

APPENDIX P

Transportation Impact Study

This Page Intentionally Left Blank.

Avila Ranch

Draft Transportation Impact Study

Prepared For: City of San Luis Obispo

Central Coast Transportation Consulting

895 Napa Avenue, Suite A-6

Morro Bay, CA 93442

(805) 316-0101

February 2016



Executive Summary

This study evaluates the potential transportation impacts of the Avila Ranch project located in the City of San Luis Obispo. The Project consists of 720 residential units and 15,000 square feet of neighborhood commercial space. The Project would generate 6,776 new daily trips, 414 new AM peak hour trips, and 616 new PM peak hour trips added to adjacent streets.

Fourteen intersections and six roadway segments were analyzed during the weekday morning (7-9 AM) and evening (4-6 PM) time periods, as shown on Figure 1.

The study locations were evaluated under six scenarios: Existing Conditions, Existing Plus Project, Near Term, Near Term Plus Project, Cumulative and Cumulative Plus Project. Project impacts are identified based on thresholds in the City of San Luis Obispo General Plan as well as Caltrans and the County of San Luis Obispo where appropriate. Impacts and mitigation measures are summarized below.

Existing Plus Project					
#	Location	Mode	Impact	Mitigation Measure	Phase
1	LOVR & 101 SB	Auto	Addition of project traffic exacerbates existing WB left turn queue exceeding capacity	Reconstruction of LOVR Interchange currently underway and mitigates this impact. This measure is programmed in the LOVR subarea fee and Citywide TIF.	1
2	South St. & Higuera	Auto	Addition of project traffic exacerbates NB right turn queue exceeding capacity	Extend NB right turn lane. Mitigation is not currently programmed.	1
4	Prado & Higuera	Auto	Addition of project traffic exacerbates existing NB left turn queue exceeding capacity.	Add a second NB left turn lane & widen Prado Rd. creek bridge west of Higuera. This measure is programmed in the MASP & AASP fee programs.	1
5	Tank Farm & Higuera	Auto	Addition of project traffic exacerbates existing SB left turn queue exceeding capacity.	Add a second SB left turn lane. Mitigation is not currently programmed.	1
6	Tank Farm & Higuera	Auto	Addition of project traffic exacerbates existing WB left turn queue exceeding capacity.	Add a second SB left turn lane. Mitigation is not currently programmed.	1
7	LOVR & Higuera	Auto	Addition of project traffic exacerbates existing EB left turn queue exceeding capacity.	Retime traffic signal once interchange reconstruction complete. Add directional signing to encourage project traffic to access the Ontario ramps to the south.	1
8	LOVR & Higuera	Auto	Addition of project traffic exacerbates existing SB right turn queue exceeding capacity.	Retime traffic signal once interchange reconstruction complete. Add directional signing to encourage project traffic to access the Ontario ramps to the south.	1

Existing Plus Project					
9	Buckley & Hwy 227	Auto	Addition of project traffic exacerbates existing NB left turn queue exceeding capacity.	Add a second NB & SB thru lane. Project shall pay its fair share to be determined by County & State	1
10	Buckley & Hwy 227	Auto	Addition of project traffic exacerbates NB thru volume exceeding capacity.	Add a second NB & SB thru lane. Project shall pay its fair share to be determined by County and State	1
11	Buckley & Hwy 227	Auto	Addition of project traffic exacerbates SB thru volume exceeding capacity.	Add a second NB & SB thru lane. Project shall pay its fair share to be determined by County and State	1
12	Higuera & Suburban	Auto	Westbound right turn queues exceed storage length with Project traffic.	Revise project proposal to extend shared westbound left/right turn lane to 250 feet by restriping roadway.	1
13	LOVR (450' N of Los Verdes Dr. to Higuera)	Auto	Volumes currently exceed capacity and the segment operates at LOS F during the PM peak hour. The addition of project traffic exacerbates this deficient condition.	The LOVR Interchange project does not include widening of NB LOVR from Higuera to 450' north of Los Verdes Drive, widening of this remaining section will address the impact.	1
14	Tank Farm & Horizon	Ped	Pedestrian level of service is below minimum GP thresholds. Project traffic does not affect this.	North side of Tank Farm is fenced farmland with insignificant pedestrian demand. Roundabout control would provide adequate pedestrian crossing when destinations are present on north side of road.	1
15	Vachell & Higuera	Ped	Pedestrian level of service is below minimum GP thresholds due to lack of pedestrian connectivity.	Restrict pedestrian crossings across Higuera Street and direct pedestrians to cross at LOVR or Suburban. Complete continuous sidewalk connection on Higuera between Vachell and LOVR.	1
16	LOVR & 101 SB	Bike	Bicycle level of service is below minimum GP thresholds. Addition of project traffic exacerbates this deficiency	Reconstruction of LOVR Interchange currently underway. This measure is programmed in the LOVR subarea fee and Citywide TIF.	1
17	Higuera (Buckley to LOVR)	Ped	Pedestrian level of service is below minimum GP thresholds due to lack of continuous sidewalk accessing project.	Install sidewalk and ADA ramps on the east side of Higuera to provide a continuous path of travel from Buckley to LOVR.	1
18	LOVR (101 NB Ramps to 450' N of Los Verdes Dr.)	Ped	Pedestrian level of service is below minimum GP thresholds. Low level of service is due to high vehicle volumes. Addition of project traffic is not expected to result in a noticeable degradation or contextual impact.	Install Class I path parallel to Higuera from Higuera & Buckley to LOVR (Bob Jones Octagon Barn Connection). This measure is not currently programed.	1
19	LOVR (450' N of Los Verdes Dr. to Higuera)	Ped	Pedestrian level of service is below minimum GP thresholds. Addition of project traffic is not expected to result in a noticeable degradation or contextual impact.	Reconstruction of LOVR Interchange currently underway. This measure is programmed in the LOVR subarea fee and Citywide TIF	1

Existing Plus Project					
20	Buckley Rd. (Higuera to Project Entrance)	Ped	Pedestrian level of service is below minimum GP thresholds.	Project proposes to construct parallel Class I facility prior to Phase 2 which would mitigate this impact.	2
21	Internal intersections & driveways.	Auto	Potentially significant safety impact at Earthwood and Venture due to closely spaced intersections. Potentially significant safety impact at high Density residential on Earthwood and commercial on Horizon due to unknown access point locations.	Intersections and driveways accessing arterial and collector streets shall follow the FHWA Access Management Manual in regards to spacing, shared driveways, and access restrictions to address potential safety impacts.	1-6
22	Venture Drive	Auto	Forecasted volumes exceed General Plan threshold for current street designation. Geometry conducive to speeding.	Amend general plan reclassifying Venture Drive to a residential collector. Implement residential trip reduction plan and traffic calming measures.	1
23	Earthwood Lane	Auto	Forecasted volumes exceed General Plan threshold for current street designation. Geometry conducive of speeding.	Amend General Plan reclassifying Earthwood Lane to a residential collector. Implement residential trip reduction plan and traffic calming measures.	1
24	Horizon Lane	Auto	Forecasted volumes exceed General Plan threshold for current street designation. Geometry conducive of speeding.	Amend General Plan reclassifying Horizon Ln. to a residential arterial from Buckley to Project boundary and to a Commercial Collector from the Project Boundary to Tank Farm. Implement residential trip reduction plan and traffic calming measures.	1
25	Vachell Lane	Auto	Forecasted volumes exceed General Plan threshold for current street designation.	Amend General Plan reclassifying Vachell Ln. to a commercial collector	1
26	Vachell Lane	Bike	Discontinuous Class II bicycle network providing access to Project area.	Install Class II bike lanes on Vachell between Higuera and Buckley	1
27	Suburban Rd.	Ped	Lack of pedestrian connectivity to Project area. Forecasted volumes exceed General Plan threshold for current street designation.	Install sidewalks and ADA ramps to complete a continuous pedestrian connection from Higuera to Earthwood Ln. Amend General Plan to designate Suburban Road as a commercial collector.	1
28	Buckley Rd.	Bike	The project proposes bike lane geometry that is inconsistent with the City's bicycle transportation plan.	Class II bike lanes along Buckley shall be at least 8' wide	1
29	Buckley Rd.	Bike	The project description has conflicting proposals for Bike facilities along Buckley Rd.	The project shall install bicycle facilities consistent with the Bicycle Transportation Plan.	1

Existing Plus Project					
30	All Phasing	Auto Bike Ped	Sequencing is not specified in the project description. Developing phases in an order not consistent with the phase numbering will invalidate this analysis and the recommended impacts.	Sequencing of the development phases shall be done in the order of the phase numbering.	1-6
31	Phases 1&2	Auto Bike	Constructing Buckley Extension as part of Phase 2 will cause the volume on Venture and Earthwood to exceed General Plan thresholds, route heavy commercial traffic thru the neighborhood, and not provide a bicycle route connection to the Project during Phase 1.	Public Vehicle Access to Phase 1 shall only be provided via Earthwood Ln & Suburban Rd. Access points at Vachell shall be restricted to emergency vehicle and bicycle & pedestrian traffic. Class II bike lanes shall be installed on Vachell from Buckley to S. Higuera. Left turn restrictions at Higuera & Vachell, extension of Buckley Rd., and full access from Project to Vachell Lane shall be provided prior to Phase 2.	1 & 2
32	Phases 4	Auto	Phase 4 will generate volumes that cause Earthwood Ln. to exceed General Plan thresholds.	Complete the Horizon lane connection to the north to provide a second route to Suburban lane prior to Phase 4.	4
		Bike Ped	Connecting Horizon/Jesperon to Buckley without frontage improvements on Buckley will create discontinuous bicycle and pedestrian access to the project from Buckley Rd.	Complete Buckley Rd. frontage improvements as part of Phase 4.	4

In addition to the Existing Plus Project impacts and mitigation, the following impacts are noted for Near Term Plus Project.

Near Term Plus Project					
	Location	Mode	Impact	Mitigation Measure	Phase
33	LOVR & Higuera	Auto	Project traffic exacerbates near term SB right turn queues exceeding capacity	Install second SB right turn lane. This measure is not currently programmed.	Post 4
34	Tank Farm & Horizon	Auto	The northbound approach would operate at LOS F both with and without the project.	Install a northbound right turn lane.	Post 4
35	Tank Farm & Higuera	Bike	Addition of project traffic exacerbates WB approach exceeding General Plan bicycle level of service threshold.	Project proposal to install parallel Class I paths from Buckley to Tank Farm mitigate this impact.	Post 4
36	LOVR & Higuera	Bike	Project traffic degrades the bicycle level of service to below City General Plan thresholds	Install Class I path parallel to Higuera from Higuera & Buckley to LOVR (Bob Jones Octagon Barn Connection). This measure is not currently programmed.	Post 4

Near Term Plus Project					
37	Buckley Rd. & Higuera	Bike	Project traffic exacerbates near term bicycle level of service being below General Plan thresholds.	Intersection is under County jurisdiction which has no Bicycle Level of Service Threshold. Installation of a parallel Class I path from LOVR to Higuera and Higuera to Broad as called for in the Bicycle Plan would mitigate this impact.	Post 4
38	Higuera (LOVR to Suburban)	Ped	Project traffic exacerbates near term pedestrian level of service being below General Plan thresholds.	Install Class I path parallel to Higuera from Higuera & Buckley to LOVR (Bob Jones Octagon Barn Connection). This measure is not currently programmed.	Post 4
39	LOVR (Higuera to 450' N Los Verdes)	Ped	Project traffic exacerbates near term pedestrian level of service being below General Plan thresholds.	Install Class I path parallel to Higuera from Higuera & Buckley to LOVR (Bob Jones Octagon Barn Connection). This measure is not currently programmed.	Post 4

In addition to the Existing and Near Term Plus Project impacts and mitigation, the following impacts are noted for Cumulative Plus Project.

Cumulative Plus Project					
	Location	Mode	Impact	Mitigation Measure	Phase
40	Prado & Higuera	Auto	Addition of project traffic exacerbates queues exceeding capacity for north, south, and west left turn movements.	Install two left turn pockets, two thru lanes, and a right turn pocket on all approaches. This measure is not currently programmed.	Post 4
41	Tank Farm & Higuera	Auto	Addition of project traffic exacerbates SB left turn queues exceeding capacity.	Install second SB left and second NB right turn lane with overlap phasing. This measure is not currently programmed.	Post 4
42	Tank Farm & Higuera	Auto	Addition of project traffic exacerbates WB left turn queues exceeding capacity	Install a second SB left turn lane and second NB right turn lane with overlap phasing. This measure is not currently programmed.	Post 4
43	Buckley & Vachell	Auto	The southbound approach would operate at LOS F during the PM peak hour with the Project in place and would meet the peak hour signal warrant.	Installation of a traffic signal or a single lane roundabout would provide acceptable operations.	Post 4
44	Prado & Higuera	Bike	Addition of project traffic exacerbates bicycle level of service exceeding General Plan threshold.	Installation of a parallel Class I path along Prado Rd. will mitigate this impact.	Post 4
45	LOVR & Higuera	Bike	Addition of project traffic exacerbates bicycle level of service exceeding General Plan threshold.	Presence of the existing parallel Class I paths between LOVR & Prado (Bob Jones) in addition to the installation of a new parallel Class I path between LOVR &	Post 4

Cumulative Plus Project					
				Higuera (Bob Jones Octagon Barn Connection) would mitigate this impact. This measure is not currently programmed.	

Details supporting these recommendations are provided in the body of this report.

Contents

Executive Summary	1
Contents	7
Introduction	8
Analysis Methods.....	7
Existing Conditions.....	9
Existing Plus Project Conditions	21
Near Term Conditions	46
Cumulative Conditions.....	57
Vehicle Miles Traveled	67
References.....	69
Figure 1: Project and Study Locations	5
Figure 2: Project Site Plan.....	6
Figure 3: Existing Peak Hour Volumes and Lane Configurations.....	20
Figure 4: Project Trip Distribution.....	25
Figure 5: Project Trip Assignment.....	26
Figure 6: Existing Plus Project Volumes Table 12 shows the 95 th percentile queues for key movements at the study intersections. Detailed queuing information is provided in Appendix B.	27
Figure 7: Near Term Projects	49
Figure 8: Near Term Volumes	50
Figure 9: Near Term Plus Project.....	51
Figure 10: Cumulative Plus Project Volumes	61
Appendix A: Traffic Counts	
Appendix B: Intersection LOS Calculation Sheets	
Appendix C: Segment LOS Calculation Sheets	
Appendix D: LOS Scenario Summary Tables	
Appendix E: Signal Warrant Sheets	
Appendix F: VMT Calculation Sheets	
Appendix G: Planning Area Daily Volume Estimates	

Introduction

This study evaluates the potential transportation impacts of the Avila Ranch project located in the City of San Luis Obispo. The Project includes 720 residential units (105 low density, 305 medium density, and 310 high density), and 15,000 square feet of neighborhood commercial space. No business park uses are included in this scenario, which is consistent with the development plan.

The project's location and study intersections are shown on **Figure 1**, while **Figure 2** the project's site plan. Study intersections were identified in consultation with City staff using the City's Travel Demand Model (TDM), which tracks trips from the project through the roadway network. The following intersections were analyzed during the weekday morning (7-9 AM) and evening (4-6 PM) time periods:

1. Los Osos Valley Road/US 101 SB Ramps (Caltrans)
2. Los Osos Valley Road/US 101 NB Ramps (Caltrans)
3. South Street/S Higuera Street (City of SLO)
4. Madonna Road/S Higuera Street (City of SLO)
5. Prado Road/S Higuera Street (City of SLO)
6. Tank Farm Road/S Higuera Street (City of SLO)
7. Tank Farm Road/Horizon Lane (City of SLO)
8. Suburban Road/S Higuera Street (City of SLO)
9. Vachell Lane/S Higuera Street (City of SLO)
10. Los Osos Valley Road/S Higuera Street (City of SLO)
11. Buckley Road/S Higuera Street (Future Intersections, SLO County)
12. Buckley Road/Vachell Lane (City of SLO)
13. Buckley Road/Project Entrance (Future Intersection, SLO County)
14. Buckley Road/Highway 227 (SLO County)

Vehicular, pedestrian, and bicycle levels of service are reported for each study intersection consistent with the City's Multimodal Transportation Impact Guidelines. The study segments were identified in consultation with City staff consistent with City policies. Six roadway segments were analyzed for vehicular, bicycle and pedestrian level of service:

1. S Higuera Street - Buckley Road to Los Osos Valley Road
2. S Higuera Street - Los Osos Valley Road to Suburban Road
3. S Higuera Street - Suburban Road to Tank Farm Road
4. Los Osos Valley Road - S Higuera Street to 450 feet north of Los Verdes Drive
5. Los Osos Valley Road -450 feet north of Los Verdes Drive to US 101 NB Ramps
6. Buckley Road - S Higuera Street to Project Entrance

The study locations were evaluated under these scenarios:

1. **Existing Conditions** reflects 2014/2015 traffic counts and the existing transportation network.
2. **Existing Plus Project** adds Project generated traffic to Existing Conditions volumes.
3. **Near Term Conditions** reflects 2014 traffic counts and the existing transportation network plus roadway improvements and approved and pending projects in the study area.
4. **Near Term Plus Project** adds Project generated traffic to Near Term Conditions volumes.
5. **Cumulative Conditions** represents future traffic conditions reflective of the buildout of land uses in the area, not including the proposed Project.

6. **Cumulative Plus Project** represents future traffic conditions reflective of the buildout of land uses in the area, including the proposed Project.

Each scenario is described in more detail in the appropriate chapter.

Figure 1: Project and Study Locations



Legend:




-  - Project Site
-  - Study Intersection
-  - Future Road

Figure 2: Project Site Plan



Source: RRM Design Group



February 2016

Avila Ranch

Analysis Methods

The analysis approach was developed based on the City of San Luis Obispo, County of San Luis Obispo, and Caltrans standards and policies.

City of San Luis Obispo Facilities

Facilities operated by the City of San Luis Obispo were evaluated using thresholds identified in the 2014 Circulation Element. Table 2 of the Circulation Element specifies that level of service (LOS) D or better operations shall be maintained for vehicular, bicycle, and transit modes in the study area. The minimum LOS standard is LOS C for pedestrians. The Circulation Element establishes priorities of each mode as presented in Table 1. Project impacts are considered significant if the project degrades a higher priority mode.

Detailed thresholds of significance are provided below.

Table 1: Modal Priorities for Level of Service ¹			
Priority	Residential Corridors & Neighborhoods	Commercial Corridors & Areas	Regional Arterial and Highway Corridors
1	Pedestrians	Vehicles	Vehicles
2	Bicycles	Bicycles	Transit
3	Vehicle	Transit	Bicycles
4	Transit	Pedestrians	Pedestrians

1. Source: Table 3 City of San Luis Obispo TIS Guidelines

Caltrans Facilities

Caltrans operates US Highway 101 and the US 101 ramp junctions with local roads. Caltrans strives to maintain operations at the LOS C/D threshold on state-operated facilities, where LOS C is acceptable but LOS D is not. If an existing State Highway facility is operating at LOS D, E, or F the existing service level should be maintained.

Table 2: Intersection Level of Service Thresholds							
Signalized Intersections ¹		Stop Sign Controlled Intersections ²		Two-Way Stop Sign Controlled ³		Pedestrian, Bicycle, and Transit Modes ⁴	
Control Delay (seconds/vehicle)	Level of Service	Control Delay (seconds/vehicle)	Level of Service	Control Delay (seconds/pedestrian)	Level of Service	LOS Score	Level of Service
≤ 10	A	≤ 10	A	≤ 5	A	≤ 2.00	A
> 10 - 20	B	> 10 - 15	B	> 5 - 10	B	> 2.00-2.75	B
> 20 - 35	C	> 15 - 25	C	> 10 - 20	C	> 2.75-3.50	C
> 35 - 55	D	> 25 - 35	D	> 20 - 30	D	> 3.50-4.25	D
> 55 - 80	E	> 35 - 50	E	> 30 - 45	E	> 4.25-5.00	E
> 80	F	> 50	F	> 45	F	> 5.00	F

1. Source: Exhibit 18-4 of the 2010 Highway Capacity Manual.
 2. Source: Exhibits 19-1 and 20-2 of the 2010 Highway Capacity Manual.
 3. Source: Exhibits 19-2 of the 2010 Highway Capacity Manual.
 4. Source: Exhibit 16-5 and 16-6 of the 2010 Highway Capacity Manual, assuming 60 ft²/p for pedestrian mode.

Intersection Analysis

The level of service thresholds for intersections and the pedestrian, bicycle, and transit modes based on the 2010 Highway Capacity Manual (HCM) are presented in Table 2.

The study intersections were analyzed with the Synchro 9 software package applying the 2010 HCM methods. Where 2010 HCM methods do not allow analysis of a specific lane or signal phasing configuration, the 2000 HCM methods were applied.

The study roadway segments were evaluated for pedestrians and bicycles using the LOS+ software which applies the 2010 HCM methods.

Thresholds of Significance

Caltrans Facilities: Operations degrade from LOS C or better to LOS D, E, or F; or the addition of project traffic increases delay at an intersection or segment operating at LOS D, E, or F.

City of San Luis Obispo Facilities:

Signalized intersections:

- Project traffic causes an intersection operating at LOS A, B, C, or D to degrade to LOS E or F for bicycles or autos or causes an intersection operating at LOS A, B, or C to degrade to LOS D, E, or F for pedestrians; or
- Project traffic increases auto volume-to-capacity ratio by 0.01 or more at an intersection currently operating at LOS E or F; or
- Project traffic degrades bicycle or pedestrian LOS at an intersection currently operating at an unacceptable level (LOS E or F for bicycles, LOS D, E, or F for pedestrians) or
- Project causes or exacerbates 95th percentile turning movement queues exceeding available turn pocket capacity.

Unsignalized intersections:

- Project traffic causes an intersection operating at LOS A, B, C, or D to degrade to unacceptable traffic conditions of LOS E or F; and V/C ratio is increased by .01 or more and signal warrants are met; or
- Project causes or exacerbates 95th percentile turning movement queues exceeding available turn pocket capacity.

Segments:

- Project traffic causes a segment operating at LOS A, B, C, or D to degrade to LOS E or F for bicycles or causes an intersection operating at LOS A, B, or C to degrade to LOS D, E, or F for pedestrians.

Pedestrian & Bicycle Facilities:

- The 2010 Highway Capacity Manual's Bicycle and Pedestrian level of service is a measure of comfort based on many different factors. The model used to calculate the LOS score can, under certain conditions, be very sensitive to minor changes that would otherwise not be noticed by pedestrians or cyclists. Professional engineering judgement is used to determine the significance threshold of a bicycle and pedestrian level of service impact based on the context and perceptibility of that impact.

County Facilities:

The County's Traffic Impact Study policies provide guidelines for identifying transportation impacts, with different standards for urban and rural areas. The project is located within the San Luis Obispo Urban Reserve Line, where LOS D is acceptable but LOS E or F is not.

Existing Conditions

This section describes the existing transportation system and current operating conditions in the study area.

EXISTING ROADWAY NETWORK

Highway 101 is a north-south facility connecting Washington to Southern California. It is a four-lane highway in the study area. In the study area Highway 101 is relatively level, and connects to the local roadway network via full access interchanges at Los Osos Valley Road and Madonna Road and a partial interchange with northbound on/off ramps at Prado Road.

Highway 227 is a north-south facility connecting San Luis Obispo to Arroyo Grande. It is a two-lane highway where it connects to Buckley Road as Broad Street. Where it connects to S Higuera Street as South Street, Highway 227 is a two-lane facility with a two-way left-turn lane classified as an arterial. Highway 227 serves residential, commercial, and agricultural areas as well as the San Luis Obispo Regional Airport. Highway 227 has varying grades and at-grade intersections.

Los Osos Valley Road is an arterial with four lanes toward the southeast and two lanes toward the northwest towards the coastal areas of Los Osos and Morro Bay. Los Osos Valley Road connects S Higuera Street to Highway 101 and various commercial and residential areas. Current expansion on the overpass will expand the facility to four lanes, these interchange improvements are not assumed in the existing or existing + project level of service calculations. The posted speed limit near the study area is 35 mph.

S Higuera Street is a north-south, four-lane arterial with a speed limit of 45 mph. S Higuera Street serves major retail, commercial, and residential areas.

Madonna Road is an east-west, four-lane arterial near the project area. The posted speed limit is 35 mph. Madonna Road connects S Higuera Street to Highway 101 and Los Osos Valley Road and serves mostly residential and retail land uses. ,.

Prado Road is an east-west, two-lane regional route with a posted speed limit of 40 mph. Prado Road currently connects Highway 101 northbound to S Higuera Street and residential and commercial areas.

Tank Farm Road is an east-west arterial roadway with a posted speed limit of 45 mph and a four-lane cross-section near S Higuera Street narrowing to two lanes near Long Street. Tank Farm Road connects S Higuera Street to Highway 227 and serves various commercial, retail, and residential areas.

Buckley Road is an east-west, two-lane arterial with a posted speed limit of 40 mph.

Suburban Road, Horizon Lane, and Vachell Lane are two-lane local streets serving residential and commercial areas. Running east-west, Suburban Road connects S Higuera Street to Horizon Lane. Running north-south, Vachell Lane connects S Higuera Street to Buckley Road and has a posted speed limit of 40 mph.

EXISTING PEDESTRIAN AND BICYCLE FACILITIES

Pedestrian facilities include sidewalks, crosswalks, multi-use paths, and pedestrian signals at signalized intersections. With the exception of Buckley Road, S. Higuera (Vachell to LOVR), and S. Higuera south of 450' south of LOVR all study streets have paved sidewalks on all or part of the segments within the study area. All signalized study intersections have pedestrian signals and/or crosswalk facilities with the exception of the Los Osos Valley Road/US 101 NB ramp.

Bicycle facilities in the study area consist of separated bicycle facilities (Class I paths), on-street striped bike lanes (Class II), and on-street shared bike lanes (Class III). The Bob Jones Trail, a Class I facility, runs from the Prado Road/S Higuera Street intersection toward the Highway 101 interchange of Los Osos Valley Road. Class II bike lanes are provided along all or part of Los Osos Valley Road, S Higuera Street, Madonna Road, Tank Farm Road, and Highway 227 as both South Street and Broad Street. Class III facilities are provided along Margarita Avenue.

EXISTING TRANSIT SERVICE

The San Luis Obispo Regional Transit Authority (RTA) and the City of San Luis Obispo Transit Division (SLO Transit) provide fixed route transit service to the study area. RTA route 10 and SLO Transit Routes 2, 4, and 5 provide service in the study area.

RTA Route 10 serves S Higuera within the study area, providing service from San Luis Obispo to Santa Maria. Along S Higuera, Route 10 stops at South Street, Margarita Avenue, and Suburban Road. Weekday service has one hour headways, Saturday service has near 3 hour headways, and Sunday service has near 4 hour headways.

SLO Transit Route 2 provides service from downtown San Luis Obispo to Suburban Road, with stops along S Higuera Street at Suburban Road, Tank Farm Road, Silver City, Hind Lane, Granada Drive, Prado Road, Margarita Avenue, Chumash Trailer, Elks Lane, Bridge Street, and South Street, and at the Prado Day Center on Prado Road. The Prado Day Center stop is not served in the evenings, and the Higuera at Margarita southbound stop is only served in the evenings. Route 2 provides service with 40 minute-headways, as well as hour headways in the weekday evenings from Labor Day to mid-June.

SLO Transit Route 4 runs west from South Street to Madonna Road within the study area. Nearest stops include Madonna Road at Madonna Plaza and South Street at Parker Street. Route 4 runs on 30 minute headways on weekdays, alternating between 4A and 4B, and hour headways on weekends. Route 4A does not serve Descanso stops off of Los Osos Valley Road, and Route 4B does not serve the Froom Ranch area of Los Osos Valley Road after noon.

SLO Transit Route 5 runs east from Madonna Road to South Street within the study area. Nearest stops include Madonna Road at Madonna Plaza and South Street at Parker Street. Route 5 runs on 30 minute headways on weekdays, alternating between 5A and 5B, and hour headways on weekends. Route 5A does not serve the Froom Ranch area of Los Osos Valley Road. . Route 5B serves all stops.

EXISTING TRANSPORTATION CONDITIONS

This section is divided into the following subsections: 1) automobile operations, 2) pedestrian and bicycle operations, and 3) transit operations.

1. Automobile Mode

Traffic counts for weekday AM and PM peak hour conditions were collected at the study intersections in 2014 and 2015. Traffic count sheets are provided in Appendix A.

Figure 3 shows the existing peak hour traffic volumes and lane configurations. Table 3 presents the LOS for the study intersections, with detailed calculation sheets included in Appendix B.

Table 3: Existing Intersection Auto Levels of Service				
Intersection	Peak Hour	V/C¹	Delay²	LOS³
1. Los Osos Valley Road/US 101 SB	AM	0.81	18.1	B
	PM	0.91	29.0	C
2. Los Osos Valley Road/US 101 NB	AM	0.83	12.5	B
	PM	0.72	11.9	B
3. South Street/S Higuera Street	AM	0.59	20.9	C
	PM	0.75	24.9	C
4. Madonna Road/S Higuera Street	AM	0.59	12.9	B
	PM	0.81	21.4	C
5. Prado Road/S Higuera Street	AM	0.55	16.7	B
	PM	0.73	21.3	C
6. Tank Farm Road/S Higuera Street	AM	0.62	25.8	C
	PM	0.70	23.9	C
7. Tank Farm Road/Horizon Lane	AM	0.49	0.4 (16.3)	A (C)
	PM	0.46	0.6 (18.3)	A (C)
8. Suburban Road/S Higuera Street	AM	0.50	5.6	A
	PM	0.70	11.1	B
9. Vachell Lane/S Higuera Street	AM	1.41	24.9 (>200)	C (F)
	PM	1.44	21.5 (>200)	C (F)
10. Los Osos Valley Road/S Higuera Street	AM	0.74	16.8	B
	PM	0.83	17.6	B
11. Buckley Road/S Higuera Street	AM	Future Intersection		
	PM	Future Intersection		
12. Buckley Road/Vachell Lane	AM	0.38	0.0	A
	PM	0.27	0.0	A
13. Buckley Road/Project Entrance	AM	Future Intersection		
	PM	Future Intersection		
14. Buckley Road/Highway 227	AM	0.76	19.1	B
	PM	0.88	35.7	D
1. Volume to capacity ratio reported for worst movement. 2. HCM 2010 average control delay in seconds per vehicle. 3. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay. Unacceptable operations shown in bold				

The following intersections operate below the desired service level:

- #9 Vachell Lane/S Higuera Street westbound approach operates at LOS F during both the AM and PM peak hours. This intersection satisfies signal warrants during both the AM and PM peak hours.
- #14 Buckley Road/Highway 227 operates at LOS D during the PM peak hour.

Table 4 shows the existing segment LOS for the study segments.

Table 4: Existing Segment Auto Levels of Service					
Segment	Peak Hour	Direction	Auto		
			V/C Ratio	LOS Score	LOS
S Higuera Street - Buckley Road to LOVR	AM	NB	0.49	2.55	B
		SB	0.41	2.55	B
	PM	NB	0.29	2.55	B
		SB	0.75	2.55	B
S Higuera Street - LOVR to Suburban Road	AM	NB	0.44	3.27	C
		SB	0.24	3.27	C
	PM	NB	0.33	3.27	C
		SB	0.52	3.27	C
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	0.34	2.86	C
		SB	0.20	2.86	C
	PM	NB	0.32	3.02	C
		SB	0.38	3.02	C
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	0.68	3.19	C
		SB	0.80	3.19	C
	PM	NB	1.32	3.19	F
		SB	0.58	3.19	C
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	0.68	3.19	C
		SB	1.59	3.19	F
	PM	NB	1.32	3.19	F
		SB	1.17	3.19	F
Buckley Road - S Higuera Street to Project Entrance	AM	NB	0.26	2.45	B
		SB	0.47	2.68	B
	PM	NB	0.26	2.45	B
		SB	0.33	2.68	B

1. HCM 2010 auto score and LOS.

The following segments operate below the desired service level:

- The northbound segment along LOVR from S Higuera Street to 450' north of Los Verdes Drive operates at LOS F during the PM peak hour due to volumes exceeding capacity along this single lane segment.
- LOVR, from 450' north of Los Verdes Drive to the US 101 northbound ramps operates at LOS F along the southbound portion during the AM and PM peak hour, and the northbound portion during the AM peak hour.

Table 5 presents the existing queues for the study intersections.

Table 5: Existing Queues				
Intersection	Movement²	Storage Length³	Peak Hour	Existing 95th Percentile Queues (feet)¹
1. Los Osos Valley Road/ US 101 SB	WBL	150	AM PM	#381 195
	SBT	Trap	AM PM	413 #648
2. Los Osos Valley Road/ US 101 NB	NBL	200	AM PM	34 54
3. South Street/ S Higuera Street	NBR	130	AM PM	28 169
4. Madonna Road/S Higuera Street	NBL	160	AM PM	109 #338
5. Prado Road/ S Higuera Street	NBL	250	AM	142
			PM	363
6. Tank Farm Road/ S Higuera Street	WBL	Trap	AM PM	196 #430
	SBL	250	AM PM	#279 #319
8. Suburban Road/ S Higuera Street	WBL/R	170	AM PM	61 185
	SBL	160	AM PM	24 27
10. Los Osos Valley Road/ S Higuera Street	EBL	Trap	AM PM	#398 221
	SBR	Trap	AM PM	82 #331
14. Buckley Road/ Highway 227	NBL	360	AM PM	227 #144
	NBT	Trap	AM PM	#1092 207
	SBT	Trap	AM PM	299 #1014

1. Queue length that would not be exceeded 95 percent of the time. Queues are reported only for turning movements where queues exceed storage capacity.
 2. Los Osos Valley Road shown as running north/south at the US 101 ramp junctions.
 3. 'Trap' denotes design where the through lane terminates in a turn lane.
 # 95th percentile volume exceeds capacity, queue may be longer.

Queuing issues and improvements to address them are discussed below:

Location	Queuing Issue	Corrective Measures
1. LOVR & 101 SB	The existing westbound left turn and southbound through queues currently exceed capacity.	Reconstruction of the interchange is underway at the time of this report and will improve this condition to an acceptable level so no further improvements are required.
3. South Street/S Higuera Street	The northbound right turn lane queues exceed storage during the PM peak hour.	The queue does not extend to the Madonna Road/S Higuera Street intersection. This condition will be improved when Prado Road is extended to Broad Street, providing a parallel route.
4. Madonna Road/S Higuera Street	The northbound left turn lane queues exceed storage during the PM Peak hour.	This condition will be improved when Prado Road is extended to Broad Street, providing a parallel route to South Street and Madonna Road.
5. Prado Road/S Higuera Street	The northbound left turn queues exceed available storage during the PM peak hour. This queue spills back into the two-way left-turn lane.	Adding a second northbound left turn lane would reduce this queue to less than 200 feet.. This improvement would also require widening the Prado Road bridge west of S Higuera Street to provide two receiving lanes. Project study and design is currently underway for the bridge widening, and the second left turn lane should be amended into the City's Traffic Impact Fee program during its next update.
6. Tank Farm Road/S Higuera Street	The southbound left turn queues at this intersection currently exceed the storage capacity.	The installation of a second southbound left turn lane would reduce queues to an acceptable level. Cost estimates have recently been prepared for this project for the Chevron Tank Farm EIR project, and should be amended into the City's Traffic Impact Fee program in the next TIF update. Installation of a westbound right turn overlap phase, which would further improve traffic operations at this location.
	The westbound left turn approach exceeds capacity during the PM peak hour.	Installation of a second southbound left turn lane as described above would reduce queues on this approach. This condition will also be improved when Prado Road is extended to Broad Street, providing a parallel route.
10. Los Osos Valley Road/S Higuera Street	The eastbound left turn movement exceeds capacity during the AM peak hour.	Adjusting signal timing would eliminate both queuing issues. The signal should be retimed once the interchange improvements are complete .
	The southbound right turn lane exceeds capacity during the PM peak hour.	
14. Buckley Road/Highway 227	The northbound left turn lane volume exceeds capacity during the PM peak hour.	Adding a second north and southbound through lane on State Route 227 would eliminate these deficiencies. This project is included in SLOCOG's 2014 Regional Transportation Plan as a constrained mid-term project. A project study report was prepared in 2006 evaluating the potential to widen State Route 227 from Aero Drive to Price Canyon Road. SLOCOG has funded an operational study in 2015 to guide the preparation of an environmental document (PAED) for the project.
	The northbound through movement exceeds capacity during the AM peak hour and exceeds 1,000 feet.	
	The southbound through movement exceeds capacity during the PM peak hour and exceeds 1,000 feet.	

2. Pedestrian and Bicycle Modes

Tables 6 and 7 shows the pedestrian and bicycle intersection operations under the existing conditions LOS for the study intersections. The following intersections operate below the desired service level for pedestrians:

- #7 Tank Farm Road/Horizon Lane operates at LOS F for pedestrians. This intersection is currently a driveway serving light industrial uses and serves minimal pedestrian demand. The north side of Tank Farm road is currently fenced farmlands with no pedestrian destinations therefore there is negligible pedestrian demand and no crossing treatments are provided.
- #9 Vachell Lane/S Higuera Street operates at LOS F for pedestrians. There is no sidewalk provided on the east side of Higuera between Vachell & LOVR. Pedestrians seeking to cross S Higuera Street would divert to either the Los Osos Valley Road or Suburban Road intersections, which are located less than 500 feet from Vachell Lane and provide crosswalks and pedestrian signals.

The following intersections operate below the desired service level for bicyclists:

- The southbound approach to Los Osos Valley Road/US 101 SB operates unacceptably at LOS E for bicycles. All other intersections operate at acceptable levels.

Table 6: Existing Intersection Pedestrian Levels of Service					
Intersection	Direction	Existing AM		Existing PM	
		LOS Score	LOS	LOS Score	LOS
1. Los Osos Valley/US 101 SB	NB	3.39	C	2.79	C
	SB	2.70	B	3.00	C
	EB	1.89	A	2.20	B
	WB	2.33	B	2.02	B
2. Los Osos Valley/US 101 NB	NB	2.56	B	2.63	B
	SB	2.60	B	2.71	B
	EB	2.34	B	2.40	B
3. South Street/S Higuera Street	NB	2.95	C	2.87	C
	SB	2.48	B	2.58	B
	EB	2.01	B	2.00	B
	WB	2.65	B	2.62	B
4. Madonna Road/S Higuera Street	NB	2.68	B	2.78	C
	SB	2.46	B	2.72	B
	EB	2.75	C	2.92	C
	WB	1.97	A	1.99	A
5. Prado Road/S Higuera Street	NB	2.67	B	2.85	C
	SB	2.67	B	2.74	B
	EB	2.27	B	2.32	B
	WB	2.25	B	2.24	B
6. Tank Farm Road/S Higuera Street	NB	2.93	C	3.07	C
	SB	2.65	B	2.78	C
	EB	1.98	A	1.99	A
	WB	2.75	B	2.80	C
7. Tank Farm Road/Horizon Lane	EB	>200	F	>200	F
	WB	>200	F	>200	F
8. Suburban Road/S Higuera	NB	2.86	B	3.02	C
	SB	2.74	C	2.85	C
	WB	2.07	B	2.17	B
9. Vachell Lane/S Higuera Street	NB	84.3	F	166.5	F
	SB	>200	F	>200	F
10. Los Osos Valley/S Higuera	NB	2.26	B	2.31	B
	SB	2.64	B	2.72	B
	EB	2.59	B	2.65	B
11. Buckley Road/S Higuera Street	-	Future Intersection			
12. Buckley Road/Vachell Lane	EB	0	A	0	A
	WB	0	A	0	A
13. Buckley Road/Project Entrance	-	Future Intersection			
14. Buckley/Highway 227	NB	2.92	C	2.91	C
	SB	2.80	C	2.76	C
	EB	2.13	B	2.19	B
	WB	1.74	A	1.76	A

1.HCM 2010 pedestrian/bicycle score and LOS.

Table 7: Existing Intersection Bicycle Levels of Service					
Intersection	Direction	Existing AM		Existing PM	
		LOS Score	LOS ²	LOS Score	LOS ²
1. Los Osos Valley/US 101 SB	NB	2.60	B	2.95	C
	SB	3.42	C	4.26	E
	WB	3.59	D	3.50	C
2. Los Osos Valley/US 101 NB	NB	3.29	C	4.05	D
	SB	4.11	D	4.09	D
	EB	2.59	B	2.60	B
3. South Street/S Higuera Street	NB	2.11	B	2.35	B
	SB	1.80	A	1.88	A
	EB	3.10	C	2.96	C
4. Madonna Road/S Higuera Street	WB	2.42	B	2.94	C
	NB	1.14	A	1.52	A
	SB	1.98	A	2.34	B
5. Prado Road/S Higuera Street	EB	3.37	A	2.89	C
	WB	1.22	C	1.37	A
	NB	1.42	A	1.77	A
6. Tank Farm Road/S Higuera Street	SB	1.66	A	1.68	A
	EB	2.90	C	2.75	B
	WB	2.69	B	2.89	C
7. Tank Farm Road/Horizon Lane	NB	1.64	A	3.08	C
	SB	1.40	A	2.95	C
	EB	2.86	C	2.76	C
8. Suburban Road/S Higuera	WB	2.18	B	4.01	D
	EB	N/A			
	WB	N/A			
9. Vachell Lane/S Higuera Street	NB	2.19	B	1.92	A
	SB	1.87	A	2.30	B
	WB	1.75	A	2.41	B
10. Los Osos Valley/S Higuera	NB	N/A			
	SB	N/A			
	EB	1.99	A	1.75	A
11. Buckley Road/S Higuera Street	SB	2.54	B	3.80	D
	EB	1.99	A	1.73	A
	-	Future Intersection			
12. Buckley Road/Vachell Lane	EB	N/A			
	WB	N/A			
13. Buckley Road/Project Entrance	-	Future Intersection			
	-	Future Intersection			
14. Buckley/Highway 227	NB	4.21	D	2.87	C
	SB	3.04	C	4.04	D
	EB	2.40	B	2.70	B
	WB	2.30	B	2.33	B

1.HCM 2010 pedestrian/bicycle score and LOS.
2.The 2010 HCM does not establish LOS standards for bicycles at two-way stop-controlled intersections.

Table 8 presents the existing pedestrian and bicycle LOS for the study segments.

Table 8: Existing Segment Pedestrian & Bicycle Levels of Service						
Segment	Peak Hour	Direction	Pedestrian		Bicycle	
			LOS Score	LOS	LOS	LOS
S Higuera Street - Buckley Road to LOVR	AM	NB	4.03	D	2.46	B
		SB	3.54	D	2.23	B
	PM	NB	3.38	C	2.07	B
		SB	4.08	D	2.54	B
S Higuera Street - LOVR to Suburban Road	AM	NB	3.01	C	2.48	B
		SB	2.42	B	2.14	B
	PM	NB	2.57	B	1.88	A
		SB	3.06	C	2.11	B
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	2.90	C	2.49	B
		SB	2.81	C	2.34	B
	PM	NB	2.90	C	2.49	B
		SB	2.89	C	2.42	B
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	2.78	C	2.38	B
		SB	2.90	C	2.38	B
	PM	NB	3.85	D	2.75	C
		SB	2.64	B	2.31	B
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	3.73	D	2.17	B
		SB	5.28	F	2.86	C
	PM	NB	4.87	E	2.71	B
		SB	4.64	E	2.70	B
Buckley Road - S Higuera Street to Project Entrance	AM	NB	4.30	E	3.45	C
		SB	4.32	E	3.69	D
	PM	NB	4.29	E	3.44	C
		SB	4.11	D	3.52	D

1. HCM 2010 pedestrian/bicycle score and LOS.

The following segments operate below the desired pedestrian service level:

- S. Higuera Street (Buckley Road to Los Osos Valley Road): operates at LOS D during the AM peak hour in the northbound direction, and during the PM peak hour in the southbound direction
- Los Osos Valley Road (S. Higuera Street to the 450' north of Los Verdes Drive) operates at LOS D during the PM peak hour in the northbound direction, and during both the AM and PM peak hour in the southbound direction
- Los Osos Valley Road (450' north of Los Verdes Drive to US 101 Northbound Ramp) operates at LOS D during the AM peak hour in the northbound direction, LOS E during the AM peak hour in the southbound direction, and LOS E during the PM peak hour in both directions.
- Buckley Road (S. Higuera Street to the Project Entrance) operates at LOS D during the both the AM and PM peak hour in both the northbound and southbound directions.

The study segments operate at an acceptable service level for bicycles.

3. Transit Mode

An acceptable transit LOS is primarily predicated on the presence of shelters and benches at bus stops, as well as the frequency and on-time performance of each route. The nearest bus stop is a timed stop for Route 2 of SLO Transit and Route 10 of RTA at the intersection of S Higuera Street/Suburban Road. The Project site is not directly served by any route. Route 2 currently operates with a 40 minute headway, while Route 10 operates with a 1 hour headway.

The City is currently updating their Short Range Transit Plan (SRTP) in coordination with RTA. The SRTP provides transit ridership data from 2013. SLO Transit's Route 2 operates with acceptable loading levels, and does not exceed 45 passengers (25% standees) at any time. The average passenger loading at the S Higuera Street/Suburban Road stop is 8 passengers with a peak of 17 passengers. A total of 89 daily boardings and alightings are reported for this stop.

The SRTP reports that RTA's Route 10 occasionally has standing load trips due to heavier service demand. The average passenger load at the South Higuera/Suburban Road stop is 17 passengers, with a peak of 30 passengers. A total of 36 daily boardings and alightings are reported for this stop.

The South Higuera/Suburban Street bus stop provides a shelter and bench for riders. This stop is roughly 1/2 mile from the closest point on the project site.

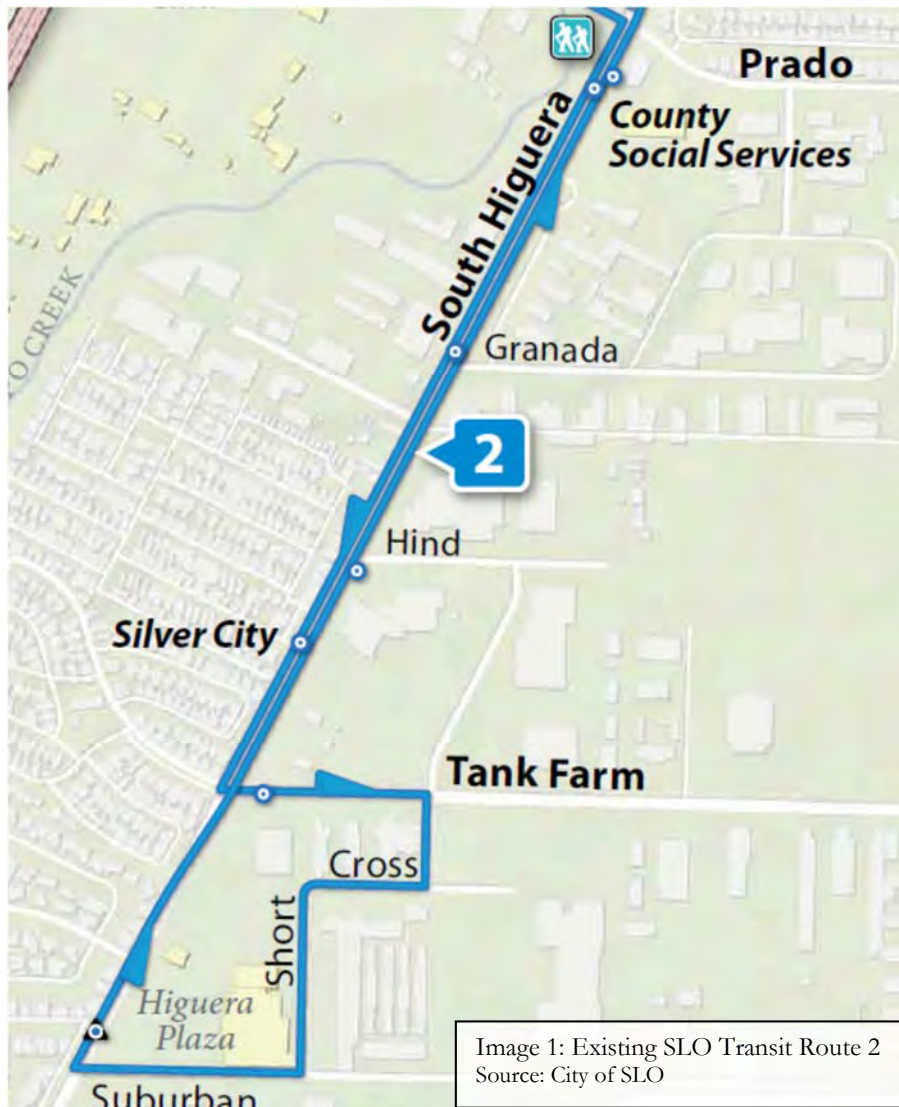
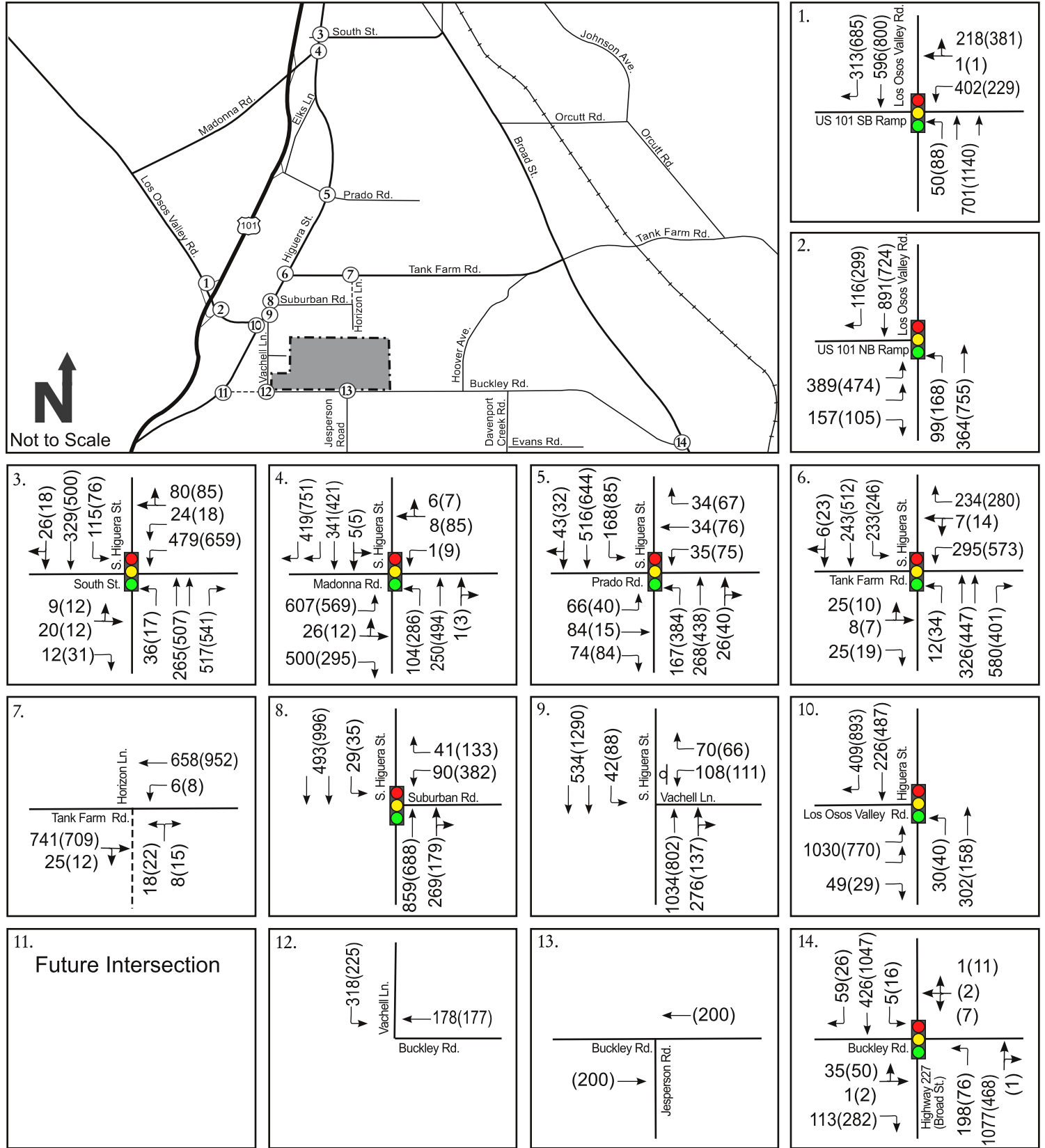


Figure 3: Existing Peak Hour Volumes and Lane Configurations



Legend:

- xx(yy) - AM(PM) Peak Hour Traffic Volumes
- Project Site
- Traffic Signal
- Study Intersection
- Future Road
- Stop Sign

Existing Plus Project Conditions

This section evaluates the impacts of the proposed Project on the surrounding transportation network.

PROJECT TRAFFIC ESTIMATES

The amount of project traffic affecting the study locations is estimated in three steps: trip generation, trip distribution, and trip assignment. Trip generation refers to the total number of trips generated by the site. Trip distribution identifies the general origins and destination of these trips, and trip assignment specifies the routes taken to reach these origins and destinations.

Trip Generation

The project’s trip generation estimate, shown in Table 9, was developed using data provided in the Institute of Transportation Engineers’ (ITE) *Trip Generation Manual*.

Land Use	Size	Number of Trips							
		Daily Trip Rate	Daily	AM			PM		
				In	Out	Total	In	Out	Total
Low Density Housing ¹	105 units	10.46	1,098	21	62	83	69	41	110
Medium Density Housing ²	305 units	5.56	1,697	21	105	126	101	49	150
High Density Housing ³	310 units	6.46	2,002	31	125	156	122	66	188
Neighborhood Commercial ⁴	15,000 s.f.	0.13	1,979	30	19	49	81	87	168
Net New Trips			6,776	103	311	414	373	243	616
Internal Capture Trips ⁶			-872	-4	-4	-8	-31	-31	-62
Trips added to adjacent streets			5,904	99	307	406	342	212	554

1. ITE Land Use Code #210, Single-Family Detached Housing. Fitted curve equations used.
 2. ITE Land Use Code #230, Residential Condominium/Townhouse. Fitted curve equations used.
 3. ITE Land Use Code #220, Apartment. Fitted curve equations used.
 4. ITE Land Use Code #820, Shopping Center. Fitted curve equation used.
 5. Internal capture estimates use ITE method for Daily trips and NCHRP method for AM and PM trips.
 Source: ITE *Trip Generation Manual*, 9th Edition, 2012; CCTC, 2015.

The Project generates 5,904 new daily trips, 406 new AM peak hour trips, and 554 new PM peak hour trips added to adjacent streets.

Trip Distribution and Assignment

The City of San Luis Obispo developed and maintains a citywide travel demand model (TDM) for use in forecasting travel demand. The TDM was applied to estimate the directions of approach and departure for project trips using a select zone procedure, which tracks trips to and from a specific Traffic Analysis Zone (TAZ) in the TDM. **Figure 4** shows the trip distribution percentages, and **Figures 5** show the project trip assignments. Existing Plus Project volumes are shown on **Figures 6**.

Project Proposal Improvements

The Project proposes the following improvements as a part of Phase 1:

- Venture Drive and Earthwood Lane extended so they intersect at a new roundabout on the Project site.

- Turn restrictions would be imposed at the Vachell Lane/S Higuera Street intersection, prohibiting left turns into and out of Vachell Lane.
- The westbound approach to the S Higuera Street/Suburban Road intersection would be restriped to provide a left turn lane and a shared left/right turn lane.

The Project proposes the extension of Buckley Road from Vachell Lane to S Higuera Street as a part of Phase 2 of the development. The County is requiring signalization of Buckley at Higuera therefore this intersection is assumed to be signalized as a part of the Buckley extension with single shared lane approaches per preliminary County comments (April 28, 2015) on the design of the Buckley Road extension.

The Project proposes the following bicycle and pedestrian facilities:

- Class I multi-use path on the north side of Buckley Road along the project frontage.
- Class I multi-use path along Tank Farm Creek through the project site.
- Class II bike lanes on Buckley Road along the project frontage and to S Higuera Street.
- Class II bike lanes along the project's frontage on Vachell Lane.
- Class II bike lanes with buffers along collector roads within the project site.
- Sidewalks on both sides of collector and local roads within the project site.

These improvements are consistent with the City's Bicycle Transportation Plan.

The Project proposes two new transit stops on the site, one on Venture Drive west of Earthwood Lane and the second on Jespersion Drive in the Town Center Plaza.

EXISTING PLUS PROJECT IMPACT ANALYSIS

1. Automobile Mode

Table 10 summarizes the auto intersection operating conditions under Existing and Existing Plus Project conditions.

Table 10: Existing and Existing Plus Project Intersection Levels of Service								
Intersection	Peak Hour	Existing No Project			Existing + Project			
		V/C ¹	Delay ²	LOS ³	V/C ¹	Delta	Delay ²	LOS ³
1. Los Osos Valley Road/US 101 SB	AM	0.81	18.1	B	0.82	0.01	18.8	B
	PM	0.91	29.0	C	0.95	0.04	33.8	C
2. Los Osos Valley Road/US 101 NB	AM	0.83	12.5	B	0.94	0.11	21.3	C
	PM	0.72	11.9	B	0.87	0.15	14.1	B
3. South Street/S Higuera Street	AM	0.59	20.9	C	0.59	0.00	21.4	C
	PM	0.75	24.9	C	0.76	0.01	25.0	C
4. Madonna Road/S Higuera Street	AM	0.59	12.9	B	0.59	0.00	12.9	B
	PM	0.81	21.4	C	0.82	0.01	21.5	C
5. Prado Road/S Higuera Street	AM	0.55	16.7	B	0.56	0.01	17.2	B
	PM	0.73	21.3	C	0.75	0.02	18.3	B
6. Tank Farm Road/S Higuera Street	AM	0.62	25.8	C	0.63	0.01	25.9	C
	PM	0.70	23.9	C	0.71	0.01	29.6	C
7. Tank Farm Road/Horizon Lane	AM	0.49	0.4 (16.3)	A (C)	0.51	0.02	0.4 (16.7)	A (C)
	PM	0.46	0.6 (18.3)	A (C)	0.48	0.02	0.6 (18.8)	A (C)
8. Suburban Road/S Higuera Street	AM	0.50	5.6	A	0.55	0.05	12.9	B
	PM	0.70	11.1	B	0.95	0.25	19.4	B
9. Vachell Lane/S Higuera Street	AM	1.41	24.9 (>200)	C (F)	0.44	-0.97	0.9 (17.3)	A (C)
	PM	1.44	21.5 (>200)	C (F)	0.45	-0.99	0.5 (14.7)	A (B)
10. Los Osos Valley Road/S Higuera Street	AM	0.74	16.8	B	0.88	0.14	21.8	C
	PM	0.83	17.6	B	0.85	0.02	20.1	C
11. Buckley Road/S Higuera Street	AM	Future Intersection			0.34	0.34	5.7	A
	PM	Future Intersection			0.90	0.90	7.1	A
12. Buckley Road/Vachell Lane	AM	0.38	0.0	A	0.57	0.19	9.8 (15.7)	A (C)
	PM	0.27	0.0	A	0.49	0.22	8.3 (15.2)	A (C)
13. Buckley Road/Project Entrance	AM	Future Intersection			0.08	0.08	7.6 (8.8)	A
	PM	Future Intersection			0.15	0.15	1.3 (11.0)	A (B)
14. Buckley Road/Highway 227	AM	0.76	19.1	B	0.76	0.00	19.5	B
	PM	0.88	35.7	D	0.88	0.00	36.5	D

1. Volume to capacity ratio reported for worst movement.
 2. HCM 2010 average control delay in seconds per vehicle.
 3. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay. Unacceptable operations shown in bold text.

The following intersection would operate below the desired service level:

- Intersection #14 Buckley Road/Highway 227 currently operates at LOS D, and the addition of project traffic would exacerbate this deficient condition by increasing delay. Installation of a second southbound through lane would provide LOS B or better operations. Therefore, the project would need to contribute its fair share in the intersection widening as mitigation of impacts.

Table 11 presents the auto segment LOS operating under Existing and Existing Plus Project conditions.

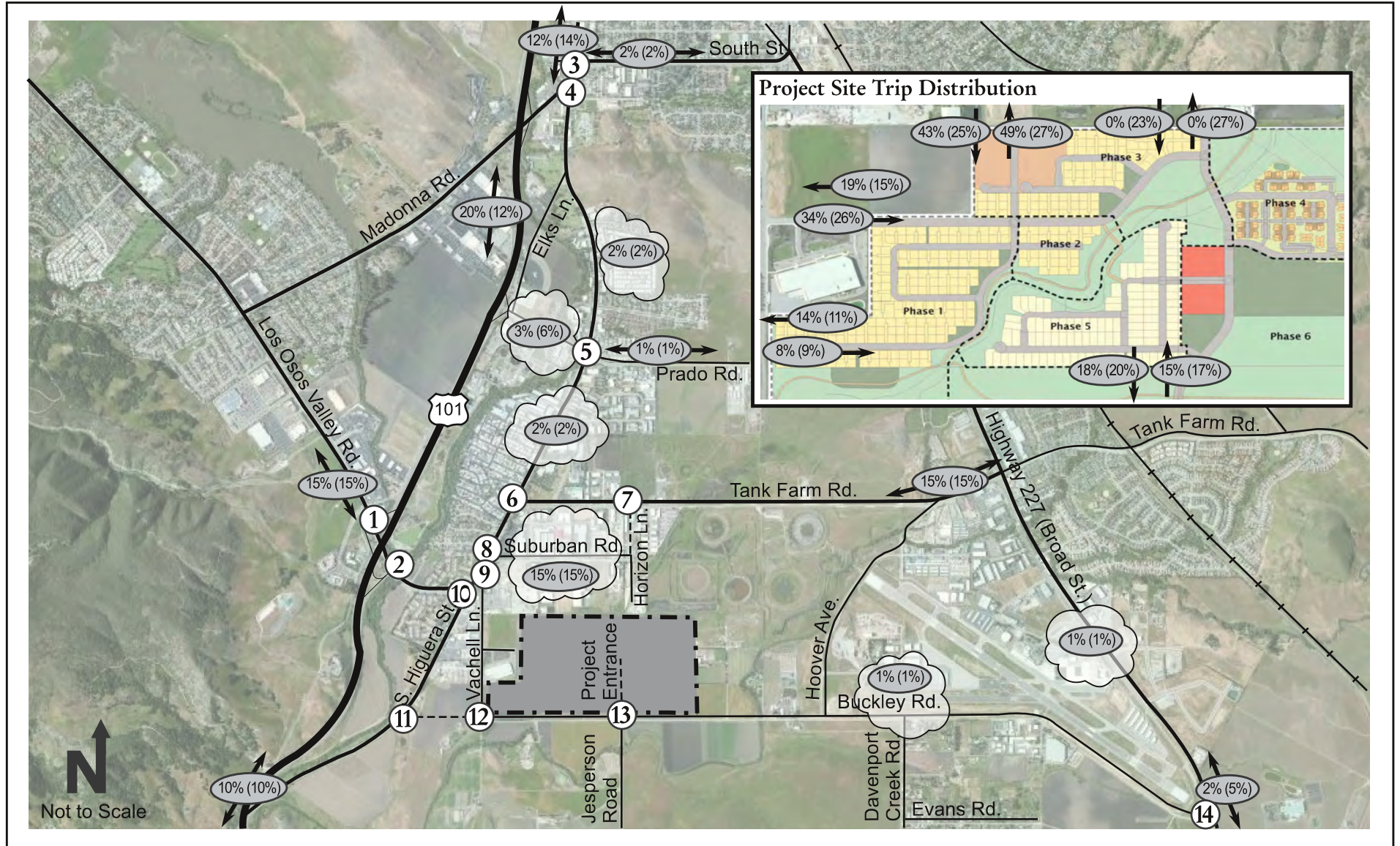
Table 11: Existing Plus Project Segment Auto Levels of Service								
Segment	Direction	Existing			Existing + Project			
		V/C	LOS	LOS	V/C	LOS	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	0.49	2.55	B	0.70	2.55	B
		SB	0.41	2.55	B	0.40	2.55	B
	PM	NB	0.29	2.55	B	0.35	2.55	B
		SB	0.75	2.55	B	0.83	2.55	B
S Higuera Street - LOVR to Suburban Road	AM	NB	0.44	3.27	C	0.46	3.27	C
		SB	0.24	3.27	C	0.24	3.27	C
	PM	NB	0.33	3.27	C	0.34	3.27	C
		SB	0.52	3.27	C	0.53	3.27	C
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	0.34	3.02	C	0.38	3.02	C
		SB	0.20	2.86	C	0.21	2.86	C
	PM	NB	0.32	3.02	C	0.35	3.02	C
		SB	0.38	3.02	C	0.43	3.02	C
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	0.68	3.04	C	0.83	3.19	C
		SB	0.8	3.19	C	0.82	3.19	C
	PM	NB	1.32	3.19	F	1.42	3.19	F
		SB	0.58	3.19	C	0.67	3.19	C
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	0.68	3.19	C	0.83	3.19	C
		SB	1.59	3.19	F	1.65	3.19	F
	PM	NB	1.32	3.19	F	1.42	3.19	F
		SB	1.17	3.19	F	1.35	3.19	F
Buckley Road - S Higuera Street to Project Entrance	AM	NB	0.26	2.45	B	0.42	2.45	B
		SB	0.47	2.68	B	0.54	2.68	B
	PM	NB	0.26	2.45	B	0.11	2.45	B
		SB	0.33	2.68	B	0.15	2.68	B

1. HCM 2010 auto score and LOS.

The following segments would operate below the desired service level:

- Los Osos Valley Road (S Higuera to northbound 101) volumes currently exceed capacity and the segment operates at LOS F during the PM peak hour. The addition of project traffic exacerbates this deficient condition. The LOVR Interchange project does not include widening of NB LOVR from Higuera to 450' north of Los Verdes Drive, widening of this remaining section will address the impact.

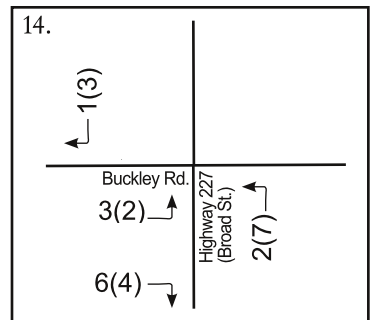
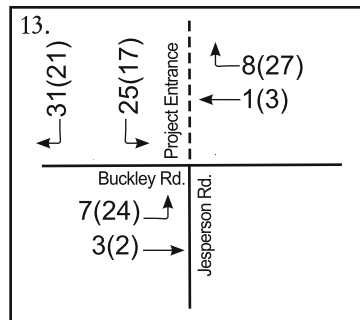
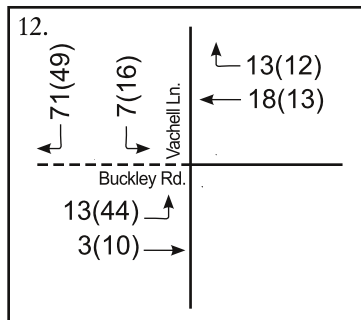
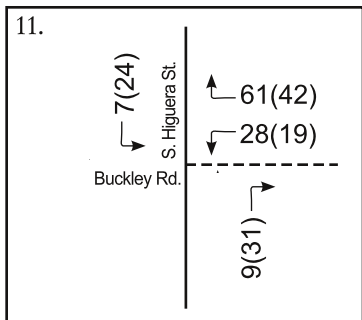
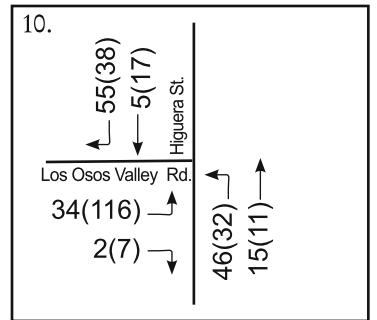
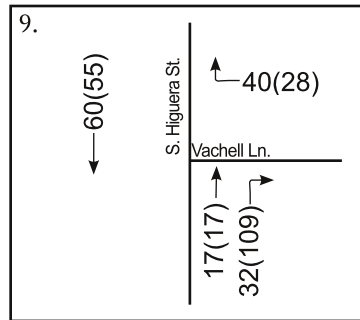
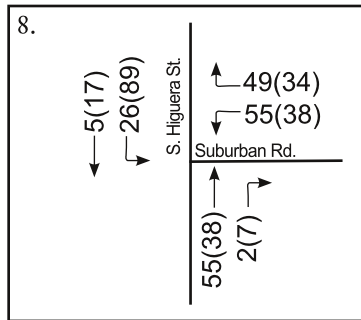
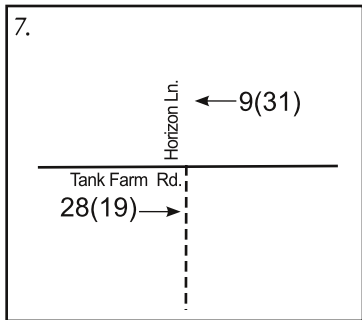
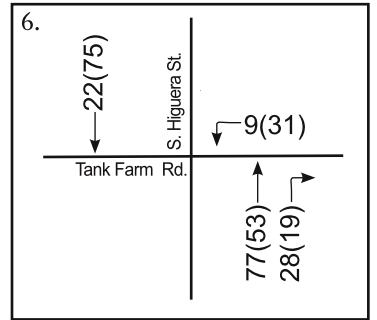
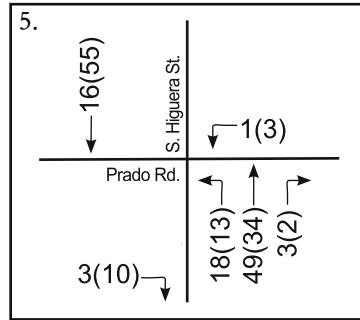
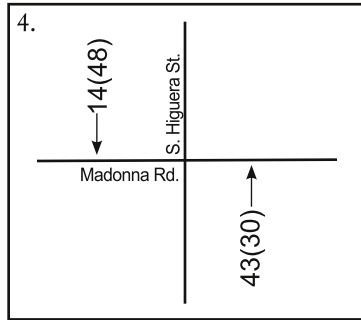
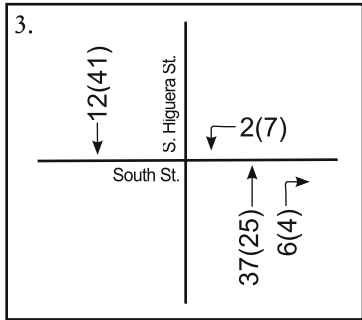
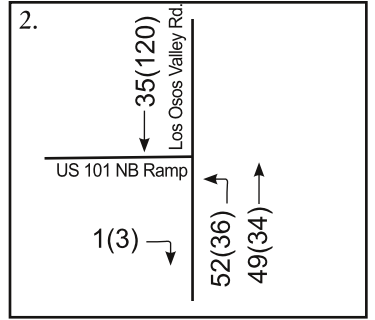
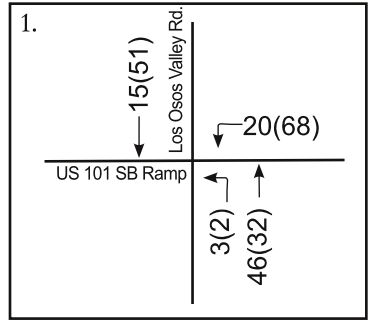
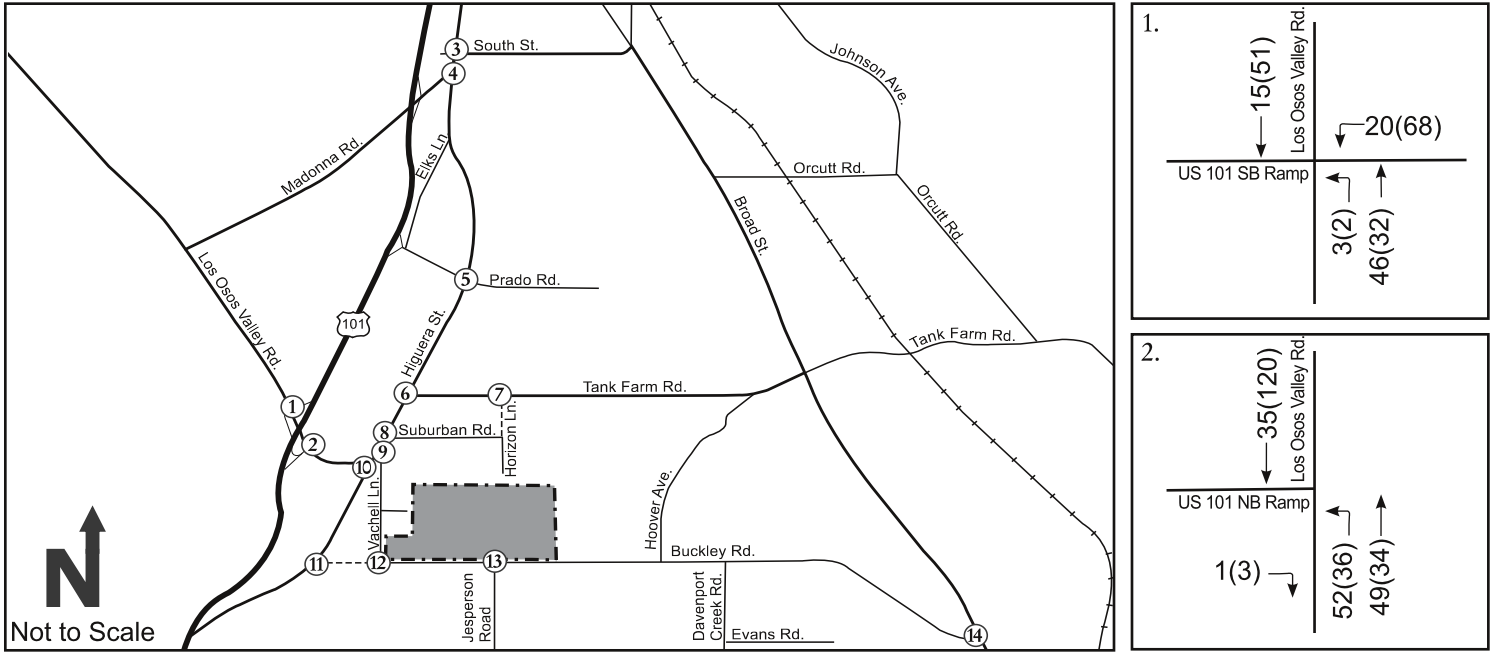
Figure 4: Existing and Cumulative Project Trip Distribution



Legend:

- Project Site
- Study Intersection
- Existing % (Cumulative %)
- Future Road

Figure 5: Project Trip Assignment

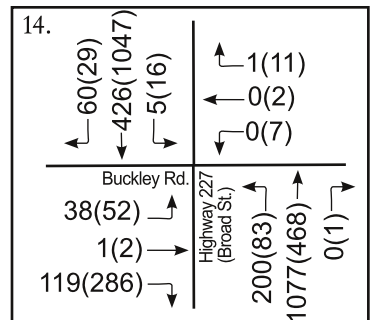
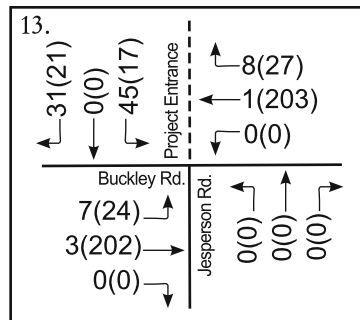
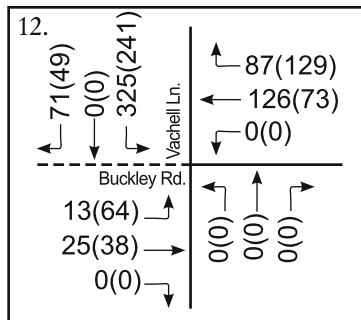
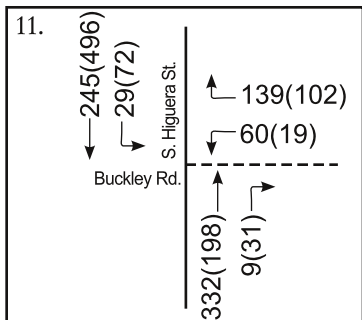
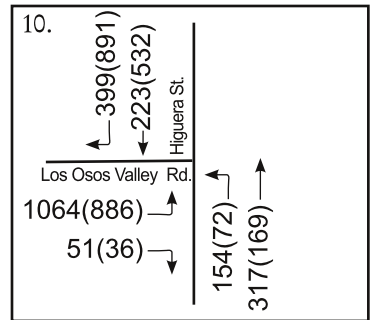
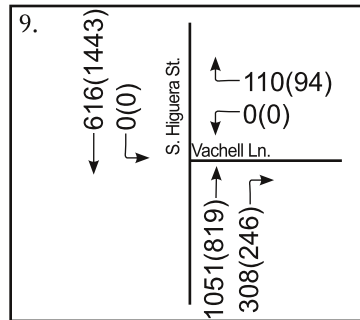
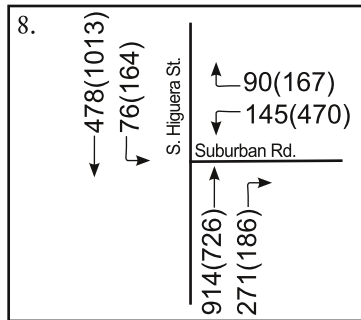
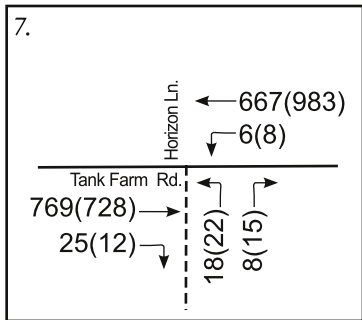
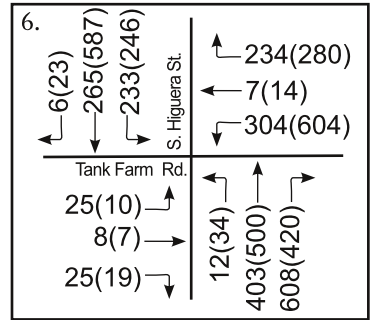
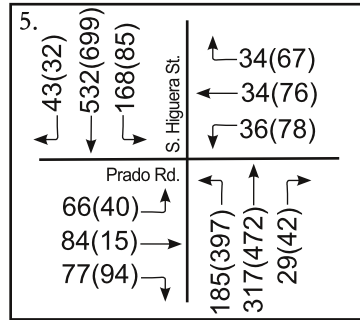
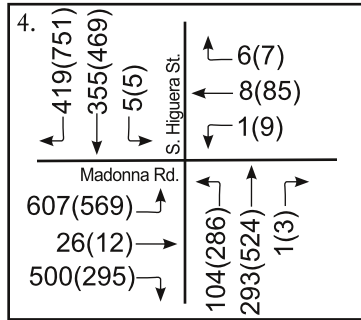
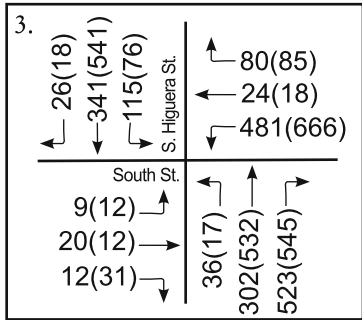
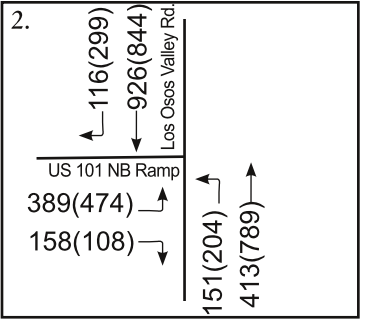
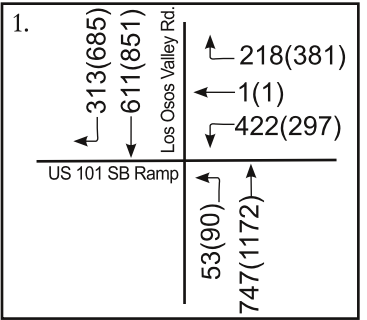
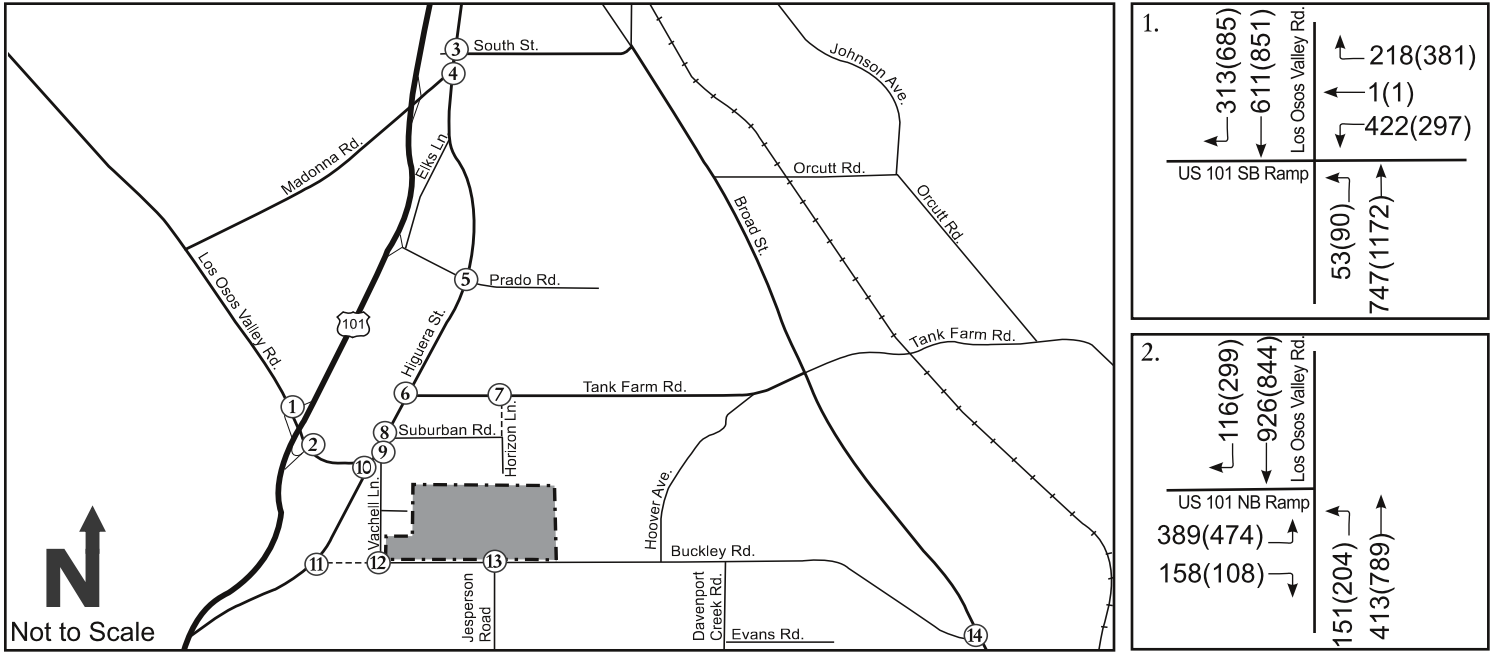


Legend:

- xx(yy) - AM(PM) Peak Hour Traffic Volumes
- Project Site
- Study Intersection
- Future Road



Figure 6: Existing Plus Project Volumes



Legend:

- xx(yy) - AM(PM) Peak Hour Traffic Volumes
- Project Site
- (X) - Study Intersection
- - Future Road



Table 12 shows the 95th percentile queues for key movements at the study intersections. Detailed queuing information is provided in Appendix B.

Table 12: Existing Plus Project Queues					
Intersection	Movement²	Storage Length³	Peak Hour	95th Percentile Queues (feet)¹	
				Existing	Existing + Project
1. Los Osos Valley Road/ US 101 SB	WBL	150	AM	#381	#411
			PM	195	236
	SBT	Trap	AM	413	429
			PM	#648	#717
2. Los Osos Valley Road/ US 101 NB	NBL	200	AM	34	53
			PM	54	75
3. South Street/ S Higuera Street	NBR	130	AM	28	40
			PM	169	177
4. Madonna Road/S Higuera Street	NBL	160	AM	109	109
			PM	#338	#338
5. Prado Road/ S Higuera Street	NBL	250	AM	142	158
			PM	363	161
6. Tank Farm Road/ S Higuera Street	WBL	Trap	AM	196	202
			PM	#430	#463
	SBL	250	AM	#279	#299
			PM	#319	#319
8. Suburban Road/ S Higuera Street	WBL/R	170	AM	61	55
			PM	185	222
	SBL	160	AM	24	#90
			PM	27	159
10. Los Osos Valley Road/ S Higuera Street	EBL	Trap	AM	#398	#409
			PM	221	263
	SBR	Trap	AM	82	73
			PM	#331	#343
	NBL	360	AM	227	225
			PM	#144	#161
14. Buckley Road/ Highway 227	NBT	Trap	AM	#1092	#1099
			PM	207	208
	SBT	Trap	AM	299	315
			PM	#1014	#1017

1. Queue length that would not be exceeded 95 percent of the time. Queues are reported only for turning movements where queues exceed storage capacity.
 2. Los Osos Valley Road shown as running north/south at the US 101 ramp junctions.
 3. 'Trap' denotes design where the through lane terminates in a turn lane.
 #. 95th percentile volume exceeds capacity, queue may be longer.

Queuing impacts and mitigations to address them are discussed below:

Location	Queuing Impact	Mitigation
1. LOVR & 101 SB	Addition of project traffic would exacerbate the existing westbound left turn queues.	Reconstruction of the interchange is underway and will improve this condition to an acceptable level so no further improvements are required. The project would contribute its fair share of the interchange reconstruction by paying the LOVR interchange subarea fee.
3. South Street/S Higuera Street	The northbound right turn lane queues exceed storage during the PM peak hour both with and without the project. The addition of project traffic would exacerbate the existing queues.	The addition of project traffic worsens right turn queue spillback but does not extend the queue to reach the Madonna Road/S Higuera Street intersection.
4. Madonna Road/S Higuera Street	The northbound left turn lane queues exceed storage during the PM Peak hour both with and without the project. The addition of project traffic does not affect existing queue deficiencies.	This condition will be improved when Prado Road is extended to Broad Street, providing a parallel route to South Street.
5. Prado Road/S Higuera Street	The northbound left turn queues exceed available storage during the PM peak hour both with and without the project. This queue spills back into the two-way left-turn lane. The addition of project traffic would exacerbate the existing queues.	Adding a second northbound left turn lane would reduce this queue to less than 200 feet with the project. This improvement would also require widening the Prado Road bridge west of S Higuera Street to provide two receiving lanes. This improvement is funded thru the AASP with study and design is currently underway for the bridge widening. The project would contribute its fair share by paying the AASP transportation fee.
6. Tank Farm Road/S Higuera Street	The southbound left turn queues at this intersection currently exceed the storage capacity, and would remain above capacity with the addition of project traffic. The addition of project traffic would exacerbate the existing queues. The need to maintain or increase transit service to Avila Ranch could be negatively affected.	The installation of a second southbound left turn lane would improve conditions to acceptable levels. This mitigation is also identified the Chevron development EIR. Cost estimates have recently been prepared for this project, and should to be amended into the City's Traffic Impact Fee program .A related project is the installation of a westbound right turn overlap phase, which would further improve traffic operations at this location.
	The westbound left turn approach exceeds capacity both with and without the project during the PM peak hour. The addition of project traffic would exacerbate the existing queues.	Improvements on the southbound approach as described above will also address the impact on the Westbound approach. This condition will also be improved when Prado Road is extended to Broad Street, providing a parallel route.
10. Los Osos Valley Road/S Higuera Street	The eastbound left turn movement exceeds capacity during the AM peak hour both with and without the project. The addition of project traffic would exacerbate the existing queues.	Adjusting signal timing would eliminate both of the above impacts. The signal is expected to be retimed once the interchange improvements are complete. Directional signage at the intersection of S Higuera Street/Buckley Road informing drivers of additional freeway access at Ontario

Location	Queuing Impact	Mitigation
	The southbound right turn lane exceeds capacity during the PM peak hour both with and without the project. The addition of project traffic would exacerbate the existing queues.	Road may help reduce traffic volumes at Los Osos Valley Road/S Higuera Street.
14. Buckley Road/Highway 227	The northbound left turn lane volume would exceed capacity during the PM peak hour both with and without the project. The addition of project traffic would exacerbate the existing queues.	Adding a second north and southbound through lane on State Route 227 would eliminate these deficiencies. This project is included in SLOCOG's 2014 Regional Transportation Plan as a constrained mid-term project. A project study report was prepared in 2006 evaluating the potential to widen State Route 227 from Aero Drive to Price Canyon Road. SLOCOG has funded an operational study in 2015 to guide the preparation of an environmental document (PAED) for the project. Caltrans significance threshold is based on LOS, not queues, and impacts are not triggered at this intersection according to Caltrans traffic impact study guidelines.
	The northbound through movement exceeds capacity during the AM peak hour and exceeds 1000 feet both with and without the project. The addition of project traffic would exacerbate the existing queues.	
	The southbound through movement exceeds capacity during the PM peak hour and exceeds 1000 feet both with and without the project. The addition of project traffic would exacerbate the existing queues.	
8. S Higuera/ Suburban	The project proposal to turn the WB right turn lane into a shared right/left turn lane casues the turn pocket to exceed capcaity.	

2. Pedestrian and Bicycle Modes

The project proposes a number of pedestrian and bicycle facilities as described in the Planned Improvements section at the beginning of this chapter. It would be necessary for the on-site facilities connect to the greater transportation network for them to effectively serve pedestrians and cyclists.

Tables 13 and 14 summarizes the bicycle and pedestrian intersection operations under Existing Plus Project conditions. The following intersections operate below the desired service level for pedestrians:

- #7 Tank Farm Road/Horizon Lane operates at LOS F for pedestrians. This intersection is currently a driveway serving light industrial uses. The Northside of Tank Farm is fenced farmlands with negligible pedestrian demand and no crossing treatments. The addition of project traffic would not noticeably affect pedestrian comfort at this intersection and would have no contextual impact and it's not recommended that pedestrian crossing provisions be considered at this location until there is a destination or route on the north side of tank farm.
- #9 Vachell Lane/S Higuera Street operates at LOS F for pedestrians. Due to the lack of controls at this intersection, pedestrians seeking to cross S Higuera Street would divert to either the Los Osos Valley Road or Suburban Road intersections, which are located less than 500 feet from Vachell Lane and provide crosswalks and pedestrian signals. In order to facilitate this diversion side walk connection on S. Higuera between LOVR and Vachell should be completed.

The following bicycle deficiencies are reported:

- #1 Los Osos Valley Road/US 101 SB: the southbound direction experiences LOS E operations both with and without the project during the PM peak hour. The addition of project traffic worsens the westbound direction from LOS C to LOS D. Implementing the Los Osos Valley Road interchange improvements currently under construction would improve operations to an acceptable LOS C.

Detailed LOS calculation sheets are provided in Appendix B.

Table 13: Existing Plus Project Intersection Pedestrian Levels of Service						
Intersection	Peak Hour	Direction	Existing		Existing + Project	
			Score	LOS	LOS Score	LOS
1. Los Osos Valley/US 101 SB	AM	NB	3.39	C	3.47	C
		SB	2.70	B	2.72	B
		EB	1.89	A	1.89	A
		WB	2.33	B	2.34	B
	PM	NB	2.79	C	2.86	C
		SB	3.00	C	3.02	C
		EB	2.20	B	2.20	B
		WB	2.02	B	2.05	B
2. Los Osos Valley/US 101 NB	AM	NB	2.56	B	2.71	B
		SB	2.60	B	2.69	B
		EB	2.34	B	2.23	B
		WB	2.63	B	2.77	C
	PM	NB	2.71	B	2.79	C
		SB	2.40	B	2.31	B
		EB	2.95	C	2.76	C
		WB	2.48	B	2.49	B
3. South Street/S Higuera Street	AM	EB	2.01	B	2.01	B
		WB	2.65	B	2.65	B
		NB	2.87	C	2.88	C
		SB	2.58	B	2.59	B
	PM	EB	2.00	B	2.00	A
		WB	2.62	B	2.62	B
		NB	2.68	B	2.70	B
		SB	2.46	B	2.47	B
4. Madonna Road/S Higuera Street	AM	EB	2.75	C	2.75	B
		WB	1.97	A	1.97	A
		NB	2.78	C	2.80	C
		SB	2.72	B	2.74	B
	PM	EB	2.92	C	2.92	C
		WB	1.99	A	1.99	A
		NB	2.67	B	2.70	B
		SB	2.67	B	2.69	B
5. Prado Road/S Higuera Street	AM	EB	2.27	B	2.28	B
		WB	2.25	B	2.25	B
		NB	2.85	C	2.95	C
		SB	2.74	B	2.76	C
	PM	EB	2.32	B	2.46	B
		WB	2.24	B	2.24	B
		NB	2.93	C	2.96	C
		SB	2.65	B	2.68	B
6. Tank Farm Road/S Higuera Street	AM	EB	1.98	A	1.98	A
		WB	2.75	B	2.76	C
		NB	3.07	C	3.12	C
		SB	2.78	C	2.82	C
	PM	EB	1.99	A	1.99	A
		WB	2.80	C	2.81	C
		NB	>200	F	>200	F
		WB	>200	F	>200	F
7. Tank Farm Road/Horizon Lane ²	AM	EB	>200	F	>200	F
		WB	>200	F	>200	F
		NB	2.86	B	2.90	C
		SB	2.74	C	2.79	C
	PM	WB	2.07	B	2.12	B
		NB	3.02	C	3.11	C
		SB	2.85	C	2.94	C
		WB	2.17	B	2.27	B
9. Vachell Lane/S Higuera Street ²	AM	NB	84.30	F	>200	F
		SB	>200	F	>200	F
		NB	166.50	F	>200	F
		SB	>200	F	>200	F
	PM	NB	2.26	B	2.43	B
		SB	2.64	B	2.66	B
		EB	2.59	B	2.65	B
		NB	2.31	B	2.35	B
10. Los Osos Valley/S Higuera	AM	SB	2.72	B	2.76	C
		EB	2.65	B	2.69	B
		NB	2.31	B	2.21	B
		SB	Future Intersection	2.31	B	
	PM	WB	Future Intersection	1.82	A	
		NB	Future Intersection	2.28	B	
		SB	Future Intersection	2.38	B	
		WB	Future Intersection	1.81	A	
11. Buckley Rd/S Higuera Street	AM	EB	0.00	A	3.70	A
		WB	0.00	A	3.70	A
		EB	0.00	A	2.60	A
		WB	0.00	A	2.60	A
12. Buckley Road/Vachell Lane	AM	EB	19.30	C	0.10	A
		WB	19.30	C	0.10	A
		EB	13.50	C	13.80	C
		WB	13.50	C	13.80	C
	PM	NB	2.92	C	2.92	C
		SB	2.80	C	2.80	C
		EB	2.13	B	2.13	B
		WB	1.74	A	1.74	A
13. Buckley Road/Project Entrance ²	AM	NB	2.91	C	2.92	C
		SB	2.76	C	2.76	C
		EB	2.19	B	2.19	B
		WB	1.76	A	1.76	A
14. Buckley Rd/ Highway 227	PM	NB	2.91	C	2.92	C
		SB	2.76	C	2.76	C
		EB	2.19	B	2.19	B
		WB	1.76	A	1.76	A

1. HCM 2010 pedestrian score and LOS.

Table 14: Existing Plus Project Intersection Bicycle Levels of Service						
Intersection	Peak Hour	Direction	Existing		Existing + Project	
			LOS Score	LOS	LOS Score	LOS
1. Los Osos Valley/US 101 SB	AM	NB	2.60	B	2.64	B
		SB	3.42	C	3.41	C
		WB	3.59	D	3.63	D
	PM	NB	2.95	C	2.98	C
		SB	4.26	E	4.31	E
		WB	3.50	C	3.61	D
2. Los Osos Valley/US 101 NB	AM	NB	3.29	C	3.16	C
		SB	4.11	D	3.07	C
		EB	2.59	B	2.96	C
	PM	NB	4.05	D	3.51	D
		SB	4.09	D	3.14	C
		EB	2.60	B	2.97	C
3. South Street/S Higuera Street	AM	NB	2.11	B	2.15	B
		SB	1.80	A	1.77	A
		EB	3.10	C	2.93	C
	PM	WB	2.42	B	2.59	B
		NB	2.35	B	2.38	B
		SB	1.88	A	1.92	A
4. Madonna Road/S Higuera Street	AM	EB	2.96	C	2.96	C
		WB	2.94	C	2.95	C
		NB	1.14	A	1.18	A
	PM	SB	1.98	A	2.00	A
		EB	3.37	A	3.37	C
		WB	1.22	C	1.22	A
5. Prado Road/S Higuera Street	AM	NB	1.52	A	1.55	A
		SB	2.34	B	2.38	B
		EB	2.89	C	2.89	C
	PM	WB	1.37	A	1.37	A
		NB	1.42	A	1.49	A
		SB	1.66	A	1.68	A
6. Tank Farm Road/S Higuera Street	AM	EB	2.90	C	2.91	C
		WB	2.69	B	2.69	B
		NB	1.77	A	1.82	A
	PM	SB	1.68	A	1.92	A
		EB	2.75	B	2.95	C
		WB	2.89	C	3.06	C
7. Tank Farm Road/ Horizon Lane ²	AM	NB	1.64	A	1.74	A
		SB	1.40	A	1.42	A
		EB	2.86	C	2.86	C
	PM	WB	2.18	B	2.19	B
		NB	3.08	C	3.14	C
		SB	2.95	C	3.02	C
8. Suburban Road/S Higuera	AM	EB	2.76	C	2.76	C
		WB	4.01	D	4.07	D
		N/A	N/A		N/A	
	PM	EB	N/A		N/A	
		WB	N/A		N/A	
		N/A	N/A		N/A	
9. Vachell Lane/S Higuera Street ²	AM	NB	2.19	B	2.25	B
		SB	1.87	A	1.89	A
		WB	1.75	A	1.73	A
	PM	NB	1.92	A	1.97	A
		SB	2.30	B	2.42	B
		WB	2.41	B	2.08	B
10. Los Osos Valley/S Higuera	AM	N/A	N/A		N/A	
		NB	1.99	A	1.80	A
		SB	2.54	B	2.51	B
	PM	EB	1.99	A	2.20	B
		NB	1.75	A	1.80	A
		SB	3.80	D	3.87	D
11. Buckley Rd/S Higuera Street	AM	EB	1.73	A	1.83	A
		NB	Future Intersection		2.70	B
		SB	Future Intersection		2.59	B
	PM	WB	Future Intersection		2.65	B
		NB	Future Intersection		2.47	B
		SB	Future Intersection		3.12	C
12. Buckley Road/Vachell Lane ²	AM	WB	Future Intersection		2.33	B
		N/A	N/A		N/A	
		N/A	N/A		N/A	
	PM	EB	N/A		N/A	
		WB	N/A		N/A	
		N/A	N/A		N/A	
13. Buckley Road/Project Entrance ²	AM	N/A	N/A		N/A	
		N/A	N/A		N/A	
		N/A	N/A		N/A	
	PM	EB	N/A		N/A	
		WB	N/A		N/A	
		N/A	N/A		N/A	
14. Buckley Rd/ Highway 227	AM	NB	4.21	D	4.22	D
		SB	3.04	C	3.04	C
		EB	2.40	B	2.42	B
	PM	WB	2.30	B	2.30	B
		NB	2.87	C	2.88	C
		SB	4.04	D	4.04	D
PM	EB	2.70	B	2.71	B	
	WB	2.33	B	2.33	B	

1. HCM 2010 bicycle score and LOS.

2. The 2010 HCM does not establish LOS standards for bicycles at two-way stop-controlled intersections.

Pedestrian and Bicycle Segment Analysis

Table 15 summarizes the pedestrian segment analysis, with detailed results provided in Appendix C.

Table 15: Existing Plus Project Segment Pedestrian Levels of Service						
Segment	Direction	Existing		Existing + Project		
		LOS Score	LOS	LOS Score	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	4.03	D	4.35	E
		SB	3.54	D	3.54	D
	PM	NB	3.38	C	3.48	C
		SB	4.08	D	4.20	D
S Higuera Street - LOVR to Suburban Road	AM	NB	4.06	D	4.13	D
		SB	2.42	B	2.40	B
	PM	NB	3.62	D	3.67	D
		SB	3.06	C	3.10	C
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	2.90	C	3.02	C
		SB	2.81	C	2.85	C
	PM	NB	2.90	C	2.98	C
		SB	2.89	C	3.06	C
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	2.78	C	3.01	C
		SB	2.90	C	2.94	C
	PM	NB	3.85	D	4.00	D
		SB	2.64	B	2.78	C
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	3.73	D	3.96	D
		SB	5.28	F	5.36	F
	PM	NB	4.87	E	5.03	F
		SB	4.64	E	4.92	E
Buckley Road - S Higuera Street to Project Entrance	AM	NB	4.30	E	4.54	E
		SB	4.32	E	4.43	E
	PM	NB	4.29	E	4.46	E
		SB	4.11	D	4.38	E

1. HCM 2010 pedestrian score and LOS.

The following roadway segments would operate below the pedestrian threshold level under Existing Plus Project conditions:

- S Higuera Street from Buckley Road to LOVR would operate at LOS D or worse in both directions during the AM and PM peak hour with and without the project. This impact is due to the segment not having continuous sidewalks and pedestrians having to use the paved shoulder. Installing continuous sidewalks would provide acceptable LOS. Portions of this segment are in the County, and portions are in the City. The addition of project traffic is not expected to result in a noticeable degradation.
- Los Osos Valley Road from S Higuera Street to 450' north of Los Verdes Drive would operate at LOS D or worse in the northbound direction during the PM peak hour both with and without the project. Sidewalks are provided along this segment and the low service level is attributable to the high vehicle volumes on Los Osos Valley Road using a single lane. The addition of project traffic is not expect to result in a noticeable degradation. The installation

of a barrier between the sidewalk and travel lanes would improve the pedestrian LOS to an acceptable level.

- Los Osos Valley Road from 450' north of Los Verdes Drive to the US 101 NB ramps would operate at LOS D or worse with all scenarios due to absent sidewalks along this segment. The addition of continuous sidewalks constructed as part of the LOVR interchange project will provide acceptable LOS.
- Buckley Road from S Higuera Street to the project entrance would operate at LOS D or E during all scenarios. This segment is outside of the City limits so the multimodal threshold of significance does not apply. The project proposes to construct a parallel Class I path consistent with the City's BTP, which would address this deficiency.

Table 16 summarizes the bicycle segment analysis, with detailed results provided in Appendix C. All of the study segments operate at an acceptable service level for bicycles.

Table 16: Existing Plus Project Segment Bicycle Levels of Service						
Segment	Direction	Existing		Existing + Project		
		LOS Score	LOS	LOS Score	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	2.46	B	2.64	B
		SB	2.23	B	2.23	B
	PM	NB	2.07	B	2.17	B
		SB	2.54	B	2.59	B
S Higuera Street - LOVR to Suburban Road	AM	NB	2.48	B	2.50	B
		SB	2.14	B	2.13	B
	PM	NB	1.88	A	1.90	A
		SB	2.11	B	2.13	B
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	2.49	B	2.54	B
		SB	2.34	B	2.37	B
	PM	NB	2.49	B	2.53	B
		SB	2.42	B	2.49	B
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	2.38	B	2.48	B
		SB	2.38	B	2.40	B
	PM	NB	2.75	C	2.79	C
		SB	2.31	B	2.38	B
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	2.17	B	2.27	B
		SB	2.86	C	2.87	C
	PM	NB	2.71	B	2.75	B
		SB	2.70	B	2.78	C
Buckley Road - S Higuera Street to Project Entrance	AM	NB	3.45	C	3.69	D
		SB	3.69	D	3.76	D
	PM	NB	3.44	C	3.62	D
		SB	3.52	D	3.73	D

1. HCM 2010 bicyde score and LOS.

3. Transit Mode

An acceptable transit LOS is primarily predicated on the presence of shelters and benches at bus stops, as well as the frequency and on-time performance of each route. The project proposes a transit stop as a part of the town center component of the project in Phase 6. The precise location and amenities for this transit stop are not available at this time.

The City is currently updating their Short Range Transit Plan in coordination with the Regional Transit Authority. The adopted SRTP (2009) proposes the following service standards related to the location of transit stops and service frequency:

- In residential areas, 90% of the population is within ¼ mile of a bus route.
- Bus stops should be spaced every 5 to 7 blocks per mile (every other block) in the downtown core, and 4 to 5 per mile as needed on the fringe.

The Project should work with SLO Transit and the City to ensure direct pedestrian connections are provided to any future transit stops serving the project, ensure that on-site transit stops are consistent with future transit route expansions, and that transit vehicles are allowed on appropriate internal project roads. The increased population resulting from the Project could result in increased transit funding to support future service increases. The two transit stops proposed on the site are within ¼ mile of future Project residents. No additional transit stops are recommended.

Transit stops and service to the site should occur concurrent with occupancy of each phase to encourage and develop ridership.

SITE ACCESS AND ON-SITE CIRCULATION

This section discusses issues related to site access and on-site circulation. On-site circulation deficiencies would occur if project exceeds established residential volume and speed thresholds, designs fail to meet appropriate standards, fail to provide adequate truck access, or would result in hazardous conditions.

Site access and on-site circulation mitigation measures are summarized below, followed by more detailed analysis.

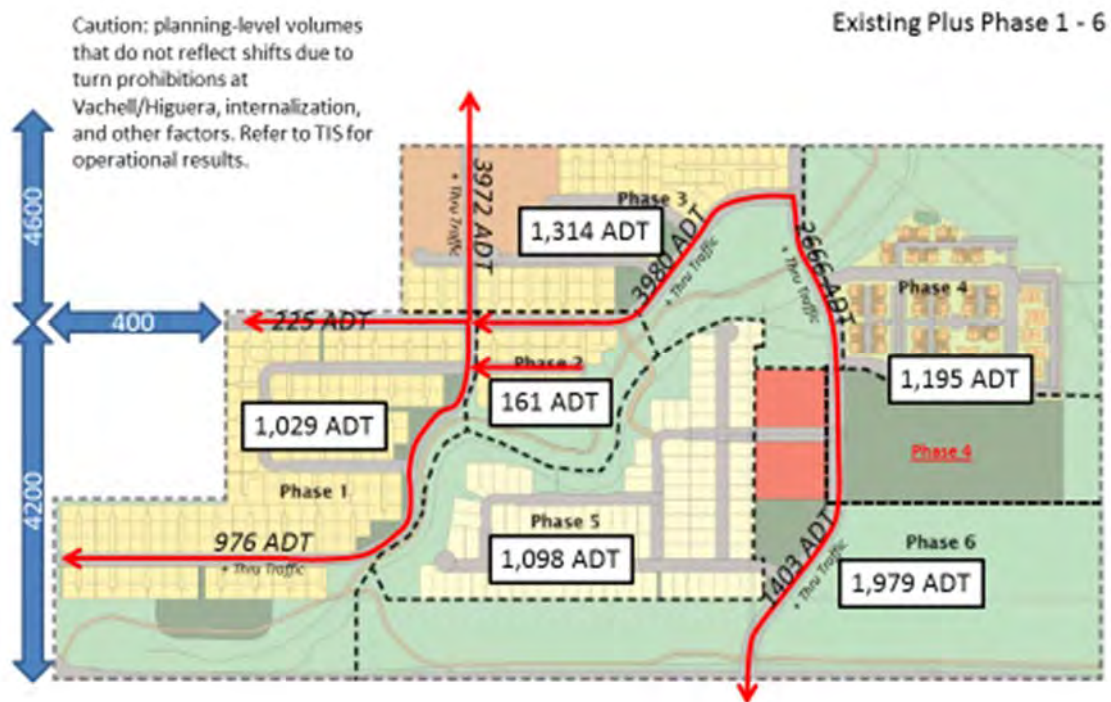
Location	Mode	Impact	Mitigation Measure
Venture Drive and Earthwood Lane	Auto	<p>The Venture Drive and Earthwood Lane designations as residential collectors are inconsistent with the current General Plan designations as residential local roads.</p> <p>Proposed intersections near to the Earthwood Ln/ Venture Drive intersection may result in vehicle conflicts due to functional area overlap. Poorly located access points for high density residential on Earthwood and commercial uses on Horizon Lane could increase vehicle conflicts. This conflicts with the City's Access Management goal in the Circulation Element.</p> <p>Forecast ADT is close to the General Plan maximum threshold for a residential collector roadway and roadway design is conducive to speeding.</p>	<p>Amend General Plan to designate Venture Drive and Earthwood Lane as residential collectors and design roadways to meet residential collector standards.</p> <p>Locate minor road intersections outside of the functional area of the Earthwood Ln/Venture Drive intersection. Restrict access to minimize conflict points. Access points for high density residential on Earthwood and commercial uses on Horizon should be placed in accordance with FHWA access management guidance to minimize conflict points.</p> <p>Implement traffic calming measures designed to maintain speeds consistent with General Plan thresholds.</p>
Horizon Lane	Auto	<p>The Horizon Lane designation as a residential collector is inconsistent with the current General Plan designation as a residential local road and Cumulative Plus Project volumes would exceed Circulation Element thresholds for this classification.</p>	<p>Amend General Plan to designate Horizon Lane as a residential arterial and design roadway to meet residential arterial standards.</p>
Suburban Road	Auto Ped	<p>The Existing plus Project daily volume would exceed the Circulation Element thresholds for a local commercial street. Suburban Road also has gaps in sidewalk connectivity and lacks ADA accessible ramps which result in a substandard pedestrian level of service.</p>	<p>Amend General Plan to designate Suburban Road as a commercial collector.</p> <p>Complete the sidewalk network including ADA accessible ramps to provide a continuous pedestrian network.</p>
Vachell Lane	Bike	<p>The project only proposes to construct Class II lanes from Buckley Road to just north of Vachell Lane/ Earthwood Lane intersection.</p>	<p>Install Class II lanes between Buckley Road and Higuera Street to maintain consistency with the City's Bicycle Transportation Plan.</p>
Buckley Road	Bike	<p>The project's proposed cross-section is inconsistent with the City's Bicycle Transportation Plan's standards requiring eight foot wide Class II bike facilities along roads with speeds over 45 MPH.</p>	<p>Modify the project's Circulation Plan and associated cross sections to conform to the BTP standards.</p>

These recommendations are discussed in more detail below.

Below are the street designation standards outlined in the City’s Circulation Element 7.3 Design Standards.

Descriptions ¹ of Street Types	Maximum ADT/LOS	Desired maximum Speeds ²
Local Commercial Streets directly serve non-residential development that front them and channel traffic to commercial collector streets (reference black line streets on Figure 1).	5,000	25 mph
Local Residential Streets directly serve residential development that front them and channel traffic to residential collector streets (reference black line streets on Figure 1).	1,500	25 mph
Commercial Collector Streets collect traffic from commercial areas and channel it to arterials.	10,000	25 mph
Residential Collector Streets collect traffic from residential areas and channel it to arterials.	3,000 ³	25 mph
Residential Arterials are bordered by residential property where preservation of neighborhood character is as important as providing for traffic flow and where speeds should be controlled.	LOS D	CVC*

The image below shows the forecast daily traffic volumes produced by each Phase and along roadways near the project under Existing Plus Project conditions. Additional figures showing the estimated ADT by phase of the project are provided in Appendix G. These planning-level estimates were used to determine likely daily volumes in comparison to Circulation Element ADT thresholds.



Venture Drive

Venture Drive is planned as a local residential street in the City's Circulation Element. The project proposes a residential collector with two travel lanes, Class II bike lanes, a planter strip, and sidewalks on both sides of the street. This is inconsistent with the current General Plan designation of Venture Drive as a residential local road. The project proposal for Venture Drive meets the street type description of a residential collector and there are no impacts associated with the proposed designation other than General Plan consistency. The General Plan would need to be amended to designate Venture Drive as a residential collector.

Assuming completion of all phases the forecast ADT of Venture Drive under the Existing Plus Project scenario would exceed 4,000 vehicles if Horizon Lane is not extended to Suburban Road. This is above the Circulation Element threshold of 3,000 daily vehicles for a residential collector street. The 3,000 vehicle threshold would be exceeded upon occupancy of Phase 4. The Horizon Lane connection to Suburban Road should be in place prior to occupancy of Phase 4 to maintain daily volumes below the Circulation Element threshold.

The proposed geometry of Venture Drive is conducive of speeds higher than the Circulation Element desired maximum speed threshold. Traffic calming measures along Venture Drive would reduce speeding and implementation of a residential trip reduction program will assist in reducing volumes.

The **Vachell Lane/Venture Drive intersection** would operate acceptably with its current configuration under all scenarios so no changes are recommended.

Earthwood Lane

Earthwood Lane is a local residential street in the City's Circulation Element. The project proposes extending Earthwood Lane to the project as a residential collector with two travel lanes, Class II bike lanes, a planter strip, and sidewalks on both sides of the street. The project proposal for Earthwood Lane meets the street type description of a residential collector and there are no impacts associated with the proposed classification.

Assuming completion of all phases the forecast ADT of Earthwood Lane under the Existing Plus Project scenario would exceed 4,000 vehicles if Horizon Lane is not extended to Suburban Road. This is above the Circulation Element threshold of 3,000 daily vehicles for a residential collector street. The 3,000 vehicle threshold would be exceeded upon occupancy of Phase 4. The Horizon Lane connection to Suburban Road should be in place prior to occupancy of Phase 4 to maintain daily volumes below the Circulation Element threshold.

The proposed geometry of Earthwood Lane is conducive of speeds higher than the Circulation Element desired maximum speed threshold. Traffic calming measures along Earthwood Lane would reduce speeding.

Horizon Lane

The City's Circulation Element identifies Horizon Lane as a planned local residential street south of Suburban Road and as a planned commercial collector street north of Suburban Road. The project proposes a residential collector with two travel lanes, Class II bike lanes, a planter strip, and sidewalks on both sides of the street. This is inconsistent with the current General Plan designation of Horizon Lane as a residential local street.

Assuming completion of all phases and the extension of Horizon Lane to connect Buckley Road to Tank Farm Road the forecast ADT of Horizon Lane under the Cumulative Plus Project scenario is

approximately 4,000 vehicles. This is within the Circulation Element threshold for a residential arterial street. The project proposal for Horizon Lane meets the street type description of a residential collector. The General Plan and project plans would need to be amended to designate Horizon Lane as a residential arterial and the roadway would need to meet design standards for that classification.

Suburban Road

Suburban Road is currently designated as a local commercial street with two travel lanes serving residential and commercial areas in the City's Circulation Element. The project proposes two connections to Suburban Road via Earthwood Lane prior to phase 1 and Horizon Lane prior to Phase 4. The Existing plus Project forecasted volume (10,000 ADT) on Suburban Road would exceed the Circulation Element maximum thresholds for a local commercial street (5,000 ADT). Suburban Road would need to be reclassified to a commercial collector and is consistent with the street type definition of this classification.

Suburban Road provides pedestrian access from the Project area to the nearby commercial center, from Earthwood Lane to S. Higuera. However Suburban Road has gaps in sidewalk connectivity and ADA accessible ramps which result in a substandard pedestrian level of service. These gaps in sidewalk connectivity and ADA accessible ramps should be completed.

Vachell Lane

Vachell Lane is currently designated as a local commercial street with two travel lanes serving residential and commercial areas in the City's Circulation Element. The project proposes to restrict access to right turns only at Higuera and Vachell and provide two connections to Vachell Lane, via Venture and Earthwood. Cumulative plus Project volumes (7,000 ADT) on Vachell Lane would exceed General Plan thresholds for a local commercial street (5,000 ADT), Vachell would need to be reclassified to a commercial collector, Vachell is consistent with the street type definition of a commercial collector.

The bicycle transportation plan calls for Class I bike lanes on Vachell Lane from Buckley to Higuera St., these planned bike lanes provide an important connection from the Project area to the rest of the bicycle transportation network. However, the project only proposes to construct Class II lanes from Buckley Road to just north of Vachell & Earthwood Intersection. The project should complete the full Class II connection between Buckley and Higuera.

Buckley Road

Buckley Road is planned as an arterial street in the City's Circulation Element. The project proposes the extension of Buckley Road to S Higuera Street. The forecast volume on Buckley Road under Existing Plus Project conditions is approximately 8,000 ADT and the forecasted LOS is B, both satisfying the General Plan thresholds.

The **Vachell Lane/Buckley Road intersection** would be served adequately by side-street stop control on the Vachell Lane approach through Near Term conditions with relatively low delays.

The **Project Entry/Buckley Road intersection** would be served adequately by side-street stop control on the Project Entry approach with low delays under all scenarios.

Buckley Road Bicycle Facilities

The development plan shows cross sections along multiple segments of Buckley Road. East of Vachell Lane Buckley Road would provide Class II on-street bike lanes that are five feet wide, and a 12 foot wide Class I path. Appendix C of the City's Bicycle Transportation Plan notes that Class II lanes should

be at least eight feet wide for facilities like Buckley Road with speeds over 45 MPH. The proposed cross section is inconsistent with this standard.

The development plan shows both Class I and Class II facilities parallel to Buckley Road west of Vachell Lane on Figure P-11, the Circulation Plan. However, the cross sections for this segment do not show Class I or Class II facilities. This segment of Buckley Road will provide an important connection to the planned trailhead at the Octagon Barn. The Circulation Plan and associated cross sections should be modified to ensure safe and convenient paths of travel for cyclists riding from the Octagon Barn to the Class I network proposed on the Project site.

When Buckley Road is extended, dedicated southbound right and left turn lanes should be installed at this intersection to reduce side-street delays. Along Buckley Road, dedicated eastbound left and westbound right turn lanes are recommended to channelize vehicle flows and allow deceleration out of the traffic stream on this 55 mile per hour facility.

On-Site Intersections & Access Points

The development plan shows three roundabouts on the site. Single lane roundabouts will be adequate for these intersections. Where collector roads intersect with local roads the local roads should be side-street stop controlled.

Local intersections are proposed within close proximity to the intersection of Earthwood Lane/Venture Drive. Closely spaced intersections can create safety issues by increasing conflicts within the functional area of the intersection. Access points for the high density residential on Earthwood Lane and the neighborhood commercial on Horizon Lane are not defined at this time. These access points should be located per guidance provided in the FHWA Access Management manual to minimize conflicts points.

Sight Distance

Detailed roadway designs are not available at this time given the planning nature of the Project. Once construction documents are prepared they should be reviewed to ensure adequate sight distances at intersections and driveways. Intersections and driveways located on the inside of horizontal curves and near crest vertical curves should be avoided.

PROJECT PHASING

The project would be developed in six phases as shown on Figure 2. The residential components of the project would be spread among Phases 1-5, with neighborhood commercial and higher density residential components planned as Phase 6.

Internal streets are proposed to be constructed as part of each respective phase. Access to the development is proposed via Venture Drive and Earthwood Lane as part of Phase 1, the Buckley Road extension is proposed as part of Phase 2, and the connection of Horizon/Jespersion to Buckley as part of Phase 4. The project does not propose to complete the planned connection of Horizon Lane to the north towards Suburban Road.

Phasing Impacts and their respective mitigation are summarized below, followed by more detailed analysis:

Phases	Impact	Mitigation
1-6	Sequencing is not specified in the project description. Developing phases in an order not consistent the phase numbering will invalidate this analysis and the recommended impacts.	Sequencing of the development phases shall be done in the order of the phase numbering
1 & 2	Extending Buckley Road to S Higuera Street as a part of Phase 2 along with other conditions will result in significant cut-thru traffic within the neighborhood causing volumes to exceed General Plan ADT thresholds.	Provide only emergency vehicle and pedestrian /bicycle connections to Vachell Lane and provide public vehicle access only via Earthwood and Suburban for Phase 1. As part of Phase 2 implement turn restrictions at Vachell Lane/S Higuera Street, extend Buckley Road, and remove access restrictions to provide project connectivity at Vachell Lane.
	Constructing Buckley at Phase 2 will not provide a bicycle route connection to Phase 1 of the Project.	Construct Class II bike lanes on Vachell lane from Buckley Road to Higuera Street prior to Phase 1 occupancy.
4	Phase 4 will generate volumes that trigger Earthwood Lane to exceed General Plan ADT thresholds.	Complete the Horizon lane connection to the north to provide a second route to Suburban Lane prior to Phase 4.
	Connecting Horizon Lane to Buckley Road without frontage improvements on Buckley Road will create discontinuous bicycle and pedestrian access to the project from Buckley Road.	Complete Buckley Road frontage improvements as part of Phase 4.

The figures in Appendix G, some of which are reproduced below, show planning-level segment volumes under Existing conditions plus each sequential phase of the project. Because the project site is not isolated it is not possible to accurately forecast detailed segment volumes for all street segments and each phase beyond the first phase due to the unknown timing of other developments throughout the City, so these estimates should be used with caution.

Phases 1 and 2

As part of Phase 1 the project proposes left turn restrictions at Higuera Street/Vachell Lane and provide access points via Earthwood Lane and Venture Drive. The Buckley Road extension is proposed as a part of Phase 2.

Table 17 below illustrates the auto intersection operating conditions for Existing and Existing Plus Project Phase 1 conditions without the Buckley Road extension. Drivers who turn left to or from Vachell Lane were diverted to Venture Drive, Earthwood Lane, and Suburban Road. All of the study intersections operate at an acceptable service level with the project proposed improvements with the exception of Buckley Road/Highway 227 which operates at LOS D both with and without Phase 1.

With the proposed restriping and protected signal phasing to the Suburban Road/S Higuera Street intersection in place no queuing issues are anticipated.

Table 17: Existing and Existing Plus Project Phase 1 Intersection Levels of Service								
Intersection	Peak Hour	Existing No Project			Existing + Project Phase 1			
		V/C ¹	Delay ²	LOS ³	V/C ¹	V/C Delta	Delay ²	LOS ³
1. Los Osos Valley Road/ US 101 SB	AM	0.81	18.1	B	0.81	0.00	18.2	B
	PM	0.91	29.0	C	0.92	0.01	29.3	C
2. Los Osos Valley Road/ US 101 NB	AM	0.83	12.5	B	0.84	0.01	12.5	B
	PM	0.72	11.9	B	0.75	0.03	11.8	B
3. South Street/ S Higuera Street	AM	0.59	20.9	C	0.59	0.00	20.9	C
	PM	0.75	24.9	C	0.75	0.00	24.9	C
4. Madonna Road/ S Higuera Street	AM	0.59	12.9	B	0.59	0.00	12.9	B
	PM	0.81	21.4	C	0.81	0.00	21.4	C
5. Prado Road/ S Higuera Street	AM	0.55	16.7	B	0.56	0.01	16.8	B
	PM	0.73	21.3	C	0.74	0.01	21.4	C
6. Tank Farm Road/ S Higuera Street	AM	0.62	25.8	C	0.63	0.01	26.0	C
	PM	0.70	23.9	C	0.70	0.00	24.0	C
7. Tank Farm Road/ Horizon Lane	AM	0.49	0.4 (16.3)	A (C)	0.49	0.00	0.4 (18.9)	A (C)
	PM	0.46	0.6 (18.3)	A (C)	0.46	0.00	0.5 (21.6)	A (C)
8. Suburban Road/ S Higuera Street	AM	0.50	5.6	A	0.66	0.16	9.1	A
	PM	0.70	11.1	B	0.78	0.08	17.5	B
9. Vachell Lane/ S Higuera Street	AM	1.41	(>200)	C (F)	0.43	-0.98	0.7 (17.1)	A (C)
	PM	1.44	(>200)	C (F)	0.44	-1.00	0.4 (13.3)	A (B)
10. Los Osos Valley Road/ S Higuera Street	AM	0.74	16.8	B	0.74	0.00	17.2	B
	PM	0.83	17.6	B	0.84	0.01	18.0	B
11. Buckley Road/ S Higuera Street	AM	Future Intersection			Future Intersection			
	PM	Future Intersection			Future Intersection			
12. Buckley Road/ Vachell Lane	AM	0.38	0.0	A	0.39	0.01	7.3	A (B)
	PM	0.27	0.0	A	0.28	0.01	5.9	A (B)
13. Buckley Road/ Project Entrance	AM	Future Intersection			0.01	0.01	6.8 (8.5)	A
	PM	Future Intersection			0.13	0.13	0.1	A (B)
14. Buckley Road/ Highway 227	AM	0.76	19.1	B	0.76	0.00	19.2	B
	PM	0.88	35.7	D	0.88	0.00	35.8	D

1. Volume to capacity ratio reported for worst movement.
 2. HCM 2010 average control delay in seconds per vehicle.
 3. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay. Unacceptable operations shown in bold text.

The proposal to not construct the Buckley extension prior to Phase 1 along with existing and new traffic patterns will cause existing traffic along Buckley Road and Vachell Lane to reroute through the development via Venture Drive, Earthwood Lane, and Suburban Road. Constructing Buckley Road after Phase 1 can be accommodated without any expected level of service impacts; however there are potentially significant impacts associated with General Plan consistency and residential street design standards which are summarized below.

1. Approximately 2,000 daily vehicles would be re-routed through the project until the Buckley Road extension is in place. This volume, in addition to the Phase 1 volume currently projected on Venture Drive and Earthwood Lane (approximately 500 daily vehicles) nears the Circulation Element residential collector threshold of 3,000 ADT. If Phase 2 of the project

and the Buckley Road extension are delayed or abandoned ambient traffic growth could result in daily volumes above the Circulation Element threshold.

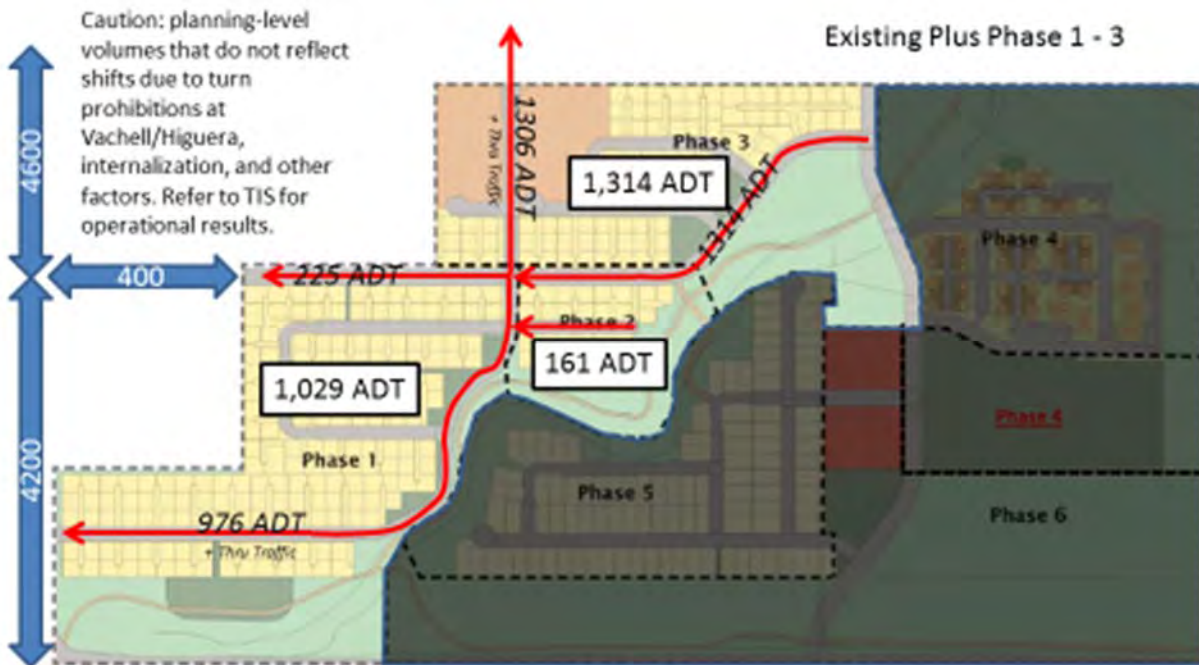
2. Rerouted traffic will include commercial trucks, trailers, and other heavy vehicles. Residential Collector Street design standards do not accommodate this type of traffic, which would negatively affect the livability of these residential streets. This impact will continue to worsen with ambient traffic growth until the Buckley Road connection is completed. If Phase 2 of the project and the Buckley Road extension is delayed or abandoned this type of incompatible traffic would continue.

3. Without the Buckley Road extension there is no bicycle route connectivity to the Phase 1 development due to discontinuities in the bikeway network on Vachell Lane and Suburban Road.

The recommended mitigation for items 1 and 2 above is to only provide emergency vehicle and Bicycle/Pedestrian connections to Vachell lane. Public vehicle access would be provided only via Earthwood lane for Phase 1. The recommended mitigation for item 3 is to install Class II bike lanes on Vachell lane from Buckley Road to S Higuera Street. Then as part of Phase 2 implement turn restrictions at Vachell Lane/S Higuera Street, extend Buckley Road, and remove the Phase 1 access restrictions at Vachell Lane. This will temporarily defer the need to install turning restrictions at Vachell and insulate Phase 1 from cut-thru traffic. Suburban Drive and Earthwood Lane segments can accommodate all of Phase 1 project traffic without exceeding Circulation Element maximum volume thresholds.

Phase 3

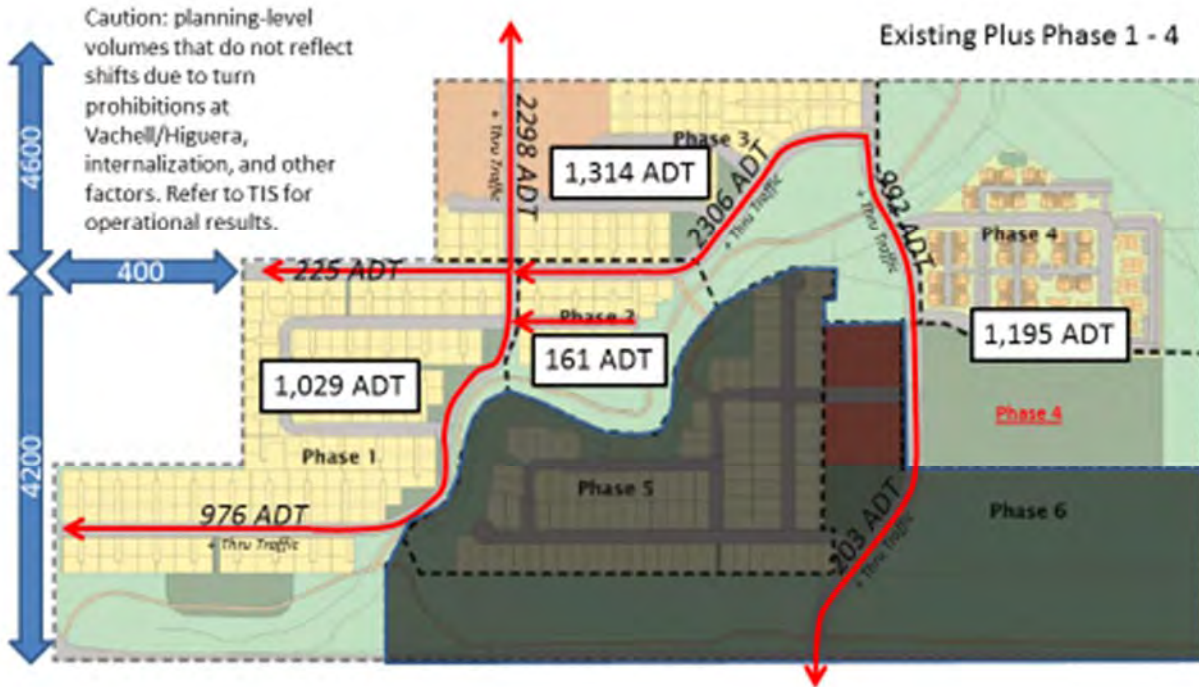
Combined, Phases 1-3 of the project would generate approximately 2,500 daily trips which would be distributed to the local roadways as shown in the image below.



These volumes in addition to cut-through traffic are expected to remain below the General Plan thresholds for a residential collector.

Phase 4

The image below shows that Phases 1-4 of the project would generate approximately 3,700 daily trips spread among the project’s roadway network.



With the addition of through traffic Earthwood Lane is expected to exceed the Circulation Element threshold of 3,000 daily vehicles for residential collectors. The recommended mitigation for this impact is to connect Horizon lane to the north proving an additional access point to Suburban prior to occupancy of Phase 4.

The project proposes to connect Horizon Lane to Buckley Road as part of Phase 4, this will provide the primary project access to Buckley Road along the project frontage. However the project would not construct the Buckley Road frontage improvements which include the sidewalk and bicycle connections until Phase 6. This will create a discontinuous path of travel to and from the project access point for bicycles and pedestrians. The recommended mitigation for this impact is to construct Buckley Road frontage improvements as part of Phase 4.

Phases 5 and 6

No phasing impacts have been identified for Phases 5 and 6.

The project description does not provide information on the sequencing of the phases. This analysis assumes that the development will occur in the order of the phase numbering. Sequencing of the development phases shall be done in the order of the phase numbering to ensure the validity of this analysis and the efficacy of the mitigation measures

Near Term Conditions

Near term conditions represent conditions with approved and pending development and roadway improvement projects in place.

NEAR TERM VOLUME FORECASTS

A list of approved, pending, and reasonably foreseeable projects was obtained from City staff. These projects were added to the TDM. The following roadway improvements were assumed to be in place under Near Term Conditions:

- Los Osos Valley Road interchange improvements in place with a widened overcrossing. This project is currently under construction. This project includes continuous sidewalks and Class II bike lanes between the US 101 ramps and S Higuera Street on Los Osos Valley Road as well as improved pedestrian facilities at the ramp junctions. The overcrossing will be widened to provide four travel lanes and improved bicycle and pedestrian facilities.
- A new north/south connector in place between Prado Road and Tank Farm Road, with a connection to the proposed project. Part of this connection is planned as a with the Coker/Ellsworth and Chevron Tank Farm Phase 1 projects. Additional right of Way along the current Horizon Lane will be needed to complete this connection.
- Horizon Lane would be extended from Suburban Road to the project.
- The southbound left turn pocket at the Prado Road/S Higuera Street will be extended to 250 feet and pedestrian countdown heads with audible/tactile pushbuttons will be added. These improvements are a part of the conditions of approval for Tract 2353.

Near term traffic forecasts were developed using the TDM. Project trips were added to the network using the methods described in the Existing Plus Project section. The project trip assignment was modified slightly to reflect changes to traffic patterns expected with the Horizon Lane connector to Tank Farm Road. Figures 7, 8, and 9 show the near term volumes.

NEAR TERM TRANSPORTATION CONDITIONS

1. *Automobile Mode*

Table 18 summarizes auto LOS at the study intersections under Near Term conditions both with and without the project. The following intersections would operate below the desired service level:

- #1 Los Osos Valley Road/US 101 SB would operate at LOS D during the PM peak hour both with and without the project. The addition of project traffic does not change the service level, so no mitigation is required.
- #7 Tank Farm Road/Horizon Lane: the northbound approach would operate at LOS F both with and without the project. Installation of a northbound right turn lane would improve the level of service to an acceptable level.
- # 14 Buckley Road/Highway 227 would operate at LOS D during the PM peak hour both with and without the project. The addition of project traffic increases delay at this Caltrans controlled intersection. Installation of a second north and southbound through lane and second northbound left turn lane would provide LOS C or better operations.

Table 18: Near Term Intersection Auto Levels of Service								
Intersection	Peak Hour	Near Term			Near Term + Project			
		V/C ¹	Delay ² (sec/veh)	LOS ³	V/C ¹	V/C Delta	Delay ² (sec/veh)	LOS ³
1. Los Osos Valley Road/US 101 SB	AM	0.71	17.4	B	0.72	0.01	17.5	B
	PM	0.78	39.2	D	0.79	0.01	39.2	D
2. Los Osos Valley Road/US 101 NB	AM	0.77	20.7	C	0.77	0.00	21.5	C
	PM	0.76	13.1	B	0.76	0.00	13.6	B
3. South Street/S Higuera Street	AM	0.67	23.5	C	0.67	0.00	23.5	C
	PM	0.83	36.4	D	0.84	0.01	36.9	D
4. Madonna Road/S Higuera Street	AM	0.65	14.2	B	0.65	0.00	14.3	B
	PM	1.21	36.3	D	1.23	0.02	36.1	D
5. Prado Road/S Higuera Street	AM	0.63	20.4	C	0.64	0.01	21.1	C
	PM	0.77	25.8	C	0.79	0.02	27.6	C
6. Tank Farm Road/S Higuera Street	AM	0.73	39.4	D	0.74	0.01	40.2	D
	PM	0.79	29.4	C	0.81	0.02	29.7	C
7. Tank Farm Road/Horizon Lane	AM	0.65	3.3 (92.5)	A (F)	0.75	0.10	1.4 (24.9)	A (C)
	PM	0.75	4.6 (120.1)	A (F)	0.89	0.14	2.5 (24.6)	A (C)
8. Suburban Road/S Higuera Street	AM	0.60	6.3	A	0.70	0.10	15.1	B
	PM	0.80	12.9	B	1.16	0.36	19.5	B
9. Vachell Lane/S Higuera Street	AM	2.81	80.1 (>200)	F (F)	0.52	-2.29	1.2 (24.2)	A (C)
	PM	2.27	46.2 (>200)	D (F)	0.51	-1.76	0.5 (15.9)	A (C)
10. Los Osos Valley Road/S Higuera Street	AM	0.69	16.9	B	0.76	0.07	19.2	B
	PM	0.91	22.6	C	0.92	0.01	25.2	C
11. Buckley Road/S Higuera Street	AM	Future Intersection			0.42	0.42	5.8	A
	PM	Future Intersection			0.73	0.73	7.5	A
12. Buckley Road/Vachell Lane	AM	0.39	7.1 (11.7)	A (B)	0.59	0.20	9.7 (16.4)	A (C)
	PM	0.28	5.8 (10.6)	A (B)	0.51	0.23	8.4 (15.6)	A (C)
13. Buckley Road/Project Entrance	AM	Future Intersection			0.10	0.10	2.8 (10.0)	A (B)
	PM	Future Intersection			0.16	0.16	1.2 (11.2)	A (B)
14. Buckley Road/Highway 227	AM	0.80	22.2	C	0.80	0.00	22.8	C
	PM	0.91	45.1	D	0.91	0.00	46.6	D

1. Volume to capacity ratio reported for worst movement.
 2. HCM 2010 average control delay in seconds per vehicle.
 3. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay. Unacceptable operations shown in bold text.

Table 19 presents the auto segment LOS operating under Near Term and Near Term Plus Project conditions.

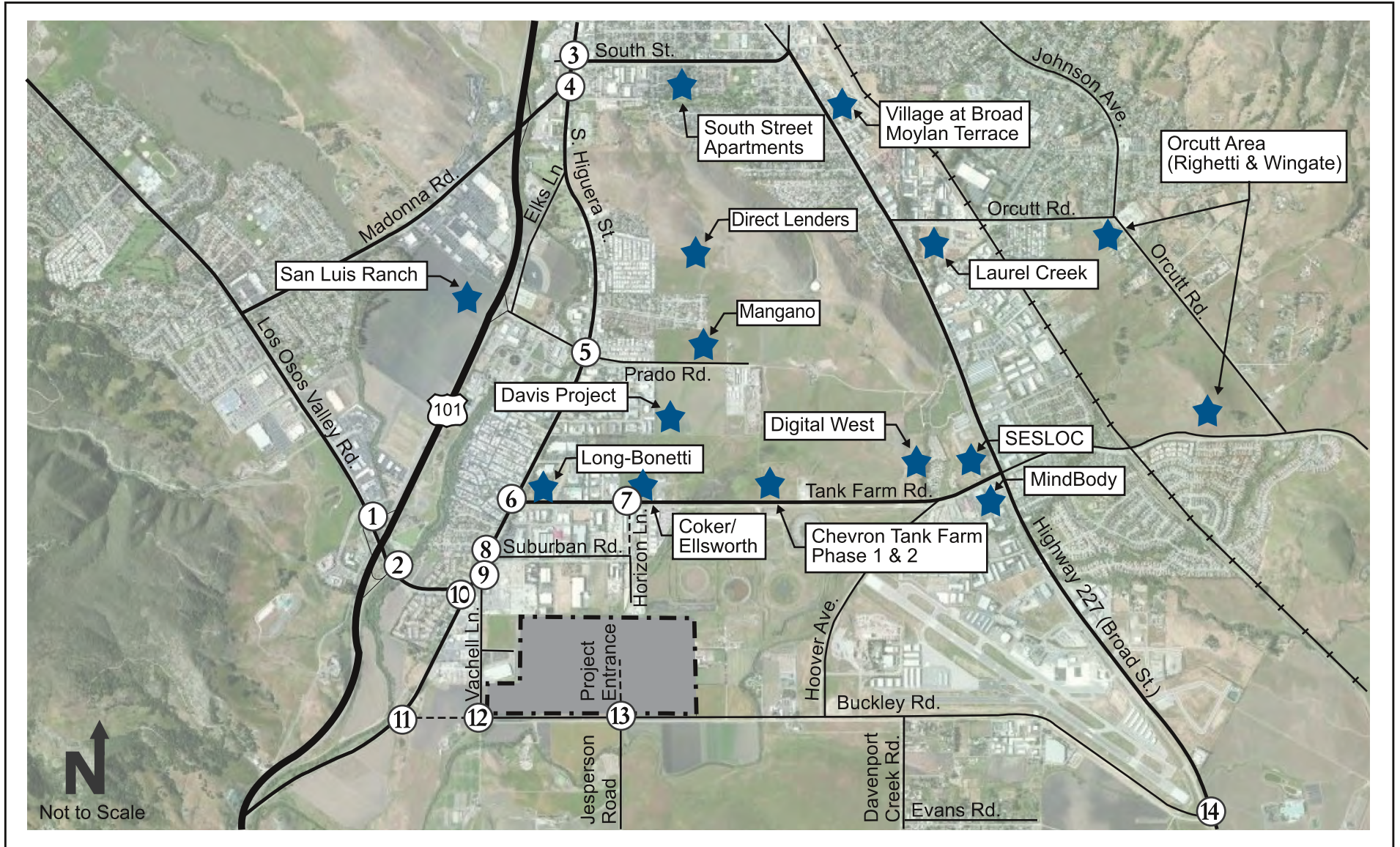
Table 19: Near Term Plus Project Segment Auto Levels of Service								
Segment	Direction	Near Term			Near Term + Project			
		Ratio	Score	LOS	Ratio	Score	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	0.56	2.55	B	0.77	2.55	B
		SB	0.44	2.55	B	0.44	2.55	B
	PM	NB	0.31	2.55	B	0.37	2.55	B
		SB	0.82	2.55	B	0.89	2.55	B
S Higuera Street - LOVR to Suburban Road	AM	NB	0.52	3.27	C	0.54	3.27	C
		SB	0.30	3.27	C	0.30	3.27	C
	PM	NB	0.37	3.27	C	0.39	3.27	C
		SB	0.60	3.27	C	0.62	3.27	C
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	0.44	2.86	C	0.48	2.86	C
		SB	0.25	2.86	C	0.26	2.86	C
	PM	NB	0.38	2.86	C	0.40	2.86	C
		SB	0.45	2.86	C	0.49	2.86	C
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	0.86	3.19	C	1.01	3.19	F
		SB	0.91	3.19	C	0.94	3.19	C
	PM	NB	1.58	3.19	F	1.68	3.19	F
		SB	0.67	3.19	C	0.76	3.19	C
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	0.43	3.19	C	0.50	3.19	C
		SB	0.91	3.19	C	0.94	3.19	C
	PM	NB	0.79	3.19	C	0.84	3.19	C
		SB	0.67	3.19	C	0.76	3.19	C
Buckley Road - S Higuera Street to Project Entrance	AM	NB	0.31	2.45	B	0.47	2.45	B
		SB	0.47	2.68	B	0.54	2.68	B
	PM	NB	0.28	2.45	B	0.38	2.45	B
		SB	0.34	2.68	B	0.51	2.68	B

1. HCM 2010 auto score and LOS.

Unacceptable operations are noted along the following segments:

- Los Osos Valley Road would exceed capacity and operate at LOS F during the AM and PM peak hour from S Higuera Street to the end of sidewalks. This condition exists with the project during the AM peak hour and both with and without the project during the PM peak hour. This is due to high volumes using a single lane. North of Los Verdes Drive will widen to provide two lanes as a part of the interchange reconstruction that is currently underway. This segment is not expected to be a bottleneck to traffic flow as flows are constrained by the adjacent signals. No improvements are recommended to address this deficiency

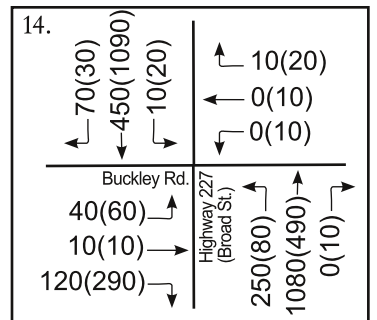
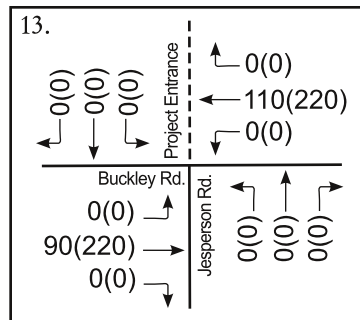
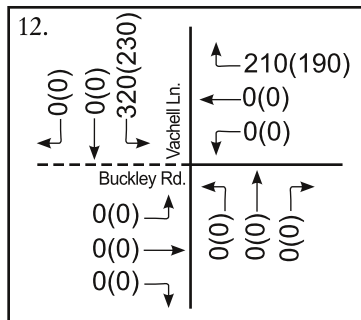
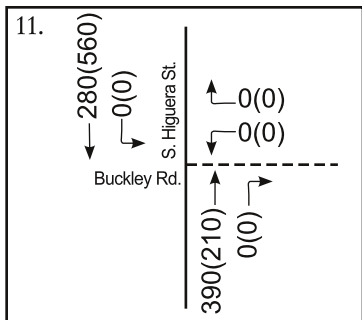
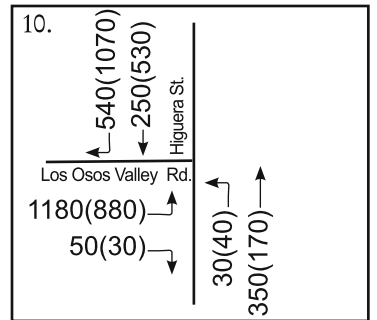
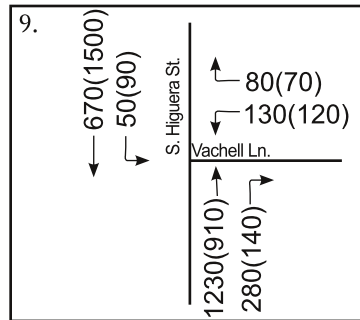
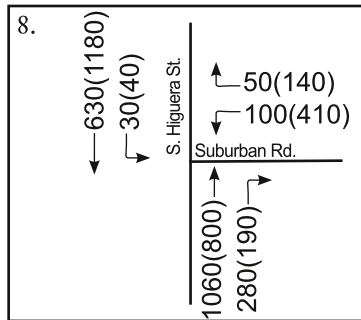
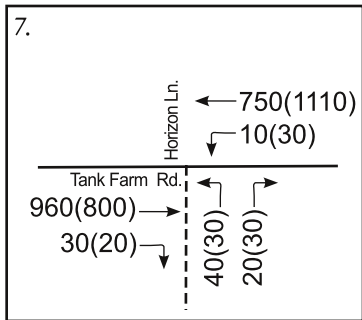
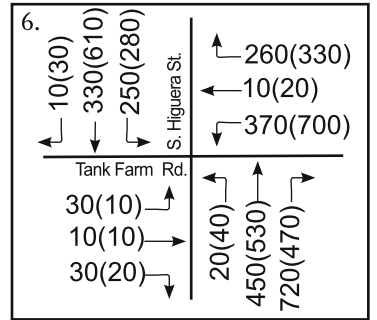
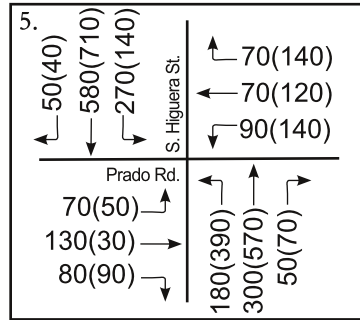
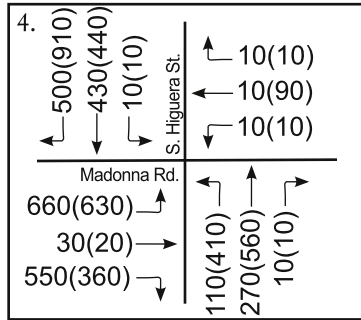
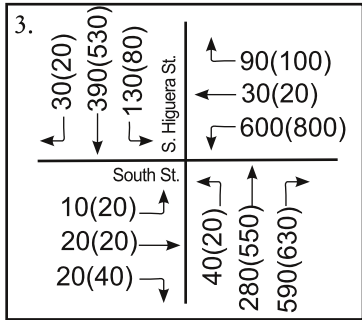
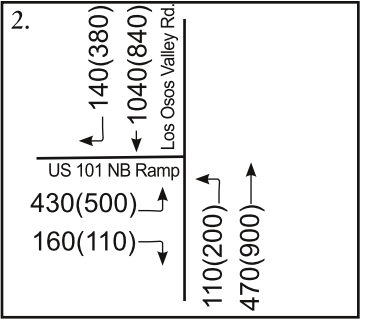
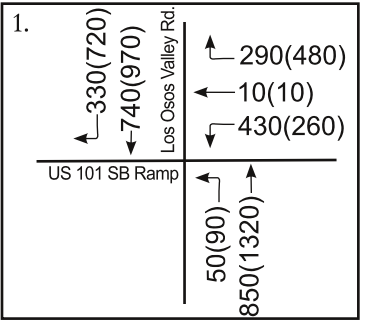
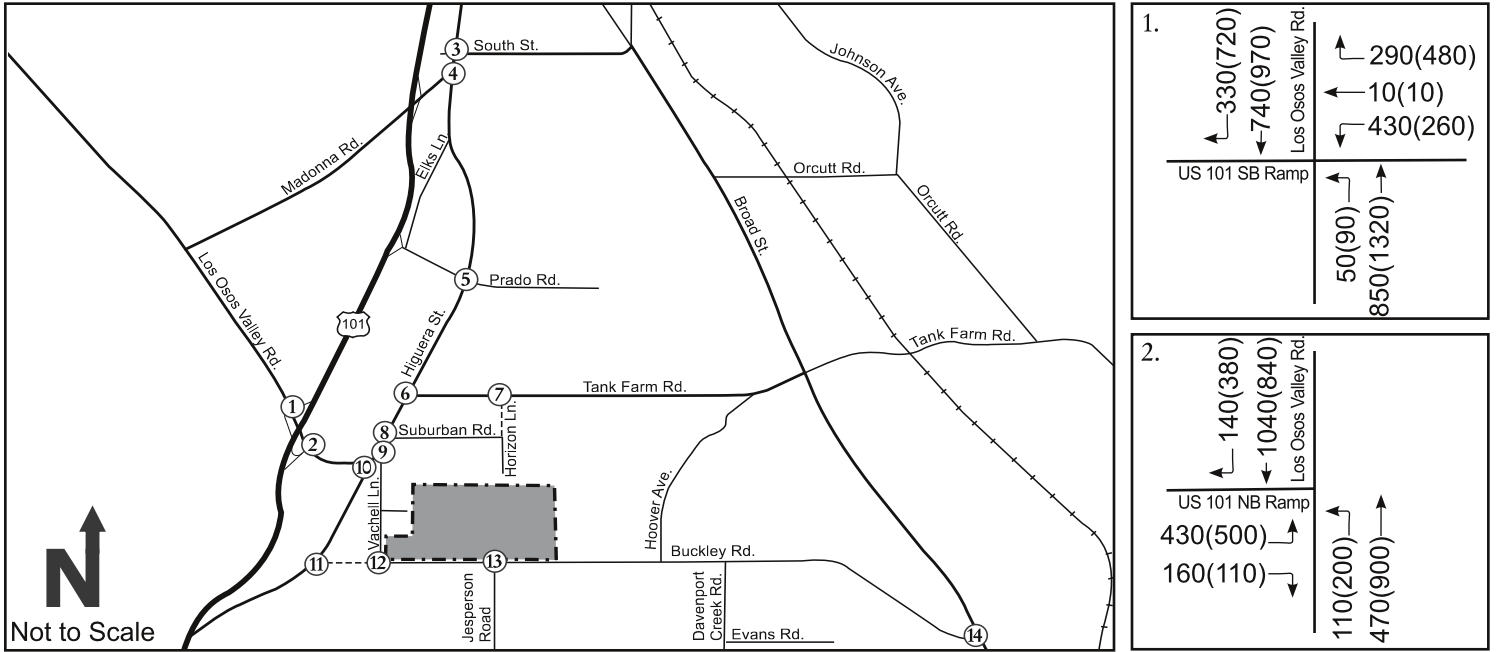
Figure 7: Near Term Projects



Legend:

- Project Site
- Near Term Projects
- Study Intersection
- Future Road

Figure 8: Near Term Volumes



Legend:

xx(yy) - AM(PM) Peak Hour Traffic Volumes

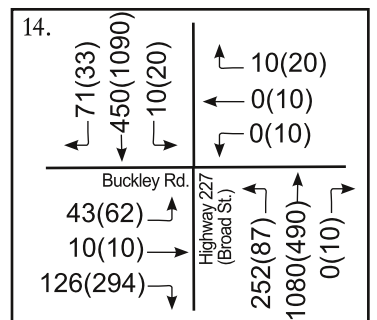
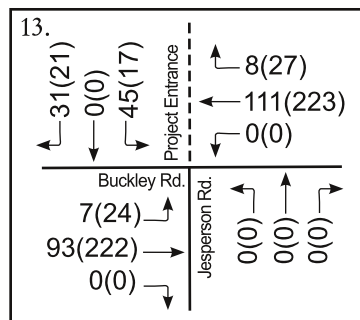
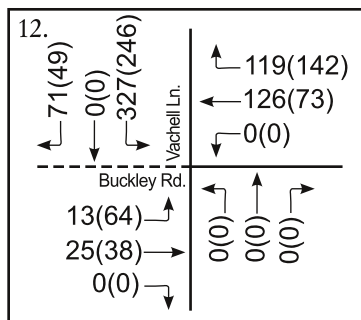
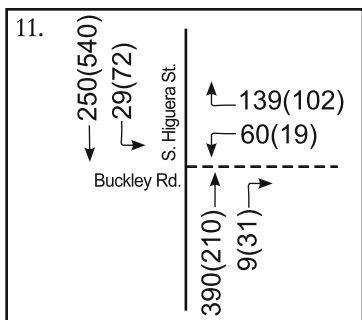
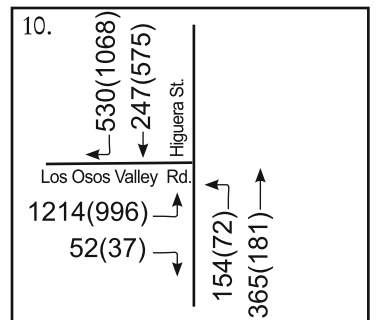
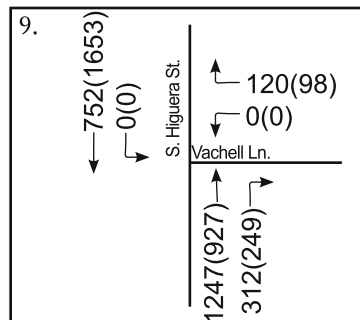
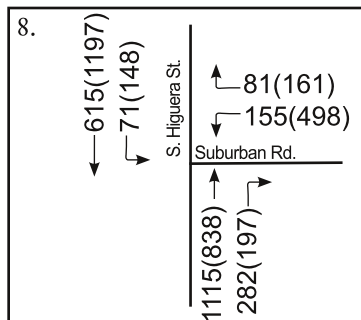
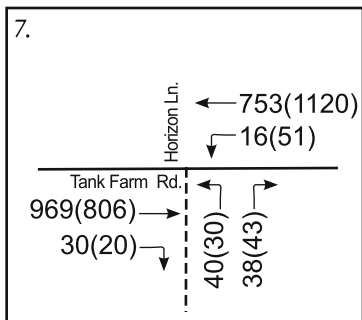
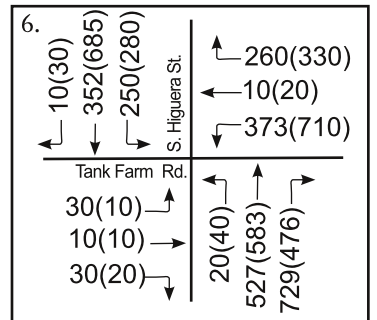
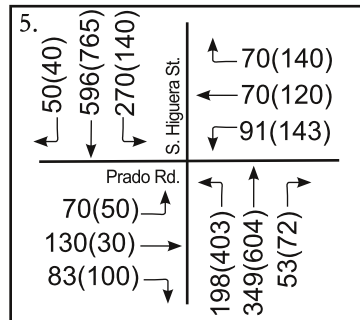
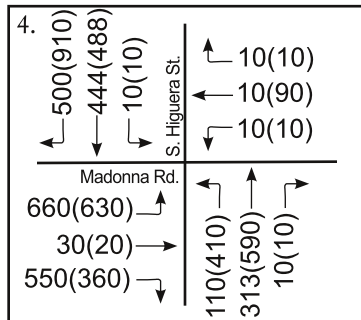
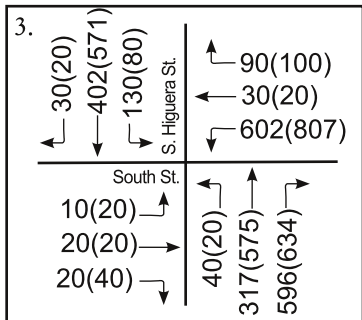
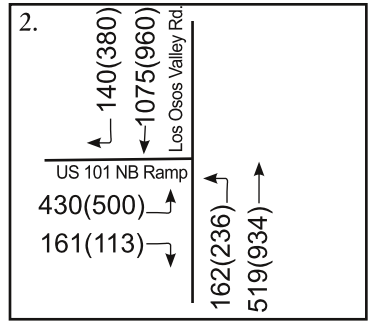
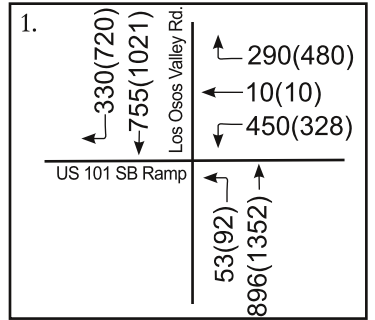
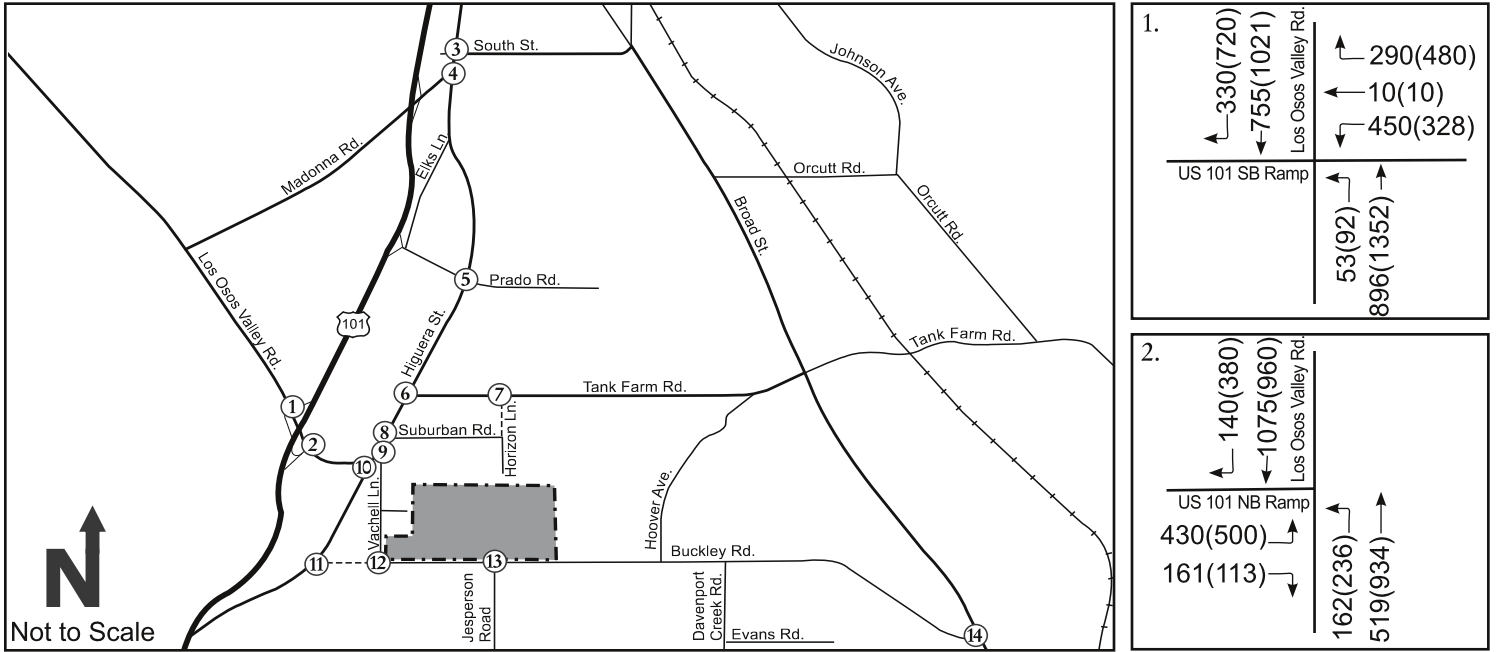
⊗ - Study Intersection

▣ - Project Site

----- - Future Road



Figure 9: Near Term Plus Project Volumes



Legend:

- xx(yy) - AM(PM) Peak Hour Traffic Volumes
- Project Site
- (X) - Study Intersection
- - Future Road

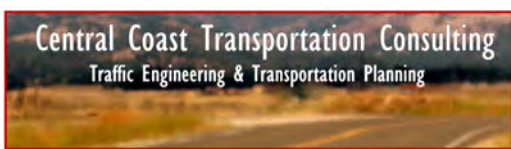


Table 20 shows the 95th percentile queues for key movements at the study intersections. Detailed queuing information is provided in Appendix B.

Table 20: Near Term Plus Project Queues					
Intersection	Movement²	Storage Length³	Peak Hour	95th Percentile Queues (feet)¹	
				Near Term	NT + Project
1. Los Osos Valley Road/ US 101 SB	WBL	150	AM	297	315
			PM	168	214
	SBT	Trap	AM	261	267
			PM	168	325
3. South Street/ S Higuera Street	NBR	130	AM	59	60
			PM	234	254
	WBL	280	AM	221	223
			PM	#313	#320
4. Madonna Road/S Higuera Street	NBL	160	AM	116	116
			PM	#523	#523
	EBL	Trap	AM	282	282
			PM	#327	#327
5. Prado Road/ S Higuera Street	NBL	250	AM	159	176
			PM	378	396
6. Tank Farm Road/ S Higuera Street	WBL	Trap	AM	241	244
			PM	#524	#534
	SBL	250	AM	#331	#331
			PM	#420	#420
8. Suburban Road/ S Higuera Street	WBL/R	170	AM	66	49
			PM	203	161
	SBL	160	AM	28	#103
			PM	33	#169
10. Los Osos Valley Road/ S Higuera Street	EBL	Trap	AM	401	419
			PM	327	386
	SBR	Trap	AM	107	104
			PM	#515	#511
14. Buckley Road/ Highway 227	NBL	360	AM	273	277
			PM	#156	#174
	NBT	Trap	AM	#1123	#1128
			PM	236	238
	SBT	Trap	AM	368	371
			PM	#1113	#1117

1. Queue length that would not be exceeded 95 percent of the time. Queues are reported only for turning movements where queues exceed storage capacity.
 2. Los Osos Valley Road shown as running north/south at the US 101 ramp junctions.
 3. 'Trap' denotes design where the through lane terminates in a turn lane.
 #. 95th percentile volume exceeds capacity, queue may be longer.

Queuing issues and improvements to address them are discussed below: All of the queue mitigations discussed in the Existing Plus Project section would apply to Near Term conditions. Only new impacts are discussed below.

Location	Queuing Impact	Mitigation
10. Los Osos Valley Road/S Higuera Street	The eastbound left turn movement exceeds capacity during the AM peak hour only under the Near Term Plus Project with Business Park scenario.	Adding a second southbound right turn lane would address both impacts. This project is not currently included in the City's Transportation Impact Fee program. Alternatively, extending Prado Road to Broad Street and constructing the Prado Road interchange would shift traffic away from this intersection and reduce these queues.
	The southbound right turn lane exceeds capacity during the PM peak hour both with and without the project.	

2. Pedestrian and Bicycle Modes

There are no reported changes in LOS for pedestrian intersection operations. The respective table is provided in Appendix D. Table 21 summarizes the bicycle intersection operations under Near Term Plus Project conditions.

The following bicycle deficiencies are reported:

- #6 Tank Farm Road/S Higuera Street: the westbound direction operates at LOS E for bicycles both with and without the project during the PM peak hour. The City's Bicycle Transportation Plan (BTP) includes Class I paths from Buckley Road through the project site to planned Class I path parallel to Tank Farm Road. Installation of these paths would provide an alternative route for cyclists allowing them to bypass this intersection.
- #10 Los Osos Valley Road/S Higuera Street: The addition of project traffic degrades the service level from LOS D without the project to LOS E with the project in the southbound direction during the PM peak hour. The Bob Jones Bike Trail provides a parallel route for cyclists between Prado Road and Los Osos Valley Road, allowing them to avoid this intersection. The City's BTP also includes a planned Class I facility connecting Los Osos Valley Road near the US 101 interchange to S Higuera Street near the planned Buckley Road/S Higuera Street intersection. The planned Class I connection between Buckley Road and Tank Farm Road would also provide a parallel route allowing cyclists to avoid this intersection.
- #14 Buckley Road/Highway 227: the northbound direction operates at LOS E during the PM peak hour both with and without the project. Caltrans does not have a significance threshold for non-auto modes. However, implementation of the City's BTP would improve this condition by adding a Class I path and Class II lanes to the extent Buckley Road.

Detailed LOS calculation sheets are provided in Appendix B.

Table 21: Near Term Intersection Bicycle Levels of Service						
Intersection	Peak Hour	Direction	Near Term		Near Term + Project	
			LOS Score	LOS	LOS Score	LOS
1. Los Osos Valley/US 101 SB	AM	NB	2.73	B	2.78	C
		SB	2.75	B	2.76	C
		WB	3.97	D	4.01	D
	PM	NB	3.10	C	3.13	C
		SB	3.19	C	3.23	C
		WB	3.91	D	4.02	D
2. Los Osos Valley/US 101 NB	AM	NB	3.17	C	3.26	C
		SB	3.19	C	3.22	C
		EB	3.00	C	3.00	C
	PM	NB	3.60	D	3.66	D
		SB	3.20	C	3.31	C
		EB	3.00	C	3.00	C
3. South Street/S Higuera Street	AM	NB	2.19	B	2.23	B
		SB	1.82	A	1.83	A
		EB	2.95	C	2.95	C
		WB	2.82	C	2.83	C
	PM	NB	2.47	B	2.50	B
		SB	1.91	A	1.95	A
4. Madonna Road/S Higuera Street	AM	EB	3.01	C	3.01	C
		WB	3.22	C	3.23	C
		NB	1.18	A	1.21	A
		SB	2.14	B	2.15	B
	PM	EB	3.56	D	3.56	D
		WB	1.24	A	1.24	A
5. Prado Road/S Higuera Street	AM	NB	1.70	A	1.72	A
		SB	2.50	B	2.55	B
		EB	3.13	C	3.13	C
		WB	1.38	A	1.38	A
	PM	NB	1.48	A	1.55	A
		SB	1.81	A	1.83	A
6. Tank Farm Road/S Higuera Street	AM	EB	3.00	C	3.01	C
		WB	2.92	C	2.92	C
		NB	1.92	A	1.97	A
		SB	1.80	A	1.85	A
	PM	EB	2.80	C	2.82	C
		WB	3.21	C	3.22	C
7. Tank Farm Road/ Horizon Lane	AM	NB	1.88	A	1.96	A
		SB	1.49	A	1.51	A
		EB	2.88	C	2.88	C
		WB	2.36	B	2.37	B
	PM	NB	3.21	C	3.26	C
		SB	3.07	C	3.14	C
8. Suburban Road/S Higuera	AM	EB	2.77	C	2.77	C
		WB	4.32	E	4.34	E
		EB	N/A			
		WB	N/A			
	PM	EB	N/A			
		WB	N/A			
9. Vachell Lane/S Higuera Street	AM	NB	2.38	B	2.44	B
		SB	2.00	A	2.01	B
		WB	1.78	A	1.73	A
		NB	2.03	B	2.07	B
	PM	SB	2.46	B	2.56	B
		WB	2.47	B	2.09	B
10. Los Osos Valley/S Higuera	AM	NB	N/A			
		SB	N/A			
		EB	N/A			
		NB	N/A			
	PM	SB	N/A			
		EB	N/A			
11. Buckley Rd/S Higuera Street	AM	NB	2.08	B	2.30	B
		SB	2.81	C	2.79	C
		EB	2.12	B	2.15	B
		NB	1.77	A	1.82	A
	PM	SB	4.17	D	4.25	D
		EB	1.82	A	1.93	A
12. Buckley Rd/ Highway 227	AM	NB	Future Intersection		2.81	C
		SB	Future Intersection		2.60	B
		WB	Future Intersection		2.46	B
		NB	Future Intersection		2.49	B
	PM	SB	Future Intersection		3.20	C
		WB	Future Intersection		2.33	B
13. Buckley Road/Project Entrance	AM	EB	N/A			
		WB	N/A			
		EB	N/A			
		WB	N/A			
	PM	EB	N/A			
		WB	N/A			
14. Buckley Rd/ Highway 227	AM	NB	4.31	E	4.32	E
		SB	3.11	C	3.11	C
		EB	2.44	B	2.46	B
		WB	2.32	B	2.32	B
	PM	NB	2.92	C	2.94	C
		SB	4.12	D	4.13	D
PM	EB	2.74	B	2.76	C	
	WB	2.37	B	2.37	B	

1. HCM 2010 bicyde score and LOS.

2. The 2010 HCM does not establish LOS standards for bicydes at two-way stop-controlled intersections.

Pedestrian and Bicycle Segment Analysis

Table 22 summarizes the pedestrian segment analysis, with detailed results provided in Appendix C.

Table 22: Near Term Segment Pedestrian Levels of Service						
Segment	Direction	Near Term		Near Term + Project		
		LOS Score	LOS	LOS Score	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	4.14	D	4.46	E
		SB	3.60	D	3.60	D
	PM	NB	3.41	C	3.51	D
		SB	4.18	D	4.30	E
S Higuera Street - LOVR to Suburban Road	AM	NB	4.30	E	4.37	E
		SB	2.59	B	2.58	B
	PM	NB	3.76	D	3.81	D
		SB	3.31	C	3.35	C
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	3.21	C	3.31	C
		SB	2.97	C	3.00	C
	PM	NB	3.08	C	3.14	C
		SB	3.11	C	3.25	C
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	3.05	C	3.28	C
		SB	3.07	C	3.12	C
	PM	NB	4.25	E	4.41	E
		SB	2.76	C	2.90	C
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	2.28	B	2.40	B
		SB	3.17	C	3.21	C
	PM	NB	2.97	C	3.05	C
		SB	2.80	C	2.94	C
Buckley Road - S Higuera Street to Project Entrance	AM	NB	4.37	E	4.62	E
		SB	4.33	E	4.43	E
	PM	NB	4.32	E	4.49	E
		SB	4.12	D	4.39	E

1. HCM 2010 pedestrian score and LOS.

The following roadway segments would operate below the pedestrian threshold level under Near Term Plus Project conditions:

- S Higuera Street from Los Osos Valley Road to Suburban Road operates at LOS D in the southbound direction during the PM peak hour both with and without the project. This is primarily due to the high vehicle volumes on S Higuera Street and no sidewalks on the east side. The project would provide on-site Class I path offering a parallel path of travel for pedestrians, thereby mitigating this impact.
- Los Osos Valley Road from S Higuera Street to 450' north of Los Verdes Drive would operate at LOS E in the northbound direction during the PM peak hour both with and without the project. Sidewalks are provided along this segment and the low service level is attributable to the high vehicle volumes on Los Osos Valley Road. The addition of project traffic is not expected to result in a noticeable degradation or contextually significant impact.

There are no reported changes in LOS for bicycle segment operations. The respective table is provided in Appendix D.

3. Transit Mode

Transit services under the Near Term conditions are not expected to change. A new transit stop at the intersection of Venture Drive/Vachell Lane or Earthwood Lane/Suburban Road would still be necessary to improve transit access consistent with the SRTP standards.

The Project shall work with SLO Transit and the City to ensure direct pedestrian connections are provided to any future transit stops serving the project concurrent with each phase of the development, on-site transit stops are consistent with future transit route expansions, and that transit vehicles are allowed on appropriate internal project roads. The increased population resulting from the Project could result in increased transit funding to support future service increases.

Cumulative Conditions

Cumulative conditions represent build-out of the land uses in the region.

CUMULATIVE VOLUME FORECASTS

In addition to network changes assumed under Near Term conditions the following roadway network changes were assumed to be in place under Cumulative Conditions consistent with the City's Circulation Element:

- A full access freeway interchange will be constructed at Prado Road and U.S. 101 Freeway.
- Prado Road will be extended to connect Madonna Road to Broad Street. Prado Road and South Higuera Street will be expanded to provide second east and westbound through lanes, new north and southbound right turn lanes, and dual left turn lanes on all approaches.
- Buckley Road will be extended to S Higuera Street and turn restrictions will be implemented at Vachell Lane/S Higuera Street prohibiting left turns in and out of Vachell Lane.
- With and without the Los Osos Valley Road bypass. This extension is dependent on a final feasibility study to be conducted as part of development of the parcels it would cross. The difference between the two scenarios only affects the intersections of LOVR at Higuera and Buckley at Higuera. An operational assessment of both those scenarios is provided in this section.
- Tank Farm Road will be widened to four lanes between S Higuera Street and Broad Street.
- Broad Street will be widened to four lanes between Aero Drive and Los Ranchos Drive.

These improvements were assumed to be operational under Cumulative conditions. No other roadway network changes affecting the study locations were assumed to be in place under Cumulative conditions.

Cumulative traffic volume forecasts, shown on Figure 10, were developed using the City's Travel Demand Model, which includes planned network and land use changes expected upon buildout of the City's General Plan.

CUMULATIVE TRANSPORTATION CONDITIONS

In addition to the Existing Plus Project impacts, as well as and Near Term Plus Project impacts, the and only list the additional stuff in near term.

1. Automobile Mode

Table 23 summarizes the intersection LOS for autos under Cumulative Conditions. Unacceptable operations are noted at the following intersections:

- #6 Tank Farm Road/S Higuera Street would operate at LOS F both with and without the project during the AM peak hour. Adding a second southbound left turn lane would improve operations to LOS C. This would slightly worsen pedestrian LOS, but it would remain acceptable at LOS C.
- #7 Tank Farm Road/Horizon Lane: the northbound approach would operate at LOS E with the project during the AM peak hour, and this intersection would meet the peak hour signal warrant. Adding a northbound right turn lane would improve operations to an acceptable level and mitigate the impact.

- #10 LOVR & Higuera would operate at level of service F during the AM & PM peaks if the LOVR Bypass is not constructed. In lieu of constructing the LOVR Bypass the installation of a second NB left turn lane in addition to near term mitigation measures would provide LOS C operations which is within General Plan thresholds.
- #12 Buckley Road/Vachell Lane: the southbound approach would operate at LOS F during the PM peak hour with the project in place and would meet the peak hour signal warrant. Installation of a traffic signal or a single lane roundabout would provide acceptable operations.
- #14 Buckley Road/Highway 227 would operate at LOS E or worse during the AM and PM peak hours both with and without the project. Installation of a second north and southbound through lane and second northbound left turn lane would provide LOS C or better operations.

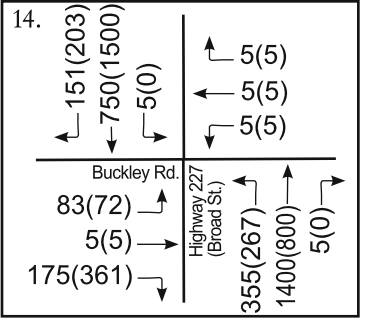
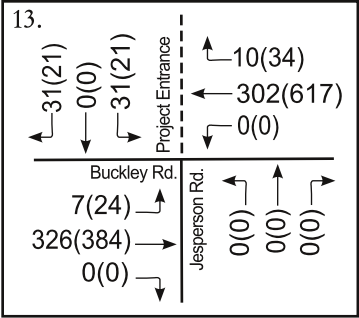
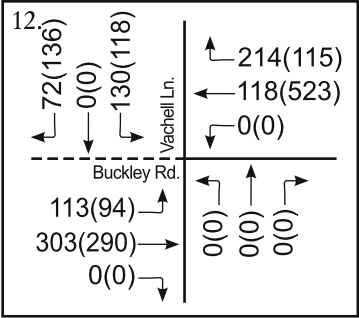
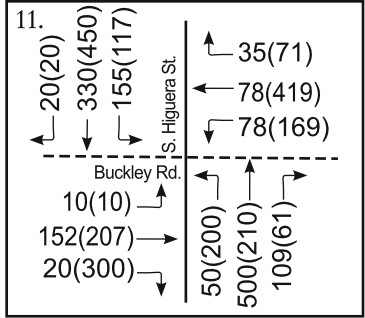
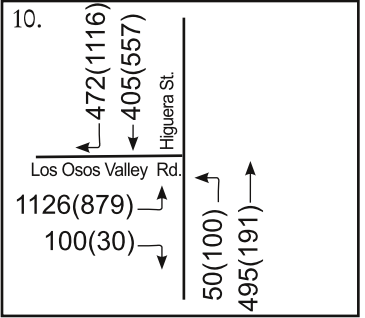
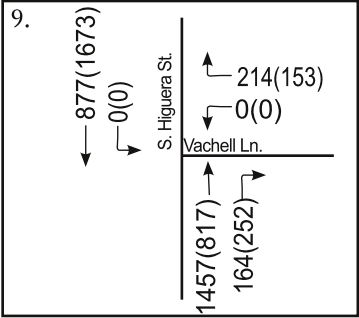
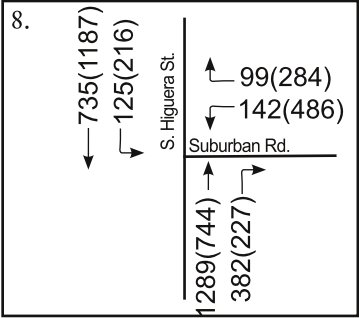
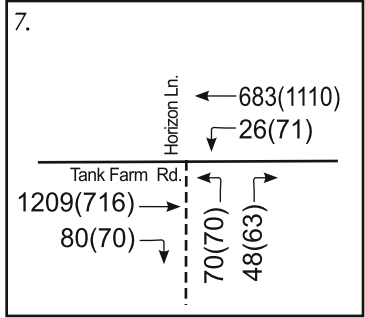
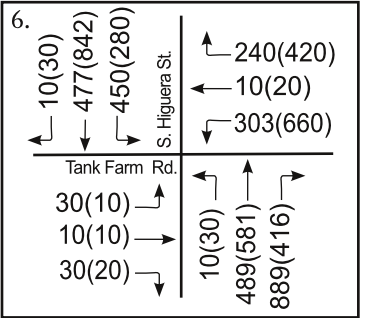
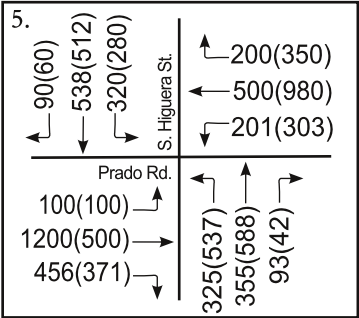
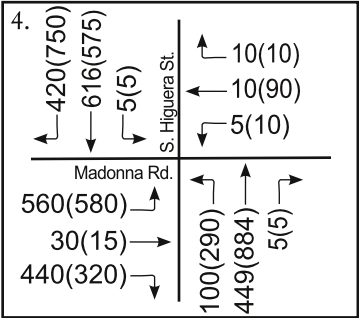
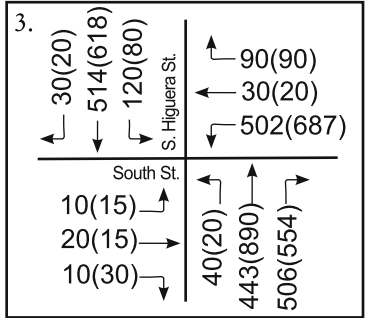
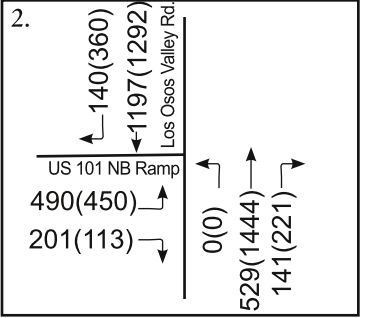
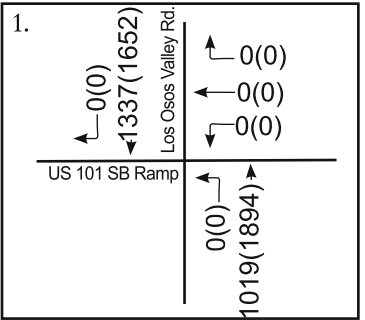
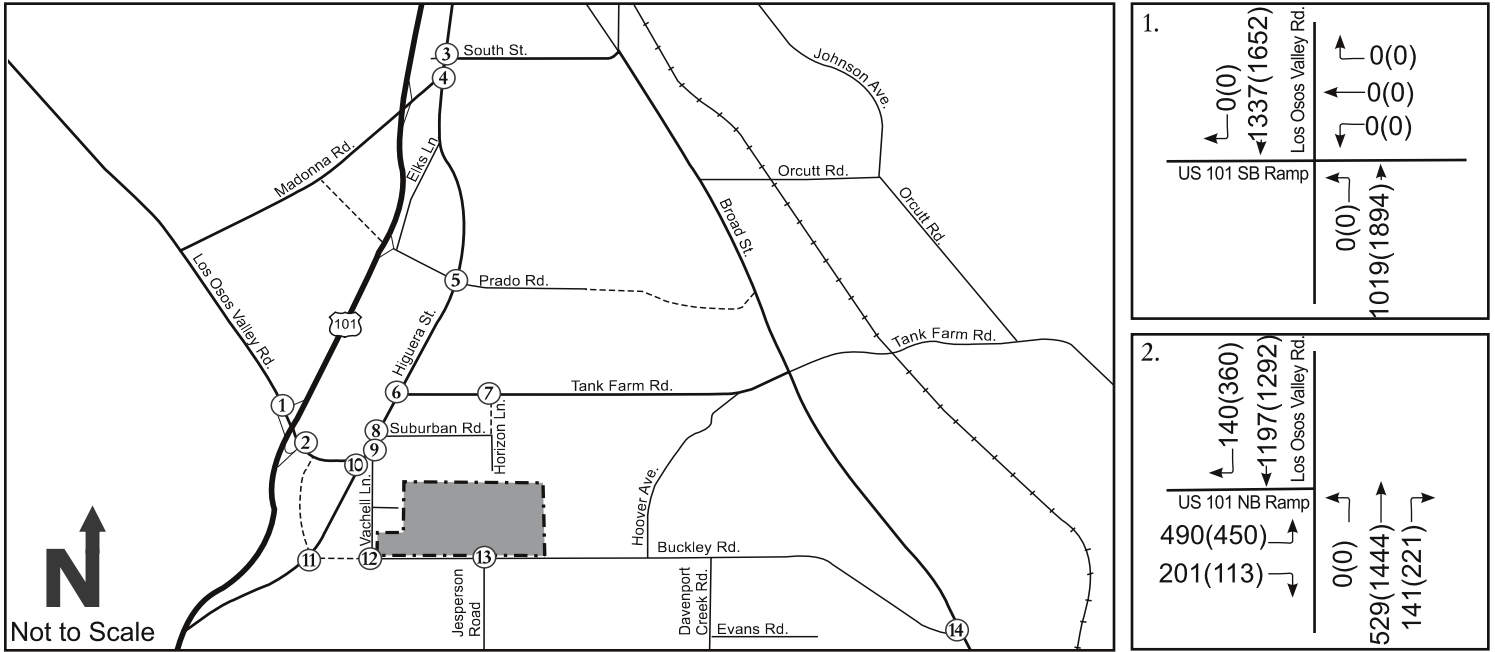
Table 23: Cumulative Intersection Auto Levels of Service								
Intersection	Peak Hour	Cumulative Delay ²			Cumulative + Project			
		V/C ¹	(sec/veh)	LOS ³	V/C ¹	Delta	Delay ² (sec/veh)	LOS ³
1. Los Osos Valley Road/US 101 SB	AM	0.76	2.5	A	0.78	0.02	2.7	A
	PM	0.85	4.5	A	0.90	0.05	7.8	A
2. Los Osos Valley Road/US 101 NB	AM	0.69	15.1	B	0.69	0.00	14.9	B
	PM	0.70	11.6	B	0.70	0.00	11.6	B
3. South Street/S Higuera Street	AM	0.59	21.4	C	0.59	0.00	21.5	C
	PM	0.78	25.8	C	0.79	0.01	26.1	C
4. Madonna Road/S Higuera Street	AM	0.66	14.2	B	0.66	0.00	14.2	B
	PM	0.85	21.8	C	0.86	0.01	22.1	C
5. Prado Road/S Higuera Street	AM	0.98	41.0	D	0.99	0.01	43.3	D
	PM	0.91	37.4	D	0.96	0.05	39.9	D
6. Tank Farm Road/S Higuera Street	AM	1.15	98.4	F	1.19	0.04	97.2	F
	PM	0.77	27.0	C	0.80	0.03	27.5	C
7. Tank Farm Road/Horizon Lane	AM	0.51	1.8 (34.1)	A (D)	0.53	0.02	2.2 (35.7)	A (E)
	PM	0.47	1.5 (19.7)	A (C)	0.47	0.00	1.9 (20.7)	A (C)
8. Suburban Road/S Higuera Street	AM	0.70	6.9	A	1.05	0.35	17.9	B
	PM	0.79	14.7	B	1.45	0.66	22.1	C
9. Vachell Lane/S Higuera Street	AM	0.62	2.4 (33.9)	A (D)	0.76	0.14	3.8 (47.5)	A (E)
	PM	0.50	0.7 (14.7)	A (B)	0.52	0.02	0.9 (16.6)	A (C)
10. Los Osos Valley Road/S Higuera Street	AM	0.77	20.3	C	0.78	0.01	20.6	C
	PM	0.93	27.2	C	0.96	0.03	30.1	C
11. Buckley Road/S Higuera Street	AM	0.65	13.7	B	0.56	-0.09	14.7	B
	PM	0.99	36.3	D	0.92	-0.07	37.7	D
12. Buckley Road/Vachell Lane	AM	0.41	4.8 (21.2)	A (C)	0.56	0.15	6.6 (24.8)	A (D)
	PM	0.66	6.7 (34.9)	A (D)	1.00	0.34	17.8 (84.2)	B (F)
13. Buckley Road/Project Entrance	AM	Future Intersection			0.20	0.20	1.3 (13.1)	A (B)
	PM	Future Intersection			0.42	0.42	1.1 (20.0)	A (C)
14. Buckley Road/Highway 227	AM	0.70	16.3	B	0.66	-0.04	19.3	B
	PM	0.92	35.3	D	0.99	0.07	39.8	D

1. Volume to capacity ratio reported for worst movement.
 2. HCM 2010 average control delay in seconds per vehicle.
 3. For side-street-stop controlled intersections the worst approach's delay is reported in parenthesis next to the overall intersection delay. Unacceptable operations shown in bold text.

Table 23a: Cumulative Intersection Without LOVR Bypass Auto Levels of Service								
Intersection	Peak Hour	Cumulative			Cumulative + Project			
		V/C¹	Delay² (sec/veh)	LOS	V/C¹	Delta	Delay² (sec/veh)	LOS
10. Los Osos Valley Road/S Higuera Street	AM	0.83	23.8	C	0.87	0.04	23.5	C
	PM	1.36	106.3	F	1.43	0.07	113.4	F
11. Buckley Road/S Higuera Street	AM	0.74	15.5	B	0.79	0.05	18.1	B
	PM	0.78	17.6	B	0.79	0.01	18.5	B
1. Volume to capacity ratio reported for worst movement.								
2. HCM 2010 average control delay in seconds per vehicle.								

No changes in LOS are reported between the Cumulative and the Near Term scenarios for auto segment operations.

Figure 10: Cumulative Plus Project Volumes



Legend:

- xx(yy) - AM(PM) Peak Hour Traffic Volumes
- Project Site
- (X) - Study Intersection
- - Future Road



Table 24 summarizes the peak hour queues under Cumulative conditions.

Table 24: Cumulative Plus Project Queues					
Intersection	Movement ²	Storage Length ³	Peak Hour	95th Percentile Queues (feet) ¹	
				Cumulative	CM + Project
1. Los Osos Valley Road/ US 101 SB	SBT	Trap	AM	0	0
			PM	#3	#81
3. South Street/ S Higuera Street	NBR	130	AM	36	38
			PM	283	293
4. Madonna Road/S Higuera Street	NBL	160	AM	#120	#120
			PM	#347	#347
	EBL	Trap	AM	256	256
			PM	268	268
5. Prado Road/ S Higuera Street	NBL	250	AM	#194	#214
			PM	#320	#335
	SBL	125	AM	#211	#211
			PM	#175	#175
	WBL	150	AM	#129	#130
			PM	153	154
6. Tank Farm Road/ S Higuera Street	NBR	100	AM	#478	#518
			PM	46	58
	WBL	Trap	AM	204	#205
			PM	#496	#508
	SBL	250	AM	#740	#740
			PM	#385	#385
8. Suburban Road/ S Higuera Street	WBL/R	170	AM	116	74
			PM	228	192
	SBL	160	AM	#183	#207
			PM	#134	#215
10. Los Osos Valley Road/ S Higuera	SBR	Trap	AM	74	87
			PM	#876	#922
	WBL	150	AM	48	71
			PM	#230	#250
11. Buckley Road/S Higuera	NBL	150	AM	55	55
			PM	#270	#270
	SBL	150	AM	122	125
			PM	122	#140
12. Vachell Lane/Buckley Road	SBL	Trap	AM	48	81
			PM	111	239
14. Buckley Road/ Highway 227	NBL	360	AM	#308	#417
			PM	#432	#467
	EBR	150	AM	27	43
			PM	#370	#396

1. Queue length that would not be exceeded 95 percent of the time. Queues are reported only for turning movements where queues exceed storage capacity.
 2. Los Osos Valley Road shown as running north/south at the US 101 ramp junctions.
 3. 'Trap' denotes design where the through lane terminates in a turn lane.
 #. 95th percentile volume exceeds capacity, queue may be longer.

Table 24a: Cumulative Plus Project Queues Without LOVR Bypass					
Intersection	Movement ²	Storage Length ³	Peak Hour	95th Percentile Queues (feet) ¹	
				Cumulative	CM + Project
10. Los Osos Valley Road/ S Higuera Street	SBR	Trap	AM	74	129
			PM	#1510	#1580
	EBL	150' Trap	AM	360	540
			PM	426	493
	NBL	Trap	AM	140	140
			PM	#1085	#1083

1. Queue length that would not be exceeded 95 percent of the time. Queues are reported only for turning
 2. Los Osos Valley Road shown as running north/south at the US 101 ramp junctions.
 3. 'Trap' denotes design where the through lane terminates in a turn lane.
 #. 95th percentile volume exceeds capacity, queue may be longer.

In addition to Existing and Near Term scenarios, Cumulative Queuing issues and improvements to address them are discussed below:

Location	Queuing Impact	Mitigation
5. Prado Road/S Higuera Street	The volumes exceed capacity for the north, south, and westbound left turn movements.	Widening the intersection to accommodate a dual left, dual thru, and a right turn pocket on all approaches mitigates this impact. This project is not currently included in the City's Transportation Impact Fee program.
6. Tank Farm Road/S Higuera Street	The southbound left turn queues exceed capacity during the AM and PM peak hours both with and without the project.	The installation of a second SB left turn lane, second WB right turn lane, and second NB right turn lane mitigates this impact. This project is not currently included in the City's Transportation Impact Fee program.
	The westbound left turn approach exceeds capacity both with and without the project during the PM peak hour.	The installation of a second SB left turn lane, second WB right turn lane, and second NB right turn lane mitigates this impact. This project is not currently included in the City's Transportation Impact Fee program.
10. Los Osos Valley Road/S Higuera Street	The southbound right turn lane exceeds capacity during the PM peak hour both with and without the project.	Adding a second southbound right turn lane would address this impact. This project is not currently included in the City's Transportation Impact Fee program.
11. Los Osos Valley Road/S Higuera Street	Without the LOVR Bypass the NB left turn lane exceeds capacity during the PM peak hour both with and without the project.	If the LOVR Bypass is not constructed the installation of a second NB left turn lane would mitigate this impact. Neither this measure nor the Bypass are currently included in the City's Transportation Impact Fee program.

2. Pedestrian and Bicycle Modes

Tables 25 and 26 summarizes the bicycle and pedestrian intersection and segment operations under Cumulative conditions. No pedestrian intersection deficiencies are noted at City controlled intersections, but the following bicycle intersection deficiencies are reported:

- #5 Prado Road/S Higuera Street: the eastbound direction operates at LOS E during the AM peak hour and the westbound direction operates at LOS E during the PM peak hour for all scenarios. Construction of a Class I path along Prado Road as included in the City's BTP would mitigate this impact.
- #10 Los Osos Valley Road/S Higuera Street: the southbound direction operates at LOS E during the PM peak hour both with and without the project. The Bob Jones Bike Trail provides a parallel route for cyclists between Prado Road and Los Osos Valley Road, allowing them to avoid this intersection. The City's BTP also includes a planned Class I facility connecting Los Osos Valley Road near the US 101 interchange to S Higuera Street near the planned Buckley Road/S Higuera Street intersection. The planned Class I connection between Buckley Road and Tank Farm Road would also provide a parallel route allowing cyclists to avoid this intersection. Construction of these planned facilities would mitigate this impact.
- #14 Buckley Road/Highway 227: the northbound direction operates at LOS F during the AM peak hour and the southbound direction operates at LOS F during the PM peak hour both with and without the project. Caltrans does not have a significance threshold for non-auto modes. However, implementation of the City's BTP would improve this condition by adding a Class I path and Class II lanes along the extent of Buckley Road.

Detailed LOS calculation sheets are provided in Appendix B.

Table 25: Cumulative Intersection Bicycle Levels of Service						
Intersection	Peak Hour	Direction	Cumulative		Cumulative + Project	
			LOS Score	LOS	LOS Score	LOS
1. Los Osos Valley/US 101 SB	AM	NB	3.35	C	3.39	C
		SB	4.10	D	4.15	D
	PM	NB	4.03	D	4.06	D
		SB	4.35	E	4.51	E
2. Los Osos Valley/US 101 NB	AM	NB	2.36	B	2.43	B
		SB	3.45	C	3.47	C
	PM	NB	3.44	C	3.49	C
		SB	3.63	D	3.70	D
3. South Street/S Higuera Street	AM	NB	2.22	B	2.26	B
		SB	1.91	A	1.92	A
		EB	2.93	C	2.93	C
		WB	2.65	B	2.66	B
	PM	NB	2.68	C	2.71	B
		SB	1.95	A	1.99	A
		EB	2.97	C	2.97	C
		WB	2.99	C	3.00	C
4. Madonna Road/S Higuera Street	AM	NB	1.28	A	1.32	A
		SB	2.22	B	2.23	B
		EB	3.19	C	3.19	C
		WB	1.23	A	1.23	A
	PM	NB	1.84	A	1.87	A
		SB	2.43	B	2.48	B
		EB	2.96	C	2.96	C
		WB	1.38	A	1.38	A
5. Prado Road/S Higuera Street	AM	NB	2.18	B	2.26	B
		SB	2.40	B	2.42	B
		EB	4.44	E	4.44	E
		WB	3.67	D	3.67	D
	PM	NB	2.55	B	2.60	B
		SB	2.27	B	2.33	B
		EB	3.71	D	3.73	D
		WB	4.31	E	4.31	E
6. Tank Farm Road/S Higuera Street	AM	NB	1.97	A	2.26	B
		SB	1.80	A	1.82	A
		EB	2.89	C	2.83	C
		WB	2.21	B	2.21	B
	PM	NB	3.14	C	3.20	C
		SB	3.19	C	3.27	C
		EB	2.77	C	2.77	C
		WB	4.40	E	4.42	E
7. Tank Farm Road/Horizon Lane ²	AM	EB WB	N/A			
	PM	EB WB	N/A			
8. Suburban Road/S Higuera	AM	NB	2.64	B	2.69	B
		SB	2.14	B	2.17	B
		WB	1.77	A	1.73	A
	PM	NB	1.98	A	2.02	B
PM	SB	2.53	B	2.61	B	
	WB	2.73	B	2.18	B	
	WB	2.73	B	2.18	B	
9. Vachell Lane/S Higuera Street ²	AM	NB SB	N/A			
	PM	NB SB	N/A			
10. Los Osos Valley/S Higuera	AM	NB	2.32	B	2.34	B
		SB	3.05	C	3.15	C
		EB	2.09	B	2.12	B
	PM	NB	1.86	A	1.88	A
		SB	4.39	E	4.48	E
		EB	1.74	A	1.82	A
11. Buckley Road/S Higuera	AM	NB	3.34	C	3.36	C
		SB	3.02	C	3.03	C
		EB	2.67	B	2.67	B
		WB	2.61	B	2.74	B
	PM	NB	2.94	C	3.00	C
		SB	3.14	C	3.17	C
		EB	3.28	C	3.30	C
		WB	3.53	D	3.61	D
12. Buckley Road/Vachell Lane ²	AM	EB WB	N/A			
	PM	EB WB	N/A			
13. Buckley Road/Project Entrance ²	AM	EB WB	N/A			
	PM	EB WB	N/A			
14. Buckley/Highway 227	AM	NB	3.50	D	3.51	D
		SB	2.97	C	2.97	C
		EB	2.93	C	2.96	C
		WB	2.69	B	2.69	B
	PM	NB	2.83	C	2.84	C
		SB	3.63	D	3.63	D
		EB	3.21	C	3.24	C
		WB	2.69	B	2.69	B

1. HCM 2010 bicyde score and LOS.

2. The 2010 HCM does not establish LOS standards for bicycles at two-way stop-controlled intersections.

Table 26: Cumulative Segment Pedestrian Levels of Service						
Segment	Direction	Cumulative		Cumulative + Project		
		LOS Score	LOS	LOS Score	LOS	
S HigueraStreet - Buckley Road to LOVR	AM	NB	4.48	E	4.51	E
		SB	4.06	D	4.07	D
	PM	NB	3.57	D	3.59	D
		SB	4.20	D	4.24	D
S HigueraStreet - LOVR to Suburban Road	AM	NB	4.62	E	4.68	E
		SB	2.63	B	2.69	B
	PM	NB	3.69	D	3.74	D
		SB	3.33	C	3.39	C
S HigueraStreet - Suburban Road to Tank Farm Road	AM	NB	3.32	C	3.43	C
		SB	3.16	C	3.20	C
	PM	NB	2.99	C	3.06	C
		SB	3.20	C	3.31	C
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	3.07	C	3.25	C
		SB	3.04	C	3.07	C
	PM	NB	5.41	F	5.53	F
		SB	2.66	B	2.76	C
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	2.30	B	2.39	B
		SB	3.13	C	3.16	C
	PM	NB	3.55	D	3.61	D
		SB	2.70	B	2.80	C
Buckley Road - S HigueraStreet to Project Entrance	AM	NB	3.48	C	4.64	E
		SB	4.01	D	4.50	E
	PM	NB	3.56	D	4.41	E
		SB	4.28	E	4.57	E

1. HCM 2010 pedestrian score and LOS.

No bicycle segment deficiencies are noted, but the following roadway segments would operate below the pedestrian threshold level under Cumulative Plus Project conditions:

- S Higuera Street from Buckley Road to LOVR would operate at LOS D or worse under all scenarios during the AM and PM peak hour. This segment does not have continuous sidewalks and pedestrians sometimes use the paved shoulder. Portions of this segment are in the County, and portions are in the City. The addition of project traffic is not expected to result in a noticeable degradation in pedestrian comfort.
- S Higuera Street from Los Osos Valley Road to Suburban Road operates at LOS D in the northbound direction during the AM peak hour and LOS D in the southbound direction during the PM peak hour both with and without the project. This is primarily due to the high vehicle volumes on S Higuera Street. The project would provide on-site Class I path offering a parallel path of travel for pedestrians, thereby mitigating this impact.

3. Transit Mode

Under Cumulative conditions additional transit service is expected in the study area. The two new transit stops proposed by the Project would adequately accommodate future route expansions.

Vehicle Miles Traveled

As reported by the City of San Luis Obispo Travel Demand Model the forecasted 2035 Daily Vehicle Miles Traveled (VMT) is approximately 12 million miles with an average VMT per household of 80 for the region and approximately 1.5 million miles with an average VMT per household of 54 for the City sphere of influence.

As reported using VMT+, the project is forecasted to add approximately 65,000 daily VMT, an increase of approximately 4% within the City sphere of influence and 0.5% within the County region. The VMT generated per household for the project is forecasted at 72 miles traveled per household.

Although the project is forecasted to have a VMT below the regional average, the San Luis Obispo City sphere of influence has a significantly lower VMT per household (54) than the County regional average (80). The proposed project's VMT per household is approximately 33% higher than the City's forecasted VMT. A summary comparison of VMT is provided in Table 28 below. Detailed VMT calculation worksheets are provided in Appendix F.

Table 28: 2035 Forecasted Vehicle Miles Traveled		
Description	Daily VMT	VMT per HH¹
San Luis Obispo County (Region)	12,000,000	80
San Luis Obispo City (Sphere of Influence)	1,500,000	54
Avila Ranch Project	65,000	72
1. Reported vehicle miles travelled per household		

EQUITABLE SHARE CONTRIBUTIONS

Table 29 summarizes the equitable share calculations for Cumulative impacts discussed above. The calculations are based on Cumulative Plus Project conditions.

Table 29: Equitable Share Calculations		
Improvement	Project Share ¹	Notes
Intersection #5 Prado Rd/ S Higuera St add east and westbound overlap phases.	5.4%	Based on total entering volumes during PM peak hour.
Intersection #6 Tank Farm Rd/ S Higuera St add second SB left turn lane and NB overlap.	13.4%	Based on total entering volumes during AM peak hour.
Intersection #7 Tank Farm Rd/ Horizon Ln add NB right turn lane.	5.5%	Based on total entering volumes during AM peak hour.
Intersection #10 LOVR/S Higuera St add second SB right turn lane.	30.8%	Based on total entering volumes during PM peak hour.
Intersection #12 Buckley Rd/ Vahell Ln install signal or roundabout	15.6%	Based on total entering volumes during PM peak hour.
Intersection #14 Buckley Rd/ Highway 227 install second NB and SB through lanes, second NB left turn lane	2.7%	Based on total entering volumes during PM peak hour.
1. Calculated as project trips divided by difference of Cumulative Plus Project and Existing volumes.		

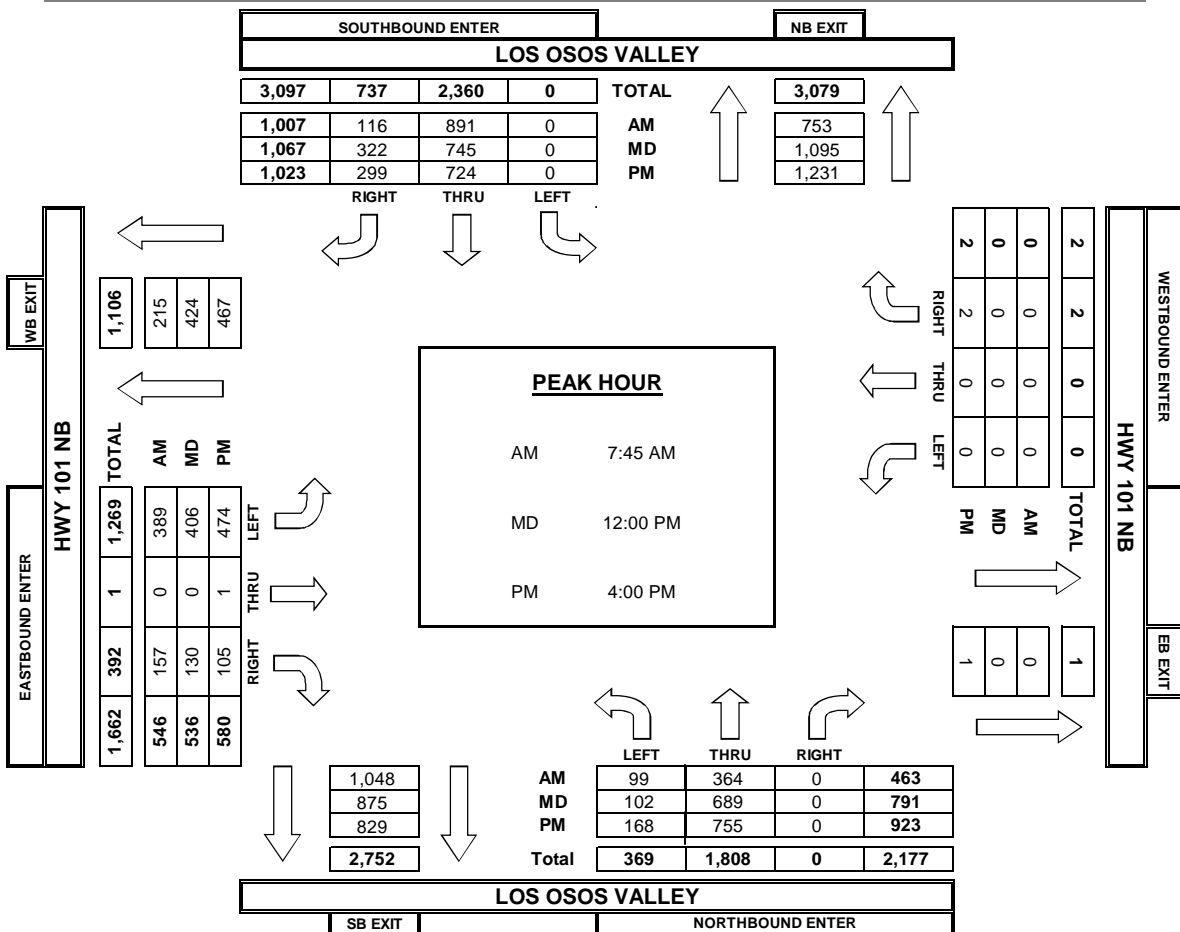
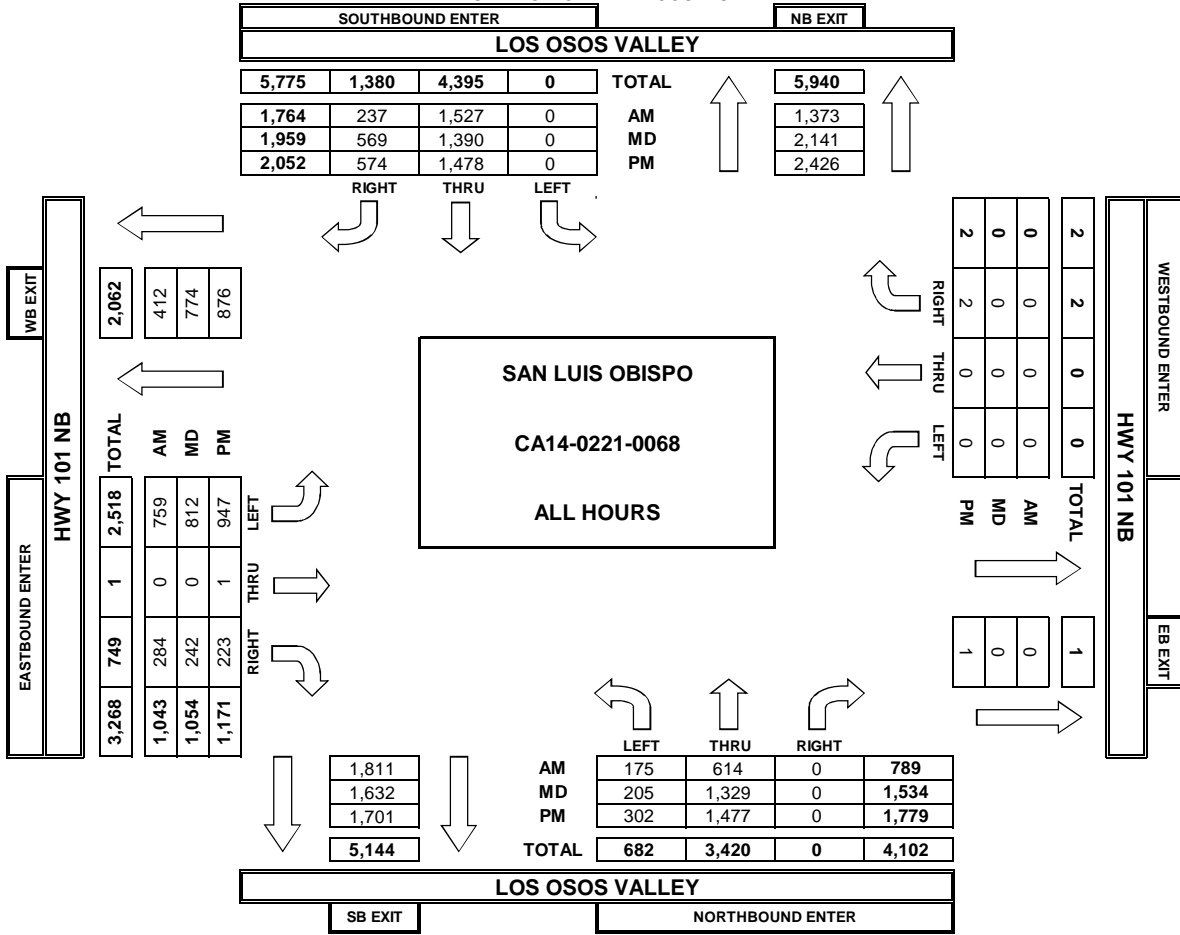
References

- American Association of State Highway and Transportation Officials (AASHTO). 2011. A Policy on Geometric Design of Highways and Streets.
- California Department of Transportation. 2002. Guide for the Preparation of Traffic Impact Studies.
- City of San Luis Obispo. 2014. Circulation Element of the General Plan.
- _____. 2014. Bicycle Transportation Plan.
- _____. 2015. Multimodal Transportation Impact Guidelines.
- County of San Luis Obispo. 2007. Traffic Impact Study Policies.
- San Luis Obispo Council of Governments. 2014. Regional Transportation Plan/Sustainable Communities Strategy.
- Transportation Research Board. 2010. Highway Capacity Manual.

Appendix A: Traffic Count Sheets

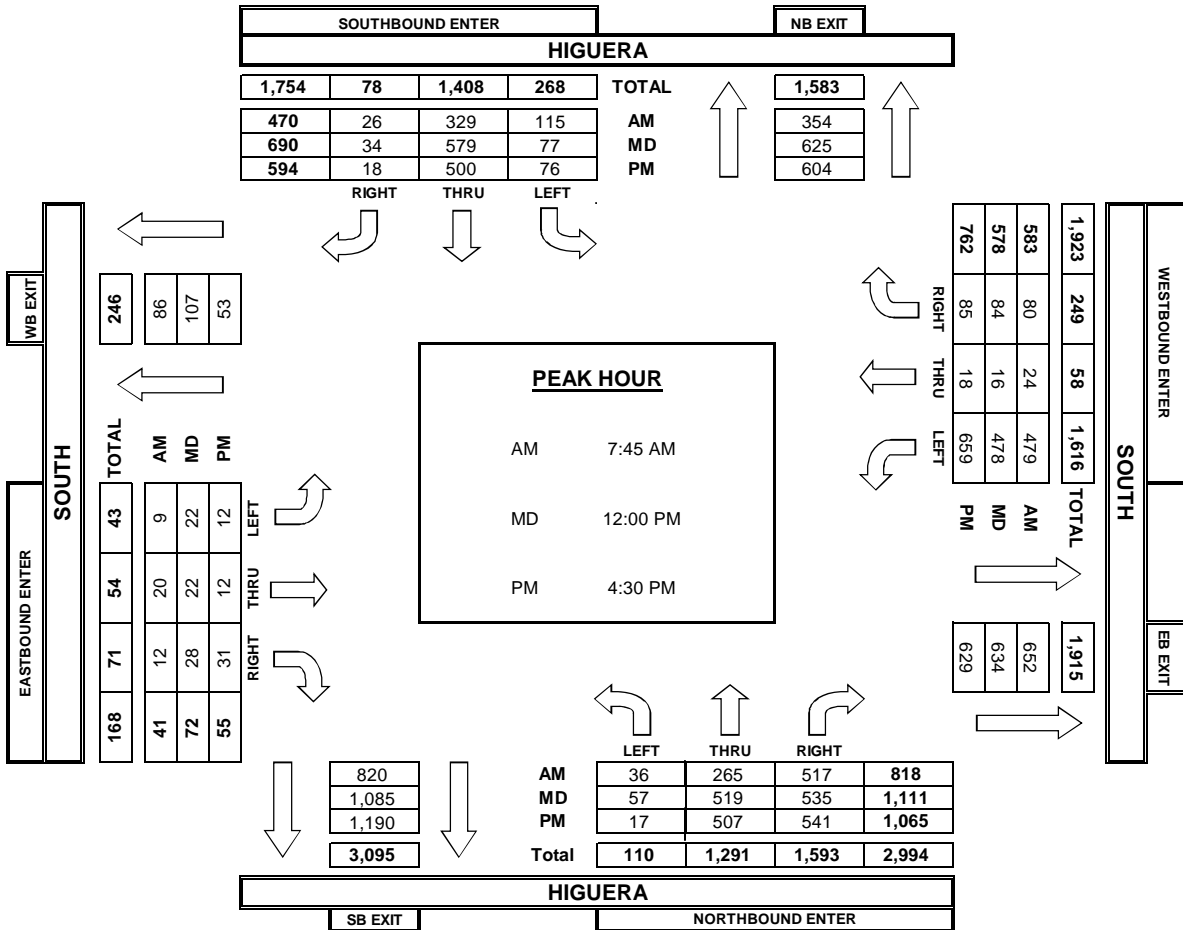
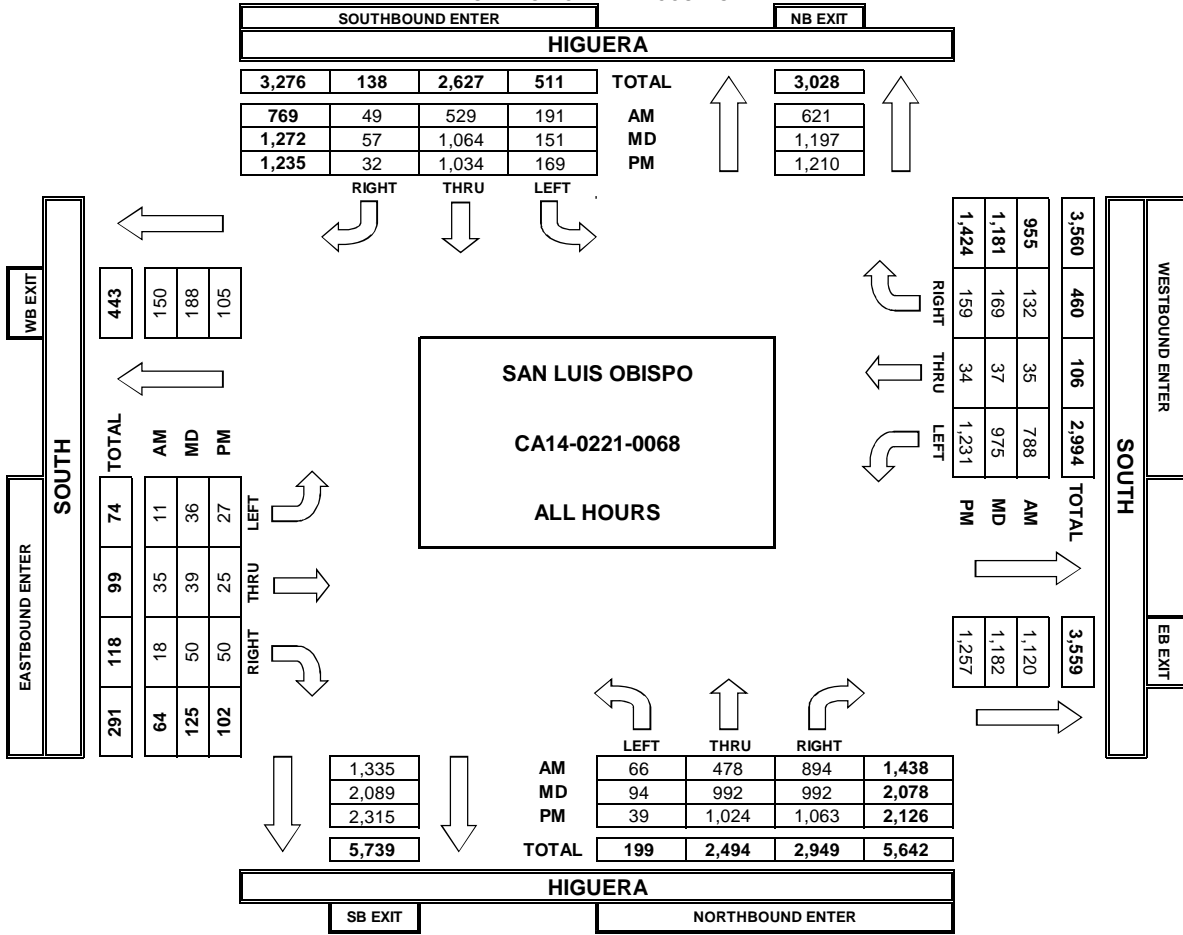
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



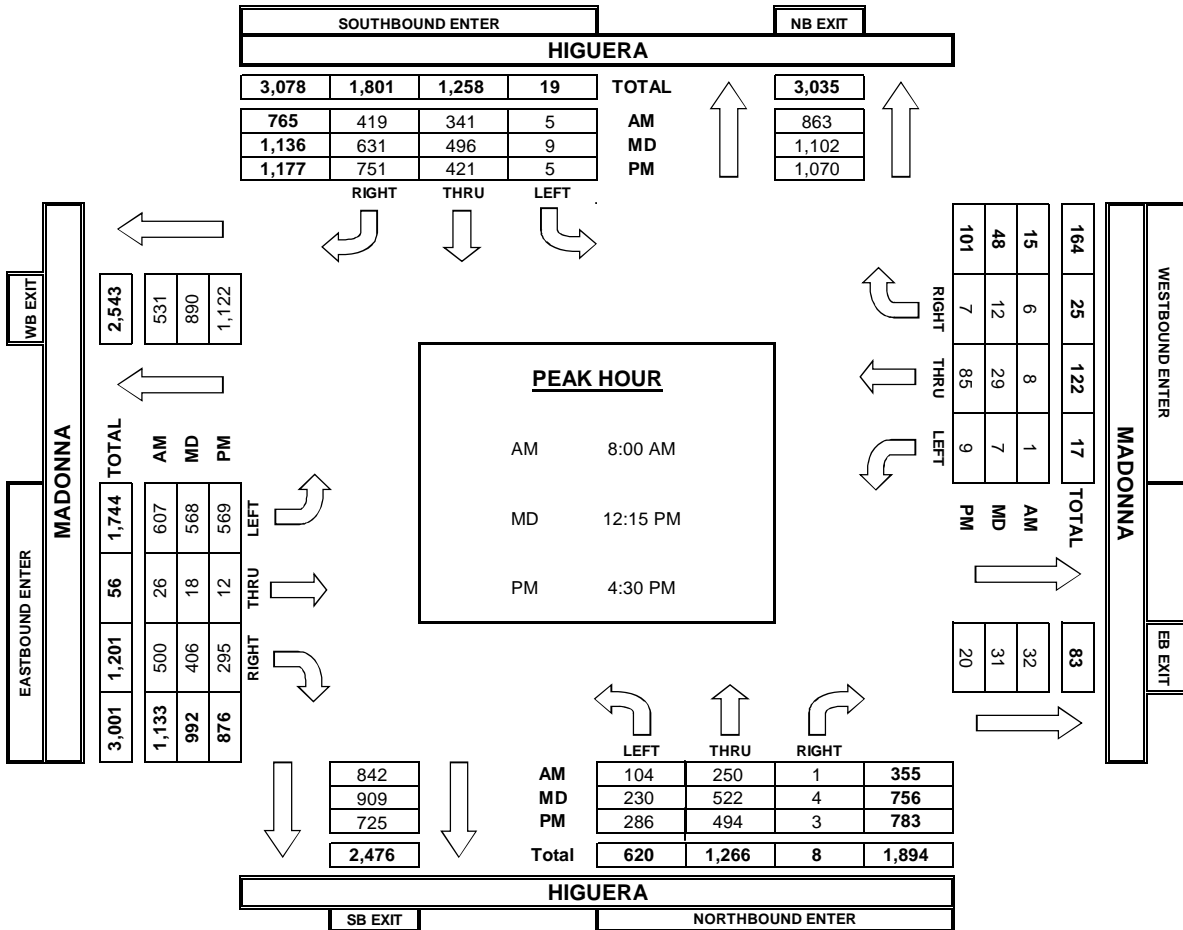
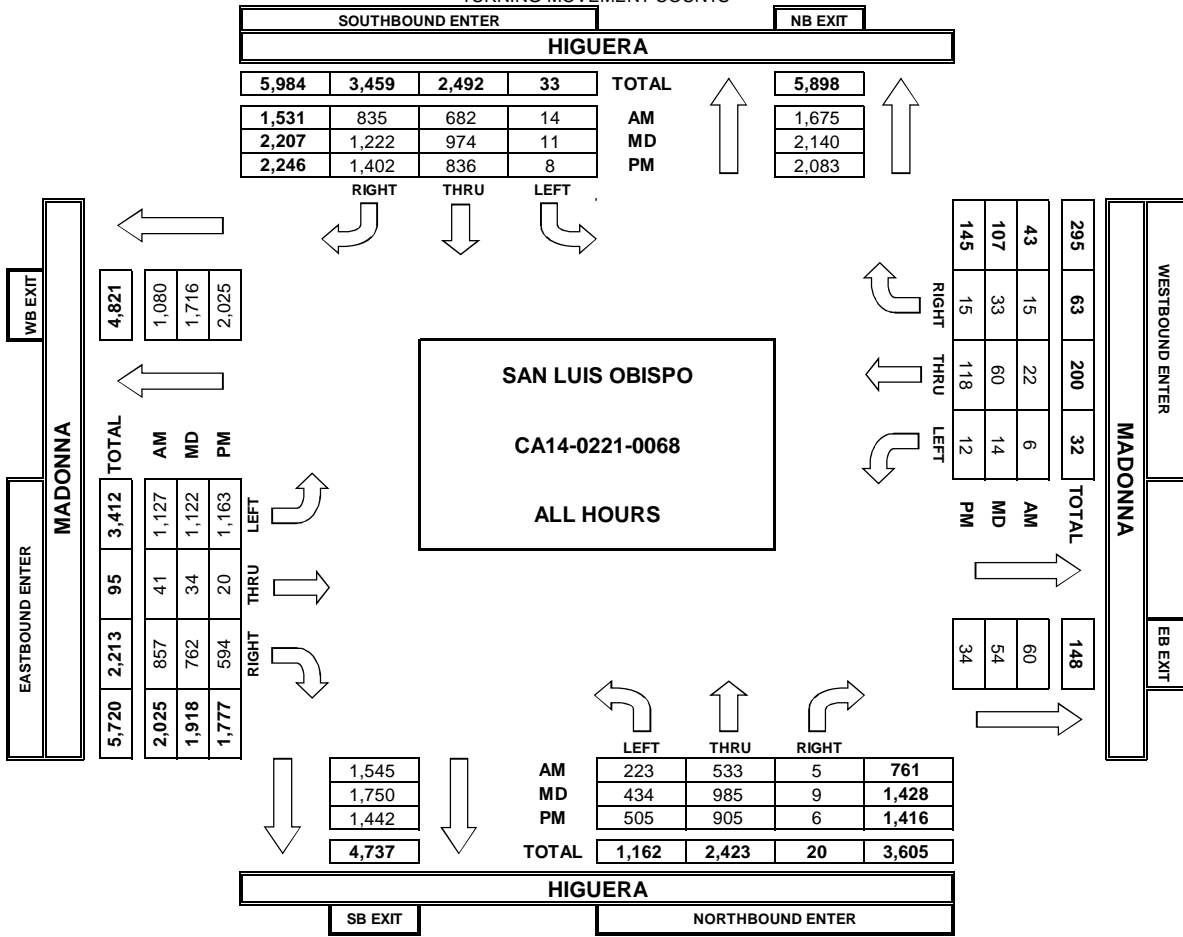
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



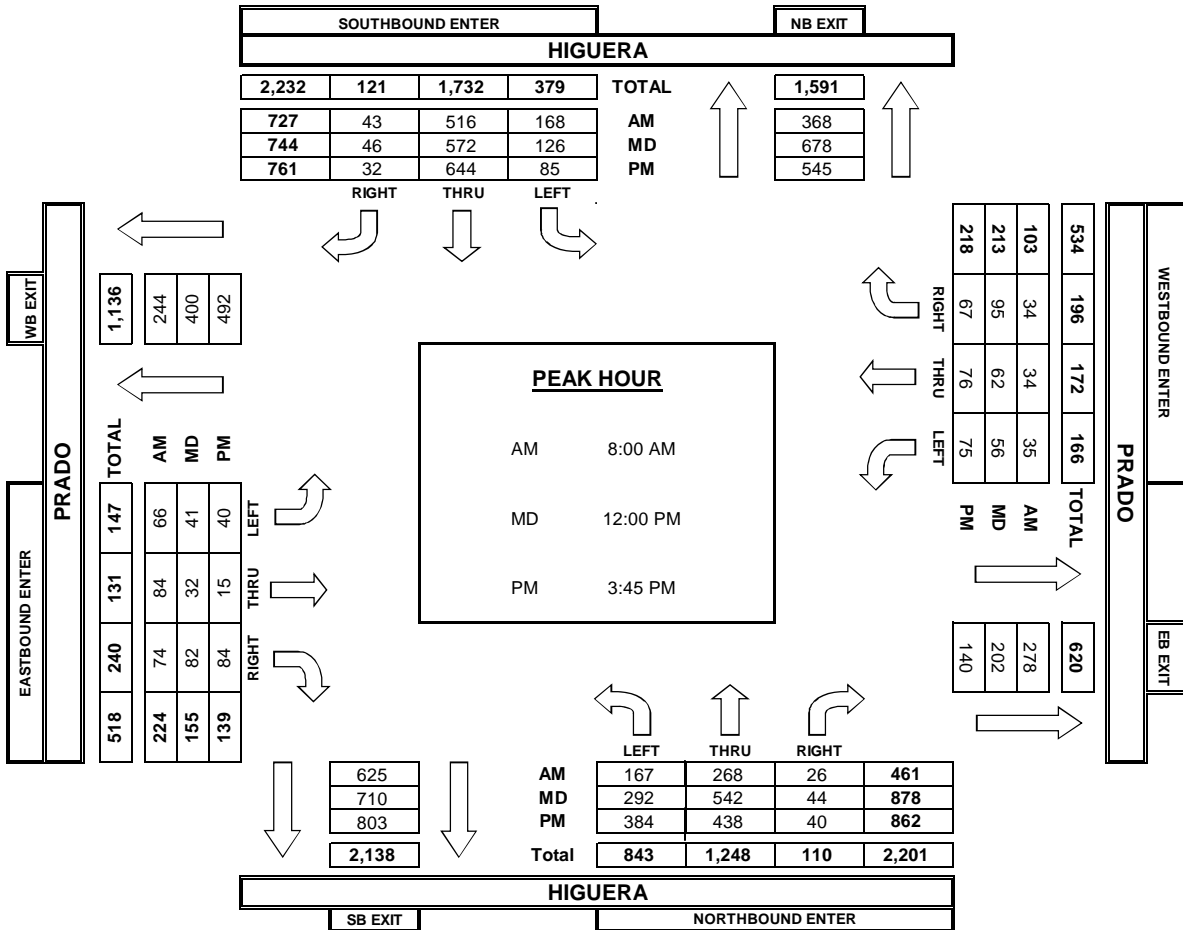
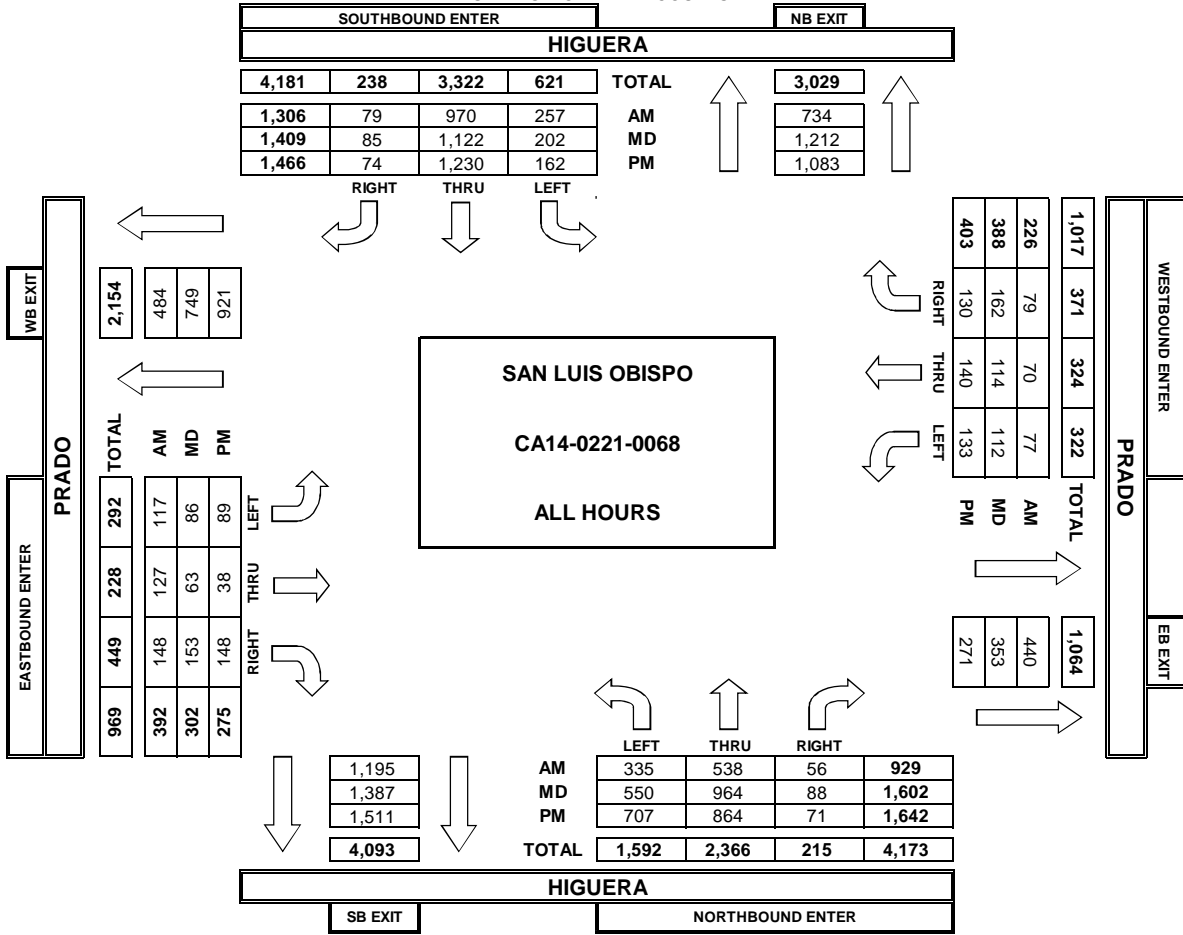
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



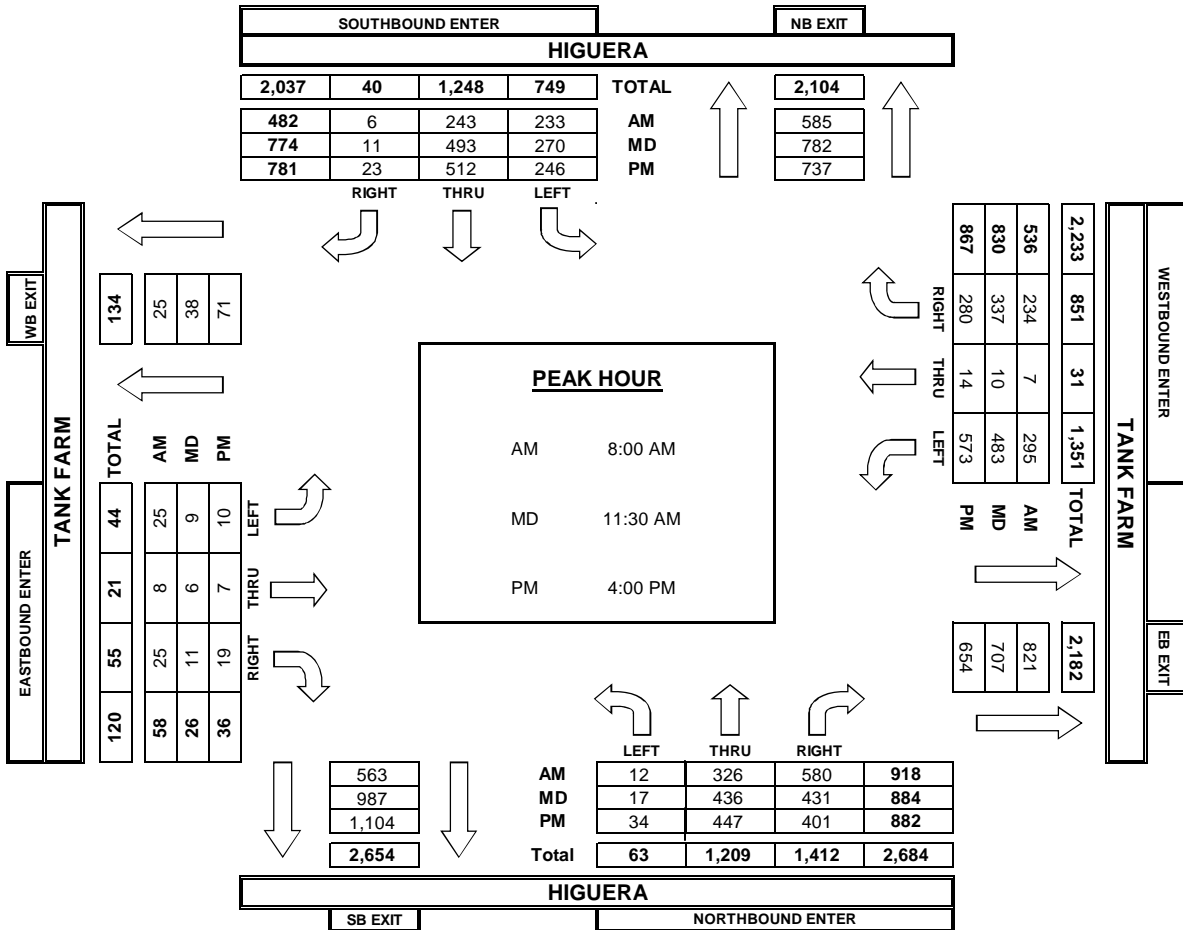
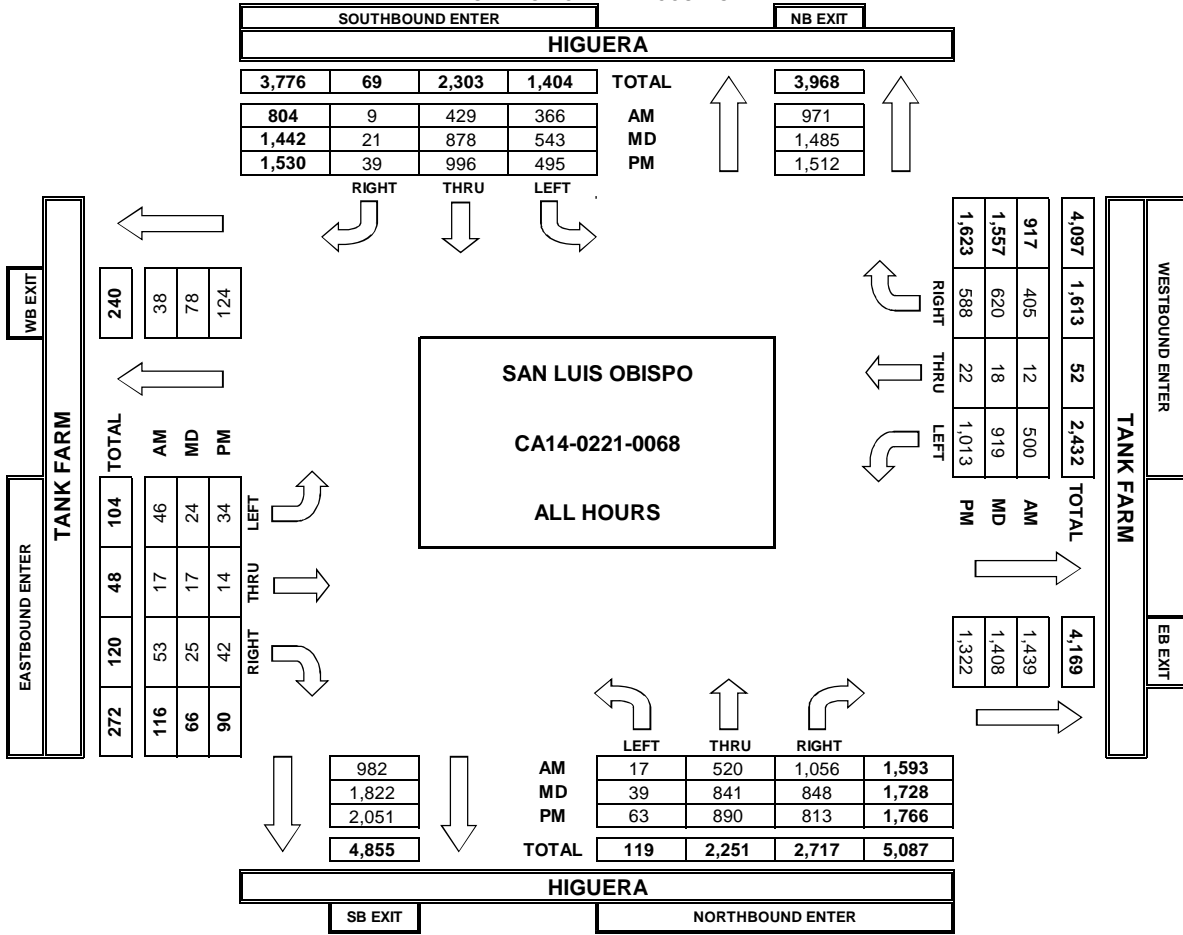
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



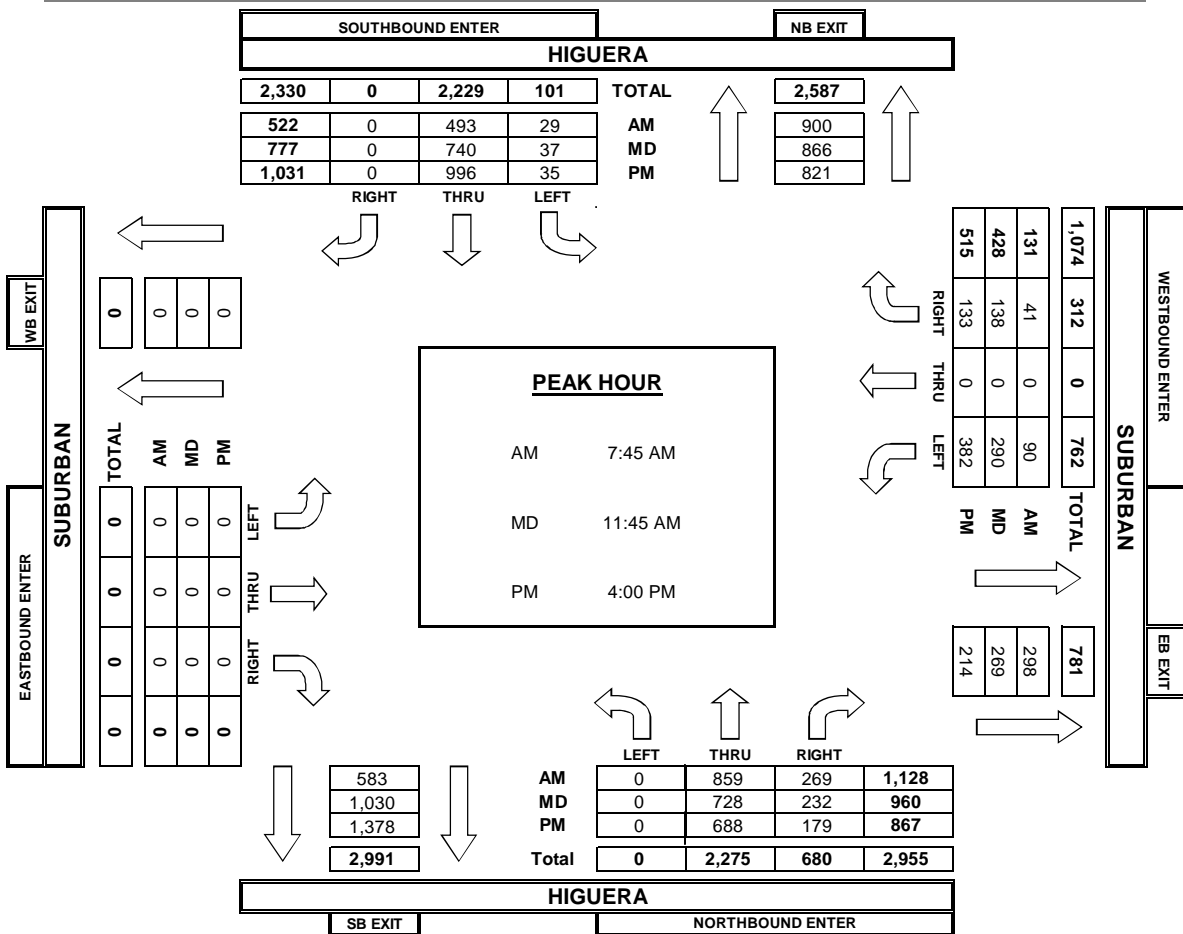
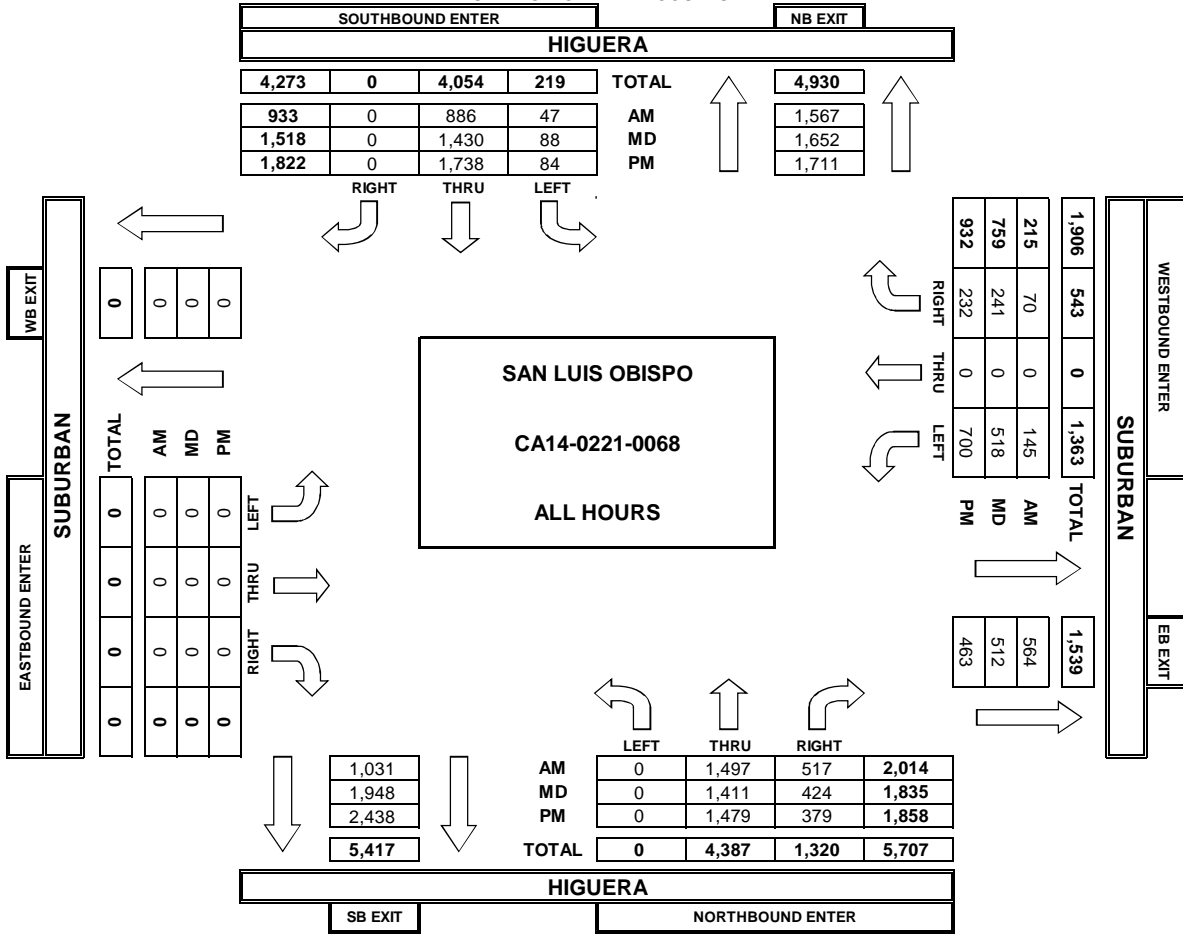
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



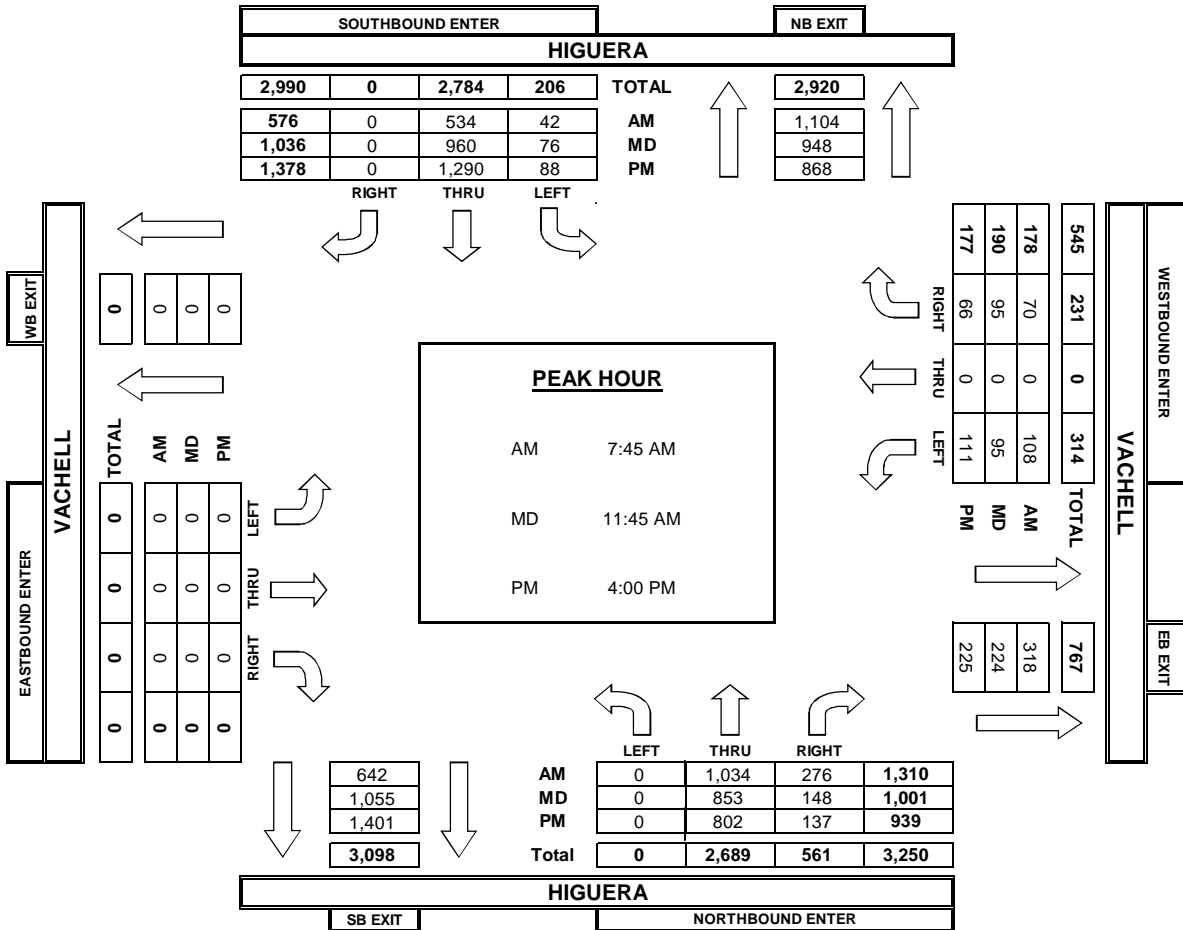
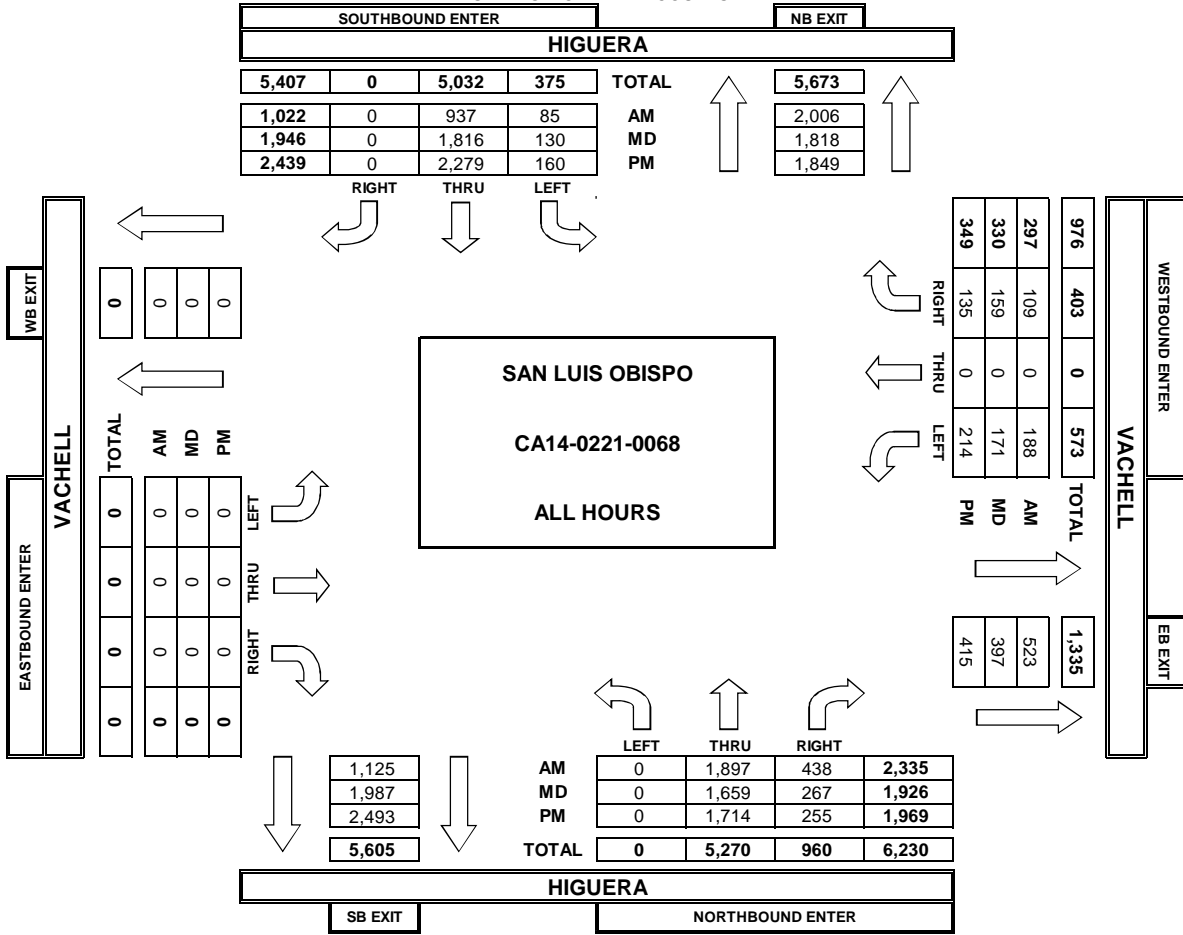
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



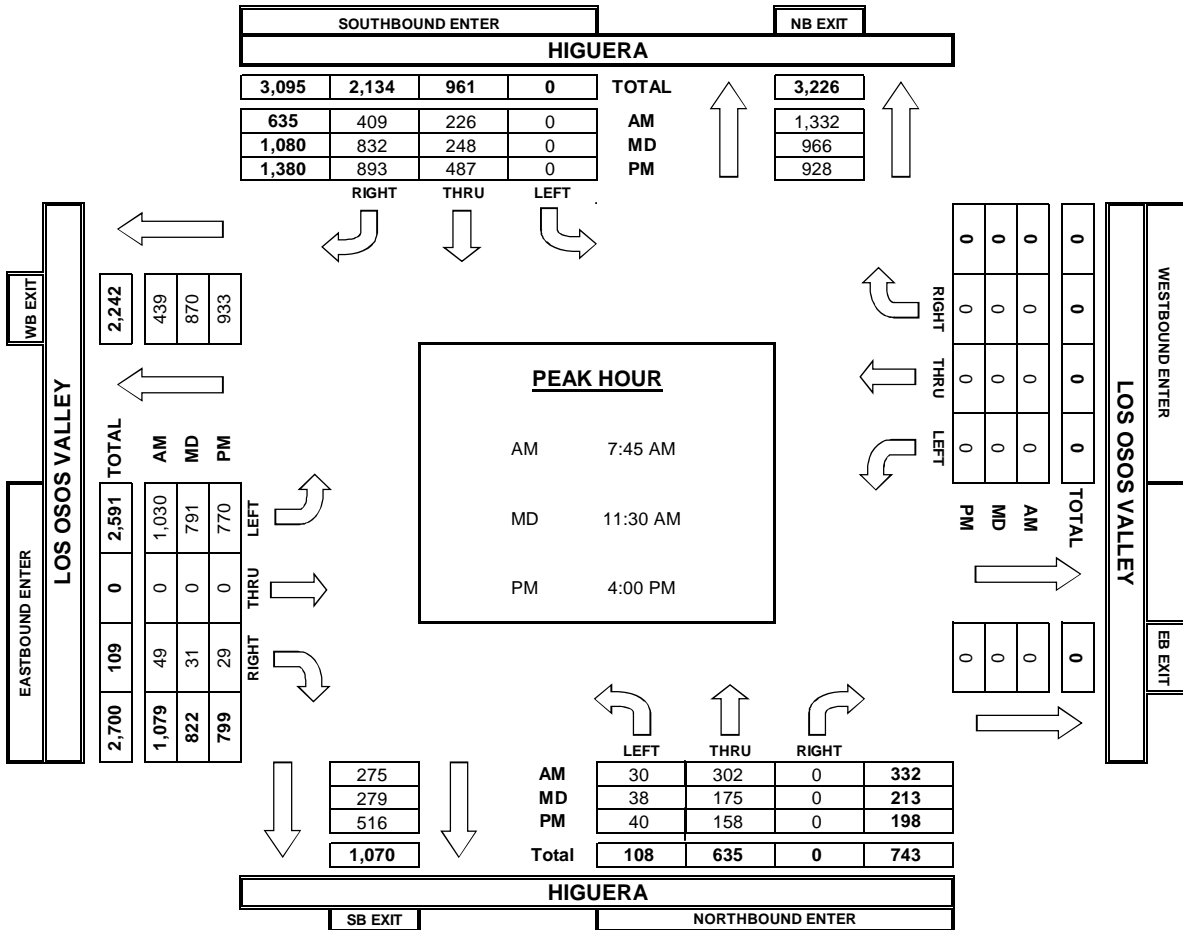
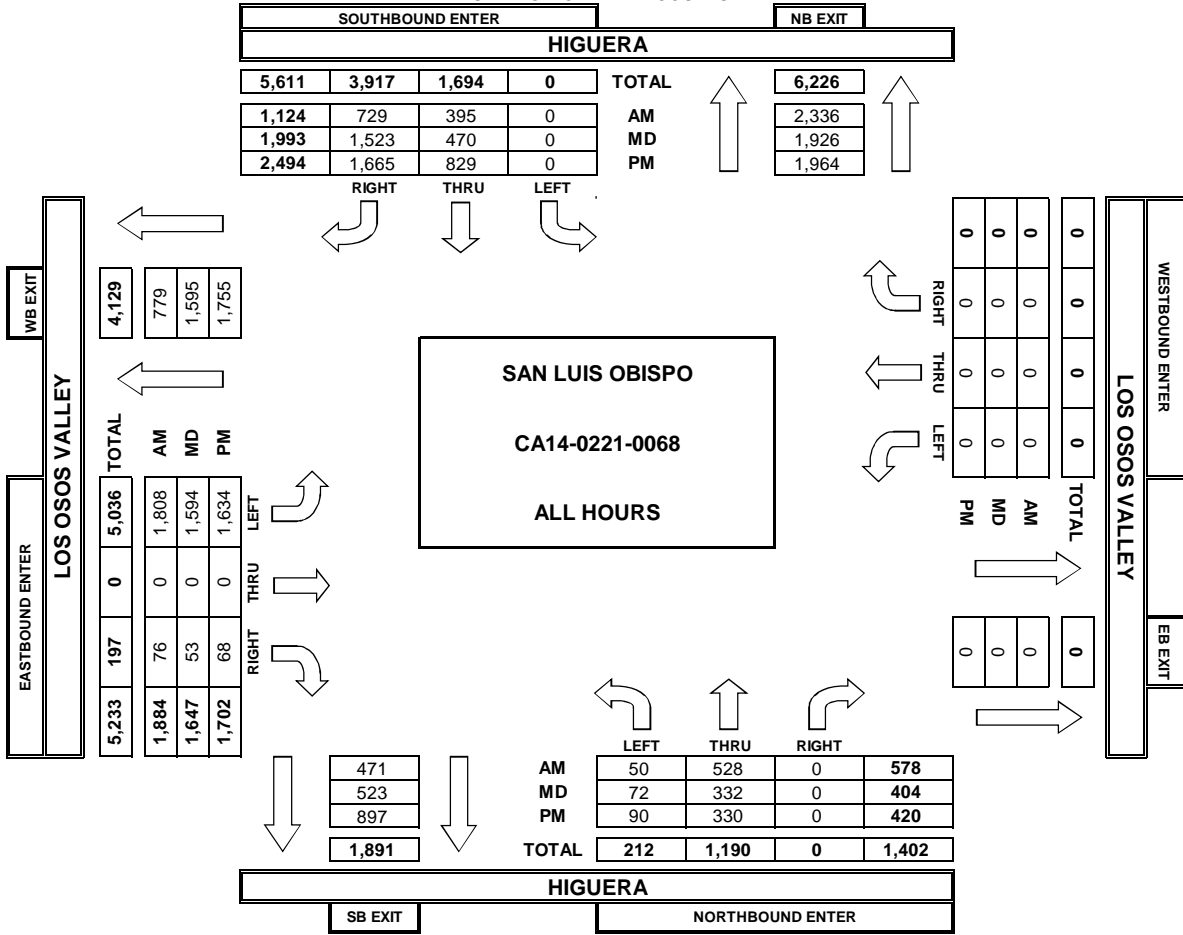
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



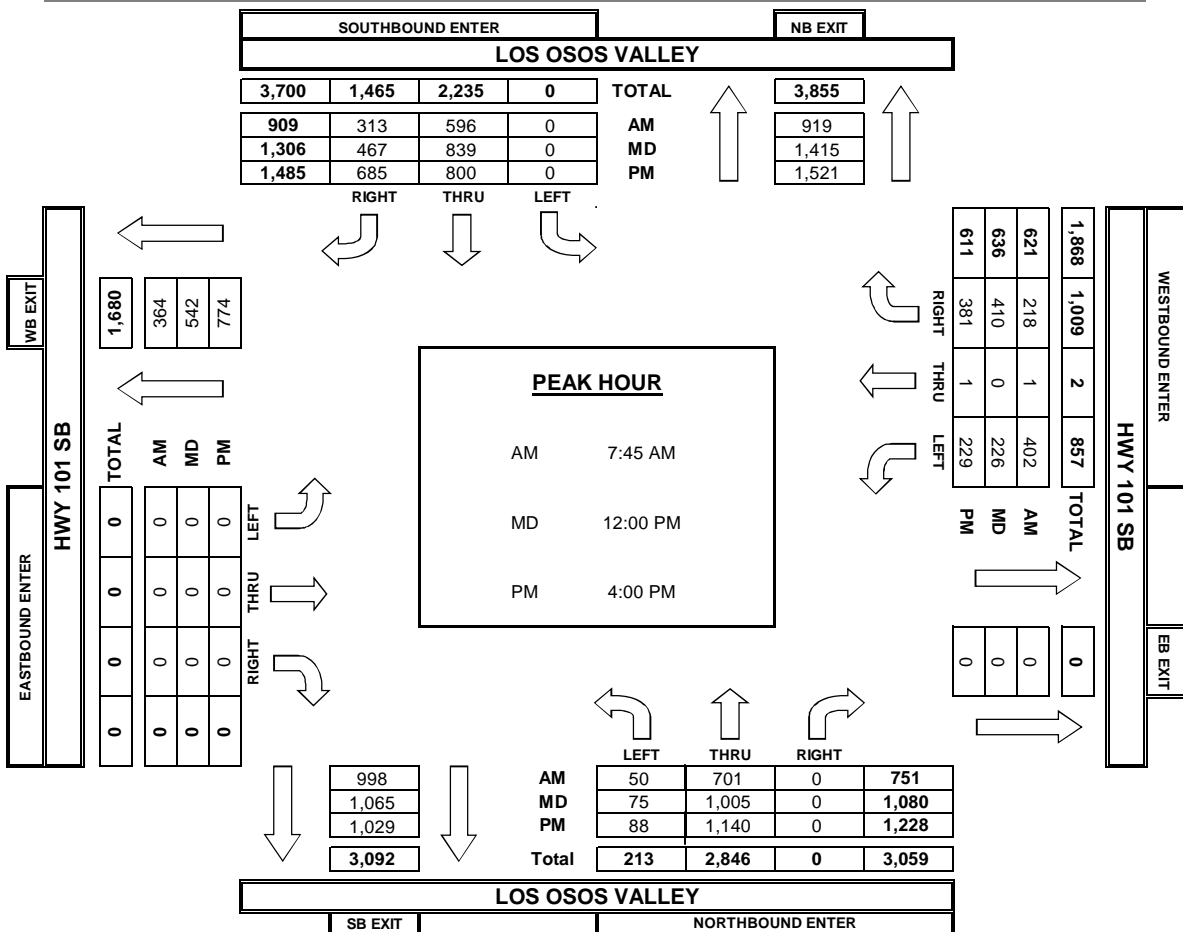
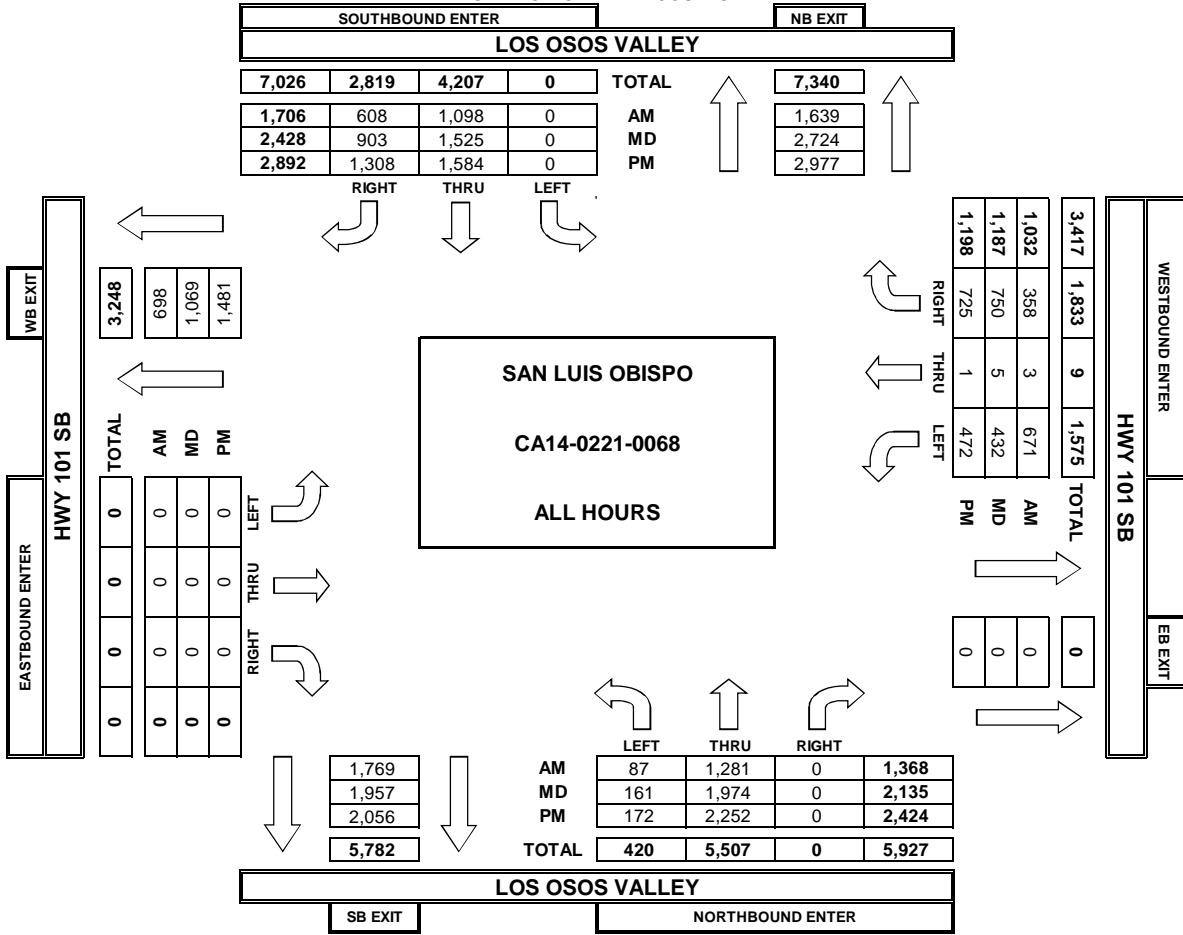
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



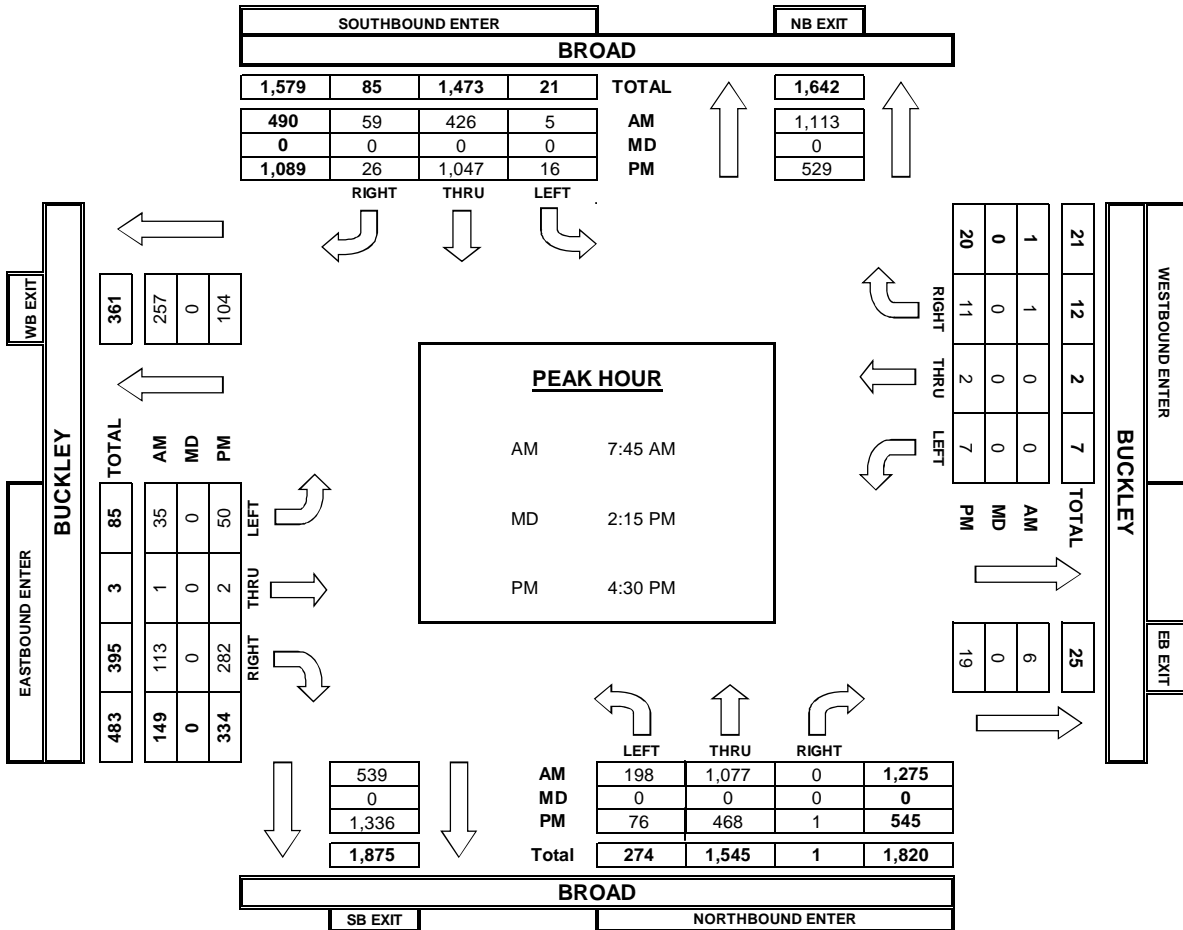
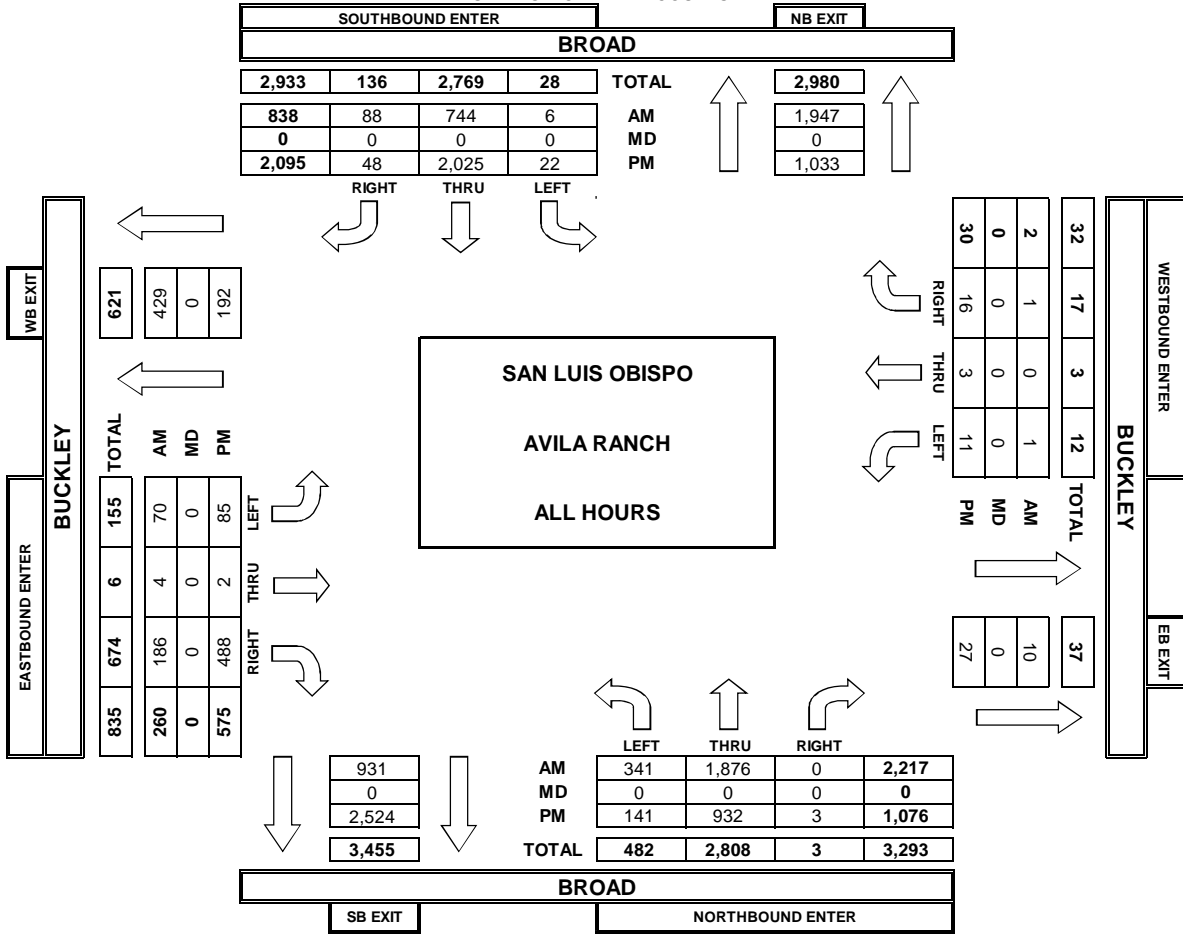
ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



ATLANTIC & PACIFIC DATA CORPORATION

TURNING MOVEMENT COUNTS



Appendix B: LOS Calculations Sheets

Avila Ranch Existing AM
6/15/2015
1: LOVR & 101 NB/101 SB

	WBL	WBT	NBL	NBT	SBR	SBR
Lane Group	437	238	54	762	648	340
Lane Group Flow (vph)	0.66	0.33	0.22	0.41	0.81	0.39
v/c Ratio	31.3	6.5	14.3	19.3	24.2	1.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.3
Queue Delay	31.3	6.5	14.3	19.3	24.2	1.8
Total Delay	209	12	21	196	312	0
Queue Length 50th (ft)	#381	67	38	240	413	4
Queue Length 95th (ft)	198			872	236	
Internal Link Dist (ft)	150		150			
Turn Bay Length (ft)	665	724	241	2123	931	961
Base Capacity (vph)	0	0	0	0	5	206
Station Cap Reductn	0	3	0	56	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.33	0.22	0.37	0.70	0.45

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch Existing AM
6/15/2015
1: LOVR & 101 NB/101 SB

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Movement											
Lane Configurations											
Traffic Volume (veh/h)	0	0	0	402	1	218	50	701	0	0	596
Future Volume (veh/h)	0	0	0	402	1	218	50	701	0	0	596
Number				3	8	18	1	6	16	5	2
Initial Q (Ob.) veh				0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863	1863	1863	0	0	1863
Adj Flow Rate, veh/h	437	1	237	54	762	0	0	648	340		
Adj No. of Lanes	1	1	0	1	2	0	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Cap. veh/h	542	2	482	321	2124	0	0	931	792		
Arrive On Green	0.31	0.31	0.31	0.12	1.00	0.00	0.00	0.00	0.50	0.50	0.50
Sat Flow, veh/h	1774	7	1578	1774	3632	0	0	1863	1583		
Grp Volume(v), veh/h	437	0	238	54	762	0	0	648	340		
Grp Sat Flow(s), veh/h/ln	1774	0	1584	1774	1770	0	0	1863	1583		
Q_Serve(g_s), s	20.4	0.0	11.0	1.1	0.0	0.0	0.0	24.0	12.3		
Cycle Q Clear(g_c), s	20.4	0.0	11.0	1.1	0.0	0.0	0.0	24.0	12.3		
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00		
Lane Grp Cap(c), veh/h	542	0	484	321	2124	0	0	931	792		
V/C Ratio(X)	0.81	0.00	0.49	0.17	0.36	0.00	0.00	0.70	0.43		
Avail Cap(c_a), veh/h	542	0	484	321	2124	0	0	931	792		
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00		
Upstream Filter(i)	1.00	0.00	1.00	0.87	0.87	0.00	0.00	0.94	0.94		
Uniform Delay (d), s/veh	28.8	0.0	25.5	11.4	0.0	0.0	0.0	17.3	14.3		
Incr Delay (d2), s/veh	12.1	0.0	3.5	1.0	0.4	0.0	0.0	4.0	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		
%ile BackOf(50%) veh/ln	11.8	0.0	5.3	0.6	0.1	0.0	0.0	13.3	5.7		
LnGrp Delay(d), s/veh	40.9	0.0	29.1	12.4	0.4	0.0	0.0	21.3	15.9		
LnGrp LOS	D	D	C	B	A	A	A	C	B		
Approach Vol, veh/h				675			816		988		
Approach Delay, s/veh				36.7			1.2		19.4		
Approach LOS				D			A		B		
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2				6		8			
Phs Duration (G+Y+Rc), s	9.0	50.0				59.0		31.0			
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5			
Max Green Setting (Gmax), s	5.5	45.0				54.0		27.5			
Max Q Clear Time (g_c+H), s	3.1	26.0				2.0		22.4			
Green Ext Time (g_e), s	0.0	11.3				17.9		1.7			
Intersection Summary											
HCM 2010 Ctrl Delay									18.1		
HCM 2010 LOS									B		

Avila Ranch Existing AM
6/15/2015
1: LOVR & 101 NB/101 SB

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	14.9	24.0	48.4	60.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated			
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	50	200	500	0
Right Corner Area per Ped. (sq ft)	30	30	35	35
Right Corner Quality of Service	0.0	0.0	0.0	0.0
Ped. Circulation Area (sq ft)	-	-	-	-
Crosswalk Circulation Code	0.0	0.0	0.0	0.0
Pedestrian Delay (s/p)	45.0	36.5	45.0	36.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.89	2.33	3.39	2.70
Pedestrian Crosswalk LOS	A	B	C	B

Avila Ranch Existing AM
6/15/2015
1: LOVR & 101 NB/101 SB

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	0	675	816	988
Effct. Green for Bike (s)	0.0	33.8	47.7	38.7
Cross Street Width (ft)	48.4	60.1	24.0	14.9
Through Lanes Number	0	1	2	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	751	1060	860
Bicycle Delay (s/bike)	0.0	17.5	9.9	14.6
Bicycle Compliance	Fair	Good	Fair	Fair
Bicycle LOS Score	0.00	3.59	2.60	3.42
Bicycle LOS	D	B	C	C

Avila Ranch Existing AM
6/15/2015
2: LOVR & 101 NB

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	414	167	105	387	948	123
Lane Group Flow (vph)	0.66	0.41	0.38	0.29	0.83	0.12
v/c Ratio	38.7	11.0	7.8	6.0	28.4	8.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	38.7	11.0	7.8	6.0	28.4	8.1
Total Delay	114	13	13	67	497	19
Queue Length 50th (ft)	149	61	34	132	#799	m36
Queue Length 95th (ft)	160			385	872	
Internal Link Dist (ft)						
Turn Bay Length (ft)	1125	612	283	1323	1139	994
Base Capacity (vph)	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.27	0.37	0.29	0.83	0.12

Intersection Summary
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m. Volume for 95th percentile queue is metered by upstream signal.

Avila Ranch Existing AM
6/15/2015
2: LOVR & 101 NB

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	389	157	99	364	891	116
Future Volume (veh/h)	389	157	99	364	891	116
Number	3	18	1	6	2	12
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/m	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	414	167	105	387	948	123
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	568	261	490	1359	1215	1033
Arrive On Green	0.17	0.17	0.04	0.73	1.00	1.00
Sat Flow, veh/h	3442	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	414	167	105	387	948	123
Grp Sat Flow(s),veh/h/m	1721	1583	1774	1863	1863	1583
Q.Serve(g.s), s	10.3	8.9	1.6	6.4	0.0	0.0
Cycle Q Clear(g.c.), s	10.3	8.9	1.6	6.4	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	568	261	490	1359	1215	1033
V/C Ratio(X)	0.73	0.64	0.21	0.28	0.78	0.12
Avail Cap(c.a), veh/h	1128	519	550	1359	1215	1033
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	0.58	0.58
Uniform Delay (d), s/veh	35.7	35.1	4.0	4.2	0.0	0.0
Incr Delay (d2), s/veh	1.8	2.6	0.2	0.5	3.0	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%),veh/m	5.0	4.0	0.8	3.4	1.0	0.0
LnGrp Delay(d),s/veh	37.5	37.7	4.2	4.7	3.0	0.1
LnGrp LOS	D	D	A	A	A	A
Approach Vol, veh	581		492	1071		
Approach Delay, s/veh	37.5		4.6	2.6		
Approach LOS	D		A	A		
Timer	1	2	3	4	5	6
Assigned Phs	1	2				8
Phs Duration (G+Y+R), s	6.9	64.7				71.6
Change Period (Y+R), s	3.5	6.0				3.5
Max Green Setting (Gmax), s	6.5	41.0				51.0
Max Q Clear Time (g_c+H), s	3.6	2.0				8.4
Green Ext Time (g_c), s	0.1	15.3				15.7
Green Ext Time (g_c), s						2.6
Intersection Summary						
HCM 2010 Ctrl Delay					12.5	
HCM 2010 LOS					B	

Avila Ranch Existing AM
2: LOVR & 101 NB 6/15/2015

Approach	EB	NB	SB
Crosswalk Length (ft)	51.3	36.0	60.0
Crosswalk Width (ft)	10.0	10.0	10.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.34	2.56	2.60
Pedestrian Crosswalk LOS	B	B	B

Avila Ranch Existing AM
2: LOVR & 101 NB 6/15/2015

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	581	492	1071
Effct. Green for Bike (s)	16.6	63.9	55.0
Cross Street Width (ft)	36.0	60.0	51.3
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	369	1420	1222
Bicycle Delay (s/bike)	29.9	3.8	6.8
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.59	3.29	4.11
Bicycle LOS	B	C	D

Avila Ranch Existing AM
3: Higuera & South 6/15/2015

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	30	13	499	108	38	276	539	120	370
Lane Group Flow (vph)	0.21	0.05	0.57	0.23	0.30	0.21	0.47	0.59	0.24
v/c Ratio	43.9	0.3	29.5	10.6	45.6	21.4	2.2	50.3	18.3
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	43.9	0.3	29.5	10.6	45.6	21.4	2.2	50.3	18.3
Total Delay	16	0	125	11	20	58	7	64	75
Queue Length 50th (ft)	45	0	174	50	53	96	28	#139	117
Queue Length 95th (ft)	208	50	130	629	60	338	60	100	507
Internal Link Dist (ft)	143	277	1168	607	161	1335	1213	231	1529
Turn Bay Length (ft)	0	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0.21	0.05	0.43	0.18	0.24	0.21	0.44	0.52	0.24
Reduced v/c Ratio	Intersection Summary								
#	95th percentile volume exceeds capacity, queue may be longer.								
	Queue shown is maximum after two cycles.								

Avila Ranch Existing AM
3: Higuera & South 6/15/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Movement	9	20	12	479	24	80	36	265	517	115	329
Lane Configurations	9	20	12	479	24	80	36	265	517	115	329
Traffic Volume (veh/h)	3	8	18	7	4	14	1	6	16	5	2
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0	0
Number	1.00	0.96	0.96	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.98
Initial Q (Cb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1900
Parking Bus, Adj	9	21	12	499	25	83	38	276	539	120	343
Adj Sat Flow, veh/h	0	1	1	2	1	2	1	2	1	2	0
Adj Flow Rate, veh/h	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj No. of Lanes	2	2	2	2	2	2	2	2	2	2	2
Peak Hour Factor	17	40	48	712	78	259	83	1337	920	155	1389
Percent Heavy Veh, %	0.03	0.03	0.03	0.21	0.21	0.21	0.05	0.38	0.38	0.09	0.42
Cap. veh/h	551	1285	1522	3442	377	1250	1774	3539	1567	1774	3322
Arrive On Green	30	0	12	499	0	108	38	276	539	120	182
Sat Flow, veh/h	1835	0	1522	1721	0	1627	1774	1770	1567	1774	1770
Grp Volume(v), veh/h	1.2	0.0	0.6	10.0	0.0	4.2	1.5	3.9	16.1	4.9	4.9
Grp Sat Flow(s), veh/h	1.2	0.0	0.6	10.0	0.0	4.2	1.5	3.9	16.1	4.9	4.9
Q Serve(g,s), s	0.30	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Cycle Q Clear(g,c), s	57	0	48	712	0	337	83	1337	920	155	740
Prop In Lane	0.52	0.00	0.25	0.70	0.00	0.32	0.46	0.21	0.59	0.78	0.25
Lane Grp Cap(c), veh/h	149	0	123	1207	0	571	96	1337	920	239	740
V/C Ratio(X)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Avail Cap(c,a), veh/h	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	35.4	0.0	35.1	27.3	0.0	25.0	34.4	15.6	9.7	33.1	14.0
Upstream Filter(i)	7.2	0.0	2.7	1.3	0.0	0.5	3.9	0.3	2.7	8.2	0.8
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(Q3), s/veh	0.7	0.0	0.3	4.8	0.0	1.9	0.9	2.0	11.0	2.8	2.6
%ile BackQ(50%), veh/m	42.6	0.0	37.8	28.5	0.0	25.5	38.3	15.9	12.5	41.3	14.8
LnGrp Delay(d),s/veh	D	D	D	C	C	C	D	B	B	D	B
LnGrp LOS	42	42	42	607	28.0	14.7	863	490	21.3	21.3	C
Approach Vol, veh/h	41.2	41.2	41.2	28.0	28.0	28.0	14.7	863	490	21.3	C
Approach Delay, s/veh	D	D	D	C	C	C	B	B	B	C	C
Approach LOS	1	2	3	4	5	6	7	8	8	8	8
Timer	1	2	3	4	5	6	7	8	8	8	8
Assigned Phs	1	2	3	4	5	6	7	8	8	8	8
Phs Duration (G+Y+Rc), s	8.5	37.0	21.3	11.5	34.0	7.3	7.3	7.3	7.3	7.3	7.3
Change Period (Y+Rc), s	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	4.0	31.0	26.0	10.0	28.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Q Clear Time (g_c+H), s	3.5	7.0	12.0	6.9	18.1	3.2	3.2	3.2	3.2	3.2	3.2
Green Ext Time (g_e), s	0.0	2.3	2.6	0.1	3.4	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary	20.9										
HCM 2010 Ctrl Delay	C										
HCM 2010 LOS	C										

Avila Ranch
3: Higuera & South

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated/Actuated/Actuated			
Corresponding Signal Phase	2	6	8	4
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	10	10	10
Veh. Perm. R. Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	40	30	30
Right Corner Area per Ped (sq ft)	7266.6 - 2896.8 - 2897.1 - 4844.0			
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (s/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.65	2.75	2.48
Pedestrian Crosswalk LOS	B	B	B	B

Avila Ranch
3: Higuera & South

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	42	607	853	490
Effct. Green for Bike (s)	6.1	20.2	30.0	34.7
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes /Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	133	439	652	754
Bicycle Delay (s/bike)	40.1	28.0	20.9	17.8
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.93	2.59	2.11	1.76
Bicycle LOS	C	B	B	A

Avila Ranch Existing AM
4: Higuera & Madonna 6/15/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	343	345	543	1	16	113	273	376	455
Lane Group Flow (vph)	0.59	0.59	0.51	0.00	0.08	0.40	0.17	0.52	0.29
v/c Ratio	22.9	22.8	2.5	32.0	25.9	33.2	12.9	26.3	6.3
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	22.9	22.8	2.5	32.0	25.9	33.2	12.9	26.3	6.3
Total Delay	89	90	0	0	3	33	24	57	26
Queue Length 50th (ft)	252	252	29	5	23	109	75	136	84
Queue Length 95th (ft)	964	964	110	5	964	1563	338		
Internal Link Dist (ft)									
Turn Bay Length (ft)	895	901	1101	520	516	357	2273	1235	2006
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.38	0.49	0.00	0.03	0.32	0.12	0.30	0.23

Avila Ranch Existing AM
4: Higuera & Madonna 6/15/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	607	26	500	1	8	6	104	250	341
Traffic Volume (veh/h)	607	26	500	1	8	6	104	250	341
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12
Number	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	0.98	1.00	1.00	0.99	0.99	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/hln	680	0	0	1	9	7	113	272	1
Adj Flow Rate, veh/h	2	0	1	1	1	0	1	2	0
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	1024	0	589	44	24	18	148	1554	6
Cap. veh/h	0.29	0.00	0.00	0.02	0.02	0.02	0.08	0.43	0.43
Arrive On Green	3548	0	1583	1774	963	749	1774	3617	13
Sat Flow, veh/h	680	0	0	1	0	16	113	133	140
Grp Volume(v), veh/h	1774	0	1583	1774	0	1712	1774	1770	1860
Grp Sat Flow(s), veh/hln	7.9	0.0	0.0	0.0	0.4	2.9	2.2	2.2	2.2
Q Serve(g_s), s	7.9	0.0	0.0	0.0	0.4	2.9	2.2	2.2	2.2
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	0.44	1.00	0.01	0.02	1.00
Prop In Lane	1024	0	589	44	0	42	148	760	799
Lane Grp Cap(c), veh/h	0.66	0.00	0.00	0.02	0.00	0.38	0.76	0.18	0.18
V/C Ratio(X)	2206	0	1116	608	0	587	418	1328	1396
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	14.6	0.0	0.0	22.2	0.0	22.4	20.9	8.2	8.2
Uniform Delay (d), s/veh	0.7	0.0	0.0	0.2	0.0	5.5	8.0	0.1	0.4
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	3.9	0.0	0.0	0.0	0.0	0.3	1.7	1.1	2.2
%ile BackOf(50%) veh/m	15.4	0.0	0.0	22.4	0.0	27.9	28.9	8.3	8.3
LnGrp Delay(d), s/veh	B	C	C	C	C	C	A	A	B
LnGrp LOS	680	17	386	17	386	17	386	17	386
Approach Vol, veh/h	15.4	15.4	14.3	14.3	14.3	14.3	14.3	14.3	14.3
Approach Delay, s/veh	B	B	C	C	C	C	B	B	A
Approach LOS	1	2	3	4	5	6	7	8	
Timer	2	4	5	6	7	8			
Assigned Phs	24.0	17.5	7.9	16.2	5.1				
Phs Duration (G+Y+Rc), s	4.0	4.0	4.0	4.0	4.0				
Change Period (Y+Rc), s	35.0	29.0	11.0	20.0	16.0				
Max Green Setting (Gmax), s	4.2	9.9	4.9	6.2	2.4				
Max Q Clear Time (g_c+H), s	7.3	3.1	0.1	5.4	0.0				
Green Ext Time (g_e), s									
Intersection Summary									
HCM 2010 Ctrl Delay	12.9								
HCM 2010 LOS	B								
Notes									

Avila Ranch Existing AM
4: Higuera & Madonna 6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	1	0	0	1
Type of Control	Actuated None Actuated Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	100	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.75	1.97	2.68	2.46
Pedestrian Crosswalk LOS	C	A	B	B

Avila Ranch Existing AM
4: Higuera & Madonna 6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1231	17	386	831
Effct. Green for Bike (s)	20.8	6.9	26.9	13.0
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	452	150	585	283
Bicycle Delay (s/bike)	27.6	39.4	23.0	33.9
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	3.37	1.22	1.14	1.98
Bicycle LOS	C	A	A	A

Avila Ranch Existing AM
5: Higuera & Prado 6/15/2015

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	72	91	80	38	37	37	182	319	183	608
Lane Group Flow (vph)	0.27	0.25	0.22	0.17	0.11	0.11	0.45	0.29	0.45	0.55
v/c Ratio	24.1	22.9	7.8	23.7	22.4	2.1	25.3	16.4	25.3	19.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	24.1	22.9	7.8	23.7	22.4	2.1	25.3	16.4	25.3	19.1
Total Delay	20	25	0	10	10	0	48	37	49	78
Queue Length 50th (ft)	63	73	32	39	37	7	142	96	143	186
Queue Length 95th (ft)	363						386		1342	828
Internal Link Dist (ft)	150		150			200	250		125	
Turn Bay Length (ft)	778	1062	909	701	1023	904	1107	2771	1107	2778
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.09	0.09	0.05	0.04	0.04	0.16	0.12	0.17	0.22
Intersection Summary										

Avila Ranch Existing AM
5: Higuera & Prado 6/15/2015

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	NBR	SBR
Lane Configurations	66	84	74	35	34	34	167	268	26	168	516
Traffic Volume (veh/h)	66	84	74	35	34	34	167	268	26	168	516
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6
Number	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	0.98	0.98	0.98	0.98	0.98	0.98	1.00	1.00	0.99	1.00	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863
Adj Sat Flow, veh/h	72	91	80	38	37	37	182	291	28	183	561
Adj Flow Rate, veh/h	1	1	1	1	1	1	1	1	2	0	1
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	374	352	293	325	352	293	247	1087	99	248	1052
Cap. veh/h	0.19	0.19	0.19	0.19	0.19	0.19	0.14	0.32	0.32	0.14	0.32
Arrive On Green	1299	1863	1553	1193	1863	1553	1774	3261	311	1774	3303
Sat Flow, veh/h	72	91	80	38	37	37	182	157	162	183	300
Grp Volume(v), veh/h	1299	1863	1553	1193	1863	1553	1774	1770	1803	1774	1770
Grp Sat Flow(s),veh/h	2.3	2.0	2.1	1.4	0.8	1.0	4.7	3.2	3.2	4.8	6.7
Q Serve(g.s), s	3.1	2.0	2.1	3.4	0.8	1.0	4.7	3.2	3.2	4.8	6.7
Cycle Q Clear(g.c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.17	1.00	0.15
Prop In Lane	374	352	293	325	352	293	247	563	573	248	577
Lane Grp Cap(c), veh/h	0.19	0.26	0.27	0.12	0.11	0.13	0.74	0.28	0.28	0.74	0.53
V/C Ratio(X)	857	1045	872	745	1007	839	1106	1545	1573	1106	1545
Avail Cap(c,a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
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
Upstream Filter()	17.4	16.6	16.7	18.1	16.1	16.2	19.9	12.3	12.3	19.8	13.5
Uniform Delay (d), s/veh	0.2	0.4	0.5	0.2	0.1	0.2	4.3	0.3	0.3	4.2	0.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.9	1.1	1.0	0.5	0.4	0.4	2.6	1.6	1.7	2.6	3.4
%ile BackQ(50%) veh/h	17.7	17.0	17.2	18.2	16.3	16.4	24.1	12.5	12.6	24.1	14.2
LnGrp Delay(d),s/veh	B	B	B	B	B	B	C	B	B	C	B
LnGrp LOS	243			112			501			791	
Approach Vol, veh/h	17.3			17.0			16.8			16.5	
Approach Delay, s/veh	B			B			B			B	
Approach LOS	1	2	3	4	5	6	7	8			
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	11.7	21.3		15.1	11.7	21.3					
Change Period (Y+Rc), s	5.0	6.0		* 6	5.0	6.0					
Max Green Setting (Gmax), s	30.0	42.0		* 27	30.0	42.0					
Max Q Clear Time (g_c+H), s	6.8	5.2		5.1	6.7	8.7					
Green Ext Time (g_e), s	0.6	5.9		1.7	0.6	5.9					
Intersection Summary											
HCM 2010 Ctrl Delay	16.7										
HCM 2010 LOS	B										
Notes											

Avila Ranch
5: Higuera & Prado

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	480	48.1	61.6	61.7
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3220.0	3221.5	3354.4	3355.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.27	2.25	2.67	2.67
Pedestrian Crosswalk LOS	B	B	B	B

Avila Ranch
5: Higuera & Prado

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	243	112	501	791
Effct. Green for Bike (s)	10.4	9.5	16.6	16.6
Cross Street Width (ft)	61.6	61.7	48.1	48.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	181	165	289	289
Bicycle Delay (s/bike)	47.6	48.4	42.1	42.1
Bicycle Compliance	Poor	Poor	Poor	Poor
Bicycle LOS Score	2.90	2.69	1.42	1.66
Bicycle LOS	C	B	A	A

Avila Ranch Existing AM
6: Higuera & Tank Farm 6/15/2015

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Lane Group	36	27	162	163	252	13	351	624	251
v/c Ratio	0.17	0.08	0.50	0.49	0.10	0.46	0.62	0.62	0.15
Control Delay	38.0	0.5	39.0	39.0	8.8	48.8	32.7	3.9	39.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	38.0	0.5	39.0	39.0	8.8	48.8	32.7	3.9	39.6
Queue Length 50th (ft)	17	0	73	73	0	6	79	0	109
Queue Length 95th (ft)	51	0	196	197	72	32	177	35	#279
Internal Link Dist (ft)	109		1317			1054			1668
Turn Bay Length (ft)					250	140		100	165
Base Capacity (vph)	703	717	536	539	677	128	1127	616	2217
Station Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.04	0.30	0.30	0.37	0.10	0.28	0.55	0.41

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch Existing AM
6: Higuera & Tank Farm 6/15/2015

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBT
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR
Lane Configurations	25	8	25	295	7	234	12	326	580
Traffic Volume (veh/h)	25	8	25	295	7	234	12	326	580
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12
Number	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/hln	27	9	27	323	0	0	13	351	624
Adj Flow Rate, veh/h	0	1	1	2	0	1	2	1	2
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	71	24	83	447	0	200	28	1169	720
Cap. veh/h	0.05	0.05	0.05	0.13	0.00	0.00	0.02	0.33	0.33
Arrive On Green	1347	449	1576	3548	0	1583	1774	3539	1576
Sat Flow, veh/h	36	0	27	323	0	0	13	351	624
Grp Volume(v), veh/h	1795	0	1576	1774	0	1583	1774	1770	1576
Grp Sat Flow(s), veh/hln	1.4	0.0	1.2	6.4	0.0	0.0	0.5	5.4	24.0
Q_Serv(g_s), s	1.4	0.0	1.2	6.4	0.0	0.0	0.5	5.4	24.0
Cycle Q Clear(g_c), s	0.75	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	95	0	83	447	0	200	28	1169	720
Lane Grp Cap(c), veh/h	0.38	0.00	0.32	0.72	0.00	0.00	0.46	0.30	0.87
V/C Ratio(X)	667	0	586	1074	0	479	122	1169	720
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00
Upstream Filter(i)	33.3	0.0	33.2	30.5	0.0	0.0	35.5	18.1	17.3
Uniform Delay (d), s/veh	0.9	0.0	0.8	0.8	0.0	0.0	4.3	0.3	11.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(Q3), s/veh	0.7	0.0	0.5	3.1	0.0	0.0	0.3	2.6	14.6
%ile BackQ(50%), veh/ln	34.2	0.0	34.0	31.4	0.0	0.0	39.8	18.4	28.9
LnGrp Delay(d), s/veh	C	C	C	C	C	C	D	B	C
LnGrp LOS	63		323				988		518
Approach Vol, veh/h	34.1		31.4				25.3		22.3
Approach Delay, s/veh	C	C	C	C	C	C	C	C	C
Approach LOS	1	2	3	4	5	6	7	8	
Timer	1	2	3	4	5	6	7	8	
Assigned Phs	1	2	4	5	6	6	8		
Phs Duration (G+Y+Rc), s	17.7	30.0	9.8	6.2	41.5	15.2			
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	6.0	6.0			
Max Green Setting (Gmax), s	24.0	24.0	27.0	5.0	43.0	22.0			
Max Q Clear Time (g_c+H), s	11.9	26.0	3.4	2.5	5.0	8.4			
Green Ext Time (g_e), s	0.9	0.0	0.2	0.0	17.7	0.7			

Intersection Summary 25.8
HCM 2010 Crt Delay C
HCM 2010 LOS C

Avila Ranch
6: Higuera & Tank Farm

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	45.5	36.3	77.9	62.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	150	50	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2245.5	2126.8	2472.0	2387.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.98	2.75	2.93	2.65
Pedestrian Crosswalk LOS	A	B	C	B

Avila Ranch
6: Higuera & Tank Farm

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	63	577	988	518
Effct. Green for Bike (s)	9.2	15.1	16.7	38.6
Cross Street Width (ft)	77.9	62.3	36.3	45.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	153	252	278	643
Bicycle Delay (s/bike)	51.2	45.9	44.5	27.6
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.86	2.18	1.64	1.40
Bicycle LOS	C	B	A	A

Avila Ranch Existing AM
7: Horizon Lane & Tank Farm 6/19/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	741	25	6	658	18	8
Future Volume (Veh/h)	741	25	6	658	18	8
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	805	27	7	715	20	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2			2		
Upstream signal (ft)						
pX platoon unblocked						
vC, conflicting volume		832			1548	818
vC1, stage 1 conf vol					818	
vC2, stage 2 conf vol					729	
vCu, unblocked vol		832			1548	818
iC, single (s)		4.1			6.4	6.2
iC, 2 stage (s)		2.2			5.4	3.3
p0 queue free %		99			94	98
CM capacity (veh/h)		801			335	376
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	832	722	29			
Volume Left	0	7	20			
Volume Right	27	0	9			
cSH	1700	801	346			
Volumes to Capacity	0.49	0.01	0.08			
Queue Length 95th (ft)	0	1	7			
Control Delay (s)	0.0	0.2	16.3			
Lane LOS	A	A	C			
Approach Delay (s)	0.0	0.2	16.3			
Approach LOS		C				
Intersection Summary						
Average Delay		0.4				
Intersection Capacity Utilization		50.5%			ICU Level of Service	A
Analysis Period (min)		15				

Avila Ranch Existing AM
7: Horizon Lane & Tank Farm 7/19/2015

Approach	EB	WB	F
Approach Direction	EB		
Median Present?	No		
Approach Delay(s)	1345.7		
Level of Service	F		
Crosswalk			
Length (ft)	46		
Lanes Crossed	2		
Veh Vol Crossed	1399		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	16.14		
Prob of Delayed X-ing	1.00		
Prob of Blocked Lane	0.96		
Delay for add Gap	1346.25		
Avg Ped Delay (s)	1345.71		
Approach	WB		
Approach Direction	WB		
Median Present?	No		
Approach Delay(s)	1345.7		
Level of Service	F		
Crosswalk			
Length (ft)	46		
Lanes Crossed	2		
Veh Vol Crossed	1399		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	16.14		
Prob of Delayed X-ing	1.00		
Prob of Blocked Lane	0.96		
Delay for add Gap	1346.25		
Avg Ped Delay (s)	1345.71		

Avila Ranch Existing AM
8: Higuera & Suburban 6/15/2015

	WBL	WBR	NBT	SBL	SBT
Lane Group	98	45	1226	32	536
Lane Group Flow (vph)	0.32	0.15	0.50	0.12	0.21
v/c Ratio	23.4	7.3	7.2	8.1	5.6
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	23.4	7.3	7.2	8.1	5.6
Total Delay	33	0	79	3	28
Queue Length 50th (ft)	61	19	257	24	97
Queue Length 95th (ft)	1164	234	234	1054	
Internal Link Dist (ft)	170			200	
Turn Bay Length (ft)	774	705	2361	255	2434
Base Capacity (vph)	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.13	0.06	0.52	0.13	0.22

Intersection Summary

Central Coast Transportation Consulting
Synchro 9 Report
Queues

Avila Ranch Existing AM
8: Higuera & Suburban 6/15/2015

	WBL	WBR	NBT	SBL	SBT
Movement	WBL	WBR	NBT	SBL	SBT
Lane Configurations	90	41	859	29	493
Traffic Volume (veh/h)	90	41	859	29	493
Future Volume (veh/h)	3	18	2	12	1
Number	0	0	0	0	0
Initial Q (Ob.) veh	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1900	1863
Adj Sat Flow, veh/h/ln	98	45	934	292	32
Adj Flow Rate, veh/h	1	1	2	0	1
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	159	142	1800	561	380
Cap. veh/h	0.09	0.09	0.68	0.68	0.68
Arrive On Green	1774	1583	2751	828	453
Sat Flow, veh/h	98	45	621	605	32
Grp Volume(v), veh/h	1774	1583	1770	1716	453
Grp Sat Flow(s),veh/h/ln	2.5	1.3	8.2	8.3	1.8
Q_Serve(g_s), s	2.5	1.3	8.2	8.3	10.1
Cycle Q Clear(g_c), s	1.00	1.00	0.48	1.00	1.00
Prop In Lane	159	142	1198	1162	380
Lane Grp Cap(c), veh/h	0.62	0.32	0.52	0.52	0.08
V/C Ratio(X)	902	805	1313	1273	409
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	20.7	20.1	3.8	3.8	6.3
Uniform Delay (d), s/veh	1.4	0.5	1.0	1.0	0.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	1.3	0.6	4.3	4.2	0.2
%ile BackQ(50%),veh/ln	22.1	20.6	4.7	4.8	6.6
LnGrp Delay(d),s/veh	C	C	A	A	A
LnGrp LOS	143	1226		568	
Approach Vol, veh/h	21.6	4.8		3.2	
Approach Delay, s/veh	C	A		A	
Approach LOS	1	2	3	4	5
Timer	2	6	7	8	
Assigned Phs	38.0			38.0	9.2
Phs Duration (G+Y+Rc), s	6.0			6.0	5.0
Change Period (Y+Rc), s	35.0			35.0	24.0
Max Green Setting (Gmax), s	10.3			12.1	4.5
Max Q Clear Time (g_c+H), s	21.2			19.9	0.3
Green Ext Time (g_e), s					
Intersection Summary					
HCM 2010 Ctrl Delay			5.6		
HCM 2010 LOS			A		

Central Coast Transportation Consulting
Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch Existing AM
8: Higuera & Suburban 6/15/2015

Approach	WB	NB	SB
Crosswalk Length (ft)	45.4	60.0	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	40	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped. (sq ft)	7276.3	7276.5	7276.5
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	3849.3	4575.8	4068.5
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (s/p)	27.5	26.6	27.5
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.07	2.86	2.74
Pedestrian Crosswalk LOS	B	C	B

Avila Ranch Existing AM
8: Higuera & Suburban 6/15/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	143	1226	568
Effct. Green for Bike (s)	9.8	40.4	40.4
Cross Street Width (ft)	60.1	45.4	60.0
Through Lanes Number	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	280	1154	1154
Bicycle Delay (s/bike)	25.9	6.3	6.3
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	1.75	2.19	1.87
Bicycle LOS	A	B	A

Avila Ranch Existing AM
9: Higuera & Vachell 6/15/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	108	70	1034	276	42	534
Future Volume (Veh/h)	108	70	1034	276	42	534
Sign Control	Stop	0%	Free	0%	Free	0%
Grade	0.94	0.94	0.94	0.94	0.94	0.94
Peak Hour Factor	1.15	0.74	1.100	0.94	0.94	0.94
Hourly flow rate (vph)	115	74	1100	294	45	568
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)	4					
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			504			314
pX platoon unblocked	0.97					
VC, conflicting volume	1621	697		1394		
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCU, unblocked vol	1577	697		1394		
IC, single (s)	6.8	6.9		4.1		
IC, 2 stage (s)	3.5	3.3		2.2		
p0 queue free %	0	81		91		
CM capacity (veh/h)	88	383		487		
Direction_Lane #	WB.1	NB.1	NB.2	SB.1	SB.2	SB.3
Volume Total	189	733	661	45	284	284
Volume Left	115	0	0	45	0	0
Volume Right	74	0	294	0	0	0
cSH	134	1700	1700	487	1700	1700
Volumes to Capacity	1.41	0.43	0.39	0.09	0.17	0.17
Queue Length 95th (ft)	314	0	0	8	0	0
Control Delay (s)	285.8	0.0	0.0	13.2	0.0	0.0
Lane LOS	F	B	B	B	B	B
Approach Delay (s)	285.8	0.0		1.0		
Approach LOS	F					
Intersection Summary						
Average Delay	24.9					
Intersection Capacity Utilization	50.0%					
Analysis Period (min)	15					
ICU Level of Service	A					

Avila Ranch Existing AM
9: Higuera & Vachell 7/9/2015

Approach	WBL	WBR	NBT	NBR	SBL	SBT
Approach Direction						NB
Median Present?						Yes
Approach Delay(s)						84.3
Level of Service						F
Crosswalk						
Length (ft)						28
Lanes Crossed						2
Veh Vol Crossed						1034
Ped Vol Crossed						0
Yield Rate(%)						0
Ped Platooning						No
Critical Headway (s)						11.00
Prob of Delayed X-ing						0.96
Prob of Blocked Lane						0.79
Delay for add. Gap						70.53
Avg Ped Delay (s)						67.54
Approach						
Approach Direction						SB
Median Present?						No
Approach Delay(s)						40111.5
Level of Service						F
Crosswalk						
Length (ft)						68
Lanes Crossed						4
Veh Vol Crossed						1568
Ped Vol Crossed						0
Yield Rate(%)						0
Ped Platooning						No
Critical Headway (s)						22.43
Prob of Delayed X-ing						1.00
Prob of Blocked Lane						0.91
Delay for add. Gap						40113.80
Avg Ped Delay (s)						40111.50

Avila Ranch
10: Higuera & LOVR

Existing AM
6/15/2015

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group						
Lane Group Flow (vph)	1096	52	32	321	240	435
v/c Ratio	0.74	0.07	0.09	0.50	0.47	0.39
Control Delay	20.7	8.9	10.6	16.0	20.6	3.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.7	8.9	10.6	16.0	20.6	3.7
Queue Length 50th (ft)	113	3	7	78	55	0
Queue Length 95th (ft)	#398	30	18	128	134	82
Internal Link Dist (ft)	407			1906	424	
Turn Bay Length (ft)	100	225				
Base Capacity (vph)	1484	702	376	1470	1050	1106
Station Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.74	0.07	0.09	0.22	0.23	0.39

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
10: Higuera & LOVR

Existing AM
6/15/2015

	EBL	EBR	NBL	NBT	SBT	SBR
Movement						
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	1030	49	30	302	226	409
Future Volume (veh/h)	1030	49	30	302	226	409
Number	7	14	5	2	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1096	52	32	321	240	435
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1296	596	318	782	528	1044
Arrive On Green	0.38	0.38	0.03	0.42	0.28	0.28
Sat Flow, veh/h	3442	1583	1774	1863	1863	1578
Grp Volume(v), veh/h	1096	52	32	321	240	435
Grp Sat Flow(s), veh/h/ln	1721	1583	1774	1863	1863	1578
Q_Serve(g_s), s	17.2	1.2	0.7	7.1	6.3	7.6
Cycle Q Clear(g_c), s	17.2	1.2	0.7	7.1	6.3	7.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1296	596	318	782	528	1044
V/C Ratio(X)	0.85	0.09	0.10	0.41	0.45	0.42
Avail Cap(c_a), veh/h	1342	617	437	1326	947	1399
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.8	11.9	13.2	12.0	17.4	4.7
Incr Delay (d2), s/veh	6.0	0.2	0.1	0.4	0.7	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%) veh/ln	91	1.4	0.3	3.7	3.3	7.1
LnGrp Delay(d), s/veh	22.8	12.0	13.3	12.4	18.1	5.0
LnGrp LOS	C	B	B	B	B	A
Approach Vol, veh/h	1148			353	675	
Approach Delay, s/veh	22.3			12.5	9.7	
Approach LOS	C			B	A	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		30.8		28.2	8.0	22.7
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		42.0		23.0	6.0	30.0
Max Q Clear Time (g_c+H), s		9.1		19.2	2.7	9.6
Green Ext Time (g_e), s		7.9		3.0	0.0	6.8
Intersection Summary						
HCM 2010 Ctrl Delay				16.8		
HCM 2010 LOS				B		

Avila Ranch
10: Higuera & LOVR

Existing AM
6/15/2015

Approach	EB	NB	SB
Crosswalk Length (ft)	61.3	36.0	60.2
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	0
Ped. R. Sidewalk Flow Rate (p/h)	2	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped. (sq ft)	14560.8	24284.0	18213.0
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	0.1	0.4	0.3
Crosswalk Circulation Code	F	F	F
Pedestrian Delay (s/p)	38.5	38.5	38.5
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.59	2.26	2.64
Pedestrian Crosswalk LOS	B	B	B

Avila Ranch
10: Higuera & LOVR

Existing AM
6/15/2015

Approach	EB	NB	SB
Bicycle Flow Rate (b/ke/h)	8	8	8
Total Flow Rate (veh/h)	1148	353	675
Effct. Green for Bike (s)	23.9	18.9	15.1
Cross Street Width (ft)	36.0	60.2	61.3
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (b/ke/h)	621	491	392
Bicycle Delay (s/bike)	18.4	22.0	25.0
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	1.99	1.99	2.54
Bicycle LOS	A	A	B

Avila Ranch
11: Higuera & Buckley

Existing AM
6/15/2015

	NBT	SBT
Lane Group	361	299
Lane Group Flow (vph)	0.19	0.16
v/c Ratio	0.2	0.2
Control Delay	0.0	0.0
Queue Delay	0.2	0.2
Total Delay	0	0
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)	387	1906
Turn Bay Length (ft)	1863	1863
Base Capacity (vph)	0	0
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.19	0.16
Intersection Summary		

Avila Ranch
11: Higuera & Buckley

Existing AM
6/15/2015

	WBL	WBR	NBT	NBR	SBL	SBT
Movement						
Lane Configurations	W					A
Traffic Volume (vph)	0	0	332	0	0	275
Future Volume (vph)	0	0	332	0	0	275
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1863			1863
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1863			1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	361	0	0	299
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	361	0	0	299
Turn Type	Prot		NA			NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)			35.0			35.0
Effective Green, g (s)			35.0			35.0
Actuated g/c Ratio			1.00			1.00
Clearance Time (s)			4.0			4.0
Vehicle Extension (s)			3.0			3.0
Lane Grp Cap (vph)			1863			1863
v/s Ratio Prot			0.19			0.16
v/c Ratio			0.19			0.16
Uniform Delay, d1			0.0			0.0
Progression Factor			1.00			1.00
Incremental Delay, d2			0.2			0.2
Delay (s)			0.2			0.2
Level of Service			A			A
Approach Delay (s)			0.0			0.2
Approach LOS			A			A
Intersection Summary						
HCM 2000 Control Delay			0.2			HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio			0.25			A
Actuated Cycle Length (s)			35.0			Sum of lost time (s)
Intersection Capacity Utilization			20.8%			ICU Level of Service
Analysis Period (min)			15			A
c. Critical Lane Group						

Avila Ranch
11: Higuera & Buckley

Existing AM
6/15/2015

Approach	WB	NB	SB
Crosswalk Length (ft)	34.8	35.4	36.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	2
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.69	2.17	2.17
Pedestrian Crosswalk LOS	A	B	B

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signals-Pedestrians

Avila Ranch
11: Higuera & Buckley

Existing AM
6/15/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	0	36.1	299
Effct. Green for Bike (s)	5.5	35.0	35.0
Cross Street Width (ft)	36.0	34.8	35.4
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	275	1750	1750
Bicycle Delay (sbike)	14.9	0.3	0.3
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.11	2.69	2.59
Bicycle LOS	B	B	B

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signals-Bicycles

Avila Ranch
12: Buckley & Vachell

Existing AM
6/15/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	178	318	0
Future Volume (Veh/h)	0	0	0	178	318	0
Sign Control	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	193	346	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	193				96	%
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	193				96	%
IC, single (s)	4.1				6.4	6.2
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	100				62	100
CM capacity (veh/h)	1380				903	960
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	0	193	346			
Volume Left	0	0	346			
Volume Right	0	193	0			
cSH	1700	1700	903			
Volumes to Capacity	0.00	0.11	0.38			
Queue Length 95th (ft)	0	0	45			
Control Delay (s)	0.0	0.0	11.4			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.4			
Approach LOS			B			
Intersection Summary						
Average Delay			7.3			
Intersection Capacity Utilization			35.3%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Existing AM
7/9/2015

Approach	EB	WB
Approach Direction	EB	
Median Present?	No	
Approach Delay(s)	0	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	0	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.00	
Prob of Blocked Lane	0.00	
Delay for add. Gap	0.00	
Avg Ped Delay (s)	0.00	
Approach	WB	
Approach Direction	WB	
Median Present?	No	
Approach Delay(s)	0	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	0	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.00	
Prob of Blocked Lane	0.00	
Delay for add. Gap	0.00	
Avg Ped Delay (s)	0.00	

Avila Ranch
13: Buckley & Project Entry

Existing AM
7/17/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	318	178	0	0	0
Future Volume (Veh/h)	0	318	178	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	346	193	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	193			539	193	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	193			539	193	
IC, single (s)	4.1			6.4	6.2	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	100	
CM capacity (veh/h)	1380			503	849	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	346	193	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1380	1700	1700			
Volumes to Capacity	0.00	0.11	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			20.1%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
13: Buckley & Project Entry

Existing AM
7/17/2015

Approach	EB	WB	C
Approach Direction	EB	WB	
Median Present?	No	No	
Approach Delay(s)	19.3		
Level of Service	C		
Crosswalk			
Length (ft)	32		
Lanes Crossed	2		
Veh Vol Crossed	496		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	12.14		
Prob of Delayed X-ing	0.81		
Prob of Blocked Lane	0.57		
Delay for add. Gap	23.72		
Avg Ped Delay (s)	19.27		
Approach	WB		
Approach Direction	WB		
Median Present?	No		
Approach Delay(s)	19.3		
Level of Service	C		
Crosswalk			
Length (ft)	32		
Lanes Crossed	2		
Veh Vol Crossed	496		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	12.14		
Prob of Delayed X-ing	0.81		
Prob of Blocked Lane	0.57		
Delay for add. Gap	23.72		
Avg Ped Delay (s)	19.27		

Avila Ranch
14.: Broad & Buckley

Existing AM
6/15/2015

	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group	39	123	1	215	1171	5	463
Lane Group Flow (vph)	0.20	0.23	0.00	0.54	0.76	0.05	0.46
v/c Ratio	0.20	0.23	0.00	0.54	0.76	0.05	0.46
Control Delay	42.6	5.4	0.0	36.2	11.2	47.6	14.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	42.6	5.4	0.0	36.2	11.2	47.6	14.0
Queue Length 50th (ft)	18	0	0	95	223	2	130
Queue Length 95th (ft)	62	36	0	227	#1092	17	299
Internal Link Dist (ft)	9507		310	439		1035	
Turn Bay Length (ft)	150		360	470		470	
Base Capacity (vph)	432	736	333	629	1665	106	1455
Stavation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.17	0.00	0.34	0.70	0.05	0.32

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
14.: Broad & Buckley

Existing AM
6/15/2015

	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Configurations	35	1	113	0	0	1	198
Traffic Volume (veh/h)	35	1	113	0	0	1	198
Future Volume (veh/h)	7	4	14	3	8	18	5
Number	0	0	0	0	0	0	0
Initial Q. (Cb). veh	1.00	0.97	1.00	0.96	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus. Adj	1881	1844	1844	1862	1825	1798	1834
Adj Sat Flow, veh/hln	38	1	123	0	0	1	215
Adj Flow Rate, veh/h	0	1	1	0	1	0	1
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	2	2	2	2	2	2	2
Percent Heavy Veh. %	157	4	374	0	0	2	256
Cap. veh/h	0.09	0.09	0.09	0.00	0.00	0.15	0.72
Arrive On Green	1713	45	1523	0	0	1495	1712
Sat Flow, veh/h	39	0	123	0	0	1	215
Grp Volume(v). veh/h	1758	0	1523	0	0	1495	1712
Grp Sat Flow(s). veh/hln	1.9	0.0	6.0	0.0	0.1	11.0	46.4
Q.Serv(s.g.s). s	1.9	0.0	6.0	0.0	0.1	11.0	46.4
Cycle Q Clear(g.c.). s	0.97	1.00	0.00	1.00	1.00	0.00	1.00
Prop In Lane	161	0	374	0	0	2	256
Lane Grp Cap(c). veh/h	0.24	0.00	0.33	0.00	0.00	0.60	0.84
V/C Ratio(X)	312	0	504	0	0	66	455
Avail Cap(c.a). veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Upstream Filter()	38.1	0.0	28.3	0.0	0.0	45.1	37.3
Uniform Delay (d). s/veh	0.8	0.0	0.5	0.0	0.0	178.9	7.2
Incr Delay (d2). s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3). s/veh	0.9	0.0	2.6	0.0	0.1	5.7	24.7
%ile BackQ(50%) veh/hln	38.9	0.0	28.8	0.0	0.0	224.0	44.6
LnGrp Delay(d).s/veh	D	C	C	F	D	B	F
LnGrp LOS	162		1386		532		11.3
Approach Vol, veh/h	31.2		224.0		20.5		11.3
Approach Delay, s/veh	C	C	F	C	C	B	B
Approach LOS	1	2	3	4	5	6	7
Timer	1	2	3	4	5	6	7
Assigned Phs	1	2	4	5	6	8	8
Phs Duration (G+Y+Rc). s	4.5	69.5	12.3	17.5	56.4	4.1	4.1
Change Period (Y+Rc). s	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax). s	4.0	80.0	16.0	24.0	60.0	4.0	4.0
Max Q Clear Time (g_c+H). s	2.3	48.4	8.0	13.0	14.9	2.1	2.1
Green Ext Time (g_e). s	0.0	17.1	0.4	0.5	20.2	0.0	0.0

Intersection Summary
HCM 2010 Ctrl Delay
HCM 2010 LOS

Avila Ranch
14.: Broad & Buckley

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.2	24.0	37.7	48.2
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.0	81.0	81.0	81.0
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	20	0	0	10
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4882.3	0.0	4834.9	5117.9
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.13	1.74	2.92	2.80
Pedestrian Crosswalk LOS	B	A	C	C

Central Coast Transportation Consulting
HCM 2010 Signals-Pedestrians

Synchro 9 Report
HCM 2010 Signals-Pedestrians

Avila Ranch
14.: Broad & Buckley

Existing AM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	162	1	1386	532
Effct. Green for Bike (s)	8.1	4.6	63.8	40.5
Cross Street Width (ft)	37.7	48.2	24.0	39.2
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	135	77	1063	675
Bicycle Delay (s/bike)	52.2	55.5	13.2	26.3
Bicycle Compliance	Poor	Poor	Fair	Fair
Bicycle LOS Score	2.40	2.30	4.21	3.04
Bicycle LOS	B	B	D	C

Central Coast Transportation Consulting
HCM 2010 Signals-Bicycles

Synchro 9 Report
HCM 2010 Signals-Bicycles

Avila Ranch
15: Earthwood & Suburban

Existing AM
6/15/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W				W	
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None				None	
Median storage (veh)						
Upstream signal (ft)	1244					
pX platoon unblocked						
VC conflicting volume	0	0	0	0	0	0
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol						
IC, single (s)			4.1		6.4	6.2
IC, 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
CM capacity (veh/h)			1623		1023	1085
Direction_Lane #	EB 1	WB 1	NB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volumes to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			0.0%			ICU Level of Service
Analysis Period (min)			15			A

Avila Ranch
16: Suburban & Horizon Lane

Existing AM
6/15/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W				W	
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Direction_Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	0	0	0			
Volume Left (vph)	0	0	0			
Volume Right (vph)	0	0	0			
Head (s)	0.00	0.00	0.00			
Departure Headway (s)	3.9	3.9	3.9			
Degree Utilization, x	0.00	0.00	0.00			
Capacity (veh/h)	917	917	917			
Control Delay (s)	6.9	6.9	6.9			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay			0.0			
Level of Service			A			
Intersection Capacity Utilization			0.0%			ICU Level of Service
Analysis Period (min)			15			A

Avila Ranch
17: Vachell & Venture Dr

Existing AM
6/15/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Traffic Volume (veh/h)	0	0	178	0	0	318
Future Volume (Veh/h)	0	0	178	0	0	318
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	193	0	0	346
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume		539	193			193
VC1 stage 1 conf vol						
VC2 stage 2 conf vol		539	193			193
VCu unblocked vol		6.4	6.2			4.1
IC single (s)						
IC 2 stage (s)		3.5	3.3			2.2
IF (s)		100	100			100
p0 queue free %		503	849			1380
pM capacity (veh/h)						
Direction Lane #	WB 1	NB 1	SB 1			
Volumes Total	0	193	346			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1380			
Volumes to Capacity	0.00	0.11	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			20.1%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
18: Vachell & Project Entry

Existing AM
6/15/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Traffic Volume (veh/h)	0	0	178	0	0	318
Future Volume (Veh/h)	0	0	178	0	0	318
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	193	0	0	346
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume		539	193			193
VC1 stage 1 conf vol						
VC2 stage 2 conf vol		539	193			193
VCu unblocked vol		6.4	6.2			4.1
IC single (s)						
IC 2 stage (s)		3.5	3.3			2.2
IF (s)		100	100			100
p0 queue free %		503	849			1380
pM capacity (veh/h)						
Direction Lane #	WB 1	NB 1	SB 1			
Volumes Total	0	193	346			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1380			
Volumes to Capacity	0.00	0.11	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			20.1%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch Existing PM
6/15/2015
1: LOVR & 101 NB/101 SB

	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	231	386	89	1152	808	692
Lane Group Flow (vph)	0.46	0.74	0.33	0.52	0.91	0.62
v/c Ratio	30.6	32.4	12.5	7.5	31.1	5.2
Control Delay	0.0	0.1	0.0	0.1	0.0	0.6
Queue Delay	30.6	32.5	12.5	7.6	31.1	5.8
Total Delay	180	#292	m37	170	#648	15
Queue Length 50th (ft)	110	153	10	87	409	51
Queue Length 95th (ft)	180	#292	m37	170	#648	15
Internal Link Dist (ft)	198			925	236	
Turn Bay Length (ft)	150		150			
Base Capacity (vph)	503	519	271	2241	910	1127
Stavation Cap Reductn	0	0	0	0	0	158
Spillback Cap Reductn	0	5	0	205	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.75	0.33	0.57	0.89	0.71

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Avila Ranch Existing PM
6/15/2015
1: LOVR & 101 NB/101 SB

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	229	1	381	88	1140	0	0	800	685
Future Volume (veh/h)	0	0	0	229	1	381	88	1140	0	0	800	685
Number				3	8	18	1	6	16	5	2	12
Initial Q (Ob.) veh				0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln				1863	1863	1900	1863	1863	0	0	1863	1863
Adj Flow Rate, veh/h				231	1	385	89	1152	0	0	808	692
Adj No. of Lanes				1	1	0	1	2	0	0	1	1
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				2	2	2	2	2	0	0	2	2
Cap. veh/h				483	1	430	301	2242	0	0	911	774
Arrive On Green				0.27	0.27	0.27	0.07	0.42	0.00	0.00	0.49	0.49
Sat Flow, veh/h				1774	4	1580	1774	3632	0	0	1863	1583
Grp Volume(v), veh/h				231	0	386	89	1152	0	0	808	692
Grp Sat Flow(s),veh/hln				1774	0	1584	1774	1770	0	0	1863	1583
Q_Serv(g_s), s				9.8	0.0	21.1	1.9	21.6	0.0	0.0	35.2	35.7
Cycle Q Clear(g_c), s				9.8	0.0	21.1	1.9	21.6	0.0	0.0	35.2	35.7
Prop In Lane				1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00
Lane Grp Cap(c), veh/h				483	0	431	301	2242	0	0	911	774
V/C Ratio(X)				0.48	0.00	0.90	0.30	0.51	0.00	0.00	0.89	0.89
Avail Cap(c_a), veh/h				483	0	431	301	2242	0	0	911	774
HCM Platoon Ratio				1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00
Upstream Filter(i)				1.00	0.00	1.00	0.72	0.72	0.00	0.00	0.82	0.82
Uniform Delay (d), s/veh				27.4	0.0	31.5	17.8	15.7	0.0	0.0	20.8	20.9
Incr Delay (d2), s/veh				3.4	0.0	23.7	1.8	0.6	0.0	0.0	10.5	12.7
Initial Q Delay(d3),s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%) veh/ln				5.3	0.0	12.1	1.3	10.7	0.0	0.0	20.6	18.1
LnGrp Delay(d),s/veh				30.8	0.0	55.2	19.6	16.3	0.0	0.0	31.3	33.6
LnGrp LOS				C		E	B	B			C	C
Approach Vol, veh/h				617			1241				1500	
Approach Delay, s/veh				46.1			16.6				32.4	
Approach LOS				D			B				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	13.0	49.0				62.0		28.0				
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5				
Max Green Setting (Gmax), s	9.5	44.0				57.0		24.5				
Max Q Clear Time (g_c+H), s	3.9	37.7				23.6		23.1				
Green Ext Time (g_e), s	0.1	5.8				25.1		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay											29.0	
HCM 2010 LOS											C	

Central Coast Transportation Consulting
Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Central Coast Transportation Consulting
Synchro 9 Report
Queues

Avila Ranch Existing PM
6/15/2015
1: LOVR & 101 NB/101 SB

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	14.7	23.9	48.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated None Actuated			
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	35
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	45.0	36.5	45.0	36.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.20	2.02	2.79	3.00
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch Existing PM
6/15/2015
1: LOVR & 101 NB/101 SB

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	0	617	1241	1500
Effct. Green for Bike (s)	0.0	25.6	55.9	42.9
Cross Street Width (ft)	48.3	60.1	23.9	14.7
Through Lanes Number	0	1	2	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	569	1242	953
Bicycle Delay (s/bike)	0.0	23.0	6.5	12.3
Bicycle Compliance	Fair	Good	Fair	Fair
Bicycle LOS Score	0.00	3.50	2.95	4.26
Bicycle LOS		C	C	E

Avila Ranch Existing PM
6/15/2015

Avila Ranch Existing PM
6/15/2015

2: LOVR & 101 NB

2: LOVR & 101 NB

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	489	108	173	778	746	308
Lane Group Flow (vph)	0.71	0.29	0.43	0.60	0.72	0.32
v/c Ratio	39.3	14.5	7.7	10.4	14.1	2.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	39.3	14.5	7.7	10.4	14.1	2.6
Total Delay	135	18	25	199	118	10
Queue Length 50th (ft)	175	58	54	359	m#382	m16
Queue Length 95th (ft)	128	50	200	471	925	
Internal Link Dist (ft)	858	447	476	1293	1033	972
Turn Bay Length (ft)	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0.57	0.24	0.36	0.60	0.72	0.32
Reduced v/c Ratio	Intersection Summary					
#	95th percentile volume exceeds capacity, queue may be longer.					
m	Queue shown is maximum after two cycles.					
	Volume for 95th percentile queue is metered by upstream signal.					

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	474	105	168	755	724	299
Lane Configurations	474	105	168	755	724	299
Traffic Volume (veh/h)	474	105	168	755	724	299
Future Volume (veh/h)	474	105	168	755	724	299
Number	3	18	1	6	2	12
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/m	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	489	108	173	778	746	308
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	617	284	513	1332	1152	979
Arrive On Green	0.18	0.18	0.06	0.72	1.00	1.00
Sat Flow, veh/h	3442	1583	1774	1863	1863	1583
Grp Volume(v), veh/h	489	108	173	778	746	308
Grp Sat Flow(s), veh/h/m	1721	1583	1774	1863	1863	1583
Q Serve(g_s), s	12.2	5.4	2.9	18.4	0.0	0.0
Cycle Q Clear(g_c), s	12.2	5.4	2.9	18.4	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	617	284	513	1332	1152	979
V/C Ratio(X)	0.79	0.38	0.34	0.58	0.65	0.31
Avail Cap(c_a), veh/h	860	396	676	1332	1152	979
HCM Platoon Ratio	1.00	1.00	1.00	1.00	2.00	2.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	0.48	0.48
Uniform Delay (d), s/veh	35.3	32.5	4.6	6.3	0.0	0.0
Incr Delay (d2), s/veh	3.5	0.8	0.4	1.9	1.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%), veh/m	6.1	2.4	1.4	10.0	0.4	0.1
LnGrp Delay(d), s/veh	38.8	33.4	5.0	8.1	1.4	0.4
LnGrp LOS	D	C	A	A	A	A
Approach Vol, veh/h	597			951	1054	
Approach Delay, s/veh	37.8			7.6	1.1	
Approach LOS	D			A	A	
Timer	1	2	3	4	5	6
Assigned Phs	1	2				8
Phs Duration (G+Y+Rc), s	8.7	61.6				70.4
Change Period (Y+Rc), s	3.5	6.0				3.5
Max Green Setting (Gmax), s	13.5	41.0				58.0
Max Q Clear Time (g_c+H), s	4.9	2.0				20.4
Green Ext Time (g_e), s	0.4	18.9				18.5
Intersection Summary	11.9					
HCM 2010 Ctrl Delay	B					
HCM 2010 LOS	B					

Avila Ranch
2: LOVR & 101 NB
Existing PM
6/15/2015

Approach	EB	NB	SB
Crosswalk Length (ft)	51.6	36.0	60.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.40	2.63	2.71
Pedestrian Crosswalk LOS	B	B	B

Avila Ranch
2: LOVR & 101 NB
Existing PM
6/15/2015

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	597	951	1054
Effct. Green for Bike (s)	18.0	62.5	49.9
Cross Street Width (ft)	36.0	60.0	51.6
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	400	1389	1109
Bicycle Delay (s/bike)	28.8	4.2	8.9
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.60	4.05	4.09
Bicycle LOS	B	D	D

Avila Ranch Existing PM
6/15/2015
3: Higuera & South

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	26	33	709	110	18	545	582	82	557
Lane Group Flow (vph)	0.29	0.15	0.75	0.22	0.21	0.34	0.61	0.48	0.29
v/c Ratio	50.8	1.4	33.6	9.0	48.1	17.8	8.5	48.4	13.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0
Queue Delay	50.8	1.4	33.6	9.0	48.1	17.8	8.8	48.4	13.1
Total Delay	41	0	252	46	33	161	169	93	147
Queue Length 50th (ft)	15	0	189	8	10	115	52	45	86
Queue Length 95th (ft)	208	0	629	629	338	338	60	100	507
Internal Link Dist (ft)	89	224	1139	594	86	1621	947	196	1899
Turn Bay Length (ft)	0	0	0	0	0	0	56	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0.29	0.15	0.62	0.19	0.21	0.34	0.65	0.42	0.29
Reduced v/c Ratio	Intersection Summary								

Avila Ranch Existing PM
6/15/2015
3: Higuera & South

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	12	12	31	659	18	85	17	507	541	76	500	18
Traffic Volume (veh/h)	12	12	31	659	18	85	17	507	541	76	500	18
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q. (Cb), veh	1.00	0.96	1.00	1.00	0.99	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/hln	13	13	33	709	19	91	18	545	582	82	538	19
Adj Flow Rate, veh/h	0	1	1	2	1	2	1	2	1	2	1	2
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	33	33	54	887	72	344	29	1603	711	106	1730	61
Cap. veh/h	0.04	0.04	0.04	0.26	0.26	0.26	0.02	0.45	0.45	0.06	0.50	0.50
Arrive On Green	909	909	1515	3442	279	1335	1774	3539	1570	1774	3486	123
Sat Flow, veh/h	26	0	33	709	0	110	18	545	582	82	273	284
Grp Volume(v), veh/h	1817	0	1515	1721	0	1614	1774	1770	1570	1774	1770	1839
Grp Sat Flow(s), veh/hln	1.2	0.0	1.8	15.9	0.0	4.5	0.8	8.2	26.6	3.8	7.6	7.6
Q_Serv(g_s), s	1.2	0.0	1.8	15.9	0.0	4.5	0.8	8.2	26.6	3.8	7.6	7.6
Cycle Q Clear(g_c), s	0.50	1.00	1.00	1.00	0.83	1.00	1.00	1.00	1.00	1.00	1.00	0.07
Prop In Lane	65	0	54	887	0	416	29	1603	711	106	878	913
Lane Grp Cap(c), veh/h	0.40	0.00	0.61	0.80	0.00	0.26	0.62	0.34	0.82	0.77	0.31	0.31
V/C Ratio(X)	88	0	73	1125	0	527	86	1603	711	193	878	913
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	39.0	0.0	39.3	28.7	0.0	24.4	40.4	14.6	19.7	38.3	12.4	12.4
Uniform Delay (d), s/veh	3.9	0.0	10.4	3.3	0.0	3.3	19.5	0.6	10.2	11.3	0.9	0.9
Incr Delay (d2), 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
Initial Q Delay(Q3), s/veh	0.6	0.0	0.9	8.0	0.0	2.0	0.6	4.1	13.5	2.2	3.9	4.1
%ile BackQ(50%), veh/ln	42.8	0.0	49.7	31.9	0.0	24.8	59.9	15.2	29.8	49.6	13.3	13.3
LnGrp Delay(d), s/veh	D	D	D	C	C	C	E	B	C	D	B	B
LnGrp LOS	59	D	819	C	1145	C	639	B	180	C	180	B
Approach Vol, veh/h	46.7	D	310	C	23.3	C	18.0	B	18.0	C	18.0	B
Approach Delay, s/veh	1	2	3	4	5	6	7	8	8	8	8	8
Approach LOS	1	2	3	4	5	6	7	8	8	8	8	8
Timer	1	2	3	4	5	6	7	8	8	8	8	8
Assigned Phs	1	2	3	4	5	6	7	8	8	8	8	8
Phs Duration (G+Y+Rc), s	8.9	41.4	7.0	5.4	45.0	25.3	25.3	25.3	25.3	25.3	25.3	25.3
Change Period (Y+Rc), s	9.0	36.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	5.8	28.6	3.8	2.8	9.6	17.9	17.9	17.9	17.9	17.9	17.9	17.9
Max Q Clear Time (g_c+H), s	0.1	5.3	0.0	0.0	13.6	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Green Ext Time (g_e), s	Intersection Summary											
HCM 2010 Ctrl Delay	24.9											
HCM 2010 LOS	C											

Avila Ranch
3: Higuera & South

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated Actuated Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	5	5	5
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq ft)	7266.6 2896.8 2897.1 4844.0			
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (s/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.00	2.62	2.87	2.58
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	59	819	1145	639
Effct. Green for Bike (s)	4.1	22.9	38.0	44.7
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	89	498	826	972
Bicycle Delay (s/bike)	42.0	26.0	15.8	12.2
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.96	2.94	2.35	1.88
Bicycle LOS	C	C	B	A

Avila Ranch Existing PM
4: Higuera & Madonna 6/15/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	312	313	317	10	99	308	534	458	808
Lane Group Flow (vph)	0.66	0.66	0.34	0.05	0.43	0.81	0.32	0.68	0.61
v/c Ratio	33.7	33.6	1.9	33.4	39.3	51.7	15.2	35.8	15.0
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	33.7	33.6	1.9	33.4	39.3	51.7	15.2	35.8	15.0
Total Delay	146	146	0	5	47	158	93	117	142
Queue Length 50th (ft)	261	261	22	19	96	#338	141	177	217
Queue Length 95th (ft)	964			1295		1563		338	
Internal Link Dist (ft)									
Turn Bay Length (ft)	566	568	939	381	399	381	1858	859	1482
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.55	0.55	0.34	0.03	0.25	0.81	0.29	0.53	0.55

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Avila Ranch Existing PM
4: Higuera & Madonna 6/15/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	569	12	295	9	85	7	286	494	3
Traffic Volume (veh/h)	569	12	295	9	85	7	286	494	3
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12
Number	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	0.98	1.00	1.00	0.99	0.99	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h	621	0	0	10	91	8	308	531	3
Adj Flow Rate, veh/h	2	0	1	1	1	1	2	0	2
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	822	0	683	140	133	12	354	1875	11
Cap. veh/h	0.23	0.00	0.00	0.08	0.08	0.08	0.20	0.52	0.52
Arrive On Green	3548	0	1583	1774	1684	148	1774	3608	20
Sat Flow, veh/h	621	0	0	10	0	99	308	260	274
Grp Volume(v), veh/h	1774	0	1583	1774	0	1833	1774	1770	1859
Grp Sat Flow(s), veh/h	11.5	0.0	0.0	0.4	0.0	3.7	11.9	5.9	5.9
Q_Serve(g_s), s	11.5	0.0	0.0	0.4	0.0	3.7	11.9	5.9	5.9
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	822	0	683	140	133	12	354	1875	11
Lane Grp Cap(c), veh/h	0.76	0.00	0.00	0.07	0.00	0.68	0.87	0.28	0.45
V/C Ratio(X)	1254	0	875	401	0	414	401	975	1025
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	25.3	0.0	0.0	30.2	0.0	31.7	27.4	9.6	22.1
Upstream Filter	1.4	0.0	0.0	0.2	0.0	5.5	16.8	0.2	0.2
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.8	0.0	0.0	0.2	0.0	2.1	7.5	2.9	3.0
Initial Q Delay(Q3), s/veh	26.8	0.0	0.0	30.4	0.0	37.2	44.2	9.7	22.7
%ile BackOf(50%) veh/m	C			C		D	A	A	C
LnGrp Delay(d), s/veh	621			109		842		1266	
LnGrp LOS	26.8			36.6		22.4		16.8	
Approach Delay, s/veh	1	2	3	4	5	6	7	8	
Approach LOS	C	C	C	D	D	C	C	B	
Timer	2	2	2	2	2	2	2	2	2
Assigned Phs	40.8	20.4	18.1	22.6	9.6	4.0	4.0	4.0	4.0
Phs Duration (G+Y+Rc), s	39.0	25.0	16.0	19.0	16.0	7.9	13.5	13.9	16.8
Change Period (Y+Rc), s	7.9	2.3	0.3	1.8	0.3	13.7	2.3	0.3	1.8
Max Green Setting (Gmax), s	13.7	2.3	0.3	1.8	0.3				
Max Q Clear Time (g_c+H), s									
Green Ext Time (g_e), s									
Intersection Summary	21.4								
HCM 2010 Ctrl Delay	C								
HCM 2010 LOS	C								
Notes									

Avila Ranch Existing PM
4: Higuera & Madonna 6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.92	1.99	2.78	2.72
Pedestrian Crosswalk LOS	C	A	C	B

Avila Ranch Existing PM
4: Higuera & Madonna 6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	942	109	842	1266
Effct. Green for Bike (s)	21.9	9.6	36.4	15.6
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	476	209	791	339
Bicycle Delay (s/bike)	26.7	36.9	16.8	31.7
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	2.89	1.37	1.52	2.34
Bicycle LOS	C	A	A	B

Avila Ranch
5: Higuera & Prado

Avila Ranch
5: Higuera & Prado

Existing PM
6/15/2015

Existing PM
6/15/2015

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	43	16	90	81	82	72	413	514	91	726
Lane Group Flow (vph)	0.21	0.05	0.26	0.41	0.30	0.21	0.73	0.28	0.41	0.69
v/c Ratio	35.6	33.7	5.0	40.9	36.8	2.6	33.3	11.0	43.3	29.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	35.6	33.7	5.0	40.9	36.8	2.6	33.3	11.0	43.3	29.1
Total Delay	17	6	0	34	33	0	161	65	38	147
Queue Length 50th (ft)	60	29	23	100	97	8	363	125	117	307
Queue Length 95th (ft)	363			386			1342			828
Internal Link Dist (ft)	150		150	150	200	200	250	250	125	125
Turn Bay Length (ft)	404	575	558	402	549	553	1043	2945	298	1726
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.03	0.16	0.20	0.15	0.13	0.40	0.17	0.31	0.42

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Movement	40	15	84	75	76	67	384	438	40	85
Lane Configurations	40	15	84	75	76	67	384	438	40	85
Traffic Volume (veh/h)	7	4	14	3	8	18	5	2	12	1
Future Volume (veh/h)	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	0.98	1.00	0.98	0.98	0.98	0.98	1.00	1.00	0.99	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863
Adj Sat Flow, veh/h	43	16	90	81	82	72	413	471	43	91
Adj Flow Rate, veh/h	1	1	1	1	1	1	1	1	1	1
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	256	303	251	302	303	251	486	1704	155	119
Cap. veh/h	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16	0.16
Percent Heavy Veh, %	1209	1863	1548	1259	1863	1548	1774	3278	298	1774
Arrive On Green	43	16	90	81	82	72	413	263	261	91
Sat Flow, veh/h	1209	1863	1548	1259	1863	1548	1774	1807	1774	1770
Grp Volume(v), veh/h	1209	1863	1548	1259	1863	1548	1774	1770	1807	1770
Grp Sat Flow(s), veh/h	2.2	0.5	3.5	3.9	2.6	2.8	14.9	5.4	5.5	3.4
Q Serve(g,s)	4.8	0.5	3.5	4.4	2.6	2.8	14.9	5.4	5.5	3.4
Cycle Q Clear(g,c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	256	303	251	302	303	251	486	920	939	119
Lane Grp Cap(c), veh/h	0.17	0.05	0.36	0.27	0.27	0.29	0.85	0.28	0.28	0.77
V/C Ratio(X)	452	605	503	487	577	480	1000	1698	1734	314
Avail Cap(c,a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(0)	27.0	24.0	25.2	25.8	24.9	24.9	23.3	9.1	9.1	31.1
Uniform Delay (d), s/veh	0.3	0.1	0.9	0.5	0.5	0.6	4.3	0.2	0.2	9.8
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(Q3), s/veh	0.8	0.3	1.6	1.4	1.4	1.2	7.8	2.6	2.7	2.0
%ile Back(Q50%), veh/m	27.3	24.0	26.1	26.3	25.3	25.5	27.5	9.3	9.3	40.9
LnGrp Delay(d), s/veh	C	C	C	C	C	C	C	C	A	D
LnGrp LOS	149	235	235	235	235	235	235	235	235	235
Approach Vol, veh/h	26.2	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7	25.7
Approach Delay, s/veh	C	C	C	C	C	C	C	C	C	C
Approach LOS	1	2	3	4	5	6	7	8		

	1	2	3	4	5	6	7	8
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	41.2		17.0	23.6	27.2		17.0
Change Period (Y+Rc), s	5.0	6.0		* 6	5.0	6.0		6.0
Max Green Setting (Gmax), s	12.0	65.0		* 22	42.0	35.0		21.0
Max Q Clear Time (g_c+H), s	5.4	7.5		6.8	16.9	13.8		6.4
Green Ext Time (g_c), s	0.1	9.1		1.6	1.6	7.4		1.6

	C	C	C	C	C	C	C	A	A	D	C	C
Intersection Summary	21.3											
HCM 2010 Ctrl Delay	C											
HCM 2010 LOS	C											
Notes												

Avila Ranch
5: Higuera & Prado

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.0	48.1	61.6	61.7
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3220.0	3221.5	3354.4	3355.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.32	2.24	2.85	2.74
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
5: Higuera & Prado

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	149	235	927	817
Effct. Green for Bike (s)	12.3	11.2	41.2	22.9
Cross Street Width (ft)	61.6	61.7	48.1	48.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Shoulder Width (ft)	0.0	6.0	0.0	0.0
Shoulder Width (ft)	0.0	6.0	0.0	0.0
On Street Parking?	Yes	Yes	Yes	Yes
Curb Is Present?	No	Yes	No	No
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	214	195	717	398
Bicycle Delay (s/bike)	45.9	46.8	23.7	36.9
Bicycle Compliance	Poor	Poor	Fair	Poor
Bicycle LOS Score	2.75	2.89	1.77	1.68
Bicycle LOS	B	C	A	A

Avila Ranch Existing PM 6/15/2015

Avila Ranch Existing PM 6/15/2015

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group	17	20	304	308	292	35	466	418	256	557
Lane Group Flow (vph)	0.09	0.06	0.67	0.67	0.45	0.27	0.66	0.44	0.70	0.39
v/c Ratio	39.2	0.4	41.2	41.4	7.1	52.1	39.0	2.6	46.0	22.3
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	39.2	0.4	41.2	41.4	7.1	52.1	39.0	2.6	46.0	22.3
Total Delay	9	0	161	163	0	19	128	0	132	125
Queue Length 50th (ft)	30	0	#430	#435	76	62	232	31	#319	228
Queue Length 95th (ft)	403			1256			1054			1668
Internal Link Dist (ft)										
Turn Bay Length (ft)					250	140		100	165	
Base Capacity (vph)	607	639	481	483	661	132	1101	977	484	1794
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.63	0.64	0.44	0.27	0.42	0.43	0.53	0.31

Intersection Summary
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations	10	7	19	573	14	280	34	447	401	246	512	23
Traffic Volume (veh/h)	10	7	19	573	14	280	34	447	401	246	512	23
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	7	20	608	0	35	466	418	256	533	24	24
Adj No. of Lanes	0	1	1	2	0	1	2	1	2	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	34	24	50	761	0	339	49	987	779	307	1464	66
Arrive On Green	0.03	0.03	0.03	0.21	0.00	0.00	0.03	0.28	0.28	0.17	0.42	0.42
Sat Flow, veh/h	1064	745	1574	3548	0	1583	1774	3539	1578	1774	3449	155
Grp Volume(v), veh/h	17	0	20	608	0	35	466	418	256	273	284	284
Grp Sat Flow(s), veh/h/ln	1810	0	1574	1774	0	1583	1774	1770	1578	1774	1770	1835
Q Serve(g_s), s	0.7	0.0	0.9	12.4	0.0	0.0	1.5	8.3	13.9	10.6	8.0	8.0
Cycle Q Clear(g_c), s	0.7	0.0	0.9	12.4	0.0	0.0	1.5	8.3	13.9	10.6	8.0	8.0
Prop In Lane	0.59		1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.08
Lane Grp Cap(c), veh/h	58	0	50	761	0	339	49	987	779	307	751	779
V/C Ratio(X)	0.29	0.00	0.40	0.80	0.00	0.00	0.72	0.47	0.54	0.83	0.36	0.36
Avail Cap(c_a), veh/h	641	0	558	1071	0	478	140	1161	857	512	952	987
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	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.1	0.0	36.2	28.4	0.0	0.0	36.8	22.8	13.3	30.5	14.9	14.9
Incr Delay (d2), s/veh	2.8	0.0	5.0	2.9	0.0	0.0	17.8	0.4	0.6	5.9	0.3	0.3
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.4	0.0	0.5	6.4	0.0	0.0	1.0	4.1	8.7	5.7	3.9	4.1
LnGrp Delay(d), s/veh	38.8	0.0	41.2	31.3	0.0	0.0	54.6	23.2	13.9	36.4	15.2	15.2
LnGrp LOS	D	D	C	C	D	C	D	C	B	D	B	B
Approach Vol, veh/h	37			608			919			813		
Approach Delay, s/veh	40.1			31.3			20.2			21.9		
Approach LOS	D			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	18.2	27.3		8.4	7.1	38.4		22.3				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	22.0	25.0		27.0	6.0	41.0		23.0				
Max Q Clear Time (g_c+H), s	12.6	15.9		2.9	3.5	10.0		14.4				
Green Ext Time (g_e), s	0.6	5.2		0.1	0.0	9.7		1.9				
Intersection Summary												
HCM 2010 Cfl Delay								23.9				
HCM 2010 LOS								C				
Notes												

Avila Ranch
6: Higuera & Tank Farm

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	47.1	49.5	74.5	62.6
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	100	70	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2262.5	2286.2	2456.2	2389.3
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.80	3.07	2.78
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	37	90.4	919	813
Effct. Green for Bike (s)	9.4	23.3	17.0	34.5
Cross Street Width (ft)	74.5	62.6	49.5	47.1
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	157	388	283	575
Bicycle Delay (s/bike)	51.0	39.0	44.2	30.5
Bicycle Compliance	Poor	Poor	Poor	Poor
Bicycle LOS Score	2.76	4.01	3.08	2.95
Bicycle LOS	C	D	C	C

Avila Ranch
7: Horizon Ln & Tank Farm
Existing PM
6/19/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	709	12	8	952	22	15
Future Volume (Veh/h)	709	12	8	952	22	15
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	771	13	9	1035	24	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2			2		
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume		784			1830	778
VC1, stage 1 conf vol				778		
VC2, stage 2 conf vol				1053		
VCu, unblocked vol		784			1830	778
IC, single (s)		4.1		6.4	6.2	6.2
IC, 2 stage (s)		2.2		5.4	3.3	3.3
p0 queue free %		99		91	96	96
CM capacity (veh/h)		834		272	397	397
Direction, Lane #	EB 1	WB 1	NB 1	NB 1		
Volume Total	784	1044	40			
Volume Left	0	9	24			
Volume Right	13	0	16			
cSH	1700	834	311			
Volumes to Capacity	0.46	0.01	0.13			
Queue Length 95th (ft)	0	1	11			
Control Delay (s)	0.0	0.3	18.3			
Lane LOS	A	C	C			
Approach Delay (s)	0.0	0.3	18.3			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay		0.6				
Intersection Capacity Utilization		66.5%		ICU Level of Service		C
Analysis Period (min)		15				

Avila Ranch
7: Horizon Ln & Tank Farm
Existing PM
7/9/2015

Approach	EB	WB	F
Approach Direction	EB	WB	F
Median Present?	No	No	No
Approach Delay(s)	3702.4	3702.4	3702.4
Level of Service	F	F	F
Crosswalk			
Length (ft)	46	46	46
Lanes Crossed	2	2	2
Veh Vol Crossed	1661	1661	1661
Ped Vol Crossed	0	0	0
Yield Rate(%)	0	0	0
Ped Platooning	No	No	No
Critical Headway (s)	16.14	16.14	16.14
Prob of Delayed X-ing	1.00	1.00	1.00
Prob of Blocked Lane	0.98	0.98	0.98
Delay for add. Gap	3704.56	3704.56	3704.56
Avg Ped Delay (s)	3702.40	3702.40	3702.40
Approach	WB	WB	F
Approach Direction	WB	WB	F
Median Present?	No	No	No
Approach Delay(s)	3702.4	3702.4	3702.4
Level of Service	F	F	F
Crosswalk			
Length (ft)	46	46	46
Lanes Crossed	2	2	2
Veh Vol Crossed	1661	1661	1661
Ped Vol Crossed	0	0	0
Yield Rate(%)	0	0	0
Ped Platooning	No	No	No
Critical Headway (s)	16.14	16.14	16.14
Prob of Delayed X-ing	1.00	1.00	1.00
Prob of Blocked Lane	0.98	0.98	0.98
Delay for add. Gap	3704.56	3704.56	3704.56
Avg Ped Delay (s)	3702.40	3702.40	3702.40

Avila Ranch Existing PM
8: Higuera & Suburban 6/15/2015

	WBL	WBR	NBT	SBL	SBT
Lane Group	402	140	912	37	1048
Lane Group Flow (vph)	0.67	0.23	0.61	0.19	0.70
v/c Ratio	20.4	5.5	12.7	13.1	15.0
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	20.4	5.5	12.7	13.1	15.0
Total Delay	98	6	90	6	118
Queue Length 50th (ft)	185	35	175	27	221
Queue Length 95th (ft)	1245	170	306	200	1054
Internal Link Dist (ft)	916	858	1872	254	1908
Turn Bay Length (ft)	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0.44	0.16	0.49	0.15	0.55
Reduced v/c Ratio					
Intersection Summary					

Central Coast Transportation Consulting
Synchro 9 Report
Queues

Avila Ranch Existing PM
8: Higuera & Suburban 6/15/2015

	WBL	WBR	NBT	SBL	SBT
Movement	WBL	WBR	NBT	SBL	SBT
Lane Configurations	382	133	688	179	35
Traffic Volume (veh/h)	382	133	688	179	35
Future Volume (veh/h)	3	18	2	12	1
Number	0	0	0	0	0
Initial Q (Ob.) veh	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pb1)	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1900	1863
Adj Sat Flow, veh/h/ln	402	140	724	188	37
Adj Flow Rate, veh/h	1	1	2	0	1
Adj No. of Lanes	0.95	0.95	0.95	0.95	0.95
Peak Hour Factor	2	2	2	2	2
Percent Heavy Veh, %	521	465	1307	339	327
Cap. veh/h	0.29	0.29	0.47	0.47	0.47
Arrive On Green	1774	1583	2875	722	609
Sat Flow, veh/h	402	140	461	451	37
Grp Volume(v), veh/h	1774	1583	1770	1734	609
Grp Sat Flow(s),veh/h/ln	9.6	3.2	8.7	8.7	2.2
Q_Serve(g_s), s	9.6	3.2	8.7	8.7	10.8
Cycle Q Clear(g_c), s	1.00	1.00	0.42	1.00	1.00
Prop In Lane	521	465	831	815	327
Lane Grp Cap(c), veh/h	0.77	0.30	0.55	0.55	0.11
V/C Ratio(X)	916	817	952	933	369
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	15.0	12.7	8.8	8.8	12.7
Upstream Filter(i)	2.5	0.4	0.6	0.6	0.2
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	5.0	1.4	4.4	4.3	0.4
Initial Q Delay(d3),s/veh	17.5	13.1	9.4	9.4	12.9
%ile BackQ(50%) veh/ln	B	B	A	A	B
LnGrp Delay(d)s/veh	542	912	1085		
LnGrp LOS	16.3	9.4	9.9		
Approach Vol, veh/h	B	A	A	B	A
Approach Delay, s/veh	1	2	3	4	5
Approach LOS	6	7	8	6	8
Timer	2	27.8	27.8	27.8	18.7
Assigned Phs	6.0	6.0	6.0	6.0	5.0
Phs Duration (G+Y+Rc), s	25.0	25.0	25.0	25.0	24.0
Change Period (Y+Rc), s	10.7	10.7	10.7	12.8	11.6
Max Green Setting (Gmax), s	10.2	10.2	10.2	9.0	2.0
Max Q Clear Time (g_c+H), s	Intersection Summary				
Green Ext Time (g_e), s	11.1				
HCM 2010 Ctrl Delay	B				
HCM 2010 LOS					

Central Coast Transportation Consulting
Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch
8: Higuera & Suburban

Existing PM
6/15/2015

Approach	WB	NB	SB
Crosswalk Length (ft)	44.6	59.9	60.2
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	30	30	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq ft)	7278.7	7278.9	7278.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	4473.5	5337.2	4748.3
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (s/p)	22.5	21.7	22.5
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.17	3.02	2.85
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Existing PM
6/15/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	542	912	1085
Effct. Green for Bike (s)	16.4	20.6	20.6
Cross Street Width (ft)	60.2	44.6	59.9
Through Lanes /Number	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	547	687	687
Bicycle Delay (s/bike)	15.8	12.9	12.9
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	2.41	1.92	2.30
Bicycle LOS	B	A	B

Avila Ranch Existing PM
9: Higuera & Vachell 6/15/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	111	66	802	137	88	1290
Future Volume (Veh/h)	111	66	802	137	88	1290
Sign Control	Slop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	117	69	844	144	93	1358
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)	4					
Median type			None			None
Median storage (veh)						
Upstream signal (ft)	0.76		4.33			386
pX platoon unblocked						
VC, conflicting volume	1781	494				988
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
IC, single (s)	1404	494				988
IC, 2 stage (s)	6.8	6.9				4.1
p0 queue free %	3.5	3.3				2.2
IC capacity (veh/h)	0	87				87
CM capacity (veh/h)	86	521				695
Direction Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	186	563	425	93	679	679
Volume Left	117	0	0	93	0	0
Volume Right	69	0	144	0	0	0
cSH	129	1700	1700	695	1700	1700
Volumes to Capacity	1.44	0.33	0.25	0.13	0.40	0.40
Queue Length 95th (ft)	315	0	0	12	0	0
Control Delay (s)	297.3	0.0	0.0	11.0	0.0	0.0
Lane LOS	F	B	B	B	B	B
Approach Delay (s)	297.3	0.0		0.7		
Approach LOS	F					
Intersection Summary						
Average Delay	21.5					
Intersection Capacity Utilization	48.5%					
Analysis Period (min)	15					
	ICU Level of Service A					

Avila Ranch Existing PM
9: Higuera & Vachell 7/9/2015

Approach	SB	NB
Approach Direction	SB	NB
Median Present?	Yes	Yes
Approach Delay(s)	166.5	166.5
Level of Service	F	F
Crosswalk		
Length (ft)	28	28
Lanes Crossed	2	1
Veh Vol Crossed	802	1290
Ped Vol Crossed	0	0
Yield Rate(%)	0	0
Ped Platooning	No	No
Critical Headway (s)	11.00	11.00
Prob of Delayed X-ing	0.91	0.98
Prob of Blocked Lane	0.71	0.98
Delay for add Gap	40.01	132.51
Avg Ped Delay (s)	36.56	129.94
Approach	SB	NB
Approach Direction	SB	NB
Median Present?	No	No
Approach Delay(s)	787242	787242
Level of Service	F	F
Crosswalk		
Length (ft)	68	68
Lanes Crossed	4	4
Veh Vol Crossed	2092	2092
Ped Vol Crossed	0	0
Yield Rate(%)	0	0
Ped Platooning	No	No
Critical Headway (s)	22.43	22.43
Prob of Delayed X-ing	1.00	1.00
Prob of Blocked Lane	0.96	0.96
Delay for add Gap	787244.00	787244.00
Avg Ped Delay (s)	787242.00	787242.00

Avila Ranch
10: Higuera & LOVR
Existing PM
6/15/2015

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	802	30	42	165	507	930
v/c Ratio	0.64	0.05	0.17	0.20	0.77	0.83
Control Delay	21.0	7.9	11.6	11.6	29.2	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.0	7.9	11.6	11.6	29.2	13.3
Queue Length 50th (ft)	156	1	10	40	203	157
Queue Length 95th (ft)	221	17	25	73	#331	#347
Internal Link Dist (ft)	407			1929	353	
Turn Bay Length (ft)	100	225				
Base Capacity (vph)	1503	708	248	1160	847	1204
Station Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.53	0.04	0.17	0.14	0.60	0.77

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
10: Higuera & LOVR
Existing PM
6/15/2015

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	770	29	40	158	487	893
Future Volume (veh/h)	770	29	40	158	487	893
Number	7	14	5	2	6	16
Initial Q. (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	802	30	42	165	507	930
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1000	460	234	985	756	1102
Arrive On Green	0.29	0.29	0.03	0.53	0.41	0.41
Sat Flow, veh/h	3442	1583	1774	1863	1863	1579
Grp Volume(v), veh/h	802	30	42	165	507	930
Grp Sat Flow(s), veh/h/ln	1721	1583	1774	1863	1863	1579
Q.Serv(s), s	14.3	0.9	0.9	3.0	14.8	27.0
Cycle Q Clear(g_c), s	14.3	0.9	0.9	3.0	14.8	27.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1000	460	234	985	756	1102
V/C Ratio(X)	0.80	0.07	0.18	0.17	0.67	0.84
Avail Cap(c_a), veh/h	1346	619	283	1037	756	1102
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.8	17.0	12.0	8.1	16.1	7.1
Incr Delay (d2), s/veh	2.6	0.1	0.4	0.1	2.3	6.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%) veh/ln	7.2	1.0	0.4	1.6	7.9	18.7
LnGrp Delay(d) s/veh	24.4	17.1	12.4	8.2	18.4	13.3
LnGrp LOS	C	B	B	A	B	B
Approach Vol, veh/h	832			207	1437	
Approach Delay, s/veh	24.1			9.0	15.1	
Approach LOS	C			A	B	
Timer	1	2	3	4	5	6
Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	41.2			25.3	8.2	33.0
Change Period (Y+Rc), s	6.0			6.0	6.0	6.0
Max Green Setting (Gmax), s	37.0			26.0	4.0	27.0
Max Q Clear Time (g_c+H), s	5.0			16.3	2.9	29.0
Green Ext Time (g_e), s	13.3			3.0	0.0	0.0
Intersection Summary						
HCM 2010 Ctrl Delay				17.6		
HCM 2010 LOS				B		

Avila Ranch
10: Higuera & LOVR

Existing PM
6/15/2015

Avila Ranch
10: Higuera & LOVR

Existing PM
6/15/2015

Approach	EB	NB	SB
Crosswalk Length (ft)	61.2	36.1	59.9
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2
Ped. Right-Left Flow Rate (p/h)	2	0	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped. (sq ft)	12134.4	18201.6	7271.2
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	0.1	0.0	0.1
Crosswalk Circulation Code	F	-	F
Pedestrian Delay (s/p)	37.5	37.5	37.5
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.65	2.31	2.72
Pedestrian Crosswalk LOS	B	B	B

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	832	207	1437
Effct. Green for Bike (s)	23.1	27.3	22.2
Cross Street Width (ft)	36.1	59.9	61.2
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	616	728	592
Bicycle Delay (s/bike)	18.0	15.2	18.6
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	1.73	1.75	3.80
Bicycle LOS	A	A	D

Avila Ranch
11: Higuera & Buckley

Existing PM
6/15/2015

	NBT	SBT
Lane Group	215	561
Lane Group Flow (vph)	0.29	0.75
v/c Ratio	0.29	0.75
Control Delay	9.5	19.4
Queue Delay	0.0	0.0
Total Delay	9.5	19.4
Queue Length 50th (ft)	30	101
Queue Length 95th (ft)	64	#233
Internal Link Dist (ft)	852	1929
Turn Bay Length (ft)		
Base Capacity (vph)	745	745
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.29	0.75

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
11: Higuera & Buckley

Existing PM
6/15/2015

	WBL	WBR	NBT	NBR	SBL	SBT
Movement						
Lane Configurations	W		P			4
Traffic Volume (vph)	0	0	198	0	0	516
Future Volume (vph)	0	0	198	0	0	516
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected			1.00			1.00
Satd. Flow (prot)			1863			1863
Flt Permitted			1.00			1.00
Satd. Flow (perm)			1863			1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	215	0	0	561
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	215	0	0	561
Turn Type	Prot		NA			NA
Protected Phases	8		2			6
Permitted Phases					6	
Actuated Green, G (s)			16.0			16.0
Effective Green, g (s)			16.0			16.0
Actuated g/c Ratio			0.40			0.40
Clearance Time (s)			4.0			4.0
Lane Grp Cap (vph)			745			745
v/s Ratio Prot			0.12			0.30
v/s Ratio Perm						
v/c Ratio			0.29			0.75
Uniform Delay, d1			8.1			10.3
Progression Factor			1.00			1.00
Incremental Delay, d2			1.0			6.9
Delay (s)			9.1			17.2
Level of Service			A			B
Approach Delay (s)	0.0		9.1			17.2
Approach LOS	A		A			B
Intersection Summary						
HCM 2000 Control Delay			15.0			HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio			0.38			
Actuated Cycle Length (s)			40.0			Sum of lost time (s) 8.0
Intersection Capacity Utilization			30.5%			ICU Level of Service A
Analysis Period (min)			15			
c Critical Lane Group						

Avila Ranch
11: Higuera & Buckley

Existing PM
6/15/2015

Approach	WB	NB	SB
Crosswalk Length (ft)	32.8	35.6	36.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	2
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.69	2.26	2.26
Pedestrian Crosswalk LOS	A	B	B

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signals-Pedestrians

Avila Ranch
11: Higuera & Buckley

Existing PM
6/15/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	0	215	561
Effct. Green for Bike (s)	16.0	16.0	16.0
Cross Street Width (ft)	36.0	32.8	35.6
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	800	800	800
Bicycle Delay (s/bike)	7.2	7.2	7.2
Bicycle Compliance	Good	Good	Good
Bicycle LOS Score	2.11	2.42	3.03
Bicycle LOS	B	B	C

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signals-Bicycles

Avila Ranch
12: Buckley & Vachell

Existing PM
6/15/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	177	225	0
Future Volume (Veh/h)	0	0	0	177	225	0
Sign Control	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	192	245	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	192				96	%
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	192				96	%
IC, single (s)	4.1				6.4	6.2
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	100				73	100
CM capacity (veh/h)	1381				903	960
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	0	192	245			
Volume Left	0	0	245			
Volume Right	0	192	0			
cSH	1700	1700	903			
Volumes to Capacity	0.00	0.11	0.27			
Queue Length 95th (ft)	0	0	28			
Control Delay (s)	0.0	0.0	10.5			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	10.5			
Approach LOS			B			
Intersection Summary						
Average Delay				5.9		
Intersection Capacity Utilization				30.1%	ICU Level of Service	A
Analysis Period (min)				15		

Avila Ranch
12: Buckley & Vachell

Existing PM
7/9/2015

Approach	EB	WB
Approach Direction	EB	
Median Present?	No	
Approach Delay(s)	0	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	0	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.00	
Prob of Blocked Lane	0.00	
Delay for add. Gap	0.00	
Avg Ped Delay (s)	0.00	
Approach	WB	
Approach Direction	WB	
Median Present?	No	
Approach Delay(s)	0	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	0	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.00	
Prob of Blocked Lane	0.00	
Delay for add. Gap	0.00	
Avg Ped Delay (s)	0.00	

Avila Ranch Existing PM
13: Buckley & Project Entry 6/15/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	200	200	0	0	0
Future Volume (Veh/h)	0	200	200	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	217	217	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	217			434	217	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	217			434	217	
IC, single (s)	4.1			6.4	6.2	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	100	
CM capacity (veh/h)	1353			579	823	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	217	217	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1353	1700	1700			
Volumes to Capacity	0.00	0.13	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			13.9%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch Existing PM
13: Buckley & Project Entry 7/9/2015

Approach	EB	WB	C
Approach Direction	EB	WB	
Median Present?	No	No	
Approach Delay(s)	13.5		
Level of Service	C		
Crosswalk			
Length (ft)	32		
Lanes Crossed	2		
Veh Vol Crossed	400		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	12.14		
Prob of Delayed X-ing	0.74		
Prob of Blocked Lane	0.49		
Delay for add. Gap	18.29		
Avg Ped Delay (s)	13.55		
Approach	WB		
Approach Direction	WB		
Median Present?	No		
Approach Delay(s)	13.5		
Level of Service	C		
Crosswalk			
Length (ft)	32		
Lanes Crossed	2		
Veh Vol Crossed	400		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	12.14		
Prob of Delayed X-ing	0.74		
Prob of Blocked Lane	0.49		
Delay for add. Gap	18.29		
Avg Ped Delay (s)	13.55		

Avila Ranch
14.: Broad & Buckley

Existing PM
6/15/2015

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	54	294	20	79	489	17	1091
v/c Ratio	0.31	0.78	0.23	0.54	0.34	0.16	0.88
Control Delay	50.0	33.1	41.1	62.5	5.8	54.5	23.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.0	33.1	41.1	62.5	5.8	54.5	23.4
Queue Length 50th (ft)	30	72	5	45	50	10	407
Queue Length 95th (ft)	79	#207	33	#144	207	38	#1014
Internal Link Dist (ft)	9732	405		777			1174
Turn Bay Length (ft)		150		360		470	
Base Capacity (vph)	348	378	88	147	1523	107	1523
Stavation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.78	0.23	0.54	0.32	0.16	0.72

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
14.: Broad & Buckley

Existing PM
6/15/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations		4	4		4		4	4		4	4
Traffic Volume (veh/h)	50	2	282	7	2	11	76	468	1	16	1047
Future Volume (veh/h)	50	2	282	7	2	11	76	468	1	16	1047
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q. (Cb), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	0.92	1.00	0.98	1.00	0.98	1.00	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825
Adj Flow Rate, veh/h	52	2	294	7	2	11	79	488	1	17	1091
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	242	9	308	9	3	14	99	1225	3	25	1168
Arrive On Green	0.14	0.14	0.02	0.02	0.02	0.06	0.68	0.68	0.68	0.01	0.64
Sat Flow, veh/h	1694	65	1520	545	156	856	1712	1793	4	1739	1825
Grp Volume(v), veh/h	54	0	294	20	0	0	79	0	489	17	1091
Grp Sat Flow(s), veh/hln	1759	0	1520	1557	0	0	1712	0	1797	1739	1825
Q_Serv(g_s), s	3.0	0.0	16.0	1.4	0.0	0.0	5.1	0.0	13.3	1.1	59.9
Cycle Q Clear(g_c), s	3.0	0.0	16.0	1.4	0.0	0.0	5.1	0.0	13.3	1.1	59.9
Prop In Lane	0.96	1.00	0.35	0.55	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	251	0	308	26	0	0	99	0	1228	25	1168
V/C Ratio(X)	0.22	0.00	0.95	0.78	0.00	0.00	0.80	0.00	0.40	0.67	0.93
Avail Cap(c_a), veh/h	251	0	308	56	0	0	107	0	1266	78	1254
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
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.5	0.0	44.4	54.9	0.0	0.0	52.1	0.0	7.7	54.9	18.1
Incr Delay (d2), s/veh	0.4	0.0	39.2	38.1	0.0	0.0	31.1	0.0	0.2	26.0	12.3
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back(Q50%), veh/ln	1.5	0.0	12.4	0.9	0.0	0.0	3.3	0.0	6.6	0.7	33.7
LnGrp Delay(d), s/veh	42.9	0.0	83.6	93.0	0.0	0.0	83.3	0.0	7.9	80.9	30.3
LnGrp LOS	D	F	F	F	F	F	F	F	A	F	C
Approach Vol, veh/h	348	20	568				568			1135	
Approach Delay, s/veh	77.3		93.0				18.4			30.5	
Approach LOS	E	F	F				B			C	
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2	4	5	6	8					
Phs Duration (G+Y+Rc), s	5.6	80.6	20.0	10.5	75.7	5.9					
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0					
Max Green Setting (Gmax), s	5.0	79.0	16.0	7.0	77.0	4.0					
Max Q Clear Time (g_c+H), s	3.1	15.3	18.0	7.1	61.9	3.4					
Green Ext Time (g_e), s	0.0	19.7	0.0	0.0	9.8	0.0					
Intersection Summary	35.7										
HCM 2010 Ctrl Delay	D										
HCM 2010 LOS	D										

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Synchro 9 Report
Queues

Central Coast Transportation Consulting

Avila Ranch
14.: Broad & Buckley

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.6	24.1	37.1	48.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.0	81.0	81.0	81.0
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3			
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4894.5	0.0	4815.1	5120.2
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.19	1.76	2.91	2.76
Pedestrian Crosswalk LOS	B	A	C	C

Central Coast Transportation Consulting
HCM 2010 Signals-Pedestrians

Synchro 9 Report
HCM 2010 Signals-Pedestrians

Avila Ranch
14.: Broad & Buckley

Existing PM
6/15/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	348	20	568	1135
Effct. Green for Bike (s)	8.9	4.4	71.5	60.6
Cross Street Width (ft)	37.1	48.3	24.1	39.6
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	148	73	1192	1010
Bicycle Delay (s/bike)	51.4	55.7	9.8	14.7
Bicycle Compliance	Poor	Poor	Good	Fair
Bicycle LOS Score	2.70	2.33	2.87	4.04
Bicycle LOS	B	B	C	D

Central Coast Transportation Consulting
HCM 2010 Signals-Bicycles

Synchro 9 Report
HCM 2010 Signals-Bicycles

Avila Ranch
15: Earthwood & Suburban

Existing PM
6/15/2015

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	W				W	
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	0	0	0	0	0	0
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol						
IC, single (s)		4.1		6.4		6.2
IC, 2 stage (s)		2.2		3.5		3.3
p0 queue free %		100		100		100
CM capacity (veh/h)		1623		1023		1085
Direction_Lane #	EB 1	WB 1	NB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volumes to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		0.0%				ICU Level of Service
Analysis Period (min)		15				A

Avila Ranch
16: Horizon Ln & Suburban

Existing PM
6/15/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Direction_Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	0	0	0			
Volume Left (vph)	0	0	0			
Volume Right (vph)	0	0	0			
Head (s)	0.00	0.00	0.00			
Departure Headway (s)	3.9	3.9	3.9			
Degree Utilization, x	0.00	0.00	0.00			
Capacity (veh/h)	917	917	917			
Control Delay (s)	6.9	6.9	6.9			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay		0.0				
Level of Service		A				
Intersection Capacity Utilization		0.0%				ICU Level of Service
Analysis Period (min)		15				A

Avila Ranch
17: Vachell & Venture Dr

Existing PM
6/15/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Traffic Volume (veh/h)	0	0	177	0	0	225
Future Volume (Veh/h)	0	0	177	0	0	225
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	192	0	0	245
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	437	192			192	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol	437	192			192	
VCu, unblocked vol	6.4	6.2			4.1	
IC, single (s)						
IC, 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	577	850			1381	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	192	245			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1381			
Volume to Capacity	0.00	0.11	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.2%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
18: Vachell & Project Entry

Existing PM
6/15/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Traffic Volume (veh/h)	0	0	177	0	0	225
Future Volume (Veh/h)	0	0	177	0	0	225
Sign Control	Stop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	192	0	0	245
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	437	192			192	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol	437	192			192	
VCu, unblocked vol	6.4	6.2			4.1	
IC, single (s)						
IC, 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
cM capacity (veh/h)	577	850			1381	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	192	245			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1381			
Volume to Capacity	0.00	0.11	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			15.2%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP AM
 2/18/2016

	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	459	238	58	812	664	340
Lane Group Flow (vph)	0.70	0.34	0.25	0.43	0.82	0.39
v/c Ratio	33.3	8.0	14.7	21.3	24.5	1.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.3
Queue Delay	33.3	8.0	14.7	21.3	24.5	1.7
Total Delay	225	20	20	183	319	0
Queue Length 50th (ft)	#411	79	m31	243	429	4
Queue Length 95th (ft)	198			872	236	
Internal Link Dist (ft)	150		150			270
Turn Bay Length (ft)	656	703	235	2123	931	961
Base Capacity (vph)	0	0	0	0	0	208
Starvation Cap Reductn	0	2	0	48	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.34	0.25	0.39	0.71	0.45

Intersection Summary
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m. Volume for 95th percentile queue is metered by upstream signal.

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP AM
 2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	0	0	0	422	1	218	53	747	0	0	611	313
Lane Configurations	0	0	0	422	1	218	53	747	0	0	611	313
Traffic Volume (vph)	0	0	0	422	1	218	53	747	0	0	611	313
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vph)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fibb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fill Protected	1770	1585	1770	1585	1770	1585	1770	1585	1770	1585	1770	1585
Satd. Flow (prot)	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fill Permitted	1770	1585	1770	1585	1770	1585	1770	1585	1770	1585	1770	1585
Satd. Flow (perm)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak-Hour factor, PHF	0	0	0	459	1	237	58	812	0	0	664	340
Adj. Flow (vph)	0	0	0	459	1	237	58	812	0	0	664	340
RTOR Reduction (vph)	0	0	0	116	0	0	0	0	0	0	0	192
Lane Group Flow (vph)	0	0	0	459	122	0	58	812	0	0	664	148
Confl. Peds. (#/hr)												
Turn Type	Perm	NA	NA	pm+pt	NA	NA	NA	NA	NA	NA	NA	Perm
Protected Phases	8			8			6				2	
Permitted Phases												
Actuated Green, G (s)	33.4	33.4	33.4	48.1	48.1	48.1	48.1	48.1	39.1	39.1	39.1	39.1
Effective Green, g (s)	33.4	33.4	33.4	48.1	48.1	48.1	48.1	48.1	39.1	39.1	39.1	39.1
Actuated g/C Ratio	0.37	0.37	0.37	0.53	0.53	0.53	0.53	0.53	0.43	0.43	0.43	0.43
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.0	3.0	3.0	3.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	656	588	656	588	656	588	656	588	656	588	656	588
v/s Ratio Prot	0.26			0.08			0.02	0.23			0.36	
v/s Ratio Perm	0.70	0.21	0.25	0.43			0.25	0.43			0.82	0.22
Uniform Delay, d1	24.0	19.3	14.9	12.7			14.9	12.7			22.4	15.9
Progression Factor	1.00	1.00	1.57	1.69			1.57	1.69			0.72	0.15
Incremental Delay, d2	6.1	0.8	2.5	0.7			2.5	0.7			8.8	0.7
Delay (s)	30.2	20.1	25.9	22.1			25.9	22.1			24.9	3.1
Level of Service	C	C	C	C			C	C			C	A
Approach Delay (s)	0.0			26.7			22.3				17.5	
Approach LOS	A			C			C				B	

Intersection Summary	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
HCM 2000 Control Delay	21.6											C
HCM 2000 Volume to Capacity ratio	0.75											
Actuated Cycle Length (s)	90.0									12.0		
Intersection Capacity Utilization	69.7%											C
Analysis Period (min)	15											
c Critical Lane Group												

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP AM
 2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	422	1	218	53	747	0	0	611	313
Future Volume (veh/h)	0	0	0	422	1	218	53	747	0	0	611	313
Number	3	8	18	1	6	16	5	2	12			
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1900	1863	1863	0	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	459	1	237	58	812	0	0	664	340			
Adj No. of Lanes	1	1	0	1	2	0	0	1	1			
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Cap. veh/h	542	2	482	313	2124	0	0	931	792			
Arrive On Green	0.31	0.31	0.12	1.00	0.00	0.00	0.00	0.50	0.50			
Sat Flow, veh/h	1774	7	1578	1774	3632	0	0	1863	1583			
Grp Volume(V), veh/h	459	0	238	58	812	0	0	664	340			
Grp Sat Flow(s), veh/h	1774	0	1584	1774	1770	0	0	1863	1583			
Q Serve(g.s), s	21.8	0.0	11.0	1.2	0.0	0.0	0.0	24.9	12.3			
Cycle Q Clear(g.c), s	21.8	0.0	11.0	1.2	0.0	0.0	0.0	24.9	12.3			
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00			
Lane Grp Cap(c), veh/h	542	0	484	313	2124	0	0	931	792			
V/C Ratio(X)	0.85	0.00	0.49	0.19	0.38	0.00	0.00	0.71	0.43			
Avail Cap(c.a), veh/h	542	0	484	313	2124	0	0	931	792			
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00			
Upstream Filter(i)	1.00	0.00	1.00	0.85	0.85	0.00	0.00	0.94	0.94			
Uniform Delay (d), s/veh	29.3	0.0	25.5	11.7	0.0	0.0	0.0	17.5	14.3			
Incr Delay (d2), s/veh	15.1	0.0	3.5	1.1	0.4	0.0	0.0	4.4	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			
%ile BackOf(50%), veh/h	12.9	0.0	5.3	0.7	0.1	0.0	0.0	13.9	5.7			
LnGrp Delay(d), s/veh	44.3	0.0	29.1	12.8	0.4	0.0	0.0	21.8	15.9			
LnGrp LOS	D		C	B	A			C	B			
Approach Vol, veh/h			697			870			1004			
Approach Delay, s/veh			39.1			1.3			19.8			
Approach LOS			D			A			B			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	9.0	50.0				59.0		31.0				
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5				
Max Green Setting (Gmax), s	5.5	45.0				54.0		27.5				
Max Q Clear Time (g.c+H), s	3.2	26.9				2.0		23.8				
Green Ext Time (p.c), s	0.0	11.3				19.1		1.3				
Intersection Summary												
HCM 2010 Ctrl Delay						18.8						
HCM 2010 LOS						B						

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP AM
 2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	12.5	24.0	60.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None-Actuated	None-Actuated	None-Actuated	None-Actuated
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	50	200	500	0
85th percentile speed (mph)	30	30	35	35
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	45.0	36.5	45.0	36.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.89	2.34	3.47	2.72
Pedestrian Crosswalk LOS	A	B	C	B

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP AM
 2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	0	697	870	1004
Effct. Green for Bike (s)	0.0	33.4	48.1	39.1
Cross Street Width (ft)	60.3	60.1	24.0	12.5
Through Lanes Number	0	1	2	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	742	1069	869
Bicycle Delay (s/bike)	0.0	17.8	9.8	14.4
Bicycle Compliance	Fair	Good	Fair	Fair
Bicycle LOS Score	0.00	3.63	2.64	3.41
Bicycle LOS	D	B	B	C

Avila Ranch
 2: LOVR & 101 NB
 Existing Plus Project no BP AM
 2/18/2016



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	582	161	439	985	123
v/c Ratio	0.76	0.40	0.18	0.50	0.13
Control Delay	35.8	7.7	5.9	16.0	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.8	7.7	5.9	16.0	5.5
Queue Length 50th (ft)	142	25	41	191	13
Queue Length 95th (ft)	187	53	70	318	m19
Internal Link Dist (ft)	160		385	872	
Turn Bay Length (ft)		200			150
Base Capacity (vph)	924	429	2413	1959	931
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.38	0.18	0.50	0.13
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Avila Ranch
2: LOVR & 101 NB

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	W	←	←	→	→
Traffic Volume (vph)	389	158	151	413	926	116
Future Volume (vph)	389	158	151	413	926	116
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Flt Protected	0.97	0.96	1.00	1.00	1.00	0.85
Satd. Flow (prot)	3339	1770	3539	3539	3539	1583
Flt Permitted	0.97	0.96	1.00	1.00	1.00	1.00
Satd. Flow (perm)	3339	402	3539	3539	3539	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	414	168	161	439	985	123
RTOR Reduction (vph)	54	0	0	0	0	55
Lane Group Flow (vph)	528	0	161	439	985	68
Turn Type	Prot	pm-pt	NA	NA	Perm	Perm
Protected Phases	3	1	6	2		
Permitted Phases		6		2		
Actuated Green, G (s)	19.2	61.3	61.3	49.8	49.8	49.8
Effective Green, g (s)	19.2	61.3	61.3	49.8	49.8	49.8
Actuated g/C Ratio	0.21	0.68	0.68	0.55	0.55	0.55
Clearance Time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	712	395	2410	1958	875	
v/s Ratio Prot	c0.16	c0.04	0.12	c0.28		
v/s Ratio Perm		0.24		0.04		
v/c Ratio	0.74	0.41	0.18	0.50	0.08	
Uniform Delay, d1	33.1	6.5	5.2	12.4	9.4	
Progression Factor	1.00	1.00	1.13	2.10		
Incremental Delay, d2	4.2	0.7	0.2	0.6	0.1	
Delay (s)	37.2	7.2	5.4	14.8	19.9	
Level of Service	D	A	A	B	B	
Approach Delay (s)	37.2	5.9	15.3			
Approach LOS	D	A	B			
Intersection Summary						
HCM 2000 Control Delay	18.4 HCM 2000 Level of Service B					
HCM 2000 Volume to Capacity ratio	0.55					
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 13.0					
Intersection Capacity Utilization	61.7% ICU Level of Service B					
Analysis Period (min)	15					
c. Critical Lane Group						

Avila Ranch
2: LOVR & 101 NB

Existing Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	38.7	60.1	72.0
Crosswalk Width (ft)	10.0	10.0	10.0
Total Number of Lanes Crossed	3	5	5
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (vph)	0	0	0
Ped. Right-Left Flow Rate (vph)	0	0	0
Ped. R. Sidewalk Flow Rate (vph)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (S/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.23	2.71	2.69
Pedestrian Crosswalk LOS	B	B	B

Avila Ranch
2: LOVR & 101 NB

Existing Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	582	600	1108
Effct. Green for Bike (s)	19.2	61.3	49.8
Cross Street Width (ft)	60.1	72.0	38.7
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	427	1362	1107
Bicycle Delay (s/bike)	27.8	4.6	9.0
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.96	3.16	3.07
Bicycle LOS	C	C	C

Avila Ranch
3: Higuera & South

Existing Plus Project no BP AM
2/18/2016

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	30	13	501	108	38	315	545	120	382
Lane Group Flow (vph)	0.32	0.05	0.57	0.23	0.29	0.23	0.48	0.54	0.24
Control Delay	51.1	0.4	29.7	10.5	45.9	21.4	2.6	45.5	16.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	51.1	0.4	29.7	10.5	45.9	21.4	2.6	45.5	16.6
Queue Length 50th (ft)	17	0	125	11	21	68	15	63	73
Queue Length 95th (ft)	46	0	174	50	53	108	40	122	115
Internal Link Dist (ft)	208		629			338			507
Turn Bay Length (ft)		50	130		60		60	100	
Base Capacity (vph)	94	238	1147	597	136	1345	1201	272	1607
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.05	0.44	0.18	0.28	0.23	0.45	0.44	0.24
Intersection Summary									

Avila Ranch
3: Higuera & South

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	20	12	481	24	80	36	302	523	115	341	26
Traffic Volume (veh/h)	9	20	12	481	24	80	36	302	523	115	341	26
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	5.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Total Lost time (s)	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00
Fpb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fpb. ped/bikes	1.00	0.85	1.00	0.88	1.00	1.00	0.85	1.00	0.85	1.00	0.99	1.00
Flt Protected	0.99	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1835	1583	3433	1624	1770	3539	1560	1770	3495	1770	3495	1770
Flt Permitted	0.99	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1835	1583	3433	1624	1770	3539	1560	1770	3495	1770	3495	1770
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	9	21	12	501	25	83	38	315	545	120	355	27
RTOR Reduction (vph)	0	0	13	0	63	0	0	0	171	0	6	0
Lane Group Flow (vph)	0	30	0	501	45	0	38	315	374	120	376	0
Confl. Peds. (#/hr)	7	4	4	7	4	4	7	4	13	13	4	4
Turn Type	Spill	NA	Perm	Spill	NA	Prot	NA	pm+ov	Prot	NA	Prot	NA
Protected Phases	8	8	8	4	4	4	1	6	4	4	5	2
Permitted Phases	8	8	8	4	4	4	1	6	4	4	5	2
Actuated Green, G (s)	2.1	2.1	2.1	20.5	20.5	20.5	3.2	30.5	51.0	9.5	36.8	0.14
Effective Green, g (s)	2.1	2.1	2.1	20.5	20.5	20.5	3.2	30.5	51.0	9.5	36.8	0.14
Actuated g/C Ratio	0.02	0.02	0.02	0.24	0.24	0.24	0.04	0.36	0.60	0.11	0.43	0.00
Clearance Time (s)	5.0	5.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	45	39	831	393	66	1275	940	198	1520	60.07	0.11	0.11
v/s Ratio Prot	0.02	0.02	0.15	0.03	0.02	0.09	0.02	0.09	0.14	0.07	0.11	0.11
v/s Ratio Perm	0.02	0.02	0.15	0.03	0.02	0.09	0.02	0.09	0.14	0.07	0.11	0.11
v/c Ratio	0.67	0.01	0.60	0.11	0.58	0.25	0.40	0.61	0.25	0.61	0.25	0.25
Uniform Delay, d1	40.9	40.2	28.4	25.0	40.0	19.0	8.8	35.8	15.1	35.8	15.1	15.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	31.5	0.1	1.2	0.1	11.6	0.5	0.3	5.2	0.4	5.2	0.4	0.4
Delay (s)	72.4	40.3	29.7	25.1	51.6	19.5	9.1	40.9	15.5	40.9	15.5	15.5
Level of Service	E	D	C	C	D	B	A	D	B	D	B	B
Approach Delay (s)	62.7	28.9	28.9	28.9	28.9	28.9	14.5	14.5	21.6	21.6	21.6	21.6
Approach LOS	E	D	C	C	D	B	A	D	B	D	B	B
Intersection Summary												
HCM 2000 Control Delay	21.5 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.50											
Actuated Cycle Length (s)	84.6 Sum of lost time (s) 22.0											
Intersection Capacity Utilization	64.5% ICU Level of Service C											
Analysis Period (min)	15											
c Critical Lane Group												

Central Coast Transportation Consulting
HCM Signalized Intersection Capacity Analysis
Synchro 9 Report

Avila Ranch
3: Higuera & South

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	9	20	12	481	24	80	36	302	523	115	341	26
Traffic Volume (veh/h)	9	20	12	481	24	80	36	302	523	115	341	26
Future Volume (veh/h)	9	20	12	481	24	80	36	302	523	115	341	26
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	9	21	12	501	25	83	38	315	545	120	355	27
Adj No. of Lanes	0	1	1	2	1	2	1	2	1	2	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	17	40	47	707	77	257	51	1300	901	191	1486	112
Arrive On Green	0.03	0.03	0.03	0.21	0.21	0.21	0.03	0.37	0.37	0.11	0.45	0.45
Sat Flow, veh/h	551	1285	1520	3442	377	1250	1774	3539	1567	1774	3331	252
Grp Volume(V), veh/h	30	0	12	501	0	108	38	315	545	120	188	194
Grp Sat Flow(s),veh/hln	1835	0	1520	1721	0	1627	1774	1770	1567	1774	1770	1814
Q Serve(g.s.)	1.2	0.0	0.6	10.3	0.0	4.3	1.6	4.7	17.4	4.9	5.0	5.1
Cycle Q Clear(g.c.) s	1.2	0.0	0.6	10.3	0.0	4.3	1.6	4.7	17.4	4.9	5.0	5.1
Prop In Lane	0.30	0.00	1.00	1.00	0.00	0.77	1.00	1.00	1.00	1.00	1.00	0.14
Lane Grp Cap(c), veh/h	57	0	47	707	0	334	51	1300	901	191	789	809
v/c Ratio(X)	0.53	0.00	0.26	0.71	0.00	0.32	0.74	0.24	0.61	0.63	0.24	0.24
Avail Cap(c.a), veh/h	96	0	80	1174	0	555	140	1300	901	279	789	809
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(0)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.4	0.0	36.1	28.2	0.0	25.8	36.7	18.8	10.7	32.6	13.1	13.1
Incr Delay (d2), s/veh	7.4	0.0	2.8	1.3	0.0	0.6	18.5	0.4	3.0	3.4	0.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%)veh/ln	0.7	0.0	0.3	5.0	0.0	2.0	1.1	2.4	11.8	2.6	2.6	2.7
LnGrp Delay(d),s/veh	43.8	0.0	38.9	29.5	0.0	26.3	55.2	17.2	13.7	35.9	13.8	13.8
LnGrp LOS	D	D	C	C	C	E	B	B	B	D	B	B
Approach Vol, veh/h	42 609 898											
Approach Delay, s/veh	42.4 28.9 16.7											
Approach LOS	D C B											
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	4	5	6	8						
Phs Duration (G+Y+Rc), s	7.2	40.0	21.7	13.2	34.0	7.4						
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	6.0	5.0						
Max Green Setting (Cmax), s	6.0	34.0	26.0	12.0	28.0	4.0						
Max Q Clear Time (g_c+H), s	3.6	7.1	12.3	6.9	19.4	3.2						
Green Ext Time (g_e), s	0.1	2.4	2.5	0.2	3.3	0.0						
Intersection Summary												
HCM 2010 Ctrl Delay	21.4 C											
HCM 2010 LOS	C											

Central Coast Transportation Consulting
HCM 2010 Signalized Intersection Summary
Synchro 9 Report

Avila Ranch
3: Higuera & South

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated Actuated Actuated			
Corresponding Signal Phase	2	6	8	4
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	10	10	10
Veh. Perm. R. Flow in Walk (v/h)	0	10	10	10
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	40	30	30
Right Corner Area per Ped (sq ft)	7266.6 2896.8 2897.1 4844.0			
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (s/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.65	2.76	2.49
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	42	609	898	502
Effct. Green for Bike (s)	4.1	20.5	30.5	36.8
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	89	446	663	800
Bicycle Delay (s/bike)	42.0	27.8	20.6	16.6
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.93	2.59	2.15	1.77
Bicycle LOS	C	B	B	A

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP AM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	343	345	543	1	16	113	319	391	455
Lane Group Flow (vph)	0.59	0.59	0.52	0.00	0.08	0.41	0.20	0.53	0.29
v/c Ratio	23.1	23.1	2.6	33.0	26.1	33.5	12.9	26.4	6.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	23.1	23.1	2.6	33.0	26.1	33.5	12.9	26.4	6.2
Total Delay	90	90	1	0	3	33	29	60	26
Queue Length 50th (ft)	253	255	30	5	23	109	86	141	84
Queue Length 95th (ft)	964	964	110	5	964	1563	338		
Internal Link Dist (ft)									
Turn Bay Length (ft)	890	895	1096	517	513	355	2261	1227	2008
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.39	0.50	0.00	0.03	0.32	0.14	0.32	0.23
Intersection Summary									

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP AM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4
Traffic Volume (vph)	607	26	500	1	8	6	104	293	355
Future Volume (vph)	607	26	500	1	8	6	104	293	355
Ideal Flow (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.88
Frb. ped/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1681	1692	1566	1770	1741	1770	3537	3537	2758
Flt Permitted	0.95	0.96	1.00	0.95	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)	1681	1692	1566	1770	1741	1770	3537	3537	2758
Peak-Hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	660	28	543	1	9	7	113	318	386
RTOR Reduction (vph)	0	0	275	0	7	0	0	0	0
Lane Group Flow (vph)	343	345	268	1	9	0	113	319	391
Confl. Peds. (#/hr)	6	6	6	6	6	6	6	6	6
Turn Type	Spill	NA	pm+ov	Spill	NA	Prot	NA	Perm	NA
Protected Phases	4	4	5	8	8	5	2	6	4
Permitted Phases			4					6	6
Actuated Green, G (s)	20.8	20.8	30.3	2.4	2.4	9.5	27.2	13.7	34.5
Effective Green, g (s)	20.8	20.8	30.3	2.4	2.4	9.5	27.2	13.7	34.5
Actuated g/C Ratio	0.33	0.33	0.49	0.04	0.04	0.15	0.44	0.22	0.55
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	560	564	760	68	66	269	1541	738	1701
v/s Ratio Prot	c0.20	0.20	0.05	0.00	c0.01	c0.06	0.09		0.09
v/s Ratio Perm			0.12						c0.12
v/c Ratio	0.61	0.61	0.35	0.01	0.14	0.42	0.21	0.53	0.27
Uniform Delay, d1	17.4	17.4	10.0	28.9	29.0	24.0	10.9	21.5	7.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	2.0	0.3	0.1	1.0	1.1	0.1	0.7	0.1
Delay (s)	19.4	19.4	10.2	28.9	30.0	25.0	11.0	22.2	7.4
Level of Service	B	B	B	C	C	C	B	C	A
Approach Delay (s)	15.4		29.9			14.7		14.2	
Approach LOS	B		C			B		B	
Intersection Summary									
HCM 2000 Control Delay	15.0 HCM 2000 Level of Service B								
HCM 2000 Volume to Capacity ratio	0.52								
Actuated Cycle Length (s)	62.4								
Intersection Capacity Utilization	55.8% ICU Level of Service B								
Analysis Period (min)	15								
c Critical Lane Group									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	607	26	500	1	8	6	104	293	1	5	355
Future Volume (veh/h)	607	26	500	1	8	6	104	293	1	5	355
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.98	1.00	0.99	0.99	0.99	0.99	0.99	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1900	1863	1863	1863	1900	1900	1863
Adj Flow Rate, veh/h	680	0	0	1	9	7	113	318	1	5	386
Adj No. of Lanes	2	0	1	1	1	0	1	2	0	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	1019	0	587	44	24	18	148	1572	5	81	919
Arrive On Green	0.29	0.00	0.00	0.02	0.02	0.02	0.08	0.43	0.43	0.27	0.27
Sat Flow, veh/h	3548	0	1583	1774	963	749	1774	3619	11	12	3452
Grp Volume(v), veh/h	680	0	0	1	0	16	113	155	164	210	181
Grp Sat Flow(s), veh/h	1774	0	1583	1774	0	1711	1774	1770	1861	1853	1610
Q Serve(g.s), s	8.0	0.0	0.0	0.0	0.4	2.9	2.6	2.6	2.6	0.0	4.4
Cycle Q Clear(g.c), s	8.0	0.0	0.0	0.0	0.4	2.9	2.6	2.6	2.6	0.0	4.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1019	0	587	44	0	42	148	769	808	572	429
V/C Ratio(X)	0.67	0.00	0.00	0.02	0.00	0.38	0.76	0.20	0.20	0.37	0.42
Avail Cap(c.a), veh/h	2177	0	1103	601	0	579	413	1310	1378	858	681
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
Upstream Filter(i)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	0.0	0.0	22.5	0.0	22.7	21.2	8.3	8.3	14.3	5.6
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.2	0.0	5.6	8.0	0.1	0.1	0.4	0.7
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%), veh/h	4.0	0.0	0.0	0.0	0.0	0.3	1.8	1.3	1.3	2.3	2.0
LnGrp Delay(d), s/veh	15.6	0.0	0.0	22.7	0.0	28.3	29.2	8.4	8.4	14.7	5.7
LnGrp LOS	B			C		C	C	A	A	B	A
Approach Vol, veh/h	680			17			432			846	
Approach Delay, s/veh	15.6			27.9			13.8			10.0	
Approach LOS	B			C			B			A	
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	2			4	5	6					
Phs Duration (G+Y+Rc), s	24.5			17.6	7.9	16.6					
Change Period (Y+Rc), s	4.0			4.0	4.0	4.0					
Max Green Setting (Gmax), s	35.0			29.0	11.0	20.0					
Max Q Clear Time (g.c+H), s	4.6			10.0	4.9	6.4					
Green Ext Time (p.c), s	7.7			3.1	0.1	5.7					
Intersection Summary											
HCM 2010 Ctrl Delay											12.9
HCM 2010 LOS											B
Notes											

User approved volume balancing among the lanes for turning movement.

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	1	0	0	1
Type of Control	Actuated			
Number of Actuated	6	2	4	8
Corresponding Signal Phase	8.0	0.0	8.0	8.0
Effective Walk Time (s)	9.0	9.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	0.0	0.0	0.0	0.0
Right Corner Curb Radius (ft)	81.0	81.0	81.0	81.0
Right Corner Total Area (sq ft)	2	0	2	2
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	100	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.75	1.97	2.70	2.47
Pedestrian Crosswalk LOS	C	A	B	B

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1231	17	432	846
Effct. Green for Bike (s)	20.9	6.9	27.2	13.3
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	454	150	591	289
Bicycle Delay (s/bike)	27.5	39.4	22.8	33.7
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	3.37	1.22	1.18	2.00
Bicycle LOS	C	A	A	A

Avila Ranch
5: Higuera & Prado

2/18/2016

Avila Ranch
5: Higuera & Prado

2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Group	72	91	84	39	37	37	201	377	183
Lane Group Flow (vph)	0.28	0.26	0.21	0.18	0.11	0.10	0.48	0.33	0.45
v/c Ratio	25.2	24.0	3.5	24.9	23.4	0.5	26.0	16.7	26.0
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	25.2	24.0	3.5	24.9	23.4	0.5	26.0	16.7	26.0
Total Delay	20	25	0	11	10	0	55	45	50
Queue Length 50th (ft)	65	75	17	41	39	0	158	114	145
Queue Length 95th (ft)	363			386			1342		828
Internal Link Dist (ft)	150	150	150	200	200	250	250	250	125
Turn Bay Length (ft)	782	1068	932	706	1030	930	978	2224	1299
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.09	0.09	0.06	0.04	0.04	0.21	0.17	0.14
Intersection Summary									

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBT
Lane Configurations	66	84	77	36	34	34	185	317	29
Traffic Volume (vph)	66	84	77	36	34	34	185	317	29
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpb)	5.0	5.0	5.0	6.0	6.0	6.0	5.0	6.0	5.0
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00
Lane Util. Factor	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95
Satd. Flow (prot)	1770	1863	1550	1755	1863	1583	1770	3485	1770
Flt Permitted	0.73	1.00	1.00	0.70	1.00	1.00	0.95	1.00	0.95
Satd. Flow (perm)	1365	1863	1550	1289	1863	1583	1770	3485	1770
Peak-Hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	72	91	84	39	37	37	201	345	32
RTOR Reduction (vph)	0	0	71	0	0	32	0	5	0
Lane Group Flow (vph)	72	91	13	39	37	5	201	372	0
Confl. Peds. (#/hr)	12	12	12	3	3	3	9	9	3
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases	4	4	4	8	8	8	5	2	1
Permitted Phases	4	8	5	8	8	8	5	2	6
Actuated Green, G (s)	8.5	8.5	8.5	7.5	7.5	7.5	12.9	17.9	12.5
Effective Green, g (s)	8.5	8.5	8.5	7.5	7.5	7.5	12.9	17.9	12.5
Actuated g/C Ratio	0.15	0.15	0.15	0.14	0.14	0.14	0.23	0.33	0.23
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0	6.0	5.0	6.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	211	288	239	176	254	216	415	1136	403
v/s Ratio Prot	0.05	0.05	0.01	0.03	0.02	0.02	0.11	0.11	0.10
v/s Ratio Perm	0.34	0.32	0.05	0.22	0.15	0.02	0.48	0.33	0.45
Uniform Delay, d1	20.7	20.6	19.8	21.1	20.9	20.5	18.1	14.0	18.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0	0.6	0.1	0.6	0.3	0.0	0.9	0.2	0.8
Delay (s)	21.7	21.3	19.9	21.7	21.1	20.6	19.0	14.1	19.1
Level of Service	C	C	B	C	C	C	B	B	B
Approach Delay (s)	20.9			21.2			15.8		16.8
Approach LOS	C			C			B		B
Intersection Summary									
HCM 2000 Control Delay	17.3								
HCM 2000 Volume to Capacity ratio	0.50								
Actuated Cycle Length (s)	54.9								
Intersection Capacity Utilization	52.5%								
Analysis Period (min)	15								
c Critical Lane Group	A								

Avila Ranch
5: Higuera & Prado

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	66	84	77	36	34	34	185	317	29	168	532	43
Traffic Volume (veh/h)	66	84	77	36	34	34	185	317	29	168	532	43
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	0.98	0.98	0.98	0.99	0.98	1.00	0.99	1.00	0.99	1.00	0.99	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Sat Flow, veh/hln	72	91	84	39	37	37	201	345	32	183	578	47
Adj Flow Rate, veh/h	1	1	1	1	1	1	1	2	0	1	2	0
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	364	348	290	315	348	290	268	1099	101	248	1075	87
Cap. veh/h	0.19	0.19	0.19	0.19	0.19	0.19	0.15	0.34	0.34	0.14	0.32	0.32
Arrive On Green	1298	1863	1553	1189	1863	1553	1774	3273	302	1774	3312	269
Sat Flow, veh/h	72	91	84	39	37	37	201	345	32	183	578	47
Grp Volume(V), veh/h	1298	1863	1553	1189	1863	1553	1774	1770	1805	1774	1770	1811
Grp Sat Flow(S), veh/hln	2.5	2.1	2.3	1.5	0.8	1.0	5.5	3.9	4.0	5.0	7.2	7.2
Q_Serve(g_s), s	3.3	2.1	2.3	3.6	0.8	1.0	5.5	3.9	4.0	5.0	7.2	7.2
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	364	348	290	315	348	290	268	594	606	248	574	588
Lane Grp Cap(c), veh/h	0.20	0.26	0.29	0.12	0.11	0.13	0.75	0.31	0.32	0.74	0.54	0.54
V/C Ratio(X)	843	1035	863	730	998	832	951	1124	1147	1374	1546	1582
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM 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)	18.4	17.5	17.6	19.0	17.0	17.1	20.5	12.4	12.4	20.8	13.9	13.9
Uniform Delay (d), s/veh	0.3	0.4	0.5	0.2	0.1	0.2	4.2	0.3	0.3	4.2	0.8	0.8
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	0.9	1.1	1.0	0.5	0.4	0.4	3.0	2.0	2.0	2.7	3.6	3.7
%ile BackOfQ(50%), veh/h	18.6	17.9	18.2	19.2	17.1	17.3	24.6	12.7	12.7	25.0	14.7	14.7
LnGrp Delay(d), s/veh	B	B	B	B	B	B	C	B	B	C	B	B
LnGrp LOS	247	182	179	113	179	179	578	808	17.0	B	17.0	B
Approach Vol, veh/h	B	B	B	B	B	B	B	B	B	B	B	B
Approach Delay, s/veh	1	2	3	4	5	6	7	8				
Approach LOS	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	2	4	5	6	6	8				
Phs Duration (G+Y+Rc), s	12.0	22.9	15.4	12.6	22.3	15.4	15.4	15.4				
Change Period (Y+Rc), s	5.0	6.0	* 6.0	5.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	39.0	32.0	* 28.0	27.0	44.0	27.0	27.0	27.0				
Max Q Clear Time (g_c+H), s	7.0	6.0	5.3	7.5	9.2	5.6	5.6	5.6				
Green Ext Time (g_e), s	0.7	6.1	1.7	0.6	6.5	1.7	1.7	1.7				
Intersection Summary												
HCM 2010 Ctrl Delay	17.2											
HCM 2010 LOS	B											
Notes												

Avila Ranch
5: Higuera & Prado

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.0	48.1	61.6	61.7
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. Perm. R. Flow in Walk (v/h)	5	5	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3220.0	3221.5	3354.4	3355.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.28	2.25	2.70	2.69
Pedestrian Crosswalk LOS	B	B	B	B

Avila Ranch
5: Higuera & Prado

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	247	113	578	808
Effct. Green for Bike (s)	10.5	9.5	17.9	17.5
Cross Street Width (ft)	61.6	61.7	48.1	48.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (b/ke/h)	183	165	311	304
Bicycle Delay (s/bike)	47.5	48.4	41.0	41.3
Bicycle Compliance	Poor	Poor	Poor	Poor
Bicycle LOS Score	2.91	2.69	1.49	1.67
Bicycle LOS	C	B	A	A

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP AM
2/18/2016

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	36	27	167	168	252	13	433	654	251	291
v/c Ratio	0.17	0.08	0.52	0.50	0.11	0.53	0.63	0.63	0.63	0.16
Control Delay	39.3	0.5	40.6	40.5	8.9	50.1	33.3	3.9	40.9	15.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	39.3	0.5	40.6	40.5	8.9	50.1	33.3	3.9	40.9	15.0
Queue Length 50th (ft)	18	0	82	82	0	7	103	0	118	39
Queue Length 95th (ft)	51	0	202	204	72	32	215	36	#299	116
Internal Link Dist (ft)	109		1317				1064			1668
Turn Bay Length (ft)			250			140		100		165
Base Capacity (vph)	674	694	514	516	659	122	1230	1143	566	2151
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.04	0.32	0.33	0.38	0.11	0.35	0.57	0.44	0.14
Intersection Summary										
# 95th percentile volume exceeds capacity, queue may be longer.										
Queue shown is maximum after two cycles.										

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP AM
2/18/2016



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	25	8	25	304	7	234	12	403	608	233	265	6
Traffic Volume (vph)	25	8	25	304	7	234	12	403	608	233	265	6
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	60	60	60	60	60	60	60	60	60	60	60	60
Total Lost time (s)	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Lane Util. Factor	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00
Frbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Fllb_psd/bikes	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	1.00
Frt	0.96	1.00	0.95	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Fll Protected	1795	1563	1681	1689	1583	1765	3539	1559	1770	3526		
Satd. Flow (prot)	0.96	1.00	0.95	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Fll Permitted	1795	1563	1681	1689	1583	1765	3539	1559	1770	3526		
Satd. Flow (perm)	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak-hour factor, PHF	27	9	27	327	8	252	13	433	654	251	285	6
Adj. Flow (vph)	0	0	25	0	0	207	0	0	358	0	1	0
RTOR Reduction (vph)	0	36	2	167	168	45	13	433	296	251	290	0
Lane Group Flow (vph)	Spill	NA	Perm	Spill	NA	Perm	Prot	NA	pm+ov	Prot	NA	
Conf. Ped. (#/hr)	4	4	4	8	8	8	5	2	8	1	6	
Turn Type	Permitted Phases											
Protected Phases												
Permitted Phases												
Actuated Green, G (s)	6.1	6.1	15.5	15.5	15.5	0.7	23.6	39.1	18.1	41.0		
Effective Green, g (s)	6.1	6.1	15.5	15.5	15.5	0.7	23.6	39.1	18.1	41.0		
Actuated q/C Ratio	0.07	0.07	0.18	0.18	0.18	0.01	0.27	0.45	0.21	0.48		
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0		
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.5		
Lane Grp Cap (vph)	126	110	301	303	284	14	967	706	371	1675		
v/s Ratio Prot	c0.02	0.10	c0.10	c0.10	0.03	0.01	c0.12	0.08	c0.14	0.08		
v/s Ratio Perm	0.00									0.11		
v/c Ratio	0.29	0.02	0.55	0.55	0.16	0.93	0.45	0.42	0.68	0.17		
Uniform Delay, d1	38.0	37.3	32.3	32.3	29.9	42.8	26.0	15.9	31.4	13.0		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.5	0.0	1.3	1.2	0.1	1.990	0.7	0.1	5.0	0.1		
Delay (s)	38.5	37.3	33.5	33.5	30.0	241.8	26.6	16.1	36.4	13.1		
Level of Service	D	D	C	C	C	F	C	B	D	B		
Approach Delay (s)	38.0						22.9			23.9		
Approach LOS	D						C			C		

Intersection Summary	
HCM 2000 Control Delay	25.9
HCM 2000 Volume to Capacity ratio	0.52
Actuated Cycle Length (s)	86.3
Intersection Capacity Utilization	69.8%
Analysis Period (min)	15
c Critical Lane Group	

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	45.5	36.3	77.9	62.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	150	50	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	2472.0	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2245.5	2126.8	2472.0	2387.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.98	2.76	2.96	2.68
Pedestrian Crosswalk LOS	A	C	C	B

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bik/earh)	0	0	0	0
Total Flow Rate (veh/h)	63	587	1100	542
Effct. Green for Bike (s)	9.3	15.5	18.6	41.0
Cross Street Width (ft)	77.9	62.3	36.3	45.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	155	258	310	683
Bicycle Delay (s/bike)	51.1	45.5	42.8	26.0
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.86	2.19	1.74	1.42
Bicycle LOS	C	B	A	A

Avila Ranch
7: Horizon Lane & Tank Farm

Existing Plus Project no BP AM
2/18/2016



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	WB	WB
Traffic Volume (veh/h)	769	25	6	667	18	8
Future Volume (Veh/h)	769	25	6	667	18	8
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	836	27	7	725	20	9
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Upstream signal (ft)	2			2		
Median storage (veh)						
Upstream signal (ft)						
px. platoon unblocked						
VC conflicting volume		863		1588		850
VC1 stage 1 conf vol				850		
VC2 stage 2 conf vol				739		
VCu unblocked vol		863		1588		850
IC single (s)		4.1		6.4		6.2
IC 2 stage (s)		2.2		5.4		3.3
p0 queue free %		99		94		98
ICM capacity (veh/h)		779		325		361
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	863	732	29			
Volume Left	0	7	20			
Volume Right	27	0	9			
cSH	1700	779	336			
Volume to Capacity	0.51	0.01	0.09			
Queue Length 95th (ft)	0	1	7			
Control Delay (s)	0.0	0.2	16.7			
Lane LOS	A	A	C			
Approach Delay (s)	0.0	0.2	16.7			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay			0.4			
Intersection Capacity Utilization			52.0%			A
Analysis Period (min)			15			

Avila Ranch
7: Horizon Lane & Tank Farm

Existing Plus Project no BP AM
2/18/2016

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
8: Higuera & Suburban

Existing Plus Project no BP AM
2/18/2016



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	256	1288	83	520
v/c Ratio	0.44	0.70	0.43	0.22
Control Delay	16.8	15.8	36.8	5.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	16.8	15.8	36.8	5.3
Queue Length 50th (ft)	28	166	29	27
Queue Length 95th (ft)	55	#426	#90	92
Internal Link Dist (ft)	1164	234		1054
Turn Bay Length (ft)			200	
Base Capacity (vph)	1335	1837	201	2474
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.19	0.70	0.41	0.21

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
8: Higuera & Suburban

Existing Plus Project no BP AM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	W	W	W	W
Traffic Volume (vph)	145	90	914	271	76	478
Future Volume (vph)	145	90	914	271	76	478
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	4.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.95	1.00	0.95
Frbp_psd/bikes	0.99	1.00	1.00	1.00	1.00	1.00
Frbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.94	0.97	1.00	1.00	1.00	1.00
Flt Protected	0.97	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3269	3401	1770	3539	1770	3539
Flt Permitted	0.97	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3269	3401	1770	3539	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	158	98	993	295	83	520
RTOR Reduction (vph)	83	0	28	0	0	0
Lane Group Flow (vph)	173	0	1260	0	83	520
Confl. Peds. (#/hr)	6	1	1	1	1	1
Turn Type	Prot	NA	Prot	NA	Prot	NA
Protected Phases	8	2	1	6		
Permitted Phases						
Actuated Green, G (s)	9.6	33.3	5.4	42.7		
Effective Green, g (s)	9.6	33.3	5.4	42.7		
Actuated g/C Ratio	0.15	0.63	0.09	0.67		
Clearance Time (s)	5.0	6.0	4.0	6.0		
Vehicle Extension (s)	2.0	5.5	3.0	5.5		
Lane Grp Cap (vph)	495	1789	150	2387		
v/s Ratio Prot	c0.05	c0.37	c0.05	0.15		
v/s Ratio Perm						
v/c Ratio	0.35	0.70	0.55	0.22		
Uniform Delay, d1	24.1	11.3	27.8	3.9		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.2	1.7	4.4	0.1		
Delay (s)	24.2	13.0	32.2	4.0		
Level of Service	C	B	C	A		
Approach Delay (s)	24.2	13.0	7.9			
Approach LOS	C	B	A			

Intersection Summary	
HCM 2000 Control Delay	12.9
HCM 2000 Volume to Capacity ratio	0.62
Actuated Cycle Length (s)	63.3
Intersection Capacity Utilization	60.2%
Analysis Period (min)	15
c Critical Lane Group	

Avila Ranch
8: Higuera & Suburban

Existing Plus Project no BP AM
2/18/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	45.9	59.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	40	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq.ft)	7274.3	7274.5	7274.5
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	3462.5	4097.7	3651.0
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (S/p)	31.4	30.5	31.4
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.12	2.90	2.79
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Existing Plus Project no BP AM
2/18/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0
Total Flow Rate (veh/h)	256	1288	603
Effct. Green for Bike (s)	9.6	33.3	41.8
Cross Street Width (ft)	60.1	45.9	59.3
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bikes/h)	246	854	1072
Bicycle Delay (s/bike)	30.0	12.8	8.4
Bicycle Compliance	Fair	Fair	Good
Bicycle LOS Score	1.73	2.25	1.89
Bicycle LOS	A	B	A

Avila Ranch
9: Higuera & Vachell

Existing Plus Project no BP AM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	110	1051	308	0	616
Future Volume (Veh/h)	0	110	1051	308	0	616
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	117	1118	328	0	655
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			504			314
pk platoon unblocked	0.98	0.96			0.96	
vC, conflicting volume	1610	723			1446	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1404	625			1379	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
p0 queue free %	3.5	3.3			2.2	
IF (s)	100	71			100	
pM capacity (veh/h)	128	410			473	
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	117	745	701	328	328	
Volume Left	0	0	0	0	0	
Volume Right	117	0	328	0	0	
cSH	410	1700	1700	1700	1700	
Volume to Capacity	0.29	0.44	0.41	0.19	0.19	
Queue Length 95th (ft)	29	0	0	0	0	
Control Delay (s)	17.3	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	17.3	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			0.9			
Intersection Capacity Utilization			52.4%			ICU Level of Service
Analysis Period (min)			15			A

Avila Ranch
9: Higuera & Vachell

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP AM
2/18/2016

Existing Plus Project no BP AM
2/18/2016

Approach	NB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	SB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	1132	54	164	337	237	424
v/c Ratio	0.87	0.09	0.41	0.23	0.53	0.44
Control Delay	28.3	10.2	14.1	11.3	24.2	5.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.3	10.2	14.1	11.3	24.2	5.2
Queue Length 50th (ft)	181	6	36	39	75	44
Queue Length 95th (ft)	#409	33	67	61	130	73
Internal Link Dist (ft)	407			1906	424	
Turn Bay Length (ft)	100	225				
Base Capacity (vph)	1305	617	400	3219	1355	971
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.87	0.09	0.41	0.10	0.17	0.44

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	1064	51	154	317	223	399
Future Volume (vph)	1064	51	154	317	223	399
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	0.97	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	0.95	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1769	3539	1863	1569
Flt Permitted	0.95	1.00	0.40	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	753	3539	1863	1569
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1132	54	164	337	237	424
RTOR Reduction (vph)	0	15	0	0	0	0
Lane Group Flow (vph)	1132	39	164	337	237	424
Confl. Peds. (#/hr)			2			2
Turn Type	Prot	Perm	pm+pt	NA	NA	pm+ov
Permitted Phases	4	5	2	6	4	
Prohibited Phases						6
Actuated Green, G (s)	23.2	23.2	25.7	25.7	14.7	37.9
Effective Green, g (s)	23.2	23.2	25.7	25.7	14.7	37.9
Actuated q/C Ratio	0.38	0.38	0.42	0.42	0.24	0.62
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	5.5	5.5	1.5	3.5	3.5	5.5
Lane Grp Cap (vph)	1307	603	401	1493	449	1131
v/s Ratio Prot	c0.33	c0.03	c0.10	c0.13	0.14	
v/s Ratio Perm	0.02	0.14			0.13	
v/c Ratio	0.87	0.06	0.41	0.23	0.53	0.37
Uniform Delay, d1	17.4	12.0	11.7	11.2	20.1	5.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	7.0	0.1	0.2	0.1	1.3	0.5
Delay (s)	24.4	12.1	11.9	11.3	21.4	6.2
Level of Service	C	B	B	B	C	A
Approach Delay (s)	23.8			11.5	11.6	
Approach LOS	C			B	B	
Intersection Summary						
HCM 2000 Control Delay	17.8 HCM 2000 Level of Service B					
HCM 2000 Volume to Capacity ratio	0.71					
Actuated Cycle Length (s)	60.9					
Intersection Capacity Utilization	66.3%					
Analysis Period (min)	15					
c Critical Lane Group						

Central Coast Transportation Consulting
HCM Signalized Intersection Capacity Analysis
Synchro 9 Report

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	1064	51	154	317	223	399
Future Volume (veh/h)	1064	51	154	317	223	399
Number	7	14	5	2	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1132	54	164	337	237	424
Adj No. of Lanes	2	1	1	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh. %	2	2	2	2	2	2
Cap. veh/h	1218	560	393	1632	543	1020
Arrive On Green	0.35	0.35	0.08	0.46	0.29	0.29
Sat Flow, veh/h	3442	1583	1774	3632	1863	1578
Grp Volume(v), veh/h	1132	54	164	337	237	424
Grp Sat Flow(s),veh/hln	1721	1583	1774	1770	1863	1578
Q Serve(g,s) s	20.5	1.5	4.0	3.7	6.7	8.5
Cycle Q Clear(g,c), s	20.5	1.5	4.0	3.7	6.7	8.5
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1218	560	393	1632	543	1020
v/c Ratio(X)	0.93	0.10	0.42	0.21	0.44	0.42
Avail Cap(c,a), veh/h	1221	562	393	3004	1265	1632
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(0)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.2	14.0	13.6	10.4	18.6	5.6
Incr Delay (d2), s/veh	13.0	0.2	0.3	0.1	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back(Q50%) veh/ln	11.8	1.6	1.9	1.8	3.5	7.4
LnGrp Delay(d),s/veh	33.2	14.2	13.9	10.5	19.3	5.9
LnGrp LOS	C	B	B	B	B	A
Approach Vol, veh/h	1186			501	661	
Approach Delay, s/veh	32.3			11.6	10.7	
Approach LOS	C			B	B	
Timer	1	2	3	4	5	6
Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	35.9			28.9	11.0	24.9
Change Period (Y+Rc), s	6.0			6.0	6.0	6.0
Max Green Setting (Cmax), s	55.0			23.0	5.0	44.0
Max Q Clear Time (g_c+H), s	5.7			22.5	6.0	10.5
Green Ext Time (g_c), s	8.6			0.4	0.0	8.1
Intersection Summary						
HCM 2010 Ctrl Delay	21.8					
HCM 2010 LOS	C					

Central Coast Transportation Consulting
HCM 2010 Signalized Intersection Summary
Synchro 9 Report

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	61.2	48.0	58.9
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	0
Ped. R. Sidewalk Flow Rate (p/h)	2	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq ft)	1457.5	24281.2	18270.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	0.1	0.3	0.2
Crosswalk Circulation Code	F	F	F
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.65	2.43	2.66
Pedestrian Crosswalk LOS	B	B	B

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	8	8	8
Total Flow Rate (veh/h)	1186	501	661
Effct. Green for Bike (s)	23.2	25.7	14.6
Cross Street Width (ft)	48.0	58.9	61.2
Through Lanes Number	2	2	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	516	571	324
Bicycle Delay (s/bike)	24.9	23.1	31.7
Bicycle Compliance	Fair	Fair	Poor
Bicycle LOS Score	2.20	1.80	2.51
Bicycle LOS	B	A	B

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP AM
2/18/2016

	WBL	NBT	SBT
Lane Group	216	371	298
Lane Group Flow (vph)	0.41	0.35	0.29
v/c Ratio	6.1	6.3	6.1
Control Delay	0.0	0.0	0.0
Queue Delay	6.1	6.3	6.1
Total Delay	7	27	21
Queue Length 50th (ft)	37	77	63
Queue Length 95th (ft)	1650	387	1906
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)	1006	1188	1125
Stavation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.21	0.31	0.26
Intersection Summary			

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP AM
2/18/2016

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	W					
Lane Configurations	60	139	332	9	29	245
Traffic Volume (vph)	60	139	332	9	29	245
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpb)	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.91	0.91	1.00	1.00	1.00	0.99
Flt Protected	0.99	0.99	1.00	1.00	0.99	0.99
Satd. Flow (prot)	1662	1662	1856	1856	1853	1853
Flt Permitted	0.99	0.99	1.00	1.00	0.94	0.94
Satd. Flow (perm)	1662	1662	1856	1856	1759	1759
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	151	361	10	32	266
RTOR Reduction (vph)	121	0	2	0	0	0
Lane Group Flow (vph)	95	0	369	0	0	298
Turn Type	Prot		NA	Perm	NA	NA
Protected Phases	8		2		6	
Permitted Phases					6	
Actuated Green, G (s)	5.8		15.6		15.6	
Effective Green, g (s)	5.8		15.6		15.6	
Actuated g/c Ratio	0.20		0.53		0.53	
Clearance Time (s)	4.0		4.0		4.0	
Vehicle Extension (s)	3.0		3.0		3.0	
Lane Grp Cap (vph)	327		984		933	
v/s Ratio Prot	c0.06		c0.20		0.17	
v/c Ratio	0.29		0.38		0.32	
Uniform Delay, d1	10.0		4.0		3.9	
Progression Factor	1.00		1.00		1.00	
Incremental Delay, d2	0.5		0.2		0.2	
Delay (s)	10.5		4.3		4.1	
Level of Service	B		A		A	
Approach Delay (s)	10.5		4.3		4.1	
Approach LOS	B		A		A	
Intersection Summary						
HCM 2000 Control Delay			5.7		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.35			
Actuated Cycle Length (s)			29.4		Sum of lost time (s)	8.0
Intersection Capacity Utilization			54.4%		ICU Level of Service	A
Analysis Period (min)			15			
c. Critical Lane Group						

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP AM
2/18/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	34.8	35.4	48.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	3
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.82	2.21	2.31
Pedestrian Crosswalk LOS	A	B	B

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP AM
2/18/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	216	371	298
Effct. Green for Bike (s)	7.0	16.5	16.5
Cross Street Width (ft)	48.0	34.8	35.4
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	350	825	825
Bicycle Delay (s/bike)	13.6	6.9	6.9
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.65	2.70	2.59
Bicycle LOS	B	B	B

Avila Ranch
12: Buckley & Vachell

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	25	126	87	325	71
Future Volume (Veh/h)	13	25	126	87	325	71
Sign Control	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	27	137	95	353	77
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None	None		
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume					240	184
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol					240	184
IC, single (s)					6.4	6.2
IC, 2 stage (s)						
p0 queue free %					3.5	3.3
IF (s)					52	91
CM capacity (veh/h)					741	858
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	41	232	430			
Volume Left	14	0	353			
Volume Right	0	95	77			
cSH	1336	1700	759			
Volume to Capacity	0.01	0.14	0.57			
Queue Length 95th (ft)	1	0	90			
Control Delay (s)	2.7	0.0	15.7			
Lane LOS	A	C	C			
Approach Delay (s)	2.7	0.0	15.7			
Approach LOS		C	C			
Intersection Summary						
Average Delay			9.8			
Intersection Capacity Utilization			41.8%		ICU	Level of Service
Analysis Period (min)			15			A

Approach	EB
Approach Direction	EB
Median Present?	No
Approach Delay(s)	0
Level of Service	A
Approach	WB
Approach Direction	WB
Median Present?	No
Approach Delay(s)	0
Level of Service	A

Avila Ranch
13: Buckley & Project Entry

Existing Plus Project no BP AM
2/18/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1	8	45	31
Traffic Volume (veh/h)	7	3	1	8	45	31
Future Volume (Veh/h)	7	3	1	8	45	31
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	3	1	9	49	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None	None		
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume		10			24	6
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol		10			24	6
IC single (s)		4.1			6.4	6.2
IC 2 stage (s)		2.2			3.5	3.3
p0 queue free %		100			95	97
CM capacity (veh/h)		1610			986	1077
Direction Lane #	EB 1	WB 1	SB 1			
Volume Total	11	10	83			
Volume Left	8	0	49			
Volume Right	0	9	34			
cSH	1610	1700	1022			
Volume to Capacity	0.00	0.01	0.08			
Queue Length 95th (ft)	0	0	7			
Control Delay (s)	5.3	0.0	8.8			
Lane LOS	A	A	A			
Approach Delay (s)	5.3	0.0	8.8			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			7.6			
Intersection Capacity Utilization			17.4%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
13: Buckley & Project Entry

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	A
Approach Direction			EB
Median Present?			No
Approach Delay(s)			0
Level of Service			A
Approach	WB	SB	A
Approach Direction			WB
Median Present?			No
Approach Delay(s)			0
Level of Service			A

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP AM
2/18/2016

	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group	42	129	1	217	1171	5	463
Lane Group Flow (vph)	0.21	0.23	0.00	0.53	0.76	0.05	0.47
v/c Ratio	42.6	5.0	0.0	35.3	11.3	47.8	14.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	42.6	5.0	0.0	35.3	11.3	47.8	14.7
Total Delay	20	0	0	97	228	2	132
Queue Length 50th (ft)	66	35	0	225	#1099	17	315
Queue Length 95th (ft)	9507	310	310	439	1035		
Internal Link Dist (ft)	150	874	330	788	1660	106	1389
Turn Bay Length (ft)	432	874	330	788	1660	106	1389
Base Capacity (vph)	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.10	0.15	0.00	0.28	0.71	0.05	0.33
Intersection Summary							
#	95th percentile volume exceeds capacity, queue may be longer.						
	Queue shown is maximum after two cycles.						

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP AM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	38	1	119	0	0	1	200	1077	0	5	426
Traffic Volume (vph)	38	1	119	0	0	1	200	1077	0	5	426
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	2%	7%	4%	7%	4%	7%	4%	7%	4%	7%	4%
Grade (%)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.86	1.00	0.85	1.00	0.95	1.00	1.00	0.85
Flt Protected	1758	1560	1451	1708	1798	1734	1825	1518	1734	1825	1518
Satd. Flow (prot)	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95
Flt Permitted	1758	1560	1451	1708	1798	1734	1825	1518	1734	1825	1518
Satd. Flow (perm)	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak-hour factor, PHF	41	1	129	0	0	1	217	1171	0	5	463
Adj. Flow (vph)	0	0	94	0	0	0	0	0	0	0	30
RTOR Reduction (vph)	0	42	35	0	0	0	217	1171	0	5	463
Lane Group Flow (vph)	2	2	2	2	2	2	2	2	2	2	2
Conf. Bikes (#/hr)	Split	NA	pm+ov	NA	NA	NA	Prot	NA	Prot	NA	Prot
Turn Type	4	4	5	8	8	8	5	2	2	1	6
Protected Phases	4	4	5	8	8	8	5	2	2	1	6
Permitted Phases	4	4	5	8	8	8	5	2	2	1	6
Actuated Green, G (s)	4.4	22.2	0.5	17.8	61.4	0.5	17.8	61.4	0.5	44.1	44.1
Effective Green, g (s)	4.4	22.2	0.5	17.8	61.4	0.5	17.8	61.4	0.5	44.1	44.1
Actuated g/C Ratio	0.05	0.27	0.01	0.21	0.74	0.01	0.21	0.74	0.01	0.53	0.53
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	93	418	8	367	1333	10	367	1333	10	972	808
v/s Ratio Prot	c0.02	0.02	c0.00	c0.00	c0.13	c0.65	0.00	0.25	0.02	0.02	0.02
v/c Ratio Perm	0.45	0.08	0.00	0.59	0.88	0.50	0.59	0.88	0.50	0.48	0.04
Uniform Delay, d1	38.0	22.7	40.9	29.2	7.9	41.0	12.1	9.3	41.0	12.1	9.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.5	0.1	0.0	2.5	6.9	34.4	0.4	0.0	34.4	0.4	0.0
Delay (s)	41.5	22.8	40.9	31.8	14.8	75.4	12.5	9.3	75.4	12.5	9.3
Level of Service	D	C	D	C	B	E	B	B	E	B	A
Approach Delay (s)	27.4	C	D	40.9	D	17.5	B	B	12.7	B	B
Approach LOS	C	D	D	D	D	B	B	B	B	B	B
Intersection Summary											
HCM 2000 Control Delay	17.1										
HCM 2000 Level of Service	B										
HCM 2000 Volume to Capacity ratio	0.85										
Actuated Cycle Length (s)	82.8										
Sum of lost time (s)	16.0										
Intersection Capacity Utilization	78.8%										
ICU Level of Service	D										
Analysis Period (min)	15										
c. Critical Lane Group											

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	38	1	119	0	0	1	200	1077	0	5	426	60
Traffic Volume (veh/h)	38	1	119	0	0	1	200	1077	0	5	426	60
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.97	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	0.98	0.98
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1881	1844	1844	1862	1825	1798	1798	1834	1825	1825	1825	1825
Adj Sat Flow, veh/hln	41	129	0	0	0	1	217	1171	0	5	463	65
Adj Flow Rate, veh/h	0	1	1	0	1	0	1	1	0	1	1	1
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	163	4	382	0	0	2	260	1300	0	9	1053	876
Cap. veh/h	0.09	0.09	0.09	0.00	0.00	0.00	0.15	0.72	0.00	0.01	0.58	0.58
Arrive On Green	1716	42	1524	0	0	1494	1712	1798	0	1739	1825	1519
Sat Flow, veh/h	42	0	129	0	0	1	217	1171	0	5	463	65
Grp Volume(v), veh/h	1758	0	1524	0	0	1494	1712	1798	0	1739	1825	1519
Grp Sat Flow(s), veh/hln	2.0	0.0	6.4	0.0	0.0	0.1	11.2	47.2	0.0	0.3	13.1	1.7
Q Serve(g.s), s	2.0	0.0	6.4	0.0	0.0	0.1	11.2	47.2	0.0	0.3	13.1	1.7
Cycle Q Clear(g.c), s	0.98	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	167	0	382	0	0	2	260	1300	0	9	1053	876
Lane Grp Cap(c), veh/h	0.25	0.00	0.34	0.00	0.00	0.61	0.84	0.90	0.00	0.55	0.44	0.07
V/C Ratio(X)	308	0	505	0	0	66	563	1576	0	76	1081	899
Avail Cap(c.a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Upstream Filter(i)	38.3	0.0	28.3	0.0	0.0	45.5	37.6	10.0	0.0	45.3	10.9	8.5
Uniform Delay (d), s/veh	0.8	0.0	0.5	0.0	0.0	182.0	6.9	6.5	0.0	43.3	0.3	0.0
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	1.0	0.0	2.7	0.0	0.0	0.1	5.8	25.1	0.0	0.2	6.6	0.7
%ile BackOf(50%) veh/h	39.1	0.0	28.8	0.0	0.0	227.6	44.5	16.5	0.0	88.6	11.2	8.6
LnGrp Delay(d), s/veh	D	C	C	F	F	D	B	B	F	B	B	A
LnGrp LOS	171	1388	533									
Approach Vol, veh/h	31.3	227.5	20.9									
Approach Delay, s/veh	C	C	C									
Approach LOS	1	2	3	4	5	6	7	8				
Assigned Phs	4.5	70.0	12.7	17.8	56.6	4.1						
Phs Duration (G+Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0						
Change Period (Y+Rc), s	4.0	80.0	16.0	30.0	54.0	4.0						
Max Green Setting (Gmax), s	2.3	49.2	8.4	13.2	15.1	2.1						
Max Q Clear Time (g.c+H), s	0.0	16.8	0.4	0.7	19.0	0.0						
Green Ext Time (g.LC), s												
Intersection Summary	19.5											
HCM 2010 Ctrl Delay	B											
HCM 2010 LOS	B											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.2	24.0	37.7	48.2
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	20	0	0	10
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4882.3	0.0	4834.9	5117.9
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.13	1.74	2.92	2.80
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	171	1	1388	533
Effct. Green for Bike (s)	8.3	4.6	64.0	40.1
Gross Street Width (ft)	37.7	48.2	24.0	39.2
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	138	77	1067	668
Bicycle Delay (s/bike)	52.0	55.5	13.1	26.6
Bicycle Compliance	Poor	Poor	Fair	Fair
Bicycle LOS Score	2.42	2.30	4.22	3.04
Bicycle LOS	B	B	D	C

Avila Ranch
15: Earthwood & Suburban

Existing Plus Project no BP AM
2/18/2016



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	35	22	0	52	77	0
Future Volume (Veh/h)	35	22	0	52	77	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	38	24	0	57	84	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	1244					
px. platoon unblocked						
vc. conflicting volume		62			107	50
vc1. stage 1 conf vol						
vc2. stage 2 conf vol						
vcu. unblocked vol		62			107	50
ic. single (s)		4.1			6.4	6.2
ic. 2 stage (s)						
p0 queue free %		100			91	100
IF (s)		2.2			3.5	3.3
dm capacity (veh/h)		1541			891	1018
Direction_Lane #	EB 1	WB 1	NB 1			
Volume Total	62	57	84			
Volume Left	0	0	84			
Volume Right	24	0	0			
cSH	1700	1541	891			
Volume to Capacity	0.04	0.00	0.09			
Queue Length 95th (ft)	0	0	8			
Control Delay (s)	0.0	0.0	9.5			
Lane LOS			A			
Approach Delay (s)	0.0	0.0	9.5			
Approach LOS			A			
Intersection Summary						
Average Delay			3.9			
Intersection Capacity Utilization			14.3%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
15: Earthwood & Suburban

Existing Plus Project no BP AM
2/18/2016

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
16: Suburban & Horizon Lane

Existing Plus Project no BP AM
2/18/2016



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	W	Stop	Stop	Stop	Stop
Sign Control	0	43	74	0	0	0
Traffic Volume (vph)	0	43	74	0	0	0
Future Volume (vph)	0	43	74	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	47	80	0	0	0
Direction_Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	47	80	0			
Volume Left (vph)	0	80	0			
Volume Right (vph)	47	0	0			
Head (s)	-0.57	0.23	0.00			
Departure Headway (s)	3.5	4.2	4.1			
Degree Utilization, x	0.05	0.09	0.00			
Capacity (veh/h)	96	833	900			
Control Delay (s)	6.7	7.7	7.1			
Approach Delay (s)	6.7	7.7	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	7.3					
Level of Service	A					
Intersection Capacity Utilization	14.1%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Existing Plus Project no BP AM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					R
Traffic Volume (veh/h)	46	12	98	11	23	327
Future Volume (Veh/h)	46	12	98	11	23	327
Sign Control	Slopp		Free		Free	Free
Grade	0%		0%		0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	13	107	12	25	355
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None			None
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	518	113			119	
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol	518	113			119	
IC single (s)	6.4	6.2			4.1	
IC 2 stage (s)						
pl queue free %	3.5	3.3			2.2	
pl capacity (veh/h)	90	99			98	
pl capacity (veh/h)	509	940			1469	
Direction Lane #	WB 1	NB 1	SB 1			
Volume Total	63	119	380			
Volume Left	50	0	25			
Volume Right	13	12	0			
cSH	562	1700	1469			
Volume to Capacity	0.11	0.07	0.02			
Queue Length 95th (ft)	9	0	1			
Control Delay (s)	12.2	0.0	0.6			
Lane LOS	B		A			
Approach Delay (s)	12.2	0.0	0.6			
Approach LOS	B		A			
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			35.1%			ICU Level of Service
Analysis Period (min)			15			A

Approach	NB
Approach Direction	NB
Median Present?	No
Approach Delay(s)	0
Level of Service	A
Approach	SB
Approach Direction	SB
Median Present?	No
Approach Delay(s)	0
Level of Service	A

Avila Ranch
18: Vachell & Project Entry

Existing Plus Project no BP AM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (veh/h)	28	15	93	3	5	368
Future Volume (Veh/h)	28	15	93	3	5	368
Sign Control	Slopp					
Grade	0%					
Peak Hour Factor	0.92					
Hourly flow rate (vph)	30	16	101	3	5	400
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)	None					
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	512	102			104	
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol	512	102			104	
IC single (s)	6.4	6.2			4.1	
IC 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	94	98			100	
CM capacity (veh/h)	520	953			1488	
Direction Lane #	WB 1	NB 1	SB 1			
Volume Total	46	104	405			
Volume Left	30	0	5			
Volume Right	16	3	0			
cSH	617	1700	1488			
Volume to Capacity	0.07	0.06	0.00			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	11.3	0.0	0.1			
Lane LOS	B	A	A			
Approach Delay (s)	11.3	0.0	0.1			
Approach LOS	B	A	A			
Intersection Summary						
Average Delay	1.0					
Intersection Capacity Utilization	33.4%					
Analysis Period (min)	15					
ICU Level of Service	A					

Approach	NB
Approach Direction	NB
Median Present?	No
Approach Delay(s)	0
Level of Service	A
Approach	SB
Approach Direction	SB
Median Present?	No
Approach Delay(s)	0
Level of Service	A

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP PM
 2/18/2016

	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	300	386	91	1184	860	692
Lane Group Flow (vph)	0.62	0.77	0.33	0.53	0.95	0.62
v/c Ratio	35.1	34.8	13.6	6.4	37.2	5.0
Control Delay	0.0	0.2	0.0	0.1	0.0	0.6
Queue Delay	35.1	35.0	13.6	6.5	37.2	5.6
Queue Length 50th (ft)	149	156	11	84	456	48
Queue Length 95th (ft)	236	#297	m41	117	#717	13
Internal Link Dist (ft)	198			925	236	
Turn Bay Length (ft)	150		150			270
Base Capacity (vph)	486	501	272	2241	910	1127
Starvation Cap Reductn	0	0	0	0	0	155
Spillback Cap Reductn	0	5	0	212	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.78	0.33	0.58	0.95	0.71

Intersection Summary
 # 95th percentile volume exceeds capacity, queue may be longer.
 Queue shown is maximum after two cycles.
 m. Volume for 95th percentile queue is metered by upstream signal.

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP PM
 2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations												
Traffic Volume (vph)	0	0	0	297	1	381	90	1172	0	0	851	685
Future Volume (vph)	0	0	0	297	1	381	90	1172	0	0	851	685
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)				3.5	3.5		3.5	5.0			5.0	5.0
Lane Util. Factor				1.00	1.00		1.00	0.95			1.00	1.00
Fpb. ped/bikes				1.00	1.00		1.00	1.00			1.00	1.00
Fpb. ped/bikes				1.00	1.00		1.00	1.00			1.00	1.00
Frt				1.00	0.85		1.00	1.00			1.00	0.85
Flt Protected				0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)				1770	1584		1770	3539			1863	1583
Flt Permitted				0.95	1.00		0.08	1.00			1.00	1.00
Satd. Flow (perm)				1770	1584		158	3539			1863	1583
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	0	0	0	300	1	385	91	1184	0	0	860	692
RTOR Reduction (vph)	0	0	0	0	66	0	0	0	0	0	0	356
Lane Group Flow (vph)	0	0	0	300	320	0	91	1184	0	0	860	336
Confl. Peds. (#/hr)									1	1		
Turn Type	Perm	NA	NA	pm+pt	NA	NA	NA	NA	NA	NA	NA	Perm
Protected Phases				8			6				2	
Permitted Phases				8			6				2	
Actuated Green, G (s)	24.8	24.8	56.7	56.7	56.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7
Effective Green, g (s)	24.8	24.8	56.7	56.7	56.7	43.7	43.7	43.7	43.7	43.7	43.7	43.7
Actuated g/C Ratio	0.28	0.28	0.63	0.63	0.63	0.49	0.49	0.49	0.49	0.49	0.49	0.49
Clearance Time (s)	3.5	3.5	3.5	3.5	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	487	436	269	2229	0.04	60.33					904	768
v/s Ratio Prot				0.20							0.46	
v/s Ratio Perm	0.17			0.18							0.21	
v/c Ratio	0.62	0.73	0.34	0.53							0.95	0.44
Uniform Delay, d1	28.4	29.6	16.5	9.3							22.1	15.1
Progression Factor	1.00	1.00	1.58	0.60							0.77	2.18
Incremental Delay, d2	5.7	10.5	3.1	0.8							18.3	1.6
Delay (s)	34.2	40.1	29.3	6.4							35.5	34.6
Level of Service	C	D	C	A							D	C
Approach Delay (s)	0.0			37.5			8.0				35.1	
Approach LOS	A			D			A				D	

Intersection Summary	
HCM 2000 Control Delay	25.7 HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio	0.84
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 12.0
Intersection Capacity Utilization	84.3% ICU Level of Service E
Analysis Period (min)	15
c Critical Lane Group	

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP PM
 2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	297	1	381	90	1172	0	0	851	685
Future Volume (veh/h)	0	0	0	297	1	381	90	1172	0	0	851	685
Number	3	8	8	18	1	6	16	5	2	12		
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1900	1863	1863	0	0	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	300	1	385	91	1184	0	0	860	692			
Adj No. of Lanes	1	1	0	1	2	0	0	0	1	1		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	483	1	430	284	2242	0	0	911	774			
Arrive On Green	0.27	0.27	0.03	0.03	0.21	0.00	0.00	0.49	0.49			
Sat Flow, veh/h	1774	4	1580	1774	3632	0	0	1863	1583			
Grp Volume(V), veh/h	300	0	386	91	1184	0	0	860	692			
Grp Sat Flow(s), veh/hln	1774	0	1584	1774	1770	0	0	1863	1583			
Q Serve(g_s), s	13.3	0.0	21.1	1.9	26.8	0.0	0.0	39.5	35.7			
Cycle Q Clear(g_c), s	13.3	0.0	21.1	1.9	26.8	0.0	0.0	39.5	35.7			
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	1.00			
Lane Grp Cap(c), veh/h	483	0	431	284	2242	0	0	911	774			
V/C Ratio(X)	0.62	0.00	0.90	0.32	0.53	0.00	0.00	0.94	0.89			
Avail Cap(c_a), veh/h	483	0	431	284	2242	0	0	911	774			
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00			
Upstream Filter(i)	1.00	0.00	1.00	0.84	0.84	0.00	0.00	0.82	0.82			
Uniform Delay (d), s/veh	28.7	0.0	31.5	19.8	23.6	0.0	0.0	21.8	20.9			
Incr Delay (d2), s/veh	5.9	0.0	23.7	2.5	0.8	0.0	0.0	16.5	12.7			
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOf(50%), veh/hln	7.3	0.0	12.1	1.5	13.4	0.0	0.0	24.3	18.1			
LnGrp Delay(d), s/veh	34.6	0.0	55.2	22.3	24.4	0.0	0.0	38.4	33.6			
LnGrp LOS	C	C	E	C	C	C	C	D	D			
Approach Vol, veh/h			686			1275						
Approach Delay, s/veh			46.2			24.2						
Approach LOS			D			C						
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2				6	7	8				
Phs Duration (G+Y+Rc), s	13.0	49.0				62.0	28.0					
Change Period (Y+Rc), s	3.5	5.0				5.0	3.5					
Max Green Setting (Gmax), s	9.5	44.0				57.0	24.5					
Max Q Clear Time (g_c+H), s	3.9	41.5				28.8	23.1					
Green Ext Time (g_e), s	0.1	2.4				22.7	0.6					
Intersection Summary												
HCM 2010 Ctrl Delay						33.8						
HCM 2010 LOS						C						

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP PM
 2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	12.6	23.9	60.1	60.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None-Actuated	None-Actuated	None-Actuated	None-Actuated
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	35
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	45.0	36.5	45.0	36.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.20	2.05	2.86	3.02
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch
 1: LOVR & 101 NB/101 SB
 Existing Plus Project no BP PM
 2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	0	686	1275	1552
Effct. Green for Bike (s)	0.0	24.8	56.7	43.7
Cross Street Width (ft)	60.1	60.1	23.9	12.6
Through Lanes Number	0	1	2	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	551	1260	971
Bicycle Delay (s/bike)	0.0	23.6	6.2	11.9
Bicycle Compliance		Fair	Good	Fair
Bicycle LOS Score	0.00	3.61	2.98	4.31
Bicycle LOS		D	C	E

Avila Ranch
 2: LOVR & 101 NB
 Existing Plus Project no BP PM
 2/18/2016



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	600	210	813	870	308
v/c Ratio	0.75	0.46	0.35	0.47	0.32
Control Delay	36.5	8.9	7.6	13.0	1.7
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.5	8.9	7.6	13.0	1.7
Queue Length 50th (ft)	156	35	92	125	9
Queue Length 95th (ft)	197	75	151	m141	m7
Internal Link Dist (ft)	128		471	925	
Turn Bay Length (ft)		200			150
Base Capacity (vph)	1016	529	2353	1843	972
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.59	0.40	0.35	0.47	0.32
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Avila Ranch
2: LOVR & 101 NB

Avila Ranch
2: LOVR & 101 NB

Existing Plus Project no BP PM
2/18/2016

Existing Plus Project no BP PM
2/18/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	W	W	W	W	W
Traffic Volume (vph)	474	108	204	789	844	299
Future Volume (vph)	474	108	204	789	844	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Flt Protected	0.96	0.95	1.00	1.00	1.00	1.00
Satd. Flow (prot)	3376	1770	3539	3539	3539	1583
Flt Permitted	0.96	0.25	1.00	1.00	1.00	1.00
Satd. Flow (perm)	3376	460	3539	3539	3539	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	489	111	210	813	870	308
RTOR Reduction (vph)	25	0	0	0	0	147
Lane Group Flow (vph)	575	0	210	813	870	161
Turn Type	Prot	pm+pt	NA	NA	Perm	Perm
Protected Phases	3	1	6	2		
Permitted Phases		6		2		
Actuated Green, G (s)	20.6	59.9	59.9	46.9	46.9	46.9
Effective Green, g (s)	20.6	59.9	59.9	46.9	46.9	46.9
Actuated g/C Ratio	0.23	0.67	0.67	0.52	0.52	0.52
Clearance Time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	772	444	2355	1844	824	
v/s Ratio Prot	0.17	0.05	0.23	0.25		
v/s Ratio Perm		0.26			0.10	
v/c Ratio	0.75	0.47	0.35	0.47	0.19	
Uniform Delay, d1	32.3	7.0	6.5	13.7	11.5	
Progression Factor	1.00	1.00	1.00	0.83	0.63	
Incremental Delay, d2	3.9	0.8	0.4	0.4	0.3	
Delay (s)	36.2	7.8	6.9	11.8	7.5	
Level of Service	D	A	A	B	A	
Approach Delay (s)	36.2	7.1	10.7			
Approach LOS	D	A	B			
Intersection Summary						
HCM 2000 Control Delay	14.8					
HCM 2000 Volume to Capacity ratio	0.56					
Actuated Cycle Length (s)	90.0					
Intersection Capacity Utilization	63.2%					
Analysis Period (min)	15					
c. Critical Lane Group						

Approach	EB	NB	SB
Crosswalk Length (ft)	39.6	60.0	72.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	5
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (vph)	0	0	0
Ped. Right-Left Flow Rate (vph)	0	0	0
Ped. R. Sidewalk Flow Rate (vph)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.31	2.77	2.79
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
2: LOVR & 101 NB

Existing Plus Project no BP PM
2/18/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	600	1023	1178
Effct. Green for Bike (s)	20.6	59.9	46.9
Cross Street Width (ft)	60.0	72.0	39.6
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	458	1331	1042
Bicycle Delay (s/bike)	26.8	5.0	10.3
Bicycle Compliance	Fair	Good	Fair
Bicycle LOS Score	2.97	3.51	3.14
Bicycle LOS	C	D	C

Avila Ranch
3: Higuera & South

Existing Plus Project no BP PM
2/18/2016

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	26	33	716	110	18	572	586	82	601
Lane Group Flow (vph)	0.29	0.18	0.74	0.21	0.17	0.35	0.62	0.56	0.32
v/c Ratio	50.5	2.2	32.7	8.8	44.9	17.3	8.8	56.0	14.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
Queue Delay	50.5	2.2	32.7	8.8	44.9	17.3	9.0	56.0	14.1
Total Delay	15	0	187	8	10	117	55	46	94
Queue Length 50th (ft)	41	0	250	45	33	166	177	#111	167
Queue Length 95th (ft)	208		629		338		60	100	507
Internal Link Dist (ft)									
Turn Bay Length (ft)	90	180	1193	617	109	1648	950	153	1858
Base Capacity (vph)	0	0	0	0	0	0	66	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.18	0.60	0.18	0.17	0.35	0.66	0.54	0.32

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
3: Higuera & South

Existing Plus Project no BP PM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBT	SBR
Lane Configurations	12	12	31	666	18	85	17	532	545	76	541	18	18
Traffic Volume (vph)	12	12	31	666	18	85	17	532	545	76	541	18	18
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	1.00	0.97	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	0.95
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00
Frbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.98	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00
Flt Protected	1817	1583	3433	1606	1770	3539	1546	1770	3519	3519	1546	1770	3519
Satd. Flow (prot)	0.98	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95	1.00	1.00
Flt Permitted	1817	1583	3433	1606	1770	3539	1546	1770	3519	3519	1546	1770	3519
Satd. Flow (perm)	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak-hour factor, PHF	13	13	33	716	19	91	18	572	586	82	582	19	19
Adj. Flow (vph)	0	0	32	0	67	0	0	0	233	0	2	0	0
RTOR Reduction (vph)	0	0	32	0	67	0	0	0	233	0	2	0	0
Lane Group Flow (vph)	7	4	1	716	43	0	18	572	353	82	599	0	0
Confl. Peds. (#/hr)	7	4	1	716	43	0	18	572	353	82	599	0	0
Turn Type	Spill	NA	Perm	Spill	NA	Prot	NA	Perm	Prot	NA	Prot	NA	NA
Protected Phases	4	4	4	8	8	5	2	2	2	1	6	6	6
Permitted Phases	4	4	4	8	8	5	2	2	2	1	6	6	6
Actuated Green, G (s)	2.2	2.2	2.2	23.2	23.2	1.8	40.0	40.0	5.3	43.5	43.5	43.5	43.5
Effective Green, g (s)	2.2	2.2	2.2	23.2	23.2	1.8	40.0	40.0	5.3	43.5	43.5	43.5	43.5
Actuated g/C Ratio	0.03	0.03	0.03	0.27	0.27	0.02	0.46	0.46	0.06	0.50	0.50	0.50	0.50
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	46	40	918	429	36	1632	713	108	1765	1765	108	1765	1765
v/s Ratio Prot	c0.01	c0.01	c0.21	0.03	0.01	0.16	c0.23	c0.05	c0.17	c0.23	c0.05	c0.17	c0.17
v/s Ratio Perm	0.00	0.00	0.00	0.78	0.10	0.50	0.35	0.49	0.76	0.34	0.34	0.34	0.34
Uniform Delay, d1	41.8	41.2	29.4	23.9	42.0	15.0	16.3	40.1	13.0	13.0	13.0	13.0	13.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	14.9	0.2	4.3	0.1	10.5	0.6	2.4	25.9	0.5	0.5	0.5	0.5	0.5
Delay (s)	56.7	41.4	33.6	24.0	52.5	15.6	18.7	66.0	13.5	13.5	13.5	13.5	13.5
Level of Service	E	D	C	C	D	B	B	E	B	E	B	B	B
Approach Delay (s)	48.2			32.4		17.7							
Approach LOS	D			C		B							
Intersection Summary													
HCM 2000 Control Delay	23.3 HCM 2000 Level of Service C												
HCM 2000 Volume to Capacity ratio	0.59												
Actuated Cycle Length (s)	86.7 Sum of lost time (s)												
Intersection Capacity Utilization	63.2% ICU Level of Service B												
Analysis Period (min)	15												
c Critical Lane Group													

Avila Ranch
3: Higuera & South

Existing Plus Project no BP PM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBT	SBR
Lane Configurations	12	12	31	666	18	85	17	532	545	76	541	18	18
Traffic Volume (veh/h)	12	12	31	666	18	85	17	532	545	76	541	18	18
Future Volume (veh/h)	12	12	31	666	18	85	17	532	545	76	541	18	18
Number	7	4	14	3	8	18	5	2	12	1	6	16	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.96	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	13	13	33	716	19	91	18	572	586	82	582	19	19
Adj No. of Lanes	0	1	1	2	1	2	1	2	1	2	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	33	33	54	900	73	349	29	1589	705	105	1720	56	56
Arrive On Green	0.04	0.04	0.04	0.26	0.26	0.26	0.02	0.45	0.45	0.06	0.49	0.49	0.49
Sat Flow, veh/h	909	909	1515	3442	279	1336	1774	3539	1570	1774	3496	114	114
Grp Volume(V), veh/h	26	0	33	716	0	110	18	572	586	82	294	307	307
Grp Sat Flow(s),veh/hln	1817	0	1515	1721	0	1614	1774	1770	1570	1774	1770	1841	1841
Q_Serv(g_s)	1.2	0.0	1.8	16.0	0.0	4.5	0.8	8.8	27.1	3.8	8.4	8.4	8.4
Cycle Q Clear(g_c), s	1.2	0.0	1.8	16.0	0.0	4.5	0.8	8.8	27.1	3.8	8.4	8.4	8.4
Prop In Lane	0.50	1.00	1.00	1.00	1.00	0.83	1.00	1.00	1.00	1.00	1.00	1.00	0.06
Lane Grp Cap(c), veh/h	65	0	54	900	0	422	29	1589	705	105	870	906	906
V/C Ratio(X)	0.40	0.00	0.61	0.80	0.00	0.26	0.62	0.36	0.83	0.78	0.34	0.34	0.34
Avail Cap(c,a), veh/h	88	0	74	1169	0	548	108	1589	705	151	870	906	906
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(0)	1.00	0.00	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	38.9	0.0	39.2	28.4	0.0	24.1	40.3	14.9	20.0	38.2	12.8	12.8	12.8
Incr Delay (d2), s/veh	3.9	0.0	10.4	3.0	0.0	0.3	19.5	0.6	11.0	14.9	1.1	1.1	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%)veh/ln	0.6	0.0	0.9	7.9	0.0	2.0	0.6	4.4	13.9	2.3	4.3	4.3	4.3
LnGrp Delay(d),s/veh	42.7	0.0	49.5	31.3	0.0	24.4	59.8	15.6	31.0	53.1	13.8	13.8	13.8
LnGrp LOS	D		D	C		C	E	B	C	D	B	B	B
Approach Vol, veh/h	59 1176 683												
Approach Delay, s/veh	46.5 30.4 18.5												
Approach LOS	D C C												
Timer	1	2	3	4	5	6	7	8	8	8	8	8	8
Assigned Phs	1	2	4	5	6	6	6	6	6	6	6	6	6
Phs Duration (G+Y+Rc), s	8.9	41.0	7.0	5.4	44.5	25.6	25.6	25.6	25.6	25.6	25.6	25.6	25.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Cmax), s	7.0	37.0	4.0	5.0	39.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
Max Q Clear Time (g_c+H), s	5.8	29.1	3.8	2.8	10.4	18.0	18.0	18.0	18.0	18.0	18.0	18.0	18.0
Green Ext Time (g_c), s	0.0	5.8	0.0	0.0	13.9	3.2	3.2	3.2	3.2	3.2	3.2	3.2	3.2
Intersection Summary													
HCM 2010 Ctrl Delay	25.0 C												
HCM 2010 LOS	C												

Avila Ranch
3: Higuera & South

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated Actuated Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	5	5	5
Veh. Perm. R. Flow in Walk (v/h)	0	5	5	5
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (s/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.00	2.62	2.88	2.59
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	59	826	1176	683
Effct. Green for Bike (s)	4.1	23.2	38.4	43.5
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	89	504	835	946
Bicycle Delay (s/bike)	42.0	25.7	15.6	12.8
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.96	2.95	2.38	1.92
Bicycle LOS	C	C	B	A

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP PM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	312	313	317	10	99	308	566	509	808
Lane Group Flow (vph)	0.66	0.66	0.34	0.05	0.43	0.82	0.34	0.72	0.60
v/c Ratio	34.4	34.3	2.0	33.6	39.8	53.3	15.3	36.9	14.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	34.4	34.3	2.0	33.6	39.8	53.3	15.3	36.9	14.8
Total Delay	152	152	0	5	49	165	100	133	142
Queue Length 50th (ft)	261	261	22	19	96	#338	151	197	217
Queue Length 95th (ft)	964			1295		1563	338		
Internal Link Dist (ft)				160					
Turn Bay Length (ft)	558	561	932	376	394	376	1833	848	1494
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.56	0.56	0.34	0.03	0.25	0.82	0.31	0.60	0.54
Intersection Summary									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP PM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	EB	EB	EB	EB	EB	EB	EB	EB	EB
Traffic Volume (vph)	569	12	295	9	85	7	286	524	3
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vph)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	0.95	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.88
Lane Util. Factor	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	1.00	0.85	1.00	0.99	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.95	1.00	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1681	1689	1568	1770	1840	1770	3536	3537	2753
Flt Permitted	0.95	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95
Satd. Flow (perm)	1681	1689	1568	1770	1840	1770	3536	3539	2753
Peak-Hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	612	13	317	10	91	8	308	563	3
RTOR Reduction (vph)	0	0	162	0	4	0	0	0	0
Lane Group Flow (vph)	312	313	155	10	95	0	308	565	0
Confl. Peds. (#/hr)			6	6	6	5	6	6	5
Turn Type	Spill	NA	pm+ov	Spill	NA	Prot	NA	Perm	NA
Protected Phases	4	4	5	8	8	5	2	6	4
Permitted Phases			4					6	6
Actuated Green, G (s)	21.9	21.9	38.6	7.8	7.8	16.7	37.3	16.6	38.5
Effective Green, g (s)	21.9	21.9	38.6	7.8	7.8	16.7	37.3	16.6	38.5
Actuated g/C Ratio	0.28	0.28	0.49	0.10	0.10	0.21	0.47	0.21	0.49
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	465	468	766	174	181	374	1669	705	1481
v/s Ratio Prot	c0.19	0.19	0.04	0.01	c0.05	c0.17	0.16	c0.15	0.14
v/s Ratio Perm			0.06						
v/c Ratio	0.67	0.67	0.20	0.06	0.53	0.82	0.34	0.72	0.55
Uniform Delay, d1	25.4	25.3	11.5	32.3	33.8	29.7	13.1	29.1	14.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.8	3.6	0.1	0.1	2.8	13.6	0.1	3.7	0.4
Delay (s)	29.1	28.9	11.6	32.4	36.6	43.4	13.2	32.7	14.6
Level of Service	C	C	B	C	D	D	B	C	B
Approach Delay (s)	23.2			36.2		23.9		21.6	
Approach LOS	C			D		C		C	
Intersection Summary									
HCM 2000 Control Delay	23.1 HCM 2000 Level of Service C								
HCM 2000 Volume to Capacity ratio	0.71								
Actuated Cycle Length (s)	79.0 Sum of lost time (s) 16.0								
Intersection Capacity Utilization	62.6% ICU Level of Service B								
Analysis Period (min)	15								
c Critical Lane Group									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	569	12	295	9	85	7	286	524	3	5	469
Future Volume (veh/h)	569	12	295	9	85	7	286	524	3	5	469
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	621	0	0	10	91	8	308	563	3	5	504
Adj No. of Lanes	2	0	1	1	1	1	0	1	2	0	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	821	0	682	140	133	12	354	1876	10	54	911
Arrive On Green	0.23	0.00	0.00	0.08	0.08	0.08	0.20	0.52	0.52	0.26	0.26
Sat Flow, veh/h	3548	0	1583	1774	1684	148	1774	3610	19	9	3454
Grp Volume(v), veh/h	621	0	0	10	0	99	308	276	290	273	236
Grp Sat Flow(s), veh/h	1774	0	1583	1774	0	1833	1774	1770	1859	1852	1610
Q Serve(s), s	11.5	0.0	0.0	0.4	0.0	3.7	11.9	6.3	6.3	0.0	9.0
Cycle Q Clear(q_c), s	11.5	0.0	0.0	0.4	0.0	3.7	11.9	6.3	6.3	8.9	9.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	821	0	682	140	0	145	354	920	966	540	425
V/C Ratio(X)	0.76	0.00	0.00	0.07	0.00	0.68	0.87	0.30	0.30	0.50	0.56
Avail Cap(c_a), veh/h	1253	0	875	401	0	414	401	975	1024	549	432
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
Upstream Filter(i)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.3	0.0	0.0	30.2	0.0	31.7	27.5	9.7	9.7	22.5	22.5
Incr Delay (d2), s/veh	1.4	0.0	0.0	0.2	0.0	5.5	16.8	0.2	0.2	0.7	1.5
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back(Q)(50%), veh/h	5.8	0.0	0.0	0.2	0.0	2.1	7.5	3.1	3.3	4.7	4.2
LnGrp Delay(d), s/veh	26.8	0.0	0.0	30.4	0.0	37.3	44.3	9.9	9.8	23.2	24.0
LnGrp LOS	C		C	D	D	D	A	A	A	C	C
Approach Vol, veh/h	621		109				874				1317
Approach Delay, s/veh	26.8		36.6		D		22.0				17.3
Approach LOS	C		D				C				B
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	2		4	5	6						
Phs Duration (G+Y+Rc), s	40.8		20.4	18.1	22.7						
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	39.0		25.0	16.0	19.0						
Max Q Clear Time (g_c+H), s	8.3		13.5	13.9	16.8						
Green Ext Time (g_e), s	14.4		2.3	0.3	1.8						
Intersection Summary											
HCM 2010 Ctrl Delay											
HCM 2010 LOS											
Notes											

User approved volume balancing among the lanes for turning movement.

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.92	1.99	2.80	2.74
Pedestrian Crosswalk LOS	C	A	C	B

Avila Ranch
4: Higuera & Madonna

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	942	109	874	1317
Effct. Green for Bike (s)	22.0	9.6	37.3	16.5
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	478	209	811	359
Bicycle Delay (s/bike)	26.6	36.9	16.3	31.0
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	2.89	1.37	1.55	2.38
Bicycle LOS	C	A	A	B

Avila Ranch
5: Higuera & Prado

Existing Plus Project no BP PM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	43	16	101	84	82	72	427	553	91	786
Lane Group Flow (vph)	0.18	0.05	0.26	0.35	0.25	0.19	0.53	0.29	0.34	0.62
v/c Ratio	27.2	25.5	5.9	31.0	28.1	2.4	26.5	13.0	32.7	20.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	27.2	25.5	5.9	31.0	28.1	2.4	26.5	13.0	32.7	20.8
Total Delay	14	5	0	29	28	0	73	70	31	127
Queue Length 50th (ft)	48	23	28	82	78	9	161	148	95	257
Queue Length 95th (ft)	363			386			1342			828
Internal Link Dist (ft)	150		150	150		200	250		125	
Turn Bay Length (ft)	601	854	770	602	821	766	1696	3033	499	2589
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.02	0.13	0.14	0.10	0.09	0.25	0.18	0.18	0.30
Intersection Summary										

Avila Ranch
5: Higuera & Prado

Existing Plus Project no BP PM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR	
Lane Configurations	4	15	94	78	76	67	397	472	42	85	699	
Traffic Volume (vph)	40	15	94	78	76	67	397	472	42	85	699	
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Ideal Flow (vph)	5.0	5.0	5.0	6.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0	
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.95	1.00	0.95	1.00	
Frpb, ped/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	1.00	0.99	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	
Satd. Flow (prot)	1770	1863	1547	1750	1863	1583	3433	3486	1770	3514	3514	
Flt Permitted	0.70	1.00	1.00	0.75	1.00	1.00	0.95	1.00	0.95	1.00	0.95	
Satd. Flow (perm)	1311	1863	1547	1376	1863	1583	3433	3486	1770	3514	3514	
Peak-Hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	
Adj. Flow (vph)	43	16	101	84	82	72	427	508	45	91	752	
RTOR Reduction (vph)	0	0	86	0	0	62	0	6	0	0	3	
Lane Group Flow (vph)	43	16	15	84	82	10	427	547	0	91	783	
Confl. Peds. (#/hr)	12	12	3	3	3	3	9	9	9	9	3	
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm	
Protected Phases	4	4	4	8	8	8	5	2	1	6	6	
Permitted Phases	4	4	4	8	8	8	8	8	7.4	24.4	24.4	
Actuated Green, G (s)	9.8	9.8	9.8	8.8	8.8	8.8	14.7	31.7	7.4	24.4	24.4	
Effective Green, g (s)	9.8	9.8	9.8	8.8	8.8	8.8	14.7	31.7	7.4	24.4	24.4	
Actuated g/C Ratio	0.15	0.15	0.15	0.14	0.14	0.14	0.23	0.49	0.11	0.38	0.38	
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	197	281	233	186	252	214	777	1702	201	1321	1321	
v/s Ratio Prot	0.03	0.01	c0.06	0.04	0.04	0.01	c0.12	0.16	0.05	c0.22	0.22	
v/s Ratio Perm	0.22	0.06	0.07	0.45	0.33	0.05	0.55	0.32	0.45	0.59	0.59	
Uniform Delay, d1	24.2	23.6	23.6	25.8	25.4	24.4	22.2	10.1	26.9	16.3	16.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	0.6	0.1	0.1	1.7	0.8	0.1	0.8	0.1	1.6	0.7	0.7	
Delay (s)	24.7	23.7	23.7	27.6	26.1	24.5	23.0	10.2	28.5	17.0	17.0	
Level of Service	C	C	C	C	C	C	C	B	C	B	B	
Approach Delay (s)	24.0			26.1			15.8		18.2		18.2	
Approach LOS	C			C			B		B		B	
Intersection Summary												
HCM 2000 Control Delay	18.4										HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55											
Actuated Cycle Length (s)	64.9										Sum of lost time (s)	17.0
Intersection Capacity Utilization	56.8%										ICU Level of Service	B
Analysis Period (min)	15											
c Critical Lane Group												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	40	15	94	78	76	67	397	472	42	85	699	32
Future Volume (veh/h)	40	15	94	78	76	67	397	472	42	85	699	32
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99	0.98	0.98	0.98	0.98	1.00	0.99	1.00	0.99	1.00	0.99	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	43	16	101	84	82	72	427	508	45	91	752	34
Adj No. of Lanes	1	1	1	1	1	1	2	2	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	283	323	269	327	323	269	615	1568	139	120	1261	57
Arrive On Green	0.17	0.17	0.17	0.17	0.17	0.17	0.18	0.48	0.48	0.07	0.37	0.37
Sat Flow, veh/h	1210	1863	1550	1248	1863	1550	3442	3287	290	1774	3448	156
Grp Volume(V), veh/h	43	16	101	84	82	72	427	273	280	91	386	400
Grp Sat Flow(s), veh/h	1210	1863	1550	1248	1863	1550	1721	1770	1808	1774	1770	1834
Q_Serve(g.s), s	1.9	0.4	3.5	3.6	2.3	2.4	7.0	5.7	5.8	3.0	10.7	10.7
Cycle Q Clear(g.c), s	4.2	0.4	3.5	4.1	2.3	2.4	7.0	5.7	5.8	3.0	10.7	10.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.16	1.00	1.00	0.08
Lane Grp Cap(c), veh/h	283	323	269	327	323	269	615	844	863	120	647	671
V/C Ratio(X)	0.15	0.05	0.38	0.26	0.25	0.27	0.69	0.32	0.32	0.76	0.60	0.60
Avail Cap(c.a), veh/h	595	804	669	628	773	643	1599	1674	1711	471	1322	1370
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	20.8	22.0	22.5	21.5	21.6	23.2	9.7	9.8	27.6	15.5	15.5
Incr Delay (d2), s/veh	0.2	0.1	0.9	0.4	0.5	1.4	0.2	0.2	0.2	9.4	0.9	0.9
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 BackOf(50%), veh/h	0.7	0.2	1.5	1.3	1.2	1.1	3.4	2.9	2.9	1.8	5.3	5.5
LnGrp Delay(d), s/veh	23.6	20.8	22.9	22.9	21.9	22.1	24.6	10.0	10.0	37.1	16.4	16.4
LnGrp LOS	C	C	C	C	C	C	C	A	A	D	B	B
Approach Vol, veh/h	160			238			980				877	
Approach Delay, s/veh	22.9			22.3			16.3				18.5	
Approach LOS	C			C			B				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	9.1	34.7		16.4	15.8	28.0						
Change Period (Y+Rc), s	5.0	6.0		* 6	5.0	6.0						
Max Green Setting (Gmax), s	16.0	57.0		* 26	28.0	45.0						
Max Q Clear Time (g.c+H), s	5.0	7.8		6.2	9.0	12.7						
Green Ext Time (g..c), s	0.2	10.1		1.8	1.8	9.4						
Intersection Summary												
HCM 2010 Ctrl Delay	18.3											
HCM 2010 LOS	B											
Notes												

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

Avila Ranch
5: Higuera & Prado

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	60.1	48.1	73.4	72.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	5	4	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3371.3	3221.5	3460.8	3450.5
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.46	2.24	2.95	2.76
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch
5: Higuera & Prado

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	160	238	980	877
Effct. Green for Bike (s)	11.5	11.0	33.8	22.5
Cross Street Width (ft)	73.4	72.1	48.1	60.1
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	200	191	588	391
Bicycle Delay (s/bike)	46.6	47.0	28.7	37.2
Bicycle Compliance	Poor	Poor	Fair	Poor
Bicycle LOS Score	2.95	3.06	1.82	1.92
Bicycle LOS	C	C	A	A

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP PM
2/18/2016

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group	17	20	321	323	292	35	521	438	256	635
Lane Group Flow (vph)	0.09	0.06	0.69	0.69	0.45	0.28	0.71	0.45	0.71	0.44
v/c Ratio	40.0	0.4	42.9	42.9	7.1	53.2	40.2	3.2	47.7	22.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	40.0	0.4	42.9	42.9	7.1	53.2	40.2	3.2	47.7	22.8
Total Delay	9	0	177	178	0	19	146	7	135	147
Queue Length 50th (ft)	30	0	#463	#467	76	62	261	42	#319	264
Queue Length 95th (ft)	403		1256			1054			1668	
Internal Link Dist (ft)										
Turn Bay Length (ft)	585	622	462	465	647	127	1059	966	466	1728
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.03	0.69	0.69	0.45	0.28	0.49	0.45	0.55	0.37

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP PM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	10	7	19	60.4	14	280	34	500	420	246	587	23
Lane Configurations	10	7	19	60.4	14	280	34	500	420	246	587	23
Traffic Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Future Volume (vph)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Ideal Flow (vph)	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	1.00	1.00	0.95
Total Lost time (s)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	0.99
Frt	0.97	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Fill Protected	1810	1563	1681	1689	1583	1770	3539	1572	1770	3516	1770	3516
Satd. Flow (prot)	1810	1563	1681	1689	1583	1770	3539	1572	1770	3516	1770	3516
Fill Permitted	0.97	1.00	0.95	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1810	1563	1681	1689	1583	1770	3539	1572	1770	3516	1770	3516
Peak-Hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	7	20	629	15	292	35	521	438	256	611	24
RTOR Reduction (vph)	0	0	19	0	0	215	0	0	205	0	2	0
Lane Group Flow (vph)	0	17	1	321	323	277	35	521	233	256	633	0
Confl. Peds. (#/hr)	1	1	1	1	1	1	3	3	3	3	3	3
Turn Type	Split	NA	Perm	Spill	NA	Perm	Prot	NA	pm+ov	Prot	NA	NA
Protected Phases	4	4	4	8	8	8	5	2	8	1	6	6
Permitted Phases												
Actuated Green, G (s)	6.5	6.5	24.3	24.3	24.3	3.1	21.0	45.3	17.9	35.8	35.8	35.8
Effective Green, g (s)	6.5	6.5	24.3	24.3	24.3	3.1	21.0	45.3	17.9	35.8	35.8	35.8
Actuated g/C Ratio	0.07	0.07	0.26	0.26	0.26	0.03	0.23	0.49	0.19	0.39	0.39	0.39
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	126	109	440	442	414	59	801	768	341	1357	1357	1357
v/s Ratio Prot	c0.01	0.00	0.19	c0.19	0.05	0.02	c0.15	0.08	c0.14	0.18	0.18	0.18
v/s Ratio Perm	0.13	0.01	0.73	0.73	0.18	0.59	0.65	0.30	0.75	0.47	0.47	0.47
Uniform Delay, d1	40.5	40.1	31.2	31.2	26.5	44.2	32.5	14.2	35.3	21.3	21.3	21.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.0	6.0	6.1	0.2	15.0	1.9	0.2	9.0	0.3	0.3	0.3
Delay (s)	41.0	40.2	37.2	37.3	26.7	59.1	34.4	14.5	44.3	21.6	21.6	21.6
Level of Service	D	D	D	D	D	C	E	C	B	D	D	C
Approach Delay (s)	40.5			34.0			26.5			28.1		
Approach LOS	D			C			C			C		

Intersection Summary	
HCM 2000 Control Delay	29.6
HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.65
Actuated Cycle Length (s)	92.7
Sum of lost time (s)	23.0
Intersection Capacity Utilization	66.0%
ICU Level of Service	C
Analysis Period (min)	15
c Critical Lane Group	

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	47.1	49.5	74.5	63.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	100	70	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Ped. Circulation Area (sq ft)	A	A	A	A
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.81	3.12	2.82
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	37	936	994	891
Effct. Green for Bike (s)	9.4	24.2	18.3	35.8
Cross Street Width (ft)	74.5	63.0	49.5	47.1
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	157	403	305	597
Bicycle Delay (s/bike)	51.0	38.2	43.1	29.5
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.76	4.07	3.14	3.02
Bicycle LOS	C	D	C	C

Avila Ranch
7: Horizon Ln & Tank Farm

Existing Plus Project no BP PM
2/18/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	728	12	8	983	22	15
Future Volume (Veh/h)	728	12	8	983	22	15
Sign Control	Free	Free	Stop	Free	Stop	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	791	13	9	1068	24	16
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2			2		
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume		804			1884	798
VC1 stage 1 conf vol				798		
VC2 stage 2 conf vol				1086		
VCu unblocked vol		804			1884	798
IC single (s)		4.1			6.4	6.2
IC 2 stage (s)		2.2			5.4	3.3
p0 queue free %		99			91	96
CM capacity (veh/h)		820			263	386
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	804	1077	40			
Volume Left	0	9	24			
Volume Right	13	0	16			
cSH	1700	820	301			
Volumes to Capacity	0.47	0.01	0.13			
Queue Length 95th (ft)	0	1	11			
Control Delay (s)	0.0	0.4	18.8			
Lane LOS	A	A	C			
Approach Delay (s)	0.0	0.4	18.8			
Approach LOS		C				
Intersection Summary						
Average Delay			0.6			
Intersection Capacity Utilization			68.1%			C
Analysis Period (min)			15			

Approach	Approach Direction	Median Present?	Approach Delay(s)	Level of Service
EB	EB	No	0	A
WB	WB	No	0	A
NB	NB	No	0	A

Avila Ranch
8: Higuera & Suburban

Existing Plus Project no BP PM
2/18/2016

	WBL	NBT	SBL	SBT
Lane Group	671	960	173	1066
Lane Group Flow (vph)	0.73	0.76	0.60	0.52
v/c Ratio	29.2	24.8	41.6	10.5
Control Delay	0.0	0.0	0.0	0.0
Queue Delay	29.2	24.8	41.6	10.5
Total Delay	137	198	77	143
Queue Length 50th (ft)	222	299	159	216
Queue Length 95th (ft)	1245	306		1054
Internal Link Dist (ft)			160	
Turn Bay Length (ft)	1202	1699	372	2642
Base Capacity (vph)	0	0	0	0
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.56	0.57	0.47	0.40
Intersection Summary				

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	470	167	726	186	164	1013
Future Volume (vph)	470	167	726	186	164	1013
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	4.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.95	0.95	1.00	0.95	0.95
Frbp. ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.96	0.97	1.00	1.00	1.00	1.00
Flt Protected	0.96	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3323	3416	1770	3539	1770	3539
Flt Permitted	0.96	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3323	3416	1770	3539	1770	3539
Peak-Hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	495	176	764	196	173	1066
RTOR Reduction (vph)	42	0	27	0	0	0
Lane Group Flow (vph)	629	0	933	0	173	1066
Confl. Peds. (#/hr)	6				1	1
Turn Type	Prot	NA	NA	Prot	NA	NA
Protected Phases	8		2	1	6	
Permitted Phases						
Actuated Green, G (s)	19.7	27.3	27.3	12.1	43.4	43.4
Effective Green, g (s)	19.7	27.3	27.3	12.1	43.4	43.4
Actuated g/C Ratio	0.27	0.37	0.37	0.16	0.59	0.59
Clearance Time (s)	5.0	6.0	4.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	883	1258	289	2072	883	2072
v/s Ratio Prot	c0.19	c0.27	c0.10	c0.30	c0.10	c0.30
v/s Ratio Perm						
v/c Ratio	0.71	0.74	0.60	0.60	0.51	0.51
Uniform Delay, d1	24.6	20.3	28.7	9.1	28.7	9.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.7	2.4	3.3	0.2	3.3	0.2
Delay (s)	27.4	22.7	32.1	9.3	32.1	9.3
Level of Service	C	C	C	C	A	A
Approach Delay (s)	27.4	22.7	22.7	12.5	32.1	12.5
Approach LOS	C	C	C	B	B	B
Intersection Summary						
HCM 2000 Control Delay	19.4		HCM 2000 Level of Service		B	
HCM 2000 Volume to Capacity ratio	0.70					
Actuated Cycle Length (s)	74.1		Sum of lost time (s)		15.0	
Intersection Capacity Utilization	66.7%		ICU Level of Service		C	
Analysis Period (min)	15					
c Critical Lane Group						

Avila Ranch
8: Higuera & Suburban

Existing Plus Project no BP PM
2/18/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	44.9	59.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	0.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	30	30	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq ft)	7271.3	7269.4	7269.4
Ped. Circulation Area (sq ft)	A	A	A
Crosswalk Circulation Code	A	F	A
Pedestrian Delay (s/p)	37.4	45.0	37.4
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.27	3.11	2.94
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Existing Plus Project no BP PM
2/18/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	671	960	1239
Effct. Green for Bike (s)	19.6	27.1	43.3
Cross Street Width (ft)	60.1	44.9	59.3
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	436	602	962
Bicycle Delay (s/bike)	27.5	22.0	12.1
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	2.07	1.97	2.42
Bicycle LOS	B	A	B

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	94	819	246	0	1443
Future Volume (Veh/h)	0	94	819	246	0	1443
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	99	862	259	0	1519
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			433			386
pX platoon unblocked	0.82					
VC conflicting volume	1751	560			1121	
VC1 stage 1 conf vol						
VC2 stage 2 conf vol	1477	560			1121	
VCu unblocked vol	6.8	6.9			4.1	
IC single (s)						
IC 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	100	79			100	
CM capacity (veh/h)	96	471			619	
Direction Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	99	575	546	760	760	
Volume Left	0	0	0	0	0	
Volume Right	99	0	259	0	0	
cSH	471	1700	1700	1700	1700	
Volume to Capacity	0.21	0.34	0.32	0.45	0.45	
Queue Length 95th (ft)	20	0	0	0	0	
Control Delay (s)	14.7	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.7	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.5					
Intersection Capacity Utilization	43.2%					
ICU Level of Service	A					
Analysis Period (min)	15					

Approach	NB
Approach Direction	NB
Median Present?	No
Approach Delay(s)	0
Level of Service	A
Approach	SB
Approach Direction	SB
Median Present?	No
Approach Delay(s)	0
Level of Service	A

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP PM
2/18/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	923	38	75	176	554	928
Lane Group Flow (vph)	0.75	0.07	0.34	0.21	0.84	0.84
v/c Ratio	25.3	8.6	14.5	11.5	35.3	14.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	25.3	8.6	14.5	11.5	35.3	14.1
Total Delay	194	3	17	43	230	156
Queue Length 50th (ft)	263	21	38	78	#399	#343
Queue Length 95th (ft)	407			1929	353	
Internal Link Dist (ft)						
Turn Bay Length (ft)	1362	645	220	1052	767	1153
Base Capacity (vph)	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.68	0.06	0.34	0.17	0.72	0.80
Intersection Summary						
# 95th percentile volume exceeds capacity, queue may be longer.						
Queue shown is maximum after two cycles.						

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP PM
2/18/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (vph)	886	36	72	169	532	891
Future Volume (vph)	886	36	72	169	532	891
Ideal Flow (vph)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	1.00	1.00	1.00
Frb. ped/bikes	1.00	1.00	1.00	1.00	1.00	0.99
Fibb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1769	1863	1863	1565
Flt Permitted	0.95	1.00	0.15	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	283	1863	1863	1565
Peak-Hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	923	38	75	176	554	928
RTOR Reduction (vph)	0	19	0	0	0	0
Lane Group Flow (vph)	923	19	75	176	554	928
Confl. Peds. (#/hr)	2					2
Turn Type	Prot	Perm	pm+pt	NA	NA	pm+ov
Protected Phases	4		5	2	6	4
Permitted Phases		4	2			6
Actuated Green, G (s)	24.4	24.4	33.1	33.1	24.2	48.6
Effective Green, g (s)	24.4	24.4	33.1	33.1	24.2	48.6
Actuated g/C Ratio	0.35	0.35	0.48	0.48	0.35	0.70
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	1205	555	196	887	648	1229
v/s Ratio Prot	0.27		c0.02	0.09	0.30	c0.26
v/s Ratio Perm	0.01	0.17				0.33
v/c Ratio	0.77	0.03	0.38	0.20	0.85	0.76
Uniform Delay, d1	20.0	14.8	13.2	10.5	21.0	6.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.0	0.0	1.2	0.1	10.7	2.7
Delay (s)	23.0	14.8	14.4	10.6	31.7	9.3
Level of Service	C	B	B	B	C	A
Approach Delay (s)	22.7		11.8	17.7		
Approach LOS	C		B	B	B	B
Intersection Summary						
HCM 2000 Control Delay			18.9	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.83			
Actuated Cycle Length (s)			69.5	Sum of lost time (s)		18.0
Intersection Capacity Utilization			72.3%	ICU Level of Service		C
Analysis Period (min)			15			
c Critical Lane Group						

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP PM
2/18/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	886	36	72	169	532	891
Future Volume (veh/h)	886	36	72	169	532	891
Number	7	14	5	2	6	16
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	923	38	75	176	554	928
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1090	502	223	955	715	1107
Arrive On Green	0.32	0.32	0.04	0.51	0.38	0.38
Sat Flow, veh/h	3442	1583	1774	1863	1863	1579
Grp Volume(v), veh/h	923	38	75	176	554	928
Grp Sat Flow(s), veh/hln	1721	1583	1774	1863	1863	1579
Q_Serve(g_s), s	17.6	1.2	1.7	3.6	18.4	27.0
Cycle Q Clear(g_c), s	17.6	1.2	1.7	3.6	18.4	27.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1090	502	223	955	715	1107
V/C Ratio(X)	0.85	0.08	0.34	0.18	0.78	0.84
Avail Cap(c_a), veh/h	1272	585	247	979	715	1107
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.4	16.8	14.6	9.2	19.0	7.2
Incr Delay (d2), s/veh	4.9	0.1	0.9	0.1	5.3	5.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	91	1.3	0.8	1.8	10.4	19.6
LnGrp Delay(d), s/veh	27.3	16.9	15.5	9.3	24.4	13.0
LnGrp LOS	C	B	B	A	C	B
Approach Vol, veh/h	961			251	1482	
Approach Delay, s/veh	26.9			11.2	17.2	
Approach LOS	C			B	B	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		42.1		28.3	9.1	33.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		37.0		26.0	4.0	27.0
Max Q Clear Time (g_c+H), s		5.6		19.6	3.7	29.0
Green Ext Time (g_e), s		13.8		2.7	0.0	0.0
Intersection Summary						
HCM 2010 Ctrl Delay	20.1					
HCM 2010 LOS	C					

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP PM
2/18/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	61.2	36.1	58.9
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2
Ped. Right-Left Flow Rate (p/h)	2	0	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq.ft)	12134.4	18201.6	7271.2
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	0.1	0.0	0.1
Crosswalk Circulation Code	F	-	F
Pedestrian Delay (S/p)	37.5	37.5	37.5
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.69	2.35	2.76
Pedestrian Crosswalk LOS	B	B	C

Avila Ranch
10: Higuera & LOVR

Existing Plus Project no BP PM
2/18/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	961	251	1482
Effct. Green for Bike (s)	24.4	31.5	24.2
Cross Street Width (ft)	36.1	58.9	61.2
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	651	840	645
Bicycle Delay (s/bike)	17.1	12.6	17.2
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	1.83	1.80	3.87
Bicycle LOS	A	A	D

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP PM
2/18/2016



Lane Group	WBL	NBT	SBT
Lane Group Flow (vph)	132	249	617
v/c Ratio	0.30	0.26	0.70
Control Delay	5.6	4.7	11.6
Queue Delay	0.0	0.0	0.0
Total Delay	5.6	4.7	11.6
Queue Length 50th (ft)	3	14	52
Queue Length 95th (ft)	24	40	#155
Internal Link Dist (ft)	1779	852	1929
Turn Bay Length (ft)			
Base Capacity (vph)	948	1014	953
Starvation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.14	0.25	0.65
Intersection Summary			
# 95th percentile volume exceeds capacity, queue may be longer.			
Queue shown is maximum after two cycles.			

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP PM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					↓
Traffic Volume (vph)	19	102	198	31	72	496
Future Volume (vph)	19	102	198	31	72	496
Ideal Flow (vphpp)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.89	0.98	1.00	0.99	0.99	0.99
Flt Protected	0.99	1.00	1.00	0.99	0.99	0.99
Satd. Flow (prot)	1638	1828	1851	1851	1851	1851
Flt Permitted	0.99	1.00	1.00	0.93	0.93	0.93
Satd. Flow (perm)	1638	1828	1828	1738	1738	1738
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	21	111	215	34	78	539
RTOR Reduction (vph)	87	0	12	0	0	0
Lane Group Flow (vph)	45	0	237	0	0	617
Turn Type	Prot	NA	NA	Perm	NA	NA
Protected Phases	8		2		6	
Permitted Phases				6		
Actuated Green, G (s)	6.3	15.0	15.0	15.0	15.0	15.0
Effective Green, g (s)	6.3	15.0	15.0	15.0	15.0	15.0
Actuated g/C Ratio	0.22	0.51	0.51	0.51	0.51	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	352	935	935	889	889	889
v/s Ratio Prot	c0.03		0.13			
v/s Ratio Perm		0.13		c0.36		
v/c Ratio	0.13	0.25	0.25	0.69	0.69	0.69
Uniform Delay, d1	9.3	4.0	4.0	5.4	5.4	5.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.2	0.1	0.1	2.4	2.4	2.4
Delay (s)	9.4	4.2	4.2	7.8	7.8	7.8
Level of Service	A	A	A	A	A	A
Approach Delay (s)	9.4	4.2	4.2	7.8	7.8	7.8
Approach LOS	A	A	A	A	A	A
Intersection Summary						
HCM 2000 Control Delay	7.1 HCM 2000 Level of Service A					
HCM 2000 Volume to Capacity ratio	0.53					
Actuated Cycle Length (s)	29.3 Sum of lost time (s) 8.0					
Intersection Capacity Utilization	59.7% ICU Level of Service B					
Analysis Period (min)	15					
c. Critical Lane Group						

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP PM
2/18/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	32.8	35.6	36.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	2
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (vph)	0	0	0
Ped. Right-Left Flow Rate (vph)	0	0	0
Ped. R. Sidewalk Flow Rate (vph)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.81	2.28	2.38
Pedestrian Crosswalk LOS	A	B	B

Avila Ranch
11: Higuera & Buckley

Existing Plus Project no BP PM
2/18/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	132	249	617
Effct. Green for Bike (s)	6.3	15.0	15.0
Cross Street Width (ft)	36.0	32.8	35.6
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	315	750	750
Bicycle Delay (s/bike)	14.2	7.8	7.8
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.33	2.47	3.12
Bicycle LOS	B	B	C

Avila Ranch
12: Buckley & Vachell

Existing Plus Project no BP PM
2/18/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		W	
Traffic Volume (veh/h)	64	38	73	129	241	49
Future Volume (Veh/h)	64	38	73	129	241	49
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	70	41	79	140	262	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None		
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked					330	149
vC, conflicting volume	219					
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	219				330	149
IC, single (s)	4.1				6.4	6.2
IC, 2 stage (s)						
p0 queue free %	2.2				3.5	3.3
IF (s)	95				58	94
pM capacity (veh/h)	1350				630	898
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	111	219	315			
Volume Left	70	0	262			
Volume Right	0	140	53			
cSH	1350	1700	663			
Volume to Capacity	0.05	0.13	0.47			
Queue Length 95th (ft)	4	0	64			
Control Delay (s)	5.1	0.0	15.2			
Lane LOS	A	C	C			
Approach Delay (s)	5.1	0.0	15.2			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay			8.3			
Intersection Capacity Utilization			43.6%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Existing Plus Project no BP PM
2/18/2016

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
13: Buckley & Project Entry

Existing Plus Project no BP PM
2/18/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		W	
Traffic Volume (veh/h)	24	202	203	27	17	21
Future Volume (Veh/h)	24	202	203	27	17	21
Sign Control	Free	Free	Free	Stop	Stop	
Grade	0%	0%	0%	0%	0%	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	220	221	29	18	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
vC, conflicting volume	250			508	236	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol	250			508	236	
vCu, unblocked vol	4.1			6.4	6.2	
IC, single (s)						
IC, 2 stage (s)	2.2			3.5	3.3	
p0 queue free %	98			97	97	
dM capacity (veh/h)	1316			515	804	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	246	250	41			
Volume Left	26	0	18			
Volume Right	0	29	23			
cSH	1316	1700	645			
Volume to Capacity	0.02	0.15	0.06			
Queue Length 95th (ft)	2	0	5			
Control Delay (s)	1.0	0.0	11.0			
Lane LOS	A	B	B			
Approach Delay (s)	1.0	0.0	11.0			
Approach LOS		B				
Intersection Summary						
Average Delay			1.3			
Intersection Capacity Utilization			37.6%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
13: Buckley & Project Entry

Existing Plus Project no BP PM
2/18/2016

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP PM
2/18/2016



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	56	298	20	86	489	17	1091
v/c Ratio	0.32	0.78	0.23	0.58	0.34	0.16	0.88
Control Delay	50.1	33.8	41.2	65.1	5.9	54.6	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.1	33.8	41.2	65.1	5.9	54.6	23.7
Queue Length 50th (ft)	31	75	5	49	50	10	409
Queue Length 95th (ft)	81	#213	34	#161	208	38	#1017
Internal Link Dist (ft)	9732		405		777		1174
Turn Bay Length (ft)		150		360		470	
Base Capacity (vph)	349	380	88	148	1520	107	1277
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.16	0.78	0.23	0.58	0.32	0.16	0.72

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP PM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	52	2	286	7	2	11	83	468	1	16	1047	29
Future Volume (vph)	52	2	286	7	2	11	83	468	1	16	1047	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Grade (%)		2%		4%		7%				4%		
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Frbp. ped/bikes	1.00	0.99		0.89		1.00	1.00	1.00	1.00	1.00	1.00	0.98
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.85
Frt	1.00	0.85	1.00	0.93	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00
Flt Protected	1759	1546	1481	1708	1797	1734	1825	1517				
Flt Permitted	0.95	1.00	0.98	0.95	1.00	0.95	1.00	1.00				
Satd. Flow (perm)	1759	1546	1481	1708	1797	1734	1825	1517				
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	54	2	298	7	2	11	86	488	1	17	1091	30
RTOR Reduction (vph)	0	0	128	0	11	0	0	0	0	0	0	10
Lane Group Flow (vph)	0	56	170	0	9	0	86	489	0	17	1091	20
Conf. Bikes (#/hr)		4			6				6			4
Turn Type	Split	NA	pm-or	Split	NA	Prot	NA	Prot	NA	Prot	NA	Prot
Permitted Phases	4	4	5	8	8	5	2	2	1	6	6	6
Actuated Green, G (s)	6.9	14.7	1.2	7.8	70.0	1.6	63.8	63.8	1.6	63.8	63.8	63.8
Effective Green, g (s)	6.9	14.7	1.2	7.8	70.0	1.6	63.8	63.8	1.6	63.8	63.8	63.8
Actuated G/C Ratio	0.07	0.15	0.01	0.08	0.73	0.02	0.67	0.67	0.02	0.67	0.67	0.67
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	126	237	18	139	1314	28	1216	1011				
v/s Ratio Prot	0.03	c0.06	c0.01	0.05	0.27	0.01	c0.60	0.01				
v/c Ratio	0.44	0.72	0.05	0.62	0.37	0.61	0.90	0.02				
Uniform Delay, d1	42.6	38.5	47.0	42.5	4.7	46.7	13.2	5.4				
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.5	9.9	20.7	8.0	0.2	32.0	8.9	0.0				
Level of Service	D	D	E	D	A	E	C	A				
Approach Delay (s)	47.9		67.7		11.7		22.6					
Approach LOS	D		E		B		C					
Intersection Summary												
HCM 2000 Control Delay	24.3 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.86											
Actuated Cycle Length (s)	95.7 Sum of lost time (s) 16.0											
Intersection Capacity Utilization	86.1% ICU Level of Service E											
Analysis Period (min)	15											
Critical Lane Group	c											

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP PM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	2	286	7	2	11	83	468	1	16	1047	29
Future Volume (veh/h)	52	2	286	7	2	11	83	468	1	16	1047	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	0.92	1.00	1.00	0.98	1.00	0.98	1.00	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	54	2	298	7	2	11	86	488	1	17	1091	30
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	240	9	312	9	3	14	106	1229	3	25	1165	968
Arrive On Green	0.14	0.14	0.02	0.02	0.02	0.02	0.06	0.69	0.69	0.01	0.64	0.64
Sat Flow, veh/h	1696	63	1520	545	156	856	1712	1793	4	1739	1825	1517
Grp Volume(v), veh/h	56	0	298	20	0	86	0	489	17	1091	30	17
Grp Sat Flow(s), veh/hln	1759	0	1520	1556	0	1712	0	1797	1739	1825	1517	1517
Q Serve(g,s)	3.2	0.0	16.0	1.4	0.0	5.6	0.0	13.3	1.1	60.7	0.8	0.8
Cycle Q Clear(g,c), s	3.2	0.0	16.0	1.4	0.0	5.6	0.0	13.3	1.1	60.7	0.8	0.8
Prop In Lane	0.96		1.00	0.35		0.55		1.00		1.00		1.00
Lane Grp Cap(c), veh/h	249	0	312	26	0	106	0	1232	25	1165	968	968
V/C Ratio(X)	0.22	0.00	0.95	0.78	0.00	0.81	0.00	0.40	0.67	0.94	0.03	0.03
Avail Cap(c,a), veh/h	249	0	312	55	0	106	0	1256	77	1244	1034	1034
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(0)	1.00	0.00	1.00	0.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.0	0.0	44.6	55.4	0.0	52.3	0.0	7.7	55.4	18.4	7.5	7.5
Incr Delay (d2), s/veh	0.5	0.0	38.7	38.4	0.0	36.0	0.0	0.2	26.2	12.7	0.0	0.0
Initial Q Delay(Q3), 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	12.5	9.9	0.0	3.7	0.0	6.6	0.7	34.4	0.3	0.3
LnGrp Delay(d),s/veh	43.5	0.0	83.3	93.8	0.0	88.3	0.0	7.9	81.6	31.1	7.6	7.6
LnGrp LOS	D		F	F	F	F		A	F	C	A	A
Approach Vol, veh/h	354 20 575 1138											
Approach Delay, s/veh	77.0 93.8 19.9 31.2											
Approach LOS	E F B C											
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	5.7	81.5	20.0	11.0	76.1	5.9						
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0						
Max Green Setting (Cmax), s	5.0	79.0	16.0	7.0	77.0	4.0						
Max Q Clear Time (g_c+H), s	3.1	15.3	18.0	7.6	62.7	3.4						
Green Ext Time (g_e), s	0.0	19.7	0.0	0.0	9.4	0.0						
Intersection Summary												
HCM 2010 Ctrl Delay	36.5 D											
HCM 2010 LOS	D											

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.6	24.1	37.1	48.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.0	81.0	81.0	81.0
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3			
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4894.5	0.0	4815.1	5120.2
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.19	1.76	2.92	2.76
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Existing Plus Project no BP PM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	354	20	575	1138
Effct. Green for Bike (s)	9.0	4.4	71.5	60.6
Cross Street Width (ft)	37.1	48.3	24.1	39.6
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	150	73	1192	1010
Bicycle Delay (s/bike)	51.3	55.7	9.8	14.7
Bicycle Compliance	Poor	Poor	Good	Fair
Bicycle LOS Score	2.71	2.33	2.88	4.04
Bicycle LOS	B	B	C	D

Avila Ranch
15: Earthwood & Suburban

Avila Ranch
15: Earthwood & Suburban

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	48	115	0	56	76	0
Future Volume (Veh/h)	48	115	0	56	76	0
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	52	125	0	61	83	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None		None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume		177		176		114
VC1 stage 1 conf vol						
VC2 stage 2 conf vol		177		176		114
VCu unblocked vol		4.1		6.4		6.2
IC single (s)		2.2		3.5		3.3
IC 2 stage (s)		100		90		100
p0 queue free %		1399		814		938
CM capacity (veh/h)						
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	177	61	83			
Volume Left	0	0	83			
Volume Right	125	0	0			
cSH	1700	1399	814			
Volumes to Capacity	0.10	0.00	0.10			
Queue Length 95th (ft)	0	0	8			
Control Delay (s)	0.0	0.0	9.9			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	9.9			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay		2.6				
Intersection Capacity Utilization		20.5%		ICU	Level of Service	A
Analysis Period (min)		15				

Approach	EB	WB	NB
Approach Direction	EB		
Median Present?	No		
Approach Delay(s)	0		
Level of Service	A		
Approach	WB		
Approach Direction	WB		
Median Present?	No		
Approach Delay(s)	0		
Level of Service	A		

Avila Ranch
16: Horizon Ln & Suburban

Existing Plus Project no BP PM
2/18/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	0	72	71	0	0	0
Future Volume (vph)	0	72	71	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	78	77	0	0	0
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	78	77	0			
Volume Left (vph)	0	77	0			
Volume Right (vph)	78	0	0			
Head (s)	-0.57	0.23	0.00			
Departure Headway (s)	3.5	4.3	4.1			
Degree Utilization, x	0.08	0.09	0.00			
Capacity (veh/h)	998	817	900			
Control Delay (s)	6.8	7.7	7.1			
Approach Delay (s)	6.8	7.7	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	7.3					
Level of Service	A					
Intersection Capacity Utilization	15.1%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Existing Plus Project no BP PM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	32	8	136	57	56	256
Future Volume (Veh/h)	32	8	136	57	56	256
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	9	148	62	61	278
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
px, platoon unblocked						
VC, conflicting volume	579	179		210		
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	579	179		210		
IC, single (s)	6.4	6.2		4.1		
IC, 2 stage (s)						
IF (s)	3.5	3.3		2.2		
p0 queue free %	92	99		96		
dM capacity (veh/h)	456	864		1361		
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	44	210	339			
Volume Left	35	0	61			
Volume Right	9	62	0			
cSH	505	1700	1361			
Volume to Capacity	0.09	0.12	0.04			
Queue Length 95th (ft)	7	0	4			
Control Delay (s)	12.8	0.0	1.7			
Lane LOS	B	A	A			
Approach Delay (s)	12.8	0.0	1.7			
Approach LOS	B	A	A			
Intersection Summary						
Average Delay	1.9					
Intersection Capacity Utilization	40.5%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Existing Plus Project no BP PM
2/18/2016

Approach	NB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	SB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
18: Vachell & Project Entry

Existing Plus Project no BP PM
2/18/2016



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					R
Traffic Volume (veh/h)	19	11	183	10	17	270
Future Volume (Veh/h)	19	11	183	10	17	270
Sign Control	0%	0%	Free	0%	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	12	199	11	18	293
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				None		None
Median type				None		None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	534	204			210	
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol	534	204			210	
IC single (s)	6.4	6.2			4.1	
IC 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	96	99			99	
pM capacity (veh/h)	500	836			1361	
Direction Lane #	WB 1	NB 1	SB 1			
Volume Total	33	210	311			
Volume Left	21	0	18			
Volume Right	12	11	0			
cSH	586	1700	1361			
Volume to Capacity	0.06	0.12	0.01			
Queue Length 95th (ft)	4	0	1			
Control Delay (s)	11.5	0.0	0.6			
Lane LOS	B		A			
Approach Delay (s)	11.5	0.0	0.6			
Approach LOS	B		A			
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			38.1%			A
Analysis Period (min)			15			

Avila Ranch
18: Vachell & Project Entry

Existing Plus Project no BP PM
2/18/2016

Avila Ranch
1: LOVR & 101 NB/101 SB

Near Term AM
6/18/2015

Approach	NB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	SB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Lane Group	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	467	326	54	924	804	359
v/c Ratio	0.54	0.40	0.24	0.62	0.71	0.48
Control Delay	20.2	13.7	21.9	30.4	25.0	4.5
Queue Delay	0.0	0.0	0.0	0.0	0.6	0.4
Total Delay	20.2	13.7	21.9	30.4	25.6	4.9
Queue Length 50th (ft)	183	86	24	265	208	57
Queue Length 95th (ft)	297	164	m44	312	261	10
Internal Link Dist (ft)	198			872	236	
Turn Bay Length (ft)	150		150			270
Base Capacity (vph)	859	813	221	1651	1297	807
Starvation Cap Reductn	0	0	0	0	191	144
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.54	0.40	0.24	0.56	0.73	0.54
Intersection Summary						
m Volume for 95th percentile queue is metered by upstream signal.						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	430	10	290	50	850	0	0	740	330
Future Volume (veh/h)	0	0	0	430	10	290	50	850	0	0	740	330
Number	3	8	8	18	1	6	16	5	2	12		
Initial Q (Cb), veh												
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1900	1863	1863	0	0	1863	1863	0	804	359
Adj Flow Rate, veh/h	467	11	315	54	924	0	0	804	359	0	804	359
Adj No. of Lanes	1	1	0	1	2	0	0	2	1	0	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Cap. veh/h	779	24	675	275	1652	0	0	1298	581	0	1298	581
Arrive On Green	0.44	0.44	0.44	0.12	0.93	0.00	0.00	0.37	0.37	0.00	0.37	0.37
Sat Flow, veh/h	1774	54	1538	1774	3632	0	0	3632	1583	0	3632	1583
Grp Volume(V), veh/h	467	0	326	54	924	0	0	804	359	0	804	359
Grp Sat Flow(S), veh/h	1774	0	1591	1774	1770	0	0	1770	1583	0	1770	1583
Q_Serve(g_s), s	18.0	0.0	13.0	1.5	3.3	0.0	0.0	16.8	16.7	0.0	16.8	16.7
Cycle Q Clear(g_c), s	18.0	0.0	13.0	1.5	3.3	0.0	0.0	16.8	16.7	0.0	16.8	16.7
Prop In Lane	1.00	0.00	0.97	1.00	0.00	0.00	0.00	1.00	1.00	0.00	1.00	1.00
Lane Grp Cap(c), veh/h	779	0	698	275	1652	0	0	1298	581	0	1298	581
V/C Ratio(X)	0.60	0.00	0.47	0.20	0.56	0.00	0.00	0.62	0.62	0.00	0.62	0.62
Avail Cap(c_a), veh/h	779	0	698	275	1652	0	0	1298	581	0	1298	581
HCM Platoon Ratio	1.00	1.00	1.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	0.00	1.00	0.84	0.84	0.00	0.00	0.94	0.94	0.00	0.94	0.94
Uniform Delay (d), s/veh	19.2	0.0	17.8	15.2	1.7	0.0	0.0	23.4	23.3	0.0	23.4	23.3
Incr Delay (d2), s/veh	3.4	0.0	2.2	1.3	1.2	0.0	0.0	2.1	4.6	0.0	2.1	4.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	9.6	0.0	6.1	0.8	1.5	0.0	0.0	8.5	8.0	0.0	8.5	8.0
LnGrp Delay(d), s/veh	22.6	0.0	20.1	16.5	2.9	0.0	0.0	25.4	27.9	0.0	25.4	27.9
LnGrp LOS	C	C	C	B	A	C	C	C	C	C	C	C
Approach Vol, veh/h			793			978			1163			
Approach Delay, s/veh			21.6			3.6			26.2			
Approach LOS			C			A			C			
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2				6		8				
Phs Duration (G+Y+Rc), s	9.0	38.0				47.0		43.0				
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5				
Max Green Setting (Gmax), s	5.5	33.0				42.0		39.5				
Max Q Clear Time (g_c+H), s	3.5	18.8				5.3		20.0				
Green Ext Time (g_e), s	0.0	10.7				20.4		4.4				
Intersection Summary												
HCM 2010 Ctrl Delay						17.4						
HCM 2010 LOS						B						

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	14.8	24.0	60.3	72.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None-Actuated	None-Actuated	None-Actuated	None-Actuated
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	50	200	500	0
85th percentile speed (mph)	30	30	35	35
Right Corner Area per Ped (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	45.0	36.5	45.0	36.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.92	2.39	3.53	2.85
Pedestrian Crosswalk LOS	A	B	D	C

Avila Ranch
1: LOVR & 101 NB/101 SB

Near Term AM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	0	793	978	1163
Effct. Green for Bike (s)	0.0	43.7	37.8	28.8
Cross Street Width (ft)	60.3	72.0	24.0	14.8
Through Lanes Number	0	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	971	840	640
Bicycle Delay (s/bike)	0.0	11.9	15.1	20.8
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	0.00	3.97	2.73	2.75
Bicycle LOS	D	B	B	B

Avila Ranch
2: LOVR & 101 NB

Near Term AM
6/18/2015



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	627	117	500	1106	149
v/c Ratio	0.77	0.34	0.21	0.55	0.16
Control Delay	35.3	8.2	6.7	19.7	9.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	35.3	8.2	6.7	19.7	9.3
Queue Length 50th (ft)	154	20	53	267	27
Queue Length 95th (ft)	201	43	85	412	m63
Internal Link Dist (ft)	160		385	872	
Turn Bay Length (ft)		200			150
Base Capacity (vph)	991	343	2348	2010	961
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.63	0.34	0.21	0.55	0.16
Intersection Summary					
m Volume for 95th percentile queue is metered by upstream signal.					

Avila Ranch Near Term AM
2: LOVR & 101 NB 6/18/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W	W	W	W	W	W
Traffic Volume (vph)	430	160	110	470	1040	140
Future Volume (vph)	430	160	110	470	1040	140
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	0.95	0.95	1.00	1.00
Flt Protected	0.96	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	3345	1770	3539	3539	1583	1583
Flt Permitted	0.96	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	3345	334	3539	3539	1583	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	457	170	117	500	1106	149
RTOR Reduction (vph)	48	0	0	0	0	63
Lane Group Flow (vph)	579	0	117	500	1106	86
Turn Type	Prot	pm-pt	NA	NA	Perm	Perm
Protected Phases	3	1	6	2		
Permitted Phases		6		2		
Actuated Green, G (s)	20.8	59.7	59.7	50.4	50.4	50.4
Effective Green, g (s)	20.8	59.7	59.7	50.4	50.4	50.4
Actuated g/C Ratio	0.23	0.66	0.66	0.56	0.56	0.56
Clearance Time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	773	314	2347	1981	886	886
v/s Ratio Prot	c0.17	c0.02	0.14	c0.31		
v/s Ratio Perm		0.22		0.05		
v/c Ratio	0.75	0.37	0.21	0.56	0.10	0.10
Uniform Delay, d1	32.2	7.4	5.9	12.7	9.2	9.2
Progression Factor	1.00	1.00	1.00	1.36	3.58	3.58
Incremental Delay, d2	4.0	0.7	0.2	0.9	0.2	0.2
Delay (s)	36.2	8.2	6.1	18.2	33.1	33.1
Level of Service	D	A	A	B	B	C
Approach Delay (s)	36.2		6.5	19.9		
Approach LOS	D		A	B		
Intersection Summary						
HCM 2000 Control Delay	20.7 HCM 2000 Level of Service C					
HCM 2000 Volume to Capacity ratio	0.60					
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 13.0					
Intersection Capacity Utilization	63.8% ICU Level of Service B					
Analysis Period (min)	15					
c. Critical Lane Group						

Avila Ranch Near Term AM
2: LOVR & 101 NB 6/18/2015

Approach	EB	NB	SB
Crosswalk Length (ft)	38.7	60.1	72.0
Crosswalk Width (ft)	10.0	10.0	10.0
Total Number of Lanes Crossed	3	5	5
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (vph)	0	0	0
Ped. Right-Left Flow Rate (vph)	0	0	0
Ped. R. Sidewalk Flow Rate (vph)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.24	2.74	2.74
Pedestrian Crosswalk LOS	B	B	B

Avila Ranch
2: LOVR & 101 NB

Near Term AM
6/18/2015

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	627	617	1255
Effct. Green for Bike (s)	20.8	59.7	51.1
Cross Street Width (ft)	60.1	72.0	38.7
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	462	1327	1136
Bicycle Delay (s/bike)	26.6	5.1	8.4
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	3.00	3.17	3.19
Bicycle LOS	C	C	C

Avila Ranch
3: Higuera & South

Near Term AM
6/18/2015

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	31	21	625	125	42	292	615	135	437
Lane Group Flow (vph)	0.35	0.09	0.67	0.24	0.34	0.24	0.55	0.62	0.28
Control Delay	53.6	0.8	31.6	10.2	48.2	22.7	3.9	49.8	17.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.6	0.8	31.6	10.2	48.2	22.7	3.9	49.8	17.6
Queue Length 50th (ft)	18	0	163	13	24	67	29	75	92
Queue Length 95th (ft)	47	0	221	55	58	101	59	136	131
Internal Link Dist (ft)	208		629		338		60	100	507
Turn Bay Length (ft)		50	130		60		60	100	
Base Capacity (vph)	88	234	1079	576	128	1199	1147	256	1581
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.09	0.58	0.22	0.33	0.24	0.54	0.53	0.28
Intersection Summary									

Avila Ranch Near Term AM 6/18/2015
 3: Higuera & South

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	20	20	600	30	90	40	280	590	130	390	30
Traffic Volume (veh/h)	10	20	20	600	30	90	40	280	590	130	390	30
Future Volume (veh/h)	3	8	18	7	4	14	1	6	16	5	2	12
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.96	1.00	0.99	1.00	0.99	1.00	0.99	1.00	1.00	0.98	0.98
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/h	10	21	21	625	31	94	42	292	615	135	406	31
Adj Flow Rate, veh/h	0	1	1	2	1	0	1	2	1	1	2	0
Adj No. of Lanes	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	20	43	52	814	96	291	54	1237	922	187	1413	107
Cap. veh/h	0.03	0.03	0.03	0.24	0.24	0.24	0.03	0.35	0.35	0.11	0.42	0.42
Arrive On Green	591	1242	1517	3442	405	1228	1774	3539	1566	1774	3330	253
Sat Flow, veh/h	31	0	21	625	0	125	42	292	615	135	215	222
Grp Volume(V), veh/h	1833	0	1517	1721	0	1633	1774	1770	1566	1774	1770	1813
Grp Sat Flow(s),veh/h	1.3	0.0	1.1	13.6	0.0	5.1	1.9	4.7	21.5	5.9	6.4	6.4
Q_Serve(g_s), s	1.3	0.0	1.1	13.6	0.0	5.1	1.9	4.7	21.5	5.9	6.4	6.4
Cycle Q Clear(g_c), s	0.32	1.00	1.00	1.00	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.14
Prop In Lane	63	0	52	814	0	386	54	1237	922	187	751	769
Lane Grp Cap(c), veh/h	0.49	0.00	0.40	0.77	0.00	0.32	0.78	0.24	0.67	0.72	0.29	0.29
V/C Ratio(X)	92	0	76	1117	0	530	133	1237	922	266	751	769
Avail Cap(c), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	38.0	0.0	37.9	28.5	0.0	25.3	38.6	18.5	11.3	34.7	15.1	15.1
Uniform Delay (d), s/veh	5.9	0.0	5.0	2.2	0.0	0.5	21.1	0.4	3.8	5.5	1.0	0.9
Incr Delay (d2), 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
Initial Q Delay(d3),s/veh	0.8	0.0	0.5	6.7	0.0	2.3	1.2	2.3	14.5	3.2	3.3	3.4
%ile BackOf(50%)veh/h	43.9	0.0	42.9	30.7	0.0	25.8	59.6	18.9	15.1	40.2	16.1	16.1
LnGrp Delay(d),s/veh	D	D	D	C	C	C	E	B	B	D	B	B
LnGrp LOS	D	D	D	C	C	C	E	B	B	D	B	B
Approach Vol, veh/h	52			750			949			572		
Approach Delay, s/veh	43.5			29.9			18.3			21.8		
Approach LOS	D			C			B			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	7.4	40.0		25.0	13.4	34.0						
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0						
Max Green Setting (Gmax), s	6.0	34.0		26.0	12.0	28.0						
Max Q Clear Time (g_c+H), s	3.9	8.4		15.6	7.9	23.5						
Green Ext Time (g_e), s	0.1	2.8		2.8	0.2	2.2						
Intersection Summary												
HCM 2010 Ctrl Delay	23.5											
HCM 2010 LOS	C											

Avila Ranch Near Term AM 6/18/2015
 3: Higuera & South

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated/Actuated/Actuated			
Corresponding Signal Phase	2	6	8	4
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	40	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (S/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.02	2.71	2.79	2.51
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Near Term AM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	52	750	949	572
Effct. Green for Bike (s)	4.1	23.0	28.5	37.9
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	89	500	620	824
Bicycle Delay (s/bike)	42.0	25.9	21.9	15.9
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.95	2.82	2.19	1.82
Bicycle LOS	C	C	B	A

Avila Ranch
4: Higuera & Madonna

Near Term AM
6/18/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	373	377	598	11	22	120	304	478	543
v/c Ratio	0.65	0.65	0.59	0.06	0.12	0.47	0.20	0.62	0.34
Control Delay	26.8	26.8	4.4	35.0	26.1	38.4	13.9	29.3	7.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.8	26.8	4.4	35.0	26.1	38.4	13.9	29.3	7.1
Queue Length 50th (ft)	154	156	17	5	5	54	46	110	61
Queue Length 95th (ft)	282	285	55	20	27	116	81	173	102
Internal Link Dist (ft)	964								
Turn Bay Length (ft)	110								
Base Capacity (vph)	792	798	1046	460	456	316	2004	1087	1914
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.47	0.57	0.02	0.05	0.38	0.15	0.44	0.28
Intersection Summary									

	EBT	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Movement	→	↘	←	↙	↑	↗	↓	↘
Lane Configurations	4	4	1	1	4	4	4	4
Traffic Volume (veh/h)	660	30	550	10	110	270	10	430
Future Volume (veh/h)	660	30	550	10	110	270	10	430
Number	7	4	14	3	8	18	5	2
Initial Q (Cb), veh	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.98	1.00	0.99	0.99	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1900	1863
Adj Flow Rate, veh/h	741	0	0	11	11	120	293	11
Adj No. of Lanes	2	0	1	1	1	2	0	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2
Cap. veh/h	1050	0	608	64	31	157	1530	57
Arrive On Green	0.30	0.00	0.00	0.04	0.04	0.09	0.44	0.28
Sat Flow, veh/h	3548	0	1583	1774	845	1774	3478	130
Grp Volume(V), veh/h	741	0	0	11	0	22	120	149
Grp Sat Flow(S), veh/hln	1774	0	1583	1774	0	1690	1774	1770
Q_Serve(g_s), s	9.8	0.0	0.0	0.3	0.0	0.7	3.5	2.7
Cycle Q Clear(g_c), s	9.8	0.0	0.0	0.3	0.0	0.7	3.5	2.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.50	1.00	1.00
Lane Grp Cap(c), veh/h	1050	0	608	64	0	61	157	778
V/C Ratio(X)	0.71	0.00	0.00	0.17	0.00	0.36	0.76	0.19
W/C Ratio(X)	1956	0	1013	540	0	514	371	1178
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	0.0	0.0	24.6	0.0	24.8	23.4	9.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	1.3	0.0	3.5	7.5	0.1
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	4.9	0.0	0.0	0.2	0.0	0.4	2.0	1.3
LnGrp Delay(d), s/veh	17.4	0.0	0.0	25.8	0.0	28.3	31.0	9.1
LnGrp LOS	B		C	C	C	C	A	A
Approach Vol, veh/h	741		33		424		1021	
Approach Delay, s/veh	17.4		27.5		15.3		11.1	
Approach LOS	B		C		B		B	
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2		4	5	6			
Phs Duration (G+Y+Rc), s	27.1		19.6	8.7	18.5			5.9
Change Period (Y+Rc), s	4.0		4.0	4.0	4.0			4.0
Max Green Setting (Gmax), s	35.0		29.0	11.0	20.0			16.0
Max Q Clear Time (g_c+H), s	4.7		11.8	5.5	8.1			2.7
Green Ext Time (g_LC), s	9.2		3.4	0.1	6.0			0.1
Intersection Summary								
HCM 2010 Ctrl Delay	14.2							
HCM 2010 LOS	B							
Notes								

	EB	WB	NB	SB
Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	1	0	0	1
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	100	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.79	1.98	2.74	2.48
Pedestrian Crosswalk LOS	C	A	B	B

Avila Ranch
4: Higuera & Madonna

Near Term AM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1348	33	424	1021
Effct. Green for Bike (s)	23.1	7.0	29.7	15.6
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	502	152	646	339
Bicycle Delay (s/bike)	25.8	39.3	21.1	31.7
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	3.56	1.24	1.18	2.14
Bicycle LOS	D	A	A	B

Avila Ranch
5: Higuera & Prado

Near Term AM
6/18/2015

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	76	141	87	98	76	76	196	380	293	684
Lane Group Flow (vph)	0.28	0.36	0.21	0.42	0.21	0.19	0.53	0.43	0.62	0.63
v/c Ratio	26.0	26.2	3.6	30.4	25.1	2.7	29.9	21.8	28.0	22.0
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	26.0	26.2	3.6	30.4	25.1	2.7	29.9	21.8	28.0	22.0
Total Delay	70	113	19	90	68	12	159	127	215	216
Queue Length 50th (ft)	23	44	0	31	23	0	63	57	91	106
Queue Length 95th (ft)	70	113	19	90	68	12	159	127	215	216
Internal Link Dist (ft)	363			386			1342			828
Turn Bay Length (ft)	150		150	150		200	250		125	
Base Capacity (vph)	627	886	794	561	884	792	812	1879	1173	2598
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.16	0.11	0.17	0.09	0.10	0.24	0.20	0.25	0.26
Intersection Summary										

	EBT	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Movement	→	↗	←	↖	↑	↘	↓	↙
Lane Configurations	EBL	EBT	EBR	WBL	WBR	NBL	NBR	SBL
Traffic Volume (veh/h)	70	130	80	90	70	180	300	580
Future Volume (veh/h)	70	130	80	90	70	180	300	580
Number	7	4	14	3	8	18	5	2
Initial Q (Cb), veh	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99	0.99	0.99	0.99	1.00	0.98	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1900	1863
Adj Flow Rate, veh/h	76	141	87	98	76	196	326	54
Adj No. of Lanes	1	1	1	1	1	1	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2
Cap. veh/h	381	455	381	330	455	381	257	782
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.14	0.26	0.21
Sat Flow, veh/h	1216	1863	1560	1137	1863	1560	1774	3037
Grp Volume(V), veh/h	76	141	87	98	76	196	326	54
Grp Sat Flow(s), veh/hln	1216	1863	1560	1137	1863	1560	1774	3037
Q_Serve(g_s), s	3.1	3.6	2.6	4.5	1.9	2.3	6.2	5.2
Cycle Q Clear(g_c), s	5.0	3.6	2.6	8.1	1.9	2.3	6.2	5.2
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	381	455	381	330	455	381	257	782
V/C Ratio(X)	0.20	0.31	0.23	0.30	0.17	0.20	0.76	0.41
W/C Ratio(a), veh/h	666	891	746	577	860	720	819	968
HCM Platoon Ratio	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
Uniform Delay (d), s/veh	19.4	18.1	17.7	21.4	17.4	17.6	24.1	18.1
Incr Delay (d2), s/veh	0.3	0.4	0.3	0.5	0.2	0.3	0.7	0.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%) veh/h	1.1	1.9	1.1	1.5	1.0	1.0	3.4	2.6
LnGrp Delay(d), s/veh	19.6	18.5	18.0	21.9	17.6	17.8	28.7	18.7
LnGrp LOS	B	B	B	C	B	B	C	B
Approach Vol, veh/h	304	250	576	977				
Approach Delay, s/veh	18.6	19.4	22.1	20.1				
Approach LOS	B	B	C	C				
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	4	5	6	8		
Phs Duration (G+Y+Rc), s	17.2	21.1	20.3	13.5	24.8	20.3		
Change Period (Y+Rc), s	5.0	6.0	6.0	6.0	6.0	6.0		
Max Green Setting (Gmax), s	39.0	32.0	28.0	27.0	44.0	27.0		
Max Q Clear Time (g_c+H), s	11.2	7.3	7.0	8.2	11.4	10.1		
Green Ext Time (g_e), s	1.1	6.6	2.9	0.6	7.0	2.7		
Intersection Summary								
HCM 2010 Ctrl Delay	20.4							
HCM 2010 LOS	C							
Notes								

	EB	WB	NB	SB
Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.0	48.1	61.6	61.7
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3220.0	3221.5	3354.4	3355.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.30	2.33	2.73	2.75
Pedestrian Crosswalk LOS	B	B	B	C

Avila Ranch
5: Higuera & Prado

Near Term AM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	304	250	576	977
Effct. Green for Bike (s)	13.0	12.0	15.7	19.2
Cross Street Width (ft)	61.6	61.7	48.1	48.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bikes/h)	226	209	273	334
Bicycle Delay (s/bike)	45.2	46.1	42.9	39.9
Bicycle Compliance	Poor	Poor	Poor	Poor
Bicycle LOS Score	3.00	2.92	1.48	1.81
	C	C	A	A

Avila Ranch
6: Higuera & Tank Farm

Near Term AM
6/18/2015

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group	43	32	203	206	280	22	484	774	269	366
Lane Group Flow (vph)	0.22	0.10	0.60	0.60	0.52	0.20	0.60	0.73	0.70	0.22
v/c Ratio	42.5	0.6	44.0	44.2	8.5	53.9	37.2	6.5	46.5	18.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	42.5	0.6	44.0	44.2	8.5	53.9	37.2	6.5	46.5	18.1
Total Delay	24	0	110	112	0	12	131	18	141	56
Queue Length 50th (ft)	59	0	241	245	75	45	244	67	#331	146
Queue Length 95th (ft)	109		1317				1064			1668
Internal Link Dist (ft)										
Turn Bay Length (ft)			250	140				100	165	
Base Capacity (vph)	600	637	478	481	651	109	1051	1132	504	1867
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.05	0.42	0.43	0.43	0.20	0.46	0.68	0.53	0.20
Intersection Summary										
# 95th percentile volume exceeds capacity, queue may be longer.										
Queue shown is maximum after two cycles.										

	EBT	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	30	10	30	370	10	260	20	450	720	250	330
Traffic Volume (veh/h)	30	10	30	370	10	260	20	450	720	250	330
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6
Number	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/hln	32	11	32	406	0	22	484	774	269	355	11
Adj Flow Rate, veh/h	0	1	1	2	0	1	2	1	1	2	0
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	74	25	87	528	0	236	43	1108	729	324	1652
Cap. veh/h	0.06	0.06	0.06	0.15	0.00	0.00	0.02	0.31	0.31	0.18	0.47
Arrive On Green	1336	459	1576	3548	0	1583	1774	3539	1576	1774	3504
Sat Flow, veh/h	43	0	32	406	0	22	484	774	269	355	11
Grp Volume(V), veh/h	17%	0	1576	1774	0	1583	1774	1770	1576	1774	1770
Grp Sat Flow(s), veh/hln	1.8	0.0	1.5	8.4	0.0	0.0	0.9	8.3	24.0	11.2	4.6
Q_Serve(g.s), s	1.8	0.0	1.5	8.4	0.0	0.0	0.9	8.3	24.0	11.2	4.6
Cycle Q Clear(g.c), s	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	99	0	87	528	0	236	43	1108	729	324	834
Lane Grp Cap(c), veh/h	0.43	0.00	0.37	0.77	0.00	0.00	0.51	0.44	1.06	0.83	0.21
V/C Ratio(X)	633	0	555	1065	0	475	116	1108	729	532	970
Avail Cap(c), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	35.0	0.0	34.9	31.3	0.0	0.0	36.9	20.9	17.5	30.2	11.9
Uniform Delay (d), s/veh	1.1	0.0	1.0	0.9	0.0	0.0	3.4	0.6	50.9	6.7	0.3
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.9	0.0	0.7	4.2	0.0	0.0	0.5	4.1	25.5	6.1	2.3
%ile BackOf(50%), veh/h	36.1	0.0	35.9	32.2	0.0	0.0	40.3	21.5	68.4	36.9	12.2
LnGrp Delay(d), s/veh	D	C	C	406	D	D	C	F	D	D	B
LnGrp LOS	D	C	C	406	D	D	C	F	D	D	B
Approach Vol, veh/h	75						1280				635
Approach Delay, s/veh	36.0						50.2				22.7
Approach LOS	D						D				C
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6		8			
Phs Duration (G+Y+Rc), s	19.0	30.0		10.2	6.9	42.1		17.4			
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0			
Max Green Setting (Gmax), s	23.0	24.0		27.0	5.0	42.0		23.0			
Max Q Clear Time (g.c+H), s	13.2	26.0		3.8	2.9	6.6		10.4			
Green Ext Time (p.c), s	0.8	0.0		0.2	0.0	23.4		0.9			
Intersection Summary											
HCM 2010 Ctrl Delay											39.4
HCM 2010 LOS											D
Notes											

	EB	WB	NB	SB
Approach	EB	WB	NB	SB
Crosswalk Length (ft)	45.5	36.3	77.9	62.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	150	50	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2245.5	2126.8	2472.0	2387.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.82	3.04	2.73
Pedestrian Crosswalk LOS	A	C	C	B

Avila Ranch
6: Higuera & Tank Farm

Near Term AM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	75	689	1280	635
Effct. Green for Bike (s)	9.7	17.8	20.1	41.7
Cross Street Width (ft)	77.9	62.3	36.3	45.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	162	297	335	695
Bicycle Delay (s/bike)	50.7	43.5	41.6	25.5
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.88	2.36	1.88	1.49
Bicycle LOS	C	B	A	A

Avila Ranch
7: Horizon Lane & Tank Farm

Near Term AM
6/19/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	960	30	10	750	40	20
Future Volume (Veh/h)	960	30	10	750	40	20
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1043	33	11	815	43	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Upstream signal (ft)	2			2		
px. platoon unblocked						
vC. conflicting volume		1076		1896	1060	
vC1. stage 1 conf vol				1060		
vC2. stage 2 conf vol				837		
vCu. unblocked vol		1076		1896	1060	
iC. single (s)		4.1		6.4	6.2	
iC. 2 stage (s)		2.2		5.4	3.3	
p0 queue free %		98		84	92	
dM capacity (veh/h)		648		264	272	
Direction_Lane #	EB 1	WB 1	NB 1			
Volume Total	1076	826	65			
Volume Left	0	11	43			
Volume Right	33	0	22			
cSH	1700	648	267			
Volume to Capacity	0.63	0.02	0.24			
Queue Length 95th (ft)	0	1	23			
Control Delay (s)	0.0	0.5	22.8			
Lane LOS	A	A	C			
Approach Delay (s)	0.0	0.5	22.8			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay		1.0				
Intersection Capacity Utilization		62.4%			ICU Level of Service	B
Analysis Period (min)		15				

Avila Ranch
7: Horizon Lane & Tank Farm

Near Term AM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	4483.9
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	46
Lanes Crossed	2
Veh Vol Crossed	1710
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	16.14
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.98
Delay for add Gap	4486.04
Avg Ped Delay (s)	4483.94
Approach	WB
Approach Direction	No
Median Present?	4483.9
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	46
Lanes Crossed	2
Veh Vol Crossed	1710
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	16.14
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.98
Delay for add Gap	4486.04
Avg Ped Delay (s)	4483.94

Avila Ranch
8: Higuera & Suburban

Near Term AM
6/18/2015

	WBL	WBR	NBT	SBL	SBT
Lane Group	109	54	1456	33	685
Lane Group Flow (vph)	0.36	0.18	0.60	0.18	0.27
v/c Ratio	24.1	8.1	8.8	10.2	5.9
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	24.1	8.1	8.8	10.2	5.9
Total Delay	35	2	111	3	40
Queue Length 50th (ft)	66	23	348	28	127
Queue Length 95th (ft)	1164	170	234	200	1054
Internal Link Dist (ft)	735	674	2439	187	2507
Turn Bay Length (ft)	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0.15	0.08	0.60	0.18	0.27
Reduced v/c Ratio	Intersection Summary				

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	1	1	1	1	1	1
Traffic Volume (veh/h)	100	50	1060	280	30	630
Future Volume (veh/h)	100	50	1060	280	30	630
Number	3	18	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	109	54	1152	304	33	685
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	169	151	1900	496	310	2420
Arrive On Green	0.10	0.10	0.68	0.68	0.68	0.68
Sat Flow, veh/h	1774	1583	2872	725	364	3632
Grp Volume(V), veh/h	109	54	729	727	33	685
Grp Sat Flow(S), veh/hln	1774	1583	1770	1734	364	1770
Q_Serve(g_s), s	2.9	1.6	11.0	11.3	2.7	3.8
Cycle Q Clear(g_c), s	2.9	1.6	11.0	11.3	14.1	3.8
Prop In Lane	1.00	1.00	1.00	0.42	1.00	1.00
Lane Grp Cap(c), veh/h	169	151	1210	1186	310	2420
V/C Ratio(X)	0.65	0.36	0.60	0.61	0.11	0.28
Avail Cap(c_a), veh/h	856	764	1246	1221	318	2492
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.7	21.1	4.2	4.3	8.1	3.1
Incr Delay (d2), s/veh	1.5	0.5	1.5	1.6	0.4	0.2
Initial Q Delay(d3), s/veh	0.00	0.00	0.00	0.00	0.00	0.00
%ile BackOf(50%), veh/h	1.5	0.7	5.8	5.8	0.3	1.9
LnGrp Delay(d), s/veh	23.2	21.6	5.7	5.9	8.5	3.3
LnGrp LOS	C	C	A	A	A	A
Approach Vol, veh/h	163		1456		718	
Approach Delay, s/veh	22.7		5.8		3.5	
Approach LOS	C		A		A	
Timer	1	2	3	4	5	6
Assigned Phs		2				8
Phs Duration (G+Y+Rc), s		40.0				40.0
Change Period (Y+Rc), s		6.0				6.0
Max Green Setting (Gmax), s		35.0				24.0
Max Q Clear Time (g_c+H), s		13.3				16.1
Green Ext Time (p_c), s		20.4				17.9
Green Ext Time (p_c), s						0.3
Intersection Summary						
HCM 2010 Ctrl Delay						6.3
HCM 2010 LOS						A

Approach	WB	NB	SB
Crosswalk Length (ft)	45.4	60.0	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	40	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq.ft)	7276.3	7276.5	7276.5
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	3849.3	4575.8	4068.5
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (S/p)	27.5	26.6	27.5
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.08	3.00	2.85
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Near Term AM
6/18/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	163	1456	718
Effct. Green for Bike (s)	10.1	41.9	41.9
Cross Street Width (ft)	60.1	45.4	60.0
Through Lanes Number	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	289	1197	1197
Bicycle Delay (s/bike)	25.6	5.6	5.6
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	1.78	2.38	2.00
Bicycle LOS	A	B	A

Avila Ranch
9: Higuera & Vachell

Near Term AM
6/18/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	130	80	1230	280	50	670
Future Volume (Veh/h)	130	80	1230	280	50	670
Sign Control	Free	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	138	85	1309	298	53	713
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)	4					
Median type	None					
Median storage (veh)						
Upstream signal (ft)			504			314
px platoon unblocked	0.94					
vC, conflicting volume	1920	804		1607		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1854	804		1607		
IC, single (s)	6.8	6.9		4.1		
IC, 2 stage (s)						
p0 queue free %	3.5	3.3		2.2		
IF (s)	0	74		87		
pM capacity (veh/h)	53	326		403		
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	223	873	734	53	356	356
Volume Left	138	0	0	53	0	0
Volume Right	85	0	298	0	0	0
cSH	79	1700	1700	403	1700	1700
Volume to Capacity	2.81	0.51	0.43	0.13	0.21	0.21
Queue Length 95th (ft)	545	0	0	11	0	0
Control Delay (s)	928.9	0.0	0.0	15.3	0.0	0.0
Lane LOS	F	C	C	C	C	C
Approach Delay (s)	928.9	0.0	1.1			
Approach LOS	F					
Intersection Summary						
Average Delay	80.1					
Intersection Capacity Utilization	56.8%					
ICU Level of Service	B					
Analysis Period (min)	15					

Avila Ranch
9: Higuera & Vachell

Near Term AM
7/9/2015

Approach	EBL	EBR	NBL	NBT	SBT	SBR
Approach Direction						
Median Present?	Yes					
Approach Delay(s)	136.8					
Level of Service	F					
Crosswalk						
Length (ft)	28	28				
Lanes Crossed	2	1				
Veh Vol Crossed	1230	670				
Ped Vol Crossed	0	0				
Yield Rate(%)	0	0				
Ped Platooning	No	No				
Critical Headway (s)	11.00	11.00				
Prob of Delayed X-ing	0.98	0.87				
Prob of Blocked Lane	0.85	0.87				
Delay for add Gap	114.23	28.99				
Avg Ped Delay (s)	111.57	25.25				
Approach						
Approach Direction	SB					
Median Present?	No					
Approach Delay(s)	262053					
Level of Service	F					
Crosswalk						
Length (ft)	68					
Lanes Crossed	4					
Veh Vol Crossed	1900					
Ped Vol Crossed	0					
Yield Rate(%)	0					
Ped Platooning	No					
Critical Headway (s)	22.43					
Prob of Delayed X-ing	1.00					
Prob of Blocked Lane	0.95					
Delay for add Gap	262055.00					
Avg Ped Delay (s)	262053.00					

Avila Ranch
10: Higuera & LOVR

Near Term AM
6/18/2015

Approach	EBL	EBR	NBL	NBT	SBT	SBR
Approach Direction						
Median Present?	Yes					
Approach Delay(s)	136.8					
Level of Service	F					
Crosswalk						
Length (ft)	28	28				
Lanes Crossed	2	1				
Veh Vol Crossed	1230	670				
Ped Vol Crossed	0	0				
Yield Rate(%)	0	0				
Ped Platooning	No	No				
Critical Headway (s)	11.00	11.00				
Prob of Delayed X-ing	0.98	0.87				
Prob of Blocked Lane	0.85	0.87				
Delay for add Gap	114.23	28.99				
Avg Ped Delay (s)	111.57	25.25				
Approach						
Approach Direction	SB					
Median Present?	No					
Approach Delay(s)	262053					
Level of Service	F					
Crosswalk						
Length (ft)	68					
Lanes Crossed	4					
Veh Vol Crossed	1900					
Ped Vol Crossed	0					
Yield Rate(%)	0					
Ped Platooning	No					
Critical Headway (s)	22.43					
Prob of Delayed X-ing	1.00					
Prob of Blocked Lane	0.95					
Delay for add Gap	262055.00					
Avg Ped Delay (s)	262053.00					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	1180	50	30	350	250	540
Future Volume (veh/h)	1180	50	30	350	250	540
Number	7	14	5	2	6	16
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1255	53	32	372	266	574
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1612	741	245	702	498	1163
Arrive On Green	0.47	0.47	0.03	0.38	0.27	0.27
Sat Flow, veh/h	3442	1583	1774	1863	1863	1577
Grp Volume(V), veh/h	1255	53	32	372	266	574
Grp Sat Flow(S), veh/hln	1721	1583	1774	1863	1863	1577
Q_Serve(g_s), s	23.6	1.4	1.0	12.0	9.5	11.7
Cycle Q Clear(g_c), s	23.6	1.4	1.0	12.0	9.5	11.7
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1612	741	245	702	498	1163
V/C Ratio(X)	0.78	0.07	0.13	0.53	0.53	0.49
Avail Cap(c_a), veh/h	1777	818	302	914	649	1291
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	17.2	11.3	18.9	18.8	24.3	4.3
Incr Delay (d2), s/veh	2.9	0.1	0.1	0.8	1.1	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	11.8	1.8	0.5	6.3	5.0	12.2
LnGrp Delay(d), s/veh	20.1	11.4	18.9	19.5	25.3	4.7
LnGrp LOS	C	B	B	B	C	A
Approach Vol, veh/h	1308			404	840	
Approach Delay, s/veh	19.8			19.5	11.2	
Approach LOS	B			B	B	
Timer	1	2	3	4	5	6
Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	35.2	42.3	8.5	26.7		
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		
Max Green Setting (Gmax), s	38.0	40.0	5.0	27.0		
Max Q Clear Time (g_c+H), s	14.0	25.6	3.0	13.7		
Green Ext Time (p_c), s	9.2	10.6	0.0	6.7		
Intersection Summary						
HCM 2010 Ctrl Delay	16.9					
HCM 2010 LOS	B					

Approach	EB	NB	SB
Crosswalk Length (ft)	61.3	36.0	60.2
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	0
Ped. R. Sidewalk Flow Rate (p/h)	2	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq.ft)	14557.5	24281.2	18210.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	0.1	0.3	0.2
Crosswalk Circulation Code	F	F	F
Pedestrian Delay (S/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.69	2.30	2.74
Pedestrian Crosswalk LOS	B	B	B

Avila Ranch
10: Higuera & LOVR

Avila Ranch
11: Higuera & Buckley

Near Term AM
6/18/2015

Near Term AM
6/18/2015

Approach	EB	NB	SB	SBT
Bicycle Flow Rate (bike/h)	8	8	8	304
Total Flow Rate (veh/h)	1308	404	840	424
Effct. Green for Bike (s)	39.7	22.8	18.9	0.23
Cross Street Width (ft)	36.0	60.2	61.3	0.3
Through Lanes Number	2	1	1	0.0
Through Lane Width (ft)	12.0	12.0	12.0	0.0
Bicycle Lane Width (ft)	5.0	5.0	5.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	0.3
On Street Parking?	No	No	No	0.2
Bicycle Lane Capacity (bike/h)	882	507	420	0
Bicycle Delay (s/bike)	14.1	25.2	28.2	0
Bicycle Compliance	Fair	Fair	Fair	0
Bicycle LOS Score	2.12	2.08	2.81	0.23
Bicycle LOS	B	B	C	0.16

Approach	NBT	SBT
Lane Group Flow (vph)	424	304
w/c Ratio	0.23	0.16
Control Delay	0.3	0.2
Queue Delay	0.0	0.0
Total Delay	0.3	0.2
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)	387	1906
Turn Bay Length (ft)	1863	1863
Base Capacity (vph)	0	0
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced w/c Ratio	0.23	0.16

Intersection Summary

Avila Ranch
11: Higuera & Buckley

Near Term AM
6/18/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					↓
Traffic Volume (vph)	0	0	390	0	0	280
Future Volume (vph)	0	0	390	0	0	280
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)			4.0			4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1863	1863	1863	1863	1863	1863
Flt Permitted	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1863	1863	1863	1863	1863	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	424	0	0	304
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	424	0	0	304
Turn Type	Prot		NA	NA	NA	NA
Protected Phases	8		2		6	
Permitted Phases					6	
Actuated Green, G (s)			27.0		27.0	
Effective Green, g (s)			27.0		27.0	
Actuated g/C Ratio			1.00		1.00	
Clearance Time (s)			4.0		4.0	
Vehicle Extension (s)			3.0		3.0	
Lane Grp Cap (vph)			1863		1863	
v/s Ratio Prot			0.23		0.16	
v/s Ratio Perm			0.23		0.16	
Uniform Delay, d1			0.0		0.0	
Progression Factor			1.00		1.00	
Incremental Delay, d2			0.1		0.0	
Delay (s)			0.1		0.0	
Level of Service			A		A	
Approach Delay (s)	0.0	0.1	0.1	0.1	0.0	0.0
Approach LOS	A	A	A	A	A	A
Intersection Summary						
HCM 2000 Control Delay			0.1			HCM 2000 Level of Service
HCM 2000 Volume to Capacity ratio			0.32			A
Actuated Cycle Length (s)			27.0			Sum of lost time (s)
Intersection Capacity Utilization			23.9%			ICU Level of Service
Analysis Period (min)			15			A
c. Critical Lane Group						

Avila Ranch
11: Higuera & Buckley

Near Term AM
6/18/2015

Approach	WB	NB	SB
Crosswalk Length (ft)	34.8	35.4	36.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	2
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (S/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.69	2.22	2.22
Pedestrian Crosswalk LOS	A	B	B

Avila Ranch
11: Higuera & Buckley

Near Term AM
6/18/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	0	424	304
Effct. Green for Bike (s)	5.5	27.0	27.0
Gross Street Width (ft)	36.0	34.8	35.4
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	275	1350	1350
Bicycle Delay (s/bike)	14.9	2.1	2.1
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.11	2.79	2.60
Bicycle LOS	B	C	B

Avila Ranch
12: Buckley & Vachell

Near Term AM
6/18/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔		↔	↔
Traffic Volume (veh/h)	0	0	0	210	320	0
Future Volume (Veh/h)	0	0	0	210	320	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	228	348	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked					114	114
vC, conflicting volume	228					
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	228				114	114
iC, single (s)	4.1				6.4	6.2
iC, 2 stage (s)						
p0 queue free %	2.2				3.5	3.3
IF (s)	100				61	100
pM capacity (veh/h)	1340				882	939
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	0	228	348			
Volume Left	0	0	348			
Volume Right	0	228	0			
cSH	1700	1700	882			
Volume to Capacity	0.00	0.13	0.39			
Queue Length 95th (ft)	0	0	47			
Control Delay (s)	0.0	0.0	11.7			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	11.7			
Approach LOS			B			
Intersection Summary						
Average Delay			7.1			
Intersection Capacity Utilization			37.4%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Near Term AM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	0
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.00
Prob of Blocked Lane	0.00
Delay for adq Gap	0.00
Avg Ped Delay (s)	0.00
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	0
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.00
Prob of Blocked Lane	0.00
Delay for adq Gap	0.00
Avg Ped Delay (s)	0.00

Avila Ranch
13: Buckley & Project Entry

Near Term AM
6/18/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	90	110	0	0	0
Future Volume (Veh/h)	0	90	110	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	98	120	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
vC, conflicting volume	120			218	120	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	120			218	120	
IC, single (s)	4.1			6.4	6.2	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	100	
dM capacity (veh/h)	1468			770	931	
Direction, Lane #	EB 1	WB 1				
Volume Total	98	120				
Volume Left	0	0				
Volume Right	0	0				
cSH	1700	1700				
Volume to Capacity	0.06	0.07				
Queue Length 95th (ft)	0	0				
Control Delay (s)	0.0	0.0				
Lane LOS						
Approach Delay (s)	0.0	0.0				
Approach LOS						
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		9.1%		ICU Level of Service		A
Analysis Period (min)		15				

Avila Ranch
13: Buckley & Project Entry

Near Term AM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	5.2
Approach Delay(s)	B
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	200
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.49
Prob of Blocked Lane	0.29
Delay for adq Gap	10.59
Avg Ped Delay (s)	5.20
Approach	WB
Approach Direction	No
Median Present?	5.2
Approach Delay(s)	B
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	200
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.49
Prob of Blocked Lane	0.29
Delay for adq Gap	10.59
Avg Ped Delay (s)	5.20

Avila Ranch
14: Broad & Buckley

Near Term AM
6/18/2015



Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	54	130	11	272	1174	11	489	76
v/c Ratio	0.29	0.21	0.03	0.63	0.80	0.12	0.53	0.09
Control Delay	45.8	4.4	0.2	38.9	13.3	51.8	18.4	1.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	4.4	0.2	38.9	13.3	51.8	18.4	1.2
Queue Length 50th (ft)	26	0	0	126	243	6	158	0
Queue Length 95th (ft)	79	33	0	273	#1123	28	368	9
Internal Link Dist (ft)	9507		310		439		1035	
Turn Bay Length (ft)	150		360		470		470	
Base Capacity (vph)	383	826	318	692	1612	93	1244	1072
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.16	0.03	0.39	0.73	0.12	0.39	0.07
Intersection Summary								
#	95th percentile volume exceeds capacity, queue may be longer.							
	Queue shown is maximum after two cycles.							

Avila Ranch
14.: Broad & Buckley

Near Term AM
6/18/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	40	10	120	0	0	10	250	1080	0	10	450	70
Future Volume (veh/h)	40	10	120	0	0	10	250	1080	0	10	450	70
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	43	11	130	0	0	11	272	1174	0	11	489	76
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	131	33	429	0	0	16	314	1292	0	18	997	829
Arrive On Green	0.09	0.09	0.09	0.00	0.00	0.01	0.18	0.72	0.00	0.01	0.55	0.55
Sat Flow, veh/h	1412	361	1524	0	0	1493	1712	1798	0	1739	1825	1519
Grp Volume(v), veh/h	54	0	130	0	0	11	272	1174	0	11	489	76
Grp Sat Flow(s), veh/hln	1774	0	1524	0	0	1493	1712	1798	0	1739	1825	1519
Q Serve(g.s), s	2.7	0.0	6.5	0.0	0.0	0.7	14.7	50.6	0.0	0.6	15.9	2.3
Cycle Q Clear(g.c), s	2.7	0.0	6.5	0.0	0.0	0.7	14.7	50.6	0.0	0.6	15.9	2.3
Prop In Lane	0.80	1.00	1.00	0.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	164	0	429	0	0	16	314	1292	0	18	997	829
V/C Ratio(X)	0.33	0.00	0.30	0.00	0.00	0.69	0.87	0.91	0.00	0.60	0.49	0.09
Avail Cap(c.a), veh/h	297	0	543	0	0	63	538	1505	0	73	1032	858
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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.6	0.0	27.4	0.0	0.0	47.1	37.9	10.9	0.0	47.1	13.5	10.4
Incr Delay (d2), s/veh	1.2	0.0	0.4	0.0	0.0	42.7	7.4	7.7	0.0	27.2	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%),veh/ln	1.4	0.0	2.8	0.0	0.0	0.5	7.6	27.2	0.0	0.4	8.0	1.0
LnGrp Delay(d),s/veh	41.7	0.0	27.8	0.0	0.0	89.8	45.3	18.5	0.0	74.2	13.8	10.4
LnGrp LOS	D	C	C	F	F	D	B	B	E	B	B	B
Approach Vol, veh/h	184			11			1446				576	
Approach Delay, s/veh	31.9			89.8			23.6				14.5	
Approach LOS	C			F			C				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	5.0	72.7		12.8	21.5	56.1						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	4.0	80.0		16.0	30.0	54.0						
Max Q Clear Time (g.c+H), s	0.0	16.1		8.5	16.7	17.9						
Green Ext Time (p.c), s	0.0	16.1		0.5	0.8	18.8						
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

Central Coast Transportation Consulting
Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch
14.: Broad & Buckley

Near Term AM
6/18/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.2	24.0	37.7	48.2
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	20	0	0	10
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4882.3	0.0	4834.9	5117.9
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.16	1.75	2.96	2.82
Pedestrian Crosswalk LOS	B	A	C	C

Central Coast Transportation Consulting
Synchro 9 Report
HCM 2010 Signals-Pedestrians

Avila Ranch
14.: Broad & Buckley

Near Term AM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bik/eh)	0	0	0	0
Total Flow Rate (veh/h)	184	11	1446	576
Effct. Green for Bike (s)	8.8	4.5	67.7	42.0
Cross Street Width (ft)	37.7	48.2	24.0	39.2
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	147	75	1128	700
Bicycle Delay (s/bike)	51.5	55.6	11.4	25.4
Bicycle Compliance	Poor	Poor	Fair	Fair
Bicycle LOS Score	2.44	2.32	4.31	3.11
Bicycle LOS	B	B	E	C

Avila Ranch
15.: Earthwood & Suburban

Near Term AM
6/18/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	T	T	T	T	T	T
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	1244					
px platoon unblocked						
VC conflicting volume		0			0	0
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol						
IC single (s)		4.1			6.4	6.2
IC 2 stage (s)						
IF (s)		2.2			3.5	3.3
p0 queue free %		100			100	100
dM capacity (veh/h)		1623			1023	1085
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		0.0%				
ICU Level of Service						A
Analysis Period (min)		15				

Avila Ranch
16: Suburban & Horizon Lane

Near Term AM
6/18/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	0	0	0			
Volume Left (vph)	0	0	0			
Volume Right (vph)	0	0	0			
Head (s)	0.00	0.00	0.00			
Departure Headway (s)	3.9	3.9	3.9			
Degree Utilization, x	0.00	0.00	0.00			
Capacity (veh/h)	917	917	917			
Control Delay (s)	6.9	6.9	6.9			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	0.0					
Level of Service	A					
Intersection Capacity Utilization	0.0%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

Avila Ranch
17: Vachell & Venture Dr

Near Term AM
6/18/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	0	0	180	0	0	320
Future Volume (Veh/h)	0	0	180	0	0	320
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	196	0	0	348
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
VC, conflicting volume	544	196		196		
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	544	196		196		
IC, single (s)	6.4	6.2		4.1		
IC, 2 stage (s)						
p0 queue free %	3.5	3.3		2.2		
IF (s)	100	100		100		
dM capacity (veh/h)	500	845		1377		
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	196	348			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1377			
Volume to Capacity	0.00	0.12	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	20.2%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

Avila Ranch
18: Vachell & Project Entry

Near Term AM
6/18/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	W	↑	↑	↓	↓
Traffic Volume (veh/h)	0	0	180	0	0	320
Future Volume (Veh/h)	0	0	180	0	0	320
Sign Control	Sloped	Sloped	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	196	0	0	348
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None	None	None	None
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	544	196			196	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	544	196			196	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
p0 queue free %	3.5	3.3			2.2	
IF (s)	100	100			100	
CM capacity (veh/h)	500	845			1377	
Direction, Lane #	WB 1	NB 1	SB 1	SB 1		
Volume Total	0	196	348			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1377			
Volumes to Capacity	0.00	0.12	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	20.2%					
Analysis Period (min)	15					
	ICU Level of Service A					

Avila Ranch
1: LOVR & 101 NB/101 SB

Near Term PM
6/18/2015

Lane Group	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	263	495	91	1333	980	727
v/c Ratio	0.35	0.72	0.44	0.78	0.70	0.68
Control Delay	20.2	28.3	15.2	17.5	20.6	7.2
Queue Delay	0.0	0.0	0.0	0.1	1.4	0.9
Total Delay	20.2	28.3	15.2	17.6	22.0	8.1
Queue Length 50th (ft)	104	225	15	249	235	165
Queue Length 95th (ft)	168	#361	m38	301	296	316
Internal Link Dist (ft)		198		925	236	
Turn Bay Length (ft)	150		150			270
Base Capacity (vph)	747	689	206	1808	1494	1088
Starvation Cap Reductn	0	0	0	0	305	145
Spillback Cap Reductn	0	0	0	55	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.72	0.44	0.76	0.82	0.77
Intersection Summary						
# 95th percentile volume exceeds capacity, queue may be longer.						
Queue shown is maximum after two cycles.						
m. Volume for 95th percentile queue is metered by upstream signal.						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	0	0	260	10	480	90	1320	0	0	970	720
Future Volume (veh/h)	0	0	0	260	10	480	90	1320	0	0	970	720
Number	3	8	8	18	1	6	16	5	2	12		
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1900	1863	1863	0	0	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	263	10	485	91	1333	0	0	980	727			
Adj No. of Lanes	1	1	0	1	2	0	0	0	2	1		
Peak Hour Factor	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Cap. veh/h	700	13	614	226	1809	0	0	1494	669			
Arrive On Green	0.39	0.39	0.39	0.02	0.17	0.00	0.00	0.42	0.42			
Sat Flow, veh/h	1774	32	1556	1774	3632	0	0	3632	1583			
Grp Volume(V), veh/h	263	0	495	91	1333	0	0	980	727			
Grp Sat Flow(S), veh/hln	1774	0	1588	1774	1770	0	0	1770	1583			
Q_Serve(g_s), s	9.5	0.0	24.7	2.5	32.2	0.0	0.0	19.9	38.0			
Cycle Q Clear(g_c), s	9.5	0.0	24.7	2.5	32.2	0.0	0.0	19.9	38.0			
Prop In Lane	1.00	1.00	0.98	1.00	0.00	0.00	0.00	1.00	1.00			
Lane Grp Cap(c), veh/h	700	0	626	226	1809	0	0	1494	669			
V/C Ratio(X)	0.38	0.00	0.79	0.40	0.74	0.00	0.00	0.66	1.09			
Avail Cap(c_a), veh/h	700	0	626	226	1809	0	0	1494	669			
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00			
Upstream Filter(i)	1.00	0.00	1.00	0.82	0.82	0.00	0.00	0.82	0.82			
Uniform Delay (d), s/veh	19.4	0.0	24.0	16.7	31.7	0.0	0.0	20.8	26.0			
Incr Delay (d2), s/veh	1.5	0.0	9.8	4.3	2.2	0.0	0.0	1.9	58.0			
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			
%ile BackOf(50%), veh/hln	4.9	0.0	12.4	1.4	16.4	0.0	0.0	10.0	27.3			
LnGrp Delay(d), s/veh	20.9	0.0	33.8	21.0	33.9	0.0	0.0	22.6	84.0			
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	C	F
Approach Vol, veh/h			758			1424				1707		
Approach Delay, s/veh			29.3			33.1				48.8		
Approach LOS			C			C				D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2										
Phs Duration (G+Y+Rc), s	8.0	43.0				51.0		39.0				
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5				
Max Green Setting (Gmax), s	4.5	38.0				46.0		35.5				
Max Q Clear Time (g_c+H), s	4.5	40.0				34.2		26.7				
Green Ext Time (g_e), s	0.0	0.0				10.9		3.2				
Intersection Summary												
HCM 2010 Ctrl Delay						39.2						
HCM 2010 LOS						D						

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	14.5	23.9	60.1	72.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None-Actuated	None-Actuated	None-Actuated	None-Actuated
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	35
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	45.0	36.5	45.0	36.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.24	2.09	2.92	3.10
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch
1: LOVR & 101 NB/101 SB

Near Term PM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	0	758	1424	1707
Effct. Green for Bike (s)	0.0	38.0	43.5	35.5
Cross Street Width (ft)	60.1	72.0	23.9	14.5
Through Lanes Number	0	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	0	844	967	789
Bicycle Delay (s/bike)	0.0	15.0	12.0	16.5
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	0.00	3.91	3.10	3.19
Bicycle LOS		D	C	C

Avila Ranch
2: LOVR & 101 NB

Near Term PM
6/18/2015



Lane Group	EBL	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	628	206	928	866	392
v/c Ratio	0.76	0.46	0.40	0.48	0.39
Control Delay	36.3	9.2	8.4	9.0	1.3
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	36.3	9.2	8.4	9.0	1.3
Queue Length 50th (ft)	161	37	117	82	5
Queue Length 95th (ft)	206	75	179	83	9
Internal Link Dist (ft)	128		471	925	
Turn Bay Length (ft)		200			150
Base Capacity (vph)	1016	523	2321	1810	1001
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.62	0.39	0.40	0.48	0.39
Intersection Summary					

Avila Ranch Near Term PM
6/18/2015
2: LOVR & 101 NB

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	500	110	200	900	840	380
Future Volume (vph)	500	110	200	900	840	380
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	1.00	0.95	0.95	1.00
Flt Protected	0.96	0.95	1.00	1.00	1.00	1.00
Satd. Flow (prot)	3378	1770	3539	3539	3539	1583
Flt Permitted	0.96	0.25	1.00	1.00	1.00	1.00
Satd. Flow (perm)	3378	457	3539	3539	3539	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	515	113	206	928	866	392
RTOR Reduction (vph)	23	0	0	0	0	192
Lane Group Flow (vph)	605	0	206	928	866	200
Turn Type	Prot	pm-plt	NA	NA	Perm	Perm
Protected Phases	3	1	6	2		
Permitted Phases		6		2		
Actuated Green, G (s)	21.5	59.0	59.0	46.0	46.0	46.0
Effective Green, g (s)	21.5	59.0	59.0	46.0	46.0	46.0
Actuated g/C Ratio	0.24	0.66	0.66	0.51	0.51	0.51
Clearance Time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	806	438	2320	1808	809	
v/s Ratio Prot	0.18	0.05	0.26	0.24		
v/s Ratio Perm		0.26			0.13	
v/c Ratio	0.75	0.47	0.40	0.48	0.25	
Uniform Delay, d1	31.8	7.3	7.2	14.2	12.3	
Progression Factor	1.00	1.00	1.00	0.53	0.19	
Incremental Delay, d2	4.0	0.8	0.5	0.7	0.6	
Delay (s)	35.7	8.1	7.8	8.3	2.9	
Level of Service	D	A	A	A	A	A
Approach Delay (s)	35.7		7.8	6.6		
Approach LOS	D		A	A		A
Intersection Summary						
HCM 2000 Control Delay	13.1 HCM 2000 Level of Service B					
HCM 2000 Volume to Capacity ratio	0.57					
Actuated Cycle Length (s)	90.0 Sum of lost time (s) 13.0					
Intersection Capacity Utilization	63.7% ICU Level of Service B					
Analysis Period (min)	15					
c Critical Lane Group						

Avila Ranch Near Term PM
6/18/2015
2: LOVR & 101 NB

Approach	EB	NB	SB
Crosswalk Length (ft)	39.6	60.0	72.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	5
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (vph)	0	0	0
Ped. Right-Left Flow Rate (vph)	0	0	0
Ped. R. Sidewalk Flow Rate (vph)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (S/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.35	2.79	2.84
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
2: LOVR & 101 NB

Near Term PM
6/18/2015

Approach	EB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0
Total Flow Rate (veh/h)	628	1134	1258
Effct. Green for Bike (s)	21.5	59.0	46.0
Cross Street Width (ft)	60.0	72.0	39.6
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	478	1311	1022
Bicycle Delay (s/bike)	26.1	5.3	10.8
Bicycle Compliance	Fair	Good	Fair
Bicycle LOS Score	3.00	3.60	3.20
Bicycle LOS	C	D	C

Avila Ranch
3: Higuera & South

Near Term PM
6/18/2015

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	44	43	860	130	22	591	677	86	592
Lane Group Flow (vph)	0.52	0.24	0.83	0.23	0.21	0.38	0.71	0.61	0.34
v/c Ratio	65.4	3.3	37.3	8.2	46.8	19.1	11.3	61.5	15.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Queue Delay	65.4	3.3	37.3	8.2	46.8	19.1	11.8	61.5	15.5
Total Delay	65.4	3.3	37.3	8.2	46.8	19.1	11.8	61.5	15.5
Queue Length 50th (ft)	26	0	238	9	13	127	81	50	97
Queue Length 95th (ft)	#75	0	#313	49	37	172	234	#117	164
Internal Link Dist (ft)	208		629		338		60	100	507
Turn Bay Length (ft)	50	130		60		1557	950	145	1747
Base Capacity (vph)	85	176	1127	599	104	0	58	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.24	0.76	0.22	0.21	0.38	0.76	0.59	0.34
Intersection Summary									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	20	40	800	20	100	20	550	630	80	530	20
Future Volume (veh/h)	20	20	40	800	20	100	20	550	630	80	530	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.95	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	22	22	43	860	22	108	22	591	677	86	570	22
Adj No. of Lanes	0	1	1	2	1	0	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	41	41	68	993	79	387	34	1494	662	110	1616	62
Arrive On Green	0.04	0.04	0.04	0.29	0.29	0.29	0.02	0.42	0.42	0.06	0.47	0.47
Sat Flow, veh/h	909	909	1510	3442	273	1341	1774	3539	1569	1774	3473	134
Grp Volume(V), veh/h	44	0	43	860	0	130	22	591	677	86	290	302
Grp Sat Flow(S), veh/hln	1817	0	1510	1721	0	1614	1774	1770	1569	1774	1770	1837
Q_Serve(g_s), s	2.1	0.0	2.5	20.8	0.0	5.5	1.1	10.2	37.0	4.2	9.2	9.2
Cycle Q Clear(g_c), s	2.1	0.0	2.5	20.8	0.0	5.5	1.1	10.2	37.0	4.2	9.2	9.2
Prop In Lane	0.50	1.00	1.00	1.00	1.00	0.83	1.00	1.00	1.00	1.00	1.00	0.07
Lane Grp Cap(c), veh/h	81	0	68	993	0	466	34	1494	662	110	823	855
V/C Ratio(X)	0.54	0.00	0.64	0.87	0.00	0.28	0.66	0.40	1.02	0.78	0.35	0.35
Avail Cap(c), veh/h	83	0	69	1099	0	516	101	1494	662	142	823	855
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.0	0.0	41.2	29.6	0.0	24.1	42.7	17.6	25.3	40.5	15.0	15.0
Incr Delay (d2), s/veh	6.7	0.0	17.3	6.9	0.0	0.3	19.6	0.8	40.8	18.8	1.2	1.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	1.2	0.0	1.3	10.7	0.0	2.5	0.7	5.1	23.3	2.6	4.7	4.9
LnGrp Delay(d), s/veh	47.7	0.0	58.5	36.5	0.0	24.4	62.3	18.4	66.1	59.3	16.2	16.1
LnGrp LOS	D	E	D	D	C	E	B	F	F	E	B	B
Approach Vol, veh/h	87			990			1290				678	
Approach Delay, s/veh	53.0			34.9			44.2				21.6	
Approach LOS	D			C			D				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	9.4	41.0		7.9	5.7	44.8		29.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	37.0		4.0	5.0	39.0		28.0				
Max Q Clear Time (g_c+H), s	6.2	39.0		4.5	3.1	11.2		22.8				
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	14.6		2.5				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	5	5	5
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (S/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.67	2.93	2.60
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Near Term PM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	87	990	1290	678
Effct. Green for Bike (s)	4.1	26.1	38.2	43.1
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	89	567	830	937
Bicycle Delay (s/bike)	42.0	23.6	15.7	13.0
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	3.01	3.22	2.47	1.91
Bicycle LOS	C	C	B	A

Avila Ranch
4: Higuera & Madonna

Near Term PM
6/18/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	352	347	387	11	108	441	613	484	978
Lane Group Flow (vph)	0.71	0.70	0.40	0.05	0.46	1.21	0.38	0.72	0.71
v/c Ratio	36.6	35.9	2.1	33.4	40.3	150.1	16.2	37.5	17.9
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	36.6	35.9	2.1	33.4	40.3	150.1	16.2	37.5	17.9
Total Delay	177	173	0	5	53	-312	111	126	191
Queue Length 50th (ft)	#327	#317	23	20	103	#523	166	190	290
Queue Length 95th (ft)	964	964	110	1295	1563	338	160	338	338
Internal Link Dist (ft)	542	545	977	365	382	365	1775	811	1451
Turn Bay Length (ft)	0	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.65	0.64	0.40	0.03	0.28	1.21	0.35	0.60	0.67

Intersection Summary
 - Volume exceeds capacity, queue is theoretically infinite.
 - Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 - Queue shown is maximum after two cycles.

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	630	20	360	10	90	10	410	560	10	10	440
Future Volume (veh/h)	630	20	360	10	90	10	410	560	10	10	440
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.98	1.00	1.00	0.99	0.99	1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863
Adj Flow Rate, veh/h	693	0	0	11	97	11	441	602	11	11	473
Adj No. of Lanes	2	0	1	1	1	0	1	2	0	0	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	871	0	721	150	138	16	373	1822	33	56	851
Arrive On Green	0.25	0.00	0.00	0.08	0.08	0.08	0.21	0.51	0.51	0.25	0.25
Sat Flow, veh/h	3548	0	1583	1774	1639	186	1774	3556	65	28	3408
Grp Volume(V), veh/h	693	0	0	11	0	108	441	299	314	258	226
Grp Sat Flow(s), veh/h	1774	0	1583	1774	0	1825	1774	1770	1851	1826	1610
Q_Serve(g.s), s	13.9	0.0	0.0	0.4	0.0	4.4	16.0	7.6	7.6	0.0	9.3
Cycle Q Clear(g.c), s	13.9	0.0	0.0	0.4	0.0	4.4	16.0	7.6	7.6	0.0	9.3
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	871	0	721	150	0	154	373	907	949	505	402
V/C Ratio(X)	0.80	0.00	0.00	0.07	0.00	0.70	1.18	0.33	0.33	0.51	0.56
Avail Cap(c), veh/h	1166	0	853	373	0	384	373	907	949	505	402
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
Upstream Filter(i)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	0.0	32.1	0.0	33.9	30.1	10.9	10.9	24.9	24.9
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.2	0.0	5.7	106.2	0.2	0.2	0.9	1.8
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	7.2	0.0	0.0	0.2	0.0	2.5	18.8	3.7	3.9	4.9	4.3
LnGrp Delay(d), s/veh	29.8	0.0	0.0	32.3	0.0	39.6	136.3	11.1	11.1	25.7	26.7
LnGrp LOS	C			C		D	F	B	B	C	B
Approach Vol, veh/h	693			119		1054				1462	
Approach Delay, s/veh	29.8			38.9		63.5				19.5	
Approach LOS	C			D		E				B	
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	2			4	5	6					
Phs Duration (G+Y+Rc), s	43.0			22.7	20.0	23.0					
Change Period (Y+Rc), s	4.0			4.0	4.0	4.0					
Max Green Setting (Gmax), s	39.0			25.0	16.0	19.0					
Max Q Clear Time (g.c+H), s	9.6			15.9	18.0	21.0					
Green Ext Time (p.c), s	16.0			2.3	0.0	0.0					
Intersection Summary											
HCM 2010 Ctrl Delay											36.3
HCM 2010 LOS											D
Notes											

	EB	WB	NB	SB
Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	3.07	2.00	2.87	2.81
Pedestrian Crosswalk LOS	C	B	C	C

Avila Ranch
4: Higuera & Madonna

Near Term PM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	1086	119	1054	1462
Effct. Green for Bike (s)	23.5	10.0	37.0	16.3
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	511	217	804	354
Bicycle Delay (s/bike)	25.5	36.5	16.4	31.1
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	3.13	1.38	1.70	2.50
	C	A	A	B

Avila Ranch
5: Higuera & Prado

Near Term PM
6/18/2015

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL
Lane Group Flow (vph)	54	32	97	151	129	151	419	688	151
v/c Ratio	0.22	0.09	0.25	0.63	0.39	0.37	0.77	0.43	0.57
Control Delay	36.6	34.2	5.5	48.8	38.6	9.3	39.2	16.5	47.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.6	34.2	5.5	48.8	38.6	9.3	39.2	16.5	47.7
Queue Length 50th (ft)	25	14	0	77	63	0	205	122	77
Queue Length 95th (ft)	71	47	28	173	142	55	378	204	174
Internal Link Dist (ft)		363		386			1342		828
Turn Bay Length (ft)	150	150	150	150	200	250	250	390	1505
Base Capacity (vph)	368	547	537	378	524	554	866	2423	390
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.06	0.18	0.40	0.25	0.27	0.48	0.28	0.39
Intersection Summary									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	50	30	90	140	120	140	390	570	70	140	710	40
Future Volume (veh/h)	50	30	90	140	120	140	390	570	70	140	710	40
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99	0.98	0.99	0.98	1.00	0.99	1.00	0.99	1.00	1.00	0.99	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	54	32	97	151	129	151	419	613	75	151	763	43
Adj No. of Lanes	1	1	1	1	1	1	1	1	2	0	1	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	240	371	310	318	371	310	479	1536	188	191	1096	62
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.27	0.48	0.48	0.11	0.32	0.32
Sat Flow, veh/h	1083	1863	1555	1238	1863	1555	1774	3172	387	1774	3404	192
Grp Volume(V), veh/h	54	32	97	151	129	151	419	341	347	151	397	409
Grp Sat Flow(S), veh/hln	1083	1863	1555	1238	1863	1555	1774	1770	1790	1774	1770	1826
Q_Serve(g_s), s	3.7	1.1	4.3	9.2	4.9	7.0	18.4	10.0	10.1	6.8	15.9	16.0
Cycle Q Clear(g_c), s	8.5	1.1	4.3	10.4	4.9	7.0	18.4	10.0	10.1	6.8	15.9	16.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.22	1.00	1.00	0.11
Lane Grp Cap(c), veh/h	240	371	310	318	371	310	479	857	867	191	570	588
V/C Ratio(X)	0.23	0.09	0.31	0.48	0.35	0.49	0.88	0.40	0.40	0.79	0.70	0.70
Avail Cap(c_a), veh/h	343	549	488	421	526	439	871	1239	1253	392	761	785
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	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	31.7	26.6	27.8	30.8	28.0	28.9	28.4	13.4	13.4	35.4	24.1	24.1
Incr Delay (d2), s/veh	0.5	0.1	0.6	1.1	0.6	1.2	5.2	0.3	0.3	7.2	1.8	1.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%) veh/h	1.1	0.6	1.9	3.2	2.6	3.1	9.7	4.9	5.0	3.7	8.0	8.2
LnGrp Delay(d), s/veh	32.2	26.7	28.4	31.9	28.6	30.1	33.7	13.7	13.7	42.6	25.9	25.9
LnGrp LOS	C	C	C	C	C	C	C	B	B	D	C	C
Approach Vol, veh/h	183			431			1107			957		
Approach Delay, s/veh	29.2			30.3			21.3			28.5		
Approach LOS	C			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	13.8	45.4		22.2	27.0	32.2						
Change Period (Y+Rc), s	5.0	6.0		* 6	5.0	6.0						
Max Green Setting (Gmax), s	18.0	57.0		* 24	40.0	35.0						
Max Q Clear Time (g_c+H), s	8.8	12.1		10.5	20.4	18.0						
Green Ext Time (g_L), s	0.3	11.8		2.6	1.6	8.3						
Intersection Summary												
HCM 2010 Ctrl Delay	25.8											
HCM 2010 LOS	C											
Notes												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.0	48.1	61.6	61.7
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3220.0	3221.5	3354.4	3355.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.34	2.32	2.95	2.84
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch
5: Higuera & Prado

Near Term PM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	183	431	1107	957
Effct. Green for Bike (s)	16.7	15.6	40.2	26.5
Cross Street Width (ft)	61.6	61.7	48.1	48.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bikes/h)	290	271	699	461
Bicycle Delay (s/bike)	42.0	43.0	24.3	34.1
Bicycle Compliance	Poor	Poor	Fair	Poor
Bicycle LOS Score	2.80	3.21	1.92	1.80
Bicycle LOS	C	C	A	A

Avila Ranch
6: Higuera & Tank Farm

Near Term PM
6/18/2015

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	20	21	372	378	344	42	552	490	292	666
v/c Ratio	0.11	0.07	0.77	0.78	0.49	0.33	0.75	0.49	0.79	0.47
Control Delay	40.7	0.4	46.2	46.7	6.6	54.4	43.1	3.3	54.6	25.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.7	0.4	46.2	46.7	6.6	54.4	43.1	3.3	54.6	25.2
Queue Length 50th (ft)	12	0	221	225	0	25	163	9	170	168
Queue Length 95th (ft)	34	0	#524	#534	80	70	277	47	#420	294
Internal Link Dist (ft)	403		1256				1054			1668
Turn Bay Length (ft)			250			140		100		165
Base Capacity (vph)	541	586	482	484	699	136	975	999	371	1463
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.77	0.78	0.49	0.31	0.57	0.49	0.79	0.46
Intersection Summary										
# 95th percentile volume exceeds capacity, queue may be longer.										
Queue shown is maximum after two cycles.										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	10	20	700	20	330	40	530	470	280	610	30
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	10	21	744	0	0	42	552	490	292	635	31
Adj No. of Lanes	0	1	1	2	0	1	1	2	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	29	29	51	873	0	389	53	961	818	331	1472	72
Cap. veh/h	0.03	0.03	0.03	0.25	0.00	0.00	0.03	0.27	0.27	0.19	0.43	0.43
Arrive On Green	909	909	1573	3548	0	1583	1774	3539	1578	1774	3435	168
Sat Flow, veh/h	20	0	21	744	0	0	42	552	490	292	635	339
Grp Volume(V), veh/h	1817	0	1573	1774	0	1583	1774	1770	1578	1774	1770	1832
Grp Sat Flow(s), veh/hln	0.9	0.0	1.1	17.5	0.0	0.0	2.1	11.8	19.0	14.0	11.3	11.3
Q_Serve(g.s), s	0.9	0.0	1.1	17.5	0.0	0.0	2.1	11.8	19.0	14.0	11.3	11.3
Cycle Q Clear(g.c), s	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.09
Prop In Lane	59	0	51	873	0	389	53	961	818	331	1472	785
Lane Grp Cap(c), veh/h	0.34	0.00	0.41	0.85	0.00	0.00	0.79	0.57	0.60	0.88	0.43	0.43
V/C Ratio(X)	562	0	486	1057	0	471	142	1013	841	386	758	785
Wvl Cap(c.a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	41.3	0.0	41.4	31.4	0.0	0.0	42.1	27.4	14.7	34.6	17.5	17.5
Uniform Delay (d), s/veh	3.4	0.0	5.3	5.9	0.0	0.0	22.9	0.7	1.1	18.6	0.4	0.4
Incr Delay (d2), 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
Initial Q Delay(d3),s/veh	0.5	0.0	0.6	9.3	0.0	0.0	1.3	5.8	12.0	8.5	5.5	5.8
%ile BackOf(50%),veh/h	44.7	0.0	46.7	37.3	0.0	0.0	65.0	28.2	15.9	53.1	17.9	17.9
LnGrp Delay(d),s/veh	D	D	D	D	D	D	E	C	B	D	B	B
LnGrp LOS	D	D	D	D	D	D	E	C	B	D	B	B
Approach Vol, veh/h	41			744			1084				958	
Approach Delay, s/veh	45.7			37.3			24.0				28.6	
Approach LOS	D			D			C				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	21.3	29.7		8.8	7.6	43.4		27.5				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	19.0	25.0		27.0	7.0	37.0		26.0				
Max Q Clear Time (g.c+H), s	16.0	21.0		3.1	4.1	13.3		19.5				
Green Ext Time (p.c), s	0.3	2.7		0.1	0.0	10.9		2.0				
Intersection Summary												
HCM 2010 Ctrl Delay	29.4											
HCM 2010 LOS	C											
Notes												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	47.1	49.5	74.5	62.6
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	100	70	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq.ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2262.5	2286.2	2456.2	2389.3
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.86	3.17	2.86
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Near Term PM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	41	1094	1084	958
Effct. Green for Bike (s)	9.6	26.8	19.4	37.6
Cross Street Width (ft)	74.5	62.6	49.5	47.1
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	160	447	323	627
Bicycle Delay (s/bike)	50.8	36.2	42.2	28.3
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.77	4.32	3.21	3.07
Bicycle LOS	C	E	C	C

Avila Ranch
7: Horizon Ln & Tank Farm

Near Term PM
6/19/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	800	20	30	1110	30	30
Future Volume (Veh/h)	800	20	30	1110	30	30
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	870	22	33	1207	33	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT/L			TWLT/L		
Median storage (veh)	2			2		
Upstream signal (ft)						
px. platoon unblocked						
VC conflicting volume		892		2154	881	
VC1 stage 1 conf vol				881		
VC2 stage 2 conf vol				1273		
VCu unblocked vol		892		2154	881	
IC single (s)		4.1		6.4	6.2	
IC 2 stage (s)		2.2		5.4	3.3	
p0 queue free %		96		84	90	
dM capacity (veh/h)		760		212	346	
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	892	1240	66			
Volume Left	0	33	33			
Volume Right	22	0	33			
cSH	1700	760	263			
Volume to Capacity	0.52	0.04	0.25			
Queue Length 95th (ft)	0	3	24			
Control Delay (s)	0.0	1.7	23.2			
Lane LOS	A	A	C			
Approach Delay (s)	0.0	1.7	23.2			
Approach LOS		C	C			
Intersection Summary						
Average Delay		1.7				
Intersection Capacity Utilization		92.7%			ICU Level of Service	F
Analysis Period (min)		15				

Avila Ranch
7: Horizon Ln & Tank Farm

Near Term PM
7/9/2015

Approach	WB	WBR	NBT	SBL	SBT
Approach Direction	EB				
Median Present?	No				
Approach Delay(s)	9864.6				
Level of Service	F				
Crosswalk					
Length (ft)	46				
Lanes Crossed	2				
Veh Vol Crossed	1910				
Ped Vol Crossed	0				
Yield Rate(%)	0				
Ped Platooning	No				
Critical Headway (s)	16.14				
Prob of Delayed X-ing	1.00				
Prob of Blocked Lane	0.99				
Delay for add Gap	9866.51				
Avg Ped Delay (s)	9864.63				
Approach					
Approach Direction	WB				
Median Present?	No				
Approach Delay(s)	9864.6				
Level of Service	F				
Crosswalk					
Length (ft)	46				
Lanes Crossed	2				
Veh Vol Crossed	1910				
Ped Vol Crossed	0				
Yield Rate(%)	0				
Ped Platooning	No				
Critical Headway (s)	16.14				
Prob of Delayed X-ing	1.00				
Prob of Blocked Lane	0.99				
Delay for add Gap	9866.51				
Avg Ped Delay (s)	9864.63				

Avila Ranch
8: Higuera & Suburban

Near Term PM
6/18/2015

Approach	WB	WBR	NBT	SBL	SBT
Approach Direction	WB	WBR	NBT	SBL	SBT
Median Present?	No	No	No	No	No
Approach Delay(s)	9864.6	9864.6	9864.6	9864.6	9864.6
Level of Service	F	F	F	F	F
Crosswalk					
Length (ft)	46	46	46	46	46
Lanes Crossed	2	2	2	2	2
Veh Vol Crossed	1910	1910	1910	1910	1910
Ped Vol Crossed	0	0	0	0	0
Yield Rate(%)	0	0	0	0	0
Ped Platooning	No	No	No	No	No
Critical Headway (s)	16.14	16.14	16.14	16.14	16.14
Prob of Delayed X-ing	1.00	1.00	1.00	1.00	1.00
Prob of Blocked Lane	0.99	0.99	0.99	0.99	0.99
Delay for add Gap	9866.51	9866.51	9866.51	9866.51	9866.51
Avg Ped Delay (s)	9864.63	9864.63	9864.63	9864.63	9864.63

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	410	140	800	190	40	1180
Future Volume (veh/h)	410	140	800	190	40	1180
Number	3	18	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	432	147	842	200	42	1242
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	541	483	1347	320	281	1680
Arrive On Green	0.31	0.31	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1774	1583	2932	674	539	3632
Grp Volume(V), veh/h	432	147	525	517	42	1242
Grp Sat Flow(S), veh/hln	1774	1583	1770	1743	539	1770
Q Serve(g_s), s	11.2	3.6	11.1	11.1	3.2	14.2
Cycle Q Clear(g_c), s	11.2	3.6	11.1	11.1	14.2	14.2
Prop In Lane	1.00	1.00	1.00	0.39	1.00	1.00
Lane Grp Cap(c), veh/h	541	483	840	827	281	1680
V/C Ratio(X)	0.80	0.30	0.62	0.63	0.15	0.74
Avail Cap(c_a), veh/h	852	761	886	872	294	1771
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.9	13.3	9.8	9.8	15.1	10.6
Incr Delay (d2), s/veh	2.9	0.4	1.3	1.3	0.2	1.6
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/hln	5.8	1.6	5.5	5.5	0.5	7.1
LnGrp Delay(d), s/veh	18.8	13.6	11.1	11.1	15.4	12.2
LnGrp LOS	B	B	B	B	B	B
Approach Vol, veh/h	579	1042			1284	
Approach Delay, s/veh	17.5	11.1			12.3	
Approach LOS	B	B			B	
Timer	1	2	3	4	5	6
Assigned Phs		2				8
Phs Duration (G+Y+Rc), s		29.7				20.2
Change Period (Y+Rc), s		6.0				5.0
Max Green Setting (Gmax), s		25.0				24.0
Max Q Clear Time (g_c+H), s		13.1				16.2
Green Ext Time (p_c), s		9.8				7.5
Intersection Summary						
HCM 2010 Ctrl Delay			12.9			
HCM 2010 LOS			B			

Approach	WB	NB	SB
Crosswalk Length (ft)	44.6	59.9	60.2
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	30	30	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq.ft)	7278.7	7278.9	7278.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	4473.5	5337.2	4748.3
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (S/p)	22.5	21.7	22.5
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.19	3.15	2.95
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Near Term PM
6/18/2015

	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	579	1042	1284
Effct. Green for Bike (s)	17.8	22.9	22.9
Cross Street Width (ft)	60.2	44.6	59.9
Through Lanes Number	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	593	763	763
Bicycle Delay (s/bike)	14.8	11.5	11.5
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	2.47	2.03	2.46
Bicycle LOS	B	B	B

Avila Ranch
9: Higuera & Vachell

Near Term PM
6/18/2015



Movement	WB	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	120	70	910	140	90	1500
Future Volume (Veh/h)	120	70	910	140	90	1500
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	126	74	958	147	95	1579
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)		4				
Median type		None				None
Median storage (veh)						
Upstream signal (ft)			433			386
pX platoon unblocked	0.70					
vC, conflicting volume	2011	552		1105		
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1582	552		1105		
iC, single (s)	6.8	6.9		4.1		
iC, 2 stage (s)						
p0 queue free %	3.5	3.3		2.2		
IF (s)						85
pM capacity (veh/h)	59	477		628		
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	SB 3
Volume Total	200	639	466	95	790	790
Volume Left	126	0	0	95	0	0
Volume Right	74	0	147	0	0	0
cSH	88	1700	1700	628	1700	1700
Volume to Capacity	2.27	0.38	0.27	0.15	0.46	0.46
Queue Length 95th (ft)	453	0	0	13	0	0
Control Delay (s)	682.2	0.0	0.0	11.8	0.0	0.0
Lane LOS	F	F	B	B	B	B
Approach Delay (s)	682.2	0.0	0.0	0.7		
Approach LOS	F					
Intersection Summary						
Average Delay	46.2					
Intersection Capacity Utilization	54.8%					
Analysis Period (min)	15					
ICU Level of Service	A					

Avila Ranch
9: Higuera & Vachell

Near Term PM
7/9/2015

Approach	EBL	EBR	NBL	NBT	SBT	SBR
Approach Direction						
Median Present?	Yes					
Approach Delay(s)	270.3					
Level of Service	F					
Crosswalk						
Length (ft)	28	28				
Lanes Crossed	2	1				
Veh Vol Crossed	910	1500				
Ped Vol Crossed	0	0				
Yield Rate(%)	0	0				
Ped Platooning	No	No				
Critical Headway (s)	11.00	11.00				
Prob of Delayed X-ing	0.94	0.99				
Prob of Blocked Lane	0.75	0.99				
Delay for add Gap	52.08	223.70				
Avg Ped Delay (s)	48.85	221.42				
Approach						
Approach Direction	SB					
Median Present?	No					
Approach Delay(s)	4955480					
Level of Service	F					
Crosswalk						
Length (ft)	68					
Lanes Crossed	4					
Veh Vol Crossed	2410					
Ped Vol Crossed	0					
Yield Rate(%)	0					
Ped Platooning	No					
Critical Headway (s)	22.43					
Prob of Delayed X-ing	1.00					
Prob of Blocked Lane	0.98					
Delay for add Gap	4955480.00					
Avg Ped Delay (s)	4955480.00					

Avila Ranch
10: Higuera & LOVR

Near Term PM
6/18/2015

Approach	EBL	EBR	NBL	NBT	SBT	SBR
Approach Direction						
Median Present?	Yes					
Approach Delay(s)	270.3					
Level of Service	F					
Crosswalk						
Length (ft)	28	28				
Lanes Crossed	2	1				
Veh Vol Crossed	910	1500				
Ped Vol Crossed	0	0				
Yield Rate(%)	0	0				
Ped Platooning	No	No				
Critical Headway (s)	11.00	11.00				
Prob of Delayed X-ing	0.94	0.99				
Prob of Blocked Lane	0.75	0.99				
Delay for add Gap	52.08	223.70				
Avg Ped Delay (s)	48.85	221.42				
Approach						
Approach Direction	SB					
Median Present?	No					
Approach Delay(s)	4955480					
Level of Service	F					
Crosswalk						
Length (ft)	68					
Lanes Crossed	4					
Veh Vol Crossed	2410					
Ped Vol Crossed	0					
Yield Rate(%)	0					
Ped Platooning	No					
Critical Headway (s)	22.43					
Prob of Delayed X-ing	1.00					
Prob of Blocked Lane	0.98					
Delay for add Gap	4955480.00					
Avg Ped Delay (s)	4955480.00					

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	880	30	40	170	530	1070
Future Volume (veh/h)	880	30	40	170	530	1070
Number	7	14	5	2	6	16
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	917	31	42	177	552	1115
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1085	499	198	1027	849	1219
Arrive On Green	0.32	0.32	0.03	0.55	0.46	0.46
Sat Flow, veh/h	3442	1583	1774	1863	1863	1580
Grp Volume(v), veh/h	917	31	42	177	552	1115
Grp Sat Flow(s), veh/hln	1721	1583	1774	1863	1863	1580
Q_Serve(g_s), s	22.4	1.2	1.1	4.2	20.6	41.0
Cycle Q Clear(g_c), s	22.4	1.2	1.1	4.2	20.6	41.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1085	499	198	1027	849	1219
V/C Ratio(X)	0.84	0.06	0.21	0.17	0.65	0.91
Avail Cap(c_a), veh/h	1415	651	226	1056	849	1219
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.7	21.5	14.5	10.0	18.9	7.1
Incr Delay (d2), s/veh	3.8	0.1	0.5	0.1	1.8	10.7
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/hln	11.1	1.3	0.5	2.2	11.0	31.2
LnGrp Delay(d), s/veh	32.6	21.6	15.0	10.1	20.7	17.8
LnGrp LOS	C	C	B	B	C	B
Approach Vol, veh/h	948			219	1667	
Approach Delay, s/veh	32.2			11.0	18.7	
Approach LOS	C			B	B	
Timer	1	2	3	4	5	6
Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	55.6	34.4	8.6	47.0		
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		
Max Green Setting (Gmax), s	51.0	37.0	4.0	41.0		
Max Q Clear Time (g_c+H), s	6.2	24.4	3.1	43.0		
Green Ext Time (p_c), s	19.9	4.0	0.0	0.0		
Intersection Summary						
HCM 2010 Ctrl Delay				22.6		
HCM 2010 LOS				C		

Approach	EB	NB	SB
Crosswalk Length (ft)	61.2	36.1	59.9
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2
Ped. Right-Left Flow Rate (p/h)	2	0	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq.ft)	12129.2	18193.8	7265.0
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	F	-	F
Pedestrian Delay (S/p)	50.0	50.0	50.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.74	2.35	2.82
Pedestrian Crosswalk LOS	B	B	C

Avila Ranch
10: Higuera & LOVR

Avila Ranch
11: Higuera & Buckley

Near Term PM
6/18/2015

Near Term PM
6/18/2015

Approach	EB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0
Total Flow Rate (veh/h)	948	219	1667
Effct. Green for Bike (s)	35.0	35.6	30.4
Cross Street Width (ft)	36.1	59.9	61.2
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (b/ke/h)	700	712	608
Bicycle Delay (s/bike)	21.1	20.7	24.2
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	1.82	1.77	4.17
Bicycle LOS	A	A	D

Lane Group	NBT	SBT
Lane Group Flow (vph)	228	609
v/c Ratio	0.24	0.65
Control Delay	4.4	8.6
Queue Delay	0.0	0.0
Total Delay	4.4	8.6
Queue Length 50th (ft)	14	47
Queue Length 95th (ft)	28	90
Internal Link Dist (ft)	852	1929
Turn Bay Length (ft)		
Base Capacity (vph)	1090	1090
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.21	0.56
Intersection Summary		

Avila Ranch
11: Higuera & Buckley

Near Term PM
6/18/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					↓
Traffic Volume (vph)	0	0	210	0	0	560
Future Volume (vph)	0	0	210	0	0	560
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0				4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (prot)	1863	1863	1863	1863	1863	1863
Flt Permitted	1.00	1.00	1.00	1.00	1.00	1.00
Satd. Flow (perm)	1863	1863	1863	1863	1863	1863
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	0	0	228	0	0	609
RTOR Reduction (vph)	0	0	0	0	0	0
Lane Group Flow (vph)	0	0	228	0	0	609
Turn Type	Prot		NA		NA	NA
Protected Phases	8		2		6	
Permitted Phases					6	
Actuated Green, G (s)	13.9		13.9		13.9	
Effective Green, g (s)	13.9		13.9		13.9	
Actuated g/C Ratio	0.51		0.51		0.51	
Clearance Time (s)	4.0		4.0		4.0	
Vehicle Extension (s)	3.0		3.0		3.0	
Lane Grp Cap (vph)	945		945		945	
v/s Ratio Prot	0.12		0.12		0.33	
v/c Ratio	0.24		0.24		0.64	
Uniform Delay, d1	3.8		4.9		4.9	
Progression Factor	1.00		1.00		1.00	
Incremental Delay, d2	0.1		1.5		1.5	
Delay (s)	3.9		6.5		6.5	
Level of Service	A		A		A	
Approach Delay (s)	0.0		3.9		6.5	
Approach LOS	A		A		A	
Intersection Summary						
HCM 2000 Control Delay			5.8	HCM 2000 Level of Service		A
HCM 2000 Volume to Capacity ratio			0.46			
Actuated Cycle Length (s)			27.4	Sum of lost time (s)		8.0
Intersection Capacity Utilization			32.8%	ICU Level of Service		A
Analysis Period (min)			15			
c. Critical Lane Group						

Avila Ranch
11: Higuera & Buckley

Near Term PM
6/18/2015

Approach	WB	NB	SB
Crosswalk Length (ft)	32.8	35.6	36.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	2
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (S/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.69	2.30	2.30
Pedestrian Crosswalk LOS	A	B	B

Avila Ranch
11: Higuera & Buckley

Near Term PM
6/18/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	0	228	609
Effct. Green for Bike (s)	5.6	14.0	14.0
Cross Street Width (ft)	36.0	32.8	35.6
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	280	700	700
Bicycle Delay (s/bike)	14.8	8.4	8.4
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.11	2.44	3.11
Bicycle LOS	B	B	C

Avila Ranch
12: Buckley & Vachell

Near Term PM
6/18/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔	↔	↔	↔	↔
Traffic Volume (veh/h)	0	0	0	190	230	0
Future Volume (Veh/h)	0	0	0	190	230	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	207	250	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked				104	104	
vC1, conflicting volume	207					
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	207				104	104
iC, single (s)	4.1				6.4	6.2
iC, 2 stage (s)						
p0 queue free %	2.2				3.5	3.3
IF (s)	100				72	100
pM capacity (veh/h)	1364				895	951
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	0	207	250			
Volume Left	0	0	250			
Volume Right	0	207	0			
cSH	1700	1700	895			
Volume to Capacity	0.00	0.12	0.28			
Queue Length 95th (ft)	0	0	29			
Control Delay (s)	0.0	0.0	10.6			
Lane LOS			B			
Approach Delay (s)	0.0	0.0	10.6			
Approach LOS			B			
Intersection Summary						
Average Delay			5.8			
Intersection Capacity Utilization			31.2%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Near Term PM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	0
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.00
Prob of Blocked Lane	0.00
Delay for adq Gap	0.00
Avg Ped Delay (s)	0.00
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	0
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.00
Prob of Blocked Lane	0.00
Delay for adq Gap	0.00
Avg Ped Delay (s)	0.00

Avila Ranch
13: Buckley & Project Entry

Near Term PM
6/18/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		W	
Traffic Volume (veh/h)	0	220	220	0	0	0
Future Volume (Veh/h)	0	220	220	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	239	239	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
VC, conflicting volume	239				478	239
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	239				478	239
IC, single (s)	4.1				6.4	6.2
IC, 2 stage (s)						
IF (s)	2.2				3.5	3.3
p0 queue free %	100				100	100
dm capacity (veh/h)	1328				546	800
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	239	239	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1328	1700	1700			
Volume to Capacity	0.00	0.14	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization		14.9%			ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
13: Buckley & Project Entry

Near Term PM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	15.8
Approach Delay(s)	C
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	440
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.77
Prob of Blocked Lane	0.52
Delay for add Gap	20.39
Avg Ped Delay (s)	15.77
Approach	WB
Approach Direction	No
Median Present?	15.8
Approach Delay(s)	C
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	440
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.77
Prob of Blocked Lane	0.52
Delay for add Gap	20.39
Avg Ped Delay (s)	15.77

Avila Ranch
14: Broad & Buckley

Near Term PM
6/18/2015

EBT	EBR	WBT	NBL	NBT	SBL	SBR	
→	↖	←	↗	↑	↘	↙	
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	73	302	41	83	520	21	1135
v/c Ratio	0.42	0.87	0.47	0.66	0.37	0.23	0.91
Control Delay	56.8	46.2	50.7	78.8	7.1	60.3	28.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.8	46.2	50.7	78.8	7.1	60.3	28.6
Queue Length 50th (ft)	52	106	15	61	101	15	648
Queue Length 95th (ft)	100	#230	#66	#156	236	44	#1113
Internal Link Dist (ft)	9732	405	777				1174
Turn Bay Length (ft)	150		360	470			
Base Capacity (vph)	298	347	87	125	1399	91	1343
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.87	0.47	0.66	0.37	0.23	0.85
Intersection Summary							
# 95th percentile volume exceeds capacity, queue may be longer.							
Queue shown is maximum after two cycles.							

Avila Ranch
14.: Broad & Buckley

Near Term PM
6/18/2015

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	60	10	290	10	10	20	80	490	10	20	1090	30
Future Volume (veh/h)	60	10	290	10	10	20	80	490	10	20	1090	30
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	0.91	1.00	0.98	1.00	0.98	1.00	1.00	0.98	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	62	10	302	10	10	21	83	510	10	21	1135	31
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	206	33	298	12	12	26	101	1196	23	29	1166	969
Arrive On Green	0.14	0.14	0.14	0.03	0.03	0.03	0.06	0.68	0.68	0.02	0.64	0.64
Sat Flow, veh/h	1522	246	1519	384	384	807	1712	1756	34	1739	1825	1517
Grp Volume(V), veh/h	72	0	302	41	0	0	83	0	520	21	1135	31
Grp Sat Flow(s), veh/hln	1768	0	1519	1575	0	0	1712	0	1791	1739	1825	1517
Q_Serve(g_s), s	4.3	0.0	16.0	3.1	0.0	0.0	5.7	0.0	15.4	1.4	70.3	0.9
Cycle Q Clear(g_c), s	4.3	0.0	16.0	3.1	0.0	0.0	5.7	0.0	15.4	1.4	70.3	0.9
Prop In Lane	0.86	1.00	1.00	0.24	0.51	1.00	1.00	0.02	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	239	0	298	50	0	0	101	0	1219	29	1166	969
V/C Ratio(X)	0.30	0.00	1.01	0.82	0.00	0.00	0.82	0.00	0.43	0.72	0.97	0.03
W/C Cap(c_a), veh/h	239	0	298	53	0	0	101	0	1219	73	1188	987
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	0.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.1	0.0	47.7	57.0	0.0	0.0	55.0	0.0	8.5	57.9	20.4	7.9
Incr Delay (d2), s/veh	0.7	0.0	55.5	60.7	0.0	0.0	39.1	0.0	0.2	27.6	19.8	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/ln	2.2	0.0	14.3	2.2	0.0	0.0	3.8	0.0	7.6	0.9	41.4	0.4
LnGrp Delay(d), s/veh	46.8	0.0	103.3	117.6	0.0	0.0	94.1	0.0	8.7	85.5	40.2	7.9
LnGrp LOS	D	F	F	F	F	F	F	F	A	F	D	A
Approach Vol, veh/h	374			41			603				1187	
Approach Delay, s/veh	92.4			117.6			20.5				40.2	
Approach LOS	F			F			C				D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	6.0	84.6		20.0	11.0	79.6						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	5.0	79.0		16.0	7.0	77.0						
Max Q Clear Time (g_c+H), s	3.4	17.4		18.0	7.7	72.3						
Green Ext Time (g_e), s	0.0	21.8		0.0	0.0	3.3						
Intersection Summary												
HCM 2010 Ctrl Delay	45.1											
HCM 2010 LOS	D											

Avila Ranch
14.: Broad & Buckley

Near Term PM
6/18/2015

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.6	24.1	37.1	48.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4894.5	0.0	4815.1	5120.2
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.20	1.78	2.95	2.80
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14.: Broad & Buckley

Near Term PM
6/18/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	374	41	603	1187
Effct. Green for Bike (s)	10.1	4.3	80.6	70.4
Cross Street Width (ft)	37.1	48.3	24.1	39.6
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	168	72	1343	1173
Bicycle Delay (s/bike)	50.3	55.8	6.5	10.3
Bicycle Compliance	Poor	Poor	Good	Fair
Bicycle LOS Score	2.74	2.37	2.92	4.12
Bicycle LOS	B	B	C	D

Avila Ranch
15.: Earthwood & Suburban

Near Term PM
6/18/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
VC conflicting volume						
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol						
IC single (s)			4.1		6.4	6.2
IC 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
dM capacity (veh/h)			1623		1023	1085
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			0.0%			A
Analysis Period (min)			15			

Avila Ranch
16. Horizon Ln & Suburban

Near Term PM
6/18/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	0	0	0			
Volume Left (vph)	0	0	0			
Volume Right (vph)	0	0	0			
Head (s)	0.00	0.00	0.00			
Departure Headway (s)	3.9	3.9	3.9			
Degree Utilization, x	0.00	0.00	0.00			
Capacity (veh/h)	917	917	917			
Control Delay (s)	6.9	6.9	6.9			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	0.0					
Level of Service	A					
Intersection Capacity Utilization	0.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17. Vachell & Venture Dr

Near Term PM
6/18/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	0	0	180	0	0	230
Future Volume (Veh/h)	0	0	180	0	0	230
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	196	0	0	250
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None			None
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
VC, conflicting volume	446	196		196		
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	446	196		196		
IC, single (s)	6.4	6.2		4.1		
IC, 2 stage (s)						
IF (s)	3.5	3.3		2.2		
p0 queue free %	100	100		100		
dM capacity (veh/h)	570	845		1377		
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	196	250			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1377			
Volume to Capacity	0.00	0.12	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	15.4%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
18: Vachell & Project Entry

Near Term PM
6/18/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					R
Traffic Volume (veh/h)	0	0	180	0	0	230
Future Volume (Veh/h)	0	0	180	0	0	230
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	196	0	0	250
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						None
Median type						None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	446	196				196
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	446	196				196
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	100	100				100
CM capacity (veh/h)	570	845				1377
Direction_Lane #	WB1	NB1	SB1			
Volume Total	0	196	250			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1377			
Volume to Capacity	0.00	0.12	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	15.4%					
Analysis Period (min)	15					
	ICU Level of Service A					

Avila Ranch
1: LOVR & 101 NB/101 SB

Near Term Plus Project no BP AM
2/18/2016

	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	489	326	58	974	821	359
w/c Ratio	0.57	0.41	0.27	0.65	0.72	0.48
Control Delay	21.0	14.4	21.4	30.8	25.2	4.4
Queue Delay	0.0	0.0	0.0	0.0	0.7	0.4
Total Delay	21.0	14.4	21.4	30.8	25.9	4.8
Queue Length 50th (ft)	196	91	26	276	213	55
Queue Length 95th (ft)	315	169	m45	327	267	11
Internal Link Dist (ft)	198			872	236	
Turn Bay Length (ft)	150		150			270
Base Capacity (vph)	854	803	217	1651	1297	807
Starvation Cap Reductn	0	0	0	0	190	145
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.57	0.41	0.27	0.59	0.74	0.54
Intersection Summary						
m	Volume for 95th percentile queue is metered by upstream signal.					

Avila Ranch
2/18/2016
Near Term Plus Project no BP AM

1.: LOVR & 101 NB/101 SB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBT	SBR
Lane Configurations													
Traffic Volume (vph)	0	0	0	450	10	290	53	896	0	0	755	330	
Future Volume (vph)	0	0	0	450	10	290	53	896	0	0	755	330	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	3.5	3.5	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Frbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.86	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Sat'd. Flow (prot)	1770	1593	1770	3539	3539	1583	3539	3539	1583	3539	1583	3539	
Flt Permitted	0.95	1.00	1.00	0.16	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	
Sat'd. Flow (perm)	1770	1593	1770	289	3539	1583	3539	3539	1583	3539	1583	3539	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	0	0	0	489	11	315	58	974	0	0	821	359	
RTOR Reduction (vph)	0	0	0	0	35	0	0	0	0	0	0	243	
Lane Group Flow (vph)	0	0	0	489	291	0	58	974	0	0	821	116	
Confit. Peds. (#/hr)													
Turn Type													
Permitted Phases													
Protected Phases													
Actuated Green, G (s)	8			8			6				6		2
Effective Green, g (s)	43.5			43.5			38.0				38.0		29.0
Actuated q/C Ratio	0.48			0.48			0.42				0.32		0.32
Clearance Time (s)	3.5			3.5			5.0				5.0		5.0
Vehicle Extension (s)	3.0			3.0			3.0				3.0		3.0
Lane Grp Cap (vph)	855			769			212				1494		510
v/s Ratio Prot				0.18			0.02				0.28		0.23
v/s Ratio Perm				0.28			0.10				0.23		0.23
Uniform Delay, d1	16.6			14.7			17.5				20.7		22.3
Progression Factor	1.00			1.00			1.40				1.41		0.94
Incremental Delay, d2	2.8			1.4			2.9				2.1		3.8
Level of Service	B			B			C				C		C
Approach Delay (s)	0.0			18.1			31.1				24.4		C
Approach LOS	A			B			C				C		C
Intersection Summary													
HCM 2000 Control Delay													
HCM 2000 Volume to Capacity ratio	25.0												C
Actuated Cycle Length (s)	0.64												
Intersection Capacity Utilization	60.0%												B
Analysis Period (min)	15												
c Critical Lane Group													

Avila Ranch
2/18/2016
Near Term Plus Project no BP AM

1.: LOVR & 101 NB/101 SB

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBT	SBR
Lane Configurations													
Traffic Volume (veh/h)	0	0	0	450	10	290	53	896	0	0	755	330	
Future Volume (veh/h)	0	0	0	450	10	290	53	896	0	0	755	330	
Number	3	8	8	18	1	6	16	5	2	12	2	12	
Initial Q. (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0	
Ped-Bike Adj(A_pbT)	1.00			1.00			1.00			1.00		1.00	
Parking Bus, Adj	1.00			1.00			1.00			1.00		1.00	
Adj Sat Flow, veh/hln	1863			1863			1863			1863		1863	
Adj Flow Rate, veh/h	489			315			58			974		821	
Adj No. of Lanes	1			1			2			2		2	
Peak Hour Factor	0.92			0.92			0.92			0.92		0.92	
Percent Heavy Veh. %	2			2			2			2		2	
Cap. veh/h	779			24			675			271		1652	
Arrive On Green	0.44			0.44			0.12			0.93		0.00	
Sat Flow, veh/h	1774			54			1538			1774		3632	
Grp Volume(V), veh/h	489			0			326			58		974	
Grp Sat Flow(S), veh/hln	1774			0			1591			1774		1770	
Q.Serv(g_s), s	19.2			0.0			13.0			1.6		3.7	
Cycle Q Clear(g_c), s	19.2			0.0			13.0			1.6		3.7	
Prop In Lane	1.00			1.00			0.97			1.00		1.00	
Lane Grp Cap(c), veh/h	779			0			698			271		1652	
V/C Ratio(X)	0.63			0.00			0.47			0.21		0.59	
Avail Cap(c.a), veh/h	779			0			698			271		1652	
HCM Platoon Ratio	1.00			1.00			1.00			2.00		1.00	
Upstream Filter(0)	1.00			1.00			1.00			0.84		0.84	
Uniform Delay (d), s/veh	19.6			0.0			17.8			15.3		1.7	
Incr Delay (d2), s/veh	3.8			0.0			2.2			1.5		1.3	
Initial Q Delay(g3), s/veh	0.0			0.0			0.0			0.0		0.0	
%ile BackOf(50%) veh/ln	10.2			0.0			6.1			0.9		1.7	
LnGrp Delay(d), s/veh	23.4			0.0			20.1			16.8		3.0	
LnGrp LOS	C			C			B			A		C	
Approach Vol, veh/h				815			1032			1180		1180	
Approach Delay, s/veh				22.0			3.8			26.4		26.4	
Approach LOS				C			A			C		C	
Timer	1	2	3	4	5	6	7	8					
Assigned Phs	1	2				6							
Phs Duration (G+Y+Rc), s	9.0			38.0			47.0			43.0		43.0	
Change Period (Y+Rc), s	3.5			5.0			5.0			3.5		3.5	
Max Green Setting (Cmax), s	5.5			33.0			42.0			39.5		39.5	
Max Q Clear Time (g_c+H), s	3.6			19.2			5.7			21.2		21.2	
Green Ext Time (g_c), s	0.0			10.6			21.1			4.4		4.4	
Intersection Summary													
HCM 2010 Ctrl Delay				17.5			B						
HCM 2010 LOS				B									

Avila Ranch
1: LOVR & 101 NB/101 SB
Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	14.8	24.0	60.3	72.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated			
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	50	200	500	0
Right Corner Area per Ped. (sq ft)	30	30	35	35
Right Corner Quality of Service	0.0	0.0	0.0	0.0
Ped. Circulation Area (sq ft)	-	-	-	-
Crosswalk Circulation Code	0.0	0.0	0.0	0.0
Pedestrian Delay (s/p)	-	-	-	-
Pedestrian Compliance Code	45.0	36.5	45.0	36.5
Pedestrian Crosswalk Score	Poor	Poor	Poor	Poor
Pedestrian Crosswalk LOS	1.92	2.40	3.55	2.86
Pedestrian Crosswalk LOS	A	B	D	C

Avila Ranch
1: LOVR & 101 NB/101 SB
Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	0	815	1032	1180
Effct. Green for Bike (s)	0.0	43.5	38.0	29.0
Cross Street Width (ft)	60.3	72.0	24.0	14.8
Through Lanes Number	0	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	967	844	644
Bicycle Delay (s/bike)	0.0	12.0	15.0	20.7
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	0.00	4.01	2.78	2.76
Bicycle LOS	D	C	C	C

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP AM
2/18/2016

	EBL	NBL	NBT	SBT	SBR
Lane Group	628	172	552	1144	149
Lane Group Flow (vph)	0.77	0.52	0.24	0.60	0.16
v/c Ratio	35.4	11.2	6.8	21.9	9.8
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	35.4	11.2	6.8	21.9	9.8
Total Delay	154	30	59	302	27
Queue Length 50th (ft)	201	61	95	424	m63
Queue Length 95th (ft)	160	200	385	872	150
Internal Link Dist (ft)	991	333	2348	1918	921
Turn Bay Length (ft)	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0.63	0.52	0.24	0.60	0.16
Reduced v/c Ratio	m				
Intersection Summary	Volume for 95th percentile queue is metered by upstream signal.				

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP AM
2/18/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	TT	TT	T	TT	TT	T
Traffic Volume (vph)	430	161	162	519	1075	140
Future Volume (vph)	430	161	162	519	1075	140
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	3.5	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	0.95	0.95	1.00	1.00
Flt Protected	0.96	0.96	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3344	3344	1770	3539	3539	1583
Flt Permitted	0.96	0.96	0.16	1.00	1.00	1.00
Satd. Flow (perm)	3344	3344	299	3539	3539	1583
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	457	171	172	552	1144	149
RTOR Reduction (vph)	48	0	0	0	0	64
Lane Group Flow (vph)	580	0	172	552	1144	85
Turn Type	Prot		pm+pt	NA	NA	Perm
Protected Phases	3		1	6	2	
Permitted Phases			6		2	
Actuated Green, G (s)	20.8	59.7	59.7	48.5	48.5	48.5
Effective Green, g (s)	20.8	59.7	59.7	48.5	48.5	48.5
Actuated g/C Ratio	0.23	0.66	0.66	0.54	0.54	0.54
Clearance Time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	772	324	2347	1907	853	
v/s Ratio Prot	c0.17	c0.05	0.16	c0.32		
v/c Ratio	0.75	0.53	0.24	0.60	0.10	0.05
Uniform Delay, d1	32.2	8.6	6.0	14.1	10.1	10.1
Progression Factor	1.00	1.00	1.00	1.37	3.44	
Incremental Delay, d2	4.2	1.7	0.2	1.1	0.2	
Delay (s)	36.3	10.3	6.3	20.6	34.9	
Level of Service	D	B	A	C	C	C
Approach Delay (s)	36.3	7.2	22.2			
Approach LOS	D	A	C			
Intersection Summary						
HCM 2000 Control Delay	21.5		HCM 2000 Level of Service		C	
HCM 2000 Volume to Capacity ratio	0.63					
Actuated Cycle Length (s)	90.0		Sum of lost time (s)		13.0	
Intersection Capacity Utilization	67.7%		ICU Level of Service		C	
Analysis Period (min)	15					
c. Critical Lane Group						

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	38.7	60.1	72.0
Crosswalk Width (ft)	10.0	10.0	10.0
Total Number of Lanes Crossed	3	5	5
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.26	2.77	2.76
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	628	724	1293
Effct. Green for Bike (s)	20.8	59.7	48.5
Cross Street Width (ft)	60.1	72.0	38.7
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	462	1327	1078
Bicycle Delay (s/bike)	26.6	5.1	9.6
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	3.00	3.26	3.22
Bicycle LOS	C	C	C

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP AM
2/18/2016

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	31	21	627	125	42	330	621	135	450
Lane Group Flow (vph)	0.35	0.09	0.67	0.24	0.34	0.28	0.56	0.62	0.28
v/c Ratio	53.6	0.8	31.7	10.2	48.2	23.0	3.9	49.8	17.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	53.6	0.8	31.7	10.2	48.2	23.0	3.9	49.8	17.7
Total Delay	18	0	164	13	24	77	30	75	95
Queue Length 50th (ft)	47	0	223	55	58	113	60	136	135
Queue Length 95th (ft)	208	0	629	629	338	338	60	100	507
Internal Link Dist (ft)									
Turn Bay Length (ft)	88	234	1079	576	128	1199	1147	256	1582
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.09	0.68	0.22	0.33	0.28	0.54	0.53	0.28
Intersection Summary									

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP AM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement	10	20	20	602	30	90	40	317	596	130	402	30
Lane Configurations	10	20	20	602	30	90	40	317	596	130	402	30
Traffic Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Future Volume (vph)	5.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Ideal Flow (vphpl)	1.00	1.00	1.00	0.97	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95
Total Lost time (s)	1.00	1.00	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	1.00	0.99
Frpb, ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frtp, ped/bikes	1.00	0.85	1.00	0.89	1.00	1.00	1.00	1.00	0.85	1.00	1.00	0.99
Flt Protected	1833	1583	3433	1629	1770	3539	1561	1770	3496	1770	3496	1770
Satd. Flow (prot)	1833	1583	3433	1629	1770	3539	1561	1770	3496	1770	3496	1770
Flt Permitted	0.98	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00	0.95
Satd. Flow (perm)	1833	1583	3433	1629	1770	3539	1561	1770	3496	1770	3496	1770
Peak-Hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	10	21	21	627	31	94	42	330	621	135	419	31
RTOR Reduction (vph)	0	0	20	0	70	0	0	0	169	0	5	0
Lane Group Flow (vph)	0	31	1	627	55	0	42	330	452	135	445	0
Confl. Peds. (#/hr)	7					7	4		13	13		4
Turn Type	Split	NA	Perm	Spill	NA	NA	Prot	NA	pm+ov	Prot	NA	NA
Protected Phases	8	8	8	4	4	4	4	4	4	5	2	2
Permitted Phases	8	8	8	4	4	4	4	4	4	5	2	2
Actuated Green, G (s)	2.2	2.2	2.2	23.0	23.0	23.0	3.3	28.4	51.4	12.8	37.9	37.9
Effective Green, g (s)	2.2	2.2	2.2	23.0	23.0	23.0	3.3	28.4	51.4	12.8	37.9	37.9
Actuated g/C Ratio	0.02	0.02	0.02	0.26	0.26	0.26	0.04	0.32	0.58	0.14	0.43	0.43
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0	6.0	5.0	6.0	6.0	5.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	45	39	893	423	66	1136	907	256	1498	60.08	0.13	0.13
v/s Ratio Prot	c0.02			c0.18	0.03		0.02	0.09	c0.13			
v/s Ratio Perm										0.16		
v/c Ratio	0.69	0.01	0.70	0.13	0.13	0.13	0.64	0.29	0.50	0.53	0.30	0.30
Uniform Delay, d1	42.8	42.0	29.6	25.0	42.0	22.5	10.9	35.0	16.5	16.5	16.5	16.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	35.8	0.1	2.5	0.1	18.4	0.6	0.4	2.0	0.5	2.0	0.5	0.5
Delay (s)	78.6	42.2	32.1	25.2	60.3	23.1	11.3	37.0	17.0	17.0	17.0	17.0
Level of Service	E	D	C	C	E	C	B	D	B	D	B	B
Approach Delay (s)	63.9			31.0			17.3		21.6			
Approach LOS	E			C			B		C			C
Intersection Summary												
HCM 2000 Control Delay	23.7											
HCM 2000 Volume to Capacity ratio	0.58											
Actuated Cycle Length (s)	88.4											
Intersection Capacity Utilization	68.5%											
Analysis Period (min)	15											
c Critical Lane Group												

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	10	20	20	602	30	90	40	317	596	130	402
Traffic Volume (veh/h)	10	20	20	602	30	90	40	317	596	130	402
Future Volume (veh/h)	3	8	18	7	4	14	1	6	16	5	2
Number	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.96	0.96	1.00	1.00	0.99	1.00	0.99	1.00	1.00	0.98
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/h	10	21	21	627	31	94	42	330	621	135	419
Adj Flow Rate, veh/h	0	1	1	2	1	0	1	2	1	1	2
Adj No. of Lanes	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	20	42	52	816	96	291	54	1236	922	187	1415
Cap. veh/h	0.03	0.03	0.03	0.24	0.24	0.24	0.03	0.35	0.35	0.11	0.42
Arrive On Green	591	1242	1517	3442	405	1228	1774	3539	1566	1774	3338
Sat Flow, veh/h	31	0	21	627	0	125	42	330	621	135	221
Grp Volume(V), veh/h	1833	0	1517	1721	0	1633	1774	1770	1566	1774	1770
Grp Sat Flow(s),veh/h	1.3	0.0	1.1	13.6	0.0	5.1	1.9	5.4	21.8	5.9	6.6
Q_Serve(g.s), s	1.3	0.0	1.1	13.6	0.0	5.1	1.9	5.4	21.8	5.9	6.6
Cycle Q Clear(g.c), s	0.32	1.00	1.00	1.00	1.00	0.75	1.00	1.00	1.00	1.00	1.00
Prop In Lane	63	0	52	816	0	387	54	1236	922	187	750
Lane Grp Cap(c), veh/h	0.49	0.00	0.40	0.77	0.00	0.32	0.78	0.27	0.67	0.72	0.29
V/C Ratio(X)	91	0	76	1116	0	529	133	1236	922	265	750
Avail Cap(c), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	38.0	0.0	37.9	28.5	0.0	25.3	38.6	18.7	11.4	34.7	15.2
Uniform Delay (d), s/veh	5.9	0.0	5.0	2.2	0.0	0.5	21.1	0.5	3.9	5.5	1.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.8	0.0	0.5	6.7	0.0	2.3	1.2	2.7	14.6	3.2	3.4
%ile BackOf(50%)veh/h	43.9	0.0	42.9	30.8	0.0	25.7	59.7	19.3	15.3	40.3	16.2
LnGrp Delay(d),s/veh	D	D	D	C	C	C	E	B	B	D	B
LnGrp LOS	D	D	D	C	C	C	E	B	B	D	B
Approach Vol, veh/h	52			752			993			585	
Approach Delay, s/veh	43.5			29.9			18.5			21.8	
Approach LOS	D			C			B			C	
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	7.4	40.0		25.0	13.4	34.0					
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0					
Max Green Setting (Gmax), s	6.0	34.0		26.0	12.0	28.0					
Max Q Clear Time (g.c+H), s	3.9	8.7		15.6	7.9	23.8					
Green Ext Time (p.c), s	0.1	2.9		2.8	0.2	2.1					
Intersection Summary											
HCM 2010 Ctrl Delay	23.5										
HCM 2010 LOS	C										

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated/Actuated/Actuated			
Corresponding Signal Phase	2	6	8	4
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	40	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (S/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.02	2.72	2.80	2.52
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP AM
2/18/2016

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	52	752	993	585
Effct. Green for Bike (s)	4.1	23.0	28.5	37.9
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	89	500	620	824
Bicycle Delay (s/bike)	42.0	25.9	21.9	15.9
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.95	2.83	2.23	1.83
Bicycle LOS	C	C	B	A

	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBR
Lane Group Flow (vph)	373	377	598	11	22	120	351	494
v/c Ratio	0.65	0.65	0.60	0.06	0.12	0.47	0.22	0.63
Control Delay	27.0	27.0	4.4	35.1	26.2	38.7	14.1	29.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.0	27.0	4.4	35.1	26.2	38.7	14.1	29.6
Queue Length 50th (ft)	156	157	18	5	5	54	55	114
Queue Length 95th (ft)	282	285	55	20	27	116	93	180
Internal Link Dist (ft)	964							
Turn Bay Length (ft)	110							
Base Capacity (vph)	787	793	1043	458	454	314	1992	1079
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.48	0.57	0.02	0.05	0.38	0.18	0.46
Intersection Summary								

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (vph)	660	30	550	10	10	10	110	313	10	10	444
Future Volume (vph)	660	30	550	10	10	10	110	313	10	10	444
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	0.95	0.95	1.00	1.00	1.00	1.00	1.00	0.95	1.00	0.95	0.88
Frbp_psd/bikes	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.93	1.00	1.00	1.00	1.00	1.00	0.85
Flt Protected	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	1.00	1.00
Sat'd. Flow (prot)	1681	1692	1565	1770	1723	1770	3519	3535	2756	3535	2756
Flt Permitted	0.95	0.96	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.94	1.00
Sat'd. Flow (perm)	1681	1692	1565	1770	1723	1770	3519	3342	2756	3342	2756
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	717	33	598	11	11	11	120	340	11	11	483
RTOR Reduction (vph)	0	0	249	0	10	0	0	2	0	0	0
Lane Group Flow (vph)	373	377	349	11	12	0	120	349	0	0	494
Confl. Peds. (#/hr)	6	6	6	6	6	6	6	6	6	6	6
Turn Type	Spill	NA	pm+ov	Spill	NA	Prot	NA	NA	Perm	NA	pm+ov
Protected Phases	4	4	5	8	8	8	2	2	6	6	6
Permitted Phases	4	4	5	8	8	8	2	2	6	6	6
Actuated Green, G (s)	23.2	23.2	32.9	3.7	3.7	9.7	30.0	16.3	39.5	16.3	39.5
Effective Green, g (s)	23.2	23.2	32.9	3.7	3.7	9.7	30.0	16.3	39.5	16.3	39.5
Actuated g/C Ratio	0.34	0.34	0.48	0.05	0.05	0.14	0.44	0.24	0.57	0.24	0.57
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	566	569	747	95	92	249	1532	790	1740	790	1740
v/s Ratio Prot	0.22	c0.22	0.07	0.01	c0.01	c0.07	0.10	c0.15	0.09	c0.15	0.09
v/s Ratio Perm	0.66	0.66	0.47	0.12	0.13	0.48	0.23	0.63	0.31	0.63	0.31
Uniform Delay, d1	19.5	19.5	12.1	31.0	31.1	27.3	12.2	23.6	7.6	23.6	7.6
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.8	2.9	0.5	0.5	0.6	1.5	0.1	1.6	0.1	1.6	0.1
Delay (s)	22.3	22.4	12.6	31.6	31.7	28.8	12.3	25.1	7.7	25.1	7.7
Level of Service	C	C	B	C	C	C	B	C	C	C	A
Approach Delay (s)	18.0	B		31.6	C	16.5	B	16.0	B	16.0	B
Approach LOS	B			C		B		B		B	
Intersection Summary											
HCM 2000 Control Delay	17.2 HCM 2000 Level of Service B										
HCM 2000 Volume to Capacity ratio	0.88										
Actuated Cycle Length (s)	68.9										
Intersection Capacity Utilization	61.1% ICU Level of Service B										
Analysis Period (min)	15										
c Critical Lane Group											

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	660	30	550	10	10	10	110	313	10	10	444
Future Volume (veh/h)	660	30	550	10	10	10	110	313	10	10	444
Number	7	4	14	3	8	8	18	5	2	12	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.98	1.00	1.00	0.99	0.99	0.99	0.99	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	741	0	0	11	11	11	120	340	11	11	483
Adj No. of Lanes	2	0	1	1	1	1	2	0	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	1046	0	607	64	30	30	157	1552	50	78	959
Arrive On Green	0.29	0.00	0.00	0.04	0.04	0.04	0.09	0.44	0.44	0.28	0.28
Sat Flow, veh/h	3548	0	1583	1774	845	845	1774	3499	113	26	3425
Grp Volume(V), veh/h	741	0	0	11	0	22	120	172	179	264	230
Grp Sat Flow(s), veh/hln	1774	0	1583	1774	0	1689	1774	1770	1842	1841	1610
Q_Serv(g_s)	9.9	0.0	0.0	0.3	0.0	0.7	3.5	3.2	3.2	6.4	5.5
Cycle Q Clear(g_c), s	9.9	0.0	0.0	0.3	0.0	0.7	3.5	3.2	3.2	6.4	5.5
Prop In Lane	1.00	1.00	1.00	1.00	0.50	1.00	1.00	0.06	0.04	1.00	1.00
Lane Grp Cap(c), veh/h	1046	0	607	64	0	61	157	785	817	586	451
V/C Ratio(X)	0.71	0.00	0.00	0.17	0.00	0.36	0.77	0.22	0.22	0.45	0.34
Avail Cap(c.a), veh/h	1935	0	1003	534	0	508	367	1165	1212	759	606
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
Upstream Filter(0)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.7	0.0	0.0	24.9	0.0	25.0	23.7	9.1	9.1	16.1	6.0
Incr Delay (d2), s/veh	0.9	0.0	0.0	1.3	0.0	3.6	7.5	0.1	0.1	0.5	0.1
Initial Q Delay(Q3), s/veh	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	5.0	0.0	0.0	0.2	0.0	0.4	2.0	1.6	1.6	3.3	2.9
LnGrp Delay(d), s/veh	17.6	0.0	0.0	26.1	0.0	28.6	31.2	9.3	9.3	16.6	17.0
LnGrp LOS	B			C		C	A	A	A	B	B
Approach Vol, veh/h	741			33			471			1037	
Approach Delay, s/veh	17.6			27.8			14.9			11.2	
Approach LOS	B			C			B			B	
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	2			4	5	6					
Phs Duration (G+Y+Rc), s	27.6			19.7	8.7	18.9					
Change Period (Y+Rc), s	4.0			4.0	4.0	4.0					
Max Green Setting (Cmax), s	35.0			29.0	11.0	20.0					
Max Q Clear Time (g_c+H), s	5.2			11.9	5.5	8.4					
Green Ext Time (g_e), s	9.7			3.3	0.1	6.1					
Intersection Summary											
HCM 2010 Ctrl Delay	14.3										
HCM 2010 LOS	B										
Notes											

User approved volume balancing among the lanes for turning movement.

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	1	0	0	1
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	100	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq.ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.79	1.98	2.76	2.49
Pedestrian Crosswalk LOS	C	A	C	B

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	1348	33	471	1037
Effct. Green for Bike (s)	23.2	7.0	30.0	15.9
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	504	152	652	346
Bicycle Delay (s/bike)	25.7	39.3	20.9	31.5
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	3.56	1.24	1.21	2.15
Bicycle LOS	D	A	A	B

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP AM
2/18/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	76	141	90	99	76	76	215	437	293	702
Lane Group Flow (vph)	0.28	0.37	0.22	0.43	0.22	0.19	0.56	0.47	0.62	0.64
v/c Ratio	27.2	27.3	4.0	31.9	26.2	2.8	30.7	22.4	28.9	22.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	27.2	27.3	4.0	31.9	26.2	2.8	30.7	22.4	28.9	22.7
Total Delay	27.2	27.3	4.0	31.9	26.2	2.8	30.7	22.4	28.9	22.7
Queue Length 50th (ft)	24	45	0	33	24	0	71	68	95	114
Queue Length 95th (ft)	73	118	21	94	71	12	176	148	221	228
Internal Link Dist (ft)	363			386			1342			828
Turn Bay Length (ft)	150	150	150	150	150	200	250	125		
Base Capacity (vph)	610	861	775	545	831	774	789	1830	1140	2538
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.16	0.12	0.18	0.09	0.10	0.27	0.24	0.26	0.28
Intersection Summary										

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	70	130	83	91	70	70	198	349	53	270	596	50
Traffic Volume (vph)	70	130	83	91	70	70	198	349	53	270	596	50
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	50	50	50	60	60	60	60	60	60	60	60	60
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frbp_psd/bikes	1.00	1.00	0.98	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp_psd/bikes	1.00	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	1.00	0.98	1.00	0.99
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	1770	1863	1548	1754	1863	1583	1770	3453	1770	3492	1770	3492
Flt Permitted	0.71	1.00	1.00	0.67	1.00	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	1318	1863	1548	1231	1863	1583	1770	3453	1770	3492	1770	3492
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	76	141	90	99	76	76	215	379	58	293	648	54
RTOR Reduction (vph)	0	0	71	0	0	61	0	11	0	0	6	0
Lane Group Flow (vph)	76	141	19	99	76	15	215	426	0	293	696	0
Confl. Peds. (#/hr)				12	12		3		9	9		3
Turn Type	Perm	NA	Perm	Perm	NA	Perm	Prot	NA	Prot	NA	Prot	NA
Protected Phases	4		4	8	8	8	5	2		1	6	
Permitted Phases												
Actuated Green, G (s)	13.2	13.2	13.2	12.2	12.2	12.2	14.0	17.0	17.0	20.0	20.0	20.0
Effective Green, g (s)	13.2	13.2	13.2	12.2	12.2	12.2	14.0	17.0	17.0	20.0	20.0	20.0
Actuated g/C Ratio	0.21	0.21	0.21	0.19	0.19	0.19	0.22	0.27	0.27	0.32	0.32	0.32
Clearance Time (s)	5.0	5.0	5.0	6.0	6.0	6.0	5.0	6.0	5.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	275	389	323	237	359	305	392	928	476	1105	60.17	60.20
v/s Ratio Prot	0.08		0.01	c0.08	0.04	0.12	0.12					
v/s Ratio Perm	0.06		0.06	0.42	0.21	0.05	0.55	0.46		0.62	0.63	
Uniform Delay, d1	21.0	21.4	20.0	22.4	21.5	20.8	21.8	19.3	20.2	18.4		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.5	0.6	0.1	1.2	0.3	0.1	1.6	0.4	2.4	1.1		
Delay (s)	21.5	22.0	20.1	23.6	21.8	20.8	23.4	19.6	22.6	19.6		
Level of Service	C	C	C	C	C	C	C	B	C	B		
Approach Delay (s)	21.3			22.2			20.9			20.5		
Approach LOS	C			C			C			C		
Intersection Summary												
HCM 2000 Control Delay	20.9 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.60											
Actuated Cycle Length (s)	63.2 Sum of lost time (s) 17.0											
Intersection Capacity Utilization	62.8% ICU Level of Service B											
Analysis Period (min)	15											
c Critical Lane Group												

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	70	130	83	91	70	70	198	349	53	270	596	50
Traffic Volume (veh/h)	70	130	83	91	70	70	198	349	53	270	596	50
Future Volume (veh/h)	70	130	83	91	70	70	198	349	53	270	596	50
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99	0.99	0.99	0.99	0.99	0.99	1.00	1.00	0.98	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow (veh/h)	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	76	141	90	99	76	76	215	379	58	293	648	54
Adj No. of Lanes	1	1	1	1	1	1	1	1	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	371	449	376	320	449	376	277	844	128	366	1074	89
Arrive On Green	0.24	0.24	0.24	0.24	0.24	0.24	0.16	0.27	0.27	0.21	0.32	0.25
Sat Flow, veh/h	1216	1863	1560	1134	1863	1560	1774	3074	466	1774	3304	272
Grp Volume(v), veh/h	76	141	90	99	76	76	215	217	220	293	347	355
Grp Sat Flow(s),veh/h	1216	1863	1560	1134	1863	1560	1774	1770	1771	1774	1770	1810
Q_Serv(g,s)	3.2	3.8	2.8	4.8	2.0	2.4	7.1	6.2	6.3	9.6	10.1	10.1
Cycle Q Clear(g_c), s	5.2	3.8	2.8	8.6	2.0	2.4	7.1	6.2	6.3	9.6	10.1	10.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.26	1.00	0.15	0.15
Lane Grp Cap(c), veh/h	371	449	376	320	449	376	277	846	487	366	575	588
V/C Ratio(X)	0.20	0.31	0.24	0.31	0.17	0.20	0.78	0.45	0.45	0.80	0.60	0.60
Avail Cap(c,a), veh/h	636	853	715	548	823	689	784	927	927	1132	1274	1303
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(0)	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	20.4	19.1	18.7	22.6	18.4	18.5	24.8	18.3	18.4	23.1	17.3	17.3
Incr Delay (d2), s/veh	0.3	0.4	0.3	0.5	0.2	0.3	0.7	0.6	0.7	0.4	0.1	0.1
Initial Q Delay(Q3),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	2.0	1.2	1.5	1.0	1.0	3.8	3.1	3.1	5.1	5.1	5.2
LnGrp Delay(d),s/veh	20.7	19.5	19.0	23.1	18.5	18.8	29.4	19.0	19.0	27.1	18.3	18.3
LnGrp LOS	C	B	B	C	B	B	C	B	C	B	C	B
Approach Vol, veh/h	307			251			652			995		
Approach Delay, s/veh	19.6			20.4			22.4			20.9		
Approach LOS	B			C			C			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	17.6	22.8		20.7	14.5	25.9		20.7				
Change Period (Y+Rc), s	5.0	6.0		* 6	5.0	6.0		6.0				
Max Green Setting (Cmax), s	39.0	32.0		* 28	27.0	44.0		27.0				
Max Q Clear Time (g_c+H), s	11.6	8.3		7.2	9.1	12.1		10.6				
Green Ext Time (g_c), s	1.1	7.0		2.9	0.7	7.6		2.7				
Intersection Summary												
HCM 2010 Ctrl Delay	21.1											
HCM 2010 LOS	C											
Notes												

* HCM 2010 computational engine requires equal clearance times for the phascs crossing the barrier.

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.0	48.1	61.6	61.7
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq.ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	3220.0	3221.5	3354.4	3355.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.31	2.33	2.76	2.77
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	307	251	652	995
Effct. Green for Bike (s)	13.2	12.2	17.0	20.0
Cross Street Width (ft)	61.6	61.7	48.1	48.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	230	212	296	348
Bicycle Delay (s/bike)	45.1	45.9	41.8	39.2
Bicycle Compliance	Poor	Poor	Poor	Poor
Bicycle LOS Score	3.01	2.92	1.55	1.83
Bicycle LOS	C	C	A	A

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP AM
2/18/2016

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	32	205	207	280	22	567	784	269	389
v/c Ratio	0.22	0.10	0.60	0.61	0.52	0.21	0.66	0.74	0.71	0.23
Control Delay	43.0	0.6	44.8	44.9	8.5	54.6	38.3	7.3	47.9	18.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.0	0.6	44.8	44.9	8.5	54.6	38.3	7.3	47.9	18.0
Queue Length 50th (ft)	25	0	116	118	0	13	158	27	148	60
Queue Length 95th (ft)	59	0	244	245	75	45	288	93	331	155
Internal Link Dist (ft)	109		1317				1054			1668
Turn Bay Length (ft)			250		140		100		165	
Base Capacity (vph)	577	619	460	462	636	105	1010	1121	484	1826
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.07	0.05	0.45	0.45	0.44	0.21	0.56	0.70	0.56	0.21
Intersection Summary										
# 95th percentile volume exceeds capacity, queue may be longer.										
Queue shown is maximum after two cycles.										

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	30	10	30	373	10	260	20	527	729	250	352	10
Traffic Volume (vph)	30	10	30	373	10	260	20	527	729	250	352	10
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	60	60	60	60	60	60	60	60	60	60	60	60
Total Lost time (s)	1.00	1.00	0.95	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Lane Util. Factor	1.00	0.99	1.00	1.00	1.00	1.00	1.00	0.98	1.00	1.00	1.00	1.00
Frbp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp_psd/bikes	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	1.00	1.00
Frt	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Flt Protected	1796	1563	1681	1690	1583	1770	3539	1559	1770	3522		
Satd. Flow (prot)	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00	0.95	1.00
Flt Permitted	1796	1563	1681	1690	1583	1770	3539	1559	1770	3522		
Satd. Flow (perm)	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak-hour factor, PHF	32	11	32	401	11	280	22	567	784	269	378	11
Adj. Flow (vph)	0	0	29	0	0	226	0	0	347	0	2	0
RTOR Reduction (vph)	0	43	3	205	207	54	22	567	437	269	387	0
Lane Group Flow (vph)	Spill	NA	Perm	Spill	NA	Perm	Prot	NA	pm+ov	Prot	NA	3
Conf. Peds. (#/hr)	4	4	4	8	8	8	8	5	2	8	1	6
Turn Type	Protected Phases											
Protected Phases												
Permitted Phases												
Actuated Green, G (s)	8.0	8.0	18.2	18.2	18.2	1.6	25.6	43.8	19.4	43.4		
Effective Green, g (s)	8.0	8.0	18.2	18.2	18.2	1.6	25.6	43.8	19.4	43.4		
Actuated g/C Ratio	0.08	0.08	0.19	0.19	0.19	0.02	0.27	0.46	0.21	0.46		
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.5	5.0
Lane Grp Cap (vph)	152	132	324	326	305	30	961	724	364	1622		
v/s Ratio Prot	c0.02	0.12	c0.12	c0.12	0.03	0.01	0.16	c0.12	c0.15	0.11		
v/s Ratio Perm	0.00	0.02	0.63	0.63	0.18	0.73	0.59	0.60	0.74	0.24		
Uniform Delay, d1	40.4	39.5	34.9	34.9	31.7	46.1	29.7	18.7	35.0	15.4		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	3.0	3.0	0.1	56.2	1.5	1.0	7.9	0.2		
Delay (s)	D	D	D	D	D	C	F	C	B	D	B	B
Level of Service	D	D	D	D	D	C	F	C	B	D	B	B
Approach Delay (s)	40.2					35.4		25.8		26.7		
Approach LOS	D					D		C		C		
Intersection Summary												
HCM 2000 Control Delay	28.8 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.61											
Actuated Cycle Length (s)	94.2 Sum of lost time (s) 23.0											
Intersection Capacity Utilization	78.3% ICU Level of Service D											
Analysis Period (min)	15											
c Critical Lane Group												

Central Coast Transportation Consulting
HCM Signalized Intersection Capacity Analysis
Synchro 9 Report

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	30	10	30	373	10	260	20	527	729	250	352	10
Traffic Volume (veh/h)	30	10	30	373	10	260	20	527	729	250	352	10
Future Volume (veh/h)	30	10	30	373	10	260	20	527	729	250	352	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	32	11	32	409	0	22	567	784	269	378	11	32
Adj No. of Lanes	0	1	1	2	0	1	2	1	1	2	0	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	74	25	87	531	0	237	43	1107	730	324	1654	48
Arrive On Green	0.06	0.06	0.06	0.15	0.00	0.00	0.02	0.31	0.31	0.18	0.47	0.47
Sat Flow, veh/h	1336	459	1576	3548	0	1583	1774	3539	1576	1774	3512	102
Grp Volume(Q), veh/h	43	0	32	409	0	0	22	567	784	269	190	199
Grp Sat Flow(s), veh/hln	1796	0	1576	1774	0	1583	1774	1770	1576	1774	1770	1844
Q_Serve(g_s), s	1.8	0.0	1.5	8.5	0.0	0.0	0.9	10.1	24.0	11.2	4.9	4.9
Cycle Q Clear(g_c), s	1.8	0.0	1.5	8.5	0.0	0.0	0.9	10.1	24.0	11.2	4.9	4.9
Prop In Lane	0.74			1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.06
Lane Grp Cap(c), veh/h	99	0	87	531	0	237	43	1107	730	324	833	869
V/C Ratio(X)	0.43	0.00	0.37	0.77	0.00	0.00	0.51	0.51	1.07	0.83	0.23	0.23
Avail Cap(c,a), veh/h	632	0	555	1063	0	475	116	1107	730	532	969	1009
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(0)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	0.0	35.0	31.4	0.0	0.0	37.0	21.6	17.5	30.2	12.0	12.0
Incr Delay (d2), s/veh	1.1	0.0	1.0	0.9	0.0	0.0	3.4	0.8	5.0	6.7	0.3	0.3
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln	0.9	0.0	0.7	4.2	0.0	0.0	0.5	5.0	26.4	6.1	2.4	2.6
LnGrp Delay(d), s/veh	36.2	0.0	35.9	32.3	0.0	0.0	40.4	22.4	17.6	37.0	12.3	12.3
LnGrp LOS	D		D	C			D	C	F	D	B	B
Approach Vol, veh/h	75			409			1373			658		
Approach Delay, s/veh	36.1			32.3			51.3			22.4		
Approach LOS	D			C			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	19.0	30.0		10.2	6.9	42.1						
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0						
Max Green Setting (Cmax), s	23.0	24.0		27.0	5.0	42.0						
Max Q Clear Time (g_c+H), s	13.2	26.0		3.8	2.9	6.9						
Green Ext Time (g_e), s	0.8	0.0		0.2	0.0	24.8						
Intersection Summary												
HCM 2010 Ctrl Delay	40.2											
HCM 2010 LOS	D											
Notes												

Central Coast Transportation Consulting
HCM 2010 Signalized Intersection Summary
Synchro 9 Report

User approved volume balancing among the lanes for turning movement.

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	45.5	36.3	77.9	62.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	150	50	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq.ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	2245.5	2126.8	2472.0	2387.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.83	3.07	2.77
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	75	692	1373	658
Effct. Green for Bike (s)	9.7	18.2	21.9	43.4
Cross Street Width (ft)	77.9	62.3	36.3	45.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	162	303	365	723
Bicycle Delay (s/bike)	50.7	43.2	40.1	24.4
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.88	2.37	1.96	1.51
Bicycle LOS	C	B	A	A

Avila Ranch
7: Horizon Lane & Tank Farm

Near Term Plus Project no BP AM
2/18/2016



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	WB	WB
Traffic Volume (veh/h)	969	30	16	753	40	38
Future Volume (Veh/h)	969	30	16	753	40	38
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1063	33	17	818	43	41
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2	2	2	2	2	2
Upstream signal (ft)						
px. platoon unblocked						
vC. conflicting volume		1086		1922	1070	1070
vC1. stage 1 conf vol				1070		
vC2. stage 2 conf vol				852		
vCu. unblocked vol		1086		1922	1070	1070
IC. single (s)		4.1		6.4	6.2	6.2
IC. 2 stage (s)		2.2		5.4	5.4	5.4
p0 queue free %		97		83	85	85
IF (s)		642		259	269	269
dM capacity (veh/h)		642		259	269	269
Direction_Lane #	EB 1	WB 1	NB 1			
Volume Total	1086	835	84			
Volume Left	0	17	43			
Volume Right	33	0	41			
cSH	1700	642	264			
Volume to Capacity	0.64	0.03	0.32			
Queue Length 95th (ft)	0	2	33			
Control Delay (s)	0.0	0.8	24.9			
Lane LOS	A	A	C			
Approach Delay (s)	0.0	0.8	24.9			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay		1.4				
Intersection Capacity Utilization		64.0%			ICU Level of Service	C
Analysis Period (min)		15				

Avila Ranch
7: Horizon Lane & Tank Farm

Near Term Plus Project no BP AM
2/18/2016

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP AM
2/18/2016



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	256	1519	77	668
v/c Ratio	0.41	0.84	0.61	0.30
Control Delay	14.6	20.0	51.9	6.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	14.6	20.0	51.9	6.2
Queue Length 50th (ft)	25	192	24	36
Queue Length 95th (ft)	49	#532	#103	123
Internal Link Dist (ft)	1164	234		1054
Turn Bay Length (ft)			200	
Base Capacity (vph)	1456	1813	126	2252
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.18	0.84	0.61	0.30
Intersection Summary				
# 95th percentile volume exceeds capacity, queue may be longer.				
Queue shown is maximum after two cycles.				

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP AM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WB	WB	NB	NB	SB	SB
Traffic Volume (vph)	155	81	1115	282	71	615
Future Volume (vph)	155	81	1115	282	71	615
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	4.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.95	1.00	0.95
Frbp_psd/bikes	0.99	1.00	1.00	1.00	1.00	1.00
Fllb_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.95	0.97	1.00	1.00	1.00	1.00
Flt Protected	0.97	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3288	3417	1770	3539	1770	3539
Flt Permitted	0.97	1.00	0.95	1.00	1.00	1.00
Satd. Flow (perm)	3288	3417	1770	3539	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	168	88	1212	307	77	668
RTOR Reduction (vph)	73	0	25	0	0	0
Lane Group Flow (vph)	183	0	1494	0	77	668
Confl. Peds. (#/hr)	6	1	1	1	1	1
Turn Type	Prot	NA	NA	Prot	NA	NA
Permitted Phases	8	2	1	6		
Prohibited Phases						
Actuated Green, G (s)	9.5	29.7	3.2	36.9		
Effective Green, g (s)	9.5	29.7	3.2	36.9		
Actuated g/C Ratio	0.17	0.52	0.06	0.64		
Clearance Time (s)	5.0	6.0	4.0	6.0		
Vehicle Extension (s)	2.0	5.5	3.0	5.5		
Lane Grp Cap (vph)	544	1768	98	2275		
v/s Ratio Prot	c0.06	c0.44	c0.04	0.19		
v/s Ratio Perm						
v/c Ratio	0.34	0.84	0.79	0.29		
Uniform Delay, d1	21.2	11.9	26.8	4.5		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.1	4.4	32.8	0.2		
Delay (s)	21.3	16.3	59.5	4.7		
Level of Service	C	B	E	A		
Approach Delay (s)	21.3	16.3	10.4	B		
Approach LOS	C	B	B	B		

Intersection Summary	
HCM 2000 Control Delay	15.1
HCM 2000 Volume to Capacity ratio	0.73
Actuated Cycle Length (s)	57.4
Intersection Capacity Utilization	65.8%
Analysis Period (min)	15
c Critical Lane Group	

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP AM
2/18/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	45.9	59.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated	Actuated	Actuated
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	40	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq ft)	7276.3	7276.5	7276.5
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	3858.5	4566.3	4068.5
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (S/p)	27.5	26.6	27.5
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.12	3.04	2.89
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP AM
2/18/2016

	WB	NB	SB
Approach	0	0	0
Bicycle Flow Rate (bikes/h)	256	1519	745
Total Flow Rate (veh/h)	9.5	29.7	36.1
Effct. Green for Bike (s)	60.1	45.9	59.3
Cross Street Width (ft)	2	2	2
Through Lanes Number	12.0	12.0	12.0
Through Lane Width (ft)	0.0	5.0	5.0
Bicycle Lane Width (ft)	6.0	0.0	0.0
Paved Shoulder Width (ft)	Yes	Yes	Yes
Curb Is Present?	No	No	No
On Street Parking?	271	849	1031
Bicycle Lane Capacity (bikes/h)	26.1	11.6	8.2
Bicycle Delay (s/bike)	Fair	Fair	Good
Bicycle Compliance	1.73	2.44	2.01
Bicycle LOS	A	B	B

Avila Ranch
9: Higuera & Vachell

Near Term Plus Project no BP AM
2/18/2016

	WBL	WBR	NBT	NBR	SBL	SBT
Movement						
Lane Configurations						
Traffic Volume (veh/h)	0	120	1247	312	0	752
Future Volume (Veh/h)	0	120	1247	312	0	752
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	128	1327	332	0	800
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None			None
Median type			None			None
Median storage (veh)			504			314
Upstream signal (ft)						
pX platoon unblocked	0.93					
vC, conflicting volume	1893	830			1659	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1811	830			1659	
iC, single (s)	6.8	6.9			4.1	
iC, 2 stage (s)						
p0 queue free %	3.5	3.3			2.2	
IF (s)	100	59			100	
pM capacity (veh/h)	65	314			384	
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	128	885	774	400	400	
Volume Left	0	0	0	0	0	
Volume Right	128	0	332	0	0	
cSH	314	1700	1700	1700	1700	
Volume to Capacity	0.41	0.52	0.46	0.24	0.24	
Queue Length 95th (ft)	48	0	0	0	0	
Control Delay (s)	24.2	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	24.2	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay			1.2			
Intersection Capacity Utilization			58.5%		ICU Level of Service	B
Analysis Period (min)			15			

Avila Ranch
9: Higuera & Vachell

Near Term Plus Project no BP AM
2/18/2016

Approach	NB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	SB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
10: Higuera & LOVR

Near Term Plus Project no BP AM
2/18/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	1291	55	164	388	263	564
Lane Group Flow (vph)	0.75	0.07	0.58	0.59	0.66	0.50
w/c Ratio	21.0	7.6	27.6	25.2	36.8	4.9
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	21.0	7.6	27.6	25.2	36.8	4.9
Total Delay	250	6	58	157	121	67
Queue Length 50th (ft)	419	29	101	239	195	104
Queue Length 95th (ft)	407		1906	424		
Internal Link Dist (ft)						
Turn Bay Length (ft)	1770	803	283	881	626	1121
Base Capacity (vph)	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.75	0.07	0.58	0.44	0.42	0.50
Intersection Summary						



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (vph)	1214	52	154	365	247	530
Future Volume (vph)	1214	52	154	365	247	530
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	0.97	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3433	1583	1769	1863	1863	1572
Flt Permitted	0.95	1.00	0.92	1.00	1.00	1.00
Satd. Flow (perm)	3433	1583	598	1863	1863	1572
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	1291	55	164	388	263	564
RTOR Reduction (vph)	0	15	0	0	0	0
Lane Group Flow (vph)	1291	40	164	388	263	564
Confl. Peds. (#/hr)			2			2
Turn Type	Prot	Perm	pm+pt	NA	NA	pm+ov
Permitted Phases	4	5	2	6	4	
Prohibited Phases						6
Actuated Green, G (s)	40.2	40.2	28.4	28.4	17.4	57.6
Effective Green, g (s)	40.2	40.2	28.4	28.4	17.4	57.6
Actuated q/C Ratio	0.50	0.50	0.35	0.35	0.22	0.71
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	5.5	5.5	1.5	3.5	3.5	5.5
Lane Grp Cap (vph)	1712	789	283	656	402	1240
v/s Ratio Prot	60.38		0.04	60.21	0.14	0.23
v/s Ratio Perm			0.03			0.13
v/c Ratio	0.75	0.05	0.88	0.59	0.65	0.45
Uniform Delay, d1	16.2	10.4	20.0	21.4	28.9	4.9
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.4	0.1	1.8	1.5	4.0	0.7
Delay (s)	18.7	10.5	21.8	22.9	32.8	5.5
Level of Service	B	B	C	C	C	A
Approach Delay (s)	18.3		22.6	14.2		
Approach LOS	B		C	B		
Intersection Summary						
HCM 2000 Control Delay	17.9 HCM 2000 Level of Service B					
HCM 2000 Volume to Capacity ratio	0.75					
Actuated Cycle Length (s)	80.6					
Intersection Capacity Utilization	71.8% ICU Level of Service C					
Analysis Period (min)	15					
c Critical Lane Group						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	1214	52	154	365	247	530
Future Volume (veh/h)	1214	52	154	365	247	530
Number	7	14	5	2	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1291	55	164	388	263	564
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1576	725	288	737	487	1137
Arrive On Green	0.46	0.46	0.06	0.40	0.26	0.26
Sat Flow, veh/h	3442	1583	1774	1863	1863	1577
Grp Volume(v), veh/h	1291	55	164	388	263	564
Grp Sat Flow(s),veh/hln	1721	1583	1774	1863	1863	1577
Q.Serv(g,s)	26.7	1.6	5.0	13.0	10.0	12.8
Cycle Q Clear(g,c), s	26.7	1.6	5.0	13.0	10.0	12.8
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1576	725	288	737	487	1137
v/c Ratio(X)	0.82	0.08	0.57	0.53	0.54	0.50
Avail Cap(c,a), veh/h	1680	773	288	864	614	1245
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(0)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	12.5	21.3	18.9	26.0	5.0
Incr Delay (d2), s/veh	4.0	0.1	1.7	0.7	1.1	0.4
Initial Q Delay(Q3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back(Q50%) veh/ln	13.4	1.9	1.1	6.8	5.3	12.8
LnGrp Delay(d),s/veh	23.3	12.6	23.0	19.6	27.2	5.4
LnGrp LOS	C	B	C	B	C	A
Approach Vol, veh/h	1346		552	827		
Approach Delay, s/veh	22.8		20.6	12.3		
Approach LOS	C		C	B		
Timer	1	2	3	4	5	6
Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+R), s	38.4	43.5	11.0	27.4		
Change Period (Y+R), s	6.0	6.0	6.0	6.0		
Max Green Setting (Cmax), s	38.0	40.0	5.0	27.0		
Max Q Clear Time (g_c+H), s	15.0	28.7	7.0	14.8		
Green Ext Time (g_e), s	9.0	8.9	0.0	6.4		
Intersection Summary						
HCM 2010 Ctrl Delay	19.2					
HCM 2010 LOS	B					

Avila Ranch
10: Higuera & LOVR

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	61.2	36.0	58.9
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	0
Ped. R. Sidewalk Flow Rate (p/h)	2	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq ft)	1457.5	24281.2	18210.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	0.1	0.3	0.2
Crosswalk Circulation Code	F	F	F
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.73	2.37	2.75
Pedestrian Crosswalk LOS	B	B	C

Avila Ranch
10: Higuera & LOVR

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	8	8	8
Total Flow Rate (veh/h)	1346	552	827
Effct. Green for Bike (s)	40.2	28.4	17.4
Cross Street Width (ft)	36.0	58.9	61.2
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Shoulder Width (ft)	0.0	0.0	0.0
On Street Parking?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	893	631	387
Bicycle Delay (s/bike)	13.8	21.2	29.4
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	2.15	2.30	2.79
Bicycle LOS	B	B	C

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP AM
2/18/2016

	WBL	NBT	SBT
Lane Group	216	434	304
Lane Group Flow (vph)	0.42	0.40	0.30
v/c Ratio	6.3	6.6	6.0
Control Delay	0.0	0.0	0.0
Queue Delay	6.3	6.6	6.0
Total Delay	7	33	22
Queue Length 50th (ft)	37	93	64
Queue Length 95th (ft)	1650	387	1906
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)	986	1174	1106
Stavation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.22	0.37	0.27
Intersection Summary			

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP AM
2/18/2016

	WBL	WBR	NBT	NBR	SBL	SBT
Movement						
Lane Configurations	W		P			P
Traffic Volume (vph)	60	139	390	9	29	250
Future Volume (vph)	60	139	390	9	29	250
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0		4.0			4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt	0.91		1.00			1.00
Flt Protected	0.99		1.00			0.99
Satd. Flow (prot)	1662		1857			1853
Flt Permitted	0.99		1.00			0.94
Satd. Flow (perm)	1662		1857			1750
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	65	151	424	10	32	272
RTOR Reduction (vph)	122	0	2	0	0	0
Lane Group Flow (vph)	94	0	432	0	0	304
Turn Type	Prot		NA		Perm	NA
Protected Phases	8		2		6	
Permitted Phases					6	
Actuated Green, G (s)	5.8		16.3		16.3	
Effective Green, g (s)	5.8		16.3		16.3	
Actuated g/c Ratio	0.19		0.54		0.54	
Clearance Time (s)	4.0		4.0		4.0	
Vehicle Extension (s)	3.0		3.0		3.0	
Lane Grp Cap (vph)	320		1005		947	
v/s Ratio Prot	c0.06		c0.23		0.17	
v/c Ratio	0.29		0.43		0.32	
Uniform Delay, d1	10.4		4.1		3.8	
Progression Factor	1.00		1.00		1.00	
Incremental Delay, d2	0.5		0.3		0.2	
Delay (s)	10.9		4.4		4.0	
Level of Service	B		A		A	
Approach Delay (s)	10.9		4.4		4.0	
Approach LOS	B		A		A	
Intersection Summary						
HCM 2000 Control Delay			5.8			A
HCM 2000 Volume to Capacity ratio			0.39			
Actuated Cycle Length (s)			30.1			8.0
Intersection Capacity Utilization			56.0%			B
Analysis Period (min)			15			
c. Critical Lane Group						

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP AM
2/18/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	34.8	35.4	36.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	2
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.82	2.26	2.34
Pedestrian Crosswalk LOS	A	B	B

Central Coast Transportation Consulting
HCM 2010 Signals-Pedestrians
Synchro 9 Report

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP AM
2/18/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	216	434	304
Effct. Green for Bike (s)	7.1	17.2	17.2
Cross Street Width (ft)	36.0	34.8	35.4
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	355	860	860
Bicycle Delay (s/bike)	13.5	6.5	6.5
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.47	2.81	2.60
Bicycle LOS	B	C	B

Central Coast Transportation Consulting
HCM 2010 Signals-Bicycles
Synchro 9 Report

Avila Ranch
12: Buckley & Vachell

Near Term Plus Project no BP AM
2/18/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	13	25	126	119	327	71
Future Volume (Veh/h)	13	25	126	119	327	71
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	14	27	137	129	355	77
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None	None		
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked					256	202
VC, conflicting volume						
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol					256	202
IC, single (s)					6.4	6.2
IC, 2 stage (s)						
p0 queue free %					3.5	3.3
IF (s)					51	91
CM capacity (veh/h)					724	839
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	41	266	432			
Volume Left	14	0	355			
Volume Right	0	129	77			
cSH	1298	1700	742			
Volume to Capacity	0.01	0.16	0.58			
Queue Length 95th (ft)	1	0	95			
Control Delay (s)	2.7	0.0	16.4			
Lane LOS	A	C	C			
Approach Delay (s)	2.7	0.0	16.4			
Approach LOS		C	C			
Intersection Summary						
Average Delay			9.7			
Intersection Capacity Utilization			43.0%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	SB
Approach Direction			EB
Median Present?			No
Approach Delay(s)			0
Level of Service			A
Approach			
Approach Direction		WB	
Median Present?		No	
Approach Delay(s)		0	
Level of Service		A	

Avila Ranch
13: Buckley & Project Entry

Near Term Plus Project no BP AM
2/18/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↑	↑		↑	↑
Traffic Volume (veh/h)	7	93	111	8	45	31
Future Volume (Veh/h)	7	93	111	8	45	31
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	101	121	9	49	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume		130			242	126
VC1 stage 1 conf vol						
VC2 stage 2 conf vol		130			242	126
VCu unblocked vol		4.1			6.4	6.2
IC single (s)						
IC 2 stage (s)		2.2			3.5	3.3
p0 queue free %		99			93	96
CM capacity (veh/h)		1455			742	925
Direction Lane #	EB 1	WB 1	SB 1			
Volume Total	109	130	83			
Volume Left	8	0	49			
Volume Right	0	9	34			
cSH	1455	1700	807			
Volume to Capacity	0.01	0.08	0.10			
Queue Length 95th (ft)	0	0	9			
Control Delay (s)	0.6	0.0	10.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.6	0.0	10.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			2.8			
Intersection Capacity Utilization			21.7%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
13: Buckley & Project Entry

Near Term Plus Project no BP AM
2/18/2016

Approach	EB
Approach Direction	EB
Median Present?	No
Approach Delay(s)	0
Level of Service	A
Approach	WB
Approach Direction	WB
Median Present?	No
Approach Delay(s)	0
Level of Service	A

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP AM
2/18/2016

	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group	58	137	11	274	1174	11	489
Lane Group Flow (vph)	0.30	0.22	0.04	0.63	0.80	0.12	0.53
v/c Ratio	0.30	0.22	0.04	0.63	0.80	0.12	0.53
Control Delay	46.0	4.4	0.2	39.1	13.5	52.0	18.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	46.0	4.4	0.2	39.1	13.5	52.0	18.6
Queue Length 50th (ft)	28	0	0	128	248	6	160
Queue Length 95th (ft)	84	34	0	277	#1128	28	371
Internal Link Dist (ft)	9507		310	439		1035	
Turn Bay Length (ft)	150		360		470		470
Base Capacity (vph)	384	833	313	694	1608	94	1239
Stavation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.16	0.04	0.39	0.73	0.12	0.39

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Movement	43	10	126	0	0	10	252	1080	0	10	450
Lane Configurations	43	10	126	0	0	10	252	1080	0	10	450
Traffic Volume (vph)	43	10	126	0	0	10	252	1080	0	10	450
Future Volume (vph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpl)	2%			4%			7%			4%	
Grade (%)											
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frbp. ped/bikes	1.00	0.99	1.00	0.91	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Frbp. psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	0.86	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frt Protected	1.00	0.96	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1772	1559	1442	1708	1798	1734	1734	1825	1518	1734	1825
Flt Permitted	0.96	1.00	1.00	1.00	0.95	1.00	0.95	1.00	1.00	0.95	1.00
Satd. Flow (perm)	1772	1559	1442	1708	1798	1734	1734	1825	1518	1734	1825
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	47	11	137	0	0	11	274	1174	0	11	489
RTOR Reduction (vph)	0	0	95	0	11	0	0	0	0	0	0
Lane Group Flow (vph)	0	58	42	0	0	274	1174	0	11	489	39
Conf. Bikes (#/hr)	2			2			2			2	

Turn Type	Split	NA	pm+ov	NA	Prot	NA	Prot	NA	Prot	NA	Prot
Protected Phases	4	4	5	8	8	5	2	1	6		
Permitted Phases			4								6
Actuated Green, G (s)	6.8	27.8	0.6	0.6	21.0	66.3	0.6	45.9	45.9	0.6	45.9
Effective Green, g (s)	6.8	27.8	0.6	0.6	21.0	66.3	0.6	45.9	45.9	0.6	45.9
Actuated g/C Ratio	0.08	0.31	0.01	0.01	0.23	0.73	0.01	0.51	0.51	0.01	0.51
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	133	479	9	397	1320	11	927	771			
v/s Ratio Prot	c0.03	0.02	c0.00	c0.00	c0.16	c0.65	0.01	0.27			
v/c Ratio	0.44	0.09	0.01	0.01	0.69	0.89	1.00	0.53	0.03		
Uniform Delay, d1	39.9	22.2	44.6	31.7	9.2	44.9	14.9	11.2			
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.3	0.1	0.4	5.1	7.7	271.4	0.5	0.0			
Delay (s)	42.2	22.3	44.9	36.8	16.9	316.2	15.5	11.2			
Level of Service	D	C	D	D	B	F	B	B			
Approach Delay (s)	28.2		44.9		20.6		20.6				
Approach LOS	C		D		C		C				

Intersection Summary	
HCM 2000 Control Delay	21.4
HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85
Actuated Cycle Length (s)	90.3
Sum of lost time (s)	16.0
Intersection Capacity Utilization	79.7%
ICU Level of Service	D
Analysis Period (min)	15
c. Critical Lane Group	

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP AM
2/18/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	43	10	126	0	0	10	252	1080	0	10	450	71
Future Volume (veh/h)	43	10	126	0	0	10	252	1080	0	10	450	71
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.97	1.00	1.00	0.96	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	47	11	137	0	0	11	274	1174	0	11	489	77
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	138	32	436	0	0	16	316	1289	0	18	992	825
Arrive On Green	0.10	0.10	0.10	0.00	0.00	0.01	0.18	0.72	0.00	0.01	0.54	0.54
Sat Flow, veh/h	1436	336	1524	0	0	1493	1712	1798	0	1739	1825	1519
Grp Volume(v), veh/h	58	0	137	0	0	11	274	1174	0	11	489	77
Grp Sat Flow(s), veh/hln	1772	0	1524	0	0	1493	1712	1798	0	1739	1825	1519
Q_Serve(g_s), s	3.0	0.0	6.9	0.0	0.0	0.7	15.0	51.5	0.0	0.6	16.1	2.4
Cycle Q Clear(g_c), s	3.0	0.0	6.9	0.0	0.0	0.7	15.0	51.5	0.0	0.6	16.1	2.4
Prop In Lane	0.81	1.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	170	0	436	0	0	16	316	1289	0	18	992	825
V/C Ratio(X)	0.34	0.00	0.31	0.00	0.00	0.70	0.87	0.91	0.00	0.60	0.49	0.09
Await Cap(c), veh/h	294	0	542	0	0	62	532	1489	0	72	1021	849
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	0.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.8	0.0	27.5	0.0	0.0	47.6	38.2	11.1	0.0	47.6	13.8	10.6
Incr Delay (d2), s/veh	1.2	0.0	0.4	0.0	0.0	42.9	7.9	8.0	0.0	27.3	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	1.5	0.0	2.9	0.0	0.0	0.5	7.8	28.0	0.0	0.4	8.3	1.0
LnGrp Delay(d), s/veh	41.9	0.0	27.9	0.0	0.0	90.5	46.2	19.1	0.0	74.9	14.1	10.7
LnGrp LOS	D	C	C	F	F	D	B	B	E	B	B	B
Approach Vol, veh/h	195			11			1448			577		
Approach Delay, s/veh	32.1			90.5			24.2			14.8		
Approach LOS	C			F			C			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.0	73.2		13.3	21.8	56.4		5.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	80.0		16.0	30.0	54.0		4.0				
Max Q Clear Time (g_c+H), s	2.6	53.5		8.9	17.0	18.1		2.7				
Green Ext Time (g_e), s	0.0	15.8		0.5	0.8	18.7		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay								22.8				
HCM 2010 LOS								C				

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.2	24.0	37.7	48.2
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	20	0	0	10
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4882.3	0.0	4834.9	5117.9
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.16	1.75	2.97	2.82
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP AM
2/18/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	195	11	1448	577
Effct. Green for Bike (s)	9.0	4.5	67.8	41.9
Cross Street Width (ft)	37.7	48.2	24.0	39.2
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	150	75	1130	698
Bicycle Delay (s/bike)	51.3	55.6	11.4	25.4
Bicycle Compliance	Poor	Poor	Fair	Fair
Bicycle LOS Score	2.46	2.32	4.32	3.11
Bicycle LOS	B	B	E	C

Avila Ranch
15: Earthwood & Suburban

Near Term Plus Project no BP AM
2/18/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	31	20	2	40	71	6
Future Volume (Veh/h)	31	20	2	40	71	6
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	34	22	2	43	77	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	1244					
px platoon unblocked			56		92	45
vc conflicting volume						
vc1 stage 1 conf vol						
vc2 stage 2 conf vol						
vcu unblocked vol			56		92	45
ic single (s)			4.1		6.4	6.2
ic 2 stage (s)			2.2		3.5	3.3
p0 queue free %			100		92	99
dm capacity (veh/h)			1549		907	1025
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	56	45	84			
Volume Left	0	2	77			
Volume Right	22	0	7			
cSH	1700	1549	916			
Volume to Capacity	0.03	0.00	0.09			
Queue Length 95th (ft)	0	0	8			
Control Delay (s)	0.0	0.3	9.3			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.3	9.3			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			4.3			
Intersection Capacity Utilization			14.7%			A
Analysis Period (min)			15			

Avila Ranch
15: Earthwood & Suburban

Near Term Plus Project no BP AM
2/18/2016

Approach	EB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	
Approach	WB
Approach Direction	No
Median Present?	0
Approach Delay(s)	A
Level of Service	

Avila Ranch
16: Suburban & Horizon Lane

Near Term Plus Project no BP AM
2/18/2016



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop		Stop	Stop	Stop	Stop
Traffic Volume (vph)	6	39	61	12	4	2
Future Volume (vph)	6	39	61	12	4	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	42	66	13	4	2
Direction_Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	49	79	6			
Volume Left (vph)	7	66	0			
Volume Right (vph)	42	0	2			
Head (s)	-0.45	0.20	-0.17			
Departure Headway (s)	3.6	4.2	3.9			
Degree Utilization, x	0.05	0.09	0.01			
Capacity (veh/h)	962	836	901			
Control Delay (s)	6.8	7.6	6.9			
Approach Delay (s)	6.8	7.6	6.9			
Approach LOS	A	A	A			
Intersection Summary						
Delay	7.3					
Level of Service	A					
Intersection Capacity Utilization	20.7%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Near Term Plus Project no BP AM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Traffic Volume (veh/h)	46	12	100	11	23	329
Future Volume (Veh/h)	46	12	100	11	23	329
Sign Control	Slop		Free			Free
Grade	0%		0%			0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	50	13	109	12	25	358
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None			None
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	523	115			121	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol	523	115			121	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	90	99			98	
CM capacity (veh/h)	506	937			1467	
Direction_Lane #	WB 1	NB 1	SB 1			
Volume Total	63	121	383			
Volume Left	50	0	25			
Volume Right	13	12	0			
cSH	559	1700	1467			
Volume to Capacity	0.11	0.07	0.02			
Queue Length 95th (ft)	9	0	1			
Control Delay (s)	12.3	0.0	0.6			
Lane LOS	B		A			
Approach Delay (s)	12.3	0.0	0.6			
Approach LOS	B		A			
Intersection Summary						
Average Delay			1.8			
Intersection Capacity Utilization			35.3%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
17: Vachell & Venture Dr

Near Term Plus Project no BP AM
2/18/2016

Approach	NB
Approach Direction	NB
Median Present?	No
Approach Delay(s)	0
Level of Service	A
Approach	SB
Approach Direction	SB
Median Present?	No
Approach Delay(s)	0
Level of Service	A

Avila Ranch
18: Vachell & Project Entry

Near Term Plus Project no BP AM
2/18/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	28	15	95	3	5	370
Future Volume (Veh/h)	28	15	95	3	5	370
Sign Control	Slopp		Free		Free	Free
Grade	0%		0%		0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	30	16	103	3	5	402
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None		None	
Median type						
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	516	104			106	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	516	104			106	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	94	98			100	
CM capacity (veh/h)	517	950			1485	
Direction_Lane #	WB 1	NB 1	SB 1			
Volume Total	46	106	407			
Volume Left	30	0	5			
Volume Right	16	3	0			
cSH	614	1700	1485			
Volume to Capacity	0.07	0.06	0.00			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	11.3	0.0	0.1			
Lane LOS	B		A			
Approach Delay (s)	11.3	0.0	0.1			
Approach LOS	B					
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			33.5%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
18: Vachell & Project Entry

Near Term Plus Project no BP AM
2/18/2016

Approach	NB
Approach Direction	NB
Median Present?	No
Approach Delay(s)	0
Level of Service	A
Approach	SB
Approach Direction	SB
Median Present?	No
Approach Delay(s)	0
Level of Service	A

Avila Ranch
1: LOVR & 101 NB/101 SB

Near Term Plus Project no BP PM
1/15/2016

	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	331	495	93	1366	1031	727
Lane Group Flow (vph)	0.45	0.73	0.48	0.79	0.72	0.68
v/c Ratio	22.1	29.4	17.1	17.1	21.1	6.9
Control Delay	0.0	0.0	0.0	0.1	1.7	0.9
Queue Delay	22.1	29.4	17.1	17.2	22.8	7.8
Total Delay	137	226	16	263	252	160
Queue Length 50th (ft)	214	#364	m42	328	325	305
Queue Length 95th (ft)	198			925	236	
Internal Link Dist (ft)	150		150			270
Turn Bay Length (ft)	733	675	195	1808	1494	1088
Base Capacity (vph)	0	0	0	0	288	143
Station Cap Reductn	0	0	0	0	49	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.73	0.48	0.78	0.85	0.77

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Avila Ranch
1: LOVR & 101 NB/101 SB

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Movement											
Lane Configurations											
Traffic Volume (veh/h)	0	0	0	328	10	480	92	1352	0	0	1021
Future Volume (veh/h)	0	0	0	328	10	480	92	1352	0	0	1021
Number				3	8	18	1	6	16	5	2
Initial Q (Cb), veh				0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj				1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h				1863	1863	1900	1863	1863	0	0	1863
Adj Flow Rate, veh/h				331	10	485	93	1366	0	0	1031
Adj No. of Lanes				1	1	0	1	2	0	0	2
Peak Hour Factor				0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Percent Heavy Veh, %				2	2	2	2	2	0	0	2
Cap. veh/h				700	13	614	219	1809	0	0	1494
Arrive On Green				0.39	0.39	0.39	0.02	0.17	0.00	0.00	0.42
Sat Flow, veh/h				1774	32	1556	1774	3632	0	0	3632
Grp Volume(v), veh/h				331	0	495	93	1366	0	0	1031
Grp Sat Flow(s), veh/h				1774	0	1588	1774	3770	0	0	1770
Q Serve(g_s), s				12.5	0.0	24.7	2.5	33.1	0.0	0.0	21.4
Cycle Q Clear(g_c), s				12.5	0.0	24.7	2.5	33.1	0.0	0.0	21.4
Prop In Lane				1.00	0.00	0.98	1.00	0.00	0.00	0.00	1.00
Lane Grp Cap(c), veh/h				700	0	626	219	1809	0	0	1494
V/C Ratio(X)				0.47	0.00	0.79	0.42	0.76	0.00	0.00	0.69
Avail Cap(c_a), veh/h				700	0	626	219	1809	0	0	1494
HCM Platoon Ratio				1.00	1.00	1.00	0.33	1.00	1.00	1.00	1.00
Upstream Filter(0)				1.00	0.00	1.00	0.82	0.82	0.00	0.00	0.82
Uniform Delay (d), s/veh				20.3	0.0	24.0	17.4	32.0	0.0	0.0	21.2
Incr Delay (d2), s/veh				2.3	0.0	9.8	4.9	2.4	0.0	0.0	2.2
Initial Q Delay(Q3), s/veh				0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%) veh/m				6.5	0.0	12.4	1.5	16.8	0.0	0.0	10.8
LnGrp Delay(d), s/veh				22.6	0.0	33.8	22.3	34.5	0.0	0.0	23.4
LnGrp LOS				C	C	C	C	C	C	C	F
Approach Vol, veh/h				826			1459				1758
Approach Delay, s/veh				29.3			33.7				48.4
Approach LOS				C			C				D
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2				6		8			
Phs Duration (G+Y+Rc), s	8.0	43.0				51.0		39.0			
Change Period (Y+Rc), s	3.5	5.0				5.0		3.5			
Max Green Setting (Gmax), s	4.5	38.0				46.0		35.5			
Max Q Clear Time (g_c+H), s	4.5	40.0				35.1		26.7			
Green Ext Time (g_c), s	0.0	0.0				10.2		3.4			
Intersection Summary											
HCM 2010 Crt Delay											39.2
HCM 2010 LOS											D

Avila Ranch
1: LOVR & 101 NB/101 SB
Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	14.5	23.9	60.1	72.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	1	2	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated			
Corresponding Signal Phase	2	6	0	8
Effective Walk Time (s)	0.0	9.0	0.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	35
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	45.0	36.5	45.0	36.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.24	2.12	2.95	3.12
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch
1: LOVR & 101 NB/101 SB
Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	0	826	1459	1758
Effct. Green for Bike (s)	0.0	37.3	44.2	36.2
Cross Street Width (ft)	60.1	72.0	23.9	14.5
Through Lanes Number	0	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	829	982	804
Bicycle Delay (s/bike)	0.0	15.4	11.7	16.1
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	0.00	4.02	3.13	3.23
Bicycle LOS	D	C	C	C

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP PM
1/15/2016

	EBL	NBL	NBT	SBT	SBR
Lane Group	631	243	963	990	392
Lane Group Flow (vph)	0.76	0.59	0.42	0.56	0.41
v/c Ratio	36.3	12.2	8.5	10.5	1.7
Control Delay	0.0	0.0	0.0	0.0	0.0
Queue Delay	36.3	12.2	8.5	10.5	1.7
Total Delay	162	45	123	94	8
Queue Length 50th (ft)	207	89	188	145	15
Queue Length 95th (ft)	128	200	471	925	150
Internal Link Dist (ft)	1015	474	2319	1767	966
Turn Bay Length (ft)	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0.62	0.51	0.42	0.56	0.41
Reduced v/c Ratio					
Intersection Summary					

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EW	EW	EW	EW	EW	EW
Traffic Volume (vph)	500	113	236	934	960	380
Future Volume (vph)	500	113	236	934	960	380
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Lane Util. Factor	0.97	1.00	0.95	0.95	1.00	1.00
Flt Protected	0.96	0.96	0.95	1.00	1.00	1.00
Satd. Flow (prot)	3376	1770	3539	3539	3539	1583
Flt Permitted	0.96	0.96	0.19	1.00	1.00	1.00
Satd. Flow (perm)	3376	363	3539	3539	3539	1583
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	515	116	243	963	990	392
RTOR Reduction (vph)	24	0	0	0	0	176
Lane Group Flow (vph)	607	0	243	963	990	217
Turn Type	Prot	pm+pt	NA	NA	Perm	Perm
Protected Phases	3	1	6	2		
Permitted Phases		6		2		
Actuated Green, G (s)	21.5	59.0	59.0	45.0	45.0	45.0
Effective Green, g (s)	21.5	59.0	59.0	45.0	45.0	45.0
Actuated g/C Ratio	0.24	0.66	0.66	0.50	0.50	0.50
Clearance Time (s)	3.5	3.5	6.0	6.0	6.0	6.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	806	402	2320	1769	791	
v/s Ratio Prot	c0.18	c0.07	0.27	0.28		
v/c Ratio	0.75	0.60	0.42	0.56	0.27	0.14
Uniform Delay, d1	31.8	8.7	7.3	15.6	13.0	
Progression Factor	1.00	1.00	1.00	0.55	0.22	
Incremental Delay, d2	4.0	2.6	0.5	1.0	0.7	
Delay (s)	35.8	11.3	7.9	9.6	3.5	
Level of Service	D	B	A	A	A	A
Approach Delay (s)	35.8	8.6	7.9			
Approach LOS	D	A	A	A		
Intersection Summary						
HCM 2000 Control Delay		13.6		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.67				
Actuated Cycle Length (s)		90.0		Sum of lost time (s)		13.0
Intersection Capacity Utilization		69.1%		ICU Level of Service		C
Analysis Period (min)		15				
c. Critical Lane Group						

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	39.6	60.0	72.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	5
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	3	6
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	30
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.36	2.84	2.87
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
2: LOVR & 101 NB

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	631	1206	1382
Effct. Green for Bike (s)	21.5	59.0	44.9
Cross Street Width (ft)	60.0	72.0	39.6
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	478	1311	998
Bicycle Delay (s/bike)	26.1	5.3	11.3
Bicycle Compliance	Fair	Good	Fair
Bicycle LOS Score	3.00	3.66	3.31
Bicycle LOS	C	D	C

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP PM
1/15/2016

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	44	43	868	130	22	618	682	86	636
v/c Ratio	0.52	0.24	0.84	0.23	0.21	0.40	0.73	0.61	0.36
Control Delay	65.4	3.3	37.7	8.2	46.8	19.4	12.3	61.5	15.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
Total Delay	65.4	3.3	37.7	8.2	46.8	19.4	12.9	61.5	15.8
Queue Length 50th (ft)	26	0	241	9	13	134	97	50	106
Queue Length 95th (ft)	#75	0	#320	49	37	181	254	#117	178
Internal Link Dist (ft)	208			629			338		507
Turn Bay Length (ft)		50	130		60		60	100	
Base Capacity (vph)	85	176	1126	599	103	1556	940	145	1748
Stavation Cap Reductn	0	0	0	0	0	0	57	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.24	0.77	0.22	0.21	0.40	0.77	0.59	0.36

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP PM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	20	20	40	807	20	100	20	575	634	80	571	20
Traffic Volume (veh/h)	20	20	40	807	20	100	20	575	634	80	571	20
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.95	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	22	22	43	868	22	108	22	618	682	86	614	22
Adj No. of Lanes	0	1	1	2	1	2	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	41	41	67	998	79	389	34	1491	661	110	1617	58
Arrive On Green	0.04	0.04	0.04	0.29	0.29	0.02	0.42	0.42	0.42	0.06	0.46	0.46
Sat Flow, veh/h	909	909	1510	3442	273	1341	1774	3539	1569	1774	3484	125
Grp Volume(v), veh/h	44	0	43	868	0	130	22	618	682	86	312	324
Grp Sat Flow(s), veh/hln	1817	0	1510	1721	0	1615	1774	1770	1569	1774	1770	1839
Q_Serv(s), s	2.1	0.0	2.5	21.0	0.0	5.5	1.1	10.8	37.0	4.2	10.1	10.1
Cycle Q Clear(g_c), s	2.1	0.0	2.5	21.0	0.0	5.5	1.1	10.8	37.0	4.2	10.1	10.1
Prop In Lane	0.50	1.00	1.00	1.00	0.83	1.00	1.00	1.00	1.00	1.00	1.00	0.07
Lane Grp Cap(c), veh/h	81	0	67	998	0	468	34	1491	661	110	822	854
V/C Ratio(X)	0.54	0.00	0.64	0.87	0.00	0.28	0.66	0.41	1.03	0.78	0.38	0.38
Avail Cap(c_a), veh/h	83	0	69	1097	0	515	101	1491	661	141	822	854
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	41.1	0.0	41.3	29.6	0.0	24.1	42.8	17.8	25.4	40.6	15.3	15.3
Incr Delay (d2), s/veh	6.7	0.0	17.5	7.2	0.0	0.3	19.6	0.9	43.6	18.9	1.3	1.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%) veh/ln	1.2	0.0	1.4	11.0	0.0	2.5	0.7	5.4	23.8	2.6	5.2	5.4
LnGrp Delay(d), s/veh	47.8	0.0	58.7	36.8	0.0	24.4	62.4	18.7	69.0	59.5	16.6	16.6
LnGrp LOS	D	E	D	D	C	E	B	F	F	E	B	B
Approach Vol, veh/h	87			998			1322			722		
Approach Delay, s/veh	53.2			35.2			45.4			21.7		
Approach LOS	D			D			D			C		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	9.5	41.0		7.9	5.7	44.8		29.5				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	37.0		4.0	5.0	39.0		28.0				
Max Q Clear Time (g_c+H), s	6.2	39.0		4.5	3.1	12.1		23.0				
Green Ext Time (g_c), s	0.0	0.0		0.0	0.0	15.1		2.4				
Intersection Summary												
HCM 2010 Ctrl Delay								36.9				
HCM 2010 LOS								D				

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated Actuated Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	5	5	5
Veh. Perm. R. Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (s/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.67	2.94	2.61
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	87	998	1322	722
Effct. Green for Bike (s)	4.1	26.2	38.2	43.1
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	89	570	830	937
Bicycle Delay (s/bike)	42.0	23.5	15.7	13.0
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	3.01	3.23	2.50	1.95
Bicycle LOS	C	C	B	A

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP PM
17/15/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	352	347	387	11	108	441	645	536	978
Lane Group Flow (vph)	0.72	0.71	0.40	0.05	0.47	1.23	0.39	0.76	0.70
v/c Ratio	37.4	36.6	2.1	33.4	40.6	157.2	16.3	39.0	17.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	37.4	36.6	2.1	33.4	40.6	157.2	16.3	39.0	17.5
Total Delay	178	175	0	5	53	-316	118	143	191
Queue Length 50th (ft)	#327	#317	23	20	103	#523	175	#211	290
Queue Length 95th (ft)									
Internal Link Dist (ft)		964			1295		1563		338
Turn Bay Length (ft)		110			160				
Base Capacity (vph)	534	537	970	360	377	360	1750	801	1463
Stantion Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.66	0.65	0.40	0.03	0.29	1.23	0.37	0.67	0.67
Intersection Summary									
-	Volume exceeds capacity, queue is theoretically infinite.								
-	Queue shown is maximum after two cycles.								
#	95th percentile volume exceeds capacity, queue may be longer.								
-	Queue shown is maximum after two cycles.								

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP PM
17/15/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBR
Lane Configurations	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBR
Traffic Volume (veh/h)	630	20	360	10	90	10	410	590	10
Future Volume (veh/h)	630	20	360	10	90	10	410	590	10
Number	7	4	14	3	8	18	5	2	12
Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1900	1863
Adj Flow Rate, veh/h	693	0	0	11	97	11	441	634	11
Adj No. of Lanes	2	0	1	1	1	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2
Cap. veh/h	871	0	721	150	138	16	373	1824	32
Arrive On Green	0.25	0.00	0.00	0.08	0.08	0.08	0.21	0.51	0.51
Sat Flow, veh/h	3548	0	1583	1774	1639	186	1774	3559	62
Grp Volume(v), veh/h	693	0	0	11	0	108	441	315	330
Grp Sat Flow(s), veh/h/ln	1774	0	1583	1774	0	1825	1774	1851	1828
Q Serve(g.s), s	13.9	0.0	0.0	0.4	0.0	4.4	16.0	8.0	8.0
Cycle Q Clear(g.c.), s	13.9	0.0	0.0	0.4	0.0	4.4	16.0	8.0	8.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.03	0.04
Lane Grp Cap(c), veh/h	871	0	721	150	0	154	373	907	949
V/C Ratio(X)	0.80	0.00	0.00	0.07	0.00	0.70	1.18	0.35	0.35
Avail Cap(c.a), veh/h	1166	0	853	373	0	384	373	907	949
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	26.9	0.0	0.0	32.1	0.0	33.9	30.1	11.0	25.3
Incr Delay (d2), s/veh	2.8	0.0	0.0	0.2	0.0	5.7	106.2	0.2	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%) veh/ln	7.2	0.0	0.0	0.2	0.0	2.5	18.8	4.0	4.2
LnGrp Delay(d), s/veh	29.8	0.0	0.0	32.3	0.0	39.6	136.3	11.2	26.8
LnGrp LOS	C			C		D	F	B	C
Approach Vol, veh/h	693			119		1086			1514
Approach Delay, s/veh	29.8			38.9		62.0			20.2
Approach LOS	C			D		E			C
Timer	1	2	3	4	5	6	7	8	
Assigned Phs	2			4	5	6			
Phs Duration (G+Y+Rc), s	43.0			22.7	20.0	23.0			10.4
Change Period (Y+Rc), s	4.0			4.0	4.0	4.0			4.0
Max Green Setting (Gmax), s	39.0			25.0	16.0	19.0			16.0
Max Q Clear Time (g_c+H), s	10.0			15.9	18.0	21.0			6.4
Green Ext Time (g_e), s	16.6			2.3	0.0	0.0			0.3
Intersection Summary									
HCM 2010 Ctrl Delay	36.1								
HCM 2010 LOS	D								
Notes									

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Number of Actuated	6	2	4	8
Corresponding Signal Phase	8.0	0.0	8.0	8.0
Effective Walk Time (s)	9.0	9.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	0.0	0.0	0.0	0.0
Right Corner Curb Radius (ft)	81.0	81.0	81.0	81.0
Right Corner Total Area (sq ft)	2	0	2	2
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	10	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	60	0	0	0
Veh. RTOR Flow in Walk (v/h)	40	30	45	30
85th percentile speed (mph)	7270.8			
Right Corner Area per Ped (sq ft)	18201.0	12134.0	7270.8	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	3.07	2.00	2.89	2.83
Pedestrian Crosswalk LOS	C	B	C	C

Avila Ranch
4: Higuera & Madonna

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1086	119	1086	1514
Effct. Green for Bike (s)	23.5	10.0	37.8	17.3
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	511	217	822	376
Bicycle Delay (s/bike)	25.5	36.5	16.0	30.3
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	3.13	1.38	1.72	2.55
Bicycle LOS	C	A	A	B

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Group	54	32	108	154	129	151	433	726	151	866
Lane Group Flow (vph)	0.23	0.09	0.28	0.64	0.39	0.37	0.79	0.44	0.58	0.78
v/c Ratio	37.7	35.1	7.3	51.1	39.8	9.3	41.4	16.6	49.7	35.5
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	37.7	35.1	7.3	51.1	39.8	9.3	41.4	16.6	49.7	35.5
Total Delay	27	15	0	84	67	0	227	134	83	233
Queue Length 50th (ft)	71	47	38	175	142	55	396	218	174	388
Queue Length 95th (ft)	363			386			1342			828
Internal Link Dist (ft)	150		150	150		200	250		125	
Turn Bay Length (ft)	352	523	519	362	501	536	829	2319	373	1441
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.15	0.06	0.21	0.43	0.26	0.28	0.52	0.31	0.40	0.60
Intersection Summary										

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	50	30	100	143	120	140	403	604	72	140	765
Traffic Volume (veh/h)	50	30	100	143	120	140	403	604	72	140	765
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0.99	0.98	0.99	0.98	0.98	0.98	1.00	1.00	0.99	1.00	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1900
Adj Sat Flow, veh/h	54	32	108	154	129	151	433	649	77	151	823
Adj Flow Rate, veh/h	1	1	1	1	1	1	1	1	2	0	2
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	232	367	306	308	367	306	489	1588	188	189	1127
Cap. veh/h	0.20	0.20	0.20	0.20	0.20	0.20	0.28	0.50	0.50	0.11	0.33
Arrive On Green	1083	1863	1554	1226	1863	1554	1774	3184	377	1774	3419
Sat Flow, veh/h	54	32	108	154	129	151	433	360	366	151	426
Grp Volume(v), veh/h	1083	1863	1554	1226	1863	1554	1774	1770	1792	1774	1770
Grp Sat Flow(s), veh/h	3.9	1.2	5.2	10.1	5.1	7.4	20.1	11.0	11.1	7.2	18.3
Q_Serv(g_s), s	9.0	1.2	5.2	11.3	5.1	7.4	20.1	11.0	11.1	7.2	18.3
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	232	367	306	308	367	306	489	883	894	189	584
Lane Grp Cap(c), veh/h	0.23	0.09	0.35	0.50	0.35	0.49	0.89	0.41	0.41	0.80	0.73
V/C Ratio(X)	321	519	433	394	497	415	824	1171	1186	371	719
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	33.7	28.2	29.8	32.9	29.8	30.7	29.9	13.6	13.6	37.6	25.5
Upstream Filter	0.5	0.1	0.7	1.3	0.6	1.2	6.5	0.3	0.3	7.5	2.9
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.6	2.3	3.5	2.7	3.3	10.7	5.4	5.6	3.9	9.6
Initial Q Delay(Q3), s/veh	34.2	28.3	30.5	34.1	30.4	32.0	36.3	13.9	13.9	45.0	28.4
%ile BackQ(50%) veh/h	C	C	C	C	C	C	C	D	B	D	C
LnGrp Delay(d), s/veh	194			434			1159			1017	
LnGrp LOS	31.2			32.3			22.3			30.8	
Approach Delay, s/veh	C			C			C			C	
Approach LOS	1	2	3	4	5	6	7	8			
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	14.2	49.0		23.0	28.7	34.4					
Change Period (Y+Rc), s	5.0	6.0		* 6	5.0	6.0					
Max Green Setting (Gmax), s	18.0	57.0		* 24	40.0	35.0					
Max Q Clear Time (g_c+H), s	9.2	13.1		11.0	22.1	20.3					
Green Ext Time (g_e), s	0.3	13.0		2.7	1.6	8.1					
Intersection Summary											
HCM 2010 Ctrl Delay	27.6										
HCM 2010 LOS	C										
Notes											

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	50	30	100	143	120	140	403	604	72	140	765
Traffic Volume (veh/h)	50	30	100	143	120	140	403	604	72	140	765
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0.99	0.98	0.99	0.98	0.98	0.98	1.00	1.00	0.99	1.00	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1900
Adj Sat Flow, veh/h	54	32	108	154	129	151	433	649	77	151	823
Adj Flow Rate, veh/h	1	1	1	1	1	1	1	1	2	0	2
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	232	367	306	308	367	306	489	1588	188	189	1127
Cap. veh/h	0.20	0.20	0.20	0.20	0.20	0.20	0.28	0.50	0.50	0.11	0.33
Arrive On Green	1083	1863	1554	1226	1863	1554	1774	3184	377	1774	3419
Sat Flow, veh/h	54	32	108	154	129	151	433	360	366	151	426
Grp Volume(v), veh/h	1083	1863	1554	1226	1863	1554	1774	1770	1792	1774	1770
Grp Sat Flow(s), veh/h	3.9	1.2	5.2	10.1	5.1	7.4	20.1	11.0	11.1	7.2	18.3
Q_Serv(g_s), s	9.0	1.2	5.2	11.3	5.1	7.4	20.1	11.0	11.1	7.2	18.3
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	232	367	306	308	367	306	489	883	894	189	584
Lane Grp Cap(c), veh/h	0.23	0.09	0.35	0.50	0.35	0.49	0.89	0.41	0.41	0.80	0.73
V/C Ratio(X)	321	519	433	394	497	415	824	1171	1186	371	719
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	33.7	28.2	29.8	32.9	29.8	30.7	29.9	13.6	13.6	37.6	25.5
Upstream Filter	0.5	0.1	0.7	1.3	0.6	1.2	6.5	0.3	0.3	7.5	2.9
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	1.2	0.6	2.3	3.5	2.7	3.3	10.7	5.4	5.6	3.9	9.6
Initial Q Delay(Q3), s/veh	34.2	28.3	30.5	34.1	30.4	32.0	36.3	13.9	13.9	45.0	28.4
%ile BackQ(50%) veh/h	C	C	C	C	C	C	C	D	B	D	C
LnGrp Delay(d), s/veh	194			434			1159			1017	
LnGrp LOS	31.2			32.3			22.3			30.8	
Approach Delay, s/veh	C			C			C			C	
Approach LOS	1	2	3	4	5	6	7	8			
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	14.2	49.0		23.0	28.7	34.4					
Change Period (Y+Rc), s	5.0	6.0		* 6	5.0	6.0					
Max Green Setting (Gmax), s	18.0	57.0		* 24	40.0	35.0					
Max Q Clear Time (g_c+H), s	9.2	13.1		11.0	22.1	20.3					
Green Ext Time (g_e), s	0.3	13.0		2.7	1.6	8.1					
Intersection Summary											
HCM 2010 Ctrl Delay	27.6										
HCM 2010 LOS	C										
Notes											

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	50	30	100	143	120	140	403	604	72	140	765
Traffic Volume (veh/h)	50	30	100	143	120	140	403	604	72	140	765
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0.99	0.98	0.99	0.98	0.98	0.98	1.00	1.00	0.99	1.00	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1900
Adj Sat Flow, veh/h	54	32	108	154	129	151	433	649			

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	480	48.1	61.6	61.7
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	4	5	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7266.5	7266.5	7266.5	7266.5
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3220.0	3221.5	3354.4	3355.4
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	47.0	47.0	47.0	47.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.34	2.32	2.98	2.87
Pedestrian Crosswalk LOS	B	B	C	C

Avila Ranch
5: Higuera & Prado

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	194	434	1159	1017
Effct. Green for Bike (s)	17.1	16.1	43.1	28.4
Cross Street Width (ft)	61.6	61.7	48.1	48.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	297	280	750	494
Bicycle Delay (s/bike)	41.7	42.5	22.5	32.6
Bicycle Compliance	Poor	Poor	Fair	Poor
Bicycle LOS Score	2.82	3.22	1.97	1.85
Bicycle LOS	C	C	A	A

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP PM
1/15/2016

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group	20	21	377	384	344	42	607	496	292	745
Lane Group Flow (vph)	0.11	0.07	0.80	0.81	0.50	0.34	0.78	0.50	0.80	0.51
v/c Ratio	41.3	0.4	48.7	49.5	6.7	55.3	43.7	3.9	56.7	25.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	41.3	0.4	48.7	49.5	6.7	55.3	43.7	3.9	56.7	25.7
Total Delay	12	0	232	237	0	25	183	16	176	194
Queue Length 50th (ft)	34	0	#534	#546	80	70	#312	59	#420	335
Queue Length 95th (ft)	403	0		1256			1054			1668
Internal Link Dist (ft)										
Turn Bay Length (ft)					250	140		100	165	
Base Capacity (vph)	532	579	473	476	693	134	958	991	364	1467
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.80	0.81	0.50	0.31	0.63	0.50	0.80	0.51

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations	10	10	20	710	20	330	40	583	476	280	685	30
Traffic Volume (veh/h)	10	10	20	710	20	330	40	583	476	280	685	30
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/h	10	10	21	755	0	0	42	607	496	292	714	31
Adj Flow Rate, veh/h	0	1	1	2	0	1	2	1	2	1	2	0
Adj No. of Lanes	2	2	2	2	2	2	2	2	2	2	2	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	29	29	51	881	0	393	53	960	821	331	1479	64
Cap. veh/h	0.03	0.03	0.03	0.25	0.00	0.00	0.03	0.27	0.27	0.19	0.43	0.43
Arrive On Green	909	909	1573	3548	0	1583	1774	3539	1578	1774	3455	150
Sat Flow, veh/h	20	0	21	755	0	0	42	607	496	292	366	379
Grp Volume(v), veh/h	1817	0	1573	1774	0	1583	1774	1770	1578	1774	1770	1836
Grp Sat Flow(s), veh/h	0.9	0.0	1.2	17.9	0.0	0.0	2.1	13.3	19.3	14.1	13.1	13.1
Q Serve(g_s), s	0.9	0.0	1.2	17.9	0.0	0.0	2.1	13.3	19.3	14.1	13.1	13.1
Cycle Q Clear(g_c), s	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.08
Prop In Lane	59	0	51	881	0	393	53	960	821	331	757	786
Lane Grp Cap(c), veh/h	0.34	0.00	0.41	0.86	0.00	0.00	0.79	0.63	0.60	0.88	0.48	0.48
V/C Ratio(X)	559	0	483	1050	0	469	141	1007	842	384	757	786
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	41.6	0.0	41.7	31.5	0.0	0.0	42.4	28.2	14.8	34.8	18.1	18.1
Uniform Delay (d), s/veh	3.4	0.0	5.3	6.3	0.0	0.0	22.8	1.2	1.2	18.9	0.5	0.5
Incr Delay (d2), 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
Initial Q Delay(Q3), s/veh	0.5	0.0	0.6	9.5	0.0	0.0	1.3	6.7	12.1	8.6	6.5	6.7
%ile Back(Q50%), veh/m	45.0	0.0	47.0	37.8	0.0	0.0	65.2	29.4	16.0	53.7	18.6	18.6
LnGrp Delay(d), s/veh	D	D	D	D	D	D	E	C	B	D	B	B
LnGrp LOS												
Approach Vol, veh/h	41			755			1145				1037	
Approach Delay, s/veh	46.0			37.8			24.9				28.5	
Approach LOS	D			D			C				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	21.4	29.8		8.8	7.6	43.6						
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0						
Max Green Setting (Gmax), s	19.0	25.0		27.0	7.0	37.0						
Max Q Clear Time (g_c+H), s	16.1	21.3		3.2	4.1	15.1						
Green Ext Time (g_e), s	0.3	2.5		0.1	0.0	11.5						
Intersection Summary												
HCM 2010 Ctrl Delay							29.7					
HCM 2010 LOS							C					
Notes												

Central Coast Transportation Consulting
Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP PM
1/15/2016

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	20	21	377	384	344	42	607	496	292	745
v/c Ratio	0.11	0.07	0.80	0.81	0.50	0.34	0.78	0.50	0.80	0.51
Control Delay	41.3	0.4	48.7	49.5	6.7	55.3	43.7	3.9	56.7	25.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.3	0.4	48.7	49.5	6.7	55.3	43.7	3.9	56.7	25.7
Queue Length 50th (ft)	12	0	232	237	0	25	183	16	176	194
Queue Length 95th (ft)	34	0	#534	#546	80	70	#312	59	#420	335
Internal Link Dist (ft)	403	0		1256			1054			1668
Turn Bay Length (ft)					250	140		100	165	
Base Capacity (vph)	532	579	473	476	693	134	958	991	364	1467
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.80	0.81	0.50	0.31	0.63	0.50	0.80	0.51

Central Coast Transportation Consulting
Synchro 9 Report
Queues

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	47.1	49.5	74.5	62.6
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	100	70	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2262.5	2286.2	2456.2	2389.3
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.86	3.21	2.90
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	41	1105	1145	1037
Effct. Green for Bike (s)	9.6	26.7	21.0	39.1
Cross Street Width (ft)	74.5	62.6	49.5	47.1
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	160	445	350	652
Bicycle Delay (s/bike)	50.8	36.3	40.8	27.3
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.77	4.34	3.26	3.14
Bicycle LOS	C	E	C	C

Avila Ranch
7: Horizon Ln & Tank Farm

Near Term Plus Project no BP PM
1/15/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	←	←	←	←	←	←
Traffic Volume (veh/h)	806	20	51	1120	30	43
Future Volume (Veh/h)	806	20	51	1120	30	43
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	876	22	55	1217	33	47
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2			2		
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume		898			2214	887
VC1, stage 1 conf vol					887	
VC2, stage 2 conf vol					1327	
VCu, unblocked vol		898			2214	887
IC, single (s)		4.1			6.4	6.2
IC, 2 stage (s)		2.2			5.4	3.3
p0 queue free %		93			83	86
CM capacity (veh/h)		756			197	343
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	898	1272	80			
Volume Left	0	55	33			
Volume Right	22	0	47			
cSH	1700	756	263			
Volumes to Capacity	0.53	0.07	0.30			
Queue Length 95th (ft)	0	6	31			
Control Delay (s)	0.0	2.9	24.6			
Lane LOS	A	C	C			
Approach Delay (s)	0.0	2.9	24.6			
Approach LOS		C				
Intersection Summary						
Average Delay		2.5				
Intersection Capacity Utilization		111.4%			ICU Level of Service	H
Analysis Period (min)		15				

Avila Ranch
7: Horizon Ln & Tank Farm

Near Term Plus Project no BP PM
2/1/2016

Approach	EB
Approach Direction	EB
Median Present?	No
Approach Delay(s)	10511.5
Level of Service	F
Crosswalk	
Length (ft)	46
Lanes Crossed	2
Veh Vol Crossed	1926
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	16.14
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.99
Delay for add. Gap	10513.40
Avg Ped Delay (s)	10511.50
Approach	WB
Approach Direction	WB
Median Present?	No
Approach Delay(s)	10511.5
Level of Service	F
Crosswalk	
Length (ft)	46
Lanes Crossed	2
Veh Vol Crossed	1926
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	16.14
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.99
Delay for add. Gap	10513.40
Avg Ped Delay (s)	10511.50

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP PM
1/15/2016

	WBL	NBT	SBL	SBT
Lane Group	693	1089	156	1260
Lane Group Flow (vph)	0.70	0.85	0.79	0.66
v/c Ratio	22.2	26.8	60.4	13.1
Control Delay	0.0	0.0	0.0	0.0
Queue Delay	22.2	26.8	60.4	13.1
Total Delay	110	188	60	163
Queue Length 50th (ft)	161	#346	#169	280
Queue Length 95th (ft)	1245	306		1054
Internal Link Dist (ft)		200		
Turn Bay Length (ft)	1319	1338	197	1977
Base Capacity (vph)	0	0	0	0
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.53	0.81	0.79	0.64

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP PM
1/15/2016

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	498	161	838	197	148	1197
Future Volume (vph)	498	161	838	197	148	1197
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	4.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.95	1.00	0.95
Frbp. ped/bikes	0.99	1.00	1.00	1.00	1.00	1.00
Fibb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.96	0.97	1.00	1.00	1.00	1.00
Flt Protected	0.96	1.00	0.95	1.00	0.95	1.00
Satd. Flow (prot)	3332	3424	1770	3539	1770	3539
Flt Permitted	0.96	1.00	0.95	1.00	0.95	1.00
Satd. Flow (perm)	3332	3424	1770	3539	1770	3539
Peak-Hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	524	169	882	207	156	1260
RTOR Reduction (vph)	50	0	28	0	0	0
Lane Group Flow (vph)	643	0	1061	0	156	1260
Confl. Peds. (#/hr)	6		1	1	1	1
Turn Type	Prot	NA	NA	Prot	NA	NA
Protected Phases	8		2	1	6	
Permitted Phases						
Actuated Green, G (s)	17.9	23.1	7.1	34.2	34.2	
Effective Green, g (s)	17.9	23.1	7.1	34.2	34.2	
Actuated g/C Ratio	0.28	0.37	0.11	0.54	0.54	
Clearance Time (s)	5.0	6.0	4.0	6.0	6.0	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)	945	1253	199	1918	1918	
v/s Ratio Prot	c0.19	c0.31	0.09	c0.36	c0.36	
v/s Ratio Perm						
v/c Ratio	0.68	0.85	0.78	0.66	0.66	
Uniform Delay, d1	20.1	18.4	27.3	10.3	10.3	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.0	5.5	18.0	0.8	0.8	
Delay (s)	22.1	23.9	45.3	11.1	11.1	
Level of Service	C	C	D	B	B	
Approach Delay (s)	22.1	23.9		14.9		
Approach LOS	C	C		B		

Intersection Summary	
HCM 2000 Control Delay	B
HCM 2000 Volume to Capacity ratio	19.5
HCM 2000 Level of Service	B
Actuated Cycle Length (s)	63.1
Sum of lost time (s)	15.0
Intersection Capacity Utilization	69.7%
ICU Level of Service	C
Analysis Period (min)	15
c Critical Lane Group	

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP PM
1/15/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	44.9	59.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	30	30	0
Veh. RTOR Flow in Walk (v/h)	25	45	45
85th percentile speed (mph)	72.76.3	72.76.5	72.76.5
Right Corner Area per Ped (sq ft)	A	A	A
Ped. Circulation Area (sq ft)	3839.8	4566.3	4068.5
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (s/p)	27.5	26.6	27.5
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.26	3.21	3.01
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Near Term Plus Project no BP PM
1/15/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	693	1089	1416
Effct. Green for Bike (s)	17.9	23.1	34.2
Cross Street Width (ft)	60.1	44.9	59.3
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	511	660	977
Bicycle Delay (s/bike)	19.4	15.7	9.2
Bicycle Compliance	Fair	Fair	Good
Bicycle LOS Score	2.09	2.07	2.56
Bicycle LOS	B	B	B

Avila Ranch
9: Higuera & Vachell

Near Term Plus Project no BP PM
17/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	98	927	249	0	1653
Future Volume (Veh/h)	0	98	927	249	0	1653
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	103	976	262	0	1740
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			433			386
pX platoon unblocked	0.74					
vC, conflicting volume	1977	619			1238	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1619	619			1238	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
p0 queue free %	3.5	3.3			2.2	
IC capacity (veh/h)	100	76			100	
ICM capacity (veh/h)	70	432			558	
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	103	651	587	870	870	
Volume Left	0	0	0	0	0	
Volume Right	103	0	262	0	0	
cSH	432	1700	1700	1700	1700	
Volumes to Capacity	0.24	0.38	0.35	0.51	0.51	
Queue Length 95th (ft)	23	0	0	0	0	
Control Delay (s)	15.9	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	15.9	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay	0.5					
Intersection Capacity Utilization	49.0%					
Analysis Period (min)	15					
	ICU Level of Service					
	A					

Avila Ranch
9: Higuera & Vachell

Near Term Plus Project no BP PM
2/11/2016

Approach	SBT	SBL	NBR	NBT	WBR	WBL
Approach Direction	NB					
Median Present?	No					
Approach Delay(s)	1143720					
Level of Service	F					
Crosswalk						
Length (ft)	56					
Lanes Crossed	4					
Veh Vol Crossed	2580					
Ped Vol Crossed	0					
Yield Rate(%)	0					
Ped Platooning	No					
Critical Headway (s)	19.00					
Prob of Delayed X-ing	1.00					
Prob of Blocked Lane	0.97					
Delay for add Gap	1143720.00					
Avg Ped Delay (s)	1143720.00					
Approach	SB					
Approach Direction	SB					
Median Present?	No					
Approach Delay(s)	1143720					
Level of Service	F					
Crosswalk						
Length (ft)	56					
Lanes Crossed	4					
Veh Vol Crossed	2580					
Ped Vol Crossed	0					
Yield Rate(%)	0					
Ped Platooning	No					
Critical Headway (s)	19.00					
Prob of Delayed X-ing	1.00					
Prob of Blocked Lane	0.97					
Delay for add Gap	1143720.00					
Avg Ped Delay (s)	1143720.00					

Avila Ranch
10: Higuera & LOVR

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	1038	39	75	189	599	1113
v/c Ratio	0.76	0.06	0.42	0.22	0.85	0.92
Control Delay	29.2	12.3	20.1	14.6	39.2	19.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	12.3	20.1	14.6	39.2	19.7
Queue Length 50th (ft)	277	7	23	63	325	262
Queue Length 95th (ft)	386	29	47	104	469	#511
Internal Link Dist (ft)	407			1929	353	
Turn Bay Length (ft)	100	225				
Base Capacity (vph)	1483	695	180	1110	892	1247
Stationing Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.06	0.42	0.17	0.67	0.89

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
10: Higuera & LOVR

Near Term Plus Project no BP PM
1/15/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	996	37	72	181	575	1068
Traffic Volume (veh/h)	996	37	72	181	575	1068
Future Volume (veh/h)	996	37	72	181	575	1068
Number	7	14	5	2	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1038	39	75	189	599	1112
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1177	542	188	991	803	1223
Arrive On Green	0.34	0.34	0.04	0.53	0.43	0.43
Sat Flow, veh/h	3442	1583	1774	1863	1863	1580
Grp Volume(v), veh/h	1038	39	75	189	599	1112
Grp Sat Flow(s), veh/h/ln	1721	1583	1774	1863	1863	1580
Q_Serv(g_s), s	27.0	1.6	2.1	5.0	25.6	41.0
Cycle Q Clear(g_c), s	27.0	1.6	2.1	5.0	25.6	41.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1177	542	188	991	803	1223
V/C Ratio(X)	0.88	0.07	0.40	0.19	0.75	0.91
Avail Cap(c_a), veh/h	1339	616	196	999	803	1223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.5	21.1	18.4	11.6	22.7	7.1
Incr Delay (d2), s/veh	6.6	0.1	1.4	0.1	3.8	10.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%) veh/ln	13.9	1.7	1.1	2.6	14.0	32.5
LnGrp Delay(d), s/veh	36.0	21.2	19.7	11.7	26.5	17.3
LnGrp LOS	D	C	B	B	C	B
Approach Vol, veh/h	1077		264	1711		
Approach Delay, s/veh	35.5		14.0	20.5		
Approach LOS	D		B	C		
Timer	1	2	3	4	5	6
Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	56.6	38.5	9.6	47.0		
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	51.0	37.0	4.0	41.0		
Max Q Clear Time (g_c+H), s	7.0	29.0	4.1	43.0		
Green Ext Time (g_e), s	20.7	3.5	0.0	0.0		
Intersection Summary						
HCM 2010 Ctrl Delay		25.2				
HCM 2010 LOS		C				

Avila Ranch
10: Higuera & LOVR

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	61.2	36.1	58.9
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2
Ped. Right-Left Flow Rate (p/h)	2	0	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq ft)	12129.2	18193.8	7265.0
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	0.0	0.0	0.1
Crosswalk Circulation Code	F	-	F
Pedestrian Delay (s/p)	50.0	50.0	50.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.79	2.39	2.86
Pedestrian Crosswalk LOS	C	B	C

Avila Ranch
10: Higuera & LOVR

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	1077	264	1711
Effct. Green for Bike (s)	35.5	40.9	33.5
Cross Street Width (ft)	36.1	58.9	61.2
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Shoulder Width (ft)	0.0	0.0	0.0
On Street Parking?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	710	818	670
Bicycle Delay (s/bike)	20.8	17.5	22.1
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	1.93	1.82	4.25
Bicycle LOS	A	A	D

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP PM
17/15/2016

	WBL	NBT	SBT
Lane Group	132	262	665
Lane Group Flow (vph)	0.31	0.27	0.73
v/c Ratio	5.7	4.7	13.0
Control Delay	0.0	0.0	0.0
Queue Delay	5.7	4.7	13.0
Total Delay	3	15	58
Queue Length 50th (ft)	24	43	#210
Queue Length 95th (ft)	1779	852	1929
Internal Link Dist (ft)			
Turn Bay Length (ft)	920	980	925
Base Capacity (vph)	0	0	0
Stavation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.14	0.27	0.72

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP PM
17/15/2016

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	W					
Lane Configurations	19	102	210	31	72	540
Traffic Volume (vph)	19	102	210	31	72	540
Future Volume (vph)	1900	1900	1900	1900	1900	1900
Ideal Flow (vphpb)	4.0	4.0	4.0	4.0	4.0	4.0
Total Lost time (s)	1.00	1.00	1.00	1.00	1.00	1.00
Lane Util. Factor	0.99	0.98	1.00	0.99	0.99	0.99
Flt Protected	1638	1830	1830	1852	1852	1852
Satd. Flow (prot)	1638	1830	1830	1744	1744	1744
Flt Permitted	0.92	0.92	0.92	0.92	0.92	0.92
Satd. Flow (perm)	21	111	228	34	78	587
Peak-hour factor, PHF	88	0	10	0	0	0
Adj. Flow (vph)	44	0	252	0	0	665
RTOR Reduction (vph)						
Lane Group Flow (vph)	Prot		NA	Perm	NA	NA
Turn Type	8		2		6	6
Protected Phases						
Permitted Phases						
Actuated Green, G (s)	6.3		15.9		15.9	15.9
Effective Green, g (s)	6.3		15.9		15.9	15.9
Actuated g/c Ratio	0.21		0.53		0.53	0.53
Clearance Time (s)	4.0		4.0		4.0	4.0
Vehicle Extension (s)	3.0		3.0		3.0	3.0
Lane Grp Cap (vph)	341		963		918	918
v/s Ratio Prot	c0.03		0.14		c0.38	c0.38
v/c Ratio	0.13		0.26		0.72	0.72
Uniform Delay, d1	9.7		3.9		5.5	5.5
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	0.2		0.1		2.9	2.9
Delay (s)	9.9		4.1		8.3	8.3
Level of Service	A		A		A	A
Approach Delay (s)	9.9		4.1		8.3	8.3
Approach LOS	A		A		A	A

Intersection Summary
HCM 2000 Control Delay
HCM 2000 Volume to Capacity ratio
Actuated Cycle Length (s)
Intersection Capacity Utilization
Analysis Period (min)
c. Critical Lane Group

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP PM
1/15/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	32.8	35.6	36.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	2	2	2
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	45	45
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	20.0	20.0	20.0
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	1.81	2.33	2.43
Pedestrian Crosswalk LOS	A	B	B

Central Coast Transportation Consulting
HCM 2010 Signals-Pedestrians

Synchro 9 Report
HCM 2010 Signals-Pedestrians

Avila Ranch
11: Higuera & Buckley

Near Term Plus Project no BP PM
1/15/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	132	262	665
Effct. Green for Bike (s)	6.3	15.9	15.9
Cross Street Width (ft)	36.0	32.8	35.6
Through Lanes Number	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	315	795	795
Bicycle Delay (s/bike)	14.2	7.3	7.3
Bicycle Compliance	Fair	Good	Good
Bicycle LOS Score	2.33	2.49	3.20
Bicycle LOS	B	B	C

Central Coast Transportation Consulting
HCM 2010 Signals-Bicycles

Synchro 9 Report
HCM 2010 Signals-Bicycles

Avila Ranch
12: Buckley & Vachell

Near Term Plus Project no BP PM
1/15/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1		W	
Traffic Volume (veh/h)	64	38	73	142	246	49
Future Volume (Veh/h)	64	38	73	142	246	49
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	70	41	79	154	267	53
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	233			337	156	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	233			337	156	
IC, single (s)	4.1			6.4	6.2	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	95			57	94	
CM capacity (veh/h)	1335			624	890	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	111	233	320			
Volume Left	70	0	267			
Volume Right	0	154	53			
cSH	1335	1700	656			
Volumes to Capacity	0.05	0.14	0.49			
Queue Length 95th (ft)	4	0	67			
Control Delay (s)	5.1	0.0	15.6			
Lane LOS	A	C	C			
Approach Delay (s)	5.1	0.0	15.6			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay		8.4				
Intersection Capacity Utilization		44.7%		ICU Level of Service		A
Analysis Period (min)		15				

Avila Ranch
12: Buckley & Vachell

Near Term Plus Project no BP PM
2/1/2016

Approach	EB	WB
Approach Direction	EB	
Median Present?	No	
Approach Delay(s)	2.6	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	111	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.31	
Prob of Blocked Lane	0.17	
Delay for add. Gap	8.28	
Avg Ped Delay (s)	2.59	
Approach	WB	EB
Approach Direction	WB	
Median Present?	No	
Approach Delay(s)	2.6	
Level of Service	A	
Crosswalk		
Length (ft)	32	
Lanes Crossed	2	
Veh Vol Crossed	111	
Ped Vol Crossed	0	
Yield Rate(%)	0	
Ped Platooning	No	
Critical Headway (s)	12.14	
Prob of Delayed X-ing	0.31	
Prob of Blocked Lane	0.17	
Delay for add. Gap	8.28	
Avg Ped Delay (s)	2.59	

Avila Ranch
13: Buckley & Project Entry

Near Term Plus Project no BP PM
17/15/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	24	222	223	27	17	21
Future Volume (Veh/h)	24	222	223	27	17	21
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	241	242	29	18	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume		271			550	256
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
IC, single (s)		4.1			6.4	6.2
IC, 2 stage (s)						
p0 queue free %		2.2			3.5	3.3
CM capacity (veh/h)		98			96	97
CM capacity (veh/h)		1292			486	782
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	267	271	41			
Volume Left	26	0	18			
Volume Right	0	29	23			
cSH	1292	1700	617			
Volumes to Capacity	0.02	0.16	0.07			
Queue Length 95th (ft)	2	0	5			
Control Delay (s)	0.9	0.0	11.2			
Lane LOS	A	A	B			
Approach Delay (s)	0.9	0.0	11.2			
Approach LOS	B	B	B			
Intersection Summary						
Average Delay		1.2				
Intersection Capacity Utilization		39.7%			ICU Level of Service	A
Analysis Period (min)		15				

Avila Ranch
13: Buckley & Project Entry

Near Term Plus Project no BP PM
2/11/2016

Approach	EB	WB	C
Approach Direction	EB	WB	
Median Present?	No	No	
Approach Delay(s)	16.1	16.1	
Level of Service	C	C	
Crosswalk			
Length (ft)	32	32	
Lanes Crossed	2	2	
Veh Vol Crossed	445	445	
Ped Vol Crossed	0	0	
Yield Rate(%)	0	0	
Ped Platooning	No	No	
Critical Headway (s)	12.14	12.14	
Prob of Delayed X-ing	0.78	0.78	
Prob of Blocked Lane	0.53	0.53	
Delay for add Gap	20.67	20.67	
Avg Ped Delay (s)	16.06	16.06	
Approach	WB	EB	C
Approach Direction	WB	EB	
Median Present?	No	No	
Approach Delay(s)	16.1	16.1	
Level of Service	C	C	
Crosswalk			
Length (ft)	32	32	
Lanes Crossed	2	2	
Veh Vol Crossed	445	445	
Ped Vol Crossed	0	0	
Yield Rate(%)	0	0	
Ped Platooning	No	No	
Critical Headway (s)	12.14	12.14	
Prob of Delayed X-ing	0.78	0.78	
Prob of Blocked Lane	0.53	0.53	
Delay for add Gap	20.67	20.67	
Avg Ped Delay (s)	16.06	16.06	

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP PM
1/15/2016

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	75	306	41	91	520	21	1135
v/c Ratio	0.43	0.88	0.47	0.72	0.37	0.23	0.91
Control Delay	56.9	47.2	50.6	85.0	7.1	60.4	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	47.2	50.6	85.0	7.1	60.4	28.9
Queue Length 50th (ft)	53	109	15	68	102	15	651
Queue Length 95th (ft)	103	#239	#66	#174	238	44	#1117
Internal Link Dist (ft)	9732	405		777			1174
Turn Bay Length (ft)		150		360		470	
Base Capacity (vph)	298	349	87	126	1398	91	1341
Stationing Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.88	0.47	0.72	0.37	0.23	0.85

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP PM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	62	10	294	10	10	20	87	490	10	20	1090
Traffic Volume (veh/h)	62	10	294	10	10	20	87	490	10	20	1090
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6
Number	0	0	0	0	0	0	0	0	0	0	0
Initial Q. (Cb). veh	1.00	0.97	1.00	0.91	1.00	0.91	1.00	0.98	1.00	1.00	0.98
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus. Adj	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825
Adj Sat Flow, veh/hln	65	10	306	10	10	21	91	510	10	21	1135
Adj Flow Rate, veh/h	0	1	1	0	1	0	1	1	0	1	1
Adj No. of Lanes	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	207	32	298	12	12	26	101	1196	23	29	1166
Arrive On Green	0.14	0.14	0.14	0.03	0.03	0.03	0.06	0.68	0.68	0.02	0.64
Percent Heavy Veh. %	1532	236	1519	384	384	807	1712	1756	34	1739	1825
Sat Flow, veh/h	75	0	306	41	0	0	91	0	520	21	1135
Grp Volume(v). veh/h	1768	0	1519	1575	0	0	1712	0	1791	1739	1825
Grp Sat Flow(s). veh/hln	4.5	0.0	16.0	3.1	0.0	0.0	6.2	0.0	15.4	1.4	70.3
Q. Serv(s). s	4.5	0.0	16.0	3.1	0.0	0.0	6.2	0.0	15.4	1.4	70.3
Cycle Q Clear(g.c.). s	0.87	1.00	0.24	0.51	1.00	0.02	1.00	1.00	1.00	1.00	1.00
Prop In Lane	239	0	298	50	0	0	101	0	1219	29	1166
Lane Grp Cap(c). veh/h	0.31	0.00	1.03	0.82	0.00	0.00	0.90	0.00	0.43	0.72	0.97
V/C Ratio(X)	239	0	298	53	0	0	101	0	1219	73	1188
Avail Cap(c.a.). veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	1.00
Upstream Filter(i)	46.2	0.0	47.7	57.0	0.0	0.0	55.3	0.0	8.5	57.9	20.4
Uniform Delay (d). s/veh	0.7	0.0	59.1	60.7	0.0	0.0	58.2	0.0	0.2	27.6	19.8
Incr Delay (d2). s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3). s/veh	2.3	0.0	14.6	2.2	0.0	0.0	4.6	0.0	7.6	0.9	41.4
%ile BackQ(50%) veh/hln	46.9	0.0	106.8	117.6	0.0	0.0	113.5	0.0	8.7	85.5	40.2
LnGrp Delay(d). s/veh	D	F	F	F	F	F	F	F	A	F	D
LnGrp LOS	D	F	F	F	F	F	F	F	A	F	D
Approach Vol, veh/h	381			41			611				1190
Approach Delay, s/veh	95.1			117.6			24.3				40.1
Approach LOS	F			F			C				D
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc). s	6.0	84.6		20.0	11.0	79.6					
Change Period (Y+Rc). s	4.0	4.0		4.0	4.0	4.0					
Max Green Setting (Gmax). s	5.0	79.0		16.0	7.0	77.0					
Max Q Clear Time (g_c+H). s	3.4	17.4		18.0	8.2	72.3					
Green Ext Time (g_c). s	0.0	21.8		0.0	0.0	3.3					
Intersection Summary	46.6										
HCM 2010 Ctrl Delay	D										
HCM 2010 LOS	D										

Central Coast Transportation Consulting
Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP PM
1/15/2016

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	75	306	41	91	520	21	1135
v/c Ratio	0.43	0.88	0.47	0.72	0.37	0.23	0.91
Control Delay	56.9	47.2	50.6	85.0	7.1	60.4	28.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	56.9	47.2	50.6	85.0	7.1	60.4	28.9
Queue Length 50th (ft)	53	109	15	68	102	15	651
Queue Length 95th (ft)	103	#239	#66	#174	238	44	#1117
Internal Link Dist (ft)	9732	405		777			1174
Turn Bay Length (ft)		150		360		470	
Base Capacity (vph)	298	349	87	126	1398	91	1341
Stationing Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.88	0.47	0.72	0.37	0.23	0.85

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Central Coast Transportation Consulting
Synchro 9 Report
Queues

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.6	24.1	37.1	48.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	3	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Number of Actuated	6	2	4	8
Corresponding Signal Phase	9.0	0.0	9.0	9.0
Effective Walk Time (s)	9.0	9.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.0	81.0	81.0	81.0
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4894.5	0.0	4815.1	5120.2
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.21	1.78	2.96	2.80
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Near Term Plus Project no BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	381	41	611	1190
Effct. Green for Bike (s)	10.3	4.4	80.6	70.3
Cross Street Width (ft)	37.1	48.3	24.1	39.6
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	172	73	1343	1172
Bicycle Delay (s/bike)	50.1	55.7	6.5	10.3
Bicycle Compliance	Poor	Poor	Good	Fair
Bicycle LOS Score	2.76	2.37	2.94	4.13
Bicycle LOS	C	B	C	D

Avila Ranch
15: Earthwood & Suburban

Near Term Plus Project no BP PM
17/15/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	34	108	7	48	72	4
Traffic Volume (veh/h)	34	108	7	48	72	4
Future Volume (Veh/h)	Free	Free	0%	Stop		
Sign Control	0%	0%	0%	0%		
Grade	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	37	117	8	52	78	4
Hourly flow rate (vph)						
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume		154		164		%
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
IC, single (s)		154		164		96
IC, 2 stage (s)		4.1		6.4		6.2
p0 queue free %		2.2		3.5		3.3
ICM capacity (veh/h)		99		91		100
Direction_Lane #	EB 1	WB 1	NB 1			
Volume Total	154	60	82			
Volume Left	0	8	78			
Volume Right	117	0	4			
cSH	1700	1426	828			
Volumes to Capacity	0.09	0.01	0.10			
Queue Length 95th (ft)	0	0	8			
Control Delay (s)	0.0	1.0	9.8			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	1.0	9.8			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay		2.9				
Intersection Capacity Utilization		19.3%		ICU Level of Service		A
Analysis Period (min)		15				

Avila Ranch
15: Earthwood & Suburban

Near Term Plus Project no BP PM
2/11/2016

Approach	EB
Approach Direction	EB
Median Present?	No
Approach Delay(s)	3.1
Level of Service	A
Crosswalk	
Length (ft)	44
Lanes Crossed	2
Veh Vol Crossed	82
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	15.57
Prob of Delayed X-ing	0.30
Prob of Blocked Lane	0.16
Delay for add Gap	10.45
Avg Ped Delay (s)	3.12
Approach	WB
Approach Direction	WB
Median Present?	No
Approach Delay(s)	1.8
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	82
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.24
Prob of Blocked Lane	0.13
Delay for add Gap	7.64
Avg Ped Delay (s)	1.85

Avila Ranch
16: Horizon Ln & Suburban

Near Term Plus Project no BP PM
17/15/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	4	58	62	8	14	7
Future Volume (vph)	4	58	62	8	14	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	63	67	9	15	8
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	67	76	23			
Volume Left (vph)	4	67	0			
Volume Right (vph)	63	0	8			
Head (s)	-0.52	0.21	-0.17			
Departure Headway (s)	3.6	4.3	3.9			
Degree Utilization, x	0.07	0.09	0.03			
Capacity (veh/h)	969	821	892			
Control Delay (s)	6.9	7.7	7.0			
Approach Delay (s)	6.9	7.7	7.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	7.3					
Level of Service	A					
Intersection Capacity Utilization	21.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Near Term Plus Project no BP PM
17/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	32	8	139	57	56	261
Future Volume (Veh/h)	32	8	139	57	56	261
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	35	9	151	62	61	284
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
px, platoon unblocked						
VC, conflicting volume	588	182		213		
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	588	182		213		
IC, single (s)	6.4	6.2		4.1		
IC, 2 stage (s)						
IC queue free %	3.5	3.3		2.2		
IF (s)	92	99		96		
ICM capacity (veh/h)	450	861		1357		
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	44	213	345			
Volume Left	35	0	61			
Volume Right	9	62	0			
CSH	499	1700	1357			
Volume to Capacity	0.09	0.13	0.04			
Queue Length 95th (ft)	7	0	4			
Control Delay (s)	12.9	0.0	1.7			
Lane LOS	B		A			
Approach Delay (s)	12.9	0.0	1.7			
Approach LOS	B		A			
Intersection Summary						
Average Delay	1.9					
Intersection Capacity Utilization	41.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
15: Earthwood & Suburban

Near Term Plus Project no BP PM
2/1/2016

Approach	WB
Approach Direction	EB
Median Present?	No
Approach Delay(s)	3.1
Level of Service	A
Crosswalk	
Length (ft)	44
Lanes Crossed	2
Veh Vol Crossed	82
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	15.57
Prob of Delayed X-ing	0.30
Prob of Blocked Lane	0.16
Delay for adq Gap	10.45
Avg Ped Delay (s)	3.12
Approach	WB
Approach Direction	WB
Median Present?	No
Approach Delay(s)	1.8
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	82
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.24
Prob of Blocked Lane	0.13
Delay for adq Gap	7.64
Avg Ped Delay (s)	1.85

Avila Ranch
18: Vachell & Project Entry

Near Term Plus Project no BP PM
1/15/2016



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					4
Traffic Volume (veh/h)	19	11	186	10	17	275
Future Volume (Veh/h)	19	11	186	10	17	275
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	21	12	202	11	18	299
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
VC conflicting volume	542	208			213	
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol	542	208			213	
IC single (s)	6.4	6.2			4.1	
IC 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	96	99			99	
dm capacity (veh/h)	494	833			1357	
Direction_Lane #	WB 1	NB 1	SB 1			
Volume Total	33	213	317			
Volume Left	21	0	18			
Volume Right	12	11	0			
cSH	580	1700	1357			
Volume to Capacity	0.06	0.13	0.01			
Queue Length 95th (ft)	5	0	1			
Control Delay (s)	11.6	0.0	0.6			
Lane LOS	B		A			
Approach Delay (s)	11.6	0.0	0.6			
Approach LOS	B		A			
Intersection Summary						
Average Delay			1.0			
Intersection Capacity Utilization			38.4%			
ICU Level of Service			A			
Analysis Period (min)			15			

Avila Ranch
18: Vachell & Project Entry

Near Term Plus Project no BP PM
2/1/2016

Avila Ranch
1: LOVR & 101 NB

Cumulative AM
6/22/2015

Approach	NB
Approach Direction	No
Median Present?	17
Approach Delay(s)	C
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	461
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.79
Prob of Blocked Lane	0.54
Delay for add Gap	21.58
Avg Ped Delay (s)	17.02
Approach	SB
Approach Direction	No
Median Present?	17
Approach Delay(s)	C
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	461
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.79
Prob of Blocked Lane	0.54
Delay for add Gap	21.58
Avg Ped Delay (s)	17.02

Lane Group	NBT	SBT
Lane Group Flow (vph)	1054	1424
v/c Ratio	0.30	0.76
Control Delay	0.2	3.0
Queue Delay	0.0	0.0
Total Delay	0.2	3.0
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)	872	236
Turn Bay Length (ft)		
Base Capacity (vph)	3539	1863
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.30	0.76
Intersection Summary		

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	970	1310	0
Future Volume (veh/h)	0	0	0	970	1310	0
Number	1	6	2	12	12	0
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00					1.00
Parking Bus, Adj	1.00					1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	1054	1424	0	0	0
Adj No. of Lanes	1	2	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Cap. veh/h	81	3340	1758	1494	1494	0
Arrive On Green	0.00	0.94	0.94	0.00	0.00	0.00
Sat Flow, veh/h	375	3632	1863	1583	1583	0
Grp Volume(v), veh/h	0	1054	1424	0	0	0
Grp Sat Flow(s), veh/hln	375	1770	1863	1583	1583	0
Q_Serve(g_s), s	0.0	2.1	16.2	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	2.1	16.2	0.0	0.0	0.0
Prop In Lane	1.00			1.00		
Lane Grp Cap(c), veh/h	81	3340	1758	1494	1494	0
V/C Ratio(X)	0.00	0.32	0.81	0.00	0.00	0.00
Avail Cap(c_a), veh/h	81	3340	1758	1494	1494	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	0.00	0.89	0.82	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.2	0.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	3.4	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/ln	0.0	1.0	8.4	0.0	0.0	0.0
LnGrp Delay(d), s/veh	0.0	0.4	4.0	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h		1054	1424			
Approach Delay, s/veh		0.4	4.0			
Approach LOS		A	A			
Timer	1	2	3	4	5	6
Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		89.0				89.0
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		84.0				84.0
Max Q Clear Time (g_c+H), s		18.2				4.1
Green Ext Time (p_c), s		50.4				58.2
Intersection Summary						
HCM 2010 Ctrl Delay	2.5					
HCM 2010 LOS	A					

Approach	EB	NB	SB
Crosswalk Length (ft)	12.4	60.0	60.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	1	5	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	Actuated
Corresponding Signal Phase	2	0	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	50	500	0
85th percentile speed (mph)	30	35	35
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (S/p)	44.5	44.5	44.5
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.50	3.58	2.85
Pedestrian Crosswalk LOS	A	D	C

Avila Ranch
1: LOVR & 101 NB
Cumulative AM
6/22/2015

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	0	1054	1424
Effct. Green for Bike (s)	0.0	89.0	89.0
Cross Street Width (ft)	60.0	60.0	12.4
Through Lanes Number	0	2	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	0	2000	2000
Bicycle Delay (s/bike)	0.0	0.0	0.0
Bicycle Compliance			-
Bicycle LOS Score	0.00	3.35	4.10
Bicycle LOS		C	D

Avila Ranch
2: LOVR & 101 NB
Cumulative AM
6/22/2015

	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	521	213	511	117	1245	149
v/c Ratio	0.69	0.53	0.21	0.11	0.52	0.13
Control Delay	36.7	24.9	6.4	1.7	9.0	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	36.7	24.9	6.4	1.7	9.0	1.6
Queue Length 50th (ft)	141	72	50	0	162	0
Queue Length 95th (ft)	177	130	88	19	262	21
Internal Link Dist (ft)			385		872	
Turn Bay Length (ft)		50		100		180
Base Capacity (vph)	1010	514	2383	1104	2383	1114
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.41	0.21	0.11	0.52	0.13
Intersection Summary						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	SBR
Lane Configurations	490	0	200	0	0	0	0	480	0	1170	0	140
Traffic Volume (veh/h)	490	0	200	0	0	0	0	480	110	0	1170	140
Future Volume (veh/h)	3	8	18	0	0	0	0	6	16	5	2	12
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	0	1863	0	1863	1863	0	1863	1863	0	1863	1863
Adj Sat Flow, veh/hln	521	0	213	0	511	0	0	0	1245	0	0	0
Adj Flow Rate, veh/h	2	0	1	0	2	1	0	2	1	0	2	1
Adj No. of Lanes	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Peak Hour Factor	679	0	312	0	2468	1104	0	2468	1104	0	2468	1104
Cap. veh/h	0.20	0.00	0.20	0.00	0.70	0.00	0.00	0.00	0.70	0.00	0.00	0.00
Arrive On Green	3442	0	1583	0	3632	1583	0	3632	1583	0	3632	1583
Sat Flow, veh/h	521	0	213	0	511	0	0	0	1245	0	0	0
Grp Volume(V), veh/h	1721	0	1583	0	1770	1583	0	1770	1583	0	1770	1583
Grp Sat Flow(s), veh/hln	12.9	0.0	11.2	0.0	4.6	0.0	0.0	4.6	0.0	14.8	0.0	0.0
Q Serve(g_s), s	12.9	0.0	11.2	0.0	4.6	0.0	0.0	4.6	0.0	14.8	0.0	0.0
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	679	0	312	0	2468	1104	0	2468	1104	0	2468	1104
Lane Grp Cap(c), veh/h	0.77	0.00	0.68	0.00	0.21	0.00	0.00	0.00	0.50	0.00	0.00	0.00
V/C Ratio(X)	1073	0	466	0	2468	1104	0	2468	1104	0	2468	1104
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	0.00	0.95	0.00	0.00	0.00	0.56	0.00	0.00	0.00
Upstream Filter(i)	34.2	0.0	33.5	0.0	4.8	0.0	0.0	4.8	0.0	6.4	0.0	0.0
Uniform Delay (d), s/veh	2.0	0.0	2.6	0.0	0.2	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	6.3	0.0	5.1	0.0	2.3	0.0	0.0	2.3	0.0	7.2	0.0	0.0
%ile BackQ(50%), veh/h	36.2	0.0	36.1	0.0	5.0	0.0	0.0	5.0	0.0	6.8	0.0	0.0
LnGrp Delay(d), s/veh	D	D	D	D	A	A	A	A	A	A	A	A
LnGrp LOS	D	D	D	D	A	A	A	A	A	A	A	A
Approach Vol, veh/h	734				511			1245				1245
Approach Delay, s/veh	36.2				5.0			6.8				6.8
Approach LOS	D				A			A				A
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2				6			8				
Phs Duration (G+Y+Rc), s	68.8				68.8			21.2				
Change Period (Y+Rc), s	6.0				6.0			3.5				
Max Green Setting (Gmax), s	54.0				54.0			26.5				
Max Q Clear Time (g_c+H), s	16.8				6.6			14.9				
Green Ext Time (g_e), s	18.8				20.9			2.9				
Intersection Summary												
HCM 2010 Ctrl Delay	15.1											
HCM 2010 LOS	B											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.1	18.5	65.0	62.2
Crosswalk Width (ft)	10.0	12.0	10.0	10.0
Total Number of Lanes Crossed	4	1	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	2	6	3	6
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	30
Right Corner Area per Ped (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	45.0	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.36	1.55	2.73	2.73
Pedestrian Crosswalk LOS	B	A	B	B

Avila Ranch
2: LOVR & 101 NB

Cumulative AM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	734	0	628	1394
Effct. Green for Bike (s)	0.0	0.0	60.6	60.6
Cross Street Width (ft)	65.0	62.2	18.5	48.1
Through Lanes Number	0	0	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	0	1347	1347
Bicycle Delay (s/bike)	0.0	0.0	4.8	4.8
Bicycle Compliance	Good	Good	Good	Good
Bicycle LOS Score	0.00	0.00	2.36	3.45
			B	C

Avila Ranch
3: Higuera & South

Cumulative AM
6/22/2015

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	31	10	521	125	40	417	521	125	552
Lane Group Flow (vph)	0.33	0.04	0.59	0.26	0.30	0.31	0.46	0.56	0.34
v/c Ratio	51.8	0.3	29.9	10.6	46.5	22.1	2.4	46.3	17.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	51.8	0.3	29.9	10.6	46.5	22.1	2.4	46.3	17.8
Total Delay	51.8	0.3	29.9	10.6	46.5	22.1	2.4	46.3	17.8
Queue Length 50th (ft)	17	0	131	13	22	94	13	66	114
Queue Length 95th (ft)	47	0	182	55	56	142	36	127	168
Internal Link Dist (ft)	208			629		338			507
Turn Bay Length (ft)		50	130		60		60	100	
Base Capacity (vph)	93	238	1142	604	135	1339	1198	271	1605
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.04	0.46	0.21	0.30	0.31	0.43	0.46	0.34
Intersection Summary									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←	←	←	←	←	←	←	←	←	←	←
Traffic Volume (veh/h)	10	20	10	500	30	90	40	400	500	120	500	30
Future Volume (veh/h)	10	20	10	500	30	90	40	400	500	120	500	30
Number	3	8	18	7	4	14	1	6	16	5	2	12
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	10	21	10	521	31	94	40	417	521	125	521	31
Adj No. of Lanes	0	1	1	2	1	2	1	2	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	1.00	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	18	38	46	728	86	260	53	1289	905	191	1500	89
Arrive On Green	0.03	0.03	0.03	0.21	0.21	0.03	0.36	0.36	0.36	0.11	0.44	0.44
Sat Flow, veh/h	591	1242	1519	3442	405	1227	1774	3539	1566	1774	3392	201
Grp Volume(V), veh/h	31	0	10	521	0	125	40	417	521	125	521	281
Grp Sat Flow(S), veh/hln	1833	0	1519	1721	0	1632	1774	1770	1566	1774	1770	1824
Q_Serve(g_s), s	1.3	0.0	0.5	10.8	0.0	5.0	1.7	6.5	16.3	5.2	7.8	7.8
Cycle Q Clear(g_c), s	1.3	0.0	0.5	10.8	0.0	5.0	1.7	6.5	16.3	5.2	7.8	7.8
Prop In Lane	0.32	1.00	1.00	1.00	0.00	0.75	1.00	1.00	1.00	1.00	1.00	0.11
Lane Grp Cap(c), veh/h	56	0	46	728	0	345	53	1289	905	191	782	806
V/C Ratio(X)	0.56	0.00	0.22	0.72	0.00	0.36	0.75	0.32	0.58	0.65	0.35	0.35
Avail Cap(c_a), veh/h	95	0	79	1164	0	552	138	1289	905	277	782	806
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.8	0.0	36.4	28.2	0.0	25.9	37.0	17.6	10.4	32.9	14.1	14.1
Incr Delay (d2), s/veh	8.4	0.0	2.3	1.3	0.0	0.6	19.2	0.7	2.7	3.7	1.2	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 BackOf(50%) veh/h	0.8	0.0	0.2	5.3	0.0	2.3	1.1	3.3	11.1	2.7	4.0	4.2
LnGrp Delay(d), s/veh	45.2	0.0	38.7	29.5	0.0	26.5	56.2	18.3	13.0	36.7	15.3	15.3
LnGrp LOS	D	D	C	C	C	E	B	B	B	D	B	B
Approach Vol, veh/h	41			646			978			677		
Approach Delay, s/veh	43.6			28.9			17.0			19.3		
Approach LOS	D			C			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	7.3	40.0		22.3	13.3	34.0						
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0						
Max Green Setting (Gmax), s	6.0	34.0		26.0	12.0	28.0						
Max Q Clear Time (g_c+H), s	3.7	9.8		12.8	7.2	18.3						
Green Ext Time (g_e), s	0.1	3.6		2.7	0.2	3.9						
Intersection Summary												
HCM 2010 Ctrl Delay	21.4											
HCM 2010 LOS	C											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated/Actuated/Actuated			
Corresponding Signal Phase	2	6	8	4
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	40	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (S/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.66	2.80	2.55
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Cumulative AM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	41	646	978	677
Effct. Green for Bike (s)	4.1	20.7	30.5	36.8
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	89	450	663	800
Bicycle Delay (s/bike)	42.0	27.6	20.6	16.6
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.93	2.65	2.22	1.91
Bicycle LOS	C	B	B	A

Avila Ranch
4: Higuera & Madonna

Cumulative AM
6/22/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	323	319	478	5	22	109	440	657	457
v/c Ratio	0.63	0.61	0.51	0.03	0.11	0.46	0.25	0.66	0.28
Control Delay	27.8	27.3	3.7	33.2	25.1	38.5	11.3	24.8	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	27.8	27.3	3.7	33.2	25.1	38.5	11.3	24.8	5.4
Queue Length 50th (ft)	100	97	7	2	4	37	42	107	23
Queue Length 95th (ft)	256	252	47	13	27	#120	107	220	78
Internal Link Dist (ft)	964								
Turn Bay Length (ft)	110								
Base Capacity (vph)	705	711	949	475	471	267	2313	1471	1974
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.46	0.45	0.50	0.01	0.05	0.41	0.19	0.45	0.23
Intersection Summary									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4	4	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	560	30	440	5	10	10	100	400	5	5	600	420
Future Volume (veh/h)	560	30	440	5	10	10	100	400	5	5	600	420
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.98	1.00	1.00	0.99	1.00	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863	1863
Adj Flow Rate, veh/h	633	0	0	5	11	11	109	435	5	5	652	457
Adj No. of Lanes	2	0	1	1	1	1	2	0	2	0	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	905	0	530	56	27	27	141	1771	20	69	1182	1654
Arrive On Green	0.26	0.00	0.00	0.03	0.03	0.03	0.08	0.49	0.49	0.34	0.34	0.34
Sat Flow, veh/h	3548	0	1583	1774	844	844	1774	3584	41	6	3461	2762
Grp Volume(v), veh/h	633	0	0	5	0	22	109	215	225	352	305	457
Grp Sat Flow(s), veh/hln	1774	0	1583	1774	0	1689	1774	1770	1855	1857	1610	1381
Q_Serve(g_s), s	8.9	0.0	0.0	0.1	0.0	0.7	3.3	3.8	3.8	0.0	8.4	4.4
Cycle Q Clear(g_c), s	8.9	0.0	0.0	0.1	0.0	0.7	3.3	3.8	3.8	8.4	8.4	4.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	0.50	1.00	1.00	0.02	0.01	1.00	1.00
Lane Grp Cap(c), veh/h	905	0	530	56	0	54	141	874	917	701	550	1654
V/C Ratio(X)	0.70	0.00	0.00	0.09	0.00	0.41	0.77	0.25	0.25	0.50	0.55	0.28
Avail Cap(c_a), veh/h	1618	0	848	518	0	493	291	1259	1320	945	764	2021
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	0.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.5	0.0	0.0	25.8	0.0	26.0	24.7	8.0	8.0	14.7	14.7	5.3
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.7	0.0	4.9	8.6	0.1	0.1	0.6	0.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	4.4	0.0	0.0	0.1	0.0	0.4	1.9	1.9	2.0	4.4	3.9	2.7
LnGrp Delay(d), s/veh	19.5	0.0	0.0	26.4	0.0	31.0	33.3	8.1	8.1	15.2	15.5	5.4
LnGrp LOS	B			C		C	C	A	A	B	B	A
Approach Vol, veh/h	633			27			549			1114		
Approach Delay, s/veh	19.5			30.1			13.1			11.3		
Approach LOS	B			C			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2			4	5	6						
Phs Duration (G+Y+Rc), s	31.1			18.0	8.4	22.7						
Change Period (Y+Rc), s	4.0			4.0	4.0	4.0						
Max Green Setting (Gmax), s	39.0			25.0	9.0	26.0						
Max Q Clear Time (g_c+H), s	5.8			10.9	5.3	10.4						
Green Ext Time (g_e), s	11.8			2.6	0.1	8.3						
Intersection Summary												
HCM 2010 Ctrl Delay	14.2											
HCM 2010 LOS	B											
Notes												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	1	0	0	1
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	100	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.74	1.97	2.80	2.49
Pedestrian Crosswalk LOS	B	A	C	B

Avila Ranch
4: Higuera & Madonna
Cumulative AM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1120	27	549	1114
Effct. Green for Bike (s)	19.7	6.9	32.1	19.1
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	428	150	698	415
Bicycle Delay (s/bike)	28.4	39.4	19.5	28.9
Bicycle Compliance	Fair	Poor	Fair	Fair
Bicycle LOS Score	3.19	1.23	1.28	2.22
Bicycle LOS	C	A	A	B

Avila Ranch
5: Higuera & Prado
Cumulative AM
6/22/2015

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	109	1304	489	217	543	217	326	326	98	348	565	98
Lane Group Flow (vph)	0.45	0.94	0.61	0.76	0.39	0.29	0.92	0.43	0.23	0.98	0.75	0.23
v/c Ratio	50.2	42.6	16.2	62.6	22.4	4.0	75.7	34.7	3.9	88.2	42.4	3.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	50.2	42.6	16.2	62.6	22.4	4.0	75.7	34.7	3.9	88.2	42.4	3.8
Total Delay	50.2	42.6	16.2	62.6	22.4	4.0	75.7	34.7	3.9	88.2	42.4	3.8
Queue Length 50th (ft)	34	403	155	69	125	0	105	92	0	112	172	0
Queue Length 95th (ft)	62	#576	261	#129	177	46	#194	133	23	#211	231	23
Internal Link Dist (ft)	882			795			1342				828	
Turn Bay Length (ft)	250		250	150		200	220		200	175		125
Base Capacity (vph)	248	1392	807	284	1399	757	355	879	482	355	879	485
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.94	0.61	0.76	0.39	0.29	0.92	0.37	0.20	0.98	0.64	0.20
Intersection Summary												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT	TT
Traffic Volume (veh/h)	100	1200	450	200	500	200	300	300	90	320	520	90
Future Volume (veh/h)	100	1200	450	200	500	200	300	300	90	320	520	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	109	1304	489	217	543	217	326	326	98	348	565	98
Adj No. of Lanes	2	2	1	2	2	2	2	2	2	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	171	1372	771	283	1487	660	355	745	329	355	745	329
Arrive On Green	0.05	0.39	0.39	0.08	0.42	0.42	0.10	0.21	0.21	0.10	0.21	0.21
Sat Flow, veh/h	3442	3539	1569	3442	3539	1570	3442	3539	1563	3442	3539	1563
Grp Volume(v), veh/h	109	1304	489	217	543	217	326	326	98	348	565	98
Grp Sat Flow(s), veh/hln	1721	1770	1569	1721	1770	1570	1721	1770	1563	1721	1770	1563
Q_Serve(g.s), s	3.0	34.6	22.4	6.0	10.2	9.0	9.1	7.8	5.1	9.8	14.5	5.1
Cycle Q Clear(g.c), s	3.0	34.6	22.4	6.0	10.2	9.0	9.1	7.8	5.1	9.8	14.5	5.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	171	1372	771	283	1487	660	355	745	329	355	745	329
V/C Ratio(X)	0.64	0.95	0.63	0.77	0.37	0.33	0.92	0.44	0.30	0.98	0.76	0.30
Avail Cap(c.a), veh/h	249	1388	778	284	1487	660	355	876	387	355	876	387
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.2	288	183	43.6	192	189	43.1	33.3	32.2	43.4	36.0	32.2
Incr Delay (d2), s/veh	3.9	14.0	1.7	11.9	0.2	0.3	28.1	0.4	0.5	42.2	3.3	0.5
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	1.5	19.5	9.9	3.3	5.0	3.9	5.7	3.8	2.3	6.7	7.4	2.3
LnGrp Delay(d),s/veh	49.1	42.8	19.9	55.4	19.4	19.2	71.1	33.7	32.7	85.6	39.2	32.7
LnGrp LOS	D	D	B	E	B	B	E	C	C	F	D	C
Approach Vol, veh/h	1902			977			750			1011		
Approach Delay, s/veh	37.3			27.4			49.8			54.6		
Approach LOS	D			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	26.4	12.0	43.6	15.0	26.4	8.8	46.7				
Change Period (Y+Rc), s	5.0	6.0	4.0	* 6	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	10.0	24.0	8.0	* 38	10.0	24.0	7.0	38.0				
Max Q Clear Time (g.c+H), s	11.8	9.8	8.0	36.6	11.1	16.5	5.0	12.2				
Green Ext Time (p.c), s	0.0	5.5	0.0	0.9	0.0	3.7	0.1	20.0				
Intersection Summary												
HCM 2010 Ctrl Delay	41.0											
HCM 2010 LOS	D											
Notes												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	84.8	84.3	85.2	85.4
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. Perm. R. Flow in Walk (v/h)	5	5	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7270.2	7270.2	7270.2	7270.2
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4102.3	4099.0	4080.5	4081.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	39.6	39.6	39.6	39.6
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	3.01	2.99	3.04	2.96
Pedestrian Crosswalk LOS	C	C	C	C

Avila Ranch
5: Higuera & Prado

Cumulative AM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	1902	977	750	1011
Effct. Green for Bike (s)	38.1	38.2	20.6	20.6
Cross Street Width (ft)	85.2	85.4	84.3	84.8
Through Lanes Number	2	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	762	764	412	412
Bicycle Delay (s/bike)	19.2	19.1	31.5	31.5
Bicycle Compliance	Fair	Fair	Poor	Poor
Bicycle LOS Score	4.43	3.67	2.18	2.40
Bicycle LOS	E	D	B	B

Avila Ranch
6: Higuera & Tank Farm

Cumulative AM
6/22/2015

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group	43	32	168	166	258	11	430	946	484	495
Lane Group Flow (vph)	0.23	0.10	0.44	0.44	0.46	0.11	0.59	0.91	1.15	0.29
v/c Ratio	42.2	0.6	38.6	38.4	7.9	51.6	38.2	19.2	126.0	17.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	42.2	0.6	38.6	38.4	7.9	51.6	38.2	19.2	126.0	17.7
Total Delay	42.2	0.6	38.6	38.4	7.9	51.6	38.2	19.2	126.0	17.7
Queue Length 50th (ft)	24	0	86	85	0	6	119	68	-342	85
Queue Length 95th (ft)	59	0	204	201	73	29	209	#478	#740	196
Internal Link Dist (ft)	407		1317				1054			1668
Turn Bay Length (ft)					250	140		100	165	
Base Capacity (vph)	551	599	420	422	589	100	1086	1063	422	1767
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.05	0.40	0.39	0.44	0.11	0.40	0.89	1.15	0.28
Intersection Summary										
- Volume exceeds capacity, queue is theoretically infinite.										
- Queue shown is maximum after two cycles.										
# 95th percentile volume exceeds capacity, queue may be longer.										
- Queue shown is maximum after two cycles.										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations		4	4	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	30	10	30	300	10	240	10	400	880	450	450
Future Volume (veh/h)	30	10	30	300	10	240	10	400	880	450	450
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	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
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	32	11	32	331	0	0	11	430	946	484	484
Adj No. of Lanes	0	1	1	2	0	1	2	1	2	1	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	69	24	81	436	0	195	24	1111	689	433	1927
Arrive On Green	0.05	0.05	0.05	0.12	0.00	0.00	0.01	0.31	0.31	0.24	0.54
Sat Flow, veh/h	1336	459	1575	3548	0	1583	1774	3539	1576	1774	3538
Grp Volume(V), veh/h	43	0	32	331	0	0	11	430	946	484	242
Grp Sat Flow(s), veh/hln	1796	0	1575	1774	0	1583	1774	1770	1576	1774	1770
Q_Serve(g.s), s	2.0	0.0	1.7	7.8	0.0	0.0	0.5	8.2	27.0	21.0	6.2
Cycle Q Clear(g.c), s	2.0	0.0	1.7	7.8	0.0	0.0	0.5	8.2	27.0	21.0	6.2
Prop In Lane	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	0	81	436	0	195	24	1111	689	433	964
V/C Ratio(X)	0.46	0.00	0.39	0.76	0.00	0.00	0.46	0.39	1.37	1.12	0.25
W/C Ratio(X)	0.46	0.00	0.39	0.76	0.00	0.00	0.46	0.39	1.37	1.12	0.25
Avail Cap(c), veh/h	564	0	494	908	0	405	103	1111	689	433	964
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
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.6	0.0	39.5	36.5	0.0	0.0	42.1	23.0	21.2	32.5	10.3
Incr Delay (d2), s/veh	1.3	0.0	1.1	1.0	0.0	0.0	5.1	0.5	176.8	79.2	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
%ile BackOf(50%) veh/h	1.0	0.0	0.8	3.9	0.0	0.0	0.3	4.1	50.1	19.8	3.1
LnGrp Delay(d), s/veh	41.0	0.0	40.6	37.5	0.0	0.0	47.2	23.5	198.0	111.7	10.6
LnGrp LOS	D	D	D	D	D	D	D	C	F	F	B
Approach Vol, veh/h	75			331				1387			979
Approach Delay, s/veh	40.8			37.5				142.7			60.6
Approach LOS	D			D				F			E
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6		8			
Phs Duration (G+Y+Rc), s	26.0	33.0		10.4	6.2	52.8		16.6			
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0			
Max Green Setting (Gmax), s	21.0	27.0		27.0	5.0	43.0		22.0			
Max Q Clear Time (g.c+H), s	23.0	29.0		4.0	2.5	8.2		9.8			
Green Ext Time (g.c), s	0.0	0.0		0.2	0.0	26.8		0.7			
Intersection Summary											
HCM 2010 Ctrl Delay	96.4										
HCM 2010 LOS	F										
Notes											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	46.8	36.3	78.8	62.6
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2259.4	2126.8	2476.0	2389.3
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.90	3.08	2.81
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Cumulative AM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	75	592	1387	979
Effct. Green for Bike (s)	9.6	20.6	18.7	44.2
Cross Street Width (ft)	78.8	62.6	36.3	46.8
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	160	343	312	737
Bicycle Delay (s/bike)	50.8	41.2	42.8	23.9
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.89	2.21	1.97	1.80
Bicycle LOS	C	B	A	A

Avila Ranch
7: Horizon Lane & Tank Farm

Cumulative AM
6/22/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	←	←	←	←
Traffic Volume (veh/h)	1200	80	20	680	70	30
Future Volume (Veh/h)	1200	80	20	680	70	30
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1304	87	22	739	76	33
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2					
Upstream signal (ft)						
px. platoon unblocked					1761	696
vc. conflicting volume		1391			1348	
vc1. stage 1 conf vol					414	
vc2. stage 2 conf vol						
vcu. unblocked vol		1391			1761	696
ic. single (s)		4.1			6.8	6.9
ic. 2 stage (s)		2.2			5.8	
p0 queue free %		95			61	91
IF (s)					3.5	3.3
dM capacity (veh/h)		488			196	384
Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	869	522	268	493	109	109
Volume Left	0	0	22	0	76	0
Volume Right	0	87	0	0	33	0
cSH	1700	1700	488	1700	230	230
Volume to Capacity	0.51	0.31	0.05	0.29	0.47	0.47
Queue Length 95th (ft)	0	0	4	0	59	0
Control Delay (s)	0.0	0.0	1.7	0.0	34.1	0.0
Lane LOS	A	A	A	A	D	D
Approach Delay (s)	0.0	0.0	0.6	0.6	34.1	0.0
Approach LOS	A	A	D	D	D	D
Intersection Summary						
Average Delay	1.8					
Intersection Capacity Utilization	48.1%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
7: Horizon Lane & Tank Farm

Cumulative AM
7/9/2015

Approach	WBL	WBR	NBT	SBL	SBT
Approach Direction	EB				
Median Present?	No				
Approach Delay(s)	315115				
Level of Service	F				
Crosswalk					
Length (ft)	70				
Lanes Crossed	4				
Veh Vol Crossed	1880				
Ped Vol Crossed	0				
Yield Rate(%)	0				
Ped Platooning	No				
Critical Headway (s)	23.00				
Prob of Delayed X-ing	1.00				
Prob of Blocked Lane	0.95				
Delay for add Gap	315117.00				
Avg Ped Delay (s)	315115.00				
Approach					
Approach Direction	WB				
Median Present?	No				
Approach Delay(s)	315115				
Level of Service	F				
Crosswalk					
Length (ft)	70				
Lanes Crossed	4				
Veh Vol Crossed	1880				
Ped Vol Crossed	0				
Yield Rate(%)	0				
Ped Platooning	No				
Critical Headway (s)	23.00				
Prob of Delayed X-ing	1.00				
Prob of Blocked Lane	0.95				
Delay for add Gap	315117.00				
Avg Ped Delay (s)	315115.00				

Avila Ranch
8: Higuera & Suburban

Cumulative AM
6/22/2015

Approach	WBL	WBR	NBT	SBL	SBT
Approach Direction	EB				
Median Present?	No				
Approach Delay(s)	315115				
Level of Service	F				
Crosswalk					
Length (ft)	70				
Lanes Crossed	4				
Veh Vol Crossed	1880				
Ped Vol Crossed	0				
Yield Rate(%)	0				
Ped Platooning	No				
Critical Headway (s)	23.00				
Prob of Delayed X-ing	1.00				
Prob of Blocked Lane	0.95				
Delay for add Gap	315117.00				
Avg Ped Delay (s)	315115.00				
Approach					
Approach Direction	WB				
Median Present?	No				
Approach Delay(s)	315115				
Level of Service	F				
Crosswalk					
Length (ft)	70				
Lanes Crossed	4				
Veh Vol Crossed	1880				
Ped Vol Crossed	0				
Yield Rate(%)	0				
Ped Platooning	No				
Critical Headway (s)	23.00				
Prob of Delayed X-ing	1.00				
Prob of Blocked Lane	0.95				
Delay for add Gap	315117.00				
Avg Ped Delay (s)	315115.00				

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	90	50	1240	380	100	730
Future Volume (veh/h)	90	50	1240	380	100	730
Number	3	18	2	12	1	0
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	98	54	1348	413	109	793
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	134	119	2202	653	238	2894
Arrive On Green	0.08	0.08	0.82	0.82	0.82	0.82
Sat Flow, veh/h	1774	1583	2786	798	271	3632
Grp Volume(V), veh/h	98	54	870	891	109	793
Grp Sat Flow(S), veh/h	1774	1583	1770	1721	271	1770
Q Serve(g.s), s	5.6	3.4	18.1	20.1	26.2	5.4
Cycle Q Clear(g.c), s	5.6	3.4	18.1	20.1	46.3	5.4
Prop In Lane	1.00	1.00	0.46	0.46	1.00	1.00
Lane Grp Cap(c), veh/h	134	119	1447	1408	238	2894
V/C Ratio(X)	0.73	0.45	0.60	0.63	0.46	0.27
Avail Cap(c.a), veh/h	414	369	1462	1422	241	2924
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	45.5	3.4	3.5	12.3	2.2
Incr Delay (d2), s/veh	2.9	1.0	1.3	1.5	3.7	0.1
Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	2.8	1.5	9.2	9.8	2.2	2.6
LnGrp Delay(d), s/veh	49.4	46.5	4.6	5.1	16.0	2.3
LnGrp LOS	D	D	A	A	B	A
Approach Vol, veh/h	152	1761			902	
Approach Delay, s/veh	48.4	4.8			4.0	
Approach LOS	D	A			A	
Timer	1	2	3	4	5	6
Assigned Phs		2			6	8
Phs Duration (G+Y+Rc), s		90.1			90.1	12.8
Change Period (Y+Rc), s		6.0			6.0	5.0
Max Green Setting (Gmax), s		85.0			85.0	24.0
Max Q Clear Time (g.c+H), s		22.1			48.3	7.6
Green Ext Time (g.c), s		60.4			35.8	0.3
Intersection Summary						
HCM 2010 Ctrl Delay			6.9			
HCM 2010 LOS			A			

Approach	WB	NB	SB
Crosswalk Length (ft)	45.4	59.6	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	40	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq.ft)	7263.9	7264.1	7264.1
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	2244.4	2665.1	2372.5
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (S/p)	52.3	51.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.15	3.17	2.99
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Cumulative AM
6/22/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	152	1761	902
Effct. Green for Bike (s)	12.3	91.8	91.8
Cross Street Width (ft)	60.1	45.4	59.6
Through Lanes Number	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	205	1530	1530
Bicycle Delay (s/bike)	48.3	3.3	3.3
Bicycle Compliance	Poor	Good	Good
Bicycle LOS Score	1.77	2.64	2.14
Bicycle LOS	A	B	B

Avila Ranch
9: Higuera & Vachell

Cumulative AM
6/22/2015



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	180	1440	140	0	820
Future Volume (Veh/h)	0	180	1440	140	0	820
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	191	1532	149	0	872
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None	None	None	None
Median type			None	None	None	None
Median storage (veh)			504			314
Upstream signal (ft)						
pX platoon unblocked	0.94					
vC, conflicting volume	2042	840			1681	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1986	840			1681	
iC, single (s)	6.8	6.9			4.1	
iC, 2 stage (s)						
p0 queue free %	3.5	3.3			2.2	
IF (s)	100	38			100	
pM capacity (veh/h)	50	308			377	
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	191	1021	660	436	436	
Volume Left	0	0	0	0	0	
Volume Right	191	0	149	0	0	
cSH	308	1700	1700	1700	1700	
Volume to Capacity	0.62	0.60	0.39	0.26	0.26	
Queue Length 95th (ft)	97	0	0	0	0	
Control Delay (s)	33.9	0.0	0.0	0.0	0.0	
Lane LOS	D					
Approach Delay (s)	33.9	0.0		0.0		
Approach LOS	D					
Intersection Summary						
Average Delay			2.4			
Intersection Capacity Utilization			62.1%		ICU Level of Service	B
Analysis Period (min)			15			

Avila Ranch
9: Higuera & Vachell

Cumulative AM
7/9/2015

Approach	NB
Approach Direction	No
Median Present?	241171
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	56
Lanes Crossed	4
Veh Vol Crossed	2260
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	19.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	241173.00
Avg Ped Delay (s)	241171.00
Approach	SB
Approach Direction	No
Median Present?	241171
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	56
Lanes Crossed	4
Veh Vol Crossed	2260
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	19.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	241173.00
Avg Ped Delay (s)	241171.00

Avila Ranch
10: Higuera & LOVR

Cumulative AM
6/22/2015



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	1170	106	53	511	426	447
v/c Ratio	0.71	0.13	0.23	0.74	0.77	0.37
Control Delay	21.3	7.6	18.5	29.1	37.9	3.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.3	7.6	18.5	29.1	37.9	3.0
Queue Length 50th (ft)	278	13	18	225	218	48
Queue Length 95th (ft)	360	43	40	335	#356	74
Internal Link Dist (ft)	407			1906	424	
Turn Bay Length (ft)		100	225			
Base Capacity (vph)	1739	833	226	896	637	1251
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.67	0.13	0.23	0.57	0.67	0.36
Intersection Summary						
# 95th percentile volume exceeds capacity, queue may be longer.						
Queue shown is maximum after two cycles.						

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	1100	100	50	480	400	420
Future Volume (veh/h)	1100	100	50	480	400	420
Number	7	14	5	2	6	16
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1170	106	53	511	426	447
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1513	696	221	771	555	1166
Arrive On Green	0.44	0.44	0.04	0.41	0.30	0.30
Sat Flow, veh/h	3442	1583	1774	1863	1863	1578
Grp Volume(V), veh/h	1170	106	53	511	426	447
Grp Sat Flow(S), veh/h	1721	1583	1774	1863	1863	1578
Q_Serve(g_s), s	23.7	3.3	1.6	18.2	17.1	8.5
Cycle Q Clear(g_c), s	23.7	3.3	1.6	18.2	17.1	8.5
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1513	696	221	771	555	1166
V/C Ratio(X)	0.77	0.15	0.24	0.66	0.77	0.38
Avail Cap(c_a), veh/h	1680	773	253	864	614	1216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.5	13.8	19.4	19.4	26.2	3.9
Incr Delay (d2), s/veh	3.0	0.3	0.2	1.8	5.6	0.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	11.8	3.8	0.8	9.6	9.6	9.9
LnGrp Delay(d), s/veh	22.5	14.1	19.6	21.2	31.7	4.2
LnGrp LOS	C	B	B	C	C	A
Approach Vol, veh/h	1276			564	873	
Approach Delay, s/veh	21.8			21.0	17.6	
Approach LOS	C			C	B	
Timer	1	2	3	4	5	6
Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	39.9	42.0	9.5	30.4		
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		
Max Green Setting (Gmax), s	38.0	40.0	5.0	27.0		
Max Q Clear Time (g_c+H), s	20.2	25.7	3.6	19.1		
Green Ext Time (p_c), s	9.3	10.4	0.0	5.3		
Intersection Summary						
HCM 2010 Ctrl Delay	20.3					
HCM 2010 LOS	C					

Approach	EB	NB	SB
Crosswalk Length (ft)	73.1	36.1	58.7
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	5	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	0
Ped. R. Sidewalk Flow Rate (p/h)	2	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq.ft)	14557.5	24281.2	18210.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	0.1	0.3	0.2
Crosswalk Circulation Code	F	F	F
Pedestrian Delay (S/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.71	2.48	2.76
Pedestrian Crosswalk LOS	B	B	C

Avila Ranch
10: Higuera & LOVR

Cumulative AM
6/22/2015

Approach	EB	NB	SB
Bicycle Flow Rate (b/ke/h)	8	8	8
Total Flow Rate (veh/h)	1276	564	873
Effct. Green for Bike (s)	38.6	30.0	24.1
Cross Street Width (ft)	36.1	58.7	73.1
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (b/ke/h)	858	667	536
Bicycle Delay (s/bike)	14.7	20.1	24.2
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	2.09	2.32	3.05
Bicycle LOS	B	B	C

Avila Ranch
11: Higuera & Buckley

Cumulative AM
6/22/2015

	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	11	185	54	76	54	543	109	163	359	22
Lane Group Flow (vph)	0.04	0.51	0.26	0.21	0.28	0.65	0.14	0.52	0.35	0.02
w/c Ratio	21.1	25.8	24.7	17.5	31.3	18.5	2.0	29.7	9.6	0.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	21.1	25.8	24.7	17.5	31.3	18.5	2.0	29.7	9.6	0.1
Total Delay	3	52	15	15	17	145	0	48	70	0
Queue Length 50th (ft)	16	121	48	50	55	288	17	122	142	0
Queue Length 95th (ft)	2022	1650	1650	1650	1650	1242	1650	1650	1906	1906
Internal Link Dist (ft)	150	150	150	150	150	150	150	150	150	150
Turn Bay Length (ft)	396	555	315	550	199	1049	952	398	1259	1095
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.33	0.17	0.14	0.27	0.52	0.11	0.41	0.29	0.02
Intersection Summary										

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	10	150	20	50	50	20	50	500	100	150	330	20
Future Volume (veh/h)	10	150	20	50	50	20	50	500	100	150	330	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	163	22	54	54	22	54	543	109	163	359	22
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	376	320	43	290	250	102	78	768	652	214	911	775
Arrive On Green	0.20	0.20	0.20	0.20	0.20	0.20	0.04	0.41	0.41	0.12	0.49	0.49
Sat Flow, veh/h	1318	1607	217	1194	1259	513	1774	1863	1583	1774	1863	1583
Grp Volume(V), veh/h	11	0	185	54	0	76	54	543	109	163	359	22
Grp Sat Flow(s), veh/hln	1318	0	1824	1194	0	1772	1774	1863	1583	1774	1863	1583
Q_Serve(g.s), s	0.3	0.0	4.0	1.9	0.0	1.6	1.3	10.8	1.9	4.0	5.5	0.3
Cycle Q Clear(g.c), s	1.9	0.0	4.0	5.9	0.0	1.6	1.3	10.8	1.9	4.0	5.5	0.3
Prop In Lane	1.00	0.00	0.12	1.00	0.00	0.29	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	376	0	363	290	0	352	78	768	652	214	911	775
V/C Ratio(X)	0.03	0.00	0.51	0.19	0.00	0.22	0.70	0.71	0.17	0.76	0.39	0.03
Avail Cap(c.a), veh/h	585	0	652	480	0	634	238	1249	1062	476	1499	1274
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	15.8	0.0	16.0	18.6	0.0	15.0	21.1	10.9	8.3	19.0	7.2	5.9
Incr Delay (d2), s/veh	0.0	0.0	1.1	0.3	0.0	0.3	10.7	1.2	0.1	5.5	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%)veh/h	0.1	0.0	2.1	0.6	0.0	0.8	0.9	5.7	0.9	2.3	2.9	0.1
LnGrp Delay(d),s/veh	15.8	0.0	17.1	18.9	0.0	15.3	31.8	12.1	8.4	24.5	7.5	5.9
LnGrp LOS	B	B	B	B	B	B	C	B	B	A	C	A
Approach Vol, veh/h	196			130			706			544		
Approach Delay, s/veh	17.0			16.8			13.1			12.5		
Approach LOS	B			B			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	9.4	22.4		12.9	6.0	25.9						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	12.0	30.0		16.0	6.0	36.0						
Max Q Clear Time (g.c+H), s	6.0	12.8		6.0	3.3	7.5						
Green Ext Time (p.c), s	0.2	5.6		1.3	0.0	6.6						
Intersection Summary												
HCM 2010 Ctrl Delay	13.7											
HCM 2010 LOS	B											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	37.1	40.5	51.2	54.9
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	35.0	35.0	35.0	35.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.05	2.12	2.55	2.54
Pedestrian Crosswalk LOS	B	B	B	B

Avila Ranch
11: Higuera & Buckley

Cumulative AM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bik/eh)	0	0	0	0
Total Flow Rate (veh/h)	196	130	706	544
Effct. Green for Bike (s)	10.9	10.9	25.0	31.0
Cross Street Width (ft)	51.2	54.9	40.5	37.1
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	311	311	714	886
Bicycle Delay (s/bike)	24.9	24.9	14.5	10.9
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	2.67	2.61	3.34	3.02
Bicycle LOS	B	B	C	C

Avila Ranch
12: Buckley & Vachell

Cumulative AM
6/22/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1	1	1	1
Traffic Volume (veh/h)	100	300	100	200	120	20
Future Volume (Veh/h)	100	300	100	200	120	20
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	109	326	109	217	130	22
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None	None		
Median type			None	None		
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked					762	218
vC, conflicting volume	326					
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	326				762	218
iC, single (s)	4.1				6.4	6.2
iC, 2 stage (s)						
p0 queue free %	2.2				3.5	3.3
IF (s)	91				62	97
pM capacity (veh/h)	1234				340	822
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	435	326	152			
Volume Left	109	0	130			
Volume Right	0	217	22			
cSH	1234	1700	372			
Volume to Capacity	0.09	0.19	0.41			
Queue Length 95th (ft)	7	0	48			
Control Delay (s)	2.7	0.0	21.2			
Lane LOS	A	C	C			
Approach Delay (s)	2.7	0.0	21.2			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay			4.8			
Intersection Capacity Utilization			56.7%		ICU Level of Service	B
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Cumulative AM
7/9/2015

Approach	EB
Approach Direction	Yes
Median Present?	3.8
Approach Delay(s)	A
Level of Service	A
Crosswalk	
Length (ft)	16
Lanes Crossed	1
Veh Vol Crossed	300
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	7.57
Prob of Delayed X-ing	0.47
Prob of Blocked Lane	0.47
Delay for add Gap	6.37
Avg Ped Delay (s)	2.98
Approach	WB
Approach Direction	Yes
Median Present?	3.8
Approach Delay(s)	A
Level of Service	A
Crosswalk	
Length (ft)	16
Lanes Crossed	1
Veh Vol Crossed	100
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	7.57
Prob of Delayed X-ing	0.19
Prob of Blocked Lane	0.19
Delay for add Gap	4.51
Avg Ped Delay (s)	0.86

Avila Ranch
13: Buckley & Project Entry

Cumulative AM
6/22/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		W	
Traffic Volume (veh/h)	0	320	300	0	0	0
Future Volume (Veh/h)	0	320	300	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	348	326	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
VC conflicting volume	326				674	326
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol	326				674	326
IC single (s)	4.1				6.4	6.2
IC 2 stage (s)						
IF (s)	2.2				3.5	3.3
pl queue free %	100				100	100
pl capacity (veh/h)	1234				420	715
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	348	326	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1234	1700	1700			
Volume to Capacity	0.00	0.19	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			20.2%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
13: Buckley & Project Entry

Cumulative AM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	29.1
Approach Delay(s)	D
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	620
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.88
Prob of Blocked Lane	0.65
Delay for add Gap	33.15
Avg Ped Delay (s)	29.06
Approach	WB
Approach Direction	No
Median Present?	29.1
Approach Delay(s)	D
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	620
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.88
Prob of Blocked Lane	0.65
Delay for add Gap	33.15
Avg Ped Delay (s)	29.06

Avila Ranch
14: Broad & Buckley

Cumulative AM
6/22/2015

	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group	92	174	15	380	1527	5	163
Lane Group Flow (vph)	0.34	0.23	0.12	0.70	0.60	0.04	0.26
v/c Ratio	31.7	3.0	31.1	29.5	8.1	35.4	4.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	31.7	3.0	31.1	29.5	8.1	35.4	4.8
Total Delay	34	4	4	131	111	2	137
Queue Length 50th (ft)	85	27	24	#308	412	13	267
Queue Length 95th (ft)	9507		310	439		1035	40
Internal Link Dist (ft)		150		360		470	470
Turn Bay Length (ft)		522	942	130	759	2626	128
Base Capacity (vph)	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.18	0.12	0.50	0.58	0.04	0.51
Intersection Summary							
# 95th percentile volume exceeds capacity, queue may be longer.							
Queue shown is maximum after two cycles.							

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		←	←	←	←	←	←	←	←	←	←	←
Traffic Volume (veh/h)	80	5	160	5	5	5	350	1400	5	5	750	150
Future Volume (veh/h)	80	5	160	5	5	5	350	1400	5	5	750	150
Number	7	4	14	3	8	8	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.98	1.00	1.00	0.98	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	87	5	174	5	5	5	380	1522	5	5	815	163
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2.02	12	590	8	8	8	440	2141	7	9	1254	548
Cap. veh/h	0.12	0.12	0.12	0.01	0.01	0.01	0.26	0.61	0.61	0.01	0.36	0.36
Arrive On Green	1665	96	1543	562	562	562	1712	3491	11	1739	3468	1517
Sat Flow, veh/h	92	0	174	15	0	0	380	744	783	5	815	163
Grp Volume(V), veh/h	1761	0	1543	1685	0	0	1712	1708	1795	1739	1734	1517
Grp Sat Flow(S), veh/hln	3.2	0.0	5.1	0.6	0.0	0.0	13.8	19.5	19.5	0.2	12.8	5.0
Q_Serve(g_s), s	3.2	0.0	5.1	0.6	0.0	0.0	13.8	19.5	19.5	0.2	12.8	5.0
Cycle Q Clear(g_c), s	0.95	1.00	1.00	0.33	1.00	0.33	1.00	0.01	1.00	1.00	1.00	1.00
Prop In Lane	214	0	590	25	0	0	440	1047	1101	9	1254	548
Lane Grp Cap(c), veh/h	0.43	0.00	0.29	0.61	0.00	0.00	0.86	0.71	0.71	0.54	0.65	0.30
V/C Ratio(X)	432	0	782	103	0	0	630	1179	1240	107	1330	582
W/C Ratio(X)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	26.5	0.0	14.2	31.9	0.0	0.0	23.1	8.6	8.6	32.3	17.4	14.9
Uniform Delay (d), s/veh	1.4	0.0	0.3	22.0	0.0	0.0	8.6	1.8	1.7	41.4	1.0	0.3
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	1.6	0.0	2.2	0.4	0.0	0.0	7.6	9.6	10.1	0.2	6.3	2.1
%ile BackOf(50%) veh/h	27.9	0.0	14.5	53.9	0.0	0.0	31.7	10.4	10.3	73.8	18.4	15.2
LnGrp Delay(d), s/veh												
LnGrp LOS	C	B	B	D	D	D	C	B	B	E	B	B
Approach Vol, veh/h	266			15			1907					983
Approach Delay, s/veh	19.1			53.9			14.6					18.2
Approach LOS	B			D			B					B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	4.3	44.0		11.9	20.8	27.6		5.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	4.0	45.0		16.0	24.0	25.0		4.0				
Max Q Clear Time (g_c+H), s	2.2	21.5		7.1	15.8	14.8		2.6				
Green Ext Time (g_e), s	0.0	17.7		0.8	1.0	8.8		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.3	24.0	61.1	72.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	5	6
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	20	0	0	10
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14563.0	36428.8	24285.8	14563.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	6898.2	0.0	7561.8	7767.3
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	34.0	42.5	34.0	34.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.23	1.74	3.15	3.10
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Cumulative AM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	266	15	1907	983
Effct. Green for Bike (s)	9.3	4.5	45.5	21.3
Cross Street Width (ft)	61.1	72.1	24.0	39.3
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	219	106	1071	501
Bicycle Delay (s/bike)	33.7	38.1	9.2	23.9
Bicycle Compliance	Poor	Poor	Good	Fair
Bicycle LOS Score	2.93	2.69	3.50	2.97
Bicycle LOS	C	B	D	C

Avila Ranch
15: Earthwood & Suburban

Cumulative AM
6/22/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	WB	WB
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	1244					
pK platoon unblocked		0			0	0
vC, conflicting volume						
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol						
IC, single (s)		4.1			6.4	6.2
IC, 2 stage (s)						
IF (s)		2.2			3.5	3.3
p0 queue free %		100			100	100
dM capacity (veh/h)		1623			1023	1085
Direction, Lane #	EB 1	WB 1	NB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS		A				
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS		A				
Intersection Summary						
Average Delay		0.0				
Intersection Capacity Utilization		0.0%			ICU Level of Service	A
Analysis Period (min)		15				

Avila Ranch
16: Suburban & Horizon Lane

Cumulative AM
6/22/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	0	0	0			
Volume Left (vph)	0	0	0			
Volume Right (vph)	0	0	0			
Head (s)	0.00	0.00	0.00			
Departure Headway (s)	3.9	3.9	3.9			
Degree Utilization, x	0.00	0.00	0.00			
Capacity (veh/h)	917	917	917			
Control Delay (s)	6.9	6.9	6.9			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	0.0					
Level of Service	A					
Intersection Capacity Utilization	0.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Cumulative AM
6/22/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
PX platoon unblocked						
VC, conflicting volume	0	0	0	0	0	0
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	0	0	0	0	0	0
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
dM capacity (veh/h)	1023	1085			1623	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
CSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	0.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
18: Vachell & Project Entry

Cumulative AM
6/22/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	0	0	300	0	0	140
Future Volume (Veh/h)	0	0	300	0	0	140
Sign Control	Stop	0%	Free	0%	Free	0%
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	326	0	0	152
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	478	326			326	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	478	326			326	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
CM capacity (veh/h)	546	715			1234	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	326	152			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1234			
Volumes to Capacity	0.00	0.19	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	19.1%					
Analysis Period (min)	15					
ICU Level of Service	A					

Avila Ranch
1: LOVR & 101 NB

Cumulative PM
6/19/2015

Movement	NBT	SBT
Lane Group	NBT	SBT
Lane Group Flow (vph)	1879	1576
v/c Ratio	0.53	0.85
Control Delay	0.6	5.7
Queue Delay	0.0	0.0
Total Delay	0.6	5.7
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	#3
Internal Link Dist (ft)	925	236
Turn Bay Length (ft)		
Base Capacity (vph)	3539	1863
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.53	0.85
Intersection Summary		
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.	

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	1860	1560	0	0
Future Volume (veh/h)	0	0	1860	1560	0	0
Number	1	6	2	12		
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00		1.00	1.00		1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863		1863
Adj Flow Rate, veh/h	0	1879	1576	0		0
Adj No. of Lanes	1	2	1	1		1
Peak Hour Factor	0.99	0.99	0.99	0.99		0.99
Cap. veh/h	116	3254	1713	1456		1456
Arrive On Green	0.00	0.92	0.92	0.00		0.00
Sat Flow, veh/h	324	3632	1863	1583		1583
Grp Volume(V), veh/h	0	1879	1576	0		0
Grp Sat Flow(S), veh/hln	324	1770	1863	1583		1583
Q_Serve(g_s), s	0.0	5.7	27.5	0.0		0.0
Cycle Q Clear(g_c), s	0.0	5.7	27.5	0.0		0.0
Prop In Lane	1.00		1.00			1.00
Lane Grp Cap(c), veh/h	116	3254	1713	1456		1456
V/C Ratio(X)	0.00	0.58	0.92	0.00		0.00
Avail Cap(c_a), veh/h	116	3254	1713	1456		1456
HCM Platoon Ratio	1.00	1.00	1.00	1.00		1.00
Upstream Filter(I)	0.00	0.75	0.74	0.00		0.00
Uniform Delay (d), s/veh	0.0	0.4	1.3	0.0		0.0
Incr Delay (d2), s/veh	0.0	0.6	7.4	0.0		0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0		0.0
%ile BackOf(50%), veh/ln	0.0	2.6	14.9	0.0		0.0
LnGrp Delay(d), s/veh	0.0	1.0	8.7	0.0		0.0
LnGrp LOS	A	A	A	A		A
Approach Vol, veh/h		1879	1576			
Approach Delay, s/veh		1.0	8.7			
Approach LOS		A	A			
Timer	1	2	3	4	5	6
Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		62.0				62.0
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		57.0				57.0
Max Q Clear Time (g_c+H), s		29.5				7.7
Green Ext Time (p_c), s		27.0				47.8
Intersection Summary						
HCM 2010 Ctrl Delay			4.5			
HCM 2010 LOS			A			

Approach	EB	NB	SB
Crosswalk Length (ft)	12.7	60.0	60.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	1	5	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	Actuated
Corresponding Signal Phase	2	0	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	35
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (S/p)	31.0	31.0	31.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.42	3.08	3.11
Pedestrian Crosswalk LOS	A	C	C

Avila Ranch
1: LOVR & 101 NB
Cumulative PM
6/19/2015

Approach	EB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0
Total Flow Rate (veh/h)	0	1879	1576
Effct. Green for Bike (s)	0.0	62.0	62.0
Cross Street Width (ft)	60.0	60.0	12.7
Through Lanes Number	0	2	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	0	2000	2000
Bicycle Delay (s/bike)	0.0	0.0	0.0
Bicycle Compliance	-	-	-
Bicycle LOS Score	0.00	4.03	4.35
Bicycle LOS	D	D	E

Avila Ranch
2: LOVR & 101 NB
Cumulative PM
6/19/2015



Lane Group	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group Flow (vph)	464	113	1454	206	1237	371
v/c Ratio	0.70	0.31	0.59	0.18	0.50	0.30
Control Delay	39.6	14.3	8.5	2.0	7.4	1.3
Queue Delay	0.0	0.0	0.6	0.0	0.0	0.0
Total Delay	39.6	14.3	9.0	2.0	7.4	1.3
Queue Length 50th (ft)	128	18	187	7	144	0
Queue Length 95th (ft)	169	60	288	32	222	27
Internal Link Dist (ft)			471		925	
Turn Bay Length (ft)		50		100		180
Base Capacity (vph)	820	435	2482	1157	2482	1221
Starvation Cap Reductn	0	0	559	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.26	0.76	0.18	0.50	0.30
Intersection Summary						

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	450	0	110	0	0	0	0	1410	200	0	1200	360
Future Volume (veh/h)	450	0	110	0	0	0	0	1410	200	0	1200	360
Number	3	8	18	0	0	0	1	6	16	5	2	12
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	0	1863	0	1863	1863	0	1863	1863	0	1863	1863
Adj Flow Rate, veh/h	464	0	113	0	1454	0	0	1237	0	0	0	0
Adj No. of Lanes	2	0	1	0	2	1	0	2	1	0	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	0	2	0	2	0	2	0	2	0	2	0
Cap. veh/h	589	0	271	0	2560	1145	0	2560	1145	0	2560	1145
Arrive On Green	0.17	0.00	0.17	0.00	0.72	0.00	0.00	0.72	0.00	0.00	0.72	0.00
Sat Flow, veh/h	3442	0	1583	0	3632	1583	0	3632	1583	0	3632	1583
Grp Volume(v), veh/h	464	0	113	0	1454	0	0	1237	0	0	1237	0
Grp Sat Flow(s), veh/hln	1721	0	1583	0	1770	1583	0	1770	1583	0	1770	1583
Q Serve(g_s), s	11.6	0.0	5.7	0.0	17.4	0.0	0.0	13.4	0.0	0.0	13.4	0.0
Cycle Q Clear(g_c), s	11.6	0.0	5.7	0.0	17.4	0.0	0.0	13.4	0.0	0.0	13.4	0.0
Prop In Lane	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	0.00
Lane Grp Cap(c), veh/h	589	0	271	0	2560	1145	0	2560	1145	0	2560	1145
V/C Ratio(X)	0.79	0.00	0.42	0.00	0.57	0.00	0.00	0.48	0.00	0.00	0.48	0.00
Avail Cap(c_a), veh/h	822	0	378	0	2560	1145	0	2560	1145	0	2560	1145
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	0.00	0.44	0.00	0.00	0.42	0.00	0.00	0.42	0.00
Uniform Delay (d), s/veh	35.7	0.0	33.3	0.0	5.8	0.0	0.0	5.3	0.0	0.0	5.3	0.0
Incr Delay (d2), s/veh	3.5	0.0	1.0	0.0	0.4	0.0	0.0	0.3	0.0	0.0	0.3	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	5.8	0.0	2.6	0.0	8.4	0.0	0.0	6.5	0.0	0.0	6.5	0.0
LnGrp Delay(d), s/veh	39.2	0.0	34.3	0.0	6.3	0.0	0.0	5.6	0.0	0.0	5.6	0.0
LnGrp LOS	D	C	C	A	A	A	A	A	A	A	A	A
Approach Vol, veh/h	577			1454			1237				1237	
Approach Delay, s/veh	38.3			6.3			5.6				5.6	
Approach LOS	D			A			A				A	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2			6			8					
Phs Duration (G+Y+Rc), s	71.1			71.1			18.9					
Change Period (Y+Rc), s	6.0			6.0			3.5					
Max Green Setting (Gmax), s	59.0			59.0			21.5					
Max Q Clear Time (g_c+H1), s	15.4			19.4			13.6					
Green Ext Time (g_e), s	33.6			31.2			1.8					
Intersection Summary												
HCM 2010 Ctrl Delay	11.6											
HCM 2010 LOS	B											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.3	33.5	60.7	63.2
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	1	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	2	6	0	0
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	30
Right Corner Area per Ped (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	45.0	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.37	1.63	3.00	3.00
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
2: LOVR & 101 NB
Cumulative PM
6/19/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	577	0	1660	1608
Effct. Green for Bike (s)	0.0	0.0	63.1	63.1
Cross Street Width (ft)	60.7	63.2	33.5	48.3
Through Lanes Number	0	0	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	0	0	1402	1402
Bicycle Delay (s/bike)	0.0	0.0	4.0	4.0
Bicycle Compliance	Good	Good	Good	Good
Bicycle LOS Score	0.00	0.00	3.44	3.63
Bicycle LOS			C	D

Avila Ranch
3: Higuera & South
Cumulative PM
6/19/2015

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	32	32	731	119	22	925	591	86	635
Lane Group Flow (vph)	0.36	0.18	0.78	0.23	0.21	0.55	0.67	0.59	0.33
Control Delay	54.2	2.2	35.7	9.3	46.2	19.2	14.6	58.7	13.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.6	0.0	0.0
Total Delay	54.2	2.2	35.7	9.3	46.2	19.7	15.3	58.7	13.5
Queue Length 50th (ft)	19	0	199	9	13	215	146	50	101
Queue Length 95th (ft)	#50	0	264	50	37	279	283	#117	170
Internal Link Dist (ft)	208			629		338			507
Turn Bay Length (ft)		50	130		60		60	100	
Base Capacity (vph)	88	178	1083	574	107	1697	886	150	1902
Starvation Cap Reductn	0	0	0	0	0	346	84	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.18	0.67	0.21	0.21	0.68	0.74	0.57	0.33
Intersection Summary									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	15	30	680	20	90	20	860	550	80	570	20
Traffic Volume (veh/h)	15	15	30	680	20	90	20	860	550	80	570	20
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.96	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00	0.99	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/hln	16	16	32	731	22	97	22	925	591	86	613	22
Adj Flow Rate, veh/h	0	1	1	2	1	0	1	2	1	1	2	0
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	33	33	55	888	77	340	34	1614	716	110	1739	62
Cap. veh/h	0.04	0.04	0.04	0.26	0.26	0.26	0.02	0.46	0.46	0.06	0.50	0.50
Arrive On Green	909	909	1512	3442	299	1318	1774	3539	1570	1774	3483	125
Sat Flow, veh/h	32	0	32	731	0	119	22	925	591	86	311	324
Grp Volume(V), veh/h	1817	0	1512	1721	0	1617	1774	1770	1570	1774	1770	1839
Grp Sat Flow(S), veh/hln	1.5	0.0	1.8	17.1	0.0	5.0	1.1	16.5	28.1	4.1	9.1	9.2
Q Serve(g.s), s	1.5	0.0	1.8	17.1	0.0	5.0	1.1	16.5	28.1	4.1	9.1	9.2
Cycle Q Clear(g.c), s	0.50	1.00	1.00	1.00	0.82	1.00	1.00	1.00	1.00	1.00	1.00	0.07
Prop In Lane	66	0	55	888	0	417	34	1614	716	110	883	918
Lane Grp Cap(c), veh/h	0.48	0.00	0.58	0.82	0.00	0.29	0.65	0.57	0.83	0.78	0.35	0.35
V/C Ratio(X)	85	0	71	1047	0	492	104	1614	716	145	883	918
Avail Cap(c.a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	40.4	0.0	40.5	299	0.0	25.4	41.7	17.1	20.3	39.5	13.0	13.0
Uniform Delay (d), s/veh	5.3	0.0	9.2	4.7	0.0	0.4	19.2	1.5	10.5	17.7	1.1	1.1
Incr Delay (d2), 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
Initial Q Delay(d3),s/veh	0.8	0.0	0.9	8.7	0.0	2.3	0.7	8.3	14.1	2.5	4.7	4.9
%ile BackOf(50%)veh/h	45.7	0.0	49.8	34.6	0.0	25.8	60.8	18.6	30.8	57.2	14.1	14.1
LnGrp Delay(d),s/veh	D	D	D	C	C	C	E	B	C	E	B	B
LnGrp LOS	D	D	D	C	C	C	E	B	C	E	B	B
Approach Vol, veh/h	64			850			1538				721	
Approach Delay, s/veh	47.7			33.3			23.9				19.2	
Approach LOS	D			C			C				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	9.3	43.0		7.1	5.6	46.7						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	7.0	39.0		4.0	5.0	41.0						
Max Q Clear Time (g.c+H), s	6.1	30.1		3.8	3.1	11.2						
Green Ext Time (g.c), s	0.0	7.3		0.0	0.0	18.4						
Intersection Summary												
HCM 2010 Ctrl Delay	25.8											
HCM 2010 LOS	C											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	5	5	5
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (S/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.63	2.95	2.67
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Cumulative PM
6/19/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	64	850	1538	721
Effct. Green for Bike (s)	4.1	22.8	40.3	45.4
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	89	496	876	987
Bicycle Delay (s/bike)	42.0	26.0	14.5	11.8
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.97	2.99	2.68	1.95
Bicycle LOS	C	C	B	A

Avila Ranch
4: Higuera & Madonna

Cumulative PM
6/19/2015

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	318	322	344	11	108	312	919	564	806
v/c Ratio	0.68	0.69	0.37	0.05	0.46	0.85	0.54	0.77	0.59
Control Delay	35.6	35.7	2.0	33.4	40.4	57.6	18.1	39.2	14.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	35.6	35.7	2.0	33.4	40.4	57.6	18.1	39.2	14.8
Queue Length 50th (ft)	157	160	0	5	53	169	186	151	143
Queue Length 95th (ft)	268	271	22	20	103	#347	267	#238	221
Internal Link Dist (ft)	964								
Turn Bay Length (ft)	110								
Base Capacity (vph)	545	547	938	367	384	367	1788	824	1495
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.59	0.37	0.03	0.28	0.85	0.51	0.68	0.54
Intersection Summary									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.93	2.00	2.93	2.85
Pedestrian Crosswalk LOS	C	A	C	C

	EBT	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Lane Configurations	4	4	4	4	4	4	4	4
Traffic Volume (veh/h)	580	15	320	10	290	850	5	520
Future Volume (veh/h)	580	15	320	10	290	850	5	520
Number	7	4	14	3	8	18	5	2
Initial Q (Cb), veh	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.98	1.00	0.99	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1900	1863	1900	1863
Adj Flow Rate, veh/h	635	0	0	11	97	11	312	914
Adj No. of Lanes	2	0	1	1	1	2	0	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2
Cap. veh/h	829	0	688	151	140	16	356	1861
Arrive On Green	0.23	0.00	0.00	0.09	0.09	0.20	0.52	0.26
Sat Flow, veh/h	3548	0	1583	1774	1639	186	1774	3609
Grp Volume(V), veh/h	635	0	0	11	0	108	312	448
Grp Sat Flow(S), veh/h/ln	1774	0	1583	1774	1770	1859	1846	1610
Q_Serve(g_s), s	12.1	0.0	0.4	0.0	4.2	12.4	11.9	10.4
Cycle Q Clear(g_c), s	12.1	0.0	0.4	0.0	4.2	12.4	11.9	10.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	829	0	688	151	0	155	356	913
V/C Ratio(X)	0.77	0.00	0.07	0.00	0.70	0.88	0.49	0.57
W/C Ratio(a), veh/h	1223	0	864	391	0	403	952	1000
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.9	0.0	0.0	30.5	0.0	32.3	28.1	11.4
Incr Delay (d2), s/veh	1.7	0.0	0.0	0.2	0.0	5.5	18.4	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%) veh/h	6.1	0.0	0.0	0.2	0.0	2.3	7.9	5.8
LnGrp Delay(d), s/veh	27.7	0.0	0.0	30.7	0.0	37.7	46.5	11.8
LnGrp LOS	C	C	C	D	D	B	B	C
Approach Vol, veh/h	635	119	1231	1370	1370	1370	1370	1370
Approach Delay, s/veh	27.7	37.1	20.6	18.7	18.7	18.7	18.7	18.7
Approach LOS	C	D	C	B	B	B	B	B
Timer	1	2	3	4	5	6	7	8
Assigned Phs	2	2	4	5	6	7	8	8
Phs Duration (G+Y+Rc), s	41.4	20.9	18.5	22.8	10.2	10.2	10.2	10.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	39.0	25.0	16.0	19.0	16.0	16.0	16.0	16.0
Max Q Clear Time (g_c+H), s	13.9	14.1	14.4	17.2	6.2	6.2	6.2	6.2
Green Ext Time (g_e), s	16.2	2.3	0.2	1.6	0.4	0.4	0.4	0.4
Intersection Summary								
HCM 2010 Ctrl Delay	21.8							
HCM 2010 LOS	C							
Notes								

Avila Ranch
4: Higuera & Madonna

Cumulative PM
6/19/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	984	119	1231	1370
Effct. Green for Bike (s)	22.3	10.0	38.2	17.5
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	485	217	830	380
Bicycle Delay (s/bike)	26.4	36.5	15.7	30.2
Bicycle Compliance	Fair	Poor	Fair	Poor
Bicycle LOS Score	2.96	1.38	1.84	2.43
Bicycle LOS	C	A	A	B

Avila Ranch
5: Higuera & Prado

Cumulative PM
6/19/2015

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	108	538	376	323	1054	376	559	591	43	301	484	65
Lane Group Flow (vph)	0.79	0.52	0.48	0.65	0.76	0.46	0.91	0.67	0.09	0.77	0.74	0.14
v/c Ratio	89.1	32.9	13.7	48.1	31.4	5.5	63.5	39.7	0.3	59.2	47.6	0.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	89.1	32.9	13.7	48.1	31.4	5.5	63.5	39.7	0.3	59.2	47.6	0.7
Total Delay	#93	226	196	153	403	78	#320	258	0	#175	226	0
Queue Length 50th (ft)	39	158	104	110	317	16	201	195	0	106	167	0
Queue Length 95th (ft)	#93	226	196	153	403	78	#320	258	0	#175	226	0
Internal Link Dist (ft)	363			386				1342			828	
Turn Bay Length (ft)	250		250	150		200	220		200	175		125
Base Capacity (vph)	136	1085	790	715	1579	893	613	982	543	408	772	502
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.79	0.50	0.48	0.45	0.67	0.42	0.91	0.60	0.08	0.74	0.63	0.13
Intersection Summary												
# 95th percentile volume exceeds capacity, queue may be longer.												
Queue shown is maximum after two cycles.												

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	100	500	350	300	980	350	520	550	40	280	450	60
Traffic Volume (veh/h)	100	500	350	300	980	350	520	550	40	280	450	60
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	0.99	1.00	0.99	1.00	1.00	1.00	1.00	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	108	538	376	323	1054	376	559	591	43	301	484	65
Adj No. of Lanes	2	2	1	2	2	2	2	2	2	2	2	2
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	135	1090	761	415	1379	611	606	917	406	368	672	296
Arrive On Green	0.04	0.31	0.31	0.12	0.39	0.39	0.18	0.26	0.26	0.11	0.19	0.19
Sat Flow, veh/h	3442	3539	1565	3442	3539	1569	3442	3539	1567	3442	3539	1561
Grp Volume(v), veh/h	108	538	376	323	1054	376	559	591	43	301	484	65
Grp Sat Flow(s), veh/hln	1721	1770	1565	1721	1770	1569	1721	1770	1567	1721	1770	1561
Q Serve(g.s), s	3.2	12.7	16.7	9.3	26.5	19.7	16.3	15.2	2.1	8.8	13.1	3.6
Cycle Q Clear(g.c), s	3.2	12.7	16.7	9.3	26.5	19.7	16.3	15.2	2.1	8.8	13.1	3.6
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	135	1090	761	415	1379	611	606	917	406	368	672	296
V/C Ratio(X)	0.80	0.49	0.49	0.78	0.76	0.62	0.92	0.64	0.11	0.82	0.72	0.22
Avail Cap(c.a), veh/h	135	1090	761	707	1558	691	606	969	429	404	762	336
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	48.7	28.9	17.9	43.6	27.1	25.1	41.4	33.7	28.8	44.7	38.9	35.0
Incr Delay (d2), s/veh	28.3	0.3	0.5	3.2	2.0	1.3	19.8	1.4	0.1	11.6	2.9	0.4
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	2.0	6.3	7.3	4.6	13.3	8.7	9.4	7.6	0.9	4.8	6.7	1.6
LnGrp Delay(d), s/veh	77.1	29.2	18.4	46.8	29.2	26.4	61.2	35.1	29.0	56.3	41.8	35.4
LnGrp LOS	E	C	B	D	C	C	E	D	C	E	D	D
Approach Vol, veh/h	1022			1753			1193			850		
Approach Delay, s/veh	30.3			31.8			47.1			46.4		
Approach LOS	C			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.9	32.5	16.3	37.5	23.0	25.4	8.0	45.8				
Change Period (Y+Rc), s	5.0	6.0	4.0	* 6	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	12.0	28.0	21.0	* 29	18.0	22.0	4.0	45.0				
Max Q Clear Time (g.c+H), s	10.8	17.2	11.3	18.7	18.3	15.1	5.2	28.5				
Green Ext Time (p.c), s	0.2	5.3	1.0	8.6	0.0	3.8	0.0	11.4				
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												
Notes												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	84.8	84.3	85.4	85.4
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. Perm. R. Flow in Walk (v/h)	5	5	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq.ft)	7267.7	7267.7	7267.7	7267.7
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	3727.0	3723.9	3706.2	3706.2
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	44.5	44.5	44.5	44.5
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.99	2.98	3.11	3.02
Pedestrian Crosswalk LOS	C	C	C	C

Avila Ranch
5: Higuera & Prado

Cumulative PM
6/19/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	1022	1763	1193	850
Effct. Green for Bike (s)	29.9	39.7	25.3	18.7
Cross Street Width (ft)	85.4	85.4	84.3	84.8
Through Lanes Number	2	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bikes/h)	544	722	460	340
Bicycle Delay (s/bike)	29.2	22.5	32.6	37.9
Bicycle Compliance	Fair	Fair	Poor	Poor
Bicycle LOS Score	3.71	4.31	2.55	2.27
Bicycle LOS	D	E	B	B

Avila Ranch
6: Higuera & Tank Farm

Cumulative PM
6/19/2015

	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group	20	21	345	353	31	542	427	812
Lane Group Flow (vph)	0.11	0.07	0.75	0.77	0.58	0.39	0.74	0.45
v/c Ratio	40.9	0.4	46.7	47.5	7.3	64.1	42.4	3.4
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	40.9	0.4	46.7	47.5	7.3	64.1	42.4	3.4
Total Delay	40.9	0.4	46.7	47.5	7.3	64.1	42.4	3.4
Queue Length 50th (ft)	12	0	209	215	0	162	10	165
Queue Length 95th (ft)	34	0	#496	#510	94	#70	275	46
Internal Link Dist (ft)	369		1256		1064			1668
Turn Bay Length (ft)			250		140		100	165
Base Capacity (vph)	556	598	457	460	749	80	963	950
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.04	0.75	0.77	0.58	0.39	0.56	0.45
Intersection Summary								
# 95th percentile volume exceeds capacity, queue may be longer.								
Queue shown is maximum after two cycles.								

	EBT	EBR	WBL	WBR	NBL	NBR	SBL	SBR	
Movement	EBL	EBT	EBR	WBL	WBR	NBL	NBR	SBL	SBR
Lane Configurations	10	10	20	650	20	420	30	520	410
Traffic Volume (veh/h)	7	4	20	650	20	420	30	520	410
Future Volume (veh/h)	7	4	20	650	20	420	30	520	410
Number	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/hln	10	10	21	692	0	31	542	427	292
Adj Flow Rate, veh/h	0	1	1	2	0	1	2	1	1
Adj No. of Lanes	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Peak Hour Factor	30	30	52	825	0	368	44	948	791
Cap. veh/h	0.03	0.03	0.03	0.23	0.00	0.02	0.27	0.27	0.19
Arrive On Green	909	909	1573	3548	0	1583	1774	3539	1578
Sat Flow, veh/h	20	0	21	692	0	31	542	427	292
Grp Volume(V), veh/h	1817	0	1573	1774	0	1583	1774	1770	1578
Grp Sat Flow(S), veh/hln	0.9	0.0	1.1	15.5	0.0	1.4	11.0	15.4	13.3
Q_Serve(g.s), s	0.9	0.0	1.1	15.5	0.0	1.4	11.0	15.4	13.3
Cycle Q Clear(g.c), s	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	60	0	52	825	0	368	44	948	791
Lane Grp Cap(c), veh/h	0.33	0.00	0.41	0.84	0.00	0.71	0.57	0.54	0.86
V/C Ratio(X)	589	0	510	1023	0	456	85	1020	823
Wvl Cap(c.a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	39.4	0.0	39.5	30.5	0.0	40.3	26.3	14.2	32.6
Uniform Delay (d), s/veh	3.2	0.0	5.0	5.2	0.0	19.1	0.7	0.7	11.6
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.5	0.0	0.5	8.2	0.0	0.9	5.4	9.9	7.6
%ile BackOf(50%) veh/h	42.6	0.0	44.5	35.7	0.0	59.4	27.0	14.9	44.3
LnGrp Delay(d), s/veh	D	D	D	D	D	E	C	B	D
LnGrp LOS	D	D	D	D	D	E	C	B	D
Approach Vol, veh/h	41	692	1000	1000	1000	1000	1000	1000	1104
Approach Delay, s/veh	43.6	35.7	22.8	22.8	22.8	22.8	22.8	22.8	24.8
Approach LOS	D	D	D	D	D	C	C	C	C
Timer	1	2	3	4	5	6	7	8	
Assigned Phs	1	2	4	5	6	7	8		
Phs Duration (G+Y+Rc), s	20.9	28.3	8.7	7.0	42.1	25.4			
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	6.0	6.0			
Max Green Setting (Gmax), s	22.0	24.0	27.0	4.0	42.0	24.0			
Max Q Clear Time (g.c+H), s	17.4	17.4	3.1	3.4	15.7	17.5			
Green Ext Time (g.c), s	0.6	4.7	0.1	0.0	12.2	1.8			
Intersection Summary									
HCM 2010 Ctrl Delay	27.0								
HCM 2010 LOS	C								
Notes									

	EB	WB	NB	SB
Approach	EB	WB	NB	SB
Crosswalk Length (ft)	46.9	49.5	74.4	63.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	100	70	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2260.4	2286.2	2455.7	2391.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.85	3.17	2.93
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Cumulative PM
6/19/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	41	1136	1000	1104
Effct. Green for Bike (s)	9.6	25.0	19.1	39.7
Cross Street Width (ft)	74.4	63.0	49.5	46.9
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	160	417	318	662
Bicycle Delay (s/bike)	50.8	37.6	42.4	26.9
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.77	4.40	3.14	3.19
Bicycle LOS	C	E	C	C

Avila Ranch
7: Horizon Ln & Tank Farm

Cumulative PM
6/22/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↔	↔	↔
Traffic Volume (veh/h)	710	70	50	1100	70	50
Future Volume (Veh/h)	710	70	50	1100	70	50
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	772	76	54	1196	76	54
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT			TWLT		
Median storage (veh)	2			2		
Upstream signal (ft)						
px platoon unblocked		848			1516	424
vc. conflicting volume					810	
vc1. stage 1 conf vol					706	
vc2. stage 2 conf vol						
vcu. unblocked vol		848			1516	424
lc. single (s)		4.1			6.8	6.9
lc. 2 stage (s)		2.2			5.8	
p0 queue free %		93			75	91
IF (s)		785			299	579
dm capacity (veh/h)						
Direction_Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	515	333	453	797	130	130
Volume Left	0	0	54	0	76	0
Volume Right	0	76	0	0	54	76
cSH	1700	1700	785	1700	374	374
Volume to Capacity	0.30	0.20	0.07	0.47	0.35	0.35
Queue Length 95th (ft)	0	0	6	0	38	0
Control Delay (s)	0.0	0.0	2.0	0.0	19.7	0.0
Lane LOS	A	A	A	A	C	C
Approach Delay (s)	0.0	0.0	0.7	0.0	19.7	0.0
Approach LOS					C	
Intersection Summary						
Average Delay	1.5					
Intersection Capacity Utilization	70.7%					
ICU Level of Service	C					
Analysis Period (min)	15					

Avila Ranch
7: Horizon Ln & Tank Farm

Cumulative PM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	209269
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	70
Lanes Crossed	4
Veh Vol Crossed	1810
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	23.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.94
Delay for add Gap	209271.00
Avg Ped Delay (s)	209269.00
Approach	WB
Approach Direction	No
Median Present?	209269
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	70
Lanes Crossed	4
Veh Vol Crossed	1810
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	23.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.94
Delay for add Gap	209271.00
Avg Ped Delay (s)	209269.00

Avila Ranch
8: Higuera & Suburban

Cumulative PM
6/19/2015



Lane Group	WBL	WBR	NBT	SBT
Lane Group Flow (vph)	474	263	979	137
v/c Ratio	0.76	0.43	0.63	0.76
Control Delay	24.6	10.5	13.6	47.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.6	10.5	13.6	47.5
Queue Length 50th (ft)	135	38	114	37
Queue Length 95th (ft)	228	87	190	#134
Internal Link Dist (ft)	1245		306	1054
Turn Bay Length (ft)		170		200
Base Capacity (vph)	795	755	1633	191
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.35	0.60	0.72
Intersection Summary				
# 95th percentile volume exceeds capacity, queue may be longer.				
Queue shown is maximum after two cycles.				

Movement	WBL	WBR	NBT	NBR	SBL	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	450	250	710	220	130	1170
Future Volume (veh/h)	450	250	710	220	130	1170
Number	3	18	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1900	1863	1863
Adj Flow Rate, veh/h	474	263	747	232	137	1232
Adj No. of Lanes	1	1	2	0	1	2
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	582	519	1241	385	282	1651
Arrive On Green	0.33	0.33	0.47	0.47	0.47	0.47
Sat Flow, veh/h	1774	1583	2753	826	572	3632
Grp Volume(v), veh/h	474	263	497	482	137	1232
Grp Sat Flow(s), veh/h	1774	1583	1770	1716	572	1770
Q Serve(g_s), s	13.1	7.2	11.2	11.2	12.5	15.3
Cycle Q Clear(g_c), s	13.1	7.2	11.2	11.2	23.7	15.3
Prop In Lane	1.00	1.00	1.00	0.48	1.00	1.00
Lane Grp Cap(c), veh/h	582	519	826	801	282	1651
V/C Ratio(X)	0.81	0.51	0.60	0.60	0.49	0.75
W/C Ratio(X)	795	709	826	801	282	1651
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.5	14.5	10.6	10.6	19.4	11.7
Incr Delay (d2), s/veh	4.7	0.8	1.2	1.3	1.3	1.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	7.1	3.2	5.7	5.5	2.1	7.8
LnGrp Delay(d), s/veh	21.2	15.3	11.8	11.9	20.7	13.6
LnGrp LOS	C	B	B	B	C	B
Approach Vol, veh/h	737	979			1369	
Approach Delay, s/veh	19.1	11.8			14.3	
Approach LOS	B	B			B	
Timer	1	2	3	4	5	6
Assigned Phs		2				8
Phs Duration (G+Y+Rc), s		31.0				22.6
Change Period (Y+Rc), s		6.0				5.0
Max Green Setting (Gmax), s		25.0				24.0
Max Q Clear Time (g_c+H), s		13.2				25.7
Green Ext Time (p_c), s		9.9				0.0
Green Ext Time (p_c), s						2.5
Intersection Summary						
HCM 2010 Ctrl Delay	14.7					
HCM 2010 LOS	B					

Approach	WB	NB	SB
Crosswalk Length (ft)	44.6	59.5	60.2
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	30	30	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq.ft)	7278.7	7278.9	7278.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	4473.5	5330.9	4748.3
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (S/p)	22.5	21.7	22.5
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.26	3.14	2.98
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Cumulative PM
6/19/2015

Approach	WB	NB	SB
Bicycle Flow Rate (bik/eh)	0	0	0
Total Flow Rate (veh/h)	737	979	1369
Effct. Green for Bike (s)	19.1	24.1	24.1
Cross Street Width (ft)	60.2	44.6	59.5
Through Lanes Number	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	637	803	803
Bicycle Delay (s/bike)	13.9	10.7	10.7
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	2.73	1.98	2.53
Bicycle LOS	B	A	B

Avila Ranch
9: Higuera & Vachell

Cumulative PM
6/19/2015



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	130	800	170	0	1620
Future Volume (Veh/h)	0	130	800	170	0	1620
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	137	842	179	0	1705
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			433			386
pk platoon unblocked	0.69					
vC, conflicting volume	1784	510			1021	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	1247	510			1021	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)						
p0 queue free %	3.5	3.3			2.2	
IF (s)	100	73			100	
dM capacity (veh/h)	115	508			675	
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	137	561	460	852	852	
Volume Left	0	0	0	0	0	
Volume Right	137	0	179	0	0	
cSH	508	1700	1700	1700	1700	
Volume to Capacity	0.27	0.33	0.27	0.50	0.50	
Queue Length 95th (ft)	27	0	0	0	0	
Control Delay (s)	14.7	0.0	0.0	0.0	0.0	
Lane LOS	B					
Approach Delay (s)	14.7	0.0		0.0		
Approach LOS	B					
Intersection Summary						
Average Delay	0.7					
Intersection Capacity Utilization	48.1%					
Analysis Period (min)	15					
ICU Level of Service	A					

Avila Ranch
9: Higuera & Vachell

Avila Ranch
10: Higuera & LOVR

Cumulative PM
7/9/2015

Cumulative PM
6/19/2015

Approach	NB
Approach Direction	No
Median Present?	524053
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	56
Lanes Crossed	4
Veh Vol Crossed	2420
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	19.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.96
Delay for add Gap	524055.00
Avg Ped Delay (s)	524053.00
Approach	SB
Approach Direction	No
Median Present?	524053
Level of Service	F
Crosswalk	
Length (ft)	56
Lanes Crossed	4
Veh Vol Crossed	2420
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	19.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.96
Delay for add Gap	524055.00
Avg Ped Delay (s)	524053.00

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	823	31	104	188	563	1125
Lane Group Flow (vph)	0.56	0.05	0.62	0.24	0.89	0.93
w/c Ratio	21.2	7.8	33.3	15.9	45.3	23.0
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	21.2	7.8	33.3	15.9	45.3	23.0
Total Delay	181	2	33	62	297	271
Queue Length 50th (ft)	240	19	#77	106	#488	#876
Queue Length 95th (ft)	407			1929	353	
Internal Link Dist (ft)	100	225				
Turn Bay Length (ft)	1534	721	167	922	697	1235
Base Capacity (vph)	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced w/c Ratio	0.54	0.04	0.62	0.20	0.81	0.91
Intersection Summary						
#	95th percentile volume exceeds capacity, queue may be longer.					
	Queue shown is maximum after two cycles.					



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	790	30	100	180	540	1080
Future Volume (veh/h)	790	30	100	180	540	1080
Number	7	14	5	2	6	16
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	823	31	104	188	562	1125
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1035	476	232	1007	763	1123
Arrive On Green	0.30	0.30	0.05	0.54	0.41	0.41
Sat Flow, veh/h	3442	1583	1774	1863	1863	1579
Grp Volume(V), veh/h	823	31	104	188	562	1125
Grp Sat Flow(S), veh/hln	1721	1583	1774	1863	1863	1579
Q_Serve(g_s), s	16.6	1.1	2.4	3.9	19.3	31.0
Cycle Q Clear(g_c), s	16.6	1.1	2.4	3.9	19.3	31.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1035	476	232	1007	763	1123
V/C Ratio(X)	0.80	0.07	0.45	0.19	0.74	1.00
Avail Cap(c_a), veh/h	1683	774	234	1009	763	1123
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(f)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	18.9	15.2	8.9	18.9	7.7
Incr Delay (d2), s/veh	1.4	0.1	1.4	0.1	3.8	27.2
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	8.1	1.1	1.2	2.0	10.6	31.6
LnGrp Delay(d), s/veh	25.8	18.9	16.6	9.0	22.6	34.9
LnGrp LOS	C	B	B	A	C	F
Approach Vol, veh/h	854			292	1687	
Approach Delay, s/veh	25.5			11.7	30.8	
Approach LOS	C			B	C	
Timer	1	2	3	4	5	6
Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		46.9		28.8	9.9	37.0
Change Period (Y+Rc), s		6.0		6.0	6.0	6.0
Max Green Setting (Gmax), s		41.0		37.0	4.0	31.0
Max Q Clear Time (g_c+H), s		5.9		18.6	4.4	33.0
Green Ext Time (p_c), s		18.3		4.1	0.0	0.0
Intersection Summary						
HCM 2010 Ctrl Delay	27.2					
HCM 2010 LOS	C					

Approach	EB	NB	SB
Crosswalk Length (ft)	73.0	36.1	58.5
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	5	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2
Ped. Right-Left Flow Rate (p/h)	2	0	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq.ft)	12131.2	18196.9	7267.5
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	0.0	0.0	0.1
Crosswalk Circulation Code	F	-	F
Pedestrian Delay (S/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.78	2.38	2.80
Pedestrian Crosswalk LOS	C	B	C

Avila Ranch
10: Higuera & LOVR

Cumulative PM
6/19/2015

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	854	292	1687
Effct. Green for Bike (s)	36.0	36.3	28.8
Cross Street Width (ft)	36.1	58.5	73.0
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	800	807	640
Bicycle Delay (s/bike)	16.2	16.0	20.8
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	1.74	1.86	4.39
Bicycle LOS	A	A	E

Avila Ranch
11: Higuera & Buckley

Cumulative PM
6/19/2015

	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	11	543	163	500	217	228	33	109	489	22
Lane Group Flow (vph)	0.06	0.73	0.99	0.67	0.81	0.33	0.05	0.55	0.87	0.04
v/c Ratio	17.8	25.0	98.1	26.6	63.8	25.4	3.0	51.9	48.8	0.8
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	17.8	25.0	98.1	26.6	63.8	25.4	3.0	51.9	48.8	0.8
Total Delay	17.8	25.0	98.1	26.6	63.8	25.4	3.0	51.9	48.8	0.8
Queue Length 50th (ft)	4	228	97	239	138	109	0	67	290	0
Queue Length 95th (ft)	16	355	#230	351	#270	176	11	122	#463	3
Internal Link Dist (ft)	150	2016	150	1779	150	852	150	150	1929	150
Turn Bay Length (ft)	240	889	201	909	285	711	638	245	666	601
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.61	0.81	0.55	0.76	0.32	0.05	0.44	0.73	0.04

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	2	2	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	10	200	300	150	400	60	200	210	30	100	450	20
Future Volume (veh/h)	10	200	300	150	400	60	200	210	30	100	450	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	217	326	163	435	65	217	228	33	109	489	22
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	286	300	451	232	707	106	249	655	557	138	538	457
Arrive On Green	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.45	0.35	0.08	0.29	0.29
Sat Flow, veh/h	894	673	1011	860	1584	237	1774	1863	1583	1774	1863	1583
Grp Volume(V), veh/h	11	0	543	163	0	500	217	228	33	109	489	22
Grp Sat Flow(s),veh/hln	894	0	1684	860	0	1821	1774	1863	1583	1774	1863	1583
Q Serve(g.s), s	0.9	0.0	25.4	17.6	0.0	20.2	11.5	8.7	1.3	5.8	24.4	1.0
Cycle Q Clear(g.c), s	21.1	0.0	25.4	43.0	0.0	20.2	11.5	8.7	1.3	5.8	24.4	1.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	286	0	752	232	0	813	249	655	557	138	538	457
V/C Ratio(X)	0.04	0.00	0.72	0.70	0.00	0.62	0.87	0.35	0.06	0.79	0.91	0.05
Avail Cap(c.a), veh/h	286	0	752	232	0	813	258	655	557	221	599	509
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.4	0.0	21.8	39.7	0.0	20.4	40.6	23.1	20.7	43.7	33.1	24.7
Incr Delay (d2), s/veh	0.1	0.0	3.4	9.2	0.0	1.4	25.4	0.3	0.0	9.6	16.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%),veh/hln	0.2	0.0	12.5	4.9	0.0	10.5	7.4	4.6	0.6	3.2	15.0	0.4
LnGrp Delay(d),s/veh	28.5	0.0	25.2	48.9	0.0	21.8	66.0	23.4	20.7	53.3	49.9	24.8
LnGrp LOS	C	C	C	D	C	C	E	C	C	D	D	C
Approach Vol, veh/h	554			663			478			620		
Approach Delay, s/veh	25.3			28.4			42.6			49.6		
Approach LOS	C			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	11.5	37.9		47.0	17.5	31.8		47.0				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	12.0	33.0		43.0	14.0	31.0		43.0				
Max Q Clear Time (g.c+H), s	7.8	10.7		27.4	13.5	26.4		45.0				
Green Ext Time (g.c), s	0.1	4.5		7.8	0.0	1.4		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	36.3											
HCM 2010 LOS	D											

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	36.4	39.0	53.0	57.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	50.0	50.0	50.0	50.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.35	2.29	2.68	2.48
Pedestrian Crosswalk LOS	B	B	B	B

Avila Ranch
11: Higuera & Buckley

Cumulative PM
6/19/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	554	663	478	620
Effct. Green for Bike (s)	36.6	36.6	33.7	27.1
Cross Street Width (ft)	53.0	57.1	39.0	36.4
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	732	732	674	542
Bicycle Delay (s/bike)	20.1	20.1	22.0	26.6
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.28	3.53	2.94	3.14
Bicycle LOS	C	D	C	C

Avila Ranch
12: Buckley & Vachell

Cumulative PM
6/19/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		W	
Traffic Volume (veh/h)	50	280	510	100	100	100
Future Volume (Veh/h)	50	280	510	100	100	100
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	54	304	554	109	109	109
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)			None	None		
Median type			None	None		
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked				1020	608	
vC, conflicting volume	663					
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	663			1020	608	
iC, single (s)	4.1			6.4	6.2	
iC, 2 stage (s)						
p0 queue free %	2.2			3.5	3.3	
IF (s)	94			56	78	
pM capacity (veh/h)	926			247	495	
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	358	663	218			
Volume Left	54	0	109			
Volume Right	0	109	109			
cSH	926	1700	329			
Volume to Capacity	0.06	0.39	0.66			
Queue Length 95th (ft)	5	0	111			
Control Delay (s)	1.9	0.0	34.9			
Lane LOS	A		D			
Approach Delay (s)	1.9	0.0	34.9			
Approach LOS			D			
Intersection Summary						
Average Delay			6.7			
Intersection Capacity Utilization			72.1%		ICU Level of Service	C
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Cumulative PM
7/9/2015

Approach	EB
Approach Direction	Yes
Median Present?	8.7
Approach Delay(s)	B
Level of Service	
Crosswalk	
Length (ft)	16
Lanes Crossed	1
Veh Vol Crossed	280
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	7.57
Prob of Delayed X-ing	0.45
Prob of Blocked Lane	0.45
Delay for add Gap	6.16
Avg Ped Delay (s)	2.74
Approach	WB
Approach Direction	Yes
Median Present?	8.7
Approach Delay(s)	B
Level of Service	
Crosswalk	
Length (ft)	16
Lanes Crossed	1
Veh Vol Crossed	510
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	7.57
Prob of Delayed X-ing	0.66
Prob of Blocked Lane	0.66
Delay for add Gap	9.12
Avg Ped Delay (s)	6.00

Avila Ranch
13: Buckley & Project Entry

Cumulative PM
6/19/2015



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	4		W	
Traffic Volume (veh/h)	0	380	610	0	0	0
Future Volume (Veh/h)	0	380	610	0	0	0
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	413	663	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	663			1076	663	
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol	663			1076	663	
IC single (s)	4.1			6.4	6.2	
IC 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	100			100	100	
dM capacity (veh/h)	926			243	461	
Direction Lane #	EB 1	WB 1	SB 1			
Volume Total	413	663	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	926	1700	1700			
Volume to Capacity	0.00	0.39	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			35.4%			
ICU Level of Service			A			
Analysis Period (min)			15			

Avila Ranch
13: Buckley & Project Entry

Cumulative PM
7/9/2015

Approach	EB
Approach Direction	No
Median Present?	86.8
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	990
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.96
Prob of Blocked Lane	0.81
Delay for add Gap	89.95
Avg Ped Delay (s)	86.76
Approach	WB
Approach Direction	No
Median Present?	86.8
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	990
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.96
Prob of Blocked Lane	0.81
Delay for add Gap	89.95
Avg Ped Delay (s)	86.76

Avila Ranch
14: Broad & Buckley

Cumulative PM
6/22/2015

	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Lane Group	78	365	15	260	833	1563	208
Lane Group Flow (vph)	0.38	0.80	0.17	0.92	0.30	0.78	0.22
v/c Ratio	48.5	38.9	46.6	78.9	3.7	17.9	2.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	48.5	38.9	46.6	78.9	3.7	17.9	2.1
Total Delay	38	128	5	136	46	296	1
Queue Length 50th (ft)	105	#370	31	#432	124	524	31
Queue Length 95th (ft)	9732		405	777	1174		
Internal Link Dist (ft)		150		360		2807	1267
Turn Bay Length (ft)	360	457	90	284	3041	2807	1267
Base Capacity (vph)	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.80	0.17	0.92	0.27	0.56	0.16
Intersection Summary							
# 95th percentile volume exceeds capacity, queue may be longer.							
Queue shown is maximum after two cycles.							

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations											
Traffic Volume (veh/h)	70	5	350	5	5	5	250	800	0	0	1500
Future Volume (veh/h)	70	5	350	5	5	5	250	800	0	0	1500
Number	7	4	14	3	8	18	5	2	12	1	6
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1881	1844	1844	1862	1825	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	73	5	365	5	5	5	260	833	0	0	1562
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	241	16	411	7	7	7	203	2497	0	2	1998
Arrive On Green	0.15	0.15	0.15	0.01	0.01	0.01	0.12	0.73	0.00	0.00	0.58
Sat Flow, veh/h	1649	113	1539	555	555	555	1712	3505	0	1739	3468
Grp Volume(V), veh/h	78	0	365	15	0	0	260	833	0	0	1562
Grp Sat Flow(s), veh/h	1762	0	1539	1666	0	0	1712	1708	0	1739	1734
Q_Serve(g_s), s	4.3	0.0	16.0	1.0	0.0	0.0	13.0	9.5	0.0	0.0	38.1
Cycle Q Clear(g_c), s	4.3	0.0	16.0	1.0	0.0	0.0	13.0	9.5	0.0	0.0	38.1
Prop In Lane	0.94	0.00	1.00	0.33	0.00	0.33	1.00	1.00	0.00	1.00	1.00
Lane Grp Cap(c), veh/h	257	0	411	22	0	0	203	2497	0	2	1998
V/C Ratio(X)	0.30	0.00	0.89	0.67	0.00	0.00	1.28	0.33	0.00	0.00	0.78
Avail Cap(c), veh/h	257	0	411	61	0	0	203	2497	0	63	2247
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
Upstream Filter(i)	1.00	0.00	1.00	0.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00
Uniform Delay (d), s/veh	41.8	0.00	38.8	53.8	0.00	0.00	48.3	5.2	0.00	0.00	17.9
Incr Delay (d2), s/veh	0.7	0.00	20.5	29.8	0.00	0.00	158.4	0.1	0.00	0.00	1.7
Initial Q Delay(d3), s/veh	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
%ile BackOf(50%) veh/h	2.1	0.00	12.9	0.6	0.00	0.00	15.0	4.4	0.00	0.00	18.5
LnGrp Delay(d), s/veh	42.5	0.00	59.3	83.6	0.00	0.00	206.7	5.3	0.00	0.00	19.6
LnGrp LOS	D	E	F	F	F	F	A	A	F	A	B
Approach Vol, veh/h	443		15				1093				1770
Approach Delay, s/veh	56.4		83.6				53.2				18.6
Approach LOS	E		F				D				B
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	1	2		4	5	6					
Phs Duration (G+Y+Rc), s	0.0	84.1		20.0	17.0	67.1					
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0					
Max Green Setting (Gmax), s	4.0	80.0		16.0	13.0	71.0					
Max Q Clear Time (g_c+H), s	0.0	11.5		18.0	15.0	40.1					
Green Ext Time (p_c), s	0.0	38.7		0.0	0.0	23.1					
Intersection Summary											
HCM 2010 Ctrl Delay	35.3										
HCM 2010 LOS	D										

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.7	24.1	60.4	72.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	5	6
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4897.5	0.0	5344.9	5503.5
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.34	1.75	3.20	3.12
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Cumulative PM
6/22/2015

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	443	15	1093	1770
Effct. Green for Bike (s)	10.1	4.5	70.7	50.3
Cross Street Width (ft)	60.4	72.3	24.1	39.7
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	168	75	1178	838
Bicycle Delay (s/bike)	50.3	55.6	10.1	20.2
Bicycle Compliance	Poor	Poor	Fair	Fair
Bicycle LOS Score	3.21	2.69	2.83	3.63
Bicycle LOS	C	B	C	D

Avila Ranch
15: Earthwood & Suburban

Cumulative PM
6/19/2015



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
VC conflicting volume						
VC1 stage 1 conf vol						
VC2 stage 2 conf vol						
VCu unblocked vol						
IC single (s)			4.1		6.4	6.2
IC 2 stage (s)						
IF (s)			2.2		3.5	3.3
p0 queue free %			100		100	100
dm capacity (veh/h)			1623		1023	1085
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	0	0	0			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1700			
Volume to Capacity	0.00	0.00	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			0.0%			A
Analysis Period (min)			15			

Avila Ranch
16: Horizon Ln & Suburban

Cumulative PM
6/19/2015

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	0	0	0			
Volume Left (vph)	0	0	0			
Volume Right (vph)	0	0	0			
Head (s)	0.00	0.00	0.00			
Departure Headway (s)	3.9	3.9	3.9			
Degree Utilization, x	0.00	0.00	0.00			
Capacity (veh/h)	917	917	917			
Control Delay (s)	6.9	6.9	6.9			
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	0.0					
Level of Service	A					
Intersection Capacity Utilization	0.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Cumulative PM
6/19/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	0	0	0	0	0	0
Future Volume (Veh/h)	0	0	0	0	0	0
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	0	0	0	0
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
PK, platoon unblocked						
VC, conflicting volume	0	0	0	0	0	0
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	0	0			0	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
IF (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
dM capacity (veh/h)	1023	1085			1623	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	0	0		0	
Volume Left	0	0	0		0	
Volume Right	0	0	0		0	
CSH	1700	1700	1700		1700	
Volume to Capacity	0.00	0.00	0.00		0.00	
Queue Length 95th (ft)	0	0	0		0	
Control Delay (s)	0.0	0.0	0.0		0.0	
Lane LOS	A	A	A		A	
Approach Delay (s)	0.0	0.0	0.0		0.0	
Approach LOS	A	A	A		A	
Intersection Summary						
Average Delay	0.0					
Intersection Capacity Utilization	0.0%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
18: Vachell & Project Entry

Cumulative PM
6/19/2015

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	0	0	250	0	0	200
Future Volume (Veh/h)	0	0	250	0	0	200
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	0	0	272	0	0	217
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC conflicting volume	489	272			272	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol	489	272			272	
VCu, unblocked vol	6.4	6.2			4.1	
IC, single (s)						
IC, 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	100	100			100	
CM capacity (veh/h)	538	767			1291	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	0	272	217			
Volume Left	0	0	0			
Volume Right	0	0	0			
cSH	1700	1700	1291			
Volume to Capacity	0.00	0.16	0.00			
Queue Length 95th (ft)	0	0	0			
Control Delay (s)	0.0	0.0	0.0			
Lane LOS	A					
Approach Delay (s)	0.0	0.0	0.0			
Approach LOS	A					
Intersection Summary						
Average Delay			0.0			
Intersection Capacity Utilization			16.5%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
1: LOVR & 101 NB

Cumulative Plus Project without BP AM
7/15/2016

	NBT	SBT
Lane Group	1108	1453
Lane Group Flow (vph)	0.31	0.78
w/c Ratio	0.2	3.3
Control Delay	0.0	0.0
Queue Delay	0.2	3.3
Total Delay	0.2	3.3
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	0
Internal Link Dist (ft)	872	236
Turn Bay Length (ft)		
Base Capacity (vph)	3539	1863
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced w/c Ratio	0.31	0.78
Intersection Summary		

Avila Ranch
1: LOVR & 101 NB
Cumulative Plus Project without BP AM
1/15/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	0	0	1019	1337	0	0
Future Volume (veh/h)	0	0	1019	1337	0	0
Number	1	6	2	12	0	0
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	0	1108	1453	0	0	0
Adj No. of Lanes	1	2	1	1	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Cap. veh/h	81	3340	1758	1494	0	0
Arrive On Green	0.00	0.94	0.94	0.00	0.00	0.00
Sat Flow, veh/h	365	3632	1863	1583	0	0
Grp Volume(v), veh/h	0	1108	1453	0	0	0
Grp Sat Flow(s), veh/hln	365	1770	1863	1583	0	0
Q_Serve(g_s), s	0.0	2.3	17.7	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.0	2.3	17.7	0.0	0.0	0.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	81	3340	1758	1494	0	0
V/C Ratio(X)	0.00	0.33	0.83	0.00	0.00	0.00
Avail Cap(c_a), veh/h	81	3340	1758	1494	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	0.00	0.89	0.82	0.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.2	0.6	0.0	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.2	3.8	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%), veh/ln	0.0	1.0	9.5	0.0	0.0	0.0
LnGrp Delay(d), s/veh	0.0	0.4	4.4	0.0	0.0	0.0
LnGrp LOS	A	A	A	A	A	A
Approach Vol, veh/h			1108	1453		
Approach Delay, s/veh			0.4	4.4		
Approach LOS			A	A		
Timer	1	2	3	4	5	6
Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		89.0				89.0
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		84.0				84.0
Max Q Clear Time (g_c+H), s		19.7				4.3
Green Ext Time (p_c), s		51.6				61.0
Intersection Summary						
HCM 2010 Ctrl Delay	2.7					
HCM 2010 LOS	A					

Avila Ranch
1: LOVR & 101 NB
Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	12.4	60.0	60.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	1	5	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	Actuated
Corresponding Signal Phase	2	0	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	50	500	0
85th percentile speed (mph)	30	35	35
Right Corner Area per Ped (sq.ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq.ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (S/p)	44.5	44.5	44.5
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.50	3.60	2.87
Pedestrian Crosswalk LOS	A	D	C

Avila Ranch
1: LOVR & 101 NB

Avila Ranch
2: LOVR & 101 NB

Cumulative Plus Project without BP AM
1/15/2016

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	0	1108	1453
Effct. Green for Bike (s)	0.0	89.0	89.0
Cross Street Width (ft)	60.0	60.0	12.4
Through Lanes Number	0	2	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	0	2000	2000
Bicycle Delay (s/bike)	0.0	0.0	0.0
Bicycle Compliance			
Bicycle LOS Score	0.00	3.39	4.15
Bicycle LOS		C	D

	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group	521	214	563	150	1273	149
Lane Group Flow (vph)	0.69	0.54	0.24	0.13	0.53	0.13
v/c Ratio	36.7	25.7	6.5	1.5	9.1	1.6
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	36.7	25.7	6.5	1.5	9.1	1.6
Total Delay	141	75	56	0	168	0
Queue Length 50th (ft)	177	132	98	21	271	21
Queue Length 95th (ft)						
Internal Link Dist (ft)			385			872
Turn Bay Length (ft)		50		100		180
Base Capacity (vph)	1010	511	2383	1115	2383	1114
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.42	0.24	0.13	0.53	0.13
Intersection Summary						

Avila Ranch
2: LOVR & 101 NB
Cumulative Plus Project without BP AM
1/15/2016

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	490	0	201	0	0	0	529	141	0	1197	140
Traffic Volume (veh/h)	490	0	201	0	0	0	529	141	0	1197	140
Future Volume (veh/h)	3	8	18	0	0	0	1	6	16	5	2
Number	Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	0	1863	0	1863	1863	0	1863	1863	0	1863
Adj Sat Flow, veh/hln	521	0	214	0	214	0	563	0	0	1273	0
Adj Flow Rate, veh/h	2	0	1	0	1	0	2	1	0	2	1
Adj No. of Lanes	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Peak Hour Factor	679	0	312	0	2468	1104	0	2468	1104	0	2468
Cap. veh/h	0.20	0.00	0.20	0.00	0.70	0.00	0.00	0.00	0.00	0.70	0.00
Arrive On Green	3442	0	1583	0	3632	1583	0	3632	1583	0	3632
Sat Flow, veh/h	521	0	214	0	214	0	563	0	0	1273	0
Grp Volume(V), veh/h	1721	0	1583	0	1770	1583	0	1770	1583	0	1770
Grp Sat Flow(S), veh/hln	12.9	0.0	11.3	0.0	5.2	0.0	0.0	0.0	0.0	15.3	0.0
Q Serve(g_s), s	12.9	0.0	11.3	0.0	5.2	0.0	0.0	0.0	0.0	15.3	0.0
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	679	0	312	0	2468	1104	0	2468	1104	0	2468
Lane Grp Cap(c), veh/h	0.77	0.00	0.69	0.00	0.23	0.00	0.00	0.00	0.00	0.52	0.00
V/C Ratio(X)	1073	0	466	0	2468	1104	0	2468	1104	0	2468
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	0.00	0.95	0.00	0.00	0.00	0.00	0.53	0.00
Upstream Filter(i)	34.2	0.0	33.5	0.0	4.9	0.0	0.0	0.0	0.0	6.4	0.0
Uniform Delay (d), s/veh	2.0	0.0	2.7	0.0	0.2	0.0	0.0	0.0	0.0	0.4	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(d3), s/veh	6.3	0.0	5.2	0.0	2.6	0.0	0.0	0.0	0.0	7.6	0.0
%ile BackQ(50%), veh/h	36.2	0.0	36.2	0.0	5.1	0.0	0.0	0.0	0.0	6.9	0.0
LnGrp Delay(d), s/veh	D	D	D	D	D	D	D	D	D	D	D
LnGrp LOS	D	D	D	D	D	D	D	D	D	D	D
Approach Vol, veh/h	735	563	563	563	563	563	563	563	563	563	563
Approach Delay, s/veh	36.2	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1
Approach LOS	D	A	A	A	A	A	A	A	A	A	A
Timer	1	2	3	4	5	6	7	8			
Assigned Phs	2	6	6	6	6	6	6	6			
Phs Duration (G+Y+Rc), s	68.8	68.8	68.8	68.8	68.8	68.8	68.8	68.8			
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0			
Max Green Setting (Gmax), s	54.0	54.0	54.0	54.0	54.0	54.0	54.0	54.0			
Max Q Clear Time (g_c+H), s	17.3	7.2	7.2	7.2	7.2	7.2	7.2	7.2			
Green Ext Time (g_e), s	19.7	22.2	22.2	22.2	22.2	22.2	22.2	22.2			
Intersection Summary											
HCM 2010 Ctrl Delay	14.9										
HCM 2010 LOS	B										

Avila Ranch
2: LOVR & 101 NB
Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.1	18.5	65.0	62.2
Crosswalk Width (ft)	10.0	12.0	10.0	10.0
Total Number of Lanes Crossed	4	1	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	2	6	3	6
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	30
Right Corner Area per Ped (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	45.0	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.36	1.58	2.77	2.75
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
2: LOVR & 101 NB
Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (b/ke/h)	0	0	0	0
Total Flow Rate (veh/h)	735	0	713	1422
Effct. Green for Bike (s)	0.0	0.0	60.6	60.6
Cross Street Width (ft)	65.0	62.2	18.5	48.1
Through Lanes Number	0	0	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (b/ke/h)	0	0	1347	1347
Bicycle Delay (s/bike)	0.0	0.0	4.8	4.8
Bicycle Compliance	Good	Good	Good	Good
Bicycle LOS Score	0.00	0.00	2.43	3.47
			B	C

Avila Ranch
3: Higuera & South
Cumulative Plus Project without BP AM
1/15/2016

	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group	31	10	523	125	40	461	527	125	566
Lane Group Flow (vph)	0.33	0.04	0.59	0.26	0.30	0.34	0.46	0.56	0.35
v/c Ratio	51.8	0.3	30.0	10.6	46.5	22.5	2.5	46.3	17.9
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	51.8	0.3	30.0	10.6	46.5	22.5	2.5	46.3	17.9
Total Delay	17	0	132	13	22	106	13	66	118
Queue Length 50th (ft)	47	0	182	55	56	157	38	127	173
Queue Length 95th (ft)	208	0	629	60	60	338	60	100	507
Internal Link Dist (ft)	93	238	1141	604	135	1339	1198	271	1605
Turn Bay Length (ft)	0	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.04	0.46	0.21	0.30	0.34	0.44	0.46	0.35
Intersection Summary									

Avila Ranch
3: Higuera & South

Cumulative Plus Project without BP AM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	20	10	502	30	90	40	44.3	506	120	514	30
Traffic Volume (veh/h)	10	20	10	502	30	90	40	44.3	506	120	514	30
Future Volume (veh/h)	3	8	18	7	4	14	1	6	16	5	2	12
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.96	1.00	1.00	1.00	0.99	1.00	0.99	1.00	1.00	0.99	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1900	1863	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/h	10	21	10	523	31	94	40	46.1	527	125	535	31
Adj Flow Rate, veh/h	0	1	1	2	1	2	1	2	1	1	2	0
Adj No. of Lanes	0.96	0.96	0.96	0.96	0.96	0.96	1.00	0.96	0.96	0.96	0.96	0.96
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	18	38	46	730	86	260	53	1288	906	191	1501	87
Cap. veh/h	0.03	0.03	0.03	0.21	0.21	0.21	0.03	0.36	0.36	0.11	0.44	0.44
Arrive On Green	591	1242	1519	3442	405	1227	1774	3539	1566	1774	3398	197
Sat Flow, veh/h	31	0	10	523	0	125	40	46.1	527	125	535	288
Grp Volume(V), veh/h	1833	0	1519	1721	0	1632	1774	1770	1566	1774	1770	1825
Grp Sat Flow(s), veh/h	1.3	0.0	0.5	10.9	0.0	5.0	1.7	7.3	16.5	5.2	8.0	8.0
Q_Serve(g.s), s	1.3	0.0	0.5	10.9	0.0	5.0	1.7	7.3	16.5	5.2	8.0	8.0
Cycle Q Clear(g.c), s	0.32	1.00	1.00	1.00	0.75	1.00	1.00	1.00	1.00	1.00	1.00	0.11
Prop In Lane	56	0	46	730	0	346	53	1288	906	191	782	806
Lane Grp Cap(c), veh/h	0.56	0.00	0.22	0.72	0.00	0.36	0.75	0.36	0.58	0.65	0.36	0.36
V/C Ratio(X)	95	0	79	1163	0	551	138	1288	906	277	782	806
Avail Cap(c), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	36.8	0.0	36.4	28.2	0.0	25.9	37.0	17.9	10.4	32.9	14.2	14.2
Uniform Delay (d), s/veh	8.4	0.0	2.3	1.3	0.0	0.6	19.2	0.8	2.7	3.7	1.3	1.2
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	0.8	0.0	0.2	5.3	0.0	2.3	1.1	3.7	11.4	2.7	4.1	4.3
%ile BackOf(50%) veh/h	45.2	0.0	38.7	29.5	0.0	26.5	56.3	18.7	13.2	36.7	15.5	15.5
LnGrp Delay(d), s/veh	D	D	C	C	C	E	B	B	B	D	B	B
LnGrp LOS	D	D	C	C	C	E	B	B	B	D	B	B
Approach Vol, veh/h	41		648			1028				691		
Approach Delay, s/veh	43.7		28.9			17.3				19.3		
Approach LOS	D		C			B				B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	7.3	40.0		22.3	13.3	34.0						
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0						
Max Green Setting (Gmax), s	6.0	34.0		26.0	12.0	28.0						
Max Q Clear Time (g.c+H), s	3.7	10.0		12.9	7.2	18.5						
Green Ext Time (g.c), s	0.1	3.7		2.7	0.2	4.1						
Intersection Summary												
HCM 2010 Ctrl Delay	21.5											
HCM 2010 LOS	C											

Avila Ranch
3: Higuera & South

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated	Actuated	Actuated	Actuated
Corresponding Signal Phase	2	6	8	4
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	40	30	30
Right Corner Area per Ped (sq ft)	7266.6	2896.8	2897.1	4844.0
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (S/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.66	2.81	2.56
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	41	648	1028	691
Effct. Green for Bike (s)	4.1	20.8	30.5	36.8
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	89	452	663	800
Bicycle Delay (s/bike)	42.0	27.6	20.6	16.6
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.93	2.66	2.26	1.92
Bicycle LOS	C	B	B	A

Avila Ranch
4: Higuera & Madonna

Cumulative Plus Project without BP AM
1/15/2016



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	323	319	478	5	22	109	493	675	457
v/c Ratio	0.63	0.62	0.52	0.03	0.12	0.46	0.28	0.66	0.27
Control Delay	28.2	27.8	3.8	33.6	25.3	39.1	11.5	24.7	5.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.2	27.8	3.8	33.6	25.3	39.1	11.5	24.7	5.4
Queue Length 50th (ft)	101	100	8	2	4	38	48	111	23
Queue Length 95th (ft)	256	252	48	13	27	#120	120	226	78
Internal Link Dist (ft)	964								
Turn Bay Length (ft)	110								
Base Capacity (vph)	694	699	942	467	463	263	2275	1447	1977
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.47	0.46	0.51	0.01	0.05	0.41	0.22	0.47	0.23
Intersection Summary									
# 95th percentile volume exceeds capacity, queue may be longer.									
Queue shown is maximum after two cycles.									

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	4	4	4	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	560	30	440	5	10	10	100	449	5	5	616	420
Future Volume (veh/h)	560	30	440	5	10	10	100	449	5	5	616	420
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	0.97	1.00	1.00	0.99	1.00	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1900	1863	1863	1900	1900	1863	1863	1863
Adj Flow Rate, veh/h	633	0	0	5	11	11	109	488	5	5	670	457
Adj No. of Lanes	2	0	1	1	1	1	2	0	2	0	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	901	0	528	56	27	27	141	1789	18	68	1200	1666
Arrive On Green	0.25	0.00	0.00	0.03	0.03	0.03	0.08	0.50	0.50	0.35	0.35	0.35
Sat Flow, veh/h	3548	0	1583	1774	844	844	1774	3589	37	6	3461	2763
Grp Volume(v), veh/h	633	0	0	5	0	22	109	241	252	362	313	457
Grp Sat Flow(s), veh/hln	1774	0	1583	1774	0	1688	1774	1770	1856	1856	1610	1381
Q Serve(g.s), s	9.0	0.0	0.0	0.2	0.0	0.7	3.3	4.4	4.4	0.0	8.8	4.4
Cycle Q Clear(g.c), s	9.0	0.0	0.0	0.2	0.0	0.7	3.3	4.4	4.4	0.0	8.8	4.4
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.02	0.01	1.00	1.00
Lane Grp Cap(c), veh/h	901	0	528	56	0	54	141	882	925	709	558	1666
V/C Ratio(X)	0.70	0.00	0.00	0.09	0.00	0.41	0.77	0.27	0.27	0.51	0.56	0.27
Avail Cap(c.a), veh/h	1596	0	838	511	0	486	287	1242	1303	932	753	2000
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	18.8	0.0	0.0	26.1	0.0	26.4	25.1	8.1	8.1	14.7	14.7	5.3
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.7	0.0	5.0	8.6	0.2	0.2	0.6	0.9	0.1
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	4.5	0.0	0.0	0.1	0.0	0.4	2.0	2.2	2.3	4.5	4.0	2.7
LnGrp Delay(d), s/veh	19.8	0.0	0.0	26.8	0.0	31.4	33.6	8.3	8.3	15.3	15.6	5.4
LnGrp LOS	B		C	C	C	C	C	A	A	B	B	A
Approach Vol, veh/h	633		27				602					1132
Approach Delay, s/veh	19.8		30.5				12.9					11.4
Approach LOS	B		C				B					B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2			4	5	6						
Phs Duration (G+Y+Rc), s	31.7			18.1	8.4	23.3						5.8
Change Period (Y+Rc), s	4.0			4.0	4.0	4.0						4.0
Max Green Setting (Gmax), s	39.0			25.0	9.0	26.0						16.0
Max Q Clear Time (g.c+H), s	6.4			11.0	5.3	10.8						2.7
Green Ext Time (p.c), s	12.4			2.6	0.1	8.5						0.0
Intersection Summary												
HCM 2010 Ctrl Delay	14.2											
HCM 2010 LOS	B											
Notes												

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	1	0	0	1
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	10	0	0	0
Veh. RTOR Flow in Walk (v/h)	100	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.74	1.97	2.82	2.50
Pedestrian Crosswalk LOS	B	A	C	B

Avila Ranch
4: Higuera & Madonna

Avila Ranch
5: Higuera & Prado

Cumulative Plus Project without BP AM
1/15/2016

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1120	27	602	1132
Effct. Green for Bike (s)	19.8	6.9	32.8	19.8
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	430	150	713	430
Bicycle Delay (s/bike)	28.3	39.4	19.0	28.3
Bicycle Compliance	Fair	Poor	Fair	Fair
Bicycle LOS Score	3.19	1.23	1.32	2.23
Bicycle LOS	C	A	A	B

EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group	109	1304	496	218	543	217	353	386	101	348	585
Lane Group Flow (vph)	0.45	0.94	0.62	0.77	0.39	0.29	1.00	0.51	0.23	0.98	0.77
v/c Ratio	50.4	43.2	16.6	63.2	22.6	4.0	92.6	35.8	4.2	89.1	43.1
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	50.4	43.2	16.6	63.2	22.6	4.0	92.6	35.8	4.2	89.1	43.1
Total Delay	50.4	43.2	16.6	63.2	22.6	4.0	92.6	35.8	4.2	89.1	43.1
Queue Length 50th (ft)	34	408	161	70	126	0	-116	111	0	113	179
Queue Length 95th (ft)	62	#576	267	#130	177	46	#214	156	25	#211	240
Internal Link Dist (ft)		363		386			1342				828
Turn Bay Length (ft)	250		250	150		200	220		200	175	125
Base Capacity (vph)	248	1387	804	283	1394	755	354	876	481	354	484
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.44	0.94	0.62	0.77	0.39	0.29	1.00	0.44	0.21	0.98	0.67

Intersection Summary

- Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.

Avila Ranch
5: Higuera & Prado

Cumulative Plus Project without BP AM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	100	1200	456	201	500	200	325	355	93	320	538	90
Traffic Volume (veh/h)	100	1200	456	201	500	200	325	355	93	320	538	90
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	0.99	1.00	0.99	1.00	0.99	1.00	0.99	0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	109	1304	496	218	543	217	353	386	101	348	585	98
Adj No. of Lanes	2	2	1	2	2	2	2	2	1	2	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	170	1366	768	282	1481	657	353	758	335	353	758	335
Arrive On Green	0.05	0.39	0.39	0.08	0.42	0.42	0.10	0.21	0.21	0.10	0.21	0.21
Sat Flow, veh/h	3442	3539	1569	3442	3539	1570	3442	3539	1563	3442	3539	1563
Grp Volume(v), veh/h	109	1304	496	218	543	217	353	386	101	348	585	98
Grp Sat Flow(s), veh/hln	1721	1770	1569	1721	1770	1570	1721	1770	1563	1721	1770	1563
Q Serve(g.s), s	3.0	34.9	23.1	6.1	10.3	9.1	10.0	9.4	5.3	9.8	15.2	5.1
Cycle Q Clear(g.c), s	3.0	34.9	23.1	6.1	10.3	9.1	10.0	9.4	5.3	9.8	15.2	5.1
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	170	1366	768	282	1481	657	353	758	335	353	758	335
V/C Ratio(X)	0.64	0.95	0.65	0.77	0.37	0.33	1.00	0.51	0.30	0.99	0.77	0.29
Aval Cap(c.a), veh/h	247	1379	773	282	1481	657	353	871	385	353	871	385
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.5	29.1	18.7	43.9	19.5	19.1	43.8	33.8	32.2	43.7	36.1	32.1
Incr Delay (d2), s/veh	4.0	14.7	1.9	12.4	0.2	0.3	48.1	0.5	0.5	44.1	3.8	0.5
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 BackOf(50%), veh/hln	1.5	19.8	10.3	3.4	5.0	4.0	7.1	4.6	2.3	6.8	7.8	2.3
LnGrp Delay(d), s/veh	49.5	43.8	20.5	56.3	19.6	19.4	91.9	34.3	32.7	87.8	39.9	32.6
LnGrp LOS	D	D	C	E	B	B	F	C	C	F	D	C
Approach Vol, veh/h	1909			978			840			1031		
Approach Delay, s/veh	38.1			27.8			58.3			55.4		
Approach LOS	D			C			E			E		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	26.9	12.0	43.7	15.0	26.9	8.8	46.8				
Change Period (Y+Rc), s	5.0	6.0	4.0	* 6	5.0	6.0	4.0	6.0				
Max Green Setting (Gmax), s	10.0	24.0	8.0	* 38	10.0	24.0	7.0	38.0				
Max Q Clear Time (g.c+H), s	11.8	11.4	8.1	36.9	12.0	17.2	5.0	12.3				
Green Ext Time (p.c), s	0.0	5.6	0.0	0.7	0.0	3.7	0.1	19.9				
Intersection Summary												
HCM 2010 Ctrl Delay	43.3											
HCM 2010 LOS	D											
Notes												

Avila Ranch
5: Higuera & Prado

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	84.8	84.3	85.4	85.4
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. Perm. R. Flow in Walk (v/h)	5	5	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq.ft)	7270.2	7270.2	7270.2	7270.2
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq.ft)	4102.3	4099.0	4081.9	4081.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	39.6	39.6	39.6	39.6
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	3.01	2.99	3.06	2.98
Pedestrian Crosswalk LOS	C	C	C	C

Avila Ranch
5: Higuera & Prado

Avila Ranch
6: Higuera & Tank Farm

Cumulative Plus Project without BP AM
1/15/2016

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	1909	978	840	1031
Effct. Green for Bike (s)	38.0	38.2	20.9	20.9
Cross Street Width (ft)	85.4	85.4	84.3	84.8
Through Lanes Number	2	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bikes/h)	760	764	418	418
Bicycle Delay (s/bike)	19.2	19.1	31.3	31.3
Bicycle Compliance	Fair	Fair	Poor	Poor
Bicycle LOS Score	4.44	3.67	2.26	2.42
Bicycle LOS	E	D	B	B

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	43	32	170	167	258	11	526	956	484
v/c Ratio	0.23	0.10	0.46	0.45	0.47	0.11	0.66	0.90	1.19
Control Delay	43.5	0.6	40.1	39.9	8.1	52.7	39.0	18.2	142.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	43.5	0.6	40.1	39.9	8.1	52.7	39.0	18.2	142.8
Queue Length 50th (ft)	25	0	92	91	0	7	151	74	-367
Queue Length 95th (ft)	59	0	205	202	73	29	257	#518	#740
Internal Link Dist (ft)	407		1317				1064		1668
Turn Bay Length (ft)			250		140		100		165
Base Capacity (vph)	531	584	405	407	577	96	1047	1078	407
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.08	0.05	0.42	0.41	0.45	0.11	0.50	0.89	1.19
Intersection Summary									
-	Volume exceeds capacity, queue is theoretically infinite.								
-	Queue shown is maximum after two cycles.								
#	95th percentile volume exceeds capacity, queue may be longer.								
-	Queue shown is maximum after two cycles.								

Avila Ranch
6: Higuera & Tank Farm

Cumulative Plus Project without BP AM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	30	303	10	240	10	489	889	450	477	10
Future Volume (veh/h)	30	10	30	303	10	240	10	489	889	450	477	10
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	32	11	32	334	0	0	11	526	956	484	513	11
Adj No. of Lanes	0	1	1	2	0	1	2	1	2	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	69	24	81	439	0	196	24	1110	691	433	1928	41
Arrive On Green	0.05	0.05	0.05	0.12	0.00	0.00	0.01	0.31	0.31	0.24	0.54	0.54
Sat Flow, veh/h	1336	459	1575	3548	0	1583	1774	3539	1579	1774	3543	76
Grp Volume(V), veh/h	43	0	32	334	0	0	11	526	956	484	256	268
Grp Sat Flow(s), veh/hln	1796	0	1575	1774	0	1583	1774	1770	1579	1774	1770	1849
Q_Serve(g.s), s	2.0	0.0	1.7	7.8	0.0	0.0	0.5	10.3	27.0	21.0	6.6	6.7
Cycle Q Clear(g.c), s	2.0	0.0	1.7	7.8	0.0	0.0	0.5	10.3	27.0	21.0	6.6	6.7
Prop In Lane	0.74	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	93	0	81	439	0	196	24	1110	691	433	963	1006
V/C Ratio(X)	0.46	0.00	0.39	0.76	0.00	0.00	0.46	0.47	1.38	1.12	0.27	0.27
Avail Cap(c.a), veh/h	563	0	494	907	0	405	103	1110	691	433	963	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	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	0.0	39.5	36.5	0.0	0.0	42.2	23.8	21.2	32.5	10.5	10.5
Incr Delay (d2), s/veh	1.3	0.0	1.1	1.0	0.0	0.0	5.1	0.7	181.5	79.6	0.3	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 BackOf(50%), veh/ln	1.0	0.0	0.8	3.9	0.0	0.0	0.3	5.1	51.2	19.8	3.3	3.4
LnGrp Delay(d), s/veh	41.0	0.0	40.7	37.5	0.0	0.0	47.3	24.5	202.7	112.2	10.8	10.8
LnGrp LOS	D	D	D	D	D	D	D	C	F	F	B	B
Approach Vol, veh/h	75			334				1493			1008	
Approach Delay, s/veh	40.9			37.5				138.8			59.5	
Approach LOS	D			D				F			E	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	26.0	33.0		10.4	6.2	52.8		16.7				
Change Period (Y+Rc), s	5.0	6.0		6.0	5.0	6.0		6.0				
Max Green Setting (Gmax), s	21.0	27.0		27.0	5.0	43.0		22.0				
Max Q Clear Time (g.c+H), s	23.0	29.0		4.0	2.5	8.7		9.8				
Green Ext Time (g.c), s	0.0	0.0		0.2	0.0	27.9		0.7				
Intersection Summary												
HCM 2010 Ctrl Delay	97.2											
HCM 2010 LOS	F											
Notes												

Avila Ranch
6: Higuera & Tank Farm

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	46.8	49.3	74.7	62.6
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	150	50	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2259.4	2284.3	2457.1	2389.3
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (S/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.96	3.12	2.85
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	75	595	1493	1008
Effct. Green for Bike (s)	9.7	20.9	21.4	46.8
Cross Street Width (ft)	74.7	62.6	49.3	46.8
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	162	348	357	780
Bicycle Delay (s/bike)	50.7	40.9	40.5	22.3
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.83	2.21	2.26	1.82
Bicycle LOS	C	B	B	A

Avila Ranch
7: Horizon Lane & Tank Farm

Cumulative Plus Project without BP AM
1/15/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑			↔	↔	↔
Traffic Volume (veh/h)	1209	80	26	683	70	48
Future Volume (Veh/h)	1209	80	26	683	70	48
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1314	87	28	742	76	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2					
Upstream signal (ft)						
px. platoon unblocked						
vc. conflicting volume		1401		1784	700	
vc1. stage 1 conf vol				1358		
vc2. stage 2 conf vol				427		
vcu. unblocked vol		1401		1784	700	
ic. single (s)		4.1		6.8	6.9	
ic. 2 stage (s)		2.2		5.8	5.8	
p0 queue free %		94		61	86	
IF (s)		2.2		3.5	3.3	
dM capacity (veh/h)		484		193	381	
Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	876	525	275	495	128	128
Volume Left	0	0	28	0	76	0
Volume Right	0	87	0	0	52	0
cSH	1700	1700	484	1700	241	241
Volume to Capacity	0.52	0.31	0.06	0.29	0.53	0.53
Queue Length 95th (ft)	0	0	5	0	71	0
Control Delay (s)	0.0	0.0	2.1	0.0	35.7	0.0
Lane LOS			A		E	
Approach Delay (s)	0.0		0.8		35.7	
Approach LOS			E		E	
Intersection Summary						
Average Delay	2.2					
Intersection Capacity Utilization	51.3%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
7: Horizon Lane & Tank Farm
Cumulative Plus Project without BP AM
2/1/2016

Approach	EB
Approach Direction	No
Median Present?	338068
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	70
Lanes Crossed	4
Veh Vol Crossed	1892
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	23.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	338070.00
Avg Ped Delay (s)	338068.00
Approach	WB
Approach Direction	No
Median Present?	338068
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	70
Lanes Crossed	4
Veh Vol Crossed	1892
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	23.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	338070.00
Avg Ped Delay (s)	338068.00

Avila Ranch
8: Higuera & Suburban
Cumulative Plus Project without BP AM
1/15/2016



Lane Group	WBL	NBT	SBL	SBT
Lane Group Flow (vph)	262	1816	136	799
v/c Ratio	0.54	0.86	0.83	0.30
Control Delay	24.3	20.2	79.4	4.5
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	24.3	20.2	79.4	4.5
Queue Length 50th (ft)	40	348	72	51
Queue Length 95th (ft)	74	#763	#207	141
Internal Link Dist (ft)	1164	234		1054
Turn Bay Length (ft)			200	
Base Capacity (vph)	979	2108	163	2660
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.27	0.86	0.83	0.30
Intersection Summary				
#	95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.			

Avila Ranch
8: Higuera & Suburban

Cumulative Plus Project without BP AM
1/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑↑
Traffic Volume (vph)	142	99	1289	382	125	735
Future Volume (vph)	142	99	1289	382	125	735
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	4.0	6.0	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.95	1.00	0.95
Frbp_psd/bikes	0.99	1.00	1.00	1.00	1.00	1.00
Fllb_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.94	0.97	1.00	1.00	1.00	1.00
Fll Protected	0.97	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3252	3401	1770	3539	1770	3539
Fll Permitted	0.97	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3252	3401	1770	3539	1770	3539
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	154	108	1401	415	136	799
RTOR Reduction (vph)	95	0	23	0	0	0
Lane Group Flow (vph)	167	0	1793	0	136	799
Confl. Peds. (#/hr)	6	1	1	1	1	1
Turn Type	Prot	NA	Prot	NA	Prot	NA
Permitted Phases	8	2	1	6		
Actuated Green, G (s)	10.5	53.4	8.0	65.4		
Effective Green, g (s)	10.5	53.4	8.0	65.4		
Actuated g/C Ratio	0.12	0.61	0.09	0.75		
Clearance Time (s)	5.0	6.0	4.0	6.0		
Vehicle Extension (s)	2.0	5.5	3.0	5.5		
Lane Grp Cap (vph)	392	2089	162	2663		
v/s Ratio Prot	c0.05	c0.53	c0.08	0.23		
v/s Ratio Perm						
v/c Ratio	0.43	0.86	0.84	0.30		
Uniform Delay, d1	35.4	13.7	38.8	3.4		
Progression Factor	1.00	1.00	1.00	1.00		
Incremental Delay, d2	0.3	4.2	29.9	0.2		
Delay (s)	35.7	17.9	68.7	3.6		
Level of Service	D	B	E	A		
Approach Delay (s)	35.7	17.9	13.1			
Approach LOS	D	B	B			
Intersection Summary						
HCM 2000 Control Delay		17.9	HCM 2000 Level of Service	B		
HCM 2000 Volume to Capacity ratio		0.79				
Actuated Cycle Length (s)		86.9	Sum of lost time (s)	15.0		
Intersection Capacity Utilization		77.0%	ICU Level of Service	D		
Analysis Period (min)		15				
c Critical Lane Group						

Avila Ranch
8: Higuera & Suburban

Cumulative Plus Project without BP AM
1/15/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	45.9	59.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated	Actuated	Actuated
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	10	40	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq.ft)	7268.8	7269.1	7269.1
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	2700.3	3195.7	2847.4
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (S/p)	42.3	41.4	42.3
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.18	3.21	3.02
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Cumulative Plus Project without BP AM
1/15/2016

	WB	NB	SB
Approach	0	0	0
Bicycle Flow Rate (bike/h)	262	1816	935
Total Flow Rate (veh/h)	10.5	53.3	65.3
Effct. Green for Bike (s)	60.1	45.9	59.3
Cross Street Width (ft)	2	2	2
Through Lanes Number	12.0	12.0	12.0
Through Lane Width (ft)	0.0	5.0	5.0
Bicycle Lane Width (ft)	6.0	0.0	0.0
Paved Shoulder Width (ft)	Yes	Yes	Yes
Curb Is Present?	No	No	No
On Street Parking?	210	1066	1306
Bicycle Lane Capacity (bike/h)	40.1	10.9	6.0
Bicycle Delay (s/bike)	Poor	Fair	Good
Bicycle Compliance	1.73	2.69	2.17
Bicycle LOS	A	B	B

Avila Ranch
9: Higuera & Vachell

Cumulative Plus Project without BP AM
1/15/2016

	WBL	WBR	NBT	NBR	SBL	SBT
Movement						
Lane Configurations						
Traffic Volume (veh/h)	0	214	1457	164	0	877
Future Volume (Veh/h)	0	214	1457	164	0	877
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Hourly flow rate (vph)	0	228	1550	174	0	933
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			504			314
pX platoon unblocked	0.93					
vC, conflicting volume	2104	862			1724	
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	2038	862			1724	
IC, single (s)	6.8	6.9			4.1	
IC, 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	100	24			100	
qM capacity (veh/h)	46	298			363	
Direction_Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	228	1033	691	466	466	
Volume Left	0	0	0	0	0	
Volume Right	228	0	174	0	0	
cSH	298	1700	1700	1700	1700	
Volume to Capacity	0.76	0.61	0.41	0.27	0.27	
Queue Length 95th (ft)	146	0	0	0	0	
Control Delay (s)	47.5	0.0	0.0	0.0	0.0	
Lane LOS	E					
Approach Delay (s)	47.5	0.0		0.0		
Approach LOS	E					
Intersection Summary						
Average Delay	3.8					
Intersection Capacity Utilization	65.4%					
Analysis Period (min)	15					
ICU Level of Service	C					

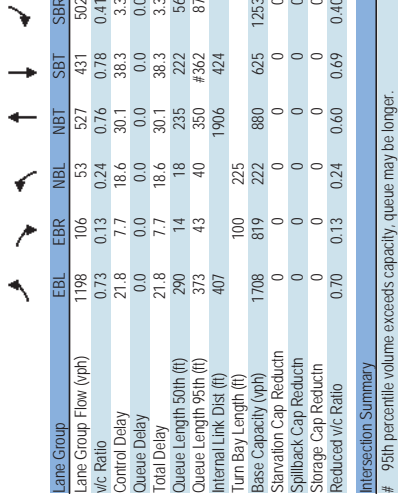
Avila Ranch
9: Higuera & Vachell

Cumulative Plus Project without BP AM
2/1/2016

Approach	NB
Approach Direction	No
Median Present?	345112
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	56
Lanes Crossed	4
Veh Vol Crossed	2334
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	19.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	345113.00
Avg Ped Delay (s)	345112.00
Approach	SB
Approach Direction	No
Median Present?	345112
Approach Delay(s)	F
Level of Service	
Crosswalk	
Length (ft)	56
Lanes Crossed	4
Veh Vol Crossed	2334
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	19.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	345113.00
Avg Ped Delay (s)	345112.00

Avila Ranch
10: Higuera & LOVR

Cumulative Plus Project without BP AM
1/15/2016



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	1198	106	53	527	431	502
v/c Ratio	0.73	0.13	0.24	0.76	0.78	0.41
Control Delay	21.8	7.7	18.6	30.1	38.3	3.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.8	7.7	18.6	30.1	38.3	3.3
Queue Length 50th (ft)	290	14	18	235	222	56
Queue Length 95th (ft)	373	43	40	350	#362	87
Internal Link Dist (ft)	407			1906	424	
Turn Bay Length (ft)		100	225			
Base Capacity (vph)	1708	819	222	880	625	1253
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.13	0.24	0.60	0.69	0.40
Intersection Summary						
# 95th percentile volume exceeds capacity, queue may be longer.						
Queue shown is maximum after two cycles.						

Avila Ranch
10: Higuera & LOVR

Cumulative Plus Project without BP AM
1/15/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	1126	100	50	495	405	472
Future Volume (veh/h)	1126	100	50	495	405	472
Number	7	14	5	2	6	16
Initial Q (Cb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1198	106	53	527	431	502
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1519	699	215	771	557	1171
Arrive On Green	0.44	0.44	0.04	0.41	0.30	0.30
Sat Flow, veh/h	3442	1583	1774	1863	1863	1578
Grp Volume(V), veh/h	1198	106	53	527	431	502
Grp Sat Flow(S), veh/h	1721	1583	1774	1863	1863	1578
Q_Serve(g_s), s	24.7	3.3	1.6	19.2	17.5	10.0
Cycle Q Clear(g_c), s	24.7	3.3	1.6	19.2	17.5	10.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1519	699	215	771	557	1171
V/C Ratio(X)	0.79	0.15	0.25	0.68	0.77	0.43
Avail Cap(c_a), veh/h	1660	764	246	853	606	1212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	13.9	19.7	19.9	26.5	4.1
Incr Delay (d2), s/veh	3.3	0.3	0.2	2.2	6.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	12.3	3.8	0.8	10.3	9.9	11.5
LnGrp Delay(d), s/veh	23.2	14.1	19.9	22.0	32.5	4.4
LnGrp LOS	C	B	B	C	C	A
Approach Vol, veh/h	1304			580	933	
Approach Delay, s/veh	22.4			21.8	17.4	
Approach LOS	C			C	B	
Timer	1	2	3	4	5	6
Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	40.3			42.6	9.5	30.8
Change Period (Y+Rc), s	6.0			6.0	6.0	6.0
Max Green Setting (Gmax), s	38.0			40.0	5.0	27.0
Max Q Clear Time (g_c+H), s	21.2			26.7	3.6	19.5
Green Ext Time (g_e), s	9.5			9.9	0.0	5.2
Intersection Summary						
HCM 2010 Ctrl Delay						20.6
HCM 2010 LOS						C

Avila Ranch
10: Higuera & LOVR

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	73.1	36.1	58.7
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	5	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq.ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	0
Ped. R. Sidewalk Flow Rate (p/h)	2	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq.ft)	14557.5	24281.2	18210.9
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq.ft)	0.1	0.3	0.2
Crosswalk Circulation Code	F	F	F
Pedestrian Delay (S/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.73	2.49	2.79
Pedestrian Crosswalk LOS	B	B	C

Avila Ranch
10: Higuera & LOVR

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	NB	SB
Bicycle Flow Rate (b/ke/h)	8	8	8
Total Flow Rate (veh/h)	1304	580	933
Effct. Green for Bike (s)	39.2	30.5	24.5
Cross Street Width (ft)	36.1	58.7	73.1
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (b/ke/h)	871	678	544
Bicycle Delay (s/bike)	14.4	19.7	23.9
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	2.12	2.34	3.15
Bicycle LOS	B	B	C

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	187	85	123	54	543	118	168	359	22
v/c Ratio	0.04	0.48	0.42	0.32	0.25	0.56	0.13	0.49	0.31	0.02
Control Delay	21.2	25.1	29.0	19.3	30.6	16.8	2.4	28.9	9.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	21.2	25.1	29.0	19.3	30.6	16.8	2.4	28.9	9.2	0.1
Queue Length 50th (ft)	3	53	25	26	17	147	0	50	71	0
Queue Length 95th (ft)	16	122	71	75	55	288	20	125	142	0
Internal Link Dist (ft)		2022		1650		1242		1906		
Turn Bay Length (ft)	150		150		150		150	150		150
Base Capacity (vph)	421	616	331	612	221	1148	1029	443	1303	1131
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.30	0.26	0.20	0.24	0.47	0.11	0.38	0.28	0.02
Intersection Summary										

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	1	1	1	1	1	1	1	1	1	1	1	1
Traffic Volume (veh/h)	10	152	20	78	78	35	50	500	109	155	330	20
Future Volume (veh/h)	10	152	20	78	78	35	50	500	109	155	330	20
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	165	22	85	85	38	54	543	118	168	359	22
Adj No. of Lanes	1	1	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	358	358	48	310	272	121	76	750	638	219	901	766
Cap. veh/h	0.22	0.22	0.22	0.22	0.22	0.22	0.04	0.40	0.40	0.12	0.48	0.48
Arrive On Green	1263	1610	215	1192	1221	546	1774	1863	1583	1774	1863	1583
Sat Flow, veh/h	11	0	187	85	0	123	54	543	118	168	359	22
Grp Volume(V), veh/h	1263	0	1825	1192	0	1766	1774	1863	1583	1774	1863	1583
Grp Sat Flow(s), veh/hln	0.4	0.0	4.2	3.2	0.0	2.8	1.4	11.7	2.3	4.4	5.9	0.3
Q_Serve(g_s), s	3.1	0.0	4.2	7.4	0.0	2.8	1.4	11.7	2.3	4.4	5.9	0.3
Cycle Q Clear(g_c), s	1.00	1.00	0.12	1.00	0.0	0.31	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	358	0	406	310	0	393	76	750	638	219	901	766
Lane Grp Cap(c), veh/h	0.03	0.00	0.46	0.27	0.00	0.31	0.71	0.72	0.18	0.77	0.40	0.03
V/C Ratio(X)	500	0	611	444	0	591	223	1169	993	445	1402	1192
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	16.8	0.0	16.1	19.3	0.0	15.5	22.6	12.0	9.2	20.3	7.9	6.5
Uniform Delay (d), s/veh	0.0	0.0	0.8	0.5	0.0	0.5	11.6	1.3	0.1	5.5	0.3	0.0
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	0.1	0.0	2.2	1.1	0.0	1.4	0.9	6.2	1.0	2.5	3.1	0.2
%ile BackOf(50%) veh/h	16.9	0.0	16.9	19.8	0.0	16.0	34.1	13.4	9.3	25.8	8.2	6.5
LnGrp Delay(d), s/veh	198	0.0	198	208	0.0	175	715	14.3	14.3	13.5	13.5	13.5
LnGrp LOS	B	B	B	B	B	B	C	B	A	C	A	A
Approach Vol, veh/h	198	0.0	198	208	0.0	175	715	14.3	14.3	13.5	13.5	13.5
Approach Delay, s/veh	16.9	0.0	16.9	17.5	0.0	17.5	14.3	14.3	14.3	13.5	13.5	13.5
Approach LOS	B	B	B	B	B	B	B	B	B	B	B	B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	9.9	23.3	14.6	6.0	27.1	14.6	14.6	14.6				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	12.0	30.0	16.0	6.0	36.0	16.0	16.0	16.0				
Max Q Clear Time (g_c+H), s	6.4	13.7	6.2	3.4	7.9	6.4	9.4	9.4				
Green Ext Time (p_c), s	0.2	5.5	1.6	0.0	6.7	1.3	1.3	1.3				
Intersection Summary												
HCM 2010 Ctrl Delay	14.7											
HCM 2010 LOS	B											

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	37.1	40.5	51.2	54.9
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (S/p)	35.0	35.0	35.0	35.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.06	2.15	2.56	2.55
Pedestrian Crosswalk LOS	B	B	B	B

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	198	208	715	549
Effct. Green for Bike (s)	11.2	10.8	27.7	33.4
Gross Street Width (ft)	51.2	54.9	40.5	37.1
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	320	309	791	954
Bicycle Delay (s/bike)	24.7	25.0	12.8	9.6
Bicycle Compliance	Fair	Fair	Fair	Good
Bicycle LOS Score	2.67	2.74	3.36	3.03
Bicycle LOS	B	B	C	C

Avila Ranch
12: Buckley & Vachell

Cumulative Plus Project without BP AM
1/15/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		4	1		1	1
Traffic Volume (veh/h)	113	303	118	214	130	72
Future Volume (Veh/h)	113	303	118	214	130	72
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	123	329	128	233	141	78
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked				820	244	
vC, conflicting volume	361					
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	361			820	244	
iC, single (s)	4.1			6.4	6.2	
iC, 2 stage (s)						
p0 queue free %	2.2			3.5	3.3	
IF (s)	90			54	90	
pM capacity (veh/h)	1198			309	794	
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	452	361	219			
Volume Left	123	0	141			
Volume Right	0	233	78			
cSH	1198	1700	395			
Volume to Capacity	0.10	0.21	0.55			
Queue Length 95th (ft)	9	0	81			
Control Delay (s)	3.0	0.0	24.8			
Lane LOS	A		C			
Approach Delay (s)	3.0	0.0	24.8			
Approach LOS	C		C			
Intersection Summary						
Average Delay			6.6			
Intersection Capacity Utilization			63.1%		ICU Level of Service	B
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Cumulative Plus Project without BP AM
2/1/2016

Approach	EB
Approach Direction	Yes
Median Present?	4
Approach Delay(s)	A
Level of Service	
Crosswalk	
Length (ft)	16
Lanes Crossed	1
Veh Vol Crossed	303
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	7.57
Prob of Delayed X-ing	0.47
Prob of Blocked Lane	0.47
Delay for add Gap	6.40
Avg Ped Delay (s)	3.02
Approach	WB
Approach Direction	Yes
Median Present?	4
Approach Delay(s)	A
Level of Service	
Crosswalk	
Length (ft)	16
Lanes Crossed	1
Veh Vol Crossed	118
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	7.57
Prob of Delayed X-ing	0.22
Prob of Blocked Lane	0.22
Delay for add Gap	4.65
Avg Ped Delay (s)	1.02

Avila Ranch
13: Buckley & Project Entry

Cumulative Plus Project without BP AM
1/15/2016



Movement	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (veh/h)	7	326	302	10	31
Future Volume (Veh/h)	7	326	302	10	31
Sign Control	Free	Free	Free	Stop	Stop
Grade	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	8	354	328	11	34
Pedestrians					
Lane Width (ft)					
Walking Speed (ft/s)					
Percent Blockage					
Right turn flare (veh)					
Median type	None	None	None		
Median storage (veh)					
Upstream signal (ft)					
px platoon unblocked					
VC, conflicting volume	339			704	334
VC1, stage 1 conf vol					
VC2, stage 2 conf vol					
VCu, unblocked vol	339			704	334
IC, single (s)	4.1			6.4	6.2
IC, 2 stage (s)					
IF (s)	2.2			3.5	3.3
p0 queue free %	99			92	95
dm capacity (veh/h)	1220			401	708
Direction, Lane #	EB 1	WB 1	SB 1		
Volume Total	362	339	68		
Volume Left	8	0	34		
Volume Right	0	11	34		
cSH	1220	1700	512		
Volume to Capacity	0.01	0.20	0.13		
Queue Length 95th (ft)	0	0	11		
Control Delay (s)	0.2	0.0	13.1		
Lane LOS	A	B	B		
Approach Delay (s)	0.2	0.0	13.1		
Approach LOS	B	B	B		
Intersection Summary					
Average Delay		1.3			
Intersection Capacity Utilization		33.1%			
Analysis Period (min)		15			
ICU Level of Service					A

Avila Ranch
13: Buckley & Project Entry

Cumulative Plus Project without BP AM
2/1/2016

Approach	EB
Approach Direction	No
Median Present?	29.8
Approach Delay(s)	D
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	628
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.88
Prob of Blocked Lane	0.65
Delay for add Gap	33.87
Avg Ped Delay (s)	29.80
Approach	WB
Approach Direction	No
Median Present?	29.8
Approach Delay(s)	D
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	628
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.88
Prob of Blocked Lane	0.65
Delay for add Gap	33.87
Avg Ped Delay (s)	29.80

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	95	190	15	386	1527	5	815	164
w/c Ratio	0.41	0.23	0.15	0.62	0.57	0.05	0.66	0.25
Control Delay	40.1	3.8	39.1	30.0	7.0	44.2	23.8	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	3.8	39.1	30.0	7.0	44.2	23.8	4.3
Queue Length 50th (ft)	40	5	4	139	115	2	165	0
Queue Length 95th (ft)	110	43	28	#417	413	16	280	39
Internal Link Dist (ft)	9507		310		439		1035	
Turn Bay Length (ft)	150			360		470		470
Base Capacity (vph)	397	846	100	650	3237	97	2683	1211
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced w/c Ratio	0.24	0.22	0.15	0.59	0.47	0.05	0.30	0.14
Intersection Summary								
#	95th percentile volume exceeds capacity, queue may be longer.							
	Queue shown is maximum after two cycles.							

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	83	5	175	5	5	5	355	1400	5	5	750	151
Traffic Volume (veh/h)	83	5	175	5	5	5	355	1400	5	5	750	151
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.98	1.00	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.98	0.98
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Sat Flow, veh/hln	90	5	190	5	5	5	386	1522	5	5	815	164
Adj Flow Rate, veh/h	0	1	1	0	1	0	1	2	0	1	2	1
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	195	11	567	8	8	8	422	2430	8	9	1577	690
Cap. veh/h	0.12	0.12	0.12	0.01	0.01	0.01	0.25	0.70	0.70	0.01	0.45	0.45
Arrive On Green	1668	93	1543	561	561	561	1712	3491	11	1739	3468	1518
Sat Flow, veh/h	95	0	190	15	0	0	386	1522	5	5	815	164
Grp Volume(V), veh/h	1761	0	1543	1683	0	0	1712	1708	1795	1739	1734	1518
Grp Sat Flow(S), veh/hln	4.8	0.0	8.5	0.8	0.0	0.0	20.9	22.4	22.4	0.3	16.0	6.3
Q_Serve(g_s), s	4.8	0.0	8.5	0.8	0.0	0.0	20.9	22.4	22.4	0.3	16.0	6.3
Cycle Q Clear(g_c), s	0.95	1.00	1.00	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	206	0	567	23	0	0	422	1189	1250	9	1577	690
Lane Grp Cap(c), veh/h	0.46	0.00	0.33	0.65	0.00	0.00	0.91	0.63	0.63	0.55	0.52	0.24
V/C Ratio(X)	296	0	646	71	0	0	485	1434	1507	73	2075	908
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	39.3	0.0	22.0	46.8	0.0	0.0	34.9	7.8	7.8	47.3	18.5	15.9
Uniform Delay (d), s/veh	1.6	0.0	0.3	26.5	0.0	0.0	20.2	0.6	0.6	43.6	0.3	0.2
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	2.4	0.0	3.7	0.6	0.0	0.0	12.2	10.5	11.1	0.2	7.6	2.7
%ile BackOf(50%), veh/h	40.9	0.0	22.3	73.2	0.0	0.0	55.1	8.4	8.4	90.9	18.8	16.1
LnGrp Delay(d), s/veh	D	C	E	E	E	E	A	A	A	F	B	B
LnGrp LOS	285	15	1913	8	8	8	1913	8	8	1913	8	8
Approach Vol, veh/h	285	15	1913	8	8	8	1913	8	8	1913	8	8
Approach Delay, s/veh	28.5	73.2	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8	17.8
Approach LOS	C	E	E	E	E	E	B	B	B	B	B	B
Timer	1	2	3	4	5	6	7	8	8	8	8	8
Assigned Phs	1	2	3	4	5	6	7	8	8	8	8	8
Phs Duration (G+Y+Rc), s	4.5	70.3	15.2	27.5	47.3	5.3	5.3	5.3	5.3	5.3	5.3	5.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	4.0	80.0	16.0	27.0	57.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Q Clear Time (g_c+H), s	2.3	24.4	10.5	22.9	18.0	2.8	2.8	2.8	2.8	2.8	2.8	2.8
Green Ext Time (g_e), s	0.0	31.2	0.6	0.6	25.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary												
HCM 2010 Ctrl Delay	19.3											
HCM 2010 LOS	B											

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.3	24.0	61.1	72.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	5	6
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated	None	Actuated	Actuated
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	9.0	0.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	20	0	0	10
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4885.4	0.0	5355.6	5501.2
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (S/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.26	1.75	3.17	3.12
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bikes/h)	0	0	0	0
Total Flow Rate (veh/h)	285	15	1913	984
Effct. Green for Bike (s)	10.0	4.3	58.9	26.9
Cross Street Width (ft)	61.1	72.1	24.0	39.3
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bikes/h)	167	72	982	448
Bicycle Delay (s/bike)	50.4	55.8	15.6	36.1
Bicycle Compliance	Poor	Poor	Fair	Poor
Bicycle LOS Score	2.96	2.69	3.51	2.97
Bicycle LOS	C	B	D	C

Avila Ranch
15: Earthwood & Suburban

Cumulative Plus Project without BP AM
1/15/2016



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	12	23	2	49	77	6
Future Volume (Veh/h)	12	23	2	49	77	6
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	13	25	2	53	84	7
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None	None	None	None	None	None
Median storage (veh)						
Upstream signal (ft)	1244					
px platoon unblocked					82	26
vc conflicting volume						
vc1 stage 1 conf vol						
vc2 stage 2 conf vol						
vcu unblocked vol					82	26
ic single (s)					6.4	6.2
ic 2 stage (s)						
po queue free %					3.5	3.3
if (s)					100	91
dm capacity (veh/h)					1572	918
dm capacity (veh/h)					1572	918
Direction Lane #	EB 1	WB 1	NB 1			
Volume Total	38	55	91			
Volume Left	0	2	84			
Volume Right	25	0	7			
csh	1700	1572	927			
Volume to Capacity	0.02	0.00	0.10			
Queue Length 95th (ft)	0	0	8			
Control Delay (s)	0.0	0.3	9.3			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	0.3	9.3			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay			4.7			
Intersection Capacity Utilization			15.5%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
15: Earthwood & Suburban

Avila Ranch
16: Suburban & Horizon Lane

Cumulative Plus Project without BP AM
2/1/2016

Cumulative Plus Project without BP AM
1/15/2016

Approach	EB
Approach Direction	No
Median Present?	2.2
Approach Delay(s)	A
Level of Service	
Crosswalk	
Length (ft)	44
Lanes Crossed	2
Veh Vol Crossed	61
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	15.57
Prob of Delayed X-ing	0.23
Prob of Blocked Lane	0.12
Delay for add Gap	9.69
Avg Ped Delay (s)	2.25
Approach	
Approach Direction	WB
Median Present?	No
Approach Delay(s)	1.3
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	61
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.19
Prob of Blocked Lane	0.10
Delay for add Gap	7.20
Avg Ped Delay (s)	1.34

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	6	19	71	12	4	2
Future Volume (vph)	6	19	71	12	4	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	7	21	77	13	4	2
Direction_Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	28	90	6			
Volume Left (vph)	7	77	0			
Volume Right (vph)	21	0	2			
HadJ (s)	-0.37	0.21	-0.17			
Departure Headway (s)	3.7	4.2	3.9			
Degree Utilization, x	0.03	0.10	0.01			
Capacity (veh/h)	932	847	913			
Control Delay (s)	6.9	7.7	6.9			
Approach Delay (s)	6.9	7.7	6.9			
Approach LOS	A	A	A			
Intersection Summary						
Delay			7.4			
Level of Service			A			
Intersection Capacity Utilization			21.2%			
Analysis Period (min)			15			
ICU Level of Service			A			

Avila Ranch
17: Vachell & Venture Dr
Cumulative Plus Project without BP AM
1/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		T			T
Traffic Volume (veh/h)	34	12	21	11	15	9
Future Volume (Veh/h)	34	12	21	11	15	9
Sign Control	Stop		Free		Free	Free
Grade	0%		0%		0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	37	13	23	12	16	10
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	71	29			35	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
IC, single (s)	71	29			35	
IC, 2 stage (s)	6.4	6.2			4.1	
p0 queue free %	3.5	3.3			2.2	
ICM capacity (veh/h)	96	99			99	
	924	1046			1576	
Direction_Lane #	WB 1	NB 1	SB 1			
Volume Total	50	35	26			
Volume Left	37	0	16			
Volume Right	13	12	0			
cSH	953	1700	1576			
Volume to Capacity	0.05	0.02	0.01			
Queue Length 95th (ft)	4	0	1			
Control Delay (s)	9.0	0.0	4.5			
Lane LOS	A	A	A			
Approach Delay (s)	9.0	0.0	4.5			
Approach LOS	A					
Intersection Summary						
Average Delay			5.1			
Intersection Capacity Utilization			18.0%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
17: Vachell & Venture Dr
Cumulative Plus Project without BP AM
2/1/2016

Approach	NB
Approach Direction	NB
Median Present?	No
Approach Delay(s)	0.6
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	30
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.10
Prob of Blocked Lane	0.05
Delay for add. Gap	6.60
Avg Ped Delay (s)	0.64
Approach	SB
Approach Direction	SB
Median Present?	No
Approach Delay(s)	0.6
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	30
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.10
Prob of Blocked Lane	0.05
Delay for add. Gap	6.60
Avg Ped Delay (s)	0.64

Avila Ranch
18: Vachell & Project Entry

Cumulative Plus Project without BP AM
1/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					R
Traffic Volume (veh/h)	25	9	323	4	5	178
Future Volume (Veh/h)	25	9	323	4	5	178
Sign Control	Slopp		Free		Free	Free
Grade	0%		0%		0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	27	10	351	4	5	193
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	556	353			355	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
IC, single (s)	556	353			355	
IC, 2 stage (s)	6.4	6.2			4.1	
p0 queue free %	3.5	3.3			2.2	
CM capacity (veh/h)	94	99			100	
	490	691			1204	
Direction_Lane #	WB 1	NB 1	SB 1			
Volume Total	37	355	198			
Volume Left	27	0	5			
Volume Right	10	4	0			
cSH	532	1700	1204			
Volume to Capacity	0.07	0.21	0.00			
Queue Length 95th (ft)	6	0	0			
Control Delay (s)	12.3	0.0	0.2			
Lane LOS	B		A			
Approach Delay (s)	12.3	0.0	0.2			
Approach LOS	B		A			
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			27.2%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
18: Vachell & Project Entry

Cumulative Plus Project without BP AM
2/1/2016

Approach	NB
Approach Direction	NB
Median Present?	No
Approach Delay(s)	19.6
Level of Service	C
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	501
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.82
Prob of Blocked Lane	0.57
Delay for add Gap	24.05
Avg Ped Delay (s)	19.61
Approach	SB
Approach Direction	SB
Median Present?	No
Approach Delay(s)	19.6
Level of Service	C
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	501
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.82
Prob of Blocked Lane	0.57
Delay for add Gap	24.05
Avg Ped Delay (s)	19.61

Avila Ranch
1: LOVR & 101 NB

Cumulative Plus Project without BP PM
1/15/2016

	NBT	SBT
Lane Group	1913	1669
Lane Group Flow (vph)	0.54	0.90
v/c Ratio	0.6	8.7
Control Delay	0.0	0.0
Queue Delay	0.6	8.7
Total Delay	0.6	8.7
Queue Length 50th (ft)	0	0
Queue Length 95th (ft)	0	#81
Internal Link Dist (ft)	925	236
Turn Bay Length (ft)		
Base Capacity (vph)	3539	1863
Starvation Cap Reductn	0	0
Spillback Cap Reductn	0	0
Storage Cap Reductn	0	0
Reduced v/c Ratio	0.54	0.90

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	EBL	EBR	NBL	NBT	SBT	SBR
Movement						
Lane Configurations						
Traffic Volume (veh/h)	0	0	0	1894	1652	0
Future Volume (veh/h)	0	0	0	1894	1652	0
Number			1	6	2	12
Initial Q (Ob.) veh			0	0	0	0
Ped-Bike Adj(A_pbT)			1.00			1.00
Parking Bus, Adj			1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln			1863	1863	1863	1863
Adj Flow Rate, veh/h			0	1913	1669	0
Adj No. of Lanes			1	2	1	1
Peak Hour Factor			0.99	0.99	0.99	0.99
Percent Heavy Veh, %			2	2	2	2
Cap. veh/h			116	3254	1713	1456
Arrive On Green			0.00	0.92	0.92	0.00
Sat Flow, veh/h			296	3632	1863	1583
Grp Volume(v), veh/h			0	1913	1669	0
Grp Sat Flow(s), veh/h/ln			296	1770	1863	1583
Q_Serve(g_s), s			0.0	5.9	43.1	0.0
Cycle Q Clear(g_c), s			0.0	5.9	43.1	0.0
Prop In Lane			1.00			1.00
Lane Grp Cap(c), veh/h			116	3254	1713	1456
V/C Ratio(X)			0.00	0.59	0.97	0.00
Avail Cap(c_a), veh/h			116	3254	1713	1456
HCM Platoon Ratio			1.00	1.00	1.00	1.00
Upstream Filter(i)			0.00	0.74	0.74	0.00
Uniform Delay (d), s/veh			0.0	0.4	1.9	0.0
Incr Delay (d2), s/veh			0.0	0.6	13.6	0.0
Initial Q Delay(Q3), s/veh			0.0	0.0	0.0	0.0
%ile BackOfQ(50%), veh/ln			0.0	2.7	24.5	0.0
LnGrp Delay(d), s/veh			0.0	1.0	15.5	0.0
LnGrp LOS				A	B	
Approach Vol, veh/h				1913	1669	
Approach Delay, s/veh				1.0	15.5	
Approach LOS				A	B	
Timer	1	2	3	4	5	6
Assigned Phs		2				6
Phs Duration (G+Y+Rc), s		62.0				62.0
Change Period (Y+Rc), s		5.0				5.0
Max Green Setting (Gmax), s		57.0				57.0
Max Q Clear Time (g_c+H), s		45.1				7.9
Green Ext Time (g_e), s		11.9				48.2
Intersection Summary						
HCM 2010 Ctrl Delay					7.8	
HCM 2010 LOS					A	

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
1: LOVR & 101 NB

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	12.7	60.0	60.0
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	1	5	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None Actuated	
Corresponding Signal Phase	2	0	8
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	30	35	35
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-
Pedestrian Delay (s/p)	31.0	31.0	31.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.42	3.11	3.14
Pedestrian Crosswalk LOS	A	C	C

Avila Ranch
1: LOVR & 101 NB

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	0	1913	1669
Effct. Green for Bike (s)	0.0	62.0	62.0
Cross Street Width (ft)	60.0	60.0	12.7
Through Lanes Number	0	2	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Curb Is Present?	No	No	No
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	0	2000	2000
Bicycle Delay (s/bike)	0.0	0.0	0.0
Bicycle Compliance			
Bicycle LOS Score	0.00	4.06	4.51
Bicycle LOS	D	E	E

Avila Ranch
2: LOVR & 101 NB
17/15/2016

Avila Ranch
2: LOVR & 101 NB
17/15/2016

	EBL	EBR	NBT	NBR	SBT	SBR
Lane Group	464	116	1489	228	1332	371
Lane Group Flow (vph)	0.70	0.32	0.60	0.20	0.54	0.30
v/c Ratio	39.6	15.2	8.7	2.1	7.9	1.3
Control Delay	0.0	0.0	0.6	0.0	0.0	0.0
Queue Delay	39.6	15.2	9.3	2.1	7.9	1.3
Total Delay	128	21	194	9	162	0
Queue Length 50th (ft)	169	63	299	35	250	27
Queue Length 95th (ft)						
Internal Link Dist (ft)			471		925	
Turn Bay Length (ft)		50		100		180
Base Capacity (vph)	820	433	2482	1160	2482	1221
Station Cap Reductn	0	0	549	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.57	0.27	0.77	0.20	0.54	0.30
Intersection Summary						

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Configurations	450	0	113	0	0	0	0	1444	221	0	1292
Traffic Volume (veh/h)	450	0	113	0	0	0	0	1444	221	0	1292
Future Volume (veh/h)	3	8	18	0	0	0	1	6	16	5	2
Number	Initial Q (Ob.) veh	0	0	0	0	0	0	0	0	0	0
Initial Q (Ob.) veh	Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	Adj Sat Flow, veh/h/m	1863	0	1863	0	1863	1863	1863	1863	0	1863
Adj Sat Flow, veh/h/m	Adj Flow Rate, veh/h	464	0	116	0	1489	0	1489	0	0	1332
Adj Flow Rate, veh/h	Adj No. of Lanes	2	0	1	0	2	0	2	1	0	2
Adj No. of Lanes	Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Peak Hour Factor	Percent Heavy Veh, %	2	0	2	0	2	0	2	0	2	2
Percent Heavy Veh, %	Cap. veh/h	589	0	271	0	2560	1145	2560	1145	0	2560
Cap. veh/h	Arrive On Green	0.17	0.00	0.17	0.00	0.17	0.00	0.17	0.00	0.17	0.00
Arrive On Green	Sat Flow, veh/h	3442	0	1583	0	3632	1583	3632	1583	0	3632
Sat Flow, veh/h	Grp Volume(v), veh/h	464	0	116	0	1489	0	1489	0	0	1332
Grp Volume(v), veh/h	Grp Sat Flow(s), veh/h/m	1721	0	1583	0	1770	1583	1770	1583	0	1770
Grp Sat Flow(s), veh/h/m	Q_Serv(g_s), s	11.6	0.0	5.9	0.0	18.1	0.0	18.1	0.0	15.0	0.0
Q_Serv(g_s), s	Cycle Q Clear(g_c), s	11.6	0.0	5.9	0.0	18.1	0.0	18.1	0.0	15.0	0.0
Cycle Q Clear(g_c), s	Prop In Lane	1.00	1.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00	1.00
Prop In Lane	Lane Grp Cap(c), veh/h	589	0	271	0	2560	1145	2560	1145	0	2560
Lane Grp Cap(c), veh/h	V/C Ratio(X)	0.79	0.00	0.43	0.00	0.58	0.00	0.58	0.00	0.52	0.00
V/C Ratio(X)	Avail Cap(c_a), veh/h	822	0	378	0	2560	1145	2560	1145	0	2560
Avail Cap(c_a), veh/h	HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	Upstream Filter(i)	1.00	0.00	1.00	0.00	0.44	0.00	0.44	0.00	0.00	0.32
Upstream Filter(i)	Uniform Delay (d), s/veh	35.7	0.0	33.4	0.0	5.9	0.0	5.9	0.0	0.0	5.5
Uniform Delay (d), s/veh	Incr Delay (d2), s/veh	3.5	0.0	1.1	0.0	0.4	0.0	0.4	0.0	0.0	0.2
Incr Delay (d2), s/veh	Initial Q Delay(Q3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Q Delay(Q3), s/veh	%ile BackQ(50%), veh/m	5.8	0.0	2.7	0.0	8.8	0.0	8.8	0.0	0.0	7.3
%ile BackQ(50%), veh/m	LnGrp Delay(d), s/veh	39.2	0.0	34.4	0.0	6.4	0.0	6.4	0.0	0.0	5.8
LnGrp Delay(d), s/veh	LnGrp LOS	D	C	C	A	A	A	A	A	A	A
LnGrp LOS	Approach Vol, veh/h	580			1489		1332				
Approach Vol, veh/h	Approach Delay, s/veh	38.2			6.4		5.8				
Approach Delay, s/veh	Approach LOS	D			A		A				
Approach LOS	Timer	1	2	3	4	5	6	7	8		
Timer	Assigned Phs	2			6		8				
Assigned Phs	Phs Duration (G+Y+Rc), s	71.1			71.1		18.9				
Phs Duration (G+Y+Rc), s	Change Period (Y+Rc), s	6.0			6.0		3.5				
Change Period (Y+Rc), s	Max Green Setting (Gmax), s	59.0			59.0		21.5				
Max Green Setting (Gmax), s	Max Q Clear Time (g_c+H), s	17.0			20.1		13.6				
Max Q Clear Time (g_c+H), s	Green Ext Time (g_c), s	34.0			32.0		1.8				
Green Ext Time (g_c), s	Intersection Summary										
Intersection Summary	HCM 2010 Ctrl Delay						11.6				
HCM 2010 Ctrl Delay	HCM 2010 LOS						B				
HCM 2010 LOS											

Avila Ranch
2: LOVR & 101 NB

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	48.3	33.5	60.7	63.2
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	1	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	2	6	0	0
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	35	30
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	45.0	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.37	1.66	3.04	3.03
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
2: LOVR & 101 NB

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	580	0	1717	1703
Effct. Green for Bike (s)	0.0	0.0	63.1	63.1
Cross Street Width (ft)	60.7	63.2	33.5	48.3
Through Lanes Number	0	0	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	0	0	1402	1402
Bicycle Delay (s/bike)	0.0	0.0	4.0	4.0
Bicycle Compliance	Good	Good	Good	Good
Bicycle LOS Score	0.00	0.00	3.49	3.70
Bicycle LOS			C	D

Avila Ranch
3: Higuera & South

Cumulative Plus Project without BP PM
1/15/2016

Lane Group	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	32	32	739	119	22	957	596	86	687
v/c Ratio	0.36	0.18	0.79	0.23	0.21	0.56	0.68	0.59	0.36
Control Delay	54.2	2.2	36.0	9.3	46.2	19.5	15.2	58.9	13.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.5	0.7	0.0	0.0
Total Delay	54.2	2.2	36.0	9.3	46.2	20.1	15.9	58.9	13.8
Queue Length 50th (ft)	19	0	202	9	13	225	153	50	111
Queue Length 95th (ft)	#50	0	268	50	37	292	293	#117	186
Internal Link Dist (ft)	208			629		338			507
Turn Bay Length (ft)		50	130		60		60	100	
Base Capacity (vph)	88	178	1082	574	107	1695	881	150	1899
Station Cap Reductn	0	0	0	0	0	341	83	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.18	0.68	0.21	0.21	0.71	0.75	0.57	0.36

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
3: Higuera & South

Cumulative Plus Project without BP PM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	15	15	30	687	20	90	20	890	554	80	618	20
Traffic Volume (veh/h)	15	15	30	687	20	90	20	890	554	80	618	20
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q. (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.96	1.00	1.00	0.99	1.00	1.00	0.99	1.00	1.00	0.99	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1900	1863	1863	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	16	16	32	739	22	97	22	957	596	86	665	22
Adj No. of Lanes	0	1	1	2	1	2	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	33	33	55	893	78	342	34	1611	714	110	1741	58
Arrive On Green	0.04	0.04	0.04	0.26	0.26	0.26	0.02	0.46	0.46	0.06	0.50	0.50
Sat Flow, veh/h	909	909	1512	3442	299	1318	1774	3539	1570	1774	3495	116
Grp Volume(v), veh/h	32	0	32	739	0	119	22	957	596	86	337	350
Grp Sat Flow(s), veh/hln	1817	0	1512	1721	0	1617	1774	1770	1570	1774	1770	1841
Q.Serv(s), s	1.5	0.0	1.8	17.4	0.0	5.0	1.1	17.3	28.6	4.1	10.1	10.1
Cycle Q Clear(g.c.), s	1.5	0.0	1.8	17.4	0.0	5.0	1.1	17.3	28.6	4.1	10.1	10.1
Prop In Lane	0.50	1.00	1.00	1.00	0.82	1.00	1.00	1.00	1.00	1.00	1.00	0.06
Lane Grp Cap(c), veh/h	66	0	55	893	0	420	34	1611	714	110	882	917
V/C Ratio(X)	0.48	0.00	0.58	0.83	0.00	0.28	0.65	0.59	0.83	0.78	0.38	0.38
Avail Cap(c,a), veh/h	85	0	71	1044	0	491	104	1611	714	145	882	917
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	40.5	0.0	40.6	29.9	0.0	25.4	41.8	17.4	20.5	39.6	13.3	13.3
Incr Delay (d2), s/veh	5.3	0.0	9.3	4.9	0.0	0.4	19.2	1.6	11.0	17.8	1.3	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 BackQ(50%) veh/ln	0.8	0.0	0.9	8.8	0.0	2.3	0.7	8.7	14.4	2.6	5.2	5.5
LnGrp Delay(d), s/veh	45.8	0.0	49.9	34.8	0.0	25.7	61.0	19.1	31.6	57.4	14.6	14.5
LnGrp LOS	D	D	D	C	C	C	E	B	C	E	B	B
Approach Vol, veh/h	64			858		1575					773	
Approach Delay, s/veh	47.9			33.6		24.4					19.3	
Approach LOS	D			C		C					B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	9.3	43.0		7.1	5.6	46.7		26.2				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	7.0	39.0		4.0	5.0	41.0		26.0				
Max Q Clear Time (g_c+H), s	6.1	30.6		3.8	3.1	12.1		19.4				
Green Ext Time (g_c), s	0.0	7.1		0.0	0.0	18.9		2.6				
Intersection Summary												
HCM 2010 Ctrl Delay								26.1				
HCM 2010 LOS								C				

Avila Ranch
3: Higuera & South

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	56.5	60.2	85.2	71.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	5	6	5
Number of Right-Turn Islands	0	0	0	0
Type of Control	None Actuated Actuated Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	5	5	5
Ped. Right-Left Flow Rate (p/h)	0	5	5	5
Ped. R. Sidewalk Flow Rate (p/h)	0	5	5	5
Veh. Perm. L. Flow in Walk (v/h)	0	5	5	5
Veh. Perm. R. Flow in Walk (v/h)	10	10	10	10
85th percentile speed (mph)	30	30	30	30
Right Corner Area per Ped (sq ft)	7266.6 2896.8 2897.1 4844.0			
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	0.0	1211.1	1448.5	1251.0
Crosswalk Circulation Code	-	A	A	A
Pedestrian Delay (s/p)	46.0	38.3	37.4	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.01	2.63	2.97	2.68
Pedestrian Crosswalk LOS	B	B	C	B

Avila Ranch
3: Higuera & South

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	64	858	1575	773
Effct. Green for Bike (s)	4.1	22.9	40.3	45.4
Cross Street Width (ft)	85.2	71.8	60.2	56.5
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	89	498	876	987
Bicycle Delay (s/bike)	42.0	26.0	14.5	11.8
Bicycle Compliance	Poor	Fair	Fair	Fair
Bicycle LOS Score	2.97	3.00	2.71	1.99
Bicycle LOS	C	C	B	A

Avila Ranch
4: Higuera & Madonna

17/15/2016

Cumulative Plus Project without BP PM

17/15/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	318	322	344	11	108	312	956	623	806
Lane Group Flow (vph)	0.68	0.69	0.37	0.05	0.47	0.86	0.56	0.83	0.58
v/c Ratio	35.8	36.0	2.1	33.4	40.6	59.1	18.4	42.4	14.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	35.8	36.0	2.1	33.4	40.6	59.1	18.4	42.4	14.7
Total Delay	157	160	0	5	53	169	196	171	143
Queue Length 50th (ft)	268	271	22	20	103	#347	281	#278	221
Queue Length 95th (ft)	964			1295		1563		338	
Internal Link Dist (ft)						160			
Turn Bay Length (ft)			110						
Base Capacity (vph)	538	541	933	362	379	362	1765	815	1500
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.60	0.37	0.03	0.28	0.86	0.54	0.76	0.54

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Movement	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Configurations	580	15	320	10	90	10	290	884	5
Traffic Volume (veh/h)	580	15	320	10	90	10	290	884	5
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12
Number	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	1.00	1.00	0.98	1.00	1.00	0.99	1.00	0.99
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Sat Flow, veh/h	635	0	0	11	97	11	312	951	5
Adj Flow Rate, veh/h	2	0	1	1	1	1	2	0	2
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Peak Hour Factor	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	829	0	688	151	140	16	356	1862	10
Cap, veh/h	0.23	0.00	0.00	0.09	0.09	0.09	0.20	0.52	0.52
Arrive On Green	3548	0	1583	1774	1639	186	1774	3610	19
Sat Flow, veh/h	635	0	0	11	0	108	312	466	490
Grp Volume(v), veh/h	1774	0	1583	1774	0	1825	1774	1770	1859
Grp Sat Flow(s), veh/h	12.1	0.0	0.0	0.4	0.0	4.2	12.4	12.6	12.6
Q Serve(g_s), s	12.1	0.0	0.0	0.4	0.0	4.2	12.4	12.6	12.6
Cycle Q Clear(g_c), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop In Lane	829	0	688	151	0	155	356	913	959
Lane Grp Cap(c), veh/h	0.777	0.00	0.00	0.07	0.00	0.70	0.88	0.51	0.51
V/C Ratio(X)	1223	0	863	391	0	403	391	951	1000
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	25.9	0.0	0.0	30.5	0.0	32.3	28.1	11.5	11.5
Upstream Filter(i)	1.7	0.0	0.0	0.2	0.0	5.5	18.4	0.4	0.4
Uniform Delay (d), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Incr Delay (d2), s/veh	6.1	0.0	0.0	0.2	0.0	2.3	7.9	6.2	6.5
Initial Q Delay(Q3), s/veh	21.7	0.0	0.0	30.7	0.0	37.8	46.5	12.0	12.0
%ile BackOfQ(50%) veh/m	635	0	0	119	0	1268	0	1429	0
LnGrp Delay(d), s/veh	27.7	0.0	0.0	37.1	0.0	37.1	20.5	19.8	0
LnGrp LOS	C	C	C	D	D	D	B	C	C
Approach Vol, veh/h	635	0	0	119	0	1268	0	1429	0
Approach Delay, s/veh	27.7	0.0	0.0	37.1	0.0	37.1	20.5	19.8	0
Approach LOS	C	C	C	D	D	D	B	C	B
Timer	1	2	3	4	5	6	7	8	
Assigned Phs	2	4	5	6	7	8			
Phs Duration (G+Y+Rc), s	41.4	20.9	18.6	22.9	10.2				
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0				
Max Green Setting (Gmax), s	39.0	25.0	16.0	19.0	16.0				
Max Q Clear Time (g_c+H), s	14.6	14.1	14.4	17.2	6.2				
Green Ext Time (g_e), s	16.6	2.3	0.2	1.7	0.4				
Intersection Summary									
HCM 2010 Ctrl Delay	22.1								
HCM 2010 LOS	C								
Notes									

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch
4: Higuera & Madonna

17/15/2016

Cumulative Plus Project without BP PM

17/15/2016

	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBR
Lane Group	318	322	344	11	108	312	956	623	806
Lane Group Flow (vph)	0.68	0.69	0.37	0.05	0.47	0.86	0.56	0.83	0.58
v/c Ratio	35.8	36.0	2.1	33.4	40.6	59.1	18.4	42.4	14.7
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	35.8	36.0	2.1	33.4	40.6	59.1	18.4	42.4	14.7
Total Delay	157	160	0	5	53	169	196	171	143
Queue Length 50th (ft)	268	271	22	20	103	#347	281	#278	221
Queue Length 95th (ft)	964			1295		1563		338	
Internal Link Dist (ft)						160			
Turn Bay Length (ft)			110						
Base Capacity (vph)	538	541	933	362	379	362	1765	815	1500
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.60	0.37	0.03	0.28	0.86	0.54	0.76	0.54

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Central Coast Transportation Consulting

Synchro 9 Report
Queues

Avila Ranch
4: Higuera & Madonna

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	67.0	36.1	69.7	59.8
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	4	3	5	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	0.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2	2
Ped. Right-Left Flow Rate (p/h)	2	0	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	40	30	45	30
Right Corner Area per Ped (sq ft)	7270.8	18201.0	12134.0	7270.8
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	3092.2	0.0	3172.1	3092.4
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	38.3	46.0	38.3	38.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.93	2.00	2.96	2.87
Pedestrian Crosswalk LOS	C	A	C	C

Avila Ranch
4: Higuera & Madonna

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	984	119	1268	1429
Effct. Green for Bike (s)	22.3	10.0	38.8	18.1
Cross Street Width (ft)	69.7	59.8	36.1	67.0
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	6.0	6.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	485	217	843	393
Bicycle Delay (s/bike)	26.4	36.5	15.4	29.7
Bicycle Compliance	Fair	Poor	Fair	Fair
Bicycle LOS Score	2.96	1.38	1.87	2.48
Bicycle LOS	C	A	A	B

Avila Ranch
5: Higuera & Prado

Cumulative Plus Project without BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Group	108	538	399	326	1054	376	577	632	45	301	551	↔
Lane Group Flow (vph)	0.81	0.52	0.51	0.65	0.77	0.46	0.96	0.70	0.09	0.78	0.81	↔
v/c Ratio	91.6	33.4	14.7	48.8	31.9	5.5	71.5	40.5	0.3	60.5	51.1	↔
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	↔
Queue Delay	91.6	33.4	14.7	48.8	31.9	5.5	71.5	40.5	0.3	60.5	51.1	↔
Total Delay	39	161	119	113	323	16	-224	213	0	108	195	↔
Queue Length 50th (ft)	#93	226	215	154	403	78	#335	278	0	#175	259	↔
Queue Length 95th (ft)	363			386			1342				828	↔
Internal Link Dist (ft)	250		250	150		200	220		200	175		↔
Turn Bay Length (ft)	134	1073	783	704	1556	885	603	968	537	402	760	↔
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0	0	↔
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	↔
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	↔
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	↔
Reduced v/c Ratio	0.81	0.50	0.51	0.46	0.68	0.42	0.96	0.65	0.08	0.75	0.72	↔
Intersection Summary												
-	Volume exceeds capacity, queue is theoretically infinite.											
-	Queue shown is maximum after two cycles.											
#	95th percentile volume exceeds capacity, queue may be longer.											
-	Queue shown is maximum after two cycles.											

Avila Ranch
5: Higuera & Prado

Cumulative Plus Project without BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Movement	100	500	371	303	980	350	537	588	42	280	512	↔
Lane Configurations	100	500	371	303	980	350	537	588	42	280	512	↔
Traffic Volume (veh/h)	100	500	371	303	980	350	537	588	42	280	512	↔
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	↔
Number	7	4	14	3	8	18	5	2	12	1	6	↔
Initial Q (Cb), veh	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔
Ped-Bike Adj(A_pb1)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔
Parking Bus, Adj	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	↔
Adj Sat Flow, veh/hln	108	538	399	326	1054	376	577	632	45	301	551	↔
Adj Flow Rate, veh/h	2	2	2	2	2	2	2	2	2	2	2	↔
Adj No. of Lanes	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	↔
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	↔
Percent Heavy Veh, %	133	1076	751	417	1369	607	599	939	416	366	700	↔
Cap. veh/h	0.04	0.30	0.30	0.12	0.39	0.39	0.17	0.27	0.27	0.11	0.20	↔
Arrive On Green	3442	3539	1565	3442	3539	1569	3442	3539	1567	3442	3539	↔
Sat Flow, veh/h	108	538	399	326	1054	376	577	632	45	301	551	↔
Grp Volume(v), veh/h	1721	1770	1565	1721	1770	1569	1721	1770	1567	1721	1770	↔
Grp Sat Flow(s), veh/hln	3.2	12.9	18.5	9.5	26.9	20.0	17.2	16.5	2.2	8.9	15.3	↔
Q Serve(g.s), s	3.2	12.9	18.5	9.5	26.9	20.0	17.2	16.5	2.2	8.9	15.3	↔
Cycle Q Clear(g.c.), s	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔
Prop In Lane	133	1076	751	417	1369	607	599	939	416	366	700	↔
Lane Grp Cap(c), veh/h	0.81	0.50	0.53	0.78	0.77	0.62	0.96	0.67	0.11	0.82	0.79	↔
V/C Ratio(x)	133	1076	751	698	1539	682	599	958	424	399	752	↔
Avail Cap(c.a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	↔
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	↔
Upstream Filter(i)	49.4	29.6	18.9	44.1	27.7	25.6	42.4	34.0	28.8	45.3	39.4	↔
Uniform Delay (d), s/veh	30.3	0.4	0.7	3.2	2.2	1.4	27.9	1.8	0.1	12.1	5.2	↔
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	↔
Initial Q Delay(d3), s/veh	2.1	6.3	8.1	4.7	13.6	8.9	10.5	8.3	1.0	4.8	8.0	↔
%ile BackOfQ(50%) veh/ln	79.7	29.9	19.6	47.4	29.9	27.0	70.3	35.8	28.9	57.4	44.7	↔
LnGrp Delay(d), s/veh	E	C	B	D	C	C	E	D	C	E	D	↔
LnGrp LOS	1045				1756		1254			917		↔
Approach Vol, veh/h	31.1				32.5		51.4			48.2		↔
Approach Delay, s/veh	C				C		D			D		↔
Approach LOS	1	2	3	4	5	6	7	8				↔
Timer	1	2	3	4	5	6	7	8				↔
Assigned Phs	16.0	33.5	16.5	37.5	23.0	26.5	8.0	46.0				↔
Phs Duration (G+Y+Rc), s	5.0	6.0	4.0	* 6	5.0	6.0	4.0	6.0				↔
Change Period (Y+Rc), s	12.0	28.0	21.0	* 29	18.0	22.0	4.0	45.0				↔
Max Green Setting (Gmax), s	10.9	18.5	11.5	20.5	19.2	17.3	5.2	28.9				↔
Max Q Clear Time (g.c.-H), s	0.2	5.2	1.0	7.3	0.0	3.0	0.0	11.1				↔
Green Ext Time (g.-c), s	Intersection Summary											
HCM 2010 Crtl Delay	39.9											
HCM 2010 LOS	D											
Notes												

Avila Ranch
5: Higuera & Prado

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	84.8	84.3	85.4	85.4
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	7	7	7	7
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	11.0	11.0	11.0	11.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	5	5
Veh. Perm. R. Flow in Walk (v/h)	5	5	5	5
Veh. RTOR Flow in Walk (v/h)	5	5	5	5
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	7267.7	7267.7	7267.7	7267.7
Ped. Circulation Area (sq ft)	A	A	A	A
Crosswalk Circulation Code	3727.0	3723.9	3706.2	3706.2
Pedestrian Delay (s/p)	A	A	A	A
Pedestrian Compliance Code	44.5	44.5	44.5	44.5
Pedestrian Crosswalk Score	Poor	Poor	Poor	Poor
Pedestrian Crosswalk LOS	2.99	2.98	3.15	3.04

Avila Ranch
5: Higuera & Prado

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	1045	1756	1254	917
Effct. Green for Bike (s)	30.1	40.0	26.3	19.8
Cross Street Width (ft)	85.4	85.4	84.3	84.8
Through Lanes Number	2	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	6.0	6.0
Paved Shoulder Width (ft)	0.0	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes	Yes
On Street Parking?	No	Yes	No	No
Bicycle Lane Capacity (bike/h)	547	727	478	360
Bicycle Delay (s/bike)	29.0	22.3	31.8	37.0
Bicycle Compliance	Fair	Fair	Poor	Poor
Bicycle LOS Score	3.73	4.31	2.60	2.33
Bicycle LOS	D	E	B	B

Avila Ranch
6: Higuera & Tank Farm
Cumulative Plus Project without BP PM
1/15/2016

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group	20	21	351	358	438	31	605	433	292	908
Lane Group Flow (vph)	0.11	0.07	0.79	0.80	0.59	0.40	0.77	0.46	0.76	0.58
v/c Ratio	41.4	0.4	49.8	50.6	7.4	65.5	43.3	4.2	51.5	24.2
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	41.4	0.4	49.8	50.6	7.4	65.5	43.3	4.2	51.5	24.2
Total Delay	34	0	#508	#518	94	#70	#331	58	#385	398
Queue Length 50th (ft)	369	0	253	228	1256	1054	1054	58	385	1668
Queue Length 95th (ft)	543	588	447	449	742	78	941	941	431	1639
Internal Link Dist (ft)	0	0	0	0	0	0	0	0	0	0
Turn Bay Length (ft)	0	0	0	0	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0.04	0.04	0.79	0.80	0.59	0.40	0.64	0.46	0.68	0.55
Reduced v/c Ratio	Intersection Summary									
#	95th percentile volume exceeds capacity, queue may be longer.									
	Queue shown is maximum after two cycles.									

Avila Ranch
6: Higuera & Tank Farm
Cumulative Plus Project without BP PM
1/15/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Movement												
Lane Configurations	10	10	20	660	20	420	30	581	416	280	842	30
Traffic Volume (veh/h)	10	10	20	660	20	420	30	581	416	280	842	30
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Sat Flow, veh/hln	10	10	21	703	0	0	31	605	433	292	877	31
Adj Flow Rate, veh/h	0	1	1	2	0	1	2	1	2	1	2	0
Adj No. of Lanes	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	30	30	52	832	0	371	43	953	796	337	1517	54
Cap. veh/h	0.03	0.03	0.03	0.23	0.00	0.00	0.02	0.27	0.27	0.19	0.44	0.44
Arrive On Green	909	909	1573	3548	0	1583	1774	3539	1578	1774	3487	123
Sat Flow, veh/h	20	0	21	703	0	0	31	605	433	292	445	463
Grp Volume(v), veh/h	1817	0	1573	1774	0	1583	1774	1770	1578	1774	1770	1840
Grp Sat Flow(s), veh/hln	0.9	0.0	1.1	15.9	0.0	0.0	1.5	12.7	15.8	13.4	16.0	16.0
Q_Serv(g_s), s	0.9	0.0	1.1	15.9	0.0	0.0	1.5	12.7	15.8	13.4	16.0	16.0
Cycle Q Clear(g_c), s	0.50	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.07
Prop In Lane	60	0	52	832	0	371	43	953	796	337	1517	801
Lane Grp Cap(c), veh/h	0.34	0.00	0.41	0.84	0.00	0.00	0.71	0.63	0.54	0.87	0.58	0.58
V/C Ratio(X)	583	0	505	1012	0	451	84	1009	821	464	883	918
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(0)	39.8	0.0	39.9	30.8	0.0	0.0	40.8	27.1	14.3	33.0	17.9	17.9
Uniform Delay (d), s/veh	3.3	0.0	5.1	5.7	0.0	0.0	19.3	1.2	0.7	12.0	0.7	0.7
Incr Delay (d2), 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
Initial Q Delay(Q3), s/veh	0.5	0.0	0.6	8.5	0.0	0.0	0.9	6.3	10.1	7.7	7.9	8.3
%ile BackQ(50%), veh/ln	43.1	0.0	45.0	36.4	0.0	0.0	60.1	28.3	15.0	45.1	18.7	18.6
LnGrp Delay(d), s/veh	D	D	D	D	D	D	E	C	B	D	B	B
LnGrp LOS	41	41	703	1069	36.4	23.8	25.1	25.1	25.1	25.1	25.1	25.1
Approach Vol, veh/h	44.1	D	D	D	D	D	C	C	C	C	C	C
Approach Delay, s/veh	1	2	3	4	5	6	7	8	8	8	8	8
Approach LOS	1	2	3	4	5	6	7	8	8	8	8	8
Timer	1	2	3	4	5	6	7	8	8	8	8	8
Assigned Phs	1	2	3	4	5	6	7	8	8	8	8	8
Phs Duration (G+Y+Rc), s	21.0	28.7	8.8	7.1	42.6	25.7	6.0	6.0	6.0	6.0	6.0	6.0
Change Period (Y+Rc), s	5.0	6.0	6.0	5.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	22.0	24.0	27.0	4.0	42.0	24.0	3.1	3.5	18.0	17.9	17.9	17.9
Max Q Clear Time (g_c+H), s	15.4	17.8	3.1	3.5	18.0	17.9	0.6	4.8	0.1	0.0	13.0	1.8
Green Ext Time (g_e), s	0.6	4.8	0.1	0.0	13.0	1.8	0.6	4.8	0.1	0.0	13.0	1.8
Green Ext Time (g_e), s	0.6	4.8	0.1	0.0	13.0	1.8	0.6	4.8	0.1	0.0	13.0	1.8
Intersection Summary	27.5											
HCM 2010 Ctrl Delay	C											
HCM 2010 LOS	C											
Notes												

Avila Ranch
6: Higuera & Tank Farm

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	46.9	49.5	74.4	63.0
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	6	5
Number of Right-Turn Islands	0	1	0	0
Type of Control	Actuated/Actuated/Actuated/Actuated			
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	8.0	8.0	8.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	100	70	0
85th percentile speed (mph)	25	45	45	45
Right Corner Area per Ped (sq ft)	7263.9	7263.9	7263.9	7263.9
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	2260.4	2286.2	2455.7	2391.9
Crosswalk Circulation Code	A	A	A	A
Pedestrian Delay (s/p)	52.3	52.3	52.3	52.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	1.99	2.85	3.22	2.97
Pedestrian Crosswalk LOS	A	C	C	C

Avila Ranch
6: Higuera & Tank Farm

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	41	114.7	106.9	1200
Effct. Green for Bike (s)	9.6	24.9	20.8	41.4
Cross Street Width (ft)	74.4	63.0	49.5	46.9
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	160	415	347	690
Bicycle Delay (s/bike)	50.8	37.7	41.0	25.7
Bicycle Compliance	Poor	Poor	Poor	Fair
Bicycle LOS Score	2.77	4.42	3.20	3.27
Bicycle LOS	C	E	C	C

Avila Ranch
7: Horizon Ln & Tank Farm
Cumulative Plus Project without BP PM
1/15/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔	↔	↔	↔	↔	↔
Traffic Volume (veh/h)	716	70	71	1110	70	63
Future Volume (Veh/h)	716	70	71	1110	70	63
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	778	76	77	1207	76	68
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2			2		
Upstream signal (ft)						
pX platoon unblocked						
vC, conflicting volume		854		1574		427
vC1, stage 1 conf vol				816		
vC2, stage 2 conf vol				758		
vCU, unblocked vol		854		1574		427
IC, single (s)		4.1		6.8		6.9
IC, 2 stage (s)		2.2		3.5		3.3
p0 queue free %		90		73		88
CM capacity (veh/h)		781		282		576
Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	519	335	479	805	144	144
Volume Left	0	0	77	0	76	0
Volume Right	0	76	0	0	68	0
cSH	1700	1700	781	1700	372	372
Volumes to Capacity	0.31	0.20	0.10	0.47	0.39	0.39
Queue Length 95th (ft)	0	0	8	0	45	0
Control Delay (s)	0.0	0.0	2.7	0.0	20.7	0.0
Lane LOS	A	A	A	C	C	C
Approach Delay (s)	0.0	1.0	1.0	20.7	0.0	0.0
Approach LOS	C	C	C	C	C	C
Intersection Summary						
Average Delay	1.9					
Intersection Capacity Utilization	72.5%					
Analysis Period (min)	15					
ICU Level of Service	C					

Avila Ranch
7: Horizon Ln & Tank Farm
Cumulative Plus Project without BP PM
2/11/2016

Approach	EB
Approach Direction	EB
Median Present?	No
Approach Delay(s)	229764
Level of Service	F
Crosswalk	
Length (ft)	70
Lanes Crossed	4
Veh Vol Crossed	1826
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	23.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	229766.00
Avg Ped Delay (s)	229764.00
Approach	WB
Approach Direction	WB
Median Present?	No
Approach Delay(s)	229764
Level of Service	F
Crosswalk	
Length (ft)	70
Lanes Crossed	4
Veh Vol Crossed	1826
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	23.00
Prob of Delayed X-ing	1.00
Prob of Blocked Lane	0.95
Delay for add Gap	229766.00
Avg Ped Delay (s)	229764.00

Avila Ranch
8: Higuera & Suburban

Cumulative Plus Project without BP PM
1/15/2016

	WBL	NBT	SBL	SBT
Lane Group	811	1022	227	1249
Lane Group Flow (vph)	0.77	0.87	0.77	0.63
v/c Ratio	23.3	31.6	49.1	12.9
Control Delay	0.0	0.0	0.0	0.0
Queue Delay	23.3	31.6	49.1	12.9
Total Delay	130	211	98	185
Queue Length 50th (ft)	192	#346	#215	272
Queue Length 95th (ft)	1245	306		1054
Internal Link Dist (ft)			200	
Turn Bay Length (ft)	1257	1221	309	2057
Base Capacity (vph)	0	0	0	0
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.65	0.84	0.73	0.61

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
8: Higuera & Suburban

Cumulative Plus Project without BP PM
1/15/2016

	WBL	WBR	NBT	NBR	SBL	SBT
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	486	284	744	227	216	1187
Future Volume (vph)	486	284	744	227	216	1187
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	4.0	4.0	6.0	6.0
Lane Util. Factor	0.97	0.95	1.00	0.95	1.00	0.95
Fpb. ped/bikes	0.99	0.99	1.00	1.00	1.00	1.00
Fpb. ped/bikes	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.94	0.96	1.00	1.00	1.00	1.00
Flt Protected	0.97	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3275	3398	1770	3539		
Flt Permitted	0.97	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3275	3398	1770	3539		
Peak-Hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	512	299	783	239	227	1249
RTOR Reduction (vph)	127	0	37	0	0	0
Lane Group Flow (vph)	684	0	985	0	227	1249
Confl. Peds. (#/hr)	6		1	1	1	
Turn Type	Prot	NA	NA	Prot	NA	NA
Protected Phases	8		2	1	6	
Permitted Phases						
Actuated Green, G (s)	19.6		23.3	11.5	38.8	
Effective Green, g (s)	19.6		23.3	11.5	38.8	
Actuated g/C Ratio	0.28		0.34	0.17	0.56	
Clearance Time (s)	5.0		6.0	4.0	6.0	
Vehicle Extension (s)	3.0		3.0	3.0	3.0	
Lane Grp Cap (vph)	924		1140	293	1978	
v/s Ratio Prot	c0.21		c0.29	c0.13	0.35	
v/s Ratio Perm						
v/c Ratio	0.74		0.86	0.77	0.63	
Uniform Delay, d1	22.6		21.6	27.7	10.4	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	3.2		7.0	12.0	0.7	
Delay (s)	25.8		28.5	39.8	11.1	
Level of Service	C		C	D	B	
Approach Delay (s)	25.8		28.5		15.5	
Approach LOS	C		C		B	

Intersection Summary	
HCM 2000 Control Delay	22.1
HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.80
Actuated Cycle Length (s)	69.4
Sum of lost time (s)	15.0
Intersection Capacity Utilization	75.4%
ICU Level of Service	D
Analysis Period (min)	15
c Critical Lane Group	

Avila Ranch
8: Higuera & Suburban

Cumulative Plus Project without BP PM
1/15/2016

Approach	WB	NB	SB
Crosswalk Length (ft)	44.9	59.3	60.1
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	3	4	5
Number of Right-Turn Islands	0	0	0
Type of Control	Actuated/Actuated/Actuated		
Corresponding Signal Phase	2	6	8
Effective Walk Time (s)	8.0	9.0	8.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	2	2
Ped. Right-Left Flow Rate (p/h)	2	2	2
Ped. R. Sidewalk Flow Rate (p/h)	2	2	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	30	30	0
85th percentile speed (mph)	25	45	45
Right Corner Area per Ped (sq ft)	7275.0	7275.3	7275.3
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	3583.7	4261.7	3797.2
Crosswalk Circulation Code	A	A	A
Pedestrian Delay (s/p)	29.9	29.0	29.9
Pedestrian Compliance Code	Fair	Fair	Fair
Pedestrian Crosswalk Score	2.32	3.18	3.04
Pedestrian Crosswalk LOS	B	C	C

Avila Ranch
8: Higuera & Suburban

Cumulative Plus Project without BP PM
1/15/2016

Approach	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	811	1022	1476
Effct. Green for Bike (s)	19.6	23.2	38.8
Cross Street Width (ft)	60.1	44.9	59.3
Through Lanes Number	2	2	2
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	5.0	5.0
Paved Shoulder Width (ft)	6.0	0.0	0.0
Curb Is Present?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	523	619	1035
Bicycle Delay (s/bike)	20.5	17.9	8.7
Bicycle Compliance	Fair	Fair	Good
Bicycle LOS Score	2.18	2.02	2.61
Bicycle LOS	B	B	B

Avila Ranch
9: Higuera & Vachell

Cumulative Plus Project without BP PM
1/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (veh/h)	0	153	817	252	0	1673
Future Volume (Veh/h)	0	153	817	252	0	1673
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	0	161	860	265	0	1761
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)			433			386
pX platoon unblocked	0.75					
VC, conflicting volume	1873	562			1125	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol	1500	562			1125	
IC, unblocked vol	6.8	6.9			4.1	
IC, single (s)						
IC, 2 stage (s)	3.5	3.3			2.2	
p0 queue free %	100	66			100	
CM capacity (veh/h)	85	470			617	
Direction Lane #	WB 1	NB 1	NB 2	SB 1	SB 2	
Volume Total	161	573	552	880	880	
Volume Left	0	0	0	0	0	
Volume Right	161	0	265	0	0	
cSH	470	1700	1700	1700	1700	
Volumes to Capacity	0.34	0.34	0.32	0.52	0.52	
Queue Length 95th (ft)	38	0	0	0	0	
Control Delay (s)	16.6	0.0	0.0	0.0	0.0	
Lane LOS	C					
Approach Delay (s)	16.6	0.0		0.0		
Approach LOS	C					
Intersection Summary						
Average Delay	0.9					
Intersection Capacity Utilization	49.6%					ICU Level of Service
Analysis Period (min)	15					A

Avila Ranch
9: Higuera & Vachell

Cumulative Plus Project without BP PM
2/11/2016

Approach	WBL	WBR	NBT	NBR	SBL	SBT
Approach Direction						NB
Median Present?						No
Approach Delay(s)						736961
Level of Service						F
Crosswalk						
Length (ft)						56
Lanes Crossed						4
Veh Vol Crossed						2490
Ped Vol Crossed						0
Yield Rate(%)						0
Ped Platooning						No
Critical Headway (s)						19.00
Prob of Delayed X-ing						1.00
Prob of Blocked Lane						0.96
Delay for add Gap						736962.00
Avg Ped Delay (s)						736961.00
Approach						
Approach Direction						SB
Median Present?						No
Approach Delay(s)						736961
Level of Service						F
Crosswalk						
Length (ft)						56
Lanes Crossed						4
Veh Vol Crossed						2490
Ped Vol Crossed						0
Yield Rate(%)						0
Ped Platooning						No
Critical Headway (s)						19.00
Prob of Delayed X-ing						1.00
Prob of Blocked Lane						0.96
Delay for add Gap						736962.00
Avg Ped Delay (s)						736961.00

Avila Ranch
10: Higuera & LOVR

Cumulative Plus Project without BP PM
1/15/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	916	31	104	199	580	1163
Lane Group Flow (vph)	0.62	0.04	0.64	0.25	0.92	0.96
v/c Ratio	22.2	8.6	34.8	16.3	50.5	27.4
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	22.2	8.6	34.8	16.3	50.5	27.4
Total Delay	275	20	#78	112	#511	#922
Queue Length 50th (ft)	210	3	33	67	310	307
Queue Length 95th (ft)	407			1929	353	
Internal Link Dist (ft)	1487	697	163	893	675	1212
Turn Bay Length (ft)	0	0	0	0	0	0
Base Capacity (vph)	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0.62	0.04	0.64	0.22	0.86	0.96
Reduced v/c Ratio	Intersection Summary					
#	95th percentile volume exceeds capacity, queue may be longer.					
	Queue shown is maximum after two cycles.					

Avila Ranch
10: Higuera & LOVR

Cumulative Plus Project without BP PM
1/15/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	879	30	100	191	557	1116
Future Volume (veh/h)	879	30	100	191	557	1116
Number	7	14	5	2	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	916	31	104	199	580	1162
Adj No. of Lanes	2	1	1	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1122	516	215	971	734	1139
Arrive On Green	0.33	0.33	0.05	0.52	0.39	0.39
Sat Flow, veh/h	3442	1583	1774	1863	1863	1579
Grp Volume(v), veh/h	916	31	104	199	580	1162
Grp Sat Flow(s), veh/h/ln	1721	1583	1774	1863	1863	1579
Q_Serve(g_s), s	19.2	1.1	2.6	4.5	21.5	31.0
Cycle Q Clear(g_c), s	19.2	1.1	2.6	4.5	21.5	31.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1122	516	215	971	734	1139
V/C Ratio(X)	0.82	0.06	0.48	0.20	0.79	1.02
Avail Cap(c_a), veh/h	1619	745	215	971	734	1139
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.3	18.2	17.1	10.1	21.0	7.4
Incr Delay (d2), s/veh	2.2	0.0	1.7	0.1	5.8	31.9
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%) veh/ln	9.4	1.1	1.3	2.3	12.1	34.5
LnGrp Delay(d), s/veh	26.6	18.3	18.8	10.2	26.8	39.3
LnGrp LOS	C	B	B	B	C	F
Approach Vol, veh/h	947			303	1742	
Approach Delay, s/veh	26.3			13.1	35.1	
Approach LOS	C			B	D	
Timer	1	2	3	4	5	6
Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	47.0	31.6	10.0	37.0		
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0		
Max Green Setting (Gmax), s	41.0	37.0	4.0	31.0		
Max Q Clear Time (g_c+H), s	6.5	21.2	4.6	33.0		
Green Ext Time (g_e), s	19.2	4.4	0.0	0.0		
Intersection Summary						
HCM 2010 Ctrl Delay	30.1					
HCM 2010 LOS	C					

Avila Ranch
10: Higuera & LOVR

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	NB	SB
Crosswalk Length (ft)	73.0	36.1	58.5
Crosswalk Width (ft)	12.0	12.0	12.0
Total Number of Lanes Crossed	5	3	4
Number of Right-Turn Islands	0	0	0
Type of Control	None	None	None
Corresponding Signal Phase	6	4	2
Effective Walk Time (s)	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	2	0	2
Ped. Right-Left Flow Rate (p/h)	2	0	2
Ped. R. Sidewalk Flow Rate (p/h)	2	0	2
Veh. Perm. L. Flow in Walk (v/h)	0	0	0
Veh. RTOR Flow in Walk (v/h)	0	0	0
85th percentile speed (mph)	35	45	30
Right Corner Area per Ped (sq ft)	12131.2	18196.9	7267.5
Right Corner Quality of Service	A	A	A
Ped. Circulation Area (sq ft)	0.0	0.0	0.1
Crosswalk Circulation Code	F	-	F
Pedestrian Delay (s/p)	45.0	45.0	45.0
Pedestrian Compliance Code	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.81	2.40	2.84
Pedestrian Crosswalk LOS	C	B	C

Central Coast Transportation Consulting
HCM 2010 Signals-Pedestrians

Synchro 9 Report
HCM 2010 Signals-Bicycles

Approach	EB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0
Total Flow Rate (veh/h)	947	303	1742
Effct. Green for Bike (s)	37.3	36.8	29.1
Cross Street Width (ft)	36.1	58.5	73.0
Through Lanes Number	2	1	1
Through Lane Width (ft)	12.0	12.0	12.0
Bicycle Lane Width (ft)	5.0	5.0	5.0
Paved Shoulder Width (ft)	0.0	0.0	0.0
Shoulder Width (ft)	0.0	0.0	0.0
On Street Parking?	Yes	Yes	Yes
On Street Parking?	No	No	No
Bicycle Lane Capacity (bike/h)	829	818	647
Bicycle Delay (s/bike)	15.4	15.7	20.6
Bicycle Compliance	Fair	Fair	Fair
Bicycle LOS Score	1.82	1.88	4.48
Bicycle LOS	A	A	E

Central Coast Transportation Consulting

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	11	551	184	532	217	228	66	127	489	22
v/c Ratio	0.05	0.69	0.91	0.65	0.87	0.38	0.12	0.65	0.90	0.04
Control Delay	17.7	23.7	72.4	26.1	74.7	27.8	6.7	58.3	54.5	0.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	17.7	23.7	72.4	26.1	74.7	27.8	6.7	58.3	54.5	0.8
Queue Length 50th (ft)	4	235	109	260	138	110	0	78	290	0
Queue Length 95th (ft)	15	365	#250	381	#270	176	29	#140	#463	3
Internal Link Dist (ft)	2016			1779	852			1929		
Turn Bay Length (ft)	150		150		150		150		150	150
Base Capacity (vph)	218	804	203	814	255	634	582	219	595	543
Stavation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.05	0.69	0.91	0.65	0.85	0.36	0.11	0.58	0.82	0.04

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	10	207	300	169	419	71	200	210	61	117	450	20
Traffic Volume (veh/h)	10	207	300	169	419	71	200	210	61	117	450	20
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q. (Cb). veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	11	225	326	184	455	77	217	228	66	127	489	22
Adj No. of Lanes	1	1	0	1	1	0	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh. %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	260	306	443	223	690	117	249	639	543	158	543	461
Arrive On Green	0.44	0.44	0.44	0.44	0.44	0.44	0.14	0.34	0.34	0.09	0.29	0.29
Sat Flow, veh/h	868	689	998	853	1553	263	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	11	0	551	184	0	532	217	228	66	127	489	22
Grp Sat Flow(s), veh/h	868	0	1687	853	0	1816	1774	1863	1583	1774	1863	1583
Q. Serv(s), s	1.0	0.0	26.1	16.9	0.0	22.3	11.6	8.9	2.8	6.8	24.4	1.0
Cycle Q Clear(g_c), s	23.3	0.0	26.1	43.0	0.0	22.3	11.6	8.9	2.8	6.8	24.4	1.0
Prop In Lane	1.00	0.00	0.59	1.00	0.00	0.14	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	260	0	749	223	0	807	249	639	543	158	543	461
V/C Ratio(X)	0.04	0.00	0.74	0.82	0.00	0.66	0.87	0.36	0.12	0.81	0.90	0.05
Avail Cap(c_a), veh/h	260	0	749	223	0	807	257	639	543	220	597	507
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	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	22.2	41.6	0.0	21.1	40.7	23.8	21.8	43.3	33.0	24.6
Incr Delay (d2), s/veh	0.1	0.0	3.8	21.5	0.0	2.0	25.7	0.3	0.1	13.7	15.9	0.0
Initial Q Delay(i3), 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 BackOf(50%) veh/m	0.2	0.0	12.9	6.2	0.0	11.5	7.4	4.6	1.2	3.9	14.9	0.4
LnGrp Delay(d)s/veh	30.3	0.0	26.0	63.0	0.0	23.1	66.4	24.2	21.9	57.0	48.9	24.7
LnGrp LOS	C	C	C	E	C	C	E	C	C	C	E	D
Approach Vol, veh/h	562			716			511			638		
Approach Delay, s/veh	26.1			33.4			41.8			49.7		
Approach LOS	C			C			D			D		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	12.6	37.2		47.0	17.6	32.2						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	12.0	33.0		43.0	14.0	31.0						
Max Q Clear Time (g_c+H), s	8.8	10.9		28.1	13.6	26.4						
Green Ext Time (g_c), s	0.1	4.6		8.0	0.0	1.8						
Intersection Summary												
HCM 2010 Ctrl Delay												
HCM 2010 LOS												

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	36.4	39.0	53.0	57.1
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	3	4	4
Number of Right-Turn Islands	0	0	0	0
Type of Control	None	None	None	None
Corresponding Signal Phase	6	2	4	8
Effective Walk Time (s)	0.0	0.0	0.0	0.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.00	81.00	81.00	81.00
Ped. Left-Right Flow Rate (p/h)	0	0	0	0
Ped. Right-Left Flow Rate (p/h)	0	0	0	0
Ped. R. Sidewalk Flow Rate (p/h)	0	0	0	0
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. Perm. R. Flow in Walk (v/h)	0	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped. (sq ft)	0.0	0.0	0.0	0.0
Right Corner Quality of Service	-	-	-	-
Ped. Circulation Area (sq ft)	0.0	0.0	0.0	0.0
Crosswalk Circulation Code	-	-	-	-
Pedestrian Delay (s/p)	50.0	50.0	50.0	50.0
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.36	2.32	2.70	2.49
Pedestrian Crosswalk LOS	B	B	B	B

Avila Ranch
11: Higuera & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	562	716	511	638
Effct. Green for Bike (s)	43.1	43.1	31.3	28.3
Cross Street Width (ft)	53.0	57.1	39.0	36.4
Through Lanes Number	1	1	1	1
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	862	862	626	566
Bicycle Delay (s/bike)	16.2	16.2	23.6	25.7
Bicycle Compliance	Fair	Fair	Fair	Fair
Bicycle LOS Score	3.30	3.61	3.00	3.17
Bicycle LOS	C	D	C	C

Avila Ranch
12: Buckley & Vachell

Cumulative Plus Project without BP PM
1/15/2016

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	94	290	523	115	118	136
Future Volume (Veh/h)	94	290	523	115	118	136
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	102	315	568	125	128	148
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	693			1150	630	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	693			1150	630	
IC, single (s)	4.1			6.4	6.2	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	89			34	69	
CM capacity (veh/h)	902			195	481	
Direction, Lane #	EB 1	WB 1	SB 1			
Volume Total	417	693	276			
Volume Left	102	0	128			
Volume Right	0	125	148			
cSH	902	1700	286			
Volumes to Capacity	0.11	0.41	0.97			
Queue Length 95th (ft)	10	0	239			
Control Delay (s)	3.3	0.0	84.2			
Lane LOS	A	F	F			
Approach Delay (s)	3.3	0.0	84.2			
Approach LOS	F	F	F			
Intersection Summary						
Average Delay			17.8			
Intersection Capacity Utilization			79.9%		ICU Level of Service	D
Analysis Period (min)			15			

Avila Ranch
12: Buckley & Vachell

Cumulative Plus Project without BP PM
2/11/2016

Approach	EB	WB
Approach Direction	Yes	Yes
Median Present?	9.1	9.1
Approach Delay(s)	B	B
Level of Service		
Crosswalk		
Length (ft)	16	16
Lanes Crossed	1	1
Veh Vol Crossed	290	523
Ped Vol Crossed	0	0
Yield Rate(%)	0	0
Ped Platooning	No	No
Critical Headway (s)	7.57	7.57
Prob of Delayed X-ing	0.46	0.67
Prob of Blocked Lane	0.46	0.67
Delay for add. Gap	6.26	9.33
Avg Ped Delay (s)	2.86	6.22
Approach	WB	EB
Approach Direction	Yes	Yes
Median Present?	9.1	9.1
Approach Delay(s)	B	B
Level of Service		
Crosswalk		
Length (ft)	16	16
Lanes Crossed	1	1
Veh Vol Crossed	523	290
Ped Vol Crossed	0	0
Yield Rate(%)	0	0
Ped Platooning	No	No
Critical Headway (s)	7.57	7.57
Prob of Delayed X-ing	0.67	0.46
Prob of Blocked Lane	0.67	0.46
Delay for add. Gap	9.33	6.26
Avg Ped Delay (s)	6.22	2.86

Avila Ranch
13: Buckley & Project Entry

Cumulative Plus Project without BP PM
1/15/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	24	384	617	34	21	21
Future Volume (Veh/h)	24	384	617	34	21	21
Sign Control	Free	Free	Free	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	26	417	671	37	23	23
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
VC, conflicting volume	708			1158	690	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
IC, unblocked vol	708			1158	690	
IC, single (s)	4.1			6.4	6.2	
IC, 2 stage (s)						
IF (s)	2.2			3.5	3.3	
p0 queue free %	97			89	95	
CM capacity (veh/h)	891			210	445	
Direction_Lane #	EB 1	WB 1	SB 1			
Volume Total	443	708	46			
Volume Left	26	0	23			
Volume Right	0	37	23			
cSH	891	1700	286			
Volume to Capacity	0.03	0.42	0.16			
Queue Length 95th (ft)	2	0	14			
Control Delay (s)	0.9	0.0	20.0			
Lane LOS	A	C	C			
Approach Delay (s)	0.9	0.0	20.0			
Approach LOS	C	C	C			
Intersection Summary						
Average Delay		1.1				
Intersection Capacity Utilization		49.9%		ICU Level of Service		A
Analysis Period (min)		15				

Avila Ranch
13: Buckley & Project Entry

Cumulative Plus Project without BP PM
2/11/2016

Approach	EB	WB	F
Approach Direction	EB		
Median Present?	No		
Approach Delay(s)	89.5		
Level of Service	F		
Crosswalk			
Length (ft)	32		
Lanes Crossed	2		
Veh Vol Crossed	1001		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	12.14		
Prob of Delayed X-ing	0.97		
Prob of Blocked Lane	0.82		
Delay for add Gap	92.68		
Avg Ped Delay (s)	89.51		
Approach	WB		
Approach Direction	WB		
Median Present?	No		
Approach Delay(s)	89.5		
Level of Service	F		
Crosswalk			
Length (ft)	32		
Lanes Crossed	2		
Veh Vol Crossed	1001		
Ped Vol Crossed	0		
Yield Rate(%)	0		
Ped Platooning	No		
Critical Headway (s)	12.14		
Prob of Delayed X-ing	0.97		
Prob of Blocked Lane	0.82		
Delay for add Gap	92.68		
Avg Ped Delay (s)	89.51		

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Lane Group	EBT	EBR	WBT	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	80	376	15	278	833	1563	211
v/c Ratio	0.39	0.82	0.17	0.98	0.30	0.78	0.22
Control Delay	48.8	41.1	46.7	93.2	3.8	17.9	2.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	48.8	41.1	46.7	93.2	3.8	17.9	2.1
Queue Length 50th (ft)	40	137	5	-163	46	297	1
Queue Length 95th (ft)	108	#396	31	#467	126	528	32
Internal Link Dist (ft)	9732		405		777	1174	
Turn Bay Length (ft)	150			360			
Base Capacity (vph)	359	458	90	283	3030	2795	1263
Stavation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.22	0.82	0.17	0.98	0.27	0.56	0.17

Intersection Summary
 - Volume exceeds capacity, queue is theoretically infinite.
 - Queue shown is maximum after two cycles.
 # 95th percentile volume exceeds capacity, queue may be longer.
 - Queue shown is maximum after two cycles.

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4	4		4			4	4		4	4
Traffic Volume (veh/h)	72	5	361	5	5	5	267	800	0	0	1500	203
Future Volume (veh/h)	72	5	361	5	5	5	267	800	0	0	1500	203
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/hln	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	75	5	376	5	5	5	278	833	0	0	1562	211
Adj No. of Lanes	0	1	1	0	1	0	1	2	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	241	16	411	7	7	7	203	2497	0	2	1998	874
Arrive On Green	0.15	0.15	0.15	0.01	0.01	0.01	0.12	0.73	0.00	0.00	0.58	0.58
Sat Flow, veh/h	1651	110	1539	555	555	555	1712	3505	0	1739	3468	1517
Grp Volume(v), veh/h	80	0	376	15	0	0	278	833	0	0	1562	211
Grp Sat Flow(s), veh/hln	1762	0	1539	1666	0	0	1712	1708	0	1739	1734	1517
Q Serve(g_s), s	4.5	0.0	16.0	1.0	0.0	0.0	13.0	9.5	0.0	0.0	38.1	7.5
Cycle Q Clear(g_c), s	4.5	0.0	16.0	1.0	0.0	0.0	13.0	9.5	0.0	0.0	38.1	7.5
Prop In Lane	0.94		1.00	0.33		0.33	1.00	0.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	257	0	411	22	0	0	203	2497	0	2	1998	874
V/C Ratio(X)	0.31	0.00	0.92	0.67	0.00	0.00	1.37	0.33	0.00	0.00	0.78	0.24
Avail Cap(c_a), veh/h	257	0	411	61	0	0	203	2497	0	63	2247	982
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	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Uniform Delay (d), s/veh	41.9	0.0	39.2	53.8	0.0	0.0	48.3	5.2	0.0	0.0	17.9	11.4
Incr Delay (d2), s/veh	0.7	0.0	24.9	29.8	0.0	0.0	194.2	0.1	0.0	0.0	1.7	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%), s/vehln	2.2	0.0	13.9	0.6	0.0	0.0	17.0	4.4	0.0	0.0	18.5	3.1
LnGrp Delay(d), s/veh	42.6	0.0	64.1	83.7	0.0	0.0	242.5	5.3	0.0	0.0	19.6	11.6
LnGrp LOS	D	E	F	F	F	F	A	A	F	A	B	B
Approach Vol, veh/h	456			15			1111				1773	
Approach Delay, s/veh	60.3			83.7			64.7				18.6	
Approach LOS	E			F			E				B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	0.0	84.1		20.0	17.0	67.1						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	4.0	80.0		16.0	13.0	71.0						
Max Q Clear Time (g_c+H), s	0.0	11.5		18.0	15.0	40.1						
Green Ext Time (g_e), s	0.0	38.8		0.0	0.0	23.1						
Intersection Summary	39.8											
HCM 2010 Ctrl Delay	D											
HCM 2010 LOS												

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Crosswalk Length (ft)	39.7	24.1	60.4	72.3
Crosswalk Width (ft)	12.0	12.0	12.0	12.0
Total Number of Lanes Crossed	3	2	5	6
Number of Right-Turn Islands	0	0	0	0
Type of Control	Actuated			
Number of Actuated	6	2	4	8
Corresponding Signal Phase	9.0	0.0	9.0	9.0
Effective Walk Time (s)	9.0	9.0	9.0	9.0
Right Corner Size A (ft)	9.0	9.0	9.0	9.0
Right Corner Size B (ft)	9.0	9.0	9.0	9.0
Right Corner Curb Radius (ft)	0.0	0.0	0.0	0.0
Right Corner Total Area (sq ft)	81.0	81.0	81.0	81.0
Ped. Left-Right Flow Rate (p/h)	1	0	1	1
Ped. Right-Left Flow Rate (p/h)	1	0	1	1
Ped. R. Sidewalk Flow Rate (p/h)	1	0	1	1
Veh. Perm. L. Flow in Walk (v/h)	0	0	0	0
Veh. RTOR Flow in Walk (v/h)	60	0	0	0
85th percentile speed (mph)	30	30	45	45
Right Corner Area per Ped (sq ft)	14554.3	36417.9	24278.6	14554.3
Right Corner Quality of Service	A	A	A	A
Ped. Circulation Area (sq ft)	4897.5	0.0	5344.9	5503.5
Crosswalk Circulation Code	A	-	A	A
Pedestrian Delay (s/p)	51.3	60.0	51.3	51.3
Pedestrian Compliance Code	Poor	Poor	Poor	Poor
Pedestrian Crosswalk Score	2.35	1.75	3.21	3.12
Pedestrian Crosswalk LOS	B	A	C	C

Avila Ranch
14: Broad & Buckley

Cumulative Plus Project without BP PM
1/15/2016

Approach	EB	WB	NB	SB
Bicycle Flow Rate (bike/h)	0	0	0	0
Total Flow Rate (veh/h)	456	15	1111	1773
Effct. Green for Bike (s)	10.2	4.5	70.9	50.5
Cross Street Width (ft)	60.4	72.3	24.1	39.7
Through Lanes Number	1	1	2	2
Through Lane Width (ft)	12.0	12.0	12.0	12.0
Bicycle Lane Width (ft)	0.0	0.0	0.0	0.0
Paved Shoulder Width (ft)	0.0	0.0	0.0	0.0
Curb Is Present?	No	No	No	No
On Street Parking?	No	No	No	No
Bicycle Lane Capacity (bike/h)	170	75	1182	842
Bicycle Delay (s/bike)	50.2	55.6	10.0	20.1
Bicycle Compliance	Poor	Poor	Fair	Fair
Bicycle LOS Score	3.24	2.69	2.84	3.63
Bicycle LOS	C	B	C	D

Avila Ranch
15: Earthwood & Suburban

Avila Ranch
15: Earthwood & Suburban

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	EB	EB	WB	WB	NB	NB
Traffic Volume (veh/h)	41	79	7	34	53	4
Future Volume (Veh/h)	41	79	7	34	53	4
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	45	86	8	37	58	4
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None					
Median storage (veh)						
Upstream signal (ft)						
pX platoon unblocked						
vC, conflicting volume		131		141		88
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
IC, single (s)		131		141		88
IC, 2 stage (s)		4.1		6.4		6.2
p0 queue free %		2.2		3.5		3.3
ICM capacity (veh/h)		99		93		100
ICM capacity (veh/h)		1454		847		970
Direction, Lane #	EB 1	WB 1	NB 1	NB 1		
Volume Total	131	45	62			
Volume Left	0	8	58			
Volume Right	86	0	4			
cSH	1700	1454	854			
Volume to Capacity	0.08	0.01	0.07			
Queue Length 95th (ft)	0	0	6			
Control Delay (s)	0.0	1.4	9.5			
Lane LOS	A	A	A			
Approach Delay (s)	0.0	1.4	9.5			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay		2.7				
Intersection Capacity Utilization		17.8%		ICU Level of Service		A
Analysis Period (min)		15				

Approach	EB
Approach Direction	EB
Median Present?	No
Approach Delay(s)	2.8
Level of Service	A
Crosswalk	
Length (ft)	44
Lanes Crossed	2
Veh Vol Crossed	75
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	15.57
Prob of Delayed X-ing	0.28
Prob of Blocked Lane	0.15
Delay for add Gap	10.19
Avg Ped Delay (s)	2.82
Approach	WB
Approach Direction	WB
Median Present?	No
Approach Delay(s)	1.7
Level of Service	A
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	75
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.22
Prob of Blocked Lane	0.12
Delay for add Gap	7.49
Avg Ped Delay (s)	1.67

Avila Ranch
16: Horizon Ln & Suburban
Cumulative Plus Project without BP PM
1/15/2016

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	W					
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume (vph)	4	65	49	8	14	7
Future Volume (vph)	4	65	49	8	14	7
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	4	71	53	9	15	8
Direction, Lane #	EB 1	NB 1	SB 1			
Volume Total (vph)	75	62	23			
Volume Left (vph)	4	53	0			
Volume Right (vph)	71	0	8			
Head (s)	-0.52	0.20	-0.17			
Departure Headway (s)	3.6	4.3	3.9			
Degree Utilization, x	0.07	0.07	0.03			
Capacity (veh/h)	982	818	891			
Control Delay (s)	6.8	7.6	7.0			
Approach Delay (s)	6.8	7.6	7.0			
Approach LOS	A	A	A			
Intersection Summary						
Delay	7.2					
Level of Service	A					
Intersection Capacity Utilization	20.7%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr
Cumulative Plus Project without BP PM
1/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W					
Traffic Volume (veh/h)	23	8	15	38	51	31
Future Volume (Veh/h)	23	8	15	38	51	31
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	25	9	16	41	55	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type			None			None
Median storage (veh)						
Upstream signal (ft)						
pX, platoon unblocked						
VC, conflicting volume	180	36			57	
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	180	36			57	
IC, single (s)	6.4	6.2			4.1	
IC, 2 stage (s)						
p0 queue free %	3.5	3.3			2.2	
IF (s)	97	99			96	
pM capacity (veh/h)	780	1036			1547	
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	34	57	89			
Volume Left	25	0	55			
Volume Right	9	41	0			
cSH	835	1700	1547			
Volume to Capacity	0.04	0.03	0.04			
Queue Length 95th (ft)	3	0	3			
Control Delay (s)	9.5	0.0	4.7			
Lane LOS	A	A	A			
Approach Delay (s)	9.5	0.0	4.7			
Approach LOS	A	A	A			
Intersection Summary						
Average Delay	4.1					
Intersection Capacity Utilization	21.1%					
ICU Level of Service	A					
Analysis Period (min)	15					

Avila Ranch
17: Vachell & Venture Dr

Cumulative Plus Project without BP PM
2/1/2016

Approach	NB
Approach Direction	No
Median Present?	1
Approach Delay(s)	A
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	46
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.14
Prob of Blocked Lane	0.07
Delay for adq Gap	6.91
Avg Ped Delay (s)	0.99
Approach	SB
Approach Direction	No
Median Present?	1
Approach Delay(s)	A
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	46
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.14
Prob of Blocked Lane	0.07
Delay for adq Gap	6.91
Avg Ped Delay (s)	0.99

Avila Ranch
18: Vachell & Project Entry

Cumulative Plus Project without BP PM
1/15/2016

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W		P			A
Traffic Volume (veh/h)	17	6	296	14	17	237
Future Volume (Veh/h)	17	6	296	14	17	237
Sign Control	Stop	Free	Free	Free	Free	Free
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	18	7	322	15	18	258
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)				None		None
Median type				None		None
Median storage (veh)						
Upstream signal (ft)						
px platoon unblocked						
VC, conflicting volume	624	330				337
VC1, stage 1 conf vol						
VC2, stage 2 conf vol						
VCu, unblocked vol	624	330				337
IC, single (s)	6.4	6.2				4.1
IC, 2 stage (s)						
IF (s)	3.5	3.3				2.2
p0 queue free %	96	99				99
dm capacity (veh/h)	443	712				1222
Direction, Lane #	WB 1	NB 1	SB 1			
Volume Total	25	337	276			
Volume Left	18	0	18			
Volume Right	7	15	0			
cSH	495	1700	1222			
Volume to Capacity	0.05	0.20	0.01			
Queue Length 95th (ft)	4	0	1			
Control Delay (s)	12.7	0.0	0.7			
Lane LOS	B		A			
Approach Delay (s)	12.7	0.0	0.7			
Approach LOS	B					
Intersection Summary						
Average Delay			0.8			
Intersection Capacity Utilization			34.5%		ICU Level of Service	A
Analysis Period (min)			15			

Avila Ranch
18: Vachell & Project Entry

Cumulative Plus Project without BP PM

2/1/2016

Approach	NB
Approach Direction	No
Median Present?	21.9
Approach Delay(s)	D
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	533
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.83
Prob of Blocked Lane	0.59
Delay for add Gap	26.22
Avg Ped Delay (s)	21.87
Approach	SB
Approach Direction	No
Median Present?	21.9
Approach Delay(s)	D
Level of Service	
Crosswalk	
Length (ft)	32
Lanes Crossed	2
Veh Vol Crossed	533
Ped Vol Crossed	0
Yield Rate(%)	0
Ped Platooning	No
Critical Headway (s)	12.14
Prob of Delayed X-ing	0.83
Prob of Blocked Lane	0.59
Delay for add Gap	26.22
Avg Ped Delay (s)	21.87

Avila Ranch
14: Broad & Buckley

Mitigated Existing Plus Project no BP PM

2/26/2016

	→	↖	←	↗	↑	↘	↓	↙	↘
Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBT	SBR	
Lane Group Flow (vph)	56	298	20	86	489	17	1091	30	
v/c Ratio	0.20	0.61	0.13	0.32	0.34	0.09	0.60	0.04	
Control Delay	26.1	14.2	23.8	29.9	6.0	29.7	11.2	0.1	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	26.1	14.2	23.8	29.9	6.0	29.7	11.2	0.1	
Queue Length 50th (ft)	15	29	3	23	43	5	117	0	
Queue Length 95th (ft)	56	107	25	492	214	27	242	0	
Internal Link Dist (ft)	9732		405		777		1174		
Turn Bay Length (ft)		150		360		470			
Base Capacity (vph)	624	488	150	265	1797	192	3468	1517	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.09	0.61	0.13	0.32	0.27	0.09	0.31	0.02	
Intersection Summary									
#	95th percentile volume exceeds capacity, queue may be longer.								
	Queue shown is maximum after two cycles.								

Avila Ranch
14: Broad & Buckley

Mitigated Existing Plus Project no BP PM
2/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	2	286	7	2	11	83	468	1	16	1047	29
Future Volume (veh/h)	52	2	286	7	2	11	83	468	1	16	1047	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Cb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	0.98	1.00	0.94	1.00	0.98	1.00	0.98	1.00	1.00	0.98	0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Flow Rate, veh/h	54	2	298	7	2	11	86	488	1	17	1091	30
Adj No. of Lanes	0	1	1	0	1	0	1	1	0	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap. veh/h	350	13	418	10	3	16	109	960	2	28	1691	739
Arrive On Green	0.21	0.21	0.21	0.02	0.02	0.02	0.06	0.54	0.54	0.02	0.49	0.49
Sat Flow, veh/h	1696	63	1542	553	158	869	1712	1793	4	1739	3468	1516
Grp Volume(V), veh/h	56	0	298	20	0	0	86	0	0	489	17	1091
Grp Sat Flow(s), veh/h	1759	0	1542	1580	0	0	1712	0	0	1797	1739	1734
Q_Serve(g_s), s	1.9	0.0	12.5	0.9	0.0	0.0	3.5	0.0	12.4	0.7	16.8	0.7
Cycle Q Clear(g_c), s	1.9	0.0	12.5	0.9	0.0	0.0	3.5	0.0	12.4	0.7	16.8	0.7
Prop In Lane	0.96	1.00	1.00	0.35	0.55	1.00	0.00	1.00	0.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	363	0	418	29	0	0	109	0	962	28	1691	739
V/C Ratio(X)	0.15	0.00	0.71	0.69	0.00	0.00	0.79	0.00	0.51	0.61	0.65	0.04
Avail Cap(c), veh/h	394	0	445	88	0	0	168	0	1987	122	3738	1634
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	0.00	0.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.2	0.0	23.6	34.9	0.0	0.0	33.0	0.0	10.6	34.9	13.7	9.6
Incr Delay (d2), s/veh	0.2	0.0	4.9	25.3	0.0	0.0	12.8	0.0	0.4	19.6	0.4	0.0
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOf(50%), veh/h	0.9	0.0	5.9	0.6	0.0	0.0	2.1	0.0	6.2	0.5	8.1	0.3
LnGrp Delay(d), s/veh	23.4	0.0	28.5	60.2	0.0	0.0	45.7	0.0	11.0	54.5	14.1	9.6
LnGrp LOS	C	C	E	E	D	D	B	B	D	B	B	A
Approach Vol, veh/h	354			20			575					1138
Approach Delay, s/veh	27.7			60.2			16.2					14.6
Approach LOS	C			E			B					B
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	5.1	42.2		18.8	8.6	38.8		5.3				
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0				
Max Green Setting (Gmax), s	5.0	79.0		16.0	7.0	77.0		4.0				
Max Q Clear Time (g_c+H), s	2.7	14.4		14.5	5.5	18.8		2.9				
Green Ext Time (p_c), s	0.0	16.3		0.3	0.0	16.0		0.0				
Intersection Summary												
HCM 2010 Ctrl Delay	17.7											
HCM 2010 LOS	B											

Avila Ranch
7: Horizon Ln & Tank Farm

Mitigated Near Term Plus Project PM
2/26/2016

Lane Group	EBT	WBL	WBT	NBL
Lane Group Flow (vph)	898	55	1217	80
v/c Ratio	0.70	0.21	0.95	0.21
Control Delay	10.8	6.5	28.3	15.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	10.8	6.5	28.3	15.4
Queue Length 50th (ft)	217	8	440	14
Queue Length 95th (ft)	342	23	#834	49
Internal Link Dist (ft)	691		1690	960
Turn Bay Length (ft)				
Base Capacity (vph)	1355	281	1358	387
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.66	0.20	0.90	0.21
Intersection Summary				
# 95th percentile volume exceeds capacity, queue may be longer.				
Queue shown is maximum after two cycles.				

Avila Ranch
7: Horizon Ln & Tank Farm
Mitigated Near Term Plus Project PM
2/26/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR	Diagram
Lane Configurations	EB	EB	WB	WB	NB	NB	↔ ↖ ↗ ↘
Traffic Volume (vph)	806	20	51	1120	30	43	
Future Volume (vph)	806	20	51	1120	30	43	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	
Flt Protected	1.00	0.95	1.00	0.92			
Satd. Flow (prot)	1857	1770	1863	1680			
Flt Permitted	1.00	0.21	1.00	0.98			
Satd. Flow (perm)	1857	385	1863	1680			
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	
Adj. Flow (vph)	876	22	55	1217	33	47	
RTOR Reduction (vph)	1	0	0	0	37	0	
Lane Group Flow (vph)	897	0	55	1217	43	0	
Turn Type	NA	Perm	NA	Prot			
Protected Phases	4		8	2			
Permitted Phases		8					
Actuated Green, G (s)	53.1	53.1	53.1	16.1			
Effective Green, g (s)	53.1	53.1	53.1	16.1			
Actuated g/C Ratio	0.69	0.69	0.69	0.21			
Clearance Time (s)	4.0	4.0	4.0	4.0			
Vehicle Extension (s)	3.0	3.0	3.0	3.0			
Lane Grp Cap (vph)	1277	264	1281	350			
v/s Ratio Prot	0.48		c0.65	c0.03			
v/s Ratio	0.70	0.21	0.95	0.12			
Uniform Delay, d1	7.3	4.4	10.9	24.8			
Progression Factor	1.00	1.00	1.00	1.00			
Incremental Delay, d2	1.8	0.4	14.8	0.7			
Delay (s)	9.0	4.8	25.7	25.5			
Level of Service	A	A	C	C			
Approach Delay (s)	9.0		24.8	25.5			
Approach LOS	A		C	C			
Intersection Summary							
HCM 2000 Control Delay		18.5			HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.76					
Actuated Cycle Length (s)		77.2			Sum of lost time (s)		8.0
Intersection Capacity Utilization		69.9%			ICU Level of Service		C
Analysis Period (min)		15					
c. Critical Lane Group							

Avila Ranch
14: Broad & Buckley
Mitigated Near Term Plus Project PM
2/26/2016

Lane Group	EBT	EBR	WBT	NBT	SBL	SBR	Diagram
Lane Group Flow (vph)	75	306	41	91	520	21	↔ ↖ ↗ ↘
v/c Ratio	0.29	0.64	0.29	0.40	0.41	0.13	
Control Delay	31.2	16.5	27.6	8.4	34.6	14.7	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	31.2	16.5	27.6	8.4	34.6	14.7	
Queue Length 50th (ft)	28	42	8	35	92	8	
Queue Length 95th (ft)	73	124	#41	#107	239	32	
Internal Link Dist (ft)	9732	405		777		1174	
Turn Bay Length (ft)	150		360	470			
Base Capacity (vph)	534	477	140	226	1789	164	
Starvation Cap Reductn	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	
Reduced v/c Ratio	0.14	0.64	0.29	0.40	0.29	0.13	
Intersection Summary							
# 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.							

Avila Ranch
14: Broad & Buckley

Mitigated Near Term Plus Project PM
2/26/2016

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Group Flow (vph)	43	32	170	167	258	11	526	956	484	524	
v/c Ratio	0.23	0.10	0.44	0.43	0.46	0.11	0.64	0.89	0.71	0.31	
Control Delay	43.0	0.6	39.1	38.9	7.9	52.3	37.5	16.7	43.2	18.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.0	0.6	39.1	38.9	7.9	52.3	37.5	16.7	43.2	18.0	
Queue Length 50th (ft)	25	0	90	89	0	6	147	66	138	91	
Queue Length 95th (ft)	59	0	205	202	73	29	257	#518	#260	208	
Internal Link Dist (ft)	407		1317				1054		165	1668	
Turn Bay Length (ft)					250	140		1009	836	1847	
Base Capacity (vph)	562	608	429	431	596	102	1108	1099	836	1847	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.08	0.05	0.40	0.39	0.43	0.11	0.47	0.87	0.58	0.28	
Intersection Summary											
# 95th percentile volume exceeds capacity, queue may be longer.											
Queue shown is maximum after two cycles.											

Avila Ranch
6: Higuera & Tank Farm

Mitigated Cumulative Plus Project no BP AM
2/26/2016

	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR
Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Lane Group Flow (vph)	43	32	170	167	258	11	526	956	484	524	
v/c Ratio	0.23	0.10	0.44	0.43	0.46	0.11	0.64	0.89	0.71	0.31	
Control Delay	43.0	0.6	39.1	38.9	7.9	52.3	37.5	16.7	43.2	18.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Delay	43.0	0.6	39.1	38.9	7.9	52.3	37.5	16.7	43.2	18.0	
Queue Length 50th (ft)	25	0	90	89	0	6	147	66	138	91	
Queue Length 95th (ft)	59	0	205	202	73	29	257	#518	#260	208	
Internal Link Dist (ft)	407		1317				1054		165	1668	
Turn Bay Length (ft)					250	140		1009	836	1847	
Base Capacity (vph)	562	608	429	431	596	102	1108	1099	836	1847	
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.08	0.05	0.40	0.39	0.43	0.11	0.47	0.87	0.58	0.28	
Intersection Summary											
# 95th percentile volume exceeds capacity, queue may be longer.											
Queue shown is maximum after two cycles.											

Avila Ranch
6: Higuera & Tank Farm
Mitigated Cumulative Plus Project no BP AM
2/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	10	30	303	10	240	10	489	889	450	477	10
Future Volume (veh/h)	30	10	30	303	10	240	10	489	889	450	477	10
Ideal Flow (vehph)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lane Util. Factor	1.00	1.00	0.95	1.00	1.00	1.00	1.00	0.95	1.00	0.99	1.00	1.00
Frbp_psd/bikes	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Flibp_psd/bikes	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.85	1.00	1.00
Flt Protected	0.96	1.00	0.95	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1796	1563	1681	1691	1583	1766	3539	1569	3433	3526		
Flt Permitted	0.96	1.00	0.95	0.96	1.00	0.95	1.00	0.95	1.00	0.95	1.00	1.00
Satd. Flow (perm)	1796	1563	1681	1691	1583	1766	3539	1569	3433	3526		
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	32	11	32	326	11	258	11	526	956	484	513	11
RTOR Reduction (vph)	0	0	29	0	0	201	0	0	331	0	1	0
Lane Group Flow (vph)	0	43	3	170	167	57	11	526	625	484	523	0
Confl. Peds. (#/hr)				1	1	3	3	3	3	3	3	3
Turn Type	Spill	NA	Perm	Spill	NA	Perm	Prot	NA	pm+ov	Prot	NA	NA
Permitted Phases	4	4	4	8	8	8	8	2	8	1	6	6
Prohibited Phases												
Actuated Green, G (s)	8.1	8.1	21.2	21.2	21.2	0.8	26.0	47.2	18.2	43.4		
Effective Green, g (s)	8.1	8.1	21.2	21.2	21.2	0.8	26.0	47.2	18.2	43.4		
Actuated q/C Ratio	0.08	0.08	0.22	0.22	0.22	0.01	0.27	0.49	0.19	0.45		
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Vehicle Extension (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	3.5	5.0	5.0
Lane Grip Cap (vph)	150	131	369	371	347	14	95.3	767	647	1885		
v/s Ratio Prot	c0.02	0.10	0.10	0.10	0.10	0.01	0.15	c0.18	c0.14	0.15		
v/s Ratio Perm	0.00	0.00	0.00	0.04	0.04	0.04	0.22	0.22	0.22	0.22		
v/c Ratio	0.29	0.02	0.46	0.45	0.16	0.79	0.55	0.82	0.75	0.33		
Uniform Delay, d1	41.5	40.6	32.7	32.6	30.5	47.8	30.3	20.9	37.0	17.2		
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.4	0.0	0.3	0.3	0.1	123.8	1.2	6.3	4.9	0.3		
Delay (s)	41.9	40.6	33.0	32.9	30.6	171.6	31.4	27.3	41.9	17.4		
Level of Service	D	D	C	C	C	F	C	C	C	D	B	B
Approach Delay (s)	41.3			31.9			29.8			29.2		
Approach LOS	D			C			C			C		C
Intersection Summary												
HCM 2000 Control Delay	30.3 HCM 2000 Level of Service C											
HCM 2000 Volume to Capacity ratio	0.74											
Actuated Cycle Length (s)	96.5 Sum of lost time (s) 23.0											
Intersection Capacity Utilization	87.1% ICU Level of Service E											
Analysis Period (min)	15											
c Critical Lane Group												

Avila Ranch
7: Horizon Lane & Tank Farm
Mitigated Cumulative Plus Project no BP AM
2/26/2016

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	1209	80	26	683	70	48
Future Volume (veh/h)	1209	80	26	683	70	48
Sign Control	Free	Free	Stop	Stop	Stop	Stop
Grade	0%	0%	0%	0%	0%	0%
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Hourly flow rate (vph)	1314	87	28	742	76	52
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	TWLT	TWLT	TWLT	TWLT	TWLT	TWLT
Median storage (veh)	2					
Upstream signal (ft)						
pX platoon unblocked		1401			1784	700
vC conflicting volume					1358	
vC1 stage 1 conf vol					427	
vC2 stage 2 conf vol					1784	700
vCu unblocked vol		1401			1784	700
iC single (s)		4.1			6.8	6.9
iC 2 stage (s)					5.8	
IF (s)		2.2			3.5	3.3
p0 queue free %		94			61	86
dM capacity (veh/h)		484			193	381
Direction Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	NB 2
Volume Total	876	525	275	495	93	35
Volume Left	0	0	28	0	76	0
Volume Right	0	87	0	0	17	35
cSH	1700	1700	484	1700	212	381
Volume to Capacity	0.52	0.31	0.06	0.29	0.44	0.09
Queue Length 95th (ft)	0	0	5	0	52	7
Control Delay (s)	0.0	0.0	2.1	0.0	34.7	15.4
Lane LOS			A		D	C
Approach Delay (s)	0.0			0.8		
Approach LOS				D		
Intersection Summary						
Average Delay	1.9					
Intersection Capacity Utilization	49.4% ICU Level of Service A					
Analysis Period (min)	15					

Avila Ranch
10: Higuera & LOVR

Mitigated Cumulative Plus Project no BP AM
2/26/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	1198	106	53	527	431	502
Lane Group Flow (vph)	0.73	0.13	0.12	0.76	0.78	0.41
v/c Ratio	21.8	7.7	16.2	30.1	38.3	3.3
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	21.8	7.7	16.2	30.1	38.3	3.3
Total Delay	290	14	8	235	222	56
Queue Length 50th (ft)	373	43	19	350	#362	87
Queue Length 95th (ft)	407			1906	424	
Internal Link Dist (ft)						
Turn Bay Length (ft)	1708	819	431	880	625	1253
Base Capacity (vph)	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.70	0.13	0.12	0.60	0.69	0.40

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
10: Higuera & LOVR

Mitigated Cumulative Plus Project no BP AM
2/26/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	1126	100	50	495	405	472
Future Volume (veh/h)	1126	100	50	495	405	472
Number	7	14	5	2	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	1198	106	53	527	431	502
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1519	699	422	771	557	1171
Arrive On Green	0.44	0.44	0.04	0.41	0.30	0.30
Sat Flow, veh/h	3442	1583	3442	1863	1863	1578
Grp Volume(v), veh/h	1198	106	53	527	431	502
Grp Sat Flow(s), veh/h/ln	1721	1583	1721	1863	1863	1578
Q_Serv(g_s), s	24.7	3.3	0.8	19.2	17.5	10.0
Cycle Q Clear(g_c), s	24.7	3.3	0.8	19.2	17.5	10.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1519	699	422	771	557	1171
V/C Ratio(X)	0.79	0.15	0.13	0.68	0.77	0.43
Avail Cap(c_a), veh/h	1660	764	483	853	606	1212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.9	13.9	19.3	19.9	26.5	4.1
Incr Delay (d2), s/veh	3.3	0.3	0.0	2.2	6.0	0.3
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%) veh/ln	12.3	3.8	0.4	10.3	9.9	11.5
LnGrp Delay(d), s/veh	23.2	14.1	19.4	22.0	32.5	4.4
LnGrp LOS	C	B	B	C	C	A
Approach Vol, veh/h	1304			580	933	
Approach Delay, s/veh	22.4			21.8	17.4	
Approach LOS	C			C	B	
Timer	1	2	3	4	5	6
Assigned Phs	2	4	5	6	7	8
Phs Duration (G+Y+Rc), s	40.3	42.6	42.6	9.5	30.8	6.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	38.0	40.0	40.0	5.0	27.0	2.8
Max Q Clear Time (g_c+H), s	21.2	26.7	26.7	2.8	19.5	9.5
Green Ext Time (g_e), s	9.5	9.9	9.9	0.0	0.0	5.2
Intersection Summary						
HCM 2010 Ctrl Delay			20.6			
HCM 2010 LOS			C			

Avila Ranch
14: Broad & Buckley

Mitigated Cumulative Plus Project no BP AM
2/26/2016

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	95	190	15	386	1527	5	815
v/c Ratio	0.41	0.23	0.15	0.62	0.57	0.05	0.66
Control Delay	40.1	3.8	39.1	30.0	7.0	44.2	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	3.8	39.1	30.0	7.0	44.2	23.8
Queue Length 50th (ft)	40	5	4	139	115	2	165
Queue Length 95th (ft)	110	43	28	#417	413	16	280
Internal Link Dist (ft)	9507		310	439			1035
Turn Bay Length (ft)	150		360		470		470
Base Capacity (vph)	397	846	100	650	3237	97	2683
Stationing Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.22	0.15	0.59	0.47	0.05	0.30

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
14: Broad & Buckley

Mitigated Cumulative Plus Project no BP AM
2/26/2016

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	83	5	175	5	5	5	355	1400	5	5	750	151
Traffic Volume (veh/h)	83	5	175	5	5	5	355	1400	5	5	750	151
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb), veh	1.00	0.98	1.00	1.00	0.98	1.00	0.98	1.00	0.98	1.00	0.98	0.98
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Sat Flow, veh/h	90	5	190	5	5	5	386	1522	5	5	815	164
Adj Flow Rate, veh/h	0	1	1	0	1	0	1	2	0	1	2	1
Adj No. of Lanes	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	195	11	567	8	8	8	422	2430	8	9	1577	690
Cap. veh/h	0.12	0.12	0.12	0.01	0.01	0.01	0.25	0.70	0.70	0.01	0.45	0.45
Arrive On Green	1668	93	1543	561	561	561	1712	3491	11	1739	3468	1518
Sat Flow, veh/h	95	0	190	15	0	0	386	1522	5	5	815	164
Grp Volume(v), veh/h	1761	0	1543	1683	0	0	1712	1708	1795	1739	1734	1518
Grp Sat Flow(s), veh/h	4.8	0.0	8.5	0.8	0.0	0.0	20.9	22.4	22.4	0.3	16.0	6.3
Q_Serv(g_s), s	4.8	0.0	8.5	0.8	0.0	0.0	20.9	22.4	22.4	0.3	16.0	6.3
Cycle Q Clear(g_c), s	0.95	1.00	1.00	0.33	0.33	1.00	0.01	1.00	1.00	1.00	1.00	1.00
Prop In Lane	206	0	567	23	0	0	422	1189	1250	9	1577	690
Lane Grp Cap(c), veh/h	0.46	0.00	0.33	0.65	0.00	0.00	0.91	0.63	0.63	0.55	0.52	0.24
V/C Ratio(X)	296	0	646	71	0	0	485	1434	1507	73	2075	908
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter()	39.3	0.0	22.0	46.8	0.0	0.0	34.9	7.8	7.8	47.3	18.5	15.9
Uniform Delay (d), s/veh	1.6	0.0	0.3	26.5	0.0	0.0	20.2	0.6	0.6	43.6	0.3	0.2
Incr Delay (d2), 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
Initial Q Delay(Q3), s/veh	2.4	0.0	3.7	0.6	0.0	0.0	12.2	10.5	11.1	0.2	7.6	2.7
%ile BackQ(50%) veh/h	40.9	0.0	22.3	73.2	0.0	0.0	55.1	8.4	8.4	90.9	18.8	16.1
LnGrp Delay(d), s/veh	D	C	E	E	E	E	A	A	A	F	B	B
LnGrp LOS	285			15			1913			984		
Approach Vol, veh/h	285			15			1913			984		
Approach Delay, s/veh	28.5			73.2			17.8			18.7		
Approach LOS	C			E			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	4.5	70.3		15.2	27.5	47.3						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	4.0	80.0		16.0	27.0	57.0						
Max Q Clear Time (g_c+H), s	2.3	24.4		10.5	22.9	18.0						
Green Ext Time (g_e), s	0.0	31.2		0.6	0.6	25.3						
Intersection Summary												
HCM 2010 Ctrl Delay	19.3											
HCM 2010 LOS	B											

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch
14: Broad & Buckley

Mitigated Cumulative Plus Project no BP AM
2/26/2016

Lane Group	EBT	EBR	WBT	NBL	NBT	SBL	SBR
Lane Group Flow (vph)	95	190	15	386	1527	5	815
v/c Ratio	0.41	0.23	0.15	0.62	0.57	0.05	0.66
Control Delay	40.1	3.8	39.1	30.0	7.0	44.2	23.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.1	3.8	39.1	30.0	7.0	44.2	23.8
Queue Length 50th (ft)	40	5	4	139	115	2	165
Queue Length 95th (ft)	110	43	28	#417	413	16	280
Internal Link Dist (ft)	9507		310	439			1035
Turn Bay Length (ft)	150		360		470		470
Base Capacity (vph)	397	846	100	650	3237	97	2683
Stationing Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.22	0.15	0.59	0.47	0.05	0.30

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Central Coast Transportation Consulting

Synchro 9 Report
Queues

Avila Ranch
10: Higuera & LOVR

Mitigated Cumulative Plus Project no BP PM
2/26/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group	916	31	104	199	580	1163
Lane Group Flow (vph)	0.62	0.04	0.33	0.25	0.92	0.96
v/c Ratio	22.2	8.6	16.7	16.3	50.5	27.4
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0
Queue Delay	22.2	8.6	16.7	16.3	50.5	27.4
Total Delay	210	3	16	67	310	307
Queue Length 50th (ft)	275	20	30	112	#511	#922
Queue Length 95th (ft)	407			1929	353	
Internal Link Dist (ft)	100	225				
Turn Bay Length (ft)	1487	697	316	893	675	1212
Base Capacity (vph)	0	0	0	0	0	0
Station Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.62	0.04	0.33	0.22	0.86	0.96

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
10: Higuera & LOVR

Mitigated Cumulative Plus Project no BP PM
2/26/2016

	EBL	EBR	NBL	NBT	SBT	SBR
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	EBL	EBR	NBL	NBT	SBT	SBR
Traffic Volume (veh/h)	879	30	100	191	557	1116
Future Volume (veh/h)	879	30	100	191	557	1116
Number	7	14	5	2	6	16
Initial Q (Ob.) veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	916	31	104	199	580	1162
Adj No. of Lanes	2	1	2	1	1	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2
Cap. veh/h	1124	517	409	968	739	1144
Arrive On Green	0.33	0.33	0.05	0.52	0.40	0.40
Sat Flow, veh/h	3442	1583	3442	1863	1863	1579
Grp Volume(v), veh/h	916	31	104	199	580	1162
Grp Sat Flow(s), veh/h/ln	1721	1583	1721	1863	1863	1579
Q_Serve(g_s), s	19.1	1.1	1.3	4.5	21.3	31.0
Cycle Q Clear(g_c), s	19.1	1.1	1.3	4.5	21.3	31.0
Prop In Lane	1.00	1.00	1.00	1.00	1.00	1.00
Lane Grp Cap(c), veh/h	1124	517	409	968	739	1144
V/C Ratio(X)	0.81	0.06	0.25	0.21	0.78	1.02
Avail Cap(c_a), veh/h	1631	750	427	978	739	1144
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(i)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.1	18.1	15.7	10.1	20.6	7.3
Incr Delay (d2), s/veh	2.1	0.0	0.3	0.1	5.5	30.5
Initial Q Delay(d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackQ(50%) veh/ln	9.4	1.1	0.6	2.3	11.9	34.2
LnGrp Delay(d) s/veh	26.3	18.1	16.0	10.2	26.2	37.8
LnGrp LOS	C	B	B	B	C	F
Approach Vol, veh/h	947			303	1742	
Approach Delay, s/veh	26.0			12.2	33.9	
Approach LOS	C			B	C	
Timer	1	2	3	4	5	6
Assigned Phs	2			4	5	6
Phs Duration (G+Y+Rc), s	46.6			31.5	9.6	37.0
Change Period (Y+Rc), s	6.0			6.0	6.0	6.0
Max Green Setting (Gmax), s	41.0			37.0	4.0	31.0
Max Q Clear Time (g_c+H), s	6.5			21.1	3.3	33.0
Green Ext Time (g_e), s	19.2			4.4	0.0	0.0
Intersection Summary						
HCM 2010 Ctrl Delay				29.2		
HCM 2010 LOS				C		

Avila Ranch
12: Buckley & Vachell

Mitigated Cumulative Plus Project no BP PM
2/26/2016

	EBT	WBT	SBL
Lane Group	417	693	276
Lane Group Flow (vph)	0.97	0.81	0.40
v/c Ratio	52.4	18.4	9.4
Control Delay	0.0	0.0	0.0
Queue Delay	52.4	18.4	9.4
Total Delay	95	131	30
Queue Length 50th (ft)	#249	240	82
Queue Length 95th (ft)	1779	1135	721
Internal Link Dist (ft)			
Turn Bay Length (ft)			
Base Capacity (vph)	543	1074	684
Stavation Cap Reductn	0	0	0
Spillback Cap Reductn	0	0	0
Storage Cap Reductn	0	0	0
Reduced v/c Ratio	0.77	0.65	0.40

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
12: Buckley & Vachell

Mitigated Cumulative Plus Project no BP PM
2/26/2016

	EBL	EBT	WBT	WBR	SBL	SBR
Movement						
Lane Configurations						
Traffic Volume (vph)	94	290	523	115	118	136
Future Volume (vph)	94	290	523	115	118	136
Ideal Flow (vphpb)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Flt Protected	0.99	1.00	0.98	0.93	0.98	0.93
Satd. Flow (prot)	1840	1817	1689	1689	1689	1689
Flt Permitted	0.50	1.00	0.98	0.98	0.98	0.98
Satd. Flow (perm)	932	1817	1689	1689	1689	1689
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	102	315	568	125	128	148
RTOR Reduction (vph)	0	0	18	0	78	0
Lane Group Flow (vph)	0	417	675	0	198	0
Turn Type	Perm	NA	NA	Prot	Prot	Prot
Protected Phases	4	4	8	6	6	6
Permitted Phases	4					
Actuated Green, G (s)	20.9	20.9	20.9	16.2	16.2	16.2
Effective Green, g (s)	20.9	20.9	20.9	16.2	16.2	16.2
Actuated g/c Ratio	0.46	0.46	0.46	0.36	0.36	0.36
Clearance Time (s)	4.0	4.0	4.0	4.0	4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	431	842	842	606	606	606
v/s Ratio Prot	c0.45	0.37	c0.12	c0.12	c0.12	c0.12
v/c Ratio	0.97	0.80	0.33	0.33	0.33	0.33
Uniform Delay, d1	11.8	10.3	10.5	10.5	10.5	10.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	34.6	5.5	1.4	1.4	1.4	1.4
Delay (s)	46.4	15.9	11.9	11.9	11.9	11.9
Level of Service	D	B	B	B	B	B
Approach Delay (s)	46.4	15.9	11.9	11.9	11.9	11.9
Approach LOS	D	B	B	B	B	B
Intersection Summary						
HCM 2000 Control Delay	24.3					C
HCM 2000 Volume to Capacity ratio	0.69					
Actuated Cycle Length (s)	45.1					8.0
Intersection Capacity Utilization	79.9%					D
Analysis Period (min)	15					
c. Critical Lane Group						

Avila Ranch
14. Broad & Buckley

Mitigated Cumulative Plus Project no BP PM
2/26/2016

	EBT	EBR	WBT	NBL	NBT	SBT	SBR	
Lane Group	80	376	15	278	833	1563	211	
Lane Group Flow (vph)	0.39	0.82	0.16	0.51	0.30	0.78	0.22	
v/c Ratio	48.6	41.1	46.6	44.0	3.8	17.9	2.1	
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Queue Delay	48.6	41.1	46.6	44.0	3.8	17.9	2.1	
Total Delay	108	#396	31	#168	126	528	32	
Queue Length 50th (ft)	40	137	5	71	46	297	1	
Queue Length 95th (ft)	108	#396	31	#168	126	528	32	
Internal Link Dist (ft)	9732		405		777	1174		
Turn Bay Length (ft)		150		360				
Base Capacity (vph)	362	460	91	554	3030	2802	1265	
Stavation Cap Reductn	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.22	0.82	0.16	0.50	0.27	0.56	0.17	

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Avila Ranch
14. Broad & Buckley

Mitigated Cumulative Plus Project no BP PM
2/26/2016

	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBR	
Movement												
Lane Configurations	72	5	361	5	5	5	267	800	0	0	1500	203
Traffic Volume (veh/h)	72	5	361	5	5	5	267	800	0	0	1500	203
Future Volume (veh/h)	7	4	14	3	8	18	5	2	12	1	6	16
Number	0	0	0	0	0	0	0	0	0	0	0	0
Initial Q (Cb) veh	1.00	0.98	1.00	0.95	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.98
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Parking Bus, Adj	1881	1844	1844	1862	1825	1862	1798	1798	1834	1825	1825	1825
Adj Sat Flow, veh/hln	75	5	376	5	5	5	278	833	0	0	1562	211
Adj Flow Rate, veh/h	0	1	1	0	1	0	2	2	0	1	2	1
Adj No. of Lanes	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Peak Hour Factor	2	2	2	2	2	2	2	2	2	2	2	2
Percent Heavy Veh, %	247	16	392	7	7	7	342	2475	0	2	2026	886
Cap. veh/h	0.15	0.15	0.15	0.01	0.01	0.01	0.10	0.72	0.00	0.00	0.58	0.58
Arrive On Green	1651	110	1539	556	556	556	3321	3505	0	1739	3468	1517
Sat Flow, veh/h	80	0	376	15	0	0	278	833	0	0	1562	211
Grp Volume(v), veh/h	1762	0	1539	1667	0	0	1661	1708	0	1739	1734	1517
Grp Sat Flow(s), veh/hln	4.3	0.0	16.0	1.0	0.0	0.0	8.8	9.5	0.0	0.0	36.4	7.2
Q_Serv(g_s), s	4.3	0.0	16.0	1.0	0.0	0.0	8.8	9.5	0.0	0.0	36.4	7.2
Cycle Q Clear(g_c), s	0.94	1.00	0.33	0.33	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00
Prop In Lane	264	0	392	22	0	0	342	2475	0	2	2026	886
Lane Grp Cap(c), veh/h	0.30	0.00	0.96	0.67	0.00	0.00	0.81	0.34	0.00	0.00	0.77	0.24
V/C Ratio(X)	264	0	392	62	0	0	404	2555	0	65	2303	1007
Avail Cap(c_a), veh/h	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Platoon Ratio	1.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00	0.00	0.00	1.00	1.00
Upstream Filter(i)	40.5	0.0	39.5	52.5	0.0	0.0	46.9	5.4	0.0	0.0	16.8	10.7
Uniform Delay (d), s/veh	0.6	0.0	35.0	29.3	0.0	0.0	10.4	0.1	0.0	0.0	1.5	0.1
Incr Delay (d2), 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
Initial Q Delay(d3), s/veh	2.2	0.0	14.8	0.6	0.0	0.0	4.5	4.4	0.0	0.0	17.8	3.0
%ile BackQ(50%) veh/ln	41.1	0.0	74.4	81.8	0.0	0.0	57.3	5.4	0.0	0.0	18.3	10.9
LnGrp Delay(d), s/veh		D	E	F	F	E	A	A		B	B	B
LnGrp LOS		D	E	F	F	E	A	A		B	B	B
Approach Vol, veh/h		456		15		1111				1773		
Approach Delay, s/veh		68.6		81.8		18.4				17.4		
Approach LOS		E		F		B				B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	1	2		4	5	6						
Phs Duration (G+Y+Rc), s	0.0	81.5		20.0	15.0	66.5						
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0						
Max Green Setting (Gmax), s	4.0	80.0		16.0	13.0	71.0						
Max Q Clear Time (g_c+H), s	0.0	11.5		18.0	10.8	38.4						
Green Ext Time (g_e), s	0.0	38.8		0.0	0.3	24.1						
Intersection Summary												
HCM 2010 Ctrl Delay	25.0											
HCM 2010 LOS	C											

Central Coast Transportation Consulting

Synchro 9 Report
HCM 2010 Signalized Intersection Summary

Avila Ranch
14. Broad & Buckley

Mitigated Cumulative Plus Project no BP PM
2/26/2016

	EBT	EBR	WBT	NBL	NBT	SBT	SBR	
Lane Group	80	376	15	278	833	1563	211	
Lane Group Flow (vph)	0.39	0.82	0.16	0.51	0.30	0.78	0.22	
v/c Ratio	48.6	41.1	46.6	44.0	3.8	17.9	2.1	
Control Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Queue Delay	48.6	41.1	46.6	44.0	3.8	17.9	2.1	
Total Delay	108	#396	31	#168	126	528	32	
Queue Length 50th (ft)	40	137	5	71	46	297	1	
Queue Length 95th (ft)	108	#396	31	#168	126	528	32	
Internal Link Dist (ft)	9732		405		777	1174		
Turn Bay Length (ft)		150		360				
Base Capacity (vph)	362	460	91	554	3030	2802	1265	
Stavation Cap Reductn	0	0	0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	
Reduced v/c Ratio	0.22	0.82	0.16	0.50	0.27	0.56	0.17	

Intersection Summary
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Central Coast Transportation Consulting

Synchro 9 Report
Queues

Appendix C: Roadway Segment Analysis Sheets



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley to Tank Farm Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.49	2.55	B	#N/A(D)	4.03	#N/A(D)	2.46	B	2.78	C
2	LOVR	Suburban Road	0.44	3.27	C	#N/A(D)	4.06	#N/A(D)	2.48	B	2.33	C
3	Suburban Road	Tank Farm Road	0.24	2.86	C	2771.88	2.90	C	2.49	B	2.97	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.41	2.55	B	#N/A(D)	3.54	#N/A(D)	2.20	B	2.76	C
2	LOVR	Suburban Road	0.24	3.27	C	2771.88	2.42	B	2.44	B	3.09	C
3	Suburban Road	Tank Farm Road	0.20	2.86	C	2771.88	2.81	C	2.34	B	2.86	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.88	3.19	C	503959	2.78	C	3.38	B	3.09	C
2	End of Sidewalks	101 NB Ramps	0.88	3.19	C	#N/A(B)	3.73	#N/A(V)	2.17	B	3.26	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score			
1	South Higgins Street	End of Sidewalks	0.88	3.19	C	503959	2.90	C	2.38	B	3.11	C
2	End of Sidewalks	101 NB Ramps	1.59	3.19	F (N<S)	#N/A(B)	5.28	#N/A(V)	2.86	C	3.47	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Northbound Date: 3/29/2015
 Limits: Higuera to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.26	2.45	B	4.30	4.32	3.46	C	2.72	B
2											
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higuera Street	Project Entrance	0.47	2.68	B	4.32	4.69	D	2.73	B
2										
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.29	2.55	#N/A(D)	3.38	#N/A(D)	2.07	B	2.73	B	
2	LOVR	Suburban Road	0.33	3.27	C	#N/A(D)	2.62	#N/A(D)	1.88	A	2.33	C
3	Suburban Road	Tank Farm Road	0.32	2.86	C	2771.88	2.80	C	2.48	B	2.87	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.29	2.55	B	#N/A(D)	4.08	#N/A(D)	2.58	B	2.85	C
2	LOVR	Suburban Road	0.32	3.27	C	2771.88	3.06	C	2.11	B	3.49	C
3	Suburban Road	Tank Farm Road	0.38	2.86	C	2771.88	2.80	C	2.40	B	2.92	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higgins Street	End of Sidewalks	1.32	3.19	F (N<=1)	3.65	D	2.76	C	3.25
2	End of Sidewalks	101 NB Ramps	1.32	3.19	F (N<=1)	4.67	HHV(0)	2.71	B	3.40
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higgins Street	End of Sidewalks	0.98	3.19	C	5.03	HHV(0)	2.31	B	3.07
2	End of Sidewalks	101 NB Ramps	1.17	3.19	F (N<=1)	4.64	HHV(0)	2.70	B	3.37
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.26	B	#ft/VDI	4.59	#ft/VDI	3.44	C	2.72	B
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.33	B	#ft/VDI	4.11	#ft/VDI	3.52	D	2.70	B
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figuera Street Direction: Northbound Date: 3/30/2015
Limits: Buckley to Tank Farm Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	LOS	Ped Space ¹	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	Buckley Road	LOVR	0.70	2.55	B	#N/A(D)	4.35	#N/A(D)	2.44	B	2.83	C
2	LOVR	Suburban Road	0.46	3.27	C	#N/A(D)	4.13	#N/A(D)	2.50	B	3.24	C
3	Suburban Road	Tank Farm Road	0.38	2.86	C	2771.88	3.02	C	2.54	B	2.89	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figuera Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	LOS	Ped Space ¹	LOS Score	LOS	LOS Score	LOS		
1	Buckley Road	LOVR	0.49	2.55	B	#N/A(D)	3.54	#N/A(D)	2.29	B	2.76	C
2	LOVR	Suburban Road	0.24	3.27	C	2771.88	2.40	B	2.13	B	3.08	C
3	Suburban Road	Tank Farm Road	0.21	2.86	C	2771.88	2.85	C	2.37	B	2.86	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higgins Street	End of Sidewalks	0.83	3.19	C	503959	3.01	C	2.48	B
2	End of Sidewalks	101 NB Ramps	0.83	3.19	C	#N/A(B)	3.96	#N/A(V)	2.27	B
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higgins Street	End of Sidewalks	0.82	3.19	C	503959	2.94	C	2.40	B
2	End of Sidewalks	101 NB Ramps	1.66	3.19	F (N<S)	#N/A(B)	5.96	#N/A(V)	2.87	C
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Northbound Date: 3/29/2015
 Limits: Higuera to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.42	2.45	B	4.54	4.03	3.69	D	2.76	C
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higuera Street	Project Entrance	0.54	2.68	B	4.43	4.03	3.76	D	2.74	B
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.35	2.55	#N/A(D)	3.48	#N/A(D)	3.17	B	2.74	B	
2	LOVR	Suburban Road	0.34	3.27	C	2.67	#N/A(D)	1.90	A	2.34	C	
3	Suburban Road	Tank Farm Road	0.35	2.86	C	2.71	2.98	C	2.39	B	2.88	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.82	2.55	B	4.20	#N/A(D)	2.99	B	2.87	C	
2	LOVR	Suburban Road	0.33	3.27	C	2.71	3.10	C	2.13	B	3.50	D
3	Suburban Road	Tank Farm Road	0.43	2.86	C	2.71	3.06	C	2.49	B	2.95	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score
1	South Higgins Street	End of Sidewalks	1.42	3.19	F (N<=1)	4.00	D	2.76	C	3.27	C
2	End of Sidewalks	101 NB Ramps	1.42	3.19	F (N<=1)	#N/A(B)	4.92	2.76	C	3.43	C
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	South Higgins Street	End of Sidewalks	0.67	3.19	C	5.03(59)	2.78	C	2.38	B	3.09	C
2	End of Sidewalks	101 NB Ramps	1.35	3.19	F (N<=1)	#N/A(B)	4.92	2.76	C	3.41	C	
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higuera Street	Project Entrance	0.13	B	48.00/100	-4.46	3.62	D	2.41	B
2										
3										
4										
5										

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higuera Street	Project Entrance	0.13	B	48.00/100	-4.38	3.79	D	2.40	B
2										
3										
4										
5										

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley to Tank Farm Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS
1	Buckley Road	LOVR	0.96	B	#N/A/DI	4.14	3.53	B	2.80	C
2	LOVR	Suburban Road	0.92	C	#N/A/DI	4.30	3.56	B	3.37	C
3	Suburban Road	Tank Farm Road	0.41	C	2771588	3.21	2.46	B	2.92	C
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS
1	Buckley Road	LOVR	0.48	B	#N/A/DI	3.60	2.28	B	2.77	C
2	LOVR	Suburban Road	0.30	C	2771588	2.59	2.25	B	3.11	C
3	Suburban Road	Tank Farm Road	0.25	C	2771588	2.97	2.46	B	2.88	C
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road
Limits: South Higgins Street to 101 NB Ramps

Direction: Northbound
Date: 3/29/2015
Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.86	3.19	C	503959	3.05	C	3.50	B	3.13	C
2	End of Sidewalks	101 NB Ramps	0.81	3.19	C	503959	2.28	B	1.99	A	3.05	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road
Limits: South Higgins Street to 101 NB Ramps

Direction: Southbound
Date: 3/29/2015
Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.91	3.19	C	503959	3.07	C	2.46	B	3.13	C
2	End of Sidewalks	101 NB Ramps	0.91	3.19	C	503959	3.17	C	2.57	B	3.15	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Northbound Date: 3/29/2015
 Limits: Higuera to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	
1	South Higuera Street	Project Entrance	0.31	2.45	8ft/VDI	4.37	8ft/VDI	3.53	D	2.74	B
2											
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	
1	South Higuera Street	Project Entrance	0.47	2.68	8ft/VDI	4.33	8ft/VDI	3.69	D	2.73	B
2											
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score
1	Buckley Road	LOVR	0.31	B	#N/A/DI	3.41	#N/A/DI	2.30	B	2.73	B
2	LOVR	Suburban Road	0.37	C	#N/A/DI	3.76	#N/A/DI	1.90	A	2.36	C
3	Suburban Road	Tank Farm Road	0.38	C	2771.88	3.08	C	2.37	B	2.90	C
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score
1	Buckley Road	LOVR	0.32	B	#N/A/DI	4.18	#N/A/DI	2.30	B	2.86	C
2	LOVR	Suburban Road	0.60	C	2771.88	3.11	C	2.39	B	3.53	D
3	Suburban Road	Tank Farm Road	0.65	C	2771.88	3.11	C	2.35	B	2.96	C
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS
1	South Higgins Street	End of Sidewalks	1.58	3.19	F N(=)1	D	3.48	C	3.31	C
2	End of Sidewalks	101 NB Ramps	0.79	3.19	C	2.97	2.46	B	3.12	C
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS
1	South Higgins Street	End of Sidewalks	0.67	3.19	C	2.76	2.37	B	3.09	C
2	End of Sidewalks	101 NB Ramps	0.67	3.19	C	2.80	2.42	B	3.09	C
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higuera Street	Project Entrance	0.28	B	48.00	A-32	1.48	C	2.75	B
2										
3										
4										
5										

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higuera Street	Project Entrance	0.28	B	48.00	A-32	1.53	D	2.70	B
2										
3										
4										
5										

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound
Limits: Buckley to Tank Farm Date: 3/30/2015
Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	Buckley Road	LOVR	0.77	2.55	B	#N/A(D)	4.46	#N/A(D)	3.49	B	2.85	C
2	LOVR	Suburban Road	0.54	3.27	C	#N/A(D)	4.37	#N/A(D)	3.39	B	2.98	C
3	Suburban Road	Tank Farm Road	0.48	3.86	C	2771.88	3.31	C	2.49	B	2.93	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound
Limits: Buckley Road to Tank Farm Road Date: 3/30/2015
Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	Buckley Road	LOVR	0.48	2.55	B	#N/A(D)	3.60	#N/A(D)	2.27	B	2.77	C
2	LOVR	Suburban Road	0.39	3.27	C	2771.88	2.58	B	2.24	B	3.11	C
3	Suburban Road	Tank Farm Road	0.26	3.86	C	2771.88	3.00	C	2.49	B	2.88	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higgins Street	End of Sidewalks	0.98	3.19	F N/C=11	3.38	C	2.98	B	3.17	C
2	End of Sidewalks	101 NB Ramps	0.99	3.19	C	503959	B	2.08	B	3.05	C
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.98	3.19	C	503959	3.12	C	2.46	B	3.14	C
2	End of Sidewalks	101 NB Ramps	0.98	3.19	C	503959	3.21	C	2.98	B	3.15	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Northbound Date: 3/29/2015
 Limits: Higuera to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.97	2.45	B	4.62	4.62	3.76	D	2.77	C
2											
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.54	2.68	B	4.43	4.43	3.76	D	2.74	B
2											
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	Buckley Road	LOVR	0.97	2.55	B	#N/A/DI	3.51	#N/A/DI	2.20	B	2.75	B
2	LOVR	Suburban Road	0.99	3.27	C	#N/A/DI	3.51	#N/A/DI	1.97	A	2.96	C
3	Suburban Road	Tank Farm Road	0.80	2.86	C	2771.88	3.14	C	2.69	B	2.91	C
4												
5												

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	Buckley Road	LOVR	0.99	2.55	B	#N/A/DI	4.30	#N/A/DI	2.69	B	2.88	C
2	LOVR	Suburban Road	0.68	3.27	C	2771.88	3.35	C	2.20	B	3.54	D
3	Suburban Road	Tank Farm Road	0.89	2.86	C	2771.88	3.35	C	2.56	B	2.98	C
4												
5												

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.76	3.19	C	503959	2.90	C	2.48	B	3.11	C
2	End of Sidewalks	101 NB Ramps	0.76	3.19	C	503959	2.94	C	2.48	B	3.12	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	1.68	3.19	F (V/C>1)	503959	4.41	E	2.49	C	3.33	C
2	End of Sidewalks	101 NB Ramps	0.84	3.19	C	503959	3.05	C	2.48	B	3.13	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.38	2.45	B	4.49	4.49	3.64	D	2.75	C
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higuera Street	Project Entrance	0.51	2.68	B	4.39	4.39	3.74	D	2.74	B
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figuera Street Direction: Northbound Date: 3/30/2015
Limits: Buckley to Tank Farm Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.78	2.55	#/WV/DI	4.48	#/WV/DI	2.70	B	2.85	C	
2	LOVR	Suburban Road	0.63	3.27	C	#/WV/DI	4.62	#/WV/DI	2.66	B	2.93	C
3	Suburban Road	Tank Farm Road	0.48	2.86	C	2771588	3.32	C	2.66	B	2.93	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figuera Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.78	2.55	B	#/WV/DI	4.06	#/WV/DI	2.58	B	2.84	C
2	LOVR	Suburban Road	0.31	3.27	C	2771588	2.63	B	2.27	B	3.12	C
3	Suburban Road	Tank Farm Road	0.31	2.86	C	2771588	3.16	C	2.98	B	2.93	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higgins Street	End of Sidewalks	0.87	3.19	C	503959	3.07	C	3.13	C
2	End of Sidewalks	101 NB Ramps	0.48	3.19	C	503959	2.50	B	1.98	A
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higgins Street	End of Sidewalks	0.89	3.19	C	503959	3.04	C	2.49	B
2	End of Sidewalks	101 NB Ramps	0.69	3.19	C	503959	3.13	C	2.56	B
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Northbound Date: 3/29/2015
 Limits: Higuera to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higuera Street	Project Entrance	0.00	2.45	B	4.01	3.48	4.01	1.20	A	2.60	B
2												
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higuera Street	Project Entrance	0.27	2.68	B	4.01	4.01	4.01	3.40	C	2.68	B
2												
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.48	2.55	B	#N/A(D)	3.57	#N/A(D)	2.26	B	2.76	C
2	LOVR	Suburban Road	0.35	3.27	C	#N/A(D)	3.69	#N/A(D)	1.91	A	2.35	C
3	Suburban Road	Tank Farm Road	0.35	2.86	C	2771.88	2.99	C	2.19	B	2.88	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.48	2.55	B	#N/A(D)	4.20	#N/A(D)	2.49	B	2.87	C
2	LOVR	Suburban Road	0.61	3.27	C	2771.88	3.33	C	2.19	B	3.54	D
3	Suburban Road	Tank Farm Road	0.48	2.86	C	2771.88	3.20	C	2.54	B	2.97	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higgins Street	End of Sidewalks	2.31	3.19	F (N<=1)	5.41	F	3.08	C	3.48
2	End of Sidewalks	101 NB Ramps	1.15	3.19	F (N<=1)	5.03599	D	2.66	B	3.21
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higgins Street	End of Sidewalks	0.60	3.19	C	5.03599	B	2.30	B	3.07
2	End of Sidewalks	101 NB Ramps	0.60	3.19	C	5.03599	B	2.36	B	3.08
3										
4										
5										

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higuera Street	Project Entrance	0.19	2.45	B	48'x10'	3.56	4B/V/D	2.43	B	2.61	B
2												
3												
4												
5												

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score			
1	South Higuera Street	Project Entrance	0.23	2.68	B	48'x10'	4.28	4B/V/D	3.40	C	2.72	B
2												
3												
4												
5												

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley to Tank Farm Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	Buckley Road	LOVR	0.81	2.55	B	#/W/VDI	4.51	#/W/VDI	2.71	B	2.85	C
2	LOVR	Suburban Road	0.05	3.27	C	#/W/VDI	4.68	#/W/VDI	2.67	B	3.03	C
3	Suburban Road	Tank Farm Road	0.52	2.86	C	2771588	3.03	C	2.70	B	2.95	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS	Ped Space ¹	LOS	LOS Score	LOS	LOS Score	LOS	LOS Score	
1	Buckley Road	LOVR	0.75	2.55	B	#/W/VDI	4.07	#/W/VDI	2.56	B	2.84	C
2	LOVR	Suburban Road	0.33	3.27	C	2771588	2.69	B	2.31	B	3.13	C
3	Suburban Road	Tank Farm Road	0.23	2.86	C	2771588	3.20	C	2.99	B	2.91	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.99	3.19	C	503959	3.25	C	3.57	B	3.15	C
2	End of Sidewalks	101 NB Ramps	0.99	3.19	C	503959	2.59	B	2.08	B	3.05	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score			
1	South Higgins Street	End of Sidewalks	0.91	3.19	C	503959	3.07	C	2.46	B	3.13	C
2	End of Sidewalks	101 NB Ramps	0.91	3.19	C	503959	3.16	C	2.57	B	3.15	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Northbound Date: 3/29/2015
 Limits: Higuera to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score
1	South Higuera Street	Project Entrance	0.88	2.45	B	4.64	4.50	3.76	D	2.78
2										
3										
4										
5										

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Buckley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode	
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.88	2.68	B	4.50	4.80	D	2.75	
2										
3										
4										
5										

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.93	2.55	#/WV/DI	3.59	#/WV/DI	2.27	B	2.76	C	
2	LOVR	Suburban Road	0.37	3.27	C	#/WV/DI	3.74	#/WV/DI	1.96	A	2.35	C
3	Suburban Road	Tank Farm Road	0.37	2.86	C	2771588	3.65	C	2.37	B	2.89	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.86	2.55	B	#/WV/DI	4.24	#/WV/DI	2.63	B	2.87	C
2	LOVR	Suburban Road	0.63	3.27	C	2771588	3.39	C	2.21	B	3.54	D
3	Suburban Road	Tank Farm Road	0.31	2.86	C	2771588	3.31	C	2.38	B	2.89	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higgins Street	End of Sidewalks	2.38	3.19	F (N<=1)	5.53	F	3.06	C	3.50	D
2	End of Sidewalks	101 NB Ramps	1.19	3.19	F (N<=1)	5.03599	D	2.66	B	3.21	C
3					F (N<=1)	5.03599					
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higgins Street	End of Sidewalks	0.68	3.19	C	5.03599	2.76	C	2.37	B	3.09
2	End of Sidewalks	101 NB Ramps	0.68	3.19	C	5.03599	2.80	C	2.42	B	3.09
3											
4											
5											

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.92	B	#ft/VDI	4.41	#ft/VDI	3.76	D	2.74	B
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Berkley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higuera Street to Project Entrance Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode		
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score	
1	South Higuera Street	Project Entrance	0.49	B	#ft/VDI	4.57	#ft/VDI	3.70	D	2.76	C
2											
3											
4											
5											

Note:
 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service For Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figuera Street Direction: Northbound Date: 3/30/2015
Limits: Buckley to Tank Farm Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.49	2.55	B	27720.00	2.98	C	2.46	B	2.62	B
2	LOVR	Suburban Road	0.44	3.27	C	27715.88	3.01	C	2.48	B	3.17	C
3	Suburban Road	Tank Farm Road	0.24	2.86	C	27715.88	2.90	C	2.49	B	2.97	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figuera Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.41	2.55	B	27720.00	2.69	B	2.23	B	2.60	B
2	LOVR	Suburban Road	0.24	3.27	C	27715.88	2.42	B	2.14	B	3.09	C
3	Suburban Road	Tank Farm Road	0.20	2.86	C	27715.88	2.81	C	2.34	B	2.86	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.34	3.19	C	503959	2.36	B	2.08	B	3.01	C
2	End of Sidewalks	101 NB Ramps	0.34	3.19	C	503959	2.15	B	1.88	A	3.03	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.60	3.19	C	503959	2.90	C	2.38	B	3.11	C
2	End of Sidewalks	101 NB Ramps	0.60	3.19	C	503959	3.00	C	2.50	B	3.12	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.29	2.55	B	27720.00	3.33	B	2.07	B	2.57	B
2	LOVR	Suburban Road	0.33	3.27	C	27715.88	2.57	B	1.88	A	3.18	C
3	Suburban Road	Tank Farm Road	0.32	2.86	C	27715.88	2.90	C	2.49	B	2.97	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
 Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.29	2.55	B	27720.00	3.03	C	2.58	B	2.69	B
2	LOVR	Suburban Road	0.32	3.27	C	27715.88	3.06	C	2.11	B	3.49	C
3	Suburban Road	Tank Farm Road	0.38	2.86	C	27715.88	2.89	C	2.40	B	2.92	C
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.66	3.19	C	503959	2.80	C	2.40	B	3.09	C
2	End of Sidewalks	101 NB Ramps	0.66	3.19	C	503959	2.76	C	2.36	B	3.09	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.58	3.19	C	503959	2.64	B	2.31	B	3.07	C
2	End of Sidewalks	101 NB Ramps	0.58	3.19	C	503959	2.68	B	2.35	B	3.08	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley to Tank Farm Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.70	2.55	B	27720.00	3.59	C	3.44	B	2.67	B
2	LOVR	Suburban Road	0.46	3.27	C	27715.88	3.07	C	3.30	B	3.18	C
3	Suburban Road	Tank Farm Road	0.38	2.86	C	27715.88	3.02	C	2.94	B	2.89	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.49	2.55	B	27720.00	2.69	B	2.23	B	2.60	B
2	LOVR	Suburban Road	0.24	3.27	C	27715.88	2.40	B	2.13	B	3.08	C
3	Suburban Road	Tank Farm Road	0.21	2.86	C	27715.88	2.85	C	2.37	B	2.86	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCHRP Project 3-70, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.42	3.19	C	503959	2.37	B	2.13	B	3.03	C
2	End of Sidewalks	101 NB Ramps	0.42	3.19	C	503959	2.27	B	1.98	A	3.04	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.42	3.19	C	503959	2.94	C	2.40	B	3.11	C
2	End of Sidewalks	101 NB Ramps	0.42	3.19	C	503959	3.04	C	2.52	B	3.13	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b, Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Northbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.93	2.55	B	27720.00	2.42	B	3.17	B	2.58	B
2	LOVR	Suburban Road	0.94	3.27	C	27715.88	2.63	B	1.90	A	3.08	C
3	Suburban Road	Tank Farm Road	0.93	2.86	C	27715.88	2.58	C	2.39	B	2.88	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



LOS+ Multimodal Level of Service for Urban Streets
Results Summary

Street: South Figueras Street Direction: Southbound Date: 3/30/2015
Limits: Buckley Road to Tank Farm Road Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	Buckley Road	LOVR	0.82	2.55	B	27720.00	3.14	C	2.99	B	2.71	B
2	LOVR	Suburban Road	0.93	3.27	C	27715.88	3.10	C	2.13	B	3.50	D
3	Suburban Road	Tank Farm Road	0.83	2.86	C	27715.88	3.06	C	2.49	B	2.95	C
4												
5												

Note:
1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Los Oros Valley Road Direction: Northbound Date: 3/29/2015
 Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.71	3.19	C	503959	2.88	C	2.44	B	3.10	C
2	End of Sidewalks	101 NB Ramps	0.71	3.19	C	503959	2.84	C	2.40	B	3.10	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17



**LOS+ Multimodal Level of Service for Urban Streets
Results Summary**

Street: Los Oros Valley Road Direction: Southbound Date: 3/29/2015
 Limits: South Higgins Street to 101 NB Ramps Analyst: KP

Segment	From	To	Auto Mode		Pedestrian Mode		Bicycle Mode		Transit Mode			
			V/C Ratio	LOS Score	Ped Space ¹	LOS Score	LOS Score	LOS Score	LOS Score	LOS Score		
1	South Higgins Street	End of Sidewalks	0.67	3.19	C	503959	2.78	C	2.38	B	3.09	C
2	End of Sidewalks	101 NB Ramps	0.67	3.19	C	503959	2.82	C	2.42	B	3.10	C
3												
4												
5												

Note: 1. Pedestrian space is reported in square feet per pedestrian (ft²/ped)
 Source: NCRBP Project 3.7b Multimodal Level of Service for Urban Streets and Highway Capacity Manual 2010, Chapter 17

Appendix D: LOS Scenario Summary Tables

Table 1: Near Term Intersection Pedestrian Levels of Service						
Intersection	Peak Hour	Direction	Near Term		Near Term + Project	
			LOS Score	LOS	LOS Score	LOS
1. Los Osos Valley/US 101 SB	AM	NB	3.53	D	3.55	D
		SB	2.85	C	2.86	C
		EB	1.92	A	1.92	A
		WB	2.39	B	2.40	B
	PM	NB	2.92	C	2.95	C
		SB	3.10	C	3.12	C
2. Los Osos Valley/US 101 NB	AM	SB	2.24	B	2.24	B
		EB	2.09	B	2.12	B
		NB	2.74	B	2.77	C
		SB	2.74	B	2.76	C
	PM	EB	2.24	B	2.26	B
		NB	2.79	C	2.84	C
3. South Street/S Higuera Street	AM	SB	2.84	C	2.87	C
		EB	2.35	B	2.36	B
		NB	2.79	B	2.80	C
		SB	2.51	B	2.52	B
	PM	EB	2.02	B	2.02	B
		WB	2.71	C	2.72	B
4. Madonna Road/S Higuera Street	AM	NB	2.93	C	2.94	C
		SB	2.60	B	2.61	B
		EB	2.67	B	2.01	B
		WB	2.01	B	2.67	B
	PM	NB	2.74	B	2.76	C
		SB	2.48	B	2.49	B
5. Prado Road/S Higuera Street	AM	EB	2.79	C	2.79	C
		WB	1.98	A	1.98	A
		NB	2.87	C	2.89	C
		SB	2.81	C	2.83	C
	PM	EB	3.07	C	3.07	C
		WB	2.00	B	2.00	A
6. Tank Farm Road/S Higuera Street	AM	NB	2.73	B	2.76	C
		SB	2.75	C	2.77	C
		EB	2.30	B	2.31	B
		WB	2.33	B	2.33	B
	PM	NB	2.95	C	2.98	C
		SB	2.84	C	2.87	C
7. Tank Farm Road/Horizon Lane ²	AM	EB	2.34	B	2.34	B
		WB	2.32	B	2.32	B
		NB	3.04	C	3.07	C
		SB	2.73	B	2.77	C
	PM	EB	1.99	A	1.99	A
		WB	2.82	C	2.83	C
8. Suburban Road/S Higuera	AM	NB	3.17	C	3.21	C
		SB	2.86	C	2.90	C
		EB	1.99	A	1.99	A
		WB	2.86	C	2.86	C
	PM	EB	>200	F	>200	F
		WB	>200	F	>200	F
9. Vachell Lane/S Higuera Street ²	AM	NB	>200	F	>200	F
		SB	>200	F	>200	F
		WB	>200	F	>200	F
		NB	3.00	C	3.04	C
	PM	SB	2.85	C	2.89	C
		WB	2.08	B	2.12	B
10. Los Osos Valley/S Higuera	AM	NB	3.15	C	3.21	C
		SB	2.95	C	3.01	C
		EB	2.19	B	2.26	B
		WB	2.19	B	2.26	B
	PM	NB	136.80	F	>200	F
		SB	>200	F	>200	F
11. Buckley Rd/S Higuera Street	AM	NB	>200	F	>200	F
		SB	>200	F	>200	F
		WB	2.30	B	2.37	B
		NB	2.74	B	2.75	B
	PM	SB	2.69	B	2.73	B
		NB	2.35	B	2.39	B
12. Buckley Road/Vachell Lane	AM	SB	2.82	C	2.86	C
		EB	2.74	B	2.79	C
		NB	2.35	B	2.39	B
		SB	2.82	C	2.86	C
	PM	EB	2.74	B	2.79	C
		NB	2.35	B	2.39	B
13. Buckley Road/Project Entrance ²	AM	SB	2.82	C	2.86	C
		EB	2.74	B	2.79	C
		NB	2.35	B	2.39	B
		SB	2.82	C	2.86	C
	PM	EB	2.74	B	2.79	C
		NB	2.35	B	2.39	B
14. Buckley Rd/ Highway 227	AM	WB	2.08	B	2.12	B
		NB	3.15	C	3.21	C
		SB	2.95	C	3.01	C
		WB	2.19	B	2.26	B
	PM	NB	136.80	F	>200	F
		SB	>200	F	>200	F
15. Buckley Rd/ Highway 227	AM	WB	2.08	B	2.12	B
		NB	3.15	C	3.21	C
		SB	2.95	C	3.01	C
		WB	2.19	B	2.26	B
	PM	NB	136.80	F	>200	F
		SB	>200	F	>200	F

1. HCM 2010 pedestrian score and LOS.

Table 2: Near Term Segment Bicycle Levels of Service						
Segment	Direction	Near Term		Near Term + Project		
		LOS Score	LOS	LOS Score	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	2.53	B	2.69	B
		SB	2.28	B	2.27	B
	PM	NB	2.10	B	2.20	B
		SB	2.59	B	2.63	B
S Higuera Street - LOVR to Suburban Road	AM	NB	2.56	B	2.58	B
		SB	2.25	B	2.24	B
	PM	NB	1.94	A	1.97	A
		SB	2.19	B	2.20	B
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	2.62	B	2.65	B
		SB	2.46	B	2.48	B
	PM	NB	2.57	B	2.60	B
		SB	2.51	B	2.56	B
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	2.50	B	2.58	B
		SB	2.45	B	2.46	B
	PM	NB	2.84	C	2.87	C
		SB	2.37	B	2.44	B
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	1.93	A	2.01	B
		SB	2.57	B	2.58	B
	PM	NB	2.45	B	2.48	B
		SB	2.42	B	2.48	B
Buckley Road - S Higuera Street to Project Entrance	AM	NB	3.53	D	3.74	D
		SB	3.69	D	3.76	D
	PM	NB	3.48	C	3.64	D
		SB	3.53	D	3.74	D

1. HCM 2010 bicyde score and LOS.

Table 3: Cumulative Segment Auto Levels of Service								
Segment	Direction	Cumulative			Cumulative + Project			
		V/C Ratio	LOS Score	LOS	V/C Ratio	LOS Score	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	0.78	2.55	B	0.81	2.55	B
		SB	0.74	2.55	B	0.75	2.55	B
	PM	NB	0.41	2.55	B	0.43	2.55	B
		SB	0.83	2.55	B	0.86	2.55	B
S Higuera Street - LOVR to Suburban Road	AM	NB	0.63	3.27	C	0.65	3.27	C
		SB	0.31	3.27	C	0.33	3.27	C
	PM	NB	0.35	3.27	C	0.37	3.27	C
		SB	0.61	3.27	C	0.63	3.27	C
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	0.48	2.86	C	0.52	2.86	C
		SB	0.31	2.86	C	0.32	2.86	C
	PM	NB	0.35	2.86	C	0.37	2.86	C
		SB	0.48	2.86	C	0.51	2.86	C
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	0.44	3.19	C	0.49	3.19	C
		SB	0.89	3.19	C	0.91	3.19	C
	PM	NB	1.15	3.19	F	1.19	3.19	F
		SB	0.60	3.19	C	0.66	3.19	C
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	0.44	3.19	C	0.49	3.19	C
		SB	0.89	3.19	C	0.91	3.19	C
	PM	NB	1.15	3.19	F	1.19	3.19	F
		SB	0.60	3.19	C	0.66	3.19	C
Buckley Road - S Higuera Street to Project Entrance	AM	NB	0.10	2.45	B	0.48	2.45	B
		SB	0.27	2.68	B	0.58	2.68	B
	PM	NB	0.19	2.45	B	0.52	2.45	B
		SB	0.25	2.68	B	0.43	2.68	B

1. HCM 2010 auto score and LOS.

Table 4: Cumulative Intersection Pedestrian Levels of Service						
Intersection	Peak Hour	Direction	Cumulative		Cumulative + Project	
			LOS Score	LOS	LOS Score	LOS
1. Los Osos Valley/ US 101 SB	AM	NB	3.58	D	3.60	D
		SB	2.85	C	2.87	C
	PM	EB	1.50	A	1.50	A
		NB	3.08	C	3.11	C
2. Los Osos Valley/ US 101 NB	AM	SB	3.11	C	3.14	C
		EB	1.42	A	1.42	A
	PM	NB	2.73	B	2.77	C
		SB	2.73	B	2.75	C
3. South Street/ S Higuera Street	AM	EB	2.36	B	2.36	B
		WB	1.55	A	1.58	A
	PM	NB	3.00	C	3.04	C
		SB	3.00	C	3.03	C
4. Madonna Road/ S Higuera Street	AM	EB	2.37	B	2.37	B
		WB	1.63	A	1.66	A
	PM	NB	2.80	C	2.81	C
		SB	2.55	B	2.56	B
5. Prado Road/ S Higuera Street	AM	EB	2.01	B	2.01	B
		WB	2.66	B	2.66	B
	PM	NB	2.95	C	2.97	C
		SB	2.67	B	2.68	B
6. Tank Farm Road/ S Higuera Street	AM	EB	2.01	B	2.01	B
		WB	2.63	B	2.63	B
	PM	NB	2.80	C	2.82	C
		SB	2.49	B	2.50	B
7. Tank Farm Road/ Horizon Lane ²	AM	EB	2.74	B	2.74	B
		WB	1.97	A	1.97	A
	PM	NB	2.93	C	2.96	C
		SB	2.85	C	2.87	C
8. Suburban Road/ S Higuera	AM	EB	2.93	C	2.93	C
		WB	2.00	A	2.00	A
	PM	NB	3.04	C	3.06	C
		SB	2.96	C	2.98	C
9. Vachell Lane /S Higuera Street ²	AM	EB	3.01	C	3.01	C
		WB	2.99	C	2.99	C
	PM	NB	3.11	C	3.15	C
		SB	3.02	C	3.04	C
10. Los Osos Valley/ S Higuera	AM	EB	2.99	C	2.99	C
		WB	2.98	C	2.98	C
	PM	NB	3.08	C	3.12	C
		SB	2.81	C	2.85	C
11. Buckley Rd/ S Higuera Street	AM	EB	1.99	A	1.99	A
		WB	2.90	C	2.96	C
	PM	NB	3.17	C	3.22	C
		SB	2.93	C	2.97	C
12. Buckley Road/ Vachell Lane	AM	EB	1.99	C	1.99	A
		WB	2.85	A	2.85	C
	PM	NB	>200	F	>200	F
		SB	>200	F	>200	F
13. Buckley Road/ Project Entrance ²	AM	EB	>200	F	>200	F
		WB	>200	F	>200	F
	PM	NB	3.17	C	3.21	C
		SB	2.99	C	3.02	C
14. Buckley Rd/ Highway 227	AM	EB	2.15	B	2.18	B
		WB	2.15	B	2.18	B
	PM	NB	3.17	C	3.18	C
		SB	2.99	C	3.04	C
15. Buckley Rd/ Highway 227	AM	WB	2.15	B	2.32	B
		NB	>200	F	>200	F
	PM	SB	>200	F	>200	F
		NB	2.38	C	2.49	B
16. Buckley Rd/ Highway 227	AM	SB	2.80	B	2.79	C
		EB	2.78	C	2.73	B
	PM	NB	2.38	C	2.40	B
		SB	2.80	B	2.84	C
17. Buckley Rd/ Highway 227	AM	EB	2.78	C	2.81	C
		NB	2.55	B	2.56	B
	PM	SB	2.54	B	2.55	B
		EB	2.05	B	2.06	B
18. Buckley Rd/ Highway 227	AM	WB	2.12	B	2.15	B
		NB	2.55	B	2.7	B
	PM	SB	2.54	B	2.49	B
		EB	2.05	B	2.36	B
19. Buckley Rd/ Highway 227	AM	WB	2.12	B	2.32	B
		EB	3.8	A	4.00	A
	PM	WB	3.8	A	4.00	A
		EB	8.7	B	9.10	B
20. Buckley Rd/ Highway 227	AM	WB	8.7	B	9.10	B
		EB	29.1	D	29.80	D
	PM	WB	29.1	D	29.80	D
		EB	86.8	F	89.80	F
21. Buckley Rd/ Highway 227	AM	WB	86.8	F	89.80	F
		NB	3.15	C	3.17	C
	PM	SB	3.10	C	3.12	C
		EB	2.23	B	2.26	B
22. Buckley Rd/ Highway 227	AM	WB	1.74	A	1.75	A
		NB	3.20	C	3.21	C
	PM	SB	3.12	C	3.12	C
		EB	2.34	B	2.35	B
23. Buckley Rd/ Highway 227	PM	WB	1.75	A	1.75	A

1. HCM 2010 pedestrian score and LOS.
2. Delay in seconds for side-street stop-controlled intersections.

Table 5: Cumulative Segment Bicycle Levels of Service						
Segment	Direction	Cumulative		Cumulative + Project		
		LOS Score	LOS	LOS Score	LOS	
S Higuera Street - Buckley Road to LOVR	AM	NB	2.70	B	2.71	B
		SB	2.54	B	2.54	B
	PM	NB	2.25	B	2.27	B
		SB	2.59	B	2.61	B
S Higuera Street - LOVR to Suburban Road	AM	NB	2.66	B	2.67	B
		SB	2.27	B	2.31	B
	PM	NB	1.91	A	1.94	A
		SB	2.19	B	2.21	B
S Higuera Street - Suburban Road to Tank Farm Road	AM	NB	2.66	B	2.70	B
		SB	2.58	B	2.59	B
	PM	NB	2.53	B	2.57	B
		SB	2.54	B	2.58	B
LOVR - S Higuera Street to 450' north of Los Verdes Drive	AM	NB	2.51	B	2.57	B
		SB	2.43	B	2.45	B
	PM	NB	3.03	C	3.05	C
		SB	2.32	B	2.37	B
LOVR - 450' north of Los Verdes Drive to US 101 NB Ramps	AM	NB	1.94	A	2.01	B
		SB	2.56	B	2.57	B
	PM	NB	2.65	B	2.66	B
		SB	2.36	B	2.42	B
Buckley Road - S Higuera Street to Project Entrance	AM	NB	1.29	A	3.76	D
		SB	3.40	C	3.80	D
	PM	NB	2.43	B	3.75	D
		SB	3.42	C	3.70	D

1. HCM 2010 bicyde score and LOS.

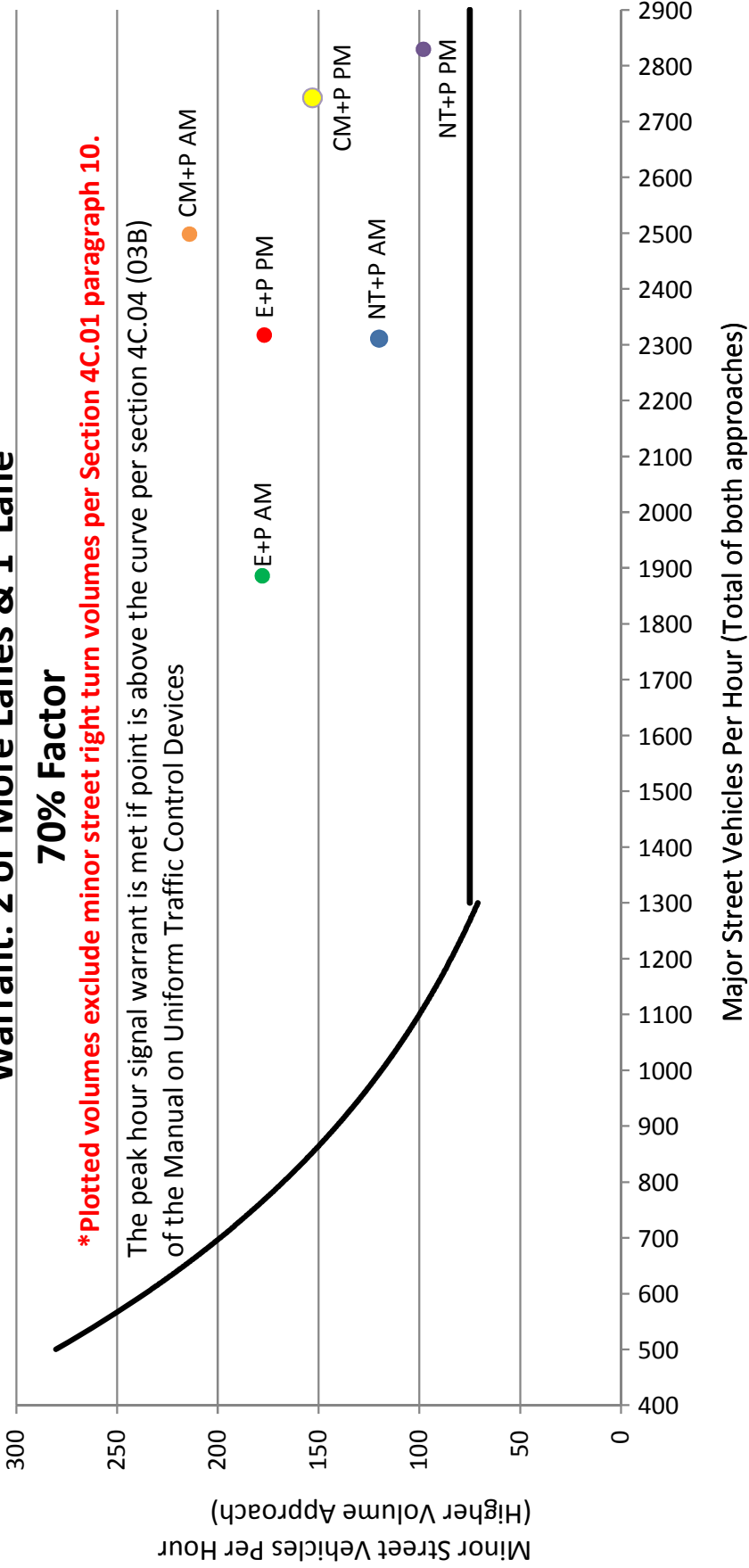
Appendix E: Signal Warrant Analysis

S. Higuera Road/Vachell Lane Peak Hour Signal Warrant: 2 or More Lanes & 1 Lane

70% Factor

***Plotted volumes exclude minor street right turn volumes per Section 4C.01 paragraph 10.**

The peak hour signal warrant is met if point is above the curve per section 4C.04 (03B) of the Manual on Uniform Traffic Control Devices



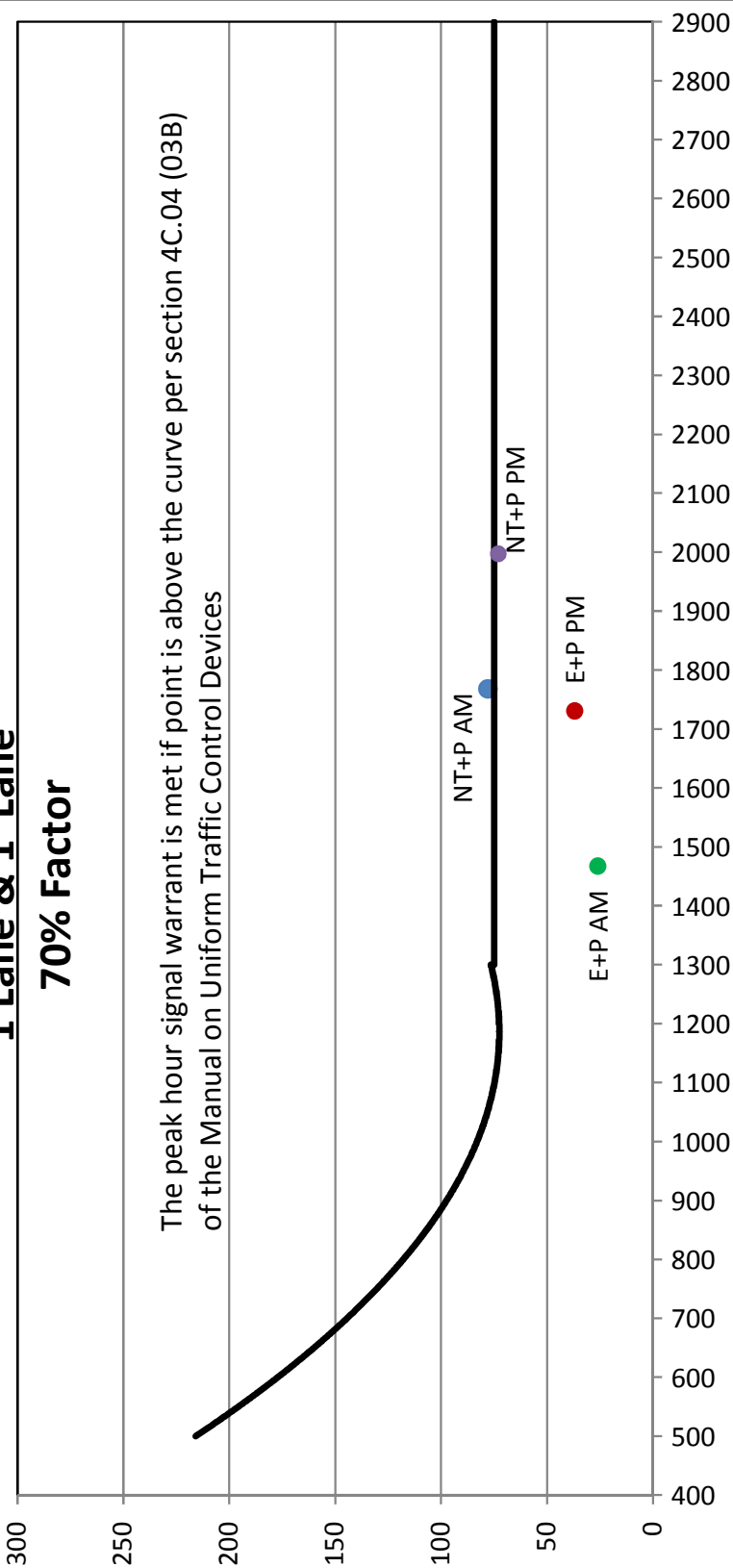
Tank Farm Road/Horizon Lane Peak Hour Signal Warrant:

1 Lane & 1 Lane

70% Factor

Minor Street Vehicles Per Hour
(Higher Volume Approach)

The peak hour signal warrant is met if point is above the curve per section 4C.04 (03B) of the Manual on Uniform Traffic Control Devices



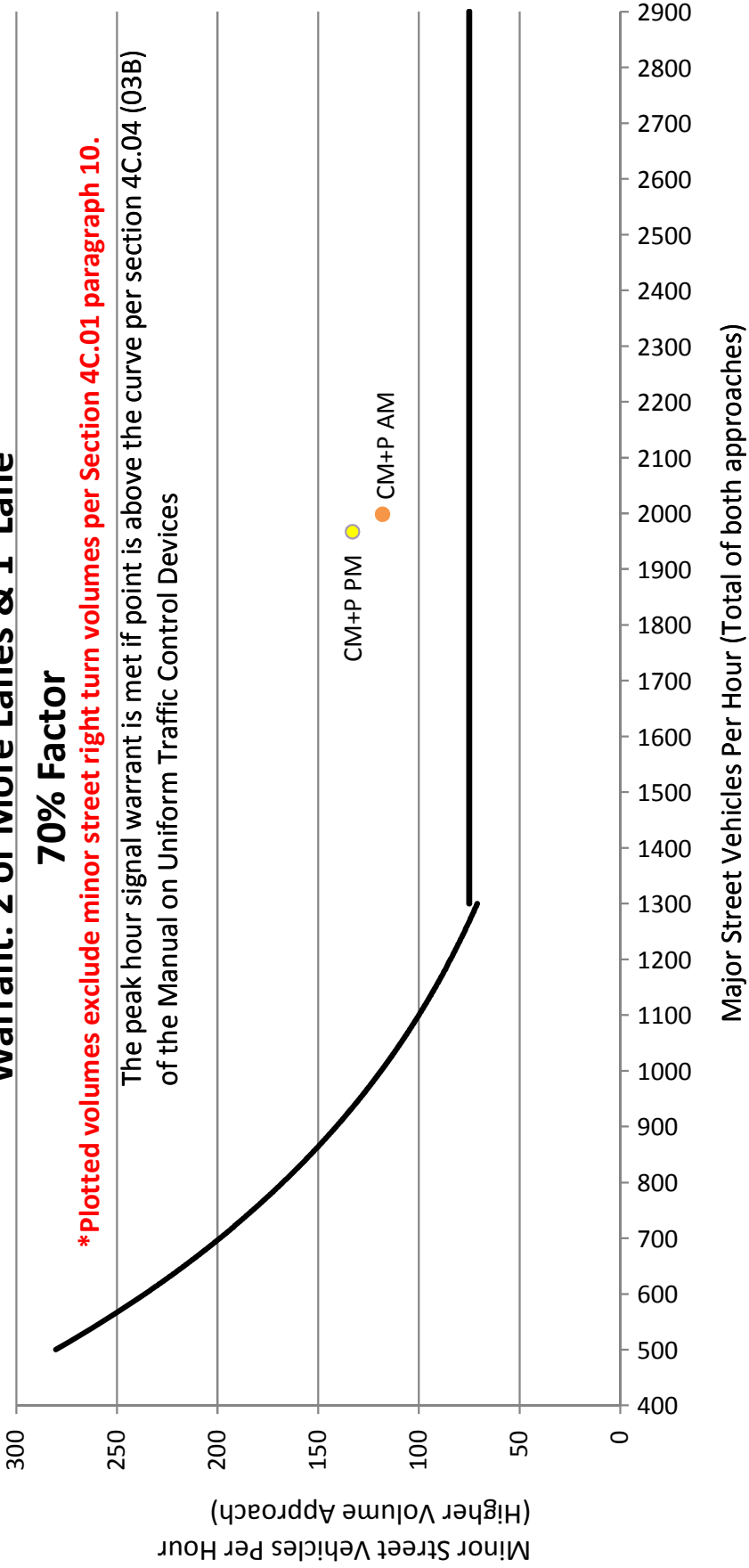
Major Street Vehicles Per Hour (Total of both approaches)

Tank Farm Road/Horizon Lane Peak Hour Signal Warrant: 2 or More Lanes & 1 Lane

70% Factor

***Plotted volumes exclude minor street right turn volumes per Section 4C.01 paragraph 10.**

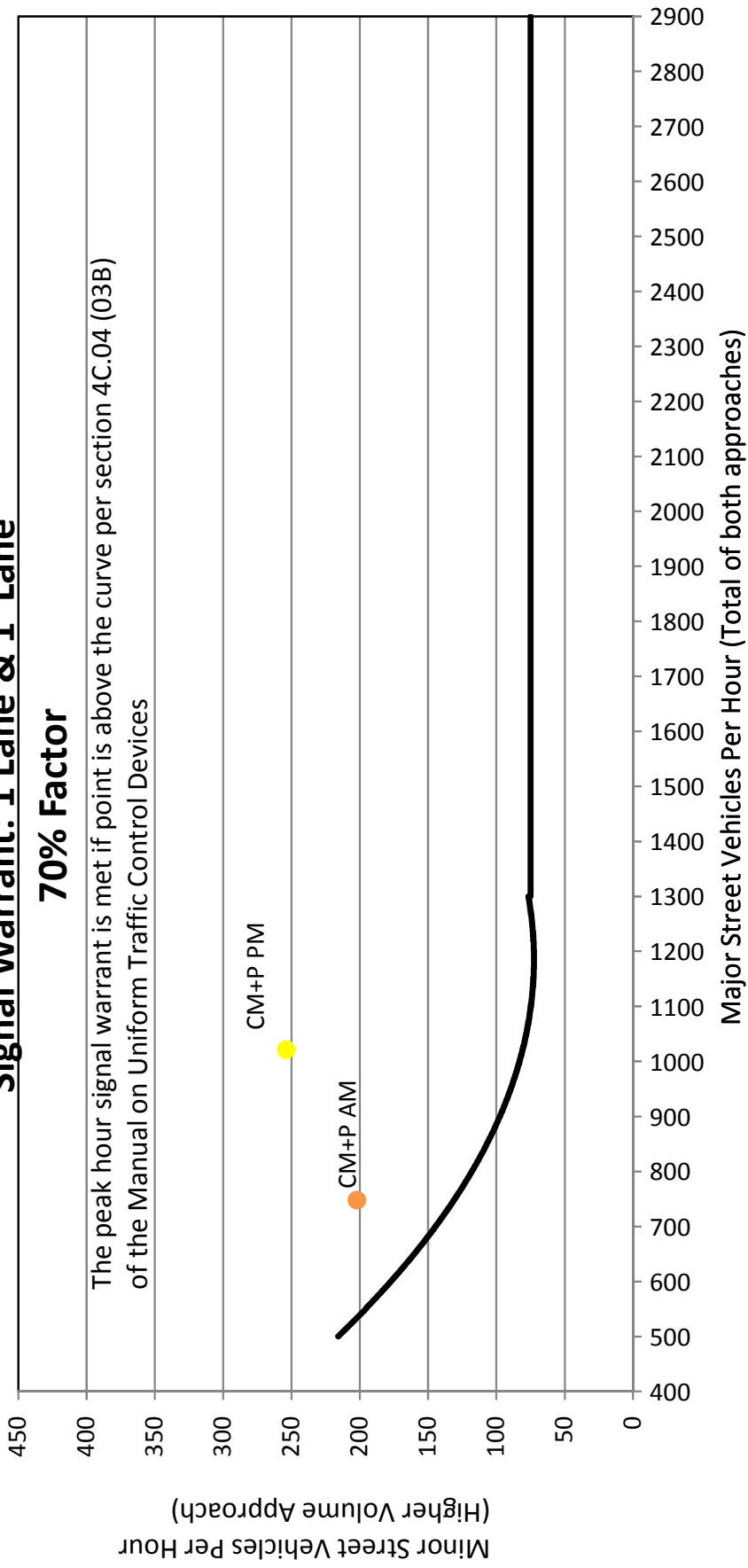
The peak hour signal warrant is met if point is above the curve per section 4C.04 (03B) of the Manual on Uniform Traffic Control Devices



Buckley Road/Vachell Lane Peak Hour Signal Warrant: 1 Lane & 1 Lane

70% Factor

The peak hour signal warrant is met if point is above the curve per section 4C.04 (03B) of the Manual on Uniform Traffic Control Devices



Appendix F: VMT Calculation Sheets

Begin by entering the geographic area where your project is located. Enter in either land use quantities (number of dwelling units or 1,000 square feet of non-residential uses) or daily trip generation for residential, retail, office, industrial, school, or other uses. Land use quantities are converted to daily trips using Institute of Transportation Engineers Trip Generation, 8th Edition data. Users can specify the average, linear, or logarithmic trip generation rate. The user can also manually enter daily trip generation for the different categories if the standard ITE categories are not applicable.

Select Geographic Area

Land Use Type	Units	Method	Daily Trips
Number of Dwelling Units			
Single Family (ITE 210)	<input type="text" value="105"/>	Log Rate ▼	1087.51
Multi-Family (ITE 220)	<input type="text" value="615"/>	Linear Rate ▼	3846.50
High Rise Condo (ITE 232)	<input type="text"/>	Average Rate ▼	
Other Residential	<input type="text"/>		<input type="text"/>
Retail Floor Space (ksf)			
General Retail other than those listed below (ITE 820)	<input type="text" value="15"/>	Log Rate ▼	1978.77
Supermarket (ITE 850)	<input type="text"/>	Average Rate ▼	
Bank (ITE 912)	<input type="text"/>	Average Rate ▼	
Health Club (ITE 492)	<input type="text"/>	Average Rate ▼	
Restaurant (non-fast food - ITE 932)	<input type="text"/>	Average Rate ▼	
Fast-Food Restaurant (ITE 934)	<input type="text"/>	Average Rate ▼	
Gas Station (ITE 945)	<input type="text"/>	Average Rate ▼	
Auto Repair (ITE 942)	<input type="text"/>	Average Rate ▼	
Other Retail	<input type="text"/>		<input type="text"/>
Office Floor Space (ksf)			
Non-Medical (ITE 710)	<input type="text"/>	Average Rate ▼	
Medical (ITE 720)	<input type="text"/>	Average Rate ▼	
Other Office	<input type="text"/>		<input type="text"/>
Industrial Floor Space (ksf)			
Light Industrial (ITE 110)	<input type="text"/>	Average Rate ▼	
Manufacturing (ITE 140)	<input type="text"/>	Average Rate ▼	
Warehousing (ITE 150)	<input type="text"/>	Average Rate ▼	
Other Industrial	<input type="text"/>		<input type="text"/>
Hotel rooms (ITE 310)	<input type="text"/>	Average Rate ▼	
Movie Screens (ITE 445)	<input type="text"/>	Average Rate ▼	
School Enrollment			
Grade School (ITE 520)	<input type="text"/>	Average Rate ▼	
High School (ITE 530)	<input type="text"/>	Average Rate ▼	
College (ITE 550)	<input type="text"/>	Average Rate ▼	
Misc Floor Space (ksf) not covered above	<input type="text" value="0"/>		<input type="text"/>
Total ITE Trips Generated <input type="text" value="6912.78"/>			
Total HH Trips Generated <input type="text" value="4934.01"/>			
Total Retail Trips Generated <input type="text" value="1978.77"/>			

Total Office Trips Generated	0.00
Total Industrial Trips Generated	0.00
Total School Trips Generated	0.00
Total Other Trips Generated	0.00

Reset

Next >>

FEHR  PEERS

This section reduces the total gross trip generation from the previous section by accounting for internal trips. Internal trips are the trips that remain within a mixed-use development that would otherwise drive off from the project site. For simple or single use sites, the level of internalization is minimal and this step can be ignored. Accurate internal trip estimates will reduce the potential for over-estimating a project's VMT and GHG emissions. Some potential sources for internalization estimates can be obtained from a regional travel model, FHWA HPMS data, or using tools like Fehr & Peers [5D MXD Trip Generation Tool](#).

Trip Purpose	Internalization Percentage	Description
Home to work trips	<input type="text" value="50"/> %	This is the percentage of onsite residential work trips that go to jobs within the project. For small projects, this percentage will tend to be small. For large projects, this percentage can be fairly large.
Home to other (shopping, services, recreation) trips	<input type="text" value="50"/> %	This is the percentage of onsite residential non-work (shopping, dining, recreation) trips that remain within the project area.
Home to school trips	<input type="text" value="0"/> %	This is the percentage of school trips (student drop-off, student drivers) that remain onsite between project homes and schools. For large sites, many of the school trips could remain internal to the project area.
Trips between non-home uses	<input type="text" value="50"/> %	This is the percentage of non-home-based trips that remain onsite. Examples of non-home-based trips include trips from work to lunch, or trips between two retail uses. In this case, only trips between onsite retail and employment are considered.

Reasonableness Checks	Trips	Percentage
Total Home-to-Work Reduction	98.94	
Total Home-to-Other Reduction	613.42	
Total Home-to-School Reduction	0.00	
Total Non-Home Trip Reduction	24.67	
Total Overall Trip Internalization	737.03	11%

<< Prev

Next >>

- 1. Land Use
- 2. Internalization
- 3. Retail Pass-by
- 4. VMT Calculation
- 5. GHG Calculation
- 6. Diagram of VMT

Enter/update the retail pass-by percentages. By default, pass-by rates are set to zero for all retail uses. If the project/plan is located on a busy street, the pass-by rate may be significant and should be adjusted to ensure an accurate VMT and GHG estimate. The Institute of Transportation Engineers Trip Generation Handbook one potential source for pass-by data.

Retail Pass-by Trip Adjustment

	Daily Pass-by Percentage	Daily Pass-by Reduction
General Retail other than those listed below (ITE 820)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Supermarket (ITE 850)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Bank (ITE 912)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Health Club (ITE 492)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Restaurant (non-fast food - ITE 932)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Fast-Food Restaurant (ITE 934)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Gas Station (ITE 945)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Auto Repair (ITE 942)	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Other Retail	<input type="text" value="0"/> %	<input type="text" value="0.00"/>
Total Daily Retail Pass-by	0 %	0.00

Note: Ensure that adjacent streets can support the level of pass-by trips shown above.

<< Prev

Next >>

Based on the results from the previous steps, VMT is calculated below. This step contains default values from the Puget Sound region for trip purpose splits and average trip length by trip purpose. Adjust the purpose splits and trip lengths as appropriate for a given project. It is important to estimate the average internal trip length (for internal project/plan vehicle trips) since this will vary significantly by project. Some reasonableness calculations are shown below the overall VMT calculation.

Select Geographic Area

Inputs/Assumptions

Home-Based Trip Production Proportions by Trip Purpose *i*

	Total Proportion	Proportion to/from Home End
Home-Based Work (HBW)	.21	0.270
Home-Based Other (HBO)	.52	0.669
Home-Based School (HBS)	.04	0.051
Non-Home Based (NHB)	.23	0.010
	1.00	1.000

Non-Home Trip Purpose Proportions *i*

	Retail	Office	Industrial	School	Other <i>i</i>
Home-Based Work (HBW)	.1	.33	.6	.16	.6
Home-Based Other (HBO)	.62	.29	.2	.56	.2
Non-Home Based (NHB)	.28	.38	.2	.28	.2
	1.00	1.00	1.00	1.00	1.00

Residential Weekday Daily Trip Ends *i*

	Trip Ends <i>i</i>	Internalization Reductions
Residential HBW	1332.18	49.47
Residential HBO	3300.85	306.71
Residential NHB attracted to home location	49.34	12.34
Residential NHB trips associated with residents of project that are generated elsewhere on network	2820.77 <i>i</i>	

Non-residential Weekday Daily Trip Ends

	Retail Trip Ends	Office Trip Ends	Industrial Trip Ends	School Trip Ends	Other Trip Ends	Internalization Reductions
HBW	197.88	0.00	0.00	0.00	0.00	49.47
HBO	1226.84	0.00	0.00	0.00	0.00	306.71
NHB	554.06	0.00	0.00	0.00	0.00	24.67

(d) Note that these trip ends can be double counted for mixed use projects/plans if internalization rate is not properly calculated

Estimated Trip Lengths in miles

	HBW	HBO	NHB
Internal to Internal (II) <i>i</i>	.25	.25	.25
Internal to External (IX) <i>i</i>	14.24	7.19	8.37

NHB (that occur elsewhere on the network) *i*

8.37

Part A CALCULATION

VMT from Internal Project Trips *i*

	Internal Residential	Internal Non Residential
HBW	12.37	12.37
HBO	76.68	76.68
NHB	3.09	6.17

Part B CALCULATION

VMT from Internal-External Project Trips *i*

	IX - XI Residential	IX - XI Non Residential
HBW	18265.79	2113.36
HBO	21527.87	6615.74
NHB	12114.61	4431.00

Summary

Total VMT Generation 65,256

Reasonableness Checks

Calculated Residential VMT per Household *i* = 72.22
Residential VMT per Household from relevant resource =

Internalization percentage = 11.00
Internalization from relevant resource =

Average trip length for all trips = 7.73
Average trip length (mi.) from relevant resource = 8.86

Note: VMT estimate may not fully take into account effects of non-residential portion of the project. If the trip ends input to this spreadsheet included the internalization effects of the non-residential, then the VMT estimate will capture the influence of non-residential land uses on the project's VMT. However, this spreadsheet does not account for the non-residential effects on existing households. The non-residential portion of a project could increase or decrease the VMT generated by existing households depending on a number of factors such as the location, type of non-residential uses, existing balance of residential and non-residential uses, balance of wages to housing prices, etc.

- 1. Land Use
- 2. Internalization
- 3. Retail Pass-by
- 4. VMT Calculation
- 5. GHG Calculation
- 6. Diagram of VMT

This step calculates GHG based on the overall VMT result from the previous steps. The GHG emissions are based on an emissions factor from the US Environmental Protection Agency and 2006 passenger car/light truck average fuel economy data from the Bureau of Transportation Statistics. Update this emissions factor with a more locally-valid factor that considers local driving behavior and fleet mix, if such a factor is available. The US EPA MOVES air quality model is a potential source for more localized emissions factors.

Overall VMT Calculation

Carbon dioxide emissions factor per gallon of gasoline consumed kilograms
 Adjustment factor to account for other greenhouse gasses

Combined average fuel economy of cars and light trucks miles per gallon

GHG emissions per average weekday from project/plan = metric tons of carbon dioxide equivalent per day

<< Prev

Next >>

Total VMT
65,256

VMT per HH
72.22

IX-XI HBW Trips
1,283

IX-XI HBW VMT
18,266

NHB VMT [1]
2,821

NHB Trips [1]
11,805

IX-XI HBO Trips
2,994

IX-XI HBO VMT
21,528

Internal HBO Trips
614

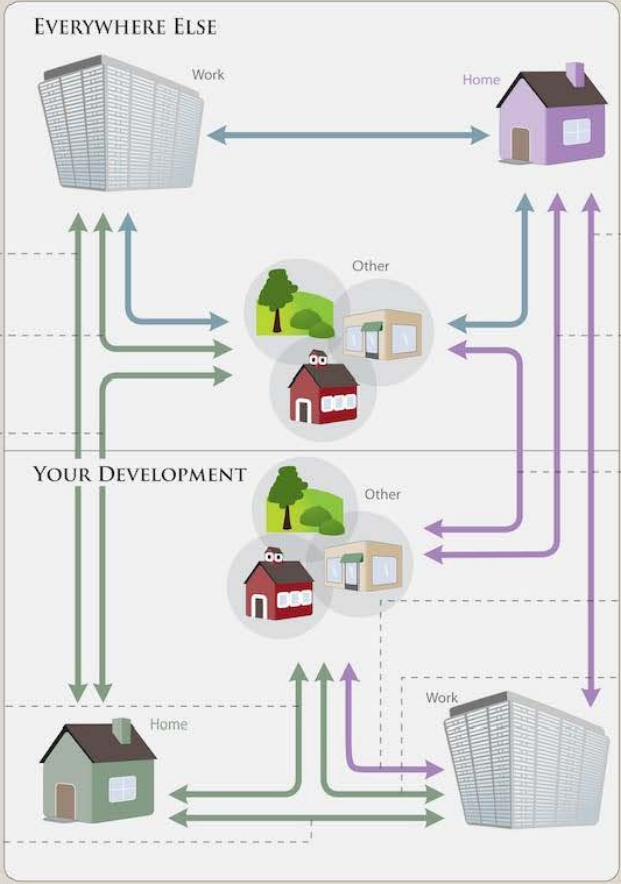
Internal HBO VMT
153

HBO Trip Internalization
17.0%

Internal HBW Trips
99

Internal HBW VMT
25

HBW Trip Internalization
7.2%



IX-XI non-Res HBW Trips
149

IX-XI non-Res HBW VMT
2,113

IX-XI non-Res HBO Trips
920

IX-XI non-Res HBO VMT
6,616

IX-XI non-Res NHB Trips
529

IX-XI non-Res NHB VMT
4,431

Internal non-Res NHB Trips
25

Internal non-Res NHB VMT
6

Internal Residential NHB Trips [1]
12

Internal Residential NHB VMT [1]
3

NHB Internalization
0.0%

<< Prev

Appendix G: Project Area Daily Volume Estimates

