-
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	479	725	867	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	783	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	465	725	867	-	-	-
Mov Cap-2 Maneuver	465	-	-	-	-	-
Stage 1	719	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	18.4	0.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	867	-	465	725	-	-
HCM Lane V/C Ratio	0.025	-	0.444	0.015	-	-
HCM Control Delay (s)	9.3	0	18.8	10	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.2	0	-	-

HCM 6th TWSC
5: Center City Parkway & Brotherton Road

08/31/2020

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	30	0	0	20	10	880	40	40	1740	70
Future Vol, veh/h	0	0	30	0	0	20	10	880	40	40	1740	70
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	70	70	70	87	87	87	81	81	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	40	0	0	29	11	1011	46	49	2148	280

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1074	-	-	529	2428	0	0	1057	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	216	0	0	494	192	-	-	655	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	216	-	-	494	192	-	-	655	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	25.4		12.7		0.3		0.2	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	192	-	-	216	494	655	-	-
HCM Lane V/C Ratio	0.06	-	-	0.185	0.058	0.075	-	-
HCM Control Delay (s)	24.9	-	-	25.4	12.7	10.9	-	-
HCM Lane LOS	C	-	-	D	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	0.2	0.2	-	-

HCM Unsignalized Intersection Capacity Analysis

6: Escondido Boulevard & Brotherton Road

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔			↔			↔	
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	40	40	10	20	20	60	10	110	10	80	250	10
Future Volume (vph)	40	40	10	20	20	60	10	110	10	80	250	10
Peak Hour Factor	0.73	0.73	0.73	0.92	0.92	0.92	0.80	0.80	0.80	0.89	0.89	0.89
Hourly flow rate (vph)	55	55	14	22	22	65	13	138	13	90	281	11

Direction, Lane #	EB 1	WB 1	NB 1	SB 1
Volume Total (vph)	124	109	164	382
Volume Left (vph)	55	22	13	90
Volume Right (vph)	14	65	13	11
Hadj (s)	0.05	-0.28	0.00	0.06
Departure Headway (s)	5.5	5.2	5.1	4.8
Degree Utilization, x	0.19	0.16	0.23	0.51
Capacity (veh/h)	587	612	662	714
Control Delay (s)	9.8	9.2	9.6	12.9
Approach Delay (s)	9.8	9.2	9.6	12.9
Approach LOS	A	A	A	B

Intersection Summary

Delay	11.2
Level of Service	B
Intersection Capacity Utilization	41.3%
ICU Level of Service	A
Analysis Period (min)	15

HCM 6th Signalized Intersection Summary

7: Center City Parkway & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	30	40	260	150	15	20	770	30	10	1550	120
Future Volume (veh/h)	80	30	40	260	150	15	20	770	30	10	1550	120
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	34	46	302	174	17	21	819	32	12	1824	141
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	47	64	329	346	293	38	2064	1213	25	2038	1012
Arrive On Green	0.07	0.07	0.07	0.18	0.18	0.18	0.02	0.58	0.58	0.01	0.57	0.57
Sat Flow, veh/h	1781	720	975	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	92	0	80	302	174	17	21	819	32	12	1824	141
Grp Sat Flow(s),veh/h/ln	1781	0	1695	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.9	0.0	5.4	19.3	9.7	1.0	1.4	14.6	0.6	0.8	52.2	4.1
Cycle Q Clear(g_c), s	5.9	0.0	5.4	19.3	9.7	1.0	1.4	14.6	0.6	0.8	52.2	4.1
Prop In Lane	1.00		0.57	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	0	111	329	346	293	38	2064	1213	25	2038	1012
V/C Ratio(X)	0.79	0.00	0.72	0.92	0.50	0.06	0.56	0.40	0.03	0.49	0.90	0.14
Avail Cap(c_a), veh/h	204	0	263	346	439	372	77	2064	1213	77	2038	1012
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	0.00	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	53.4	0.0	53.2	46.4	42.5	38.9	56.2	13.2	3.3	56.8	21.7	8.3
Incr Delay (d2), s/veh	11.3	0.0	8.5	27.9	1.1	0.1	12.2	0.6	0.0	14.1	6.6	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	8.0	0.0	2.5	11.0	4.6	0.4	0.7	5.8	0.2	0.4	22.2	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	64.7	0.0	61.6	74.3	43.6	39.0	68.4	13.8	3.3	70.9	28.3	8.6
LnGrp LOS	E	A	E	E	D	D	E	B	A	E	C	A
Approach Vol, veh/h		172			493			872			1977	
Approach Delay, s/veh		63.3			62.3			14.7			27.1	
Approach LOS		E			E			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	61	71.9	25.9	12.1	7.0	71.0	12.1	25.9				
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	66.5	66.5	22.5	18.0	5.0	66.5	13.3	27.2				
Max Q Clear Time (g_c+1), s	16.6	16.6	21.3	7.4	3.4	54.2	7.9	11.7				
Green Ext Time (p_c), s	0.0	7.2	0.1	0.2	0.0	9.9	0.1	0.8				
Intersection Summary												
HCM 6th Ctrl Delay											30.8	
HCM 6th LOS											C	

HCM Unsignalized Intersection Capacity Analysis
 8: Escondido Boulevard & Citracado Parkway

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	40	10	10	0	100	30	70	30	5	10	15	230
Future Volume (vph)	40	10	10	0	100	30	70	30	5	10	15	230
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	43	11	11	0	109	33	76	33	5	11	16	250
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	65	142	76	38	277							
Volume Left (vph)	43	0	76	0	11							
Volume Right (vph)	11	33	0	5	250							
Hadj (s)	0.06	-0.11	0.53	-0.06	-0.50							
Departure Headway (s)	5.1	4.8	5.8	5.2	4.2							
Degree Utilization, x	0.09	0.19	0.12	0.05	0.32							
Capacity (veh/h)	645	693	589	652	815							
Control Delay (s)	8.6	8.9	8.4	7.3	9.2							
Approach Delay (s)	8.6	8.9	8.0		9.2							
Approach LOS	A	A	A		A							
Intersection Summary												
Delay			8.8									
Level of Service			A									
Intersection Capacity Utilization			43.2%	ICU Level of Service	A							
Analysis Period (min)			15									

HCM 6th Signalized Intersection Summary

1: Center City Parkway & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↕		↖↗	↕	↖	↖↗	↕	↖	↖↗	↕	↖
Traffic Volume (veh/h)	370	410	290	240	620	50	520	490	200	220	860	390
Future Volume (veh/h)	370	410	290	240	620	50	520	490	200	220	860	390
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	435	482	341	253	653	53	565	533	217	253	989	448
Peak Hour Factor	0.85	0.85	0.85	0.95	0.95	0.95	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	457	491	346	296	711	470	580	1320	724	333	1066	685
Arrive On Green	0.13	0.25	0.25	0.09	0.20	0.20	0.17	0.37	0.37	0.10	0.30	0.30
Sat Flow, veh/h	3456	1990	1404	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	435	430	393	253	653	53	565	533	217	253	989	448
Grp Sat Flow(s),veh/h/ln	1728	1777	1618	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.2	21.7	21.7	6.5	16.2	2.2	14.6	10.0	7.8	6.4	24.3	20.1
Cycle Q Clear(g_c), s	11.2	21.7	21.7	6.5	16.2	2.2	14.6	10.0	7.8	6.4	24.3	20.1
Prop In Lane	1.00		0.87	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	457	438	399	296	711	470	580	1320	724	333	1066	685
V/C Ratio(X)	0.95	0.98	0.98	0.86	0.92	0.11	0.97	0.40	0.30	0.76	0.93	0.65
Avail Cap(c_a), veh/h	457	438	399	296	711	470	580	1320	724	449	1066	685
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	38.8	33.7	33.7	40.6	35.3	23.0	37.3	20.9	15.4	39.6	30.6	20.2
Incr Delay (d2), s/veh	30.2	38.0	40.8	21.1	17.0	0.1	30.9	0.9	1.1	5.1	14.9	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	6.6	13.7	12.8	3.6	8.5	0.8	8.5	4.2	2.9	2.9	12.2	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	71.7	74.6	61.7	52.3	23.2	68.1	21.8	16.4	44.8	45.4	25.0
LnGrp LOS	E	E	E	E	D	C	E	C	B	D	D	C
Approach Vol, veh/h		1258			959			1315			1690	
Approach Delay, s/veh		71.6			53.2			40.8			39.9	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	37.9	12.2	26.7	19.6	31.5	16.4	22.5				
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	11.7	30.4	7.7	22.2	15.1	27.0	11.9	18.0				
Max Q Clear Time (g_c+I1), s	8.4	12.0	8.5	23.7	16.6	26.3	13.2	18.2				
Green Ext Time (p_c), s	0.3	4.2	0.0	0.0	0.0	0.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			50.2									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↖↗		↖	↖↗	↖	↖	↖↗		↖	↖↗	
Traffic Volume (veh/h)	80	730	50	290	1080	140	90	260	210	120	370	170
Future Volume (veh/h)	80	730	50	290	1080	140	90	260	210	120	370	170
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	830	57	305	1137	147	103	299	241	125	385	177
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.87	0.87	0.87	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	922	63	343	1472	796	131	450	353	156	599	271
Arrive On Green	0.05	0.27	0.27	0.19	0.41	0.41	0.07	0.24	0.24	0.09	0.25	0.25
Sat Flow, veh/h	3456	3374	232	1781	3554	1585	1781	1894	1486	1781	2376	1077
Grp Volume(v), veh/h	91	437	450	305	1137	147	103	280	260	125	287	275
Grp Sat Flow(s),veh/h/ln	1728	1777	1829	1781	1777	1585	1781	1777	1603	1781	1777	1676
Q Serve(g_s), s	2.2	20.4	20.4	14.4	23.8	4.4	4.9	12.3	12.7	5.9	12.4	12.7
Cycle Q Clear(g_c), s	2.2	20.4	20.4	14.4	23.8	4.4	4.9	12.3	12.7	5.9	12.4	12.7
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.93	1.00		0.64
Lane Grp Cap(c), veh/h	178	486	500	343	1472	796	131	423	381	156	448	422
V/C Ratio(X)	0.51	0.90	0.90	0.89	0.77	0.18	0.79	0.66	0.68	0.80	0.64	0.65
Avail Cap(c_a), veh/h	204	505	520	382	1562	836	167	423	381	176	448	422
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	39.8	30.2	30.2	33.9	21.7	11.8	39.3	29.7	29.9	38.6	28.8	28.9
Incr Delay (d2), s/veh	2.3	18.6	18.2	20.5	2.3	0.1	17.1	8.0	9.5	20.7	6.9	7.6
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	10.9	11.2	8.0	9.8	1.5	2.7	6.0	5.8	3.4	6.0	5.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	48.8	48.4	54.4	24.1	11.9	56.3	37.7	39.4	59.2	35.6	36.5
LnGrp LOS	D	D	D	D	C	B	E	D	D	E	D	D
Approach Vol, veh/h		978			1589			643			687	
Approach Delay, s/veh		48.0			28.8			41.4			40.3	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	25.0	21.1	28.1	10.8	26.2	8.9	40.2				
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	12.5	20.5	18.5	24.5	8.1	20.9	5.1	37.9				
Max Q Clear Time (g_c+1T), s	17.9	14.7	16.4	22.4	6.9	14.7	4.2	25.8				
Green Ext Time (p_c), s	0.0	1.7	0.2	1.1	0.0	1.8	0.0	6.7				
Intersection Summary												
HCM 6th Ctrl Delay											37.7	
HCM 6th LOS											D	

Intersection						
Int Delay, s/veh	38					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	160	50	1780	240	70	950
Future Vol, veh/h	160	50	1780	240	70	950
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	75	-	140	120	-
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	174	54	1935	261	76	1033

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2604	968	0	0	2196
Stage 1	1935	-	-	-	-
Stage 2	669	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 20	254	-	-	237
Stage 1	~ 99	-	-	-	-
Stage 2	471	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 14	254	-	-	237
Mov Cap-2 Maneuver	~ 73	-	-	-	-
Stage 1	~ 99	-	-	-	-
Stage 2	320	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	578.5	0	1.9
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	73	254	237	-
HCM Lane V/C Ratio	-	-	2.382	0.214	0.321	-
HCM Control Delay (s)	-	-	\$ 752.1	23	27.2	-
HCM Lane LOS	-	-	F	C	D	-
HCM 95th %tile Q(veh)	-	-	16.6	0.8	1.3	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	80.3					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔		↑	↑	↔
Traffic Vol, veh/h	340	20	40	640	290	230
Future Vol, veh/h	340	20	40	640	290	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	370	22	43	696	315	250

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1097	315	565	0	-	0
Stage 1	315	-	-	-	-	-
Stage 2	782	-	-	-	-	-
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	~ 236	725	1007	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	451	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 219	725	1007	-	-	-
Mov Cap-2 Maneuver	~ 219	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	451	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s\$	347.1	0.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1007	-	219	725	-	-
HCM Lane V/C Ratio	0.043	-	1.688	0.03	-	-
HCM Control Delay (s)	8.7	-	\$ 366.9	10.1	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	24.5	0.1	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

HCM 6th TWSC
5: Center City Parkway & Brotherton Road

08/31/2020

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	0	0	30	0	0	50	50	1910	250	60	1000	50
Future Vol, veh/h	0	0	30	0	0	50	50	1910	250	60	1000	50
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	84	84	84	94	94	94	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	48	0	0	60	53	2032	266	67	1124	56

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	562	-	-	1149	1180	0	0	2298	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	470	0	0	192	588	-	-	216	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	470	-	-	192	588	-	-	216	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	13.5		32		0.3		1.6	
HCM LOS	B		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	588	-	-	470	192	216	-
HCM Lane V/C Ratio	0.09	-	-	0.101	0.31	0.312	-
HCM Control Delay (s)	11.7	-	-	13.5	32	29.1	-
HCM Lane LOS	B	-	-	B	D	D	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	1.3	1.3	-

HCM Unsignalized Intersection Capacity Analysis
 6: Escondido Boulevard & Brotherton Road

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	280	60	20	10	20	40	20	190	15	60	190	10
Future Volume (vph)	280	60	20	10	20	40	20	190	15	60	190	10
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.81	0.81	0.81	0.88	0.88	0.88
Hourly flow rate (vph)	318	68	23	13	27	53	25	235	19	68	216	11
Direction, Lane #	EB 1	WB 1	NB 1	SB 1								
Volume Total (vph)	409	93	279	295								
Volume Left (vph)	318	13	25	68								
Volume Right (vph)	23	53	19	11								
Hadj (s)	0.16	-0.28	0.01	0.06								
Departure Headway (s)	6.0	6.4	6.1	6.1								
Degree Utilization, x	0.69	0.16	0.48	0.50								
Capacity (veh/h)	572	463	539	544								
Control Delay (s)	21.1	10.6	14.6	15.2								
Approach Delay (s)	21.1	10.6	14.6	15.2								
Approach LOS	C	B	B	C								
Intersection Summary												
Delay			16.9									
Level of Service			C									
Intersection Capacity Utilization			60.5%	ICU Level of Service	B							
Analysis Period (min)			15									

HCM 6th Signalized Intersection Summary

7: Center City Parkway & Citracado Parkway

08/31/2020



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	110	20	140	60	20	30	1890	100	20	880	70
Future Volume (veh/h)	160	110	20	140	60	20	30	1890	100	20	880	70
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	180	124	22	173	74	25	32	2032	108	23	1011	80
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	151	27	198	182	154	48	2205	1160	40	2188	1153
Arrive On Green	0.11	0.10	0.10	0.11	0.10	0.10	0.03	0.62	0.62	0.02	0.62	0.62
Sat Flow, veh/h	1781	1547	274	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	180	0	146	173	74	25	32	2032	108	23	1011	80
Grp Sat Flow(s),veh/h/ln	1781	0	1821	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.1	0.0	9.6	11.6	4.5	1.8	2.2	61.6	2.4	1.6	18.6	1.8
Cycle Q Clear(g_c), s	12.1	0.0	9.6	11.6	4.5	1.8	2.2	61.6	2.4	1.6	18.6	1.8
Prop In Lane	1.00		0.15	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	0	178	198	182	154	48	2205	1160	40	2188	1153
V/C Ratio(X)	0.90	0.00	0.82	0.87	0.41	0.16	0.66	0.92	0.09	0.58	0.46	0.07
Avail Cap(c_a), veh/h	199	0	271	198	277	235	97	2205	1160	73	2188	1153
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(l)	1.00	0.00	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	53.3	0.0	53.7	53.2	51.6	50.3	58.5	20.4	4.7	58.8	12.5	4.7
Incr Delay (d2), s/veh	38.0	0.0	11.1	32.3	1.5	0.5	14.3	7.8	0.2	12.8	0.7	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	7.5	0.0	4.9	7.0	2.2	0.7	1.2	25.9	0.8	0.8	7.3	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.3	0.0	64.8	85.4	53.0	50.8	72.9	28.3	4.9	71.6	13.2	4.9
LnGrp LOS	F	A	E	F	D	D	E	C	A	E	B	A
Approach Vol, veh/h		326			272			2172			1114	
Approach Delay, s/veh		79.4			73.4			27.7			13.9	
Approach LOS		E			E			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	79.9	18.0	16.4	7.8	79.3	18.1	16.3				
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	5.0	75.4	13.5	18.1	6.6	73.8	13.6	18.0				
Max Q Clear Time (g_c+1), s	13.6	63.6	13.6	11.6	4.2	20.6	14.1	6.5				
Green Ext Time (p_c), s	0.0	10.1	0.0	0.3	0.0	10.0	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay											31.3	
HCM 6th LOS											C	

HCM Unsignalized Intersection Capacity Analysis
 8: Escondido Boulevard & Citracado Parkway

08/31/2020

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Sign Control		Yield			Stop			Stop			Stop	
Traffic Volume (vph)	100	80	20	5	50	20	20	40	10	20	20	130
Future Volume (vph)	100	80	20	5	50	20	20	40	10	20	20	130
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	87	22	5	54	22	22	43	11	22	22	141
Direction, Lane #	EB 1	WB 1	NB 1	NB 2	SB 1							
Volume Total (vph)	218	81	22	54	185							
Volume Left (vph)	109	5	22	0	22							
Volume Right (vph)	22	22	0	11	141							
Hadj (s)	0.07	-0.12	0.53	-0.11	-0.40							
Departure Headway (s)	4.7	4.7	6.0	5.3	4.5							
Degree Utilization, x	0.28	0.11	0.04	0.08	0.23							
Capacity (veh/h)	722	709	565	630	754							
Control Delay (s)	9.6	8.2	8.0	7.6	8.8							
Approach Delay (s)	9.6	8.2	7.7		8.8							
Approach LOS	A	A	A		A							
Intersection Summary												
Delay			8.9									
Level of Service			A									
Intersection Capacity Utilization			41.1%	ICU Level of Service	A							
Analysis Period (min)			15									

APPENDIX G

PEAK HOUR INTERSECTION ANALYSIS WORKSHEETS – LONG-TERM WITH PROJECT

HCM 6th Signalized Intersection Summary
 1: Center City Parkway & Felicita Avenue

Long Term + Project AM
 01/07/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 		
Traffic Volume (veh/h)	660	600	330	200	530	70	400	797	160	160	632	260
Future Volume (veh/h)	660	600	330	200	530	70	400	797	160	160	632	260
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	688	625	344	260	688	91	449	896	180	174	687	283
Peak Hour Factor	0.96	0.96	0.96	0.77	0.77	0.77	0.89	0.89	0.89	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	749	720	396	334	730	424	491	1121	653	215	837	717
Arrive On Green	0.22	0.33	0.33	0.10	0.21	0.21	0.14	0.32	0.32	0.06	0.24	0.24
Sat Flow, veh/h	3456	2211	1217	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	688	502	467	260	688	91	449	896	180	174	687	283
Grp Sat Flow(s),veh/h/ln	1728	1777	1651	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	17.5	23.9	23.9	6.6	17.2	4.0	11.5	20.8	6.8	4.5	16.5	10.7
Cycle Q Clear(g_c), s	17.5	23.9	23.9	6.6	17.2	4.0	11.5	20.8	6.8	4.5	16.5	10.7
Prop In Lane	1.00		0.74	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	749	579	538	334	730	424	491	1121	653	215	837	717
V/C Ratio(X)	0.92	0.87	0.87	0.78	0.94	0.21	0.91	0.80	0.28	0.81	0.82	0.39
Avail Cap(c_a), veh/h	749	579	538	365	730	424	491	1121	653	215	837	717
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	28.5	28.5	39.7	35.2	25.6	38.1	28.2	17.5	41.7	32.6	16.4
Incr Delay (d2), s/veh	16.4	13.2	14.1	9.6	20.4	0.2	21.5	6.0	1.0	20.2	8.9	1.6
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	8.9	11.9	11.2	3.2	9.3	1.5	6.3	9.4	2.6	2.5	7.9	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.9	41.8	42.6	49.3	55.6	25.8	59.6	34.2	18.6	61.8	41.5	18.1
LnGrp LOS	D	D	D	D	E	C	E	C	B	E	D	B
Approach Vol, veh/h		1657			1039			1525			1144	
Approach Delay, s/veh		45.8			51.4			39.8			38.8	
Approach LOS		D			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	10.1	32.9	13.2	33.8	17.3	25.7	24.0	23.0				
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	5.6	28.4	9.5	28.5	12.8	21.2	19.5	18.5				
Max Q Clear Time (g_c+I1), s	6.5	22.8	8.6	25.9	13.5	18.5	19.5	19.2				
Green Ext Time (p_c), s	0.0	3.1	0.1	1.5	0.0	1.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			43.7									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

Long Term + Project AM
01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↓		↔	↑↑	↔	↔	↑↓		↔	↑↓	
Traffic Volume (veh/h)	100	500	140	140	1080	30	150	267	80	70	282	260
Future Volume (veh/h)	100	500	140	140	1080	30	150	267	80	70	282	260
Initial Q (Qb), 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
Work Zone On Approach		No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	111	556	156	157	1213	34	183	326	98	79	317	292
Peak Hour Factor	0.90	0.90	0.90	0.89	0.89	0.89	0.82	0.82	0.82	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	842	235	193	1273	658	213	813	241	102	424	379
Arrive On Green	0.06	0.31	0.31	0.11	0.36	0.36	0.12	0.30	0.30	0.06	0.24	0.24
Sat Flow, veh/h	3456	2742	767	1781	3554	1585	1781	2704	800	1781	1777	1585
Grp Volume(v), veh/h	111	360	352	157	1213	34	183	212	212	79	317	292
Grp Sat Flow(s),veh/h/ln	1728	1777	1732	1781	1777	1585	1781	1777	1726	1781	1777	1585
Q Serve(g_s), s	2.5	14.0	14.1	6.9	26.5	1.0	8.0	7.6	7.8	3.5	13.2	13.7
Cycle Q Clear(g_c), s	2.5	14.0	14.1	6.9	26.5	1.0	8.0	7.6	7.8	3.5	13.2	13.7
Prop In Lane	1.00		0.44	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	198	545	532	193	1273	658	213	535	519	102	424	379
V/C Ratio(X)	0.56	0.66	0.66	0.81	0.95	0.05	0.86	0.40	0.41	0.77	0.75	0.77
Avail Cap(c_a), veh/h	217	545	532	235	1273	659	213	535	519	204	424	379
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	36.5	24.0	24.0	34.7	24.9	13.9	34.4	22.1	22.2	37.0	28.1	28.3
Incr Delay (d2), s/veh	2.7	2.9	3.1	16.1	15.4	0.0	28.1	2.2	2.4	11.7	11.4	14.1
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	1.1	6.0	6.0	3.8	13.1	0.4	5.0	3.4	3.4	1.8	6.7	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	39.2	26.9	27.1	50.8	40.3	13.9	62.5	24.3	24.5	48.7	39.4	42.4
LnGrp LOS	D	C	C	D	D	B	E	C	C	D	D	D
Approach Vol, veh/h		823			1404			607			688	
Approach Delay, s/veh		28.6			40.8			35.9			41.7	
Approach LOS		C			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.1	28.4	13.1	28.9	14.0	23.5	9.1	33.0				
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	19.4	10.5	23.0	9.5	19.0	5.0	28.5					
Max Q Clear Time (g_c+1), s	9.8	8.9	16.1	10.0	15.7	4.5	28.5					
Green Ext Time (p_c), s	0.0	1.8	0.1	2.5	0.0	1.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay											37.3	
HCM 6th LOS											D	

Intersection						
Int Delay, s/veh	53					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	310	58	850	80	52	1580
Future Vol, veh/h	310	58	850	80	52	1580
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	130	125	-
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	337	63	924	87	57	1717

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	1897	462	0	0	1011
Stage 1	924	-	-	-	-
Stage 2	973	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 61	547	-	-	681
Stage 1	347	-	-	-	-
Stage 2	~ 327	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 56	547	-	-	681
Mov Cap-2 Maneuver	~ 172	-	-	-	-
Stage 1	347	-	-	-	-
Stage 2	~ 300	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	420.4	0	0.3
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	172	547	681	-
HCM Lane V/C Ratio	-	-	1.959	0.115	0.083	-
HCM Control Delay (s)	-	-	\$ 496.7	12.4	10.8	-
HCM Lane LOS	-	-	F	B	B	-
HCM 95th %tile Q(veh)	-	-	25.6	0.4	0.3	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	3.7					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↖	↗		↖	↗	↗
Traffic Vol, veh/h	190	12	28	208	292	390
Future Vol, veh/h	190	12	28	208	292	390
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	207	13	30	226	317	424

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	603	317	741	0	-	0
Stage 1	317	-	-	-	-	-
Stage 2	286	-	-	-	-	-
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	462	724	866	-	-	-
Stage 1	738	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	444	724	866	-	-	-
Mov Cap-2 Maneuver	444	-	-	-	-	-
Stage 1	708	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	19.4	1.1	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	866	-	444	724	-	-
HCM Lane V/C Ratio	0.035	-	0.465	0.018	-	-
HCM Control Delay (s)	9.3	0	20	10.1	-	-
HCM Lane LOS	A	A	C	B	-	-
HCM 95th %tile Q(veh)	0.1	-	2.4	0.1	-	-

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			↗			↗	↗	↕		↗	↕	↗
Traffic Vol, veh/h	0	0	30	0	0	20	10	880	42	40	1740	70
Future Vol, veh/h	0	0	30	0	0	20	10	880	42	40	1740	70
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	75	75	75	70	70	70	87	87	87	81	81	25
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	40	0	0	29	11	1011	48	49	2148	280

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	1074	-	-	530	2428	0	0	1059	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	216	0	0	493	192	-	-	653	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	216	-	-	493	192	-	-	653	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	25.4		12.8		0.3		0.2	
HCM LOS	D		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	192	-	-	216	493	653	-	-
HCM Lane V/C Ratio	0.06	-	-	0.185	0.058	0.076	-	-
HCM Control Delay (s)	24.9	-	-	25.4	12.8	11	-	-
HCM Lane LOS	C	-	-	D	B	B	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.7	0.2	0.2	-	-

Intersection	
Intersection Delay, s/veh	11.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	42	40	10	20	20	60	10	112	10	80	266	10
Future Vol, veh/h	42	40	10	20	20	60	10	112	10	80	266	10
Peak Hour Factor	0.73	0.73	0.73	0.92	0.92	0.92	0.80	0.80	0.80	0.89	0.89	0.89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	58	55	14	22	22	65	13	140	13	90	299	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.9	9.3	9.7	13.3
HCM LOS	A	A	A	B

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	46%	20%	22%
Vol Thru, %	85%	43%	20%	75%
Vol Right, %	8%	11%	60%	3%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	132	92	100	356
LT Vol	10	42	20	80
Through Vol	112	40	20	266
RT Vol	10	10	60	10
Lane Flow Rate	165	126	109	400
Geometry Grp	1	1	1	1
Degree of Util (X)	0.234	0.195	0.159	0.531
Departure Headway (Hd)	5.116	5.566	5.26	4.779
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	706	648	684	744
Service Time	3.116	3.579	3.274	2.873
HCM Lane V/C Ratio	0.234	0.194	0.159	0.538
HCM Control Delay	9.7	9.9	9.3	13.3
HCM Lane LOS	A	A	A	B
HCM 95th-tile Q	0.9	0.7	0.6	3.2

HCM 6th Signalized Intersection Summary
7: Center City Parkway & Citracado Parkway

Long Term + Project AM
01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	32	40	266	160	15	20	772	30	10	1550	120
Future Volume (veh/h)	80	32	40	266	160	15	20	772	30	10	1550	120
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	92	37	46	309	186	17	21	821	32	12	1824	141
Peak Hour Factor	0.87	0.87	0.87	0.86	0.86	0.86	0.94	0.94	0.94	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	51	63	335	355	301	38	2050	1213	25	2024	1006
Arrive On Green	0.07	0.07	0.07	0.19	0.19	0.19	0.02	0.58	0.58	0.01	0.57	0.57
Sat Flow, veh/h	1781	758	943	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	92	0	83	309	186	17	21	821	32	12	1824	141
Grp Sat Flow(s),veh/h/ln	1781	0	1701	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	5.9	0.0	5.6	19.9	10.4	1.0	1.4	14.8	0.6	0.8	53.0	4.2
Cycle Q Clear(g_c), s	5.9	0.0	5.6	19.9	10.4	1.0	1.4	14.8	0.6	0.8	53.0	4.2
Prop In Lane	1.00		0.55	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	116	0	114	335	355	301	38	2050	1213	25	2024	1006
V/C Ratio(X)	0.79	0.00	0.73	0.92	0.52	0.06	0.56	0.40	0.03	0.49	0.90	0.14
Avail Cap(c_a), veh/h	203	0	262	343	436	369	76	2050	1213	76	2024	1006
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	0.00	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	53.8	0.0	53.4	46.6	42.5	38.7	56.6	13.6	3.3	57.2	22.2	8.5
Incr Delay (d2), s/veh	11.3	0.0	8.6	29.3	1.2	0.1	12.2	0.6	0.0	14.2	7.0	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	8.0	0.0	2.7	11.5	4.9	0.4	0.7	5.9	0.2	0.4	22.7	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.1	0.0	62.0	75.8	43.7	38.8	68.8	14.2	3.3	71.4	29.2	8.8
LnGrp LOS	E	A	E	E	D	D	E	B	A	E	C	A
Approach Vol, veh/h		175			512			874			1977	
Approach Delay, s/veh		63.6			62.9			15.1			28.0	
Approach LOS		E			E			B			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	61	71.9	26.5	12.3	7.0	71.0	12.1	26.7				
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	66.5	66.5	22.5	18.0	5.0	66.5	13.3	27.2				
Max Q Clear Time (g_c+1), s	16.8	16.8	21.9	7.6	3.4	55.0	7.9	12.4				
Green Ext Time (p_c), s	0.0	7.2	0.1	0.2	0.0	9.3	0.1	0.9				
Intersection Summary												
HCM 6th Ctrl Delay											31.6	
HCM 6th LOS											C	

Intersection												
Intersection Delay, s/veh	9.2											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	42	10	10	0	100	30	70	30	5	10	15	246
Future Vol, veh/h	42	10	10	0	100	30	70	30	5	10	15	246
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	46	11	11	0	109	33	76	33	5	11	16	267
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	8.7	9	9	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	68%	0%	4%
Vol Thru, %	0%	86%	16%	77%	6%
Vol Right, %	0%	14%	16%	23%	91%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	35	62	130	271
LT Vol	70	0	42	0	10
Through Vol	0	30	10	100	15
RT Vol	0	5	10	30	246
Lane Flow Rate	76	38	67	141	295
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.122	0.055	0.095	0.189	0.341
Departure Headway (Hd)	5.794	5.189	5.08	4.804	4.169
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	617	688	702	743	860
Service Time	3.542	2.937	3.137	2.853	2.206
HCM Lane V/C Ratio	0.123	0.055	0.095	0.19	0.343
HCM Control Delay	9.4	8.2	8.7	9	9.4
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.4	0.2	0.3	0.7	1.5

HCM 6th Signalized Intersection Summary
 1: Center City Parkway & Felicita Avenue

Long Term + Project PM
 01/07/2021

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	 		 	 		 	 	
Traffic Volume (veh/h)	370	410	290	240	620	50	520	493	200	220	867	390
Future Volume (veh/h)	370	410	290	240	620	50	520	493	200	220	867	390
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	435	482	341	253	653	53	565	536	217	253	997	448
Peak Hour Factor	0.85	0.85	0.85	0.95	0.95	0.95	0.92	0.92	0.92	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	457	491	346	296	711	470	580	1320	724	333	1066	685
Arrive On Green	0.13	0.25	0.25	0.09	0.20	0.20	0.17	0.37	0.37	0.10	0.30	0.30
Sat Flow, veh/h	3456	1990	1404	3456	3554	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	435	430	393	253	653	53	565	536	217	253	997	448
Grp Sat Flow(s),veh/h/ln	1728	1777	1618	1728	1777	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	11.2	21.7	21.7	6.5	16.2	2.2	14.6	10.0	7.8	6.4	24.6	20.1
Cycle Q Clear(g_c), s	11.2	21.7	21.7	6.5	16.2	2.2	14.6	10.0	7.8	6.4	24.6	20.1
Prop In Lane	1.00		0.87	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	457	438	399	296	711	470	580	1320	724	333	1066	685
V/C Ratio(X)	0.95	0.98	0.98	0.86	0.92	0.11	0.97	0.41	0.30	0.76	0.94	0.65
Avail Cap(c_a), veh/h	457	438	399	296	711	470	580	1320	724	449	1066	685
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	38.8	33.7	33.7	40.6	35.3	23.0	37.3	20.9	15.4	39.6	30.6	20.2
Incr Delay (d2), s/veh	30.2	38.0	40.8	21.1	17.0	0.1	30.9	0.9	1.1	5.1	15.8	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	6.6	13.7	12.8	3.6	8.5	0.8	8.5	4.2	2.9	2.9	12.5	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.9	71.7	74.6	61.7	52.3	23.2	68.1	21.9	16.4	44.8	46.4	25.0
LnGrp LOS	E	E	E	E	D	C	E	C	B	D	D	C
Approach Vol, veh/h		1258			959			1318			1698	
Approach Delay, s/veh		71.6			53.2			40.8			40.5	
Approach LOS		E			D			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	37.9	12.2	26.7	19.6	31.5	16.4	22.5				
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	11.7	30.4	7.7	22.2	15.1	27.0	11.9	18.0				
Max Q Clear Time (g_c+I1), s	8.4	12.0	8.5	23.7	16.6	26.6	13.2	18.2				
Green Ext Time (p_c), s	0.3	4.2	0.0	0.0	0.0	0.3	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			50.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary

2: Escondido Boulevard & Felicita Avenue

Long Term + Project PM
01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖↗	↑↓		↖↗	↑↑	↖	↖	↑↓		↖	↑↓	
Traffic Volume (veh/h)	80	730	50	290	1080	140	90	263	210	120	377	170
Future Volume (veh/h)	80	730	50	290	1080	140	90	263	210	120	377	170
Initial Q (Qb), 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
Work Zone On Approach		No										
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	91	830	57	305	1137	147	103	302	241	125	393	177
Peak Hour Factor	0.88	0.88	0.88	0.95	0.95	0.95	0.87	0.87	0.87	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	178	922	63	343	1472	796	131	452	352	156	603	268
Arrive On Green	0.05	0.27	0.27	0.19	0.41	0.41	0.07	0.24	0.24	0.09	0.25	0.25
Sat Flow, veh/h	3456	3374	232	1781	3554	1585	1781	1902	1479	1781	2392	1063
Grp Volume(v), veh/h	91	437	450	305	1137	147	103	282	261	125	291	279
Grp Sat Flow(s),veh/h/ln	1728	1777	1829	1781	1777	1585	1781	1777	1604	1781	1777	1679
Q Serve(g_s), s	2.2	20.4	20.4	14.4	23.8	4.4	4.9	12.4	12.8	5.9	12.6	12.9
Cycle Q Clear(g_c), s	2.2	20.4	20.4	14.4	23.8	4.4	4.9	12.4	12.8	5.9	12.6	12.9
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.92	1.00		0.63
Lane Grp Cap(c), veh/h	178	486	500	343	1472	796	131	423	381	156	448	423
V/C Ratio(X)	0.51	0.90	0.90	0.89	0.77	0.18	0.79	0.67	0.69	0.80	0.65	0.66
Avail Cap(c_a), veh/h	204	505	520	382	1562	836	167	423	381	176	448	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	39.8	30.2	30.2	33.9	21.7	11.8	39.3	29.8	29.9	38.6	28.8	28.9
Incr Delay (d2), s/veh	2.3	18.6	18.2	20.5	2.3	0.1	17.1	8.1	9.6	20.7	7.1	7.9
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	10.9	11.2	8.0	9.8	1.5	2.7	6.1	5.8	3.4	6.1	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	42.1	48.8	48.4	54.4	24.1	11.9	56.3	37.8	39.5	59.2	36.0	36.8
LnGrp LOS	D	D	D	D	C	B	E	D	D	E	D	D
Approach Vol, veh/h		978			1589			646			695	
Approach Delay, s/veh		48.0			28.8			41.5			40.5	
Approach LOS		D			C			D			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.1	25.0	21.1	28.1	10.8	26.2	8.9	40.2				
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	12.5	20.5	18.5	24.5	8.1	20.9	5.1	37.9				
Max Q Clear Time (g_c+1T), s	12.5	14.8	16.4	22.4	6.9	14.9	4.2	25.8				
Green Ext Time (p_c), s	0.0	1.7	0.2	1.1	0.0	1.8	0.0	6.7				
Intersection Summary												
HCM 6th Ctrl Delay											37.8	
HCM 6th LOS											D	

Intersection						
Int Delay, s/veh	38.8					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	160	53	1780	240	78	950
Future Vol, veh/h	160	53	1780	240	78	950
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	130	125	-
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	174	58	1935	261	85	1033

Major/Minor	Minor1	Major1	Major2		
Conflicting Flow All	2622	968	0	0	2196
Stage 1	1935	-	-	-	-
Stage 2	687	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22
Pot Cap-1 Maneuver	~ 19	254	-	-	237
Stage 1	~ 99	-	-	-	-
Stage 2	461	-	-	-	-
Platoon blocked, %			-	-	-
Mov Cap-1 Maneuver	~ 12	254	-	-	237
Mov Cap-2 Maneuver	~ 72	-	-	-	-
Stage 1	~ 99	-	-	-	-
Stage 2	296	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s\$	582.8	0	2.2
HCM LOS	F		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	-	-	72	254	237	-
HCM Lane V/C Ratio	-	-	2.415	0.227	0.358	-
HCM Control Delay (s)	-	-	\$ 768.2	23.3	28.4	-
HCM Lane LOS	-	-	F	C	D	-
HCM 95th %tile Q(veh)	-	-	16.7	0.9	1.5	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

Intersection						
Int Delay, s/veh	85.6					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↘	↗		↑	↑	↗
Traffic Vol, veh/h	340	28	43	643	298	230
Future Vol, veh/h	340	28	43	643	298	230
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	Stop	-	None	-	None
Storage Length	0	0	-	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	370	30	47	699	324	250

Major/Minor	Minor2	Major1	Major2			
Conflicting Flow All	1117	324	574	0	-	0
Stage 1	324	-	-	-	-	-
Stage 2	793	-	-	-	-	-
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	~ 229	717	999	-	-	-
Stage 1	733	-	-	-	-	-
Stage 2	446	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 211	717	999	-	-	-
Mov Cap-2 Maneuver	~ 211	-	-	-	-	-
Stage 1	677	-	-	-	-	-
Stage 2	446	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s\$	366.8	0.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	999	-	211	717	-	-
HCM Lane V/C Ratio	0.047	-	1.751	0.042	-	-
HCM Control Delay (s)	8.8	-	\$ 396.2	10.2	-	-
HCM Lane LOS	A	-	F	B	-	-
HCM 95th %tile Q(veh)	0.1	-	25.3	0.1	-	-

Notes
 -: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon

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	0	0	30	0	0	50	50	1910	260	60	1000	50
Future Vol, veh/h	0	0	30	0	0	50	50	1910	260	60	1000	50
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	-	-	Stop	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	-	-	0	90	-	-	70	-	200
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	63	63	63	84	84	84	94	94	94	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	48	0	0	60	53	2032	277	67	1124	56

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	-	-	562	-	-	1155	1180	0	0	2309	0	0
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy	-	-	6.94	-	-	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	-	-	-	-	-	-	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-	-	-	-	-	-	-
Follow-up Hdwy	-	-	3.32	-	-	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	0	0	470	0	0	190	588	-	-	214	-	-
Stage 1	0	0	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	0	0	-	-	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-	-	-	-	-	-	-
Mov Cap-1 Maneuver	-	-	470	-	-	190	588	-	-	214	-	-
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB		
HCM Control Delay, s	13.5		32.4		0.3		1.6		
HCM LOS	B		D						

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	588	-	-	470	190	214	-	-
HCM Lane V/C Ratio	0.09	-	-	0.101	0.313	0.315	-	-
HCM Control Delay (s)	11.7	-	-	13.5	32.4	29.4	-	-
HCM Lane LOS	B	-	-	B	D	D	-	-
HCM 95th %tile Q(veh)	0.3	-	-	0.3	1.3	1.3	-	-

Intersection	
Intersection Delay, s/veh	18
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	290	60	20	10	20	40	20	196	15	60	197	10
Future Vol, veh/h	290	60	20	10	20	40	20	196	15	60	197	10
Peak Hour Factor	0.88	0.88	0.88	0.75	0.75	0.75	0.81	0.81	0.81	0.88	0.88	0.88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	330	68	23	13	27	53	25	242	19	68	224	11
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	23	10.8	15.1	15.9
HCM LOS	C	B	C	C

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	9%	78%	14%	22%
Vol Thru, %	85%	16%	29%	74%
Vol Right, %	6%	5%	57%	4%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	231	370	70	267
LT Vol	20	290	10	60
Through Vol	196	60	20	197
RT Vol	15	20	40	10
Lane Flow Rate	285	420	93	303
Geometry Grp	1	1	1	1
Degree of Util (X)	0.491	0.715	0.167	0.523
Departure Headway (Hd)	6.203	6.126	6.449	6.207
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	579	593	554	580
Service Time	4.256	4.126	4.51	4.258
HCM Lane V/C Ratio	0.492	0.708	0.168	0.522
HCM Control Delay	15.1	23	10.8	15.9
HCM Lane LOS	C	C	B	C
HCM 95th-tile Q	2.7	5.9	0.6	3

HCM 6th Signalized Intersection Summary
 7: Center City Parkway & Citracado Parkway

Long Term + Project PM
 01/07/2021



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	160	116	20	143	64	20	30	1900	100	20	880	70
Future Volume (veh/h)	160	116	20	143	64	20	30	1900	100	20	880	70
Initial Q (Qb), 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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	180	130	22	177	79	25	32	2043	108	23	1011	80
Peak Hour Factor	0.89	0.89	0.89	0.81	0.81	0.81	0.93	0.93	0.93	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	199	157	27	197	187	159	48	2198	1156	40	2180	1149
Arrive On Green	0.11	0.10	0.10	0.11	0.10	0.10	0.03	0.62	0.62	0.02	0.61	0.61
Sat Flow, veh/h	1781	1559	264	1781	1870	1585	1781	3554	1585	1781	3554	1585
Grp Volume(v), veh/h	180	0	152	177	79	25	32	2043	108	23	1011	80
Grp Sat Flow(s),veh/h/ln	1781	0	1823	1781	1870	1585	1781	1777	1585	1781	1777	1585
Q Serve(g_s), s	12.2	0.0	10.0	12.0	4.8	1.8	2.2	62.9	2.4	1.6	18.7	1.8
Cycle Q Clear(g_c), s	12.2	0.0	10.0	12.0	4.8	1.8	2.2	62.9	2.4	1.6	18.7	1.8
Prop In Lane	1.00		0.14	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	0	184	197	187	159	48	2198	1156	40	2180	1149
V/C Ratio(X)	0.91	0.00	0.83	0.90	0.42	0.16	0.66	0.93	0.09	0.58	0.46	0.07
Avail Cap(c_a), veh/h	199	0	271	197	276	234	96	2198	1156	73	2180	1149
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	0.00	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	53.5	0.0	53.7	53.5	51.5	50.1	58.8	20.9	4.8	59.0	12.7	4.9
Incr Delay (d2), s/veh	38.8	0.0	12.5	37.1	1.5	0.5	14.4	8.5	0.2	12.8	0.7	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	7.6	0.0	5.2	7.4	2.4	0.7	1.2	26.7	0.8	0.8	7.4	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	0.0	66.2	90.7	53.0	50.6	73.2	29.4	5.0	71.9	13.4	5.0
LnGrp LOS	F	A	E	F	D	D	E	C	A	E	B	A
Approach Vol, veh/h		332			281			2183			1114	
Approach Delay, s/veh		80.4			76.5			28.8			14.0	
Approach LOS		F			E			C			B	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	7.2	79.9	18.0	16.8	7.8	79.3	18.1	16.7				
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	5.0	75.4	13.5	18.1	6.6	73.8	13.6	18.0				
Max Q Clear Time (g_c+1), s	13.6	64.9	14.0	12.0	4.2	20.7	14.2	6.8				
Green Ext Time (p_c), s	0.0	9.1	0.0	0.3	0.0	10.0	0.0	0.3				

Intersection Summary

HCM 6th Ctrl Delay		32.4										
HCM 6th LOS			C									

Intersection												
Intersection Delay, s/veh	9.1											
Intersection LOS	A											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕			↕	
Traffic Vol, veh/h	106	80	20	5	50	20	20	40	10	20	20	137
Future Vol, veh/h	106	80	20	5	50	20	20	40	10	20	20	137
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	115	87	22	5	54	22	22	43	11	22	22	149
Number of Lanes	0	1	0	0	1	0	1	1	0	0	1	0

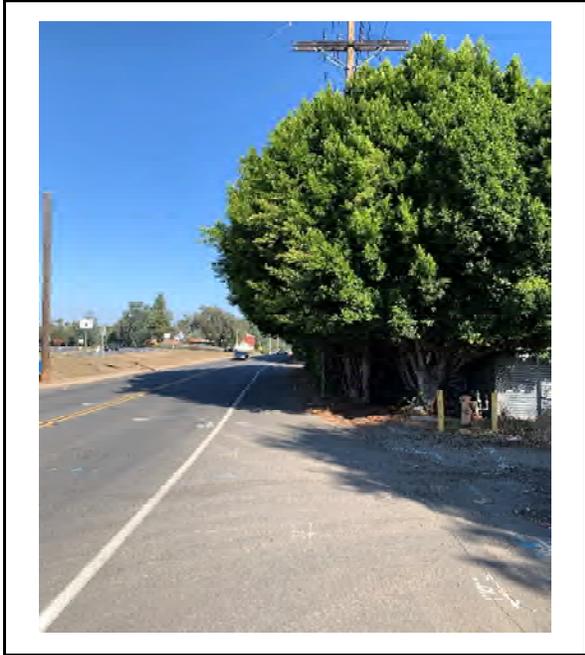
Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	1	1	1
HCM Control Delay	9.7	8.3	8.6	8.9
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1
Vol Left, %	100%	0%	51%	7%	11%
Vol Thru, %	0%	80%	39%	67%	11%
Vol Right, %	0%	20%	10%	27%	77%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	20	50	206	75	177
LT Vol	20	0	106	5	20
Through Vol	0	40	80	50	20
RT Vol	0	10	20	20	137
Lane Flow Rate	22	54	224	82	192
Geometry Grp	7	7	2	2	5
Degree of Util (X)	0.036	0.08	0.293	0.106	0.237
Departure Headway (Hd)	5.952	5.306	4.704	4.692	4.429
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	600	673	761	760	808
Service Time	3.702	3.056	2.747	2.745	2.471
HCM Lane V/C Ratio	0.037	0.08	0.294	0.108	0.238
HCM Control Delay	8.9	8.5	9.7	8.3	8.9
HCM Lane LOS	A	A	A	A	A
HCM 95th-tile Q	0.1	0.3	1.2	0.4	0.9

APPENDIX H

PHOTOS OF EXISTING SHOULDER ON S. ESCONDIDO BOULEVARD ALONG THE PROJECT FRONTAGE AND EXHIBIT DEPICTING THE PROPOSED AC SIDEWALK EXHIBIT

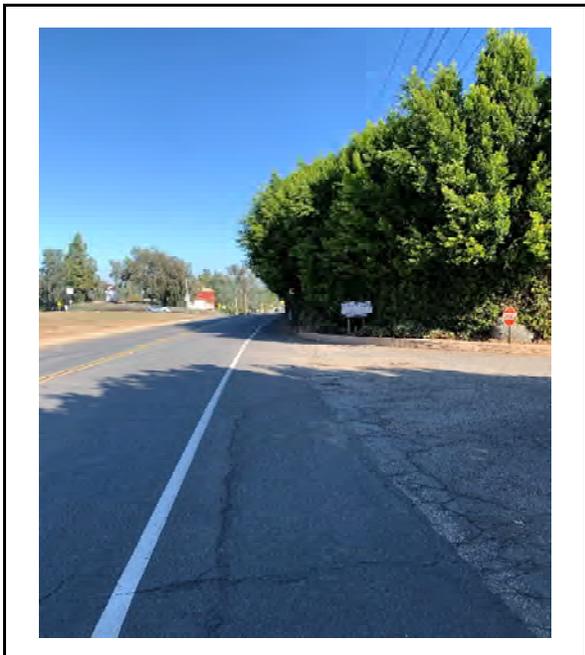
Canyon Crest Estates Mobile Home Park
(2100 S. Escondido Boulevard)



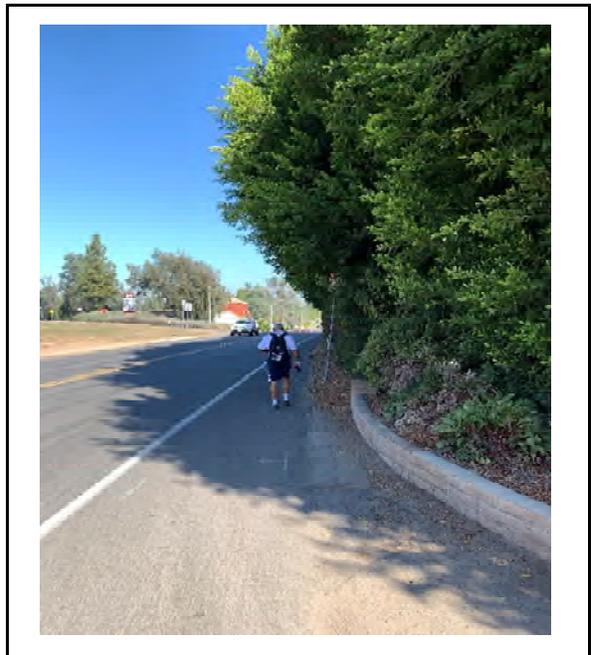
NWC of Project Looking North
Along S. Escondido Blvd.
11/18/2020



Looking North Just before Mobile
Home Park Entrance
11/18/2020

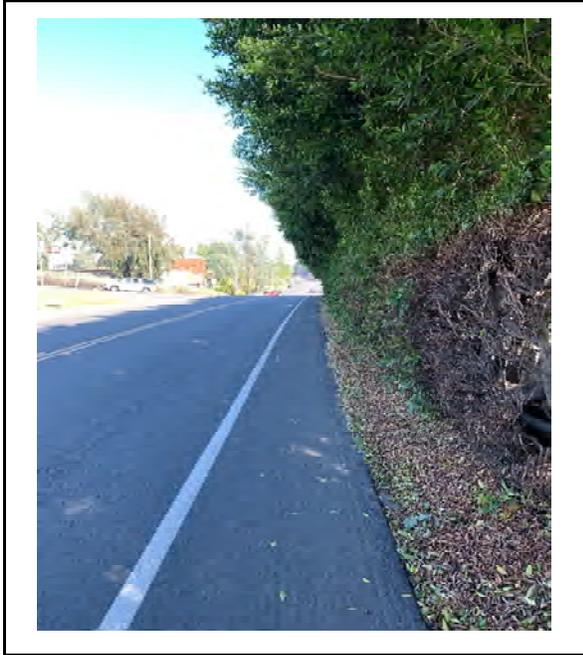


Looking North at Mobile Home
Park Entrance
11/18/2020

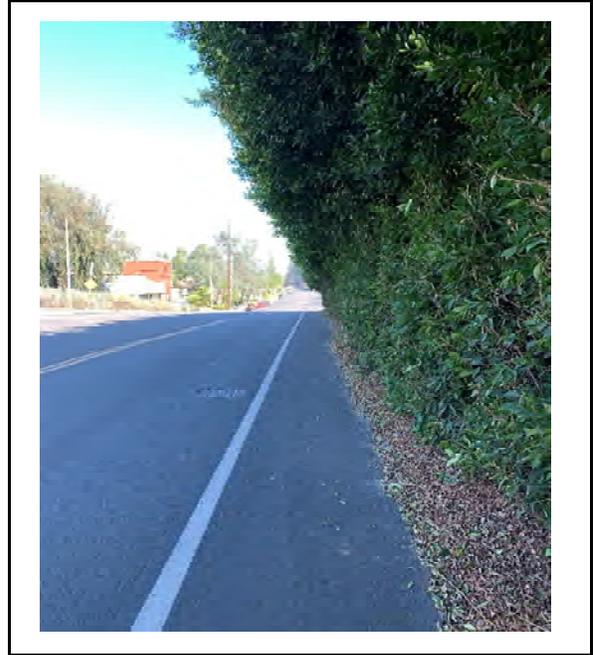


Looking North just after Mobile Home
Park Entrance
11/18/2020

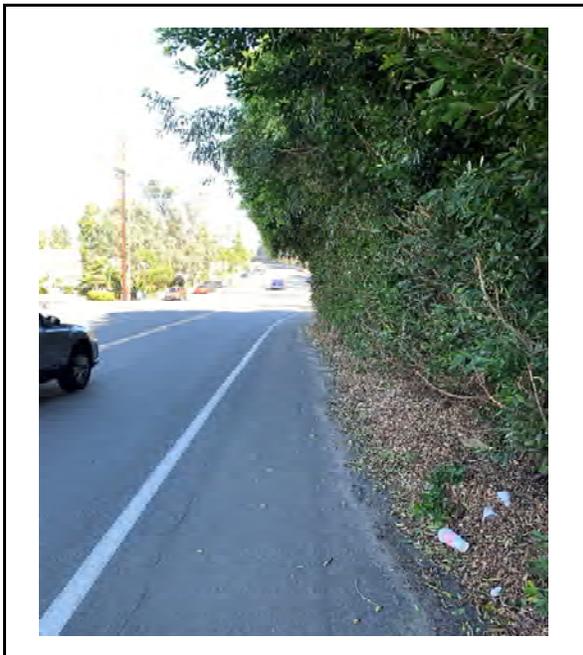
Canyon Crest Estates Mobile Home Park
(2100 S. Escondido Boulevard)



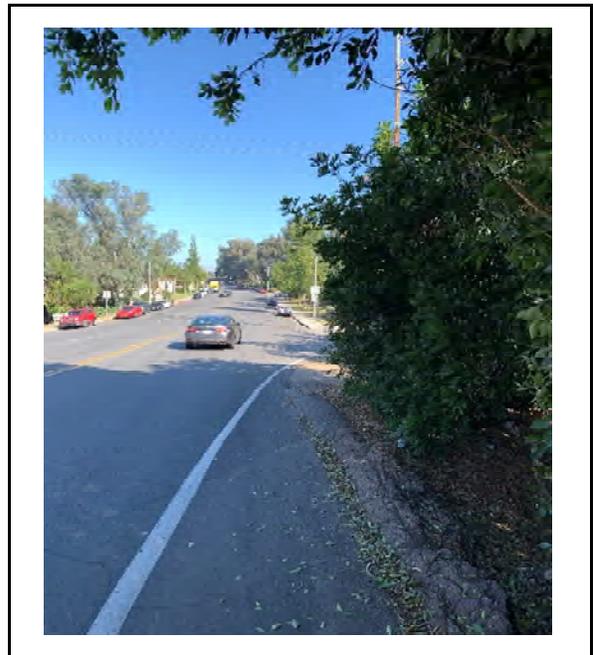
Continuing North Along
S. Escondido Blvd.
11/18/2020



Continuing North Along
S. Escondido Blvd.
11/18/2020



Continuing North Along
S. Escondido Blvd.
11/18/2020



Existing Sidewalk North of
Mobile Home Park Frontage
11/18/2020





SPEED
LIMIT
40

1st

1st



SPEED LIMIT
40

350

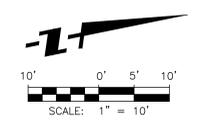
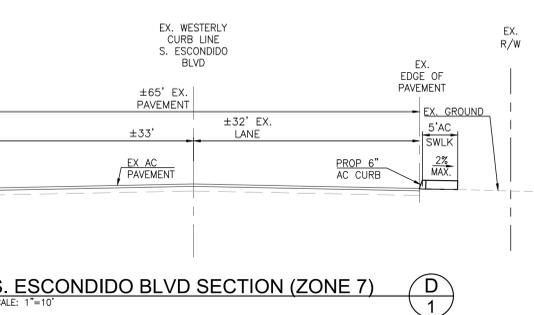
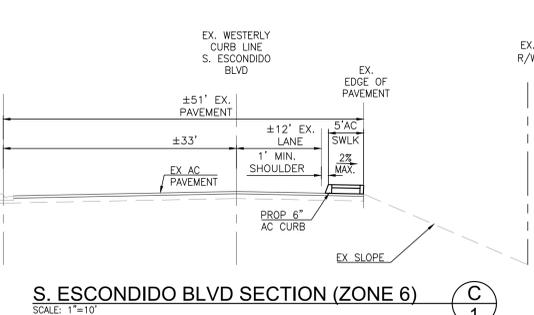
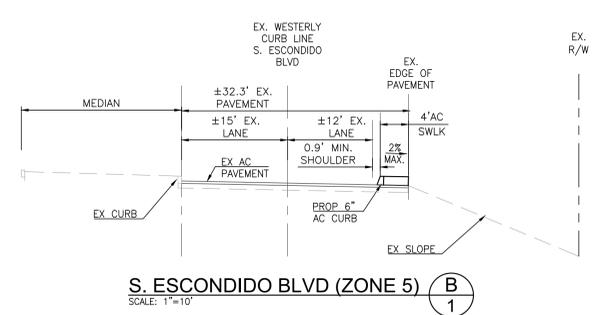
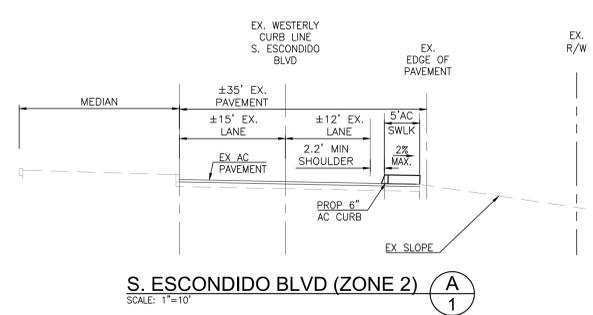
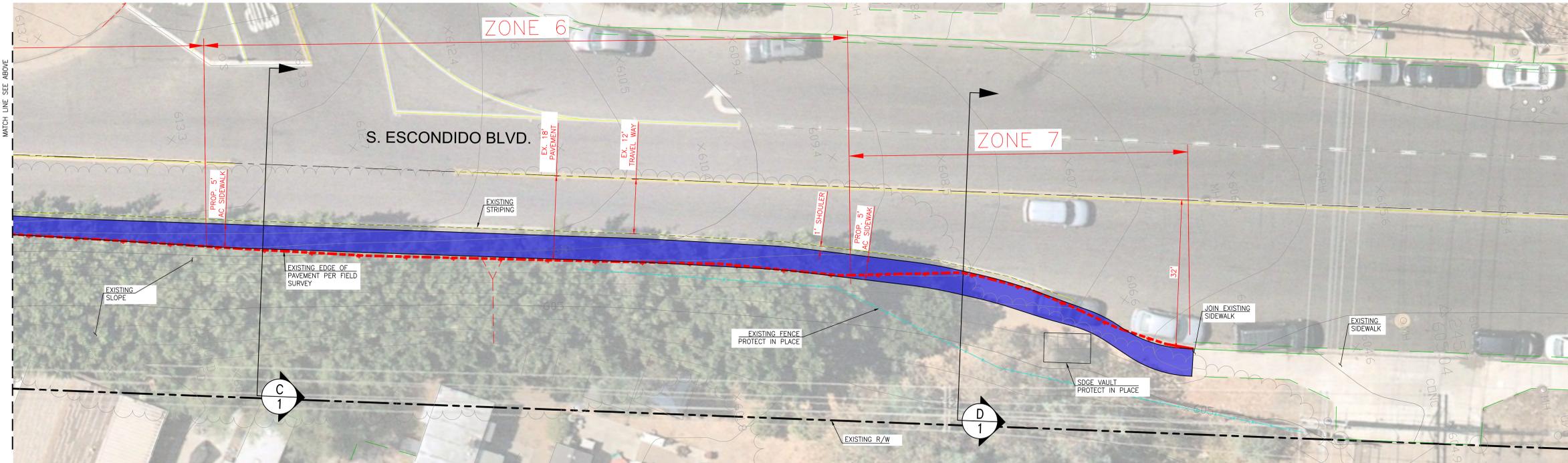
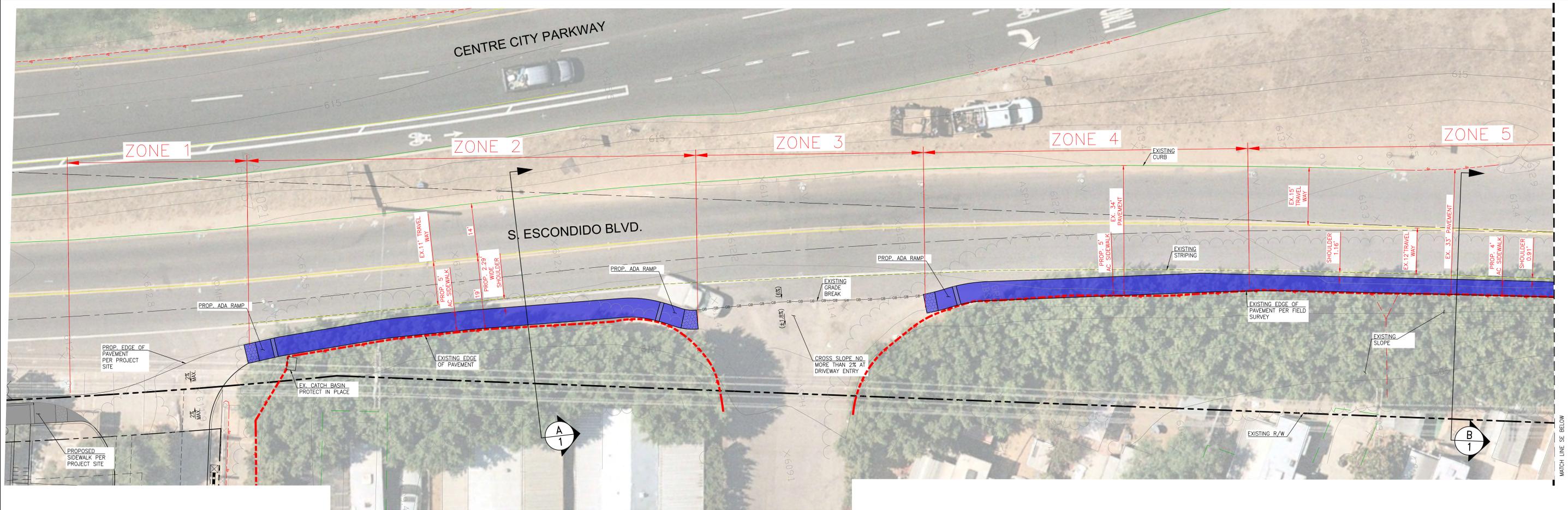


SPEED CHECKED BY RADAR
SPEED LIMIT 40





MUST USE
RIGHT SIDE
OF ROAD



PROPOSED AC SIDEWALK EXHIBIT
SUB20-0006

X ENGINEERING & CONSULTING, INC.
6 Hutton Centre Drive, Suite 650
Santa Ana, California 92707
949.522.7100 | xengineeringinc.com

MATCH LINE SEE BELOW

P:\1\1000\Exhibit\Exhibit 101-003 AC Sidewalk Exhibiting Plan.dwg | February 4, 2021 2:39 PM | Last Saved By: erichsener | Last Saved At: February 4, 2021 2:39 PM

APPENDIX I
ROUTE 350 MAP AND SCHEDULE

350

Escondido to Del Lago Transit Station via Westfield North County Mall

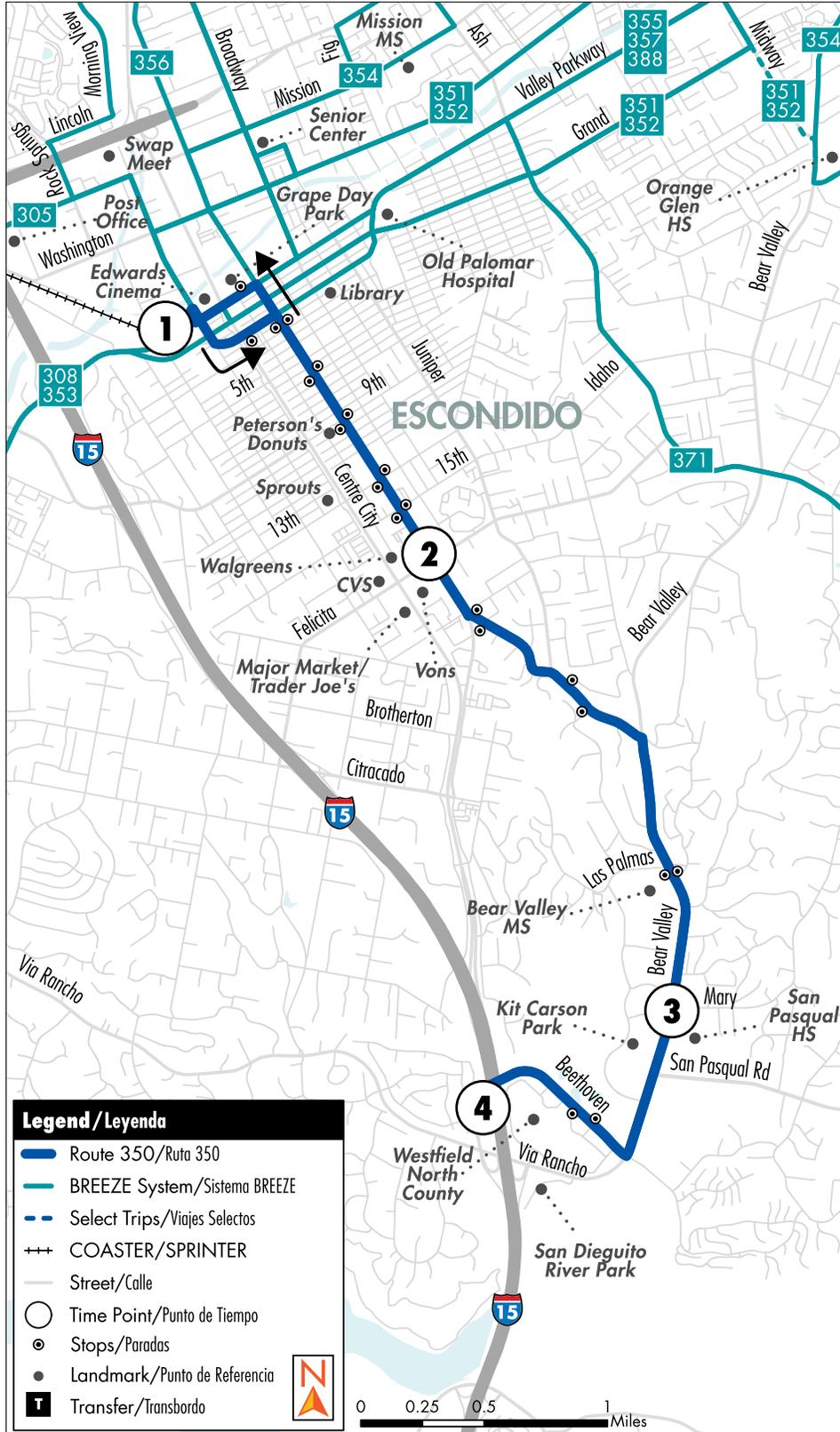
Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

M-F • SA • SU
L-V • SÁ • DO

Destinations / Destinos

- Kit Carson Park
- L.R. Green School
- Connect to MTS 235 or 280 for service to San Diego

- San Pasqual High School
- Bear Valley Middle School
- North County Mall



350**Escondido to Del Lago Transit Station via Westfield North County Mall**

Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

See pg. 6 for Holiday schedules/Ver pág. 236 para obtener los horarios de días festivos

Monday - Friday			
Southbound to Westfield North County Mall			
<i>Lunes a Viernes • Dirección hacia el sur a Westfield North County Mall</i>			
Escondido Transit Center	Escondido Bl. & Felicita Ave.	Bear Valley Pkwy. & Kit Carson Pk.	Del Lago Transit Station
1	2	3	4
4:23	4:30	4:35	4:40a
4:43	4:50	4:55	5:00
5:03	5:10	5:15	5:20
5:18	5:25	5:30	5:35
5:33	5:40	5:47	5:52
5:48	5:55	6:02	6:07
6:03	6:10	6:17	6:22
6:18	6:27	6:34	6:39
6:33	6:44	6:52	6:58
6:40	6:51	7:00	7:06
6:47	6:58	7:08	7:15
6:53	7:04	7:14	7:21
7:03	7:14	7:24	7:31
7:13	7:24	7:34	7:41
7:23	7:34	7:44	7:51
7:33	7:44	7:54	8:01
7:43	7:54	8:04	8:11
7:53	8:04	8:13	8:20
8:03	8:12	8:20	8:27
8:18	8:27	8:34	8:41
8:33	8:42	8:48	8:55
8:48	8:57	9:03	9:10
9:03	9:12	9:18	9:25
9:18	9:27	9:33	9:40
9:33	9:42	9:48	9:55
9:48	9:57	10:03	10:10
10:03	10:12	10:18	10:25
10:18	10:27	10:33	10:40
10:33	10:42	10:48	10:55
10:48	10:57	11:03	11:10
11:03	11:12	11:18	11:25
11:18	11:27	11:33	11:40
11:33	11:42	11:48	11:55

Trips operate only when San Pasqual High School is open. Trip operates on school days in regular school year (not during summer school).

Los viajes operan solamente cuando San Pasqual High School está abierto. El viaje opera los días escolares durante el año regular de clases (no durante el verano).

350**Escondido to Del Lago Transit Station via Westfield North County Mall**

Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

See pg. 6 for Holiday schedules/Ver pág. 236 para obtener los horarios de días festivos

Monday - Friday			
Southbound to Westfield North County Mall			
<i>Lunes a Viernes • Dirección hacia el sur a Westfield North County Mall</i>			
Escondido Transit Center	Escondido Bl. & Felicita Ave.	Bear Valley Pkwy. & Kit Carson Pk.	Del Lago Transit Station
1	2	3	4
11:48	11:57	12:03	12:10p
12:03	12:12	12:18	12:25
12:18	12:27	12:33	12:40
12:33	12:42	12:48	12:55
12:48	12:57	1:03	1:10
1:03	1:12	1:18	1:25
1:18	1:27	1:33	1:40
1:33	1:42	1:48	1:55
1:48	1:57	2:03	2:10
2:03	2:12	2:19	2:27
2:18	2:27	2:34	2:42
2:33	2:43	2:51	2:59
2:54	3:04	3:12	3:20
3:03	3:13	3:21	3:29
3:18	3:28	3:34	3:42
3:33	3:43	3:48	3:56
3:48	3:58	4:03	4:11
4:03	4:13	4:18	4:26
4:18	4:28	4:33	4:41
4:33	4:43	4:48	4:56
4:48	4:58	5:03	5:11
5:03	5:13	5:18	5:26
5:18	5:28	5:33	5:41
5:33	5:43	5:48	5:56
5:48	5:58	6:03	6:11
6:03	6:12	6:17	6:25
6:18	6:27	6:32	6:40
6:33	6:42	6:47	6:55
7:03	7:12	7:17	7:23
7:33	7:42	7:47	7:53
8:03	8:11	8:16	8:22
8:33	8:41	8:46	8:52
9:03	9:10	9:15	9:21
9:33	9:40	9:45	9:51

350**Escondido to Del Lago Transit Station via Westfield North County Mall**

Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

See pg. 6 for Holiday schedules/Ver pág. 236 para obtener los horarios de días festivos

Monday - Friday			
Northbound to Escondido			
<i>Lunes a Viernes • Dirección hacia el norte a Escondido</i>			
Del Lago Transit Station	Bear Valley Pkwy. & Kit Carson Pk.	Escondido Bl. & Felicita Ave.	Escondido Transit Center
4	3	2	1
4:40	4:43	4:49	4:58a
4:55	4:58	5:04	5:13
5:10	5:13	5:19	5:28
5:39	5:42	5:48	5:57
6:06	6:10	6:17	6:27
6:21	6:25	6:32	6:42
6:35	6:39	6:46	6:56
6:48	6:52	7:00	7:12
7:02	7:06	7:14	7:27
7:14	7:19	7:28	7:42
7:29	7:34	7:43	7:57
7:45	7:50	7:59	8:12
8:01	8:06	8:14	8:27
8:19	8:23	8:30	8:42
8:34	8:38	8:45	8:57
8:49	8:53	9:00	9:12
9:04	9:08	9:15	9:27
9:19	9:23	9:30	9:42
9:34	9:38	9:45	9:57
9:49	9:53	10:00	10:12
10:04	10:08	10:15	10:27
10:19	10:23	10:30	10:42
10:34	10:38	10:45	10:57
10:49	10:53	11:00	11:12
11:04	11:08	11:15	11:27
11:19	11:23	11:30	11:42
11:34	11:38	11:45	11:57
11:49	11:53	12:00	12:12p
12:04	12:08	12:15	12:27
12:19	12:23	12:30	12:42
12:34	12:38	12:45	12:57
12:48	12:52	12:59	1:11
1:04	1:08	1:15	1:27
1:19	1:23	1:30	1:42

350

Escondido to Del Lago Transit Station via Westfield North County Mall

Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

See pg. 6 for Holiday schedules/Ver pág. 236 para obtener los horarios de días festivos

Monday - Friday			
Northbound to Escondido			
<i>Lunes a Viernes • Dirección hacia el norte a Escondido</i>			
Del Lago Transit Station	Bear Valley Pkwy. & Kit Carson Pk.	Escondido Bl. & Felicita Ave.	Escondido Transit Center
4	3	2	1
*1:30	*1:34	*1:41	*1:53
1:33	1:37	1:44	1:56
1:44	1:49	1:57	2:11
1:59	2:05	2:14	2:30
2:14	2:21	2:31	2:49
2:25	2:33	2:44	3:03
**2:29	**2:37	**2:48	**3:08
2:38	2:46	2:57	3:17
2:49	2:57	3:08	3:28
**2:53	**3:01	**3:12	**3:32
**2:58	**3:06	**3:17	**3:37
3:09	3:16	3:26	3:44
3:23	3:29	3:37	3:52
3:32	3:38	3:45	3:58
3:42	3:48	3:55	4:08
3:52	3:58	4:05	4:18
4:02	4:08	4:15	4:28
4:16	4:22	4:29	4:42
4:31	4:37	4:44	4:57
4:46	4:52	4:59	5:12
5:01	5:07	5:14	5:27
5:16	5:22	5:29	5:42
5:31	5:37	5:44	5:57
5:47	5:52	5:59	6:12
6:02	6:07	6:14	6:27
6:18	6:23	6:30	6:42
6:34	6:38	6:45	6:57
7:05	7:09	7:15	7:27
7:35	7:39	7:45	7:57
8:05	8:09	8:15	8:27

* Operates Thursdays only.
Opera solamente los Jueves.

** Operates Monday, Tuesday, Wednesday, and Friday.
Opera Lunes, Martes, Miércoles y Viernes.

Trip operates on school days in regular school year (not during summer school).
El viaje opera los días escolares durante el año regular de clases (no durante el verano).

350**Escondido to Del Lago Transit Station via Westfield North County Mall**

Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

See pg. 6 for Holiday schedules/Ver pág. 250 para obtener los horarios de días festivos

Monday - Friday			
Northbound to Escondido			
<i>Lunes a Viernes • Dirección hacia el norte a Escondido</i>			
Del Lago Transit Station	Bear Valley Pkwy. & Kit Carson Pk.	Escondido Bl. & Felicita Ave.	Escondido Transit Center
4	3	2	1
8:36	8:40	8:46	8:57
9:06	9:10	9:16	9:27
9:40	9:44	9:49	9:57
10:40	10:43	10:48	10:55

350**Escondido to Del Lago Transit Station via Westfield North County Mall**

Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

See pg. 6 for Holiday schedules/Ver pág. 236 para obtener los horarios de días festivos

Saturday & Sunday			
Southbound to Westfield North County Mall			
<i>Sábado y Domingo • Dirección hacia el sur a Westfield North County Mall</i>			
Escondido Transit Center	Escondido Bl. & Felicita Ave.	Bear Valley Pkwy. & Kit Carson Pk.	Del Lago Transit Station
1	2	3	4
6:04	6:12	6:18	6:25a
6:56	7:04	7:10	7:17
7:34	7:42	7:49	7:57
8:04	8:12	8:19	8:27
8:34	8:42	8:49	8:57
9:04	9:12	9:19	9:28
9:35	9:44	9:51	10:00
10:04	10:13	10:20	10:29
10:34	10:43	10:50	10:59
11:04	11:13	11:20	11:29
11:34	11:43	11:50	11:59
12:04	12:13	12:20	12:29p
12:35	12:44	12:51	1:00
1:04	1:13	1:20	1:29
1:34	1:43	1:50	1:59
2:04	2:13	2:20	2:29
2:34	2:43	2:50	2:59
3:04	3:13	3:20	3:29
3:34	3:43	3:50	3:59
4:04	4:13	4:20	4:29
4:34	4:43	4:50	4:59
5:04	5:12	5:18	5:26
5:34	5:42	5:48	5:56
6:04	6:12	6:18	6:26
6:34	6:42	6:48	6:56
7:04	7:12	7:18	7:24
7:34	7:42	7:48	7:54
8:34	8:42	8:48	8:54
9:34	9:41	9:47	9:53

350**Escondido to Del Lago Transit Station via Westfield North County Mall**

Escondido a la Estación de Tránsito Del Lago vía Westfield North County Mall

See pg. 6 for Holiday schedules/Ver pág. 236 para obtener los horarios de días festivos

Saturday & Sunday Northbound to Escondido <i>Sábado y Domingo • Dirección hacia el norte a Escondido</i>			
Del Lago Transit Station	Bear Valley Pkwy. & Kit Carson Pk.	Escondido Bl. & Felicita Ave.	Escondido Transit Center
4	3	2	1
6:27	6:31	6:38	6:50a
7:30	7:34	7:41	7:53
8:00	8:04	8:11	8:24
8:30	8:34	8:41	8:54
8:58	9:02	9:09	9:22
9:30	9:34	9:41	9:54
10:01	10:06	10:13	10:26
10:30	10:35	10:42	10:55
11:00	11:05	11:12	11:25
11:30	11:35	11:42	11:56
12:00	12:05	12:12	12:26p
12:30	12:35	12:43	12:57
1:01	1:06	1:14	1:28
1:30	1:35	1:43	1:57
2:00	2:05	2:13	2:27
2:30	2:35	2:43	2:57
3:00	3:05	3:13	3:27
3:30	3:35	3:43	3:57
4:00	4:05	4:13	4:27
4:30	4:35	4:43	4:57
5:00	5:05	5:13	5:27
5:29	5:34	5:42	5:56
5:59	6:04	6:12	6:25
6:31	6:36	6:42	6:55
7:01	7:06	7:12	7:25
7:34	7:39	7:45	7:55
8:02	8:07	8:13	8:23
9:02	9:06	9:12	9:22
10:11	10:15	10:20	10:28