TRAFFIC IMPACT ANALYSIS

FOR

3820 CHILES ROAD

Davis, CA

Prepared For:

Shepard Family Holdings
66 College Park
Davis, CA 95616

Prepared By:

KD Anderson & Associates, Inc.
3853 Taylor Road, Suite G
Loomis, California 95650
(916) 660-1555

May 1, 2018

Job No. 6581-01

3820 CHILES ROAD
TRAFFIC IMPACT ANALYSIS

TABLE OF CONTENTS

3820 CHILES ROAD
TRAFFIC IMPACT ANALYSIS

EXECUTIVE SUMMARY

Project Description. This study evaluates the traffic impacts associated with the proposed multi-family housing project at 3820 Chiles Road in Davis. The project is located along Chiles Road in the southeast quadrant of the Chiles Road / La Vida Way intersection. The project consists of a 222-unit apartment complex. Access to the site will be along Chiles Road. The project is expected to generate approximately 1,323 new daily trips. 102 new trips are projected during the a.m. peak hour and 120 new trips will be generated in the p.m. peak hour. A second alternative, 'Alternative B', was considered. This alternative includes a 188-unit multi-family apartment complex with five single family residential units and would generate 1,184 daily trips, 91 a.m. peak hour trips and 109 p.m. peak hour trips. This study analyzes the 222-unit site as it generates the highest number of trips.

Existing Setting. Levels of Service were evaluated for nine (9) intersections in the area of the proposed project and five roadway segments. The analysis considered both a.m. and p.m. traffic for intersection analysis and the highest peak hour for each roadway segment. The existing intersections operate at acceptable levels of service, at LOS D or better which satisfies the City's LOS E minimum. All roadway segments operate at LOS C.

Existing Plus Project Specific Impacts. The existing operating level of service will be maintained with the addition of project traffic. All intersections will operate at LOS D or better and all roadway segments will continue to operate at LOS C. Thus, the project's traffic impact is not significant based on this LOS criteria and no mitigation is required.

Under the 'Alternative B' scenario, the impacts would be the same or less given that the trip generation is less than the proposed project alternative. Five peak hour trips and up to 64 daily trips would be added onto La Vida Way under this alternative. These volumes would not create an impact at the Chiles Road / La Vida Way intersection, nor along the La Vida Way segment. The no-parking zone between El Segundo Avenue and Becerra Way will allow adequate site distance for vehicles exiting the site onto La Vida Way; this assumes that any obstructions such as fencing or landscaping between 2½ feet and 8 feet are outside the line of sight at the driveway exit.

Standard City of Davis conditions of approval will require payment of existing MPFP fees as mitigation for city-wide impacts.

Existing Plus Approved Projects (EPAP) Setting. Thirteen approved projects were identified by City staff for inclusion in this analysis. All intersections will operate at acceptable levels of service, at LOS E or better. All roadway segments will operate at LOS C.

EPAP Plus Project Specific Impacts. The addition of the project will maintain acceptable levels of service at the study intersections, at LOS E or better. All roadway segments will operate at LOS D or better. The project's impacts are not significant, and no additional mitigation is required.

Cumulative Conditions.

Scenario #1 - Cumulative Year 2035 Conditions without Project. The analysis of Cumulative 2035 impacts is intended to consider the impact of this project within the context of future conditions in the City of Davis. Cumulative 2035 plus Project traffic volumes along the study roadways were developed by Fehr and Peers using the Davis Travel Demand Model. Project traffic was subtracted from these volumes to develop the 2035 No Project conditions. All intersections will operate at LOS E or better. This is consistent with the City of Davis minimum LOS E threshold. All roadway segments will operate at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No improvements are needed.

Scenario #1 - Cumulative Year 2035 Conditions with Project. As noted above Fehr and Peers developed 2035 Cumulative volumes which included the project; the 2035 model also included the revised Nishi site development, referred to as Nishi 2.0. Under these conditions each intersection will operate at LOS E or better. This is consistent with the City of Davis minimum LOS E threshold. All roadway segments will continue to operate within acceptable City thresholds, at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No mitigations are identified.

Scenario #2 - Cumulative Year 2035 Conditions with MRIC Project. Under this scenario the Cumulative 2035 conditions incorporates the MRIC site. All roadway segments will operate at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No improvements are needed.

Cumulative Year 2035 Conditions with MRIC Project plus Project. Under the Cumulative 2035 with MRIC Project plus Project scenario all roadway segments will continue to operate at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No mitigations are identified.

3820 CHILES ROAD
TRAFFIC IMPACT ANALYSIS

INTRODUCTION

Study Purpose and Objectives

This study evaluates the traffic impacts associated with the proposed apartment project at 3820 Chiles Road in Davis. The project is located along Chiles Road in the southeast quadrant of the Chiles Road / La Vida Way intersection (Figure 1). The project consists of a 222-unit apartment complex. The conceptual site plan is illustrated in Figure 2A. Access to the site will be along Chiles Road. A second alternative, 'Alternative B', was also considered. This alternative includes a 188-unit multi-family apartment complex with five single family residential units. Access for the multi-family units would remain along Chiles Road while access to the single-family homes would occur along La Vida Way (Figure 2B).

The study parameters are consistent with City of Davis guidelines. The study addresses the following traffic scenarios:

1. Existing A.M. and P.M. Peak Hour Traffic Conditions;
2. Existing Plus Project A.M. and P.M. Peak Hour Traffic Conditions;
3. Existing Plus Approved Projects (EPAP) A.M. and P.M. Peak Hour Conditions;
4. EPAP Plus Project A.M. and P.M. Peak Hour Conditions;
5. Cumulative Year 2035 Conditions under General Plan development with no development on site;
6. Cumulative Year 2035 Conditions under General Plan development plus development on site;
7. "Super Cumulative" Year 2035 Conditions with 1111 Richards Hotel, Nishi and MRIC Projects (roadway segment analysis only); and
8. "Super Cumulative" Year 2035 Plus Project with 1111 Richards Hotel, Nishi and MRIC Projects Plus Project (roadway segment analysis only).

The objective of this study is to identify what effects the projects will have on the area roadway network and local intersections.

Project Description

The 3820 Chiles Road project is an apartment complex consisting of a variety of micro studio, 1-bedroom, 2-bedroom and 3-bedroom units. Access to the project will include two access driveways along Chiles Road. The primary access driveway will be located approximately in the center of the site, about 450' from the La Vida Way intersection while a secondary access will also be provided at the eastern property line. The project intends to provide 303 on-site parking spaces within garages, carports and surface lots and 345 bicycle parking spaces with bike storage available inside one building.

The project also proposes to widen Chiles Road along the project frontage to provide two through lanes, a buffered bike lane, a landscaped median and parking along the project frontage that would accommodate about 25 vehicles.

VICINITY MAP

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 1

PROJECT DATA:							10.19.17
SITE AREA:	318,700	SF	7.19	Acres			
NUMBER OF UNITS:							
MICRO STUDIO	430	SF	16	UNITS	6,880	SF	7%
STUDIO	550	SF	-	UNITS	-	SF	0%
1 BEDROOM:	735	SF	98	UNITS	72,030	SF	44%
2 BEDROOM:	1,080	SF	93	UNITS	100,440	SF	42%
3 BEDROOM:	1,250	SF	15	UNITS	18,750	SF	7%
			222	UNITS	198,100	SF	100%
ASSUMED EFFICIENCY:			76%				
COMMON AREA (CIRCULATION AND AMENITIES):					62,558	SF	
TOTAL BUILDING AREA (NOT INCLUDING GARAGE AND DECKS):					260,658	SF	
DENSITY:			30.9	UNITS PER ACRE			
FAR:			0.8				
PARKING REQUIREMENTS:							
VEHICULAR PARKING REQUIRED			307	SPACES			
BICYCLE PARKING REQUIRED			345	SPACES			
VEHICULAR PARKING PROVIDED:							
SURFACE			123	SPACES			
CARPORT			152	SPACES			
GARAGE (SINGLE)			28	SPACES			
GARAGE (TANDEM)			0	SPACES			
			303	SPACES	1.36	SPACES PER UNIT	
CHILES ROAD ON STREET PARKING			25	SPACES			
BICYCLE PARKING PROVIDED:			345	SPACES			
OPEN SPACE REQUIREMENT:							
OPEN SPACE REQUIRED:			50,550	SF			
OPEN SPACE PROVIDED:							
PRIVATE BALCONIES:			14,652	SF	66	PER UNIT	
LEASING/CLUBHOUSE/FITNESS			-	SF			
USABLE LANDSCAPED AREA:			93,282	SF			
			107,934	SF			

0 50' 100' 200' 300'

3820 CHILES ROAD

DAVIS, CALIFORNIA

CONCEPTUAL SITE PLAN

DATE: 10.19.2017
PROJECT NO: 1261-0001
SCALE: 1" = 100'-0"
SHEET: –

LPAS
2484 Natomas Park Drive Suite 100 Sacramento CA 95833
916 443 0335 lpasdesign.com

PREFERRED SITE PLAN

SITE AND ZONING INFORMATION

PARCEL 1 SITE AREA	6.28 ACRES
PARCEL 2 SITE AREA	0.95 ACRES
5 SINGLE FAMILY DETACHED 2-STORY HOMES ALLEY LOADED HOMES AT 2,000 - 2,300 SF	
PROPOSED ZONING	R-HD & R1/R2

PROJECT DATA

NUMBER OF UNITS		
STUDIO	12 UNITS	6%
1 BEDROOM	76 UNITS	40%
2 BEDROOM	88 UNITS	48%
3 BEDROOM	12 UNITS	6%
	188 UNITS	100%
MULTI- FAMILY DENSITY	29.95 UNITS PER ACRE	

VEHICULAR PARKING REQUIRED	266 SPACES (1.41 SPACES PER UNIT)
BICYCLE PARKING REQUIRED	304 SPACES
VEHICULAR PARKING PROVIDED	270 SPACES (1.44 SPACES PER UNIT)
BICYCLE PARKING PROVIDED	304 SPACES

3820 CHILES ROAD

3820 CHILES ROAD, DAVIS CA 95618

CONCEPTUAL SITE PLAN B
MULTIFAMILY / SINGLE FAMILY

DATE: 07.10.2017
PROJECT NO: 1261-0001
SCALE: 1" = 100'-0"
SHEET: --

LPAS

2484 Natomas Park Drive Suite 100 Sacramento CA 95833
916 443 0335 lpasdesign.com

CONCEPTUAL SITE PLAN B

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 2b

EXISTING SETTING

Study Area

This study addresses traffic conditions on the adjacent roadways that will be used to access the site including a review of the site plan. Freeway segments along I-80 were not studied, which is consistent with the SACOG response to the City's request for confirmation that the project was consistent with the Metropolitan Transportation Plan/Sustainable Communities Strategy for 2036 (MTP/SCS). SACOG determined that the project is consistent with the MTP/SCS and as they noted, it is the responsibility of the lead agency to make the final determination on a project's consistency with the MTP/SCS. The text that follows describes these studied facilities.

Roadways

Chiles Road. Chiles Road is identified as a minor arterial between Cowell Blvd and Mace Blvd. In the project vicinity Chiles Road is designated as a 2+ lane facility in the Davis General Plan; it currently has a 2 lane configuration with left turn lanes at major intersections. The posted speed along Chiles Road is 40 miles per hour (mph) and bike lanes are present.

Cowell Boulevard. Cowell Boulevard is classified as a major arterial roadway from Richards Blvd to just east of Chiles Road. The roadway is a major east-west facility through south Davis. Cowell Blvd is designated as a 4 or 4+ lane roadway between the I-80 interchange and Pole Line Road – Lillard Drive. The roadway is identified as a 2+ facility between Pole Line Road – Lillard Drive and Mace Blvd. The posted speed along Cowell Blvd is 40 mph west of Chiles Road / Drummond Avenue and 35 mph east of the intersection. Bike lanes are present along Cowell Blvd.

La Vida Way. La Vida Way provides a connection between Chiles Road and Cowell Blvd; however, it is a classified as a local roadway. The roadway is unstriped and provides for two-way traffic. The posted speed along La Vida Way is 25 mph. Parking along La Vida Way is prohibited along the project (east) side of the street between El Segundo Avenue and Becerra Way.

Mace Blvd. Mace Blvd is classified as a Major Arterial roadway along its entire length through the City. The roadway is a four-lane roadway from 2nd Street to just south of El Macero Drive. Mace Blvd consists of two northbound lanes from Blue Oak Place to El Macero Drive with a single lane southbound. Single lanes are present in both directions south of Blue Oak Place. The City is currently undertaking a complete street project between Cowell Blvd and Redbud Drive. The project will reduce the travel lanes in this segment to one lane in each direction, add buffered bike lanes in both directions and add a two-way cycle track. In addition, the Mace Blvd / Cowell Blvd intersection will be redesigned to the Davis "Dutch Intersection" configuration.

Intersections

The quality of traffic flow is often governed by the operation of the local intersections. For this study nine existing intersections were identified for evaluation. The study locations include:

The **Cowell Blvd / Pole Line Road / Lillard Drive intersection** is a signal controlled intersection west of the project site. The intersection is a four-leg intersection. The northbound Lillard Drive approach includes a dedicated left turn lane, two through lanes and a free right turn lane while southbound Pole Line Road includes a dedicated left turn lane, one through lane and an exclusive right turn lane. Cowell Blvd includes dedicated left and right turn lanes and a single through lane. Pedestrian access is provided with crosswalks across all approaches. Bicycle lanes exist along all approaches.

The **Cowell Blvd / Chiles Road / Drummond Avenue intersection** is a single lane roundabout completed in January 2018. Bicycle lanes exist along all approaches and sidewalks are present in the surrounding area.

The **Chiles Road / La Vida Way intersection** is a tee intersection and is stop controlled along La Vida Way. Eastbound Chiles Road includes a single through-right lane while the westbound approach includes a 100'± left turn lane and a through lane. Northbound La Vida Way includes a single lane for both left and right turns. Bike lanes are present along Chiles Road and sidewalk is present along La Vida Way and the south side of Chiles Road.

The **Chiles Road / Ensenada Drive intersection** is a tee intersection and is stop controlled along Ensenada Drive. Eastbound Chiles Road includes a single through-right lane while the westbound approach includes single through-left lane. Northbound Ensenada Drive includes a single lane for both left and right turns. Bike lanes are present along all of Chiles Road and sidewalk is present along Ensenada Drive and the south side of Chiles Road.

The **Chiles Road / I-80 Eastbound Off-Ramp intersection** is a signal controlled intersection south of I-80. The intersection has three legs. The eastbound approach includes a single through lane while the westbound approach includes two through lanes that merge into a single lane west of the intersection. The eastbound hook off-ramp includes a dual lane off-ramp that widens prior to the intersection to provide two left turn lanes and one right turn lane. Bicycle lanes are present along on the west leg of Chiles Road.

The **Mace Blvd / Chiles Road intersection** is a four-way signal controlled intersection east of the project site. The eastbound approach includes two left turn lanes, a through lane and a free right turn lane. All four lanes are about 325', and extend to the I-80 eastbound off-ramp intersection. The westbound approach includes left, through and right turn lanes, with the turn lanes each about 150'. The northbound Mace Blvd approach includes a 125' left turn lane, a through lane and a through-right lane. The outside lane includes a short one-car free right turn lane. The southbound approach includes a 300'± left turn lane, two through lanes and a 150'± free right turn lane. The signal phasing includes protected left turns on all approaches.

The **Mace Blvd / I-80 Eastbound On-Ramps intersection** provides freeway access to eastbound I-80 for both northbound and southbound Mace Blvd. The southbound ramp is a loop ramp while the northbound ramp is directional. Both ramp entrances are free movements.

The **Mace Blvd / I-80 Westbound Ramps intersection** is a signal controlled intersection. The intersection serves westbound I-80 off-ramp and on-ramp traffic in an L-1 diamond configuration. The northbound approach includes two 260'± left turn lanes and two through lanes. The southbound approach includes two through lanes and a 275'± right turn lane. The westbound off-ramp is a two-lane off-ramp which widens to three lanes that includes a free right turn lane, a left-through lane and a 685'± left turn lane. The westbound free right turn lane has a dedicated accepting lane north of the intersection. This third lane merges into the two through lanes about 325' north of the ramp intersection. Bicycle lanes are present along Mace Blvd.

The **Mace Blvd / 2nd Street** intersection is a signal controlled intersection with protected left turn phasing. The northbound approach includes a 300'± left turn lane, a through lane and a through-right lane. The southbound approach includes a 200'± left turn lane, two through lanes and a free right turn lane; the right turn lane is a trap lane from the southbound departure of the 2nd Street / Alhambra Drive intersection. The eastbound approach incudes a 250'± left turn lane, a through lane and a free right turn lane; the right turn lane is a trap lane from the eastbound departure of the 2nd Street / Fermi Place - Target intersection. For both free right turn movements vehicles are required to yield to through movement vehicles. Bicycle lanes are present along all approaches.

Level of Service Analysis

Methodology. *Level of Service Analysis* has been employed to provide a basis for describing existing traffic conditions and for evaluating the significance of project traffic impacts. Level of Service measures the *quality* of traffic flow and is represented by letter designations from "A" to "F", with a grade of "A" referring to the best conditions, and "F" representing the worst conditions. Table 1 presents typical Level of Service characteristics.

Local agencies adopt minimum Level of Service standards for their facilities. The City of Davis identifies LOS 'E' as the acceptable Level of Service within the City during the peak hour while LOS F is acceptable for the 'Core Area'. The *2010 Highway Capacity Manual* was used to provide a basis for describing existing traffic conditions and for evaluating the significance of project traffic impacts.

Various software programs have been developed to assist in calculating intersection Level of Service, and the level of sophistication of each program responds to factors that affect the overall flow of traffic. Synchro-SimTraffic simulation software was used for intersection analysis along the Mace Blvd corridor to account for the effects of closely spaced traffic signals. This included intersections between 2nd Street and Chiles Road and the Chiles Road / I-80 Eastbound Off-ramp intersection.

Synchro-SimTraffic software is a stochastic model, i.e. randomness is present when running the simulations. The results will vary within each scenario and between scenarios. This may result in some intersections having lower delays in the Plus Project scenario than in the No Project scenario. The simulation results contained herein reflect the average of the mean 10 one-hour simulation runs selected from a 20-run sample.

The remaining signalized and unsignalized stop controlled intersections utilized the HCM 2010 methodology documented in the 2010 Highway Capacity Manual. This method considers gap acceptance and the average delay of motorists on minor streets and in main line turn lanes to calculate the weighted average total delay for each controlled movement and for the intersection as a whole. The intersection levels of service presented in this analysis are based on the weighted average total delay per vehicle for the intersection as a whole based on the delay thresholds shown in Table 1.

The Cowell Blvd / Chiles Road – Drummond Avenue intersection was analyzed using SIDRA 7.0.

TABLE 1
LEVEL OF SERVICE DEFINITIONS

Level of Service	Signalized Intersection	Unsignalized Intersection	Roadway (Daily)
"A"	Uncongested operations, all queues clear in a single-signal cycle. Delay ≤ 10.0 sec	Little or no delay. Delay ≤ 10 sec/veh	Completely free flow.
"B"	Uncongested operations, all queues clear in a single cycle. Delay > 10.0 sec and ≤ 20.0 sec	Short traffic delays. Delay > 10 sec/veh and ≤ 15 sec/veh	Free flow, presence of other vehicles noticeable.
"C"	Light congestion, occasional backups on critical approaches. Delay > 20.0 sec and ≤ 35.0 sec	Average traffic delays. Delay > 15 sec/veh and ≤ 25 sec/veh	Ability to maneuver and select operating speed affected.
"D"	Significant congestion of critical approaches but intersection functional. Cars required to wait through more than one cycle during short peaks. No long queues formed. Delay > 35.0 sec and ≤ 55.0 sec	Long traffic delays. Delay > 25 sec/veh and ≤ 35 sec/veh	Unstable flow, speeds and ability to maneuver restricted.
"E"	Severe congestion with some long standing queues on critical approaches. Blockage of intersection may occur if traffic signal does not provide for protected turning movements. Traffic queue may block nearby intersection(s) upstream of critical approach(es). Delay > 55.0 sec and ≤ 80.0 sec	Very long traffic delays, failure, extreme congestion. Delay > 35 sec/veh and ≤ 50 sec/veh	At or near capacity, flow quite unstable.
"F"	Total breakdown, stop-and-go operation. Delay > 80.0 sec	Intersection blocked by external causes. Delay > 50 sec/veh	Forced flow, breakdown.
Sources: 2010 Highway Capacity Manual, Transportation Research Board (TRB).			

Significance Thresholds.

Intersections. Significant traffic impacts at intersections within the City of Davis jurisdiction are defined when the addition of proposed project traffic causes any of the following:

a) For signalized intersections outside the Core Area, causes overall intersection operations to deteriorate from an acceptable level (LOS E or better in the AM or PM peak hour) to an unacceptable level (LOS F in the AM or PM peak hour);

b) For signalized intersections outside the Core Area, exacerbate unacceptable (LOS F) operations by increasing an intersection's average delay by five seconds or more;

c) For unsignalized intersections outside the Core Area, causes the worst-case movement (or average of all movements for all-way stop-controlled intersections) to deteriorate from an acceptable level (LOS E or better in the AM or PM peak hour) to an unacceptable level (LOS F in the AM or PM peak hour) and meet the California Manual on Uniform Traffic Control Devices (MUTCD) peak hour signal warrant;

d) For unsignalized intersections outside the Core Area that operate unacceptably (LOS F in the AM or PM peak hour) and meet MUTCD's peak hour signal warrant without the project, exacerbate operations by increasing the overall intersection's volume by more than one percent; or

e) For unsignalized intersections that operate unacceptably, but do not meet MUTCD's peak hour signal warrant without the project, add sufficient volume to meet the MUTCD peak hour signal warrant.

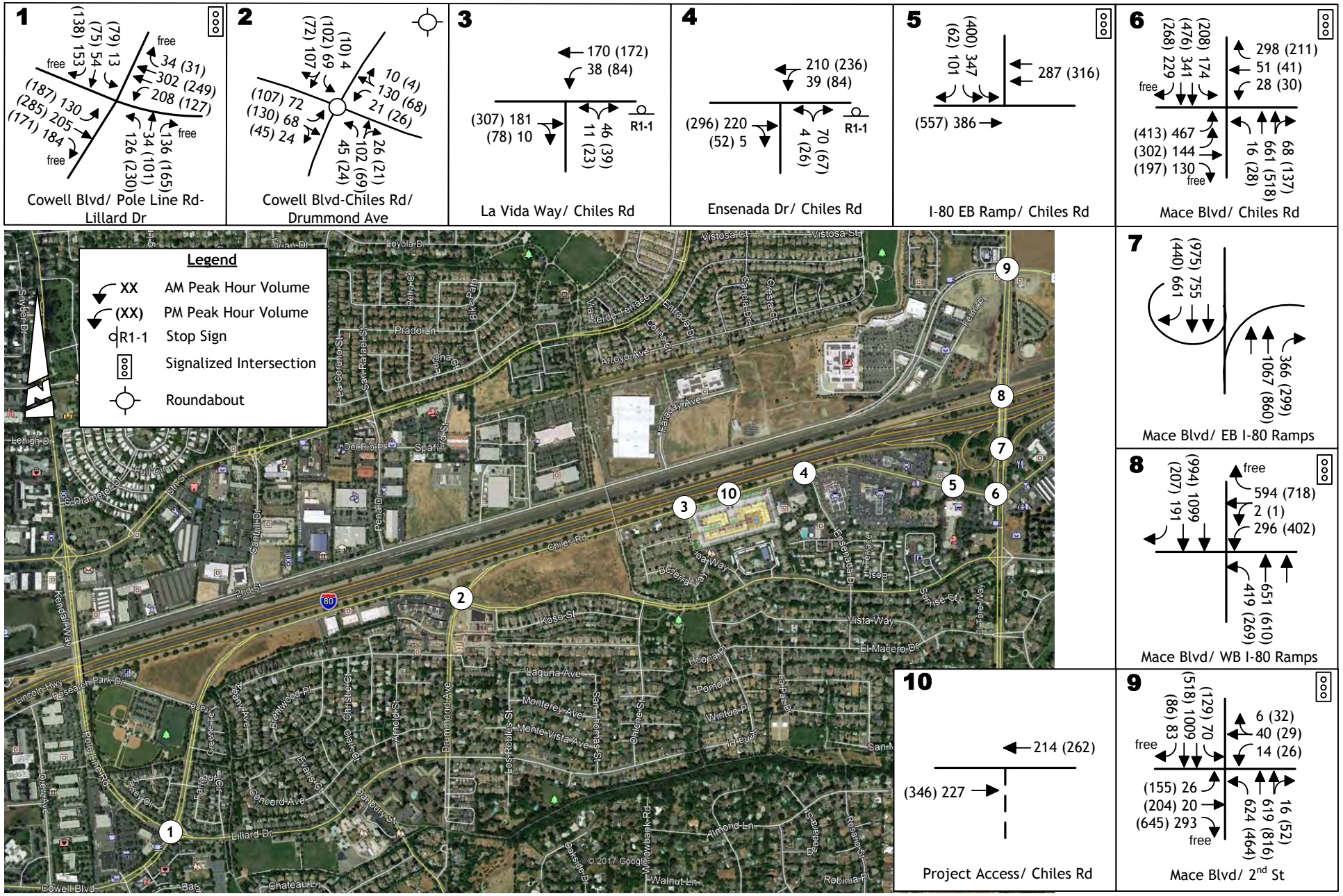
Roadway Segments. Significant traffic impacts on roadway segments within the City of Davis are defined when the addition of proposed project traffic causes any of the following:

a) The operating level of a roadway segment deteriorates from LOS E (or better) to LOS F; or

b) The traffic volume on a roadway segment already operating at LOS F, without the project, increases by more than five percent.

Existing Traffic Conditions

A.m. and p.m. traffic counts data were assembled for this analysis. New counts were conducted in mid-December 2017 while Davis School District and UC Davis schools were in session. However, the Chiles Road / Cowell Blvd roundabout was not completed, and an intersection detour was still in place. The construction was assumed to have re-routed traffic and these counts were adjusted by Fehr and Peers while developing Cumulative 2035 volumes based on their City-wide travel demand model (TDM). Figure 3 displays the adjusted Existing traffic volumes for the study intersections.



KD Anderson & Associates, Inc.
Transportation Engineers

EXISTING TRAFFIC VOLUMES AND LANE CONFIGURATIONS

6581-01 RA 4/12/2018

figure 3

Intersection Levels of Service. The Level of Service for signalized and unsignalized intersections is based on and measured in terms of the length of control delay occurring during the peak fifteen-minute analysis period within the peak hour. Table 2 summarizes current Levels of Service at the study area intersections during the a.m. and p.m. peak hours. The peak hours occur inside the peak 2-hour periods of 7:00 to 9:00 a.m. and 4:00 to 6:00 p.m. As shown, all intersections currently operate at LOS D or better which satisfies minimum City standards.

TABLE 2
EXISTING PEAK HOUR LEVELS OF SERVICE AT INTERSECTIONS

Location	Control	AM Peak Hour		PM Peak Hour		Peak Hour Warrant Met?
		LOS	Average Delay (secs)	LOS	Average Delay (secs)	
1. Cowell Blvd / Pole Line Rd / Lillard Dr	Signal	B	18	C	21	N/A
2. Cowell Blvd / Chiles Rd / Drummond Ave	Roundabout	A	6	A	6	N/A
3. Chiles Rd / La Vida Way NB WB left turn	NB Stop	 B A	 10 8	 B A	 13 8	No
4. Chiles Rd / Ensenada Dr NB WB left turn	NB Stop	 B A	 10 8	 B A	 13 8	No
5. Chiles Rd / I-80 EB Off-Ramp	Signal	B	18	B	12	N/A
6. Chiles Rd / Mace Blvd	Signal	C	26	C	26	N/A
7. Mace Blvd / I-80 EB On-Ramps NB On SB On	Uncontrolled	 A B	 1 12	 A A	 1 7	N/A
8. Mace Blvd / I-80 WB Ramps	Signal	C	22	C	20	N/A
9. Mace Blvd / 2nd St	Signal	D	42	D	46	N/A

N/A - Not Applicable

Traffic Signal Warrants. Traffic volumes at the two unsignalized intersections were evaluated to determine whether the CAMUTCD peak hour traffic signal warrant was met. This warrant, which analyzes peak hour delays and peak hour volumes, is frequently the first warrant that is satisfied when determining if an intersection should be signalized. Neither of the study intersections carry volumes that meet the peak hour warrant, and it is unlikely that any other warrant would be met under existing traffic conditions. Other warrants include an 8-hour vehicular warrant, a 4-hour vehicular warrant, a pedestrian volume warrant, school crossing warrant, coordinated signal system warrant, crash experience warrant and a roadway network warrant. A cursory review of the vehicle, pedestrian and bicycle volumes indicated that these warrants did not require full evaluation.

Roadway Levels of Service. Roadway Level of Service was analyzed under Existing conditions. The approach was consistent with that identified in the MRIC DEIR. Roadway segment Level of Service was identified using LOS thresholds for peak hour volumes developed by Fehr & Peers for the MRIC DEIR based on City of Davis roadway characteristics and the roadway capacity methodology presented in the *2010 Highway Capacity Manual.* This approach defines peak hour capacities based on roadway features including number of lanes, design speed, intersection spacing, horizontal and vertical curvature, and other factors. Table 3 presents the Level of Service thresholds employed for the roadway segment analysis.

TABLE 3
ROADWAY SEGMENT LOS DEFINITIONS

Functional Classification	LOS Peak Hour Volume Not to Exceed (vph)		
	C	D	E
4-Lane Major Arterial	3,170	4,400	4,770
2-Lane Major Arterial	1,370	1,650	1,780
2-Lane Minor Arterial	1,030	1,450	1,750
Collector	660	920	1,110
Local	360	510	610
Source: Mace Ranch Innovation Center DEIR			

Table 4 presents the peak hour roadway segment traffic volumes along five study segments. All roadway segments will operate at LOS C.

TABLE 4
EXISTING ROADWAY SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	Existing Conditions (vph)	
			Volume	LOS
Cowell Blvd	Pole Line Rd to Chiles Rd / Drummond Ave	Major Arterial	611	C
	Chiles Rd / Drummond Ave to Ensenada Dr	Minor Arterial	259	C
Chiles Rd	Cowell Blvd to Project	Minor Arterial	602	C
	Project to EB I-80 Off-Ramp	Minor Arterial	935	C
La Vida Way	Chiles Rd to Cowell Blvd	Local	224	C
vph – vehicles per hour				

Non-Automobile Transportation

Public Transit. Unitrans and Yolo Bus provide public fixed-route transit service in Davis. There are no scheduled routes along Chiles Road between Cowell Blvd and Mace Blvd. However, Unitrans Q and P routes operate along Cowell Blvd between Cowell Blvd and Mace Blvd. The nearest Unitrans stop is at the Cowell Blvd / La Vida Way intersection about 700 feet south of the project. The facilities serving the area of the proposed project include:

1. ***Unitrans***. This is operated by the Associated Students of the University of California Davis (ASUCD). The 'P' and 'Q' routes provide citywide service. The 'P' route provides counterclockwise service around the City while the 'Q' route provides clockwise service. Both routes travel along Cowell Blvd and stop at the La Vida Way intersection. The 'P' and the 'Q' routes operate with the first bus departing the Memorial Union at 6:30 a.m. and the last bus arriving at 11:00 p.m. Monday through Thursday; Friday service operates from 6:30 a.m. to 9:00 p.m. Weekend service is provided for both routes with the first bus departing F Street at Covell Blvd at 8:24 a.m. The first bus departing the Memorial Union leaves at 9:00 a.m. The last bus arrives at the memorial Union at 7:00 p.m. The routes operate at approximately 30 minute headways during the midweek with headways extending to one hour after 6:00 p.m. while weekend service operates at about one hour headways.

2. ***Yolo Bus.*** Yolo Bus provides service in the project vicinity with four routes, 42A and 42B, 44, 231 and 232. Route 42A provides clockwise service between Davis, Woodland, Sacramento Airport and downtown Sacramento. Route 42B provides counterclockwise service between Davis, Woodland, Sacramento Airport and downtown Sacramento. Both routes have stops at the Chiles Road / Mace Blvd intersection. Service begins at this location with the first bus on the 42A route departing at 6:06 a.m. Monday through Friday. The last bus arrives at 11:00 p.m. Service is generally hourly with an additional run at 5:33 a.m. prior to hourly service. Weekend service begins at 7:06 a.m. from the Mace Blvd / 2nd Street intersection and operates about hourly until 9:06 p.m.

   The first bus departing along the 42B route leaves at 6:45 a.m. Monday through Friday and operates on about a one hour headway. The last bus arrives at 10:21 p.m. Service is generally hourly with an additional run at 5:53 a.m. prior to hourly service. Weekend service begins at 7:45 a.m. from the Mace Blvd / 2nd Street intersection and operates hourly until 10:23 p.m.

   Route 44 operates Monday through Friday with three runs into Sacramento in the a.m. and p.m. The route stops at the Mace Blvd / Chiles Road intersection. The morning runs stop at this intersection beginning at about 6:26 with the third bus departing about 7:51 a.m. In the evening the first bus arrives at the intersection at about 5:03 with the third bus arriving about 5:53. This route does not operate on weekends. Additional stops are located closer to the site, along Cowell Blvd near La Vida Way and along Ensenada Drive at Chiles Road (outbound only). As these stops are not time stamped it is estimated that the buses would arrive about two to three minutes before the bus reaches

the Mace Blvd / Chiles Road stop and about three minutes after it leaves the Mace Blvd / Chiles Road stop.

Route 231 is an express bus that operates only during the midweek with a single run in the evening arriving at the Mace Blvd / Chiles Road intersection at about 6:47 p.m.

Route 232 operates only during the midweek with a single run in the morning leaving the Mace Blvd / Chiles Road intersection at about 6:51 a.m. The return trip arrives from Sacramento at about 6:20 p.m.

Yolo Bus also operates a 'Quick Trip' (QT) route between the Chiles Road / Mace Blvd intersection and the Yolobus Facility in Woodland. The bus leaves this intersection at 10:23 p.m. every day. There are no inbound buses to this intersection.

Bicycle and Pedestrian Facilities. Bicycle and pedestrian facilities are available throughout the City of Davis. The City has developed an extensive bicycle system connecting with the networks on the UCD campus and in Yolo County. On-street and off-street facilities are available in the project area. Bike lanes are present along Chiles Road between Cowell Blvd and the east City limit. In addition, bike lanes exist along Cowell Blvd, Mace Road / Covell Blvd and Pole Line Road. Access to the Dave Pelz bike crossing of I-80 is available from Willow Creek Park just west of the project site.

Sidewalk is present along the improved sections of Chiles Road, from approximately the Dave Pelz overcrossing east to Mace Blvd. The north side of Chiles Road has sidewalk from the west side of University Honda to the I-80 Eastbound Off-Ramp intersection. Sidewalk is present along La Vida Way and Ensenada Drive.

PROJECT IMPACTS

Project Characteristics

The development of this project will attract additional traffic to the project site. The amount of additional traffic on a particular section of the street network is dependent upon two factors:

I. Trip Generation, the number of new vehicular trips generated by the project, and
II. Trip Distribution and Assignment, the specific routes that the new traffic takes.

Vehicular Trip Generation. Trip generation is determined by identifying the type and size of land use being developed, and recognized sources of trip generation data may then be used to calculate the total number of trip ends. The trip generation of the proposed project was computed using two sources. Daily traffic was based on trip generation rates contained in the City's traffic model while a.m. and p.m. peak hour trips were based upon the rates published in *Trip Generation* (Institute of Transportation Engineers, 10th Edition, 2017).

The project considers two alternative developments for the site. The preferred development includes 222 multi-family units while 'Alternative B' includes 188 multi-family units and 5 single family units.

Table 5 displays the resulting daily, a.m. and p.m. peak hour trip generation for the preferred project and 'Alternative B'. The proposed project is expected to generate 1,323 daily trips with 102 a.m. and 120 p.m. peak hour trips while Alternative 'B' would generate 1,184 daily trips with 91 a.m. and 109 p.m. peak hour trips. Thus, the preferred project presents a worst-case scenario.

Vehicle Trip Distribution. The distribution of project vehicular traffic was determined based on review of the existing traffic counts at the surrounding intersections and knowledge of the City's attractors and destinations. Table 6 displays the trip distribution assumptions used for the proposed projects.

Vehicle Trip Assignment. Traffic generated by the project was assigned to the study area street system based on the projected distribution percentages. Figure 4 displays the project generated traffic alone assuming access as proposed. Figure 5 displays the resulting sum of existing a.m. and p.m. peak hour volumes and project trips at the study intersections for the Existing plus Project condition.

TABLE 5
PROJECT VEHICLE TRIP GENERATION

Land Use	Amount	Trip Generation Rate					Trips				
		Daily	AM Peak Hour		PM Peak Hour		Daily	AM Peak Hour		PM Peak Hour	
Proposed Project											
Multifamily Residential	222 Units	5.961*	0.46†		0.55†		1,323	102		120	
			In	**Out**	**In**	**Out**		**In**	**Out**	**In**	**Out**
Multifamily Residential			23%	77%	63%	37%		23	78	76	44
Total New Trips - Directional								**23**	**78**	**76**	**44**
Alternative B Project											
Single Family Residential	5 Units	12.82*	0.74†		0.99†		64	4		5	
Multifamily Residential	188 Units	5.961*	0.46†		0.55†		1,120	87		104	
Total New Trips							1,184	91		109	
			In	**Out**	**In**	**Out**		**In**	**Out**	**In**	**Out**
Single Family Residential			25%	75%	63%	37%		1	3	3	2
Multifamily Residential			23%	77%	63%	37%		20	67	65	38
Total New Trips - Directional								**21**	**70**	**68**	**40**

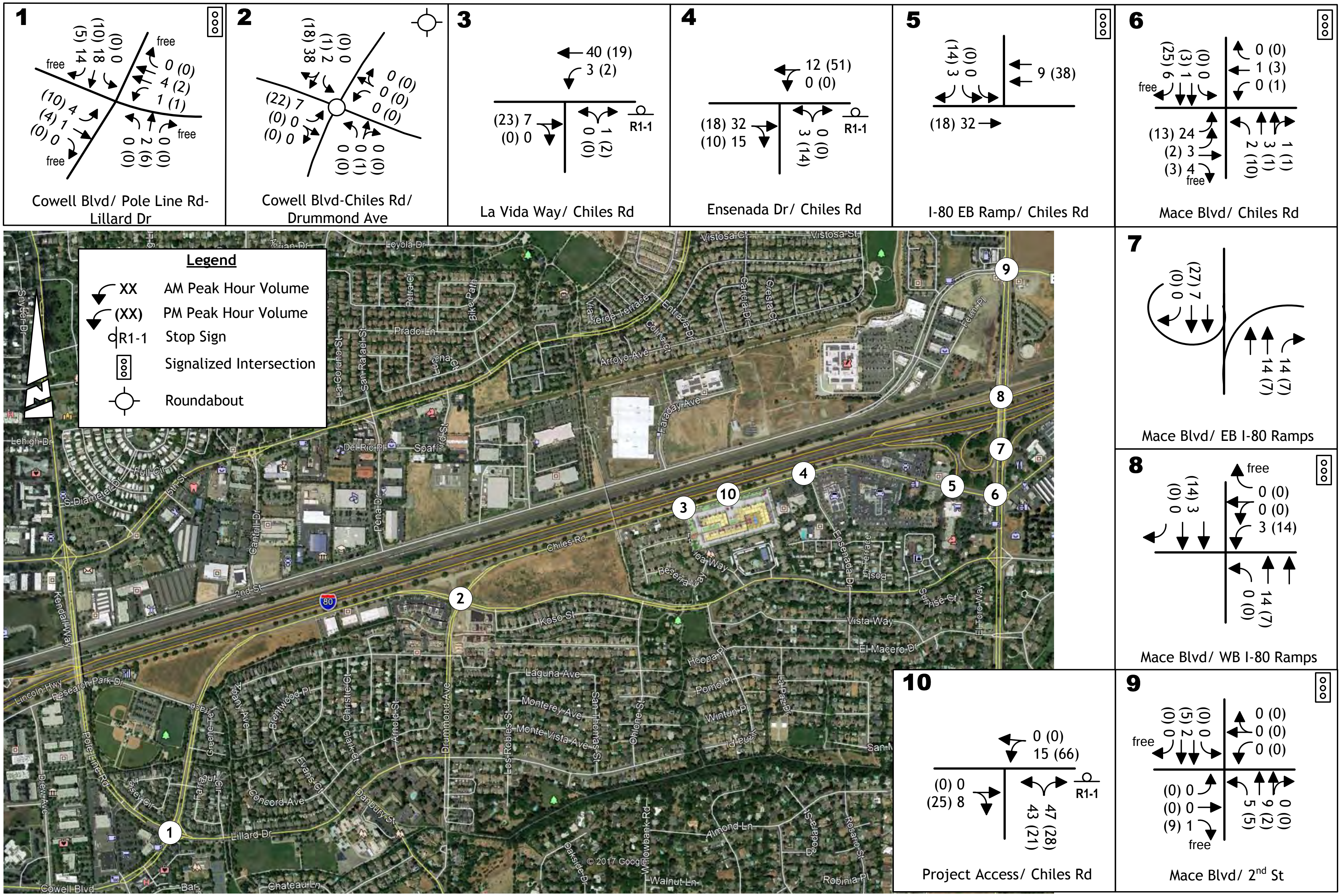
* City traffic model traffic daily trip generation rate

† Rates from ITE *Trip Generation*

Note - numbers may not match due to rounding

TABLE 6
TRIP DISTRIBUTION

Route	% of Total Trips	
	AM	**PM**
North on Mace Blvd	10%	5%
West on 2nd Street	5%	10%
To / From I-80 eastbound	15%	15%
East on Chiles Road	5%	5%
To / From El Macero Center / Surrounding Commercial	15%	20%
South on Mace Blvd	2%	2%
To / From University Research Park	8%	8%
North on Pole Line Rd	20%	15%
To / From I-80 westbound	15%	15%
West on Richards Blvd	5%	5%
Total	100%	100%

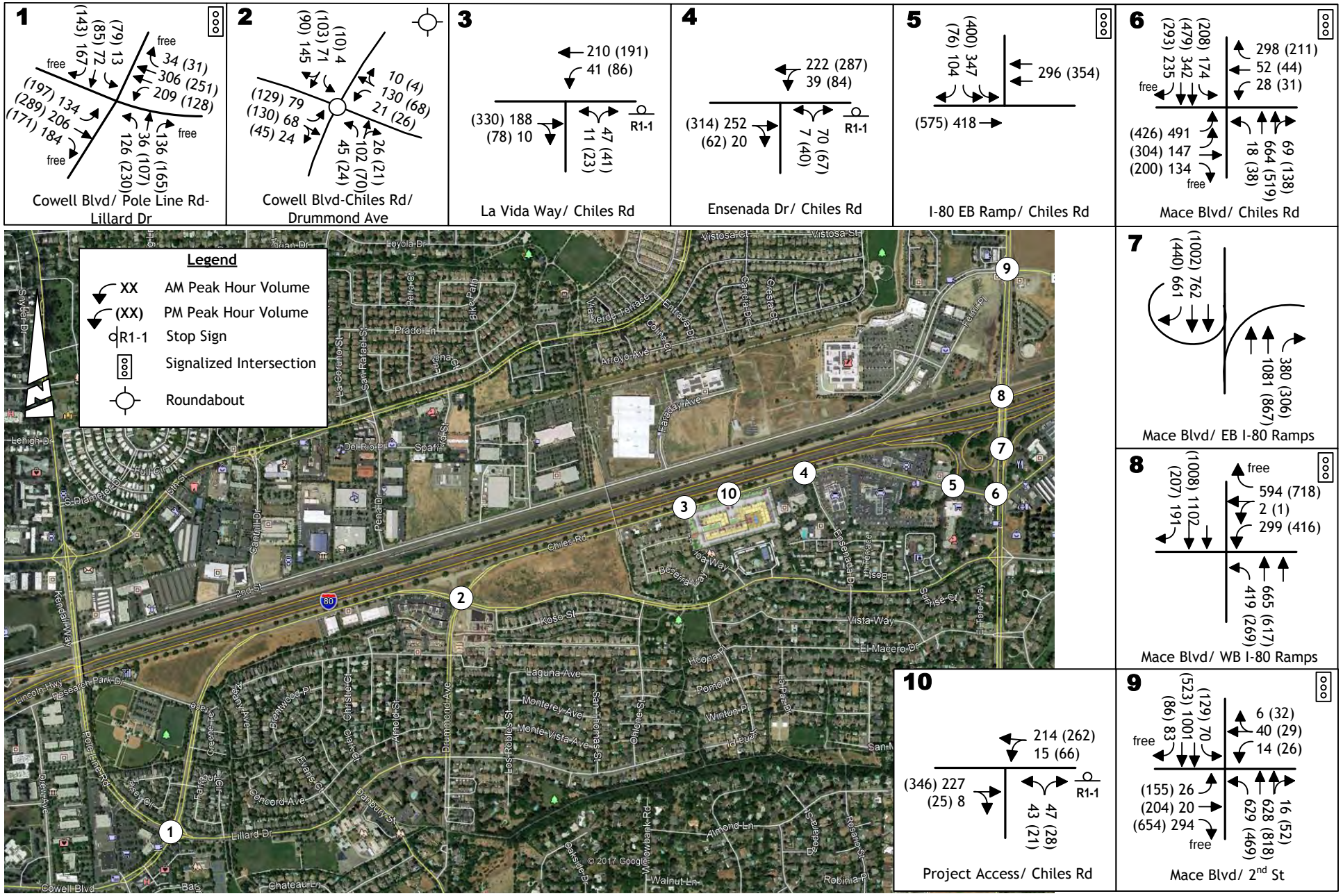


PROJECT ONLY
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 4



EXISTING PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 5

Existing Plus Project Level of Service Impacts

Intersection Levels of Service. Table 7 displays the a.m. and p.m. peak period level of service at each study intersection with the proposed project. As shown, all intersections will continue to operate within the City's level of service threshold, at LOS D or better. None of the unsignalized study intersections will carry traffic volumes that meet the peak hour signal warrant. Thus, the project's traffic impacts are not significant from the standpoint of City LOS policy.

Roadway Levels of Service. Table 8 presents the peak hour roadway segment traffic volumes along the five study segments. All roadway segments will continue to operate at LOS C.

Site Access Analysis

This report section provides additional details regarding the operation of the site access on Chiles Road.

Circulation Layout. The project is located along Chiles Road east of La Vida Way. The primary driveway access to the site will be situated about 400 feet east of La Vida Way. An existing driveway at the east end of the site will be used as a secondary access, providing right-in, right-out access. Carport and surface parking will be provided on-site around the perimeter. A continuous interior roadway will loop around the site and provide access for emergency vehicles. A multi-use pathway / secondary emergency vehicle access is proposed along La Vida Way at the El Segundo Avenue intersection. The main driveway will include an island separating inbound and outbound traffic. Upon entering this driveway, a motorist would make an immediate left or right turn to reach their designated parking space. The exit route involves a 90° left or right turn on the approach to Chiles Road. The outbound approach to Chiles Road includes a single lane approach with a throat depth of about 60 feet. This is adequate to store two vehicles.

Based on the level of service analysis a westbound left turn lane is not necessary to queue inbound vehicles. However, the project proponents, pending receipt of this study, had proposed to widen Chiles Road along the project frontage. The widening would include two 10-foot through lanes, a 7-foot bike lane with a 3-foot buffer adjacent to the motor vehicle lane, a 10-foot median and a 7-foot parking lane. The parking lane would accommodate approximately 25 vehicles. The landscaped median would have a break at the project's main driveway with a left turn lane developed to provide vehicle queuing outside of the through lane. A short acceleration lane would also be provided for vehicles exiting the project driveway heading westbound. The median would continue east to the east driveway which is planned to provide right-in, right-out access only. To eliminate left turn movements, it is suggested that the raised median be extended across the driveway. The proposed widening is shown in Figure A-1 in the Appendix.

Pedestrian Access & Circulation / Impacts

The project site is located along a minor arterial roadway and many facilities are available for alternative transportation modes. Sidewalk is present along the south side of Chiles Road and along La Vida Way. The sidewalk along Chiles Road will allow Sacramento-bound commuters

to walk to the Yolo Bus stop at the Ensenada Drive / Chiles Road intersection. A multi-use pathway connection from the project site onto La Vida Way is proposed opposite El Segundo Avenue. This will allow property residents to access the Unitrans and Yolo Bus routes along Cowell Blvd. without having to walk around the perimeter of the site. This pathway will also provide a direct route to the Davis off-road bikeway system at Willow Creek Park and will be a preferable route for students to access the suggested routes for Pioneer Elementary School and Harper Middle School discussed below.

Suggested Routes to School. Children living at the 3820 Chiles Road site will attend Pioneer Elementary School east of Mace Blvd, Harper Middle School on East Covell Blvd and Davis High School. The City's Suggested Routes to School Map for Pioneer Elementary School indicates that the routes nearest the project site begin at the Cowell Blvd / La Vida Way intersection and the Ensenada Drive / Chiles Road intersection. Both routes direct students to the Mace Blvd / Cowell Blvd intersection and east to the school via either El Cemonte Avenue / Swingle Drive or Cowell Blvd / Schmeiser Avenue. Sidewalk is present along Chiles Road, Ensenada Drive and La Vida Way to allow students walking to school to follow the suggested routes. Students biking to school might consider using Ensenada Drive outbound to school as the Cowell Blvd / Ensenada Drive intersection is all-way stop controlled. This would provide easier crossing of Cowell Blvd for bicycling students to ride with traffic. On the return ride, bicyclists riding to La Vida Way would benefit from making all right turns back to the project site.

Middle School age students will attend Harper Middle School located on the north side of I-80 along East Covell Blvd. The suggested outbound route for students is to use the multi-use pathway connection along Becerra Way via La Vida Way. The pathway would be followed to the Dave Pelz overcrossing of I-80. Pedestrians and bicyclists would continue along the north side pathway to 5th Street, then continue east past Alhambra Drive onto Oceano Way. They can continue along Oceano Way to Arena Drive and then proceed east to the school. The inbound route would follow the same route in reverse.

Bicycle Circulation / Impacts

Bicyclists can currently use the bike lanes along Chiles Road or Cowell Blvd to head west towards downtown Davis and the University or east towards Mace Blvd and the El Macero Shopping Center. Bicyclists leaving the site and traveling west along Chiles Road can cross at either the driveway or La Vida Way. Sight distance along Chiles Road is at least 900 feet in both directions at both locations. Based on sight distance standards contained in the Caltrans Highway Design Manual, this equates to a design speed along Chiles Road of greater than 55 mph. Bicyclists heading south on La Vida Way and using the bike / pedestrian access will cross La Vida Way opposite El Segundo Avenue. The available sight distances are about 270 feet to the north and about 185 feet to the south; a 275± foot no parking zone exists along the east side of La Vida Way from El Segundo Avenue heading south. The sight distances from the access point equate to design speeds of about 37 mph for southbound traffic and about 28 mph for northbound traffic. Adequate sight distance is available for bicyclists entering both roadways.

Those bicyclists not comfortable travelling along major City streets can access the Davis pathway bike system at Willow Creek Park from Becerra Way, two blocks from the project. Once they enter the off-street system, they can travel north across I-80 via the Dave Pelz overcrossing into Mace Ranch and East Davis, and west along the multi-use pathway paralleling Cowell Blvd to Playfields Park and Pole Line Road. Additionally, bicyclists can use multiple routes to the I-80 undercrossing leading onto the UC Davis campus.

Unitrans Utilization

Unitrans operates two routes, the P and Q with stops within about 700 feet of the project. The project will introduce new riders to this route. Bus ridership data from the West Davis Active Adult Community EIR and The Cannery EIR were reviewed to determine potential Unitrans ridership for the project. An 8% transit rate was used to determine the additional Unitrans ridership. Based on the total projected trips about 106 daily trips, 8 morning and 10 evening peak hour trips are anticipated for the Chiles Road project.

According to the *Unitrans General Manager's Report Fiscal Year 2016-2017* (October 2017), certain bus lines can experience overcrowding, particularly during inclement weather conditions. Most Unitrans buses can accommodate 60 passengers without crowding, with their double decker buses accommodating 100 passengers. The report notes that daily ridership on the P and Q lines is about 28 passengers per hour on the P Line and 30 passengers per hour on the Q line. Based on the farebox recovery ratio and passenger trips per vehicle per revenue hour identified in the report, these routes are not as busy as other routes within the City. The additional peak hour trips can be supported by both routes without approaching a crowding condition.

Parking / Transportation Systems Management

The site is proposing 303 on-site motor vehicle parking spaces and 345 bicycle parking spaces. Based on the City's zoning code requirements the site should have 307 motor vehicle parking spaces and 345 bicycle parking spaces. Additional spaces are available off-site, along the project frontages.

The City's Transportation Policy 5.1 notes that parking management techniques should be employed to efficiently manage motor vehicle parking supply and promote sustainability. The 3820 site includes several characteristics with respect to site location, planned land uses, and design elements that can lead to reduced automobile use and associated emissions. These land use characteristics are further supplemented by a variety of programs already available in the project vicinity. These include accessibility to two fixed route bus services (Unitrans and Yolo Transit) within 700 feet of the project site, access to the City's existing bicycle and pedestrian network via the existing bike lanes along Chiles Road and the multi-use pathways accessible at Willow Creek Park via Becerra Way, about 800 feet away. Various amenities (e.g., supermarket and restaurants) are less than a mile away from the project and can be accessed by foot or bike. The project will provide a total of 345 bicycle parking spaces on the site.

To promote sustainability, the site could implement the following programs:

- a ridesharing and carpooling program for residents;
- promote alternative transportation by hosting various events and marketing efforts;
- on-site parking can be charged a separate fee unbundled from leases of apartments. Tenants utilizing or requiring parking could pay an additional cost for parking based on market rates;
- promote car share programs. Car sharing programs provide an easy alternative for tenants that need to run errands locally or to take trips that are not conducive to bicycling or walking. Car sharing can reduce the number of parking spaces needed onsite and reduce overall VMT. The use of a car sharing program could extend to the surrounding area based on demand for the service, as the number of users within the project may be limited;
- provide for electric vehicle charging stations on-site, which the project intends to do based on the City's EV Charging Plan.

TABLE 7
EXISTING PLUS PROJECT PEAK HOUR INTERSECTION LEVELS OF SERVICE

Location	Control	Existing				Existing Plus Project				Peak Hour Warrant Met?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
		LOS	Average Delay (secs)	LOS	Average Delay (secs)	LOS	Average Delay (secs)	LOS	Average Delay (secs)	
1. Cowell Blvd / Pole Line Rd / Lillard Dr	Signal	B	18	C	21	B	18	C	22	N/A
2. Cowell Blvd / Chiles Rd / Drummond Ave	Roundabout	A	6	A	6	A	6	A	7	N/A
3. Chiles Rd / La Vida Way										
NB Approach	NB Stop	B	10	B	13	B	10	B	14	No
WB left turn		A	8	A	8	A	8	A	9	
4. Chiles Rd / Ensenada Dr										
NB Approach	NB Stop	B	10	B	13	B	11	C	16	No
WB left turn		A	8	A	8	A	8	A	8	
5. Chiles Rd / I-80 EB Off-Ramp	Signal	B	18	B	12	B	18	B	12	N/A
6. Chiles Rd / Mace Blvd	Signal	C	26	C	26	C	26	C	27	N/A
7. Mace Blvd / I-80 EB On-Ramps										
NB On-Ramp	Uncontrolled	A	1	A	1	A	2	A	2	N/A
SB On-Ramp		B	12	A	7	B	12	A	7	
8. Mace Blvd / I-80 WB Ramp	Signal	C	22	C	20	C	23	C	21	N/A
9. Mace Blvd / 2nd St	Signal	D	42	D	46	D	37	D	52	N/A
10. Chiles Rd / Project Access										
NB Approach	NB Stop	---	---	---	---	B	12	B	14	No
WB left turn						A	8	A	8	

TABLE 8
EXISTING PLUS PROJECT ROADWAY SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	Existing Plus Project Conditions (vph)	
			Volume	LOS
Cowell Blvd	Pole Line Rd to Chiles Rd / Drummond Ave	Major Arterial	642	C
	Chiles Rd / Drummond Ave to Ensenada Dr	Minor Arterial	259	C
Chiles Rd	Cowell Blvd to Project	Minor Arterial	644	C
	Project to EB I-80 Off-Ramp	Minor Arterial	1,005	C
La Vida Way	Chiles Rd to Cowell Blvd	Local	228	C

vph – vehicles per hour

EXISTING PLUS APPROVED PROJECTS (EPAP) IMPACTS

Approved Projects

The analysis of the near term cumulative condition is intended to consider the impact of this project within the context of the "Existing Plus Approved Projects" (EPAP) conditions, (i.e. including projects that are approved or are reasonably foreseeable in the near term). City of Davis staff was contacted to identify any approved or pending projects within the project vicinity. 13 projects were identified including the following:

1) **Berry Bridge Cottages –** This project is located in South Davis on Hackberry Place and consists of eight single family residential units.
2) **The Villages at Willow Creek** – The project is located in South Davis in the southeast quadrant of Cowell Blvd and Drummond Avenue. It consists of 35 medium density single-family residential units with four units having an accessory dwelling unit.
3) **Plaza 2555** – This proposed project is located in South Davis in the northwest quadrant of the Cowell Blvd / Research Park Drive intersection. The project is intended to be residential and will include student housing. Though the project is still undefined, the most conservative data available from the City indicates the project may contain 139 single family residential units (duplex) and 61 apartments.
4) **Hyatt House Hotel** – This project is located in South Davis along Cowell Blvd west of Chiles Road. As of November 2017, the project includes a 118-room extended stay hotel.
5) **Marriott Residence Inn** – This project is located near the Target Center in the Mace Ranch area on the north side of I-80. As of November 2017, the project consists of a 120-room extended stay hotel.
6) **Creekside Apartments** – The project is located at 2990 5th Street. It is a high density affordable apartment project with 72 multi-family residential units. The resident population will include extremely low income, very low income and lower income households. Forty percent of the units will be prioritized for individuals who are disabled and / or currently homeless.
7) **Sterling Apartments** – This project is located at 2100 5th Street in East Davis just east of the post office. The DEIR for the project assumed a 244-unit apartment complex with 203 units and 727 beds for student housing and 41 units with 74 bedrooms affordable housing apartment units. The project was later reduced in unit count during the public review process.
8) **Chiles Ranch** – The project is located along E. 8th Street east of Pole Line Road and includes a total of 107 homes plus 21 accessory dwelling units. Of the 107 homes, 30 are attached units and 77 are detached.
9) **1111 Richards** – The project is located at 1111 Richards Blvd just north of I-80. As of July 2017, the project consists of a 110-room hotel and about 6,500 square feet of meeting room area and courtyard.

10) **Lincoln 40 Apartments** – This project is located on East Olive Drive east of Richards Blvd. The project is a 130-unit, 708 bed student housing apartment complex.

11) **Morris Way Apartments** – This project is located in Yolo County near South Davis and includes a 10-unit apartment project.

12) **Trackside Center** – This project is located at 901-919 3rd Street just east of downtown Davis. The project is mixed-use and contains 9,100 square feet of commercial storefront and 27 apartment units above.

13) **West Davis Active Adult Community** – This project is located in West Davis, in the northwest quadrant of Covell Blvd and Riesling Court. As of November 2017, this project includes 325 single family units and 150 affordable senior apartments.

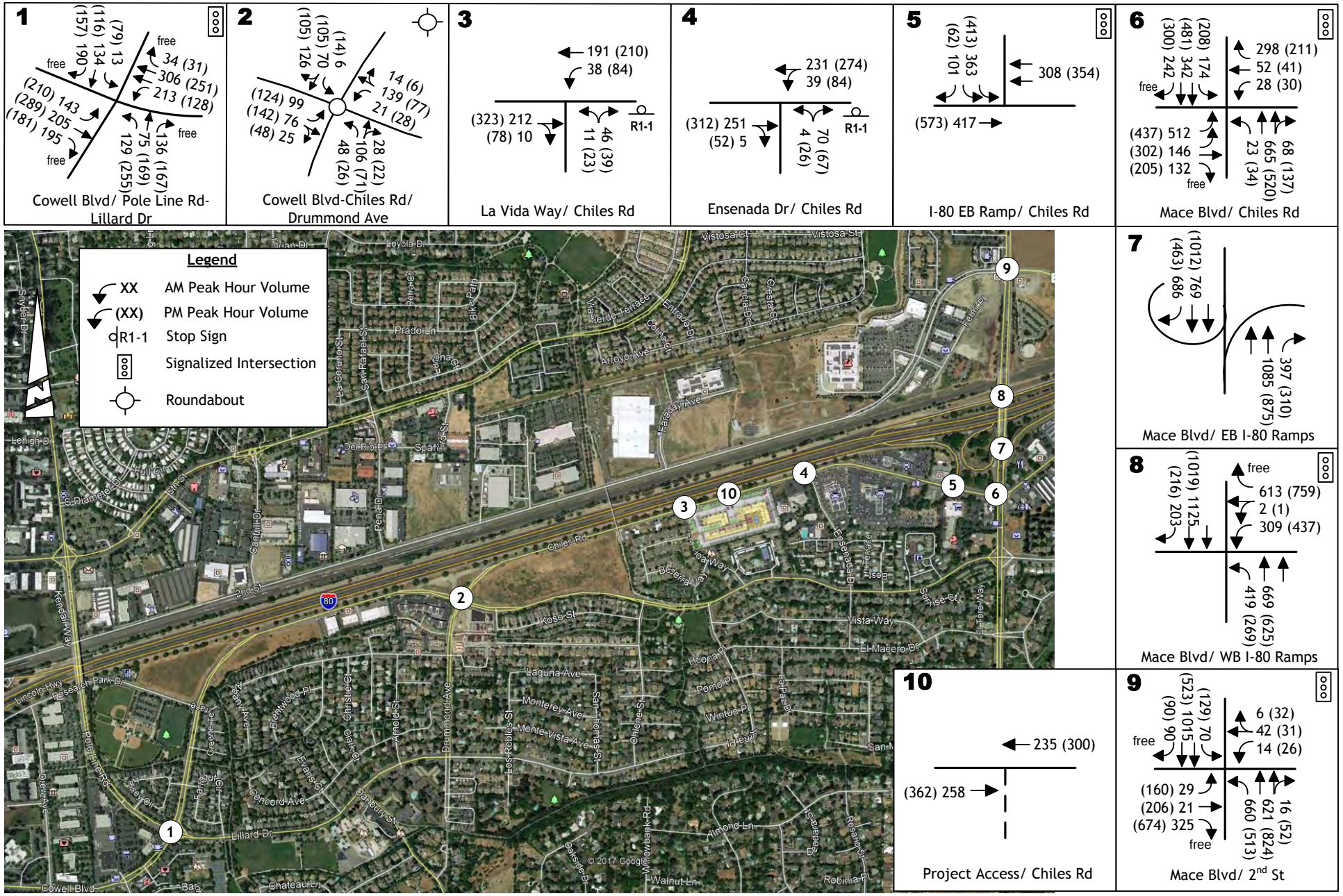
Existing Plus Approved Projects (EPAP) Conditions

Available trip generation and distribution information was obtained for the projects. Trip assignments developed in the various traffic studies prepared for the projects were used, and additional assignments were made through project intersections when data was unavailable. The resulting trips were assigned to the study intersections, and total Existing Plus Approved Projects (EPAP) volumes are presented in Figure 6.

Intersection Levels of Service. The identified EPAP volumes were used to recalculate operating Levels of Service at the study intersections. No improvements to the study area intersections were assumed to occur with completion of all of the EPAP projects.

Table 9 displays the a.m. and p.m. peak hour Levels of Service at each study intersection under EPAP conditions. All intersections will continue to operate within acceptable City thresholds, operating at LOS E or better. A peak hour warrant analysis was conducted, and none of the unsignalized intersections meet the peak hour warrant.

Roadway Levels of Service. Table 10 presents the peak hour roadway segment traffic volumes under EPAP conditions along the five study segments. All roadway segments will operate at LOS C.



EXISTING PLUS APPROVED PROJECT TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 6

TABLE 9
EPAP PLUS PROJECT PEAK HOUR LEVELS OF SERVICE AT INTERSECTIONS

Location	Control	EPAP				EPAP Plus Project				Peak Hour Warrant Met?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
		LOS	Average Delay (secs)	LOS	Average Delay (secs)	LOS	Average Delay (secs)	LOS	Average Delay (secs)	
1. Cowell Blvd / Pole Line Rd / Lillard Dr	Signal	B	19	C	23	B	20	C	24	N/A
2. Cowell Blvd / Chiles Rd / Drummond Ave	Roundabout	A	6	A	7	A	7	A	7	N/A
3. Chiles Rd / La Vida Way										
NB Approach	NB Stop	B	11	B	14	B	11	B	15	No
WB left turn		A	8	A	9	A	8	A	9	
4. Chiles Rd / Ensenada Dr										
NB Approach	NB Stop	B	11	B	14	B	11	C	17	No
WB left turn		A	8	A	8	A	8	A	9	
5. Chiles Rd / I-80 EB Off-Ramp	Signal	B	17	B	12	B	18	B	12	N/A
6. Chiles Rd / Mace Blvd	Signal	C	27	C	27	C	27	C	27	N/A
7. Mace Blvd / I-80 EB On-Ramps										
NB On-Ramp	Uncontrolled	A	3	A	2	A	2	A	2	N/A
SB On-Ramp		B	12	A	7	B	12	A	7	
8. Mace Blvd / I-80 WB Ramps	Signal	D	36	D	35	C	31	C	32	N/A
9. Mace Blvd / 2nd St	Signal	D	52	E	57	D	50	E	57	N/A
10. Chiles Rd / Project Access										
NB Approach	NB Stop	---	---	---	---	B	12	B	15	No
WB left turn						A	8	A	8	

TABLE 10
EPAP ROADWAY SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	EPAP Conditions (vph)	
			Volume	LOS
Cowell Blvd	Pole Line Rd to Chiles Rd / Drummond Ave	Major Arterial	762	C
	Chiles Rd / Drummond Ave to Ensenada Dr	Minor Arterial	289	C
Chiles Rd	Cowell Blvd to Project	Minor Arterial	656	C
	Project to EB I-80 Off-Ramp	Minor Arterial	989	C
La Vida Way	Chiles Rd to Cowell Blvd	Local	224	C
vph – vehicles per hour				

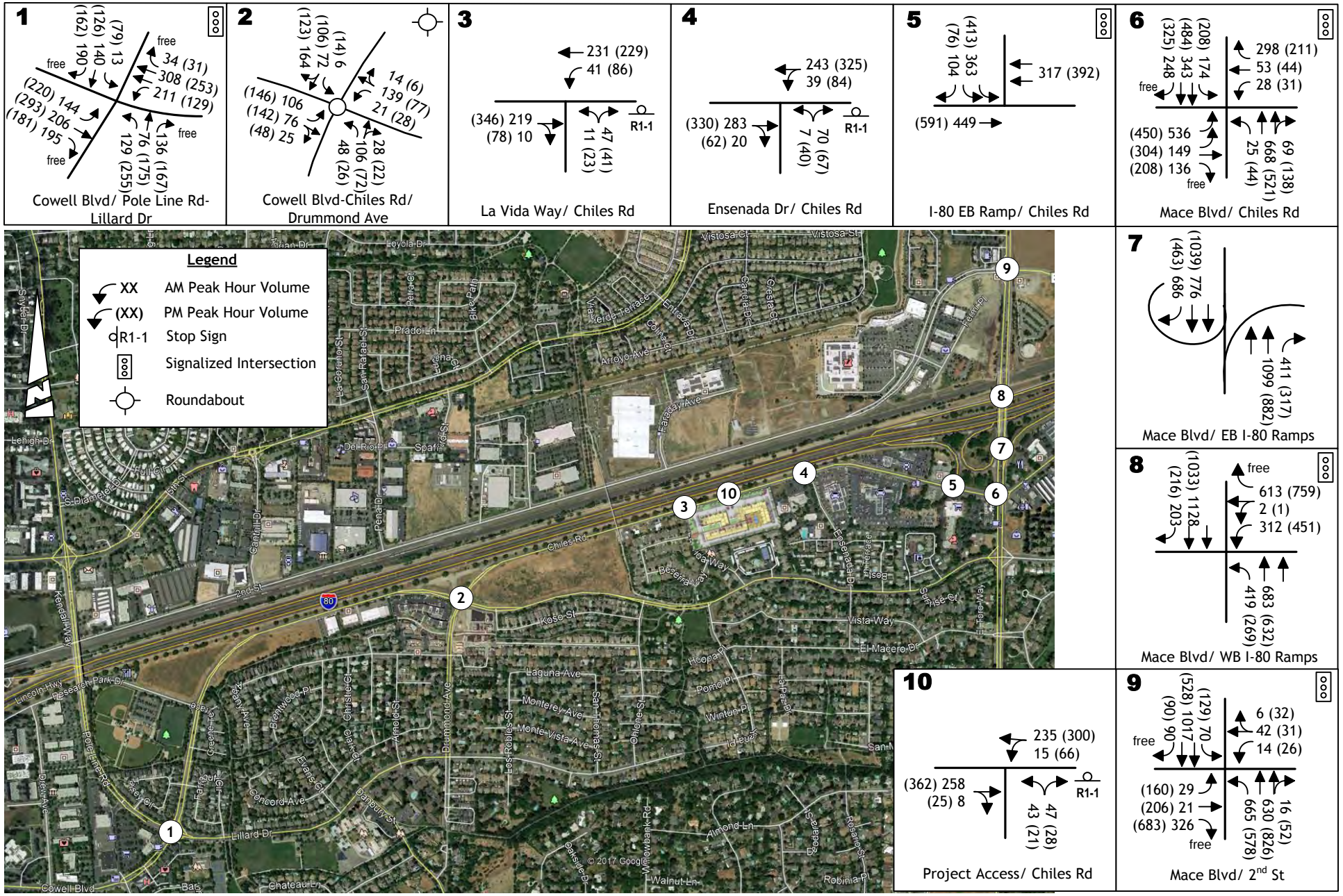
EPAP Plus Project Impacts

Intersection Levels of Service. Project trips were superimposed onto the EPAP condition, and Figure 7 displays the resulting a.m. and p.m. peak hour volumes at the study intersections under EPAP plus Project conditions. Table 9 displays the a.m. and p.m. peak period Level of Service at each study intersection with the proposed project. All intersections will continue to operate within the City's level of service threshold, at LOS E or better. None of the unsignalized study intersections will meet the peak hour signal warrant.

Roadway Levels of Service. Table 11 presents the peak hour roadway segment traffic volumes under EPAP plus Project conditions along the five study segments. All roadway segments will continue to operate at LOS D or better.

TABLE 11
EPAP PLUS PROJECT ROADWAY SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	EPAP plus Project Conditions (vph)	
			Volume	LOS
Cowell Blvd	Pole Line Rd to Chiles Rd / Drummond Ave	Major Arterial	793	C
	Chiles Rd / Drummond Ave to Ensenada Dr	Minor Arterial	289	C
Chiles Rd	Cowell Blvd to Project	Minor Arterial	698	C
	Project to EB I-80 Off-Ramp	Minor Arterial	1,059	D
La Vida Way	Chiles Rd to Cowell Blvd	Local	228	C
vph – vehicles per hour				



EPAP PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 7

CUMULATIVE YEAR 2035 IMPACTS

Background Information

The analysis of Cumulative Year 2035 impacts is intended to consider the impact of this project within the context of future conditions under the City of Davis General Plan while also providing information regarding other reasonably foreseeable development proposals. Cumulative 2035 traffic volumes presented herein are based on information provided by Fehr & Peers Associates.

Year 2035 Roadway Configurations. The cumulative analysis assumes regional circulation system improvements will be completed by 2035. The following projects in the project limits assumed to be completed include:

- widening of Mace Blvd from 2nd Street to just north of Alhambra Drive to a 4+ roadway configuration. This project is identified in the City's General Plan Transportation Element but is currently on the deferred list in the most current Transportation Implementation Plan.

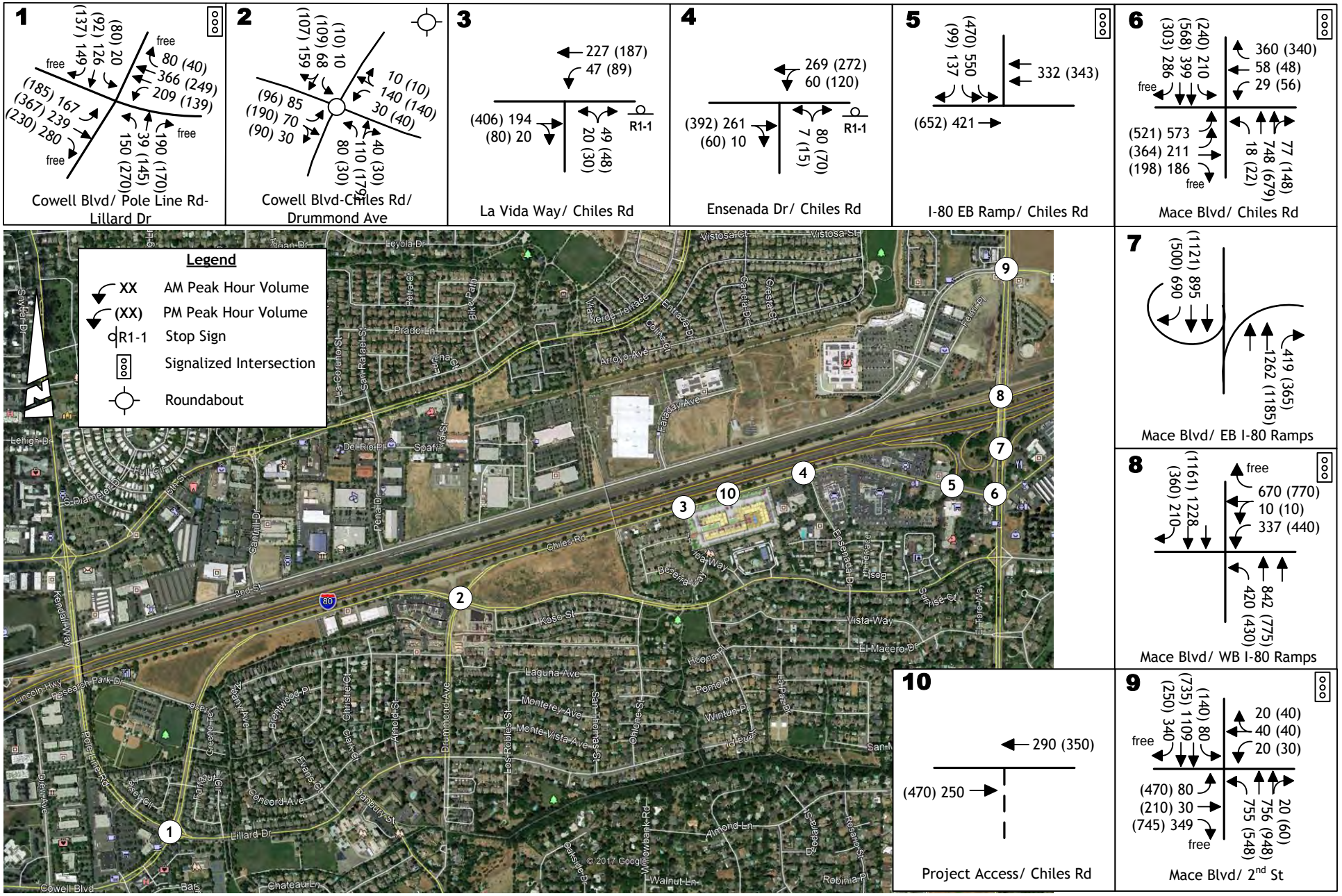
Analysis Scenarios. Two background scenarios were considered. The first scenario assumes buildout of the City of Davis General Plan and includes the revised Nishi Project, referred to as Nishi 2.0. All approved projects identified in the EPAP section are included in the City's traffic model. This scenario is addressed based on peak hour Level of Service at the study intersections and based on the roadway segment analysis introduced in the MRIC DEIR. The second scenario is referred to as the "Super Cumulative" buildout scenario and adds traffic generated by the MRIC project. Similar to the first scenario model, all approved projects identified in the EPAP section are included in this traffic model.

Scenario #1 - Cumulative Traffic Conditions

Approach. Peak hour intersection turning movement volumes were projected for the 'Plus Project' Cumulative 2035 scenario. The volumes were developed by Fehr and Peers using the Davis TDM as provided in their March 18, 2018 e-mail to KD Anderson. These volumes were then manually adjusted to delete traffic associated with the project trips on the site. Figure 8 presents the Cumulative 2035 traffic volumes and lane configurations at the study intersections.

Intersection Levels of Service. Table 12 displays the a.m. and p.m. peak hour Levels of Service at each study intersection in the Cumulative 2035 "No Project" condition. Future growth in Davis will increase the volume of traffic on the study roadways. All intersections will operate at a Level of Service that satisfies the City's minimum LOS standard, (i.e., at LOS E or better). None of the unsignalized study intersections will meet the peak hour signal warrant.

Roadway Levels of Service. Table 13 presents the peak hour roadway segment traffic volumes under Cumulative Year 2035 conditions along the five study segments. All roadway segments will continue to operate at LOS D or better.



CUMULATIVE TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 8

TABLE 12
SCENARIO #1 - CUMULATIVE YEAR 2035 PEAK HOUR INTERSECTION LEVELS OF SERVICE

Location	Control	Cumulative				Cumulative Plus Project				Peak Hour Warrant Met?
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
		LOS	Average Delay (secs)	LOS	Average Delay (secs)	LOS	Average Delay (secs)	LOS	Average Delay (secs)	
1. Cowell Blvd / Pole Line Rd / Lillard Dr	Signal	C	21	C	26	C	22	C	27	N/A
2. Cowell Blvd / Chiles Rd / Drummond Ave	Roundabout	A	7	A	8	A	7	A	8	N/A
3. Chiles Rd / La Vida Way NB Approach WB left turn	NB Stop	 B A	 11 8	 C A	 16 9	 B A	 11 8	 C A	 16 9	No
4. Chiles Rd / Ensenada Dr NB Approach WB left turn	NB Stop	 B A	 11 8	 B A	 15 9	 B A	 12 8	 C A	 19 9	No
5. Chiles Rd / I-80 EB Off-Ramp	Signal	B	13	B	13	B	13	B	11	N/A
6. Chiles Rd / Mace Blvd	Signal	C	32	C	27	C	33	C	29	N/A
7. Mace Blvd / I-80 EB On-Ramps NB On-Ramp SB On-Ramp	Uncontrolled	 A B	 1 12	 A B	 2 10	 A B	 1 12	 A B	 2 10	N/A
8. Mace Blvd / I-80 WB Ramps	Signal	D	38	C	28	D	36	C	25	N/A
9. Mace Blvd / 2nd St	Signal	E	67	E	72	E	66	E	68	N/A
10. Chiles Rd / Project Access NB Approach WB left turn	NB Stop	 --- ---	 --- ---	 --- ---	 --- ---	 B A	 12 8	 C A	 16 9	No

TABLE 13
SCENARIO #1 - CUMULATIVE YEAR 2035 PEAK HOUR
ROADWAY SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	Cumulative Conditions (vph)	
			Volume	LOS
Cowell Blvd	Pole Line Rd to Chiles Rd / Drummond Ave	Major Arterial	679	C
	Chiles Rd / Drummond Ave to Ensenada Dr	Minor Arterial	420	C
Chiles Rd	Cowell Blvd to Project	Minor Arterial	730	C
	Project to EB I-80 Off-Ramp	Minor Arterial	1,094	D
La Vida Way	Chiles Rd to Cowell Blvd	Local	247	C
vph – vehicles per hour				

Scenario #1 - Cumulative Year 2035 Plus Project Traffic Conditions

The impacts of the project under Year 2035 conditions were identified by Fehr and Peers in their TDM results for the Cumulative Plus Project scenario. Figure 9 displays the Cumulative Year 2035 plus Project volumes and lane configurations at each study intersection,

Intersection Levels of Service. Table 12 displays the resulting a.m. and p.m. peak hour Levels of Service at each study intersection with the project. The project will add traffic to study area intersections and all intersections will continue to operate within the City's minimum Level of Service E standard. None of the unsignalized study intersections will meet the peak hour signal warrant.

Roadway Levels of Service. Table 14 presents the roadway segment volumes during the a.m. and p.m. peak hours for the Cumulative Year 2035 plus Project scenario. All roadway segments will continue to operate with Levels of Service that satisfy the City LOS E minimum.

TABLE 14
SCENARIO #1 - CUMULATIVE PLUS PROJECT YEAR 2035 PEAK HOUR
ROADWAY SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	Cumulative + Project Conditions (vph)	
			Volume	LOS
Cowell Blvd	Pole Line Rd to Chiles Rd / Drummond Ave	Major Arterial	700	C
	Chiles Rd / Drummond Ave to Ensenada Dr	Minor Arterial	420	C
Chiles Rd	Cowell Blvd to Project	Minor Arterial	760	C
	Project to EB I-80 Off-Ramp	Minor Arterial	1,160	D
La Vida Way	Chiles Rd to Cowell Blvd	Local	250	C
vph – vehicles per hour				

Vehicles Miles Travelled (VMT)

This section discusses the effect of the project on VMT per capita for the City of Davis area. The VMT was generated through model runs prepared by Fehr and Peers Associates. The proposed project is identified as being consistent with the SACOG MTP/SCS for the region. The project is located within a Transit Priority Area (TPA). A project is in a TPA if it is within one-half mile of a major transit stop (existing or planned light rail, street car, train station, or the intersection of two or more major bus routes) or an existing or planned high-quality transit corridor included in the MTP/SCS. The 3820 Chiles Road project is within one-half mile of the Cowell Blvd high quality transit corridor in the MTP/SCS. It is also within a half mile of Drummond Ave. to the west and Mace Blvd to the east, both of which are also identified as high-quality transit corridors in the MTP/SCS.

The project's effect on VMT per capita for the Davis area was determined for Existing plus Project and Cumulative plus Project scenarios by capturing the VMT generated by the proposed project and dividing it by the total projected capita of the project (541 residents). The VMT per capita was determined to be 12.2 VMT per day in the Existing plus Project scenario and 12.3 VMT per day under Cumulative plus Project Conditions and is shown in Table 15. These results show that the project's VMT per capita per day is lower than the existing City Davis/UC Davis Area-generated 18.0 VMT per capita per day. This represents about a 32% percent reduction in VMT per capita for the proposed 3820 Chiles Road project.

TABLE 15
VEHICLE MILES TRAVELLED

Scenario	DU	Residents	Daily Vehicle Trips	Project Generated VMT	VMT per Capita
Existing Plus Project	222	541	1,323	6,621	12.2
Cumulative Plus Project	222	541	1,323	6,654	12.3

Scenario #2 – Cumulative 2035 with MRIC Project Traffic Conditions

The second cumulative scenario consists of Scenario #2 assumptions under "Super Cumulative" conditions which includes the MRIC project. The analysis for this scenario was consistent with the approach taken in the MRIC DEIR and evaluated only the roadway segment Level of Service impacts.

Roadway Segment Level of Service. Table 16 displays the Scenario #2 peak hour traffic volumes along the various study roadway segments. All study area roadway segments will operate at LOS E or better and satisfy the City's minimum standard.

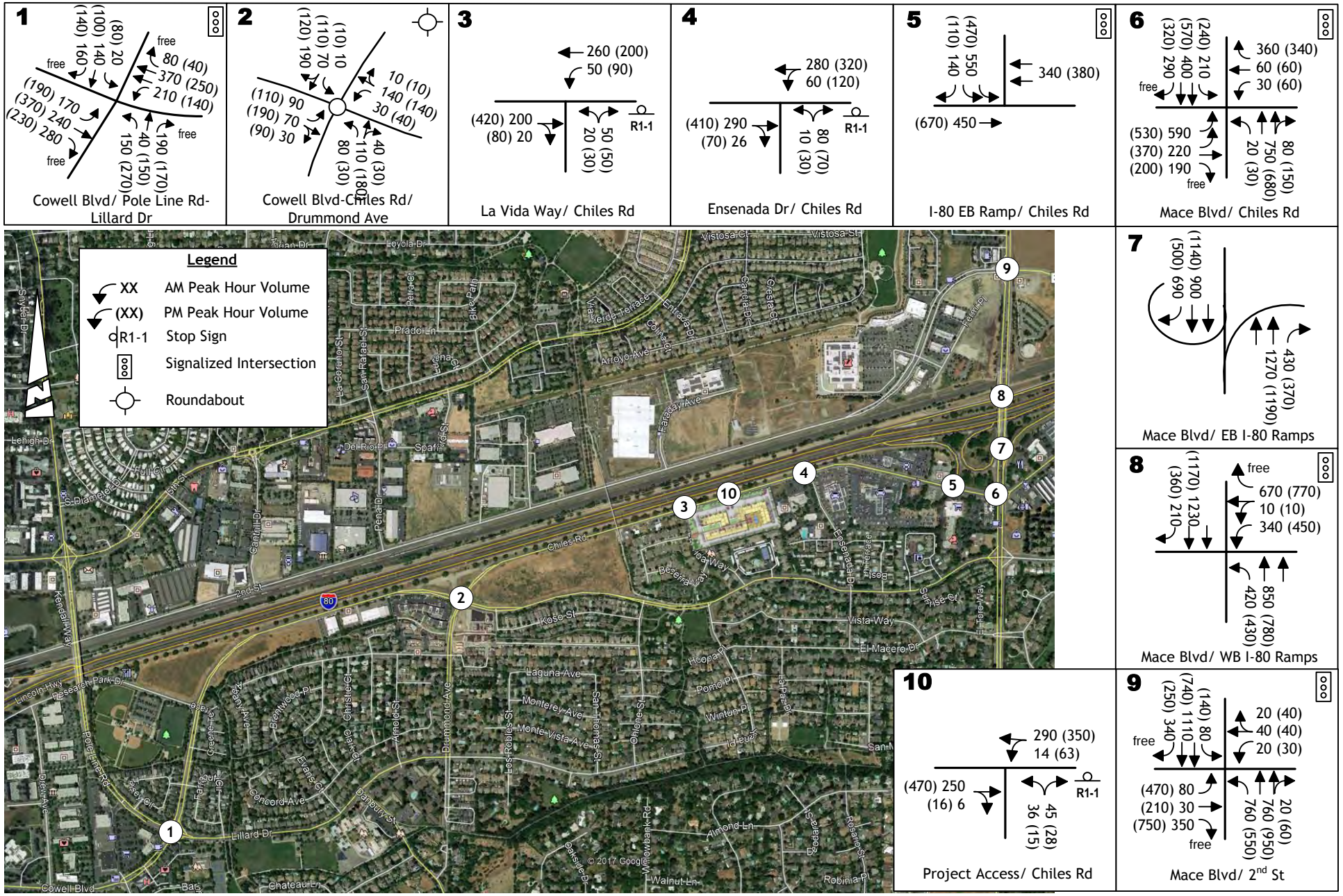
Scenario #2 - Cumulative 2035 with MRIC Project plus Project Traffic Conditions

Project traffic was added to the Scenario #2 Cumulative Year 2035 plus MRIC Project scenario to analyze roadway segment Levels of Service under 'Plus Project' conditions.

Roadway Segment Levels of Service. Table 16 displays the highest peak hour roadway segment volumes. All roadway segments will continue to operate above the City's LOS threshold, at LOS D or better.

TABLE 16
SCENARIO #2 – "SUPER" CUMULATIVE
ROADWAY SEGMENT LEVELS OF SERVICE

Roadway	Location	Facility Classification	"Super" Cumulative	
			No Project Peak Hour	Plus Project Peak Hour
Cowell Blvd	Pole Line Rd to Chiles Rd / Drummond Ave	Major Arterial	749 / C	780 / C
	Chiles Rd / Drummond Ave to Ensenada Dr	Minor Arterial	530 / C	530 / C
Chiles Rd	Cowell Blvd to Project	Minor Arterial	798 / C	840 / C
	Project to EB I-80 Off-Ramp	Minor Arterial	1,180 / D	1,250 / D
La Vida Way	Chiles Rd to Cowell Blvd	Local	266 / C	270 / C



CUMULATIVE PLUS PROJECT
TRAFFIC VOLUMES AND LANE CONFIGURATIONS

KD Anderson & Associates, Inc.
Transportation Engineers

6581-01 RA 4/12/2018

figure 9

IMPACT SUMMARY / MITIGATION MEASURES

The preceding analysis has identified project impacts that may occur without mitigation. The text that follows identifies a strategy for mitigating the impacts of the proposed project. Recommendations are identified for facilities that require mitigation but are not a result of the proposed project. If the project causes a significant impact, mitigations are identified for the facility.

Existing Conditions

Recommendations. No recommendations for improvements for existing conditions have been made to address Level of Service deficiencies at study intersections since all operate at acceptable Levels of Service, at LOS D or better. This satisfies the City's LOS E minimum.

No recommendations for improvements for existing conditions have been made to address Level of Service deficiencies at study roadway segments since all operate at acceptable Levels of Service, at LOS C or better. This satisfies the City's LOS E minimum.

Existing Plus Project Conditions

Adequate operating level of service will be maintained at all intersections and along all roadway segments with the addition of project traffic, and the City's minimum Level of Service standard will be met for both intersections and roadway segments. Thus, the project's traffic impact is not significant based on this LOS criteria and no mitigation is required.

Under the 'Alternative B' scenario, the impacts would be the same or less given that the trip generation is less than the proposed project alternative. Five peak hour trips and up to 64 daily trips would be added onto La Vida Way under this alternative. These volumes would not create an impact at the Chiles Road / La Vida Way intersection, nor along the La Vida Way segment. The no-parking zone between El Segundo Avenue and Becerra Way will allow adequate site distance for vehicles exiting the site onto La Vida Way; this assumes that any obstructions such as fencing or landscaping between 2½ feet and 8 feet are outside the line of sight at the driveway exit.

Standard City of Davis conditions of approval will require payment of existing MPFP fees as mitigation for city-wide impacts.

Existing Plus Approved Projects (EPAP) Conditions

Recommendations. No recommendations are made as all intersections and roadway segments will continue to operate at acceptable levels of service, at LOS E or better, which satisfies the City's LOS E minimum.

EPAP Plus Project Conditions

The addition of the project's trips will result in acceptable levels of service at all study intersections and roadway segments, with each intersection operating at LOS E or better and all roadway segments operating at LOS D or better. Since the LOS E standard will be satisfied, the project's impacts are not significant, and no additional mitigation is required.

Cumulative Conditions

Scenario #1 - Cumulative Year 2035 Conditions. All intersections will operate at LOS E or better. This is consistent with the City of Davis minimum LOS E threshold. All roadway segments will operate at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No improvements are needed.

Scenario #1 - Cumulative Year 2035 Conditions plus Project. The addition of the project's trips will maintain acceptable Levels of Service at all study intersections with each intersection operating at LOS E or better. This is consistent with the City of Davis minimum LOS E threshold. All roadway segments will continue to operate within acceptable City thresholds, at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No mitigations are identified.

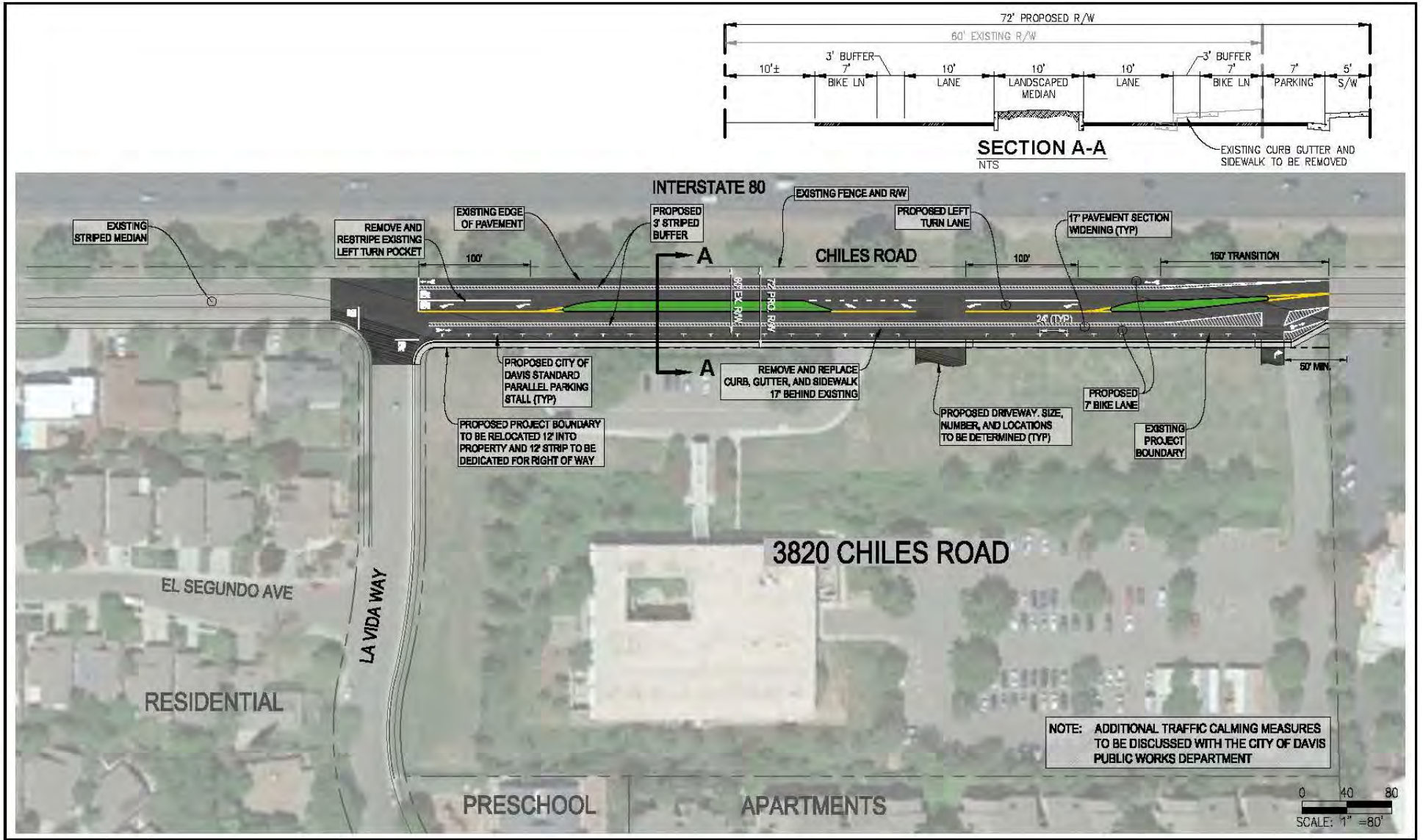
Scenario #2 - Cumulative Year 2035 Conditions with MRIC Project. Under the Cumulative Year 2035 with the MRIC Project scenario all roadway segments will operate at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No improvements are needed.

Scenario #2 - Cumulative Year 2035 Conditions with MRIC Project plus Project. Under the Cumulative Year 2035 with MRIC Project plus Project scenario all roadway segments will continue to operate at LOS D or better. This is consistent with the City of Davis minimum LOS E threshold. No mitigations are identified.

REFERENCES

1. ITE *Trip Generation*, 10th Edition, 2017
2. California Manual of Uniform Traffic Control Devices, November, 2014
3. *City of Davis General Plan, Transportation Element*, December 10, 2013.
4. *Mace Ranch Innovation Center Draft Environmental Impact Report,* Raney Planning and Management, August 2015
5. SACOG, Letter to Katherine Hess, City of Davis, regarding project consistency with the Metropolitan Transportation Plan/Sustainable Communities Strategy for 2036
6. City of Davis, *Draft Environmental Impact Report for the West Davis Active Adult Community Project*, December 2017, SCH 2017042043
7. City of Davis, *Draft Environmental Impact Report for the Cannery Project*, February 2013, SCH# 2012032022
8. Unitrans, *General Manager's Report Fiscal Year 2016-2017* (October 2017)
9. City of Davis, *Transportation Implementation Plan 2017 Annual Report,* July 2017
10. Telephone and E-mail correspondence, Eric Lee, Brian Mickelson and Brian Abbanat, City of Davis, January 2018 through April 2018
11. Telephone and E-mail correspondence, Fred Choa, Fehr and Peers Associates, January 2018 through April 2018

APPENDIX


72' PROPOSED R/W
60' EXISTING R/W
10'±
3' BUFFER
7'
BIKE LN
10'
LANE
10'
LANDSCAPED MEDIAN
10'
LANE
3' BUFFER
7'
BIKE LN
7'
PARKING
5'
S/W
EXISTING CURB GUTTER AND SIDEWALK TO BE REMOVED
SECTION A-A
NTS
INTERSTATE 80
EXISTING FENCE AND R/W
EXISTING STRIPED MEDIAN
REMOVE AND RESTRIPE EXISTING LEFT TURN POCKET
EXISTING EDGE OF PAVEMENT
PROPOSED 3' STRIPED BUFFER
PROPOSED LEFT TURN LANE
17' PAVEMENT SECTION WIDENING (TYP)
CHILES ROAD
100'
100'
150' TRANSITION
A
A
60' EX. R/W
72' PRO. R/W
24' (TYP.)
50' MIN.
PROPOSED CITY OF DAVIS STANDARD PARALLEL PARKING STALL (TYP)
REMOVE AND REPLACE CURB, GUTTER, AND SIDEWALK 17' BEHIND EXISTING
PROPOSED 7' BIKE LANE
PROPOSED DRIVEWAY. SIZE, NUMBER, AND LOCATIONS TO BE DETERMINED (TYP)
EXISTING PROJECT BOUNDARY
PROPOSED PROJECT BOUNDARY TO BE RELOCATED 12' INTO PROPERTY AND 12' STRIP TO BE DEDICATED FOR RIGHT OF WAY
3820 CHILES ROAD
EL SEGUNDO AVE
LA VIDA WAY
RESIDENTIAL
NOTE: ADDITIONAL TRAFFIC CALMING MEASURES TO BE DISCUSSED WITH THE CITY OF DAVIS PUBLIC WORKS DEPARTMENT
PRESCHOOL
APARTMENTS
0 40 80
SCALE: 1" =80'
DESIGNED BY: PR
DRAWN BY: PR
CHECKED BY: CWC
SCALE
1" = 80'
CUNNINGHAM ENGINEERING
CECIVEAT.COM
Project Planning • Civil Engineering • Landscape Architecture
Sacramento Office
2180 20th Street, Suite Three
Sacramento, CA 95818
(916) 455-3939
Davis Office
2840 Spafford Street, Suite 200
Davis, CA 95618
(530) 759-1939
DAVIS
3820 CHILES ROAD
PROPOSED CHILES ROAD WIDENING EXHIBIT
CALIFORNIA
SHEET
1
OF
1
DATE: 7/4/2017
JOB NO: 1579.01
S:\Projects\1500\1579 3820 Chiles Road\AutoCAD\1579-01 EXHIBITS\For Owner\1579 Widening Exhibit.dwg – SHEET 1 7/04/2017 – 11:37AM Plotted by: Niki

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-001
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	Cowell Blvd Southbound					Pole Line Rd/Lillard Dr Westbound					Cowell Blvd Northbound					Pole Line Rd/Lillard Dr Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	9	13	0	22	21	13	3	0	37	13	5	10	0	28	7	15	30	0	52	139	0
7:15	0	15	19	0	34	23	24	3	0	50	23	10	12	0	45	16	2	38	0	56	185	0
7:30	0	16	23	0	39	41	25	3	0	69	30	7	18	0	55	18	15	40	0	73	236	0
7:45	0	9	39	0	48	37	89	5	0	131	39	8	21	0	68	25	25	44	0	94	341	0
Total	0	49	94	0	143	122	151	14	0	287	105	30	61	0	196	66	57	152	0	275	901	0
8:00	5	16	39	0	60	42	75	7	0	124	28	10	35	0	73	23	54	39	0	116	373	0
8:15	7	10	41	0	58	68	70	11	0	149	30	7	64	0	101	42	67	45	0	154	462	0
8:30	1	19	34	0	54	61	68	11	0	140	29	9	16	0	54	40	59	56	0	155	403	0
8:45	3	10	39	0	52	35	57	4	0	96	35	10	20	0	65	27	31	55	0	113	326	0
Total	16	55	153	0	224	206	270	33	0	509	122	36	135	0	293	132	211	195	0	538	1564	0
16:00	9	7	34	0	50	35	44	4	0	83	44	39	33	0	116	46	57	40	2	145	394	2
16:15	6	11	26	0	43	27	38	7	0	72	44	29	45	0	118	42	40	43	2	127	360	2
16:30	17	13	30	0	60	35	40	9	0	84	50	35	35	0	120	42	40	49	2	133	397	2
16:45	15	19	36	0	70	28	52	10	0	90	60	25	42	0	127	50	74	41	1	166	453	1
Total	47	50	126	0	223	125	174	30	0	329	198	128	155	0	481	180	211	173	7	571	1604	7
17:00	21	22	33	0	76	48	81	12	0	141	61	27	41	0	129	50	81	45	3	179	525	3
17:15	21	17	34	0	72	24	57	6	0	87	52	31	40	0	123	39	59	37	2	137	419	2
17:30	22	17	35	0	74	27	59	3	0	89	57	18	42	0	117	42	71	48	0	161	441	0
17:45	21	13	23	0	57	43	50	10	0	103	50	19	57	0	126	37	45	41	1	124	410	1
Total	85	69	125	0	279	142	247	31	0	420	220	95	180	0	495	168	256	171	6	601	1795	6
Grand Total	148	223	498	0	869	595	842	108	0	1545	645	289	531	0	1465	546	735	691	13	1985	5864	13
Apprch %	17.0%	25.7%	57.3%	0.0%		38.5%	54.5%	7.0%	0.0%		44.0%	19.7%	36.2%	0.0%		27.5%	37.0%	34.8%	0.7%			
Total %	2.5%	3.8%	8.5%	0.0%	14.8%	10.1%	14.4%	1.8%	0.0%	26.3%	11.0%	4.9%	9.1%	0.0%	25.0%	9.3%	12.5%	11.8%	0.2%	33.9%	100.0%	

AM PEAK HOUR	Cowell Blvd Southbound					Pole Line Rd/Lillard Dr Westbound					Cowell Blvd Northbound					Pole Line Rd/Lillard Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	9	39	0	48	37	89	5	0	131	39	8	21	0	68	25	25	44	0	94	341
8:00	5	16	39	0	60	42	75	7	0	124	28	10	35	0	73	23	54	39	0	116	373
8:15	7	10	41	0	58	68	70	11	0	149	30	7	64	0	101	42	67	45	0	154	462
8:30	1	19	34	0	54	61	68	11	0	140	29	9	16	0	54	40	59	56	0	155	403
Total Volume	13	54	153	0	220	208	302	34	0	544	126	34	136	0	296	130	205	184	0	519	1579
% App Total	5.9%	24.5%	69.5%	0.0%		38.2%	55.5%	6.3%	0.0%		42.6%	11.5%	45.9%	0.0%		25.0%	39.5%	35.5%	0.0%		
PHF	.464	.711	.933	.000	.917	.765	.848	.773	.000	.913	.808	.850	.531	.000	.733	.774	.765	.821	.000	.837	.854

PM PEAK HOUR	Cowell Blvd Southbound					Pole Line Rd/Lillard Dr Westbound					Cowell Blvd Northbound					Pole Line Rd/Lillard Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	15	19	36	0	70	28	52	10	0	90	60	25	42	0	127	50	74	41	1	166	453
17:00	21	22	33	0	76	48	81	12	0	141	61	27	41	0	129	50	81	45	3	179	525
17:15	21	17	34	0	72	24	57	6	0	87	52	31	40	0	123	39	59	37	2	137	419
17:30	22	17	35	0	74	27	59	3	0	89	57	18	42	0	117	42	71	48	0	161	441
Total Volume	79	75	138	0	292	127	249	31	0	407	230	101	165	0	496	181	285	171	6	643	1838
% App Total	27.1%	25.7%	47.3%	0.0%		31.2%	61.2%	7.6%	0.0%		46.4%	20.4%	33.3%	0.0%		28.1%	44.3%	26.6%	0.9%		
PHF	.898	.852	.958	.000	.961	.661	.769	.646	.000	.722	.943	.815	.982	.000	.961	.905	.880	.891	.500	.898	.875

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-001
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	Cowell Blvd Southbound					Pole Line Rd/Lillard Dr Westbound					Cowell Blvd Northbound					Pole Line Rd/Lillard Dr Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	1	0	0	2	1	0	0	0	0	0	0	0	0	0	0	1	2
7:15	0	0	0	0	0	4	1	0	1	5	0	0	0	1	0	0	0	0	0	0	5	2
7:30	0	1	0	0	1	3	2	0	1	5	0	0	1	1	1	0	0	0	0	0	7	2
7:45	0	0	0	0	0	9	3	0	0	12	0	0	1	2	1	0	1	0	0	1	14	2
Total	0	1	0	0	1	17	6	0	4	23	0	0	2	4	2	0	1	0	0	1	27	8
8:00	0	0	0	0	0	2	2	0	4	4	1	0	0	8	1	0	0	0	0	0	5	12
8:15	0	1	0	1	1	4	2	0	1	6	0	0	2	2	2	0	1	0	2	1	10	6
8:30	0	3	0	1	3	7	1	0	1	8	0	0	0	5	0	1	0	2	0	3	14	7
8:45	0	5	0	0	5	4	2	0	0	6	0	0	1	6	1	0	0	0	0	0	12	6
Total	0	9	0	2	9	17	7	0	6	24	1	0	3	21	4	1	1	2	2	4	41	31
16:00	0	0	1	1	1	3	0	0	2	3	1	0	0	2	1	0	1	0	0	1	6	5
16:15	0	1	0	0	1	3	0	0	0	3	0	2	6	2	8	0	1	0	0	1	13	2
16:30	0	0	0	0	0	1	0	0	0	1	0	0	4	3	4	0	0	1	0	1	6	3
16:45	0	0	1	0	1	0	0	0	0	0	1	0	2	2	3	0	1	0	0	1	5	2
Total	0	1	2	1	3	7	0	0	2	7	2	2	12	9	16	0	3	1	0	4	30	12
17:00	0	0	0	0	0	0	0	0	1	0	0	0	3	8	3	1	1	0	2	2	5	11
17:15	0	1	0	2	1	2	0	0	0	2	0	3	8	2	11	0	1	0	0	1	15	4
17:30	0	1	1	1	2	2	1	0	0	3	1	1	4	1	6	0	1	0	0	1	12	2
17:45	0	0	0	0	0	1	0	0	1	1	0	2	2	3	4	0	2	0	0	2	7	4
Total	0	2	1	3	3	5	1	0	2	6	1	6	17	14	24	1	5	0	2	6	39	21
Grand Total	0	13	3	6	16	46	14	0	14	60	4	8	34	48	46	2	10	3	4	15	137	72
Apprch %	0.0%	81.3%	18.8%			76.7%	23.3%	0.0%			8.7%	17.4%	73.9%			13.3%	66.7%	20.0%				
Total %	0.0%	9.5%	2.2%		11.7%	33.6%	10.2%	0.0%		43.8%	2.9%	5.8%	24.8%		33.6%	1.5%	7.3%	2.2%		10.9%	100.0%	

AM PEAK HOUR	Cowell Blvd Southbound					Pole Line Rd/Lillard Dr Westbound					Cowell Blvd Northbound					Pole Line Rd/Lillard Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	9	3	0	0	12	0	0	1	2	1	0	1	0	0	1	14
8:00	0	0	0	0	0	2	2	0	4	4	1	0	0	8	1	0	0	0	0	0	5
8:15	0	1	0	1	1	4	2	0	1	6	0	0	2	2	2	0	1	0	2	1	10
8:30	0	3	0	1	3	7	1	0	1	8	0	0	0	5	0	1	0	2	0	3	14
Total Volume	0	4	0	2	4	22	8	0	6	30	1	0	3	17	4	1	2	2	2	5	43
% App Total	0.0%	100.0%	0.0%			73.3%	26.7%	0.0%			25.0%	0.0%	75.0%			20.0%	40.0%	40.0%			
PHF	.000	.333	.000		.333	.611	.667	.000		.625	.250	.000	.375		.500	.250	.500	.250		.417	.768

PM PEAK HOUR	Cowell Blvd Southbound					Pole Line Rd/Lillard Dr Westbound					Cowell Blvd Northbound					Pole Line Rd/Lillard Dr Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	1	0	1	0	0	0	0	0	1	0	2	2	3	0	1	0	0	1	5
17:00	0	0	0	0	0	0	0	0	1	0	0	0	3	8	3	1	1	0	2	2	5
17:15	0	1	0	2	1	2	0	0	0	2	0	3	8	2	11	0	1	0	0	1	15
17:30	0	1	1	1	2	2	1	0	0	3	1	1	4	1	6	0	1	0	0	1	12
Total Volume	0	2	2	3	4	4	1	0	1	5	2	4	17	13	23	1	4	0	2	5	37
% App Total	0.0%	50.0%	50.0%			80.0%	20.0%	0.0%			8.7%	17.4%	73.9%			20.0%	80.0%	0.0%			
PHF	.000	.500	.500		.500	.500	.250	.000		.417	.500	.333	.531		.523	.250	1.000	.000		.625	.617

Prepared by National Data & Surveying Services

Cowell Blvd & Pole Line Rd/Lillard Dr

Peak Hour Turning Movement Count

ID: 17-07704-001
City: Davis

Day: Tuesday
Date: 10/10/2017

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:45 PM - 05:45 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

SOUTHBOUND (Cowell Blvd)

AM	153	54	13	0	198	AM
NOON	0	0	0	0	0	NOON
PM	138	75	79	0	313	PM

EASTBOUND (Pole Line Rd/Lillard Dr)

AM	NOON	PM	
581	0	623	⇦
0	0	6	↶ 0
130	0	181	↰ 0
205	0	285	→ 0
184	0	171	↷ 0
AM	NOON	PM	

WESTBOUND (Pole Line Rd/Lillard Dr)

PM	NOON	AM	
31	0	34	0 ↱
249	0	302	0 ←
127	0	208	0 ↶
0	0	0	0 ↷
529	0	354	⇨
PM	NOON	AM	

NORTHBOUND (Cowell Blvd)

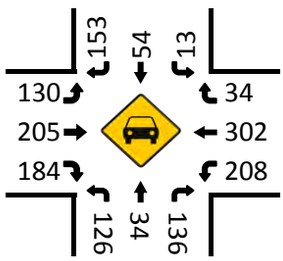
PM	373	0	230	101	165	PM
NOON	0	0	0	0	0	NOON
AM	446	0	126	34	136	AM

CONTROL

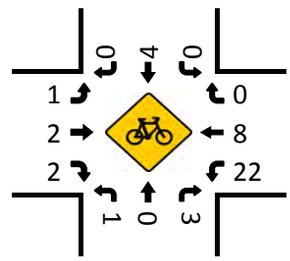
0

TEV	1579	0	1838
	AM	NOON	PM
PHF	0.85		0.88

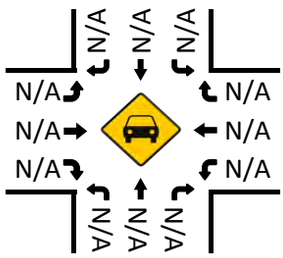
Total Vehicles (AM)



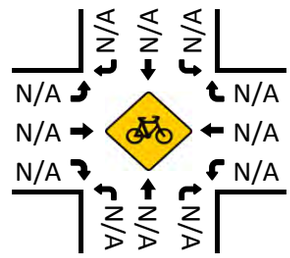
Bikes (AM)



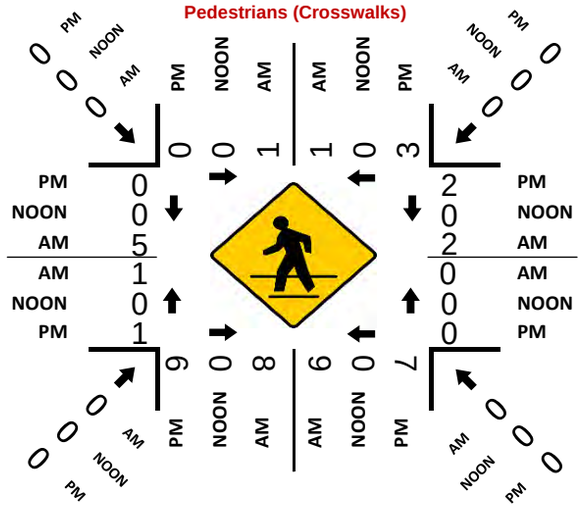
Total Vehicles (Noon)



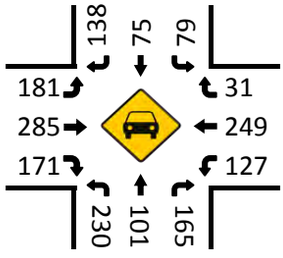
Bikes (NOON)



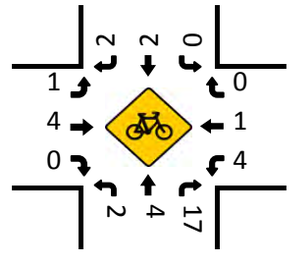
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-002
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	Chiles Rd / Drummond Ave Southbound					Cowell Blvd Westbound					Chiles Rd / Drummond Ave Northbound					Cowell Blvd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	6	17	8	0	31	11	11	1	0	23	0	2	19	0	21	2	9	0	0	11	86	0
7:15	6	26	1	0	33	15	10	3	0	28	1	7	19	0	27	3	9	0	0	12	100	0
7:30	1	9	19	0	29	4	20	0	0	24	8	23	4	0	35	15	10	0	0	25	113	0
7:45	0	12	22	0	34	2	32	1	0	35	10	19	10	0	39	16	14	5	0	35	143	0
Total	13	64	50	0	127	32	73	5	0	110	19	51	52	0	122	36	42	5	0	83	442	0
8:00	2	17	33	0	52	4	36	2	0	42	12	30	4	0	46	20	14	6	0	40	180	0
8:15	1	27	22	0	50	14	35	3	0	52	13	28	9	0	50	18	21	8	0	47	199	0
8:30	1	13	30	0	44	1	27	4	0	32	10	25	3	0	38	18	19	5	0	42	156	0
8:45	0	6	23	0	29	3	24	2	0	29	8	11	3	0	22	14	15	6	0	35	115	0
Total	4	63	108	0	175	22	122	11	0	155	43	94	19	0	156	70	69	25	0	164	650	0
17:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1	1
Grand Total	17	127	158	0	302	54	195	16	1	266	62	145	71	0	278	106	111	30	0	247	1093	1
Apprch %	5.6%	42.1%	52.3%	0.0%		20.3%	73.3%	6.0%	0.4%		22.3%	52.2%	25.5%	0.0%		42.9%	44.9%	12.1%	0.0%			
Total %	1.6%	11.6%	14.5%	0.0%	27.6%	4.9%	17.8%	1.5%	0.1%	24.3%	5.7%	13.3%	6.5%	0.0%	25.4%	9.7%	10.2%	2.7%	0.0%	22.6%	100.0%	

AM PEAK HOUR	Chiles Rd / Drummond Ave Southbound					Cowell Blvd Westbound					Chiles Rd / Drummond Ave Northbound					Cowell Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	12	22	0	34	2	32	1	0	35	10	19	10	0	39	16	14	5	0	35	143
8:00	2	17	33	0	52	4	36	2	0	42	12	30	4	0	46	20	14	6	0	40	180
8:15	1	27	22	0	50	14	35	3	0	52	13	28	9	0	50	18	21	8	0	47	199
8:30	1	13	30	0	44	1	27	4	0	32	10	25	3	0	38	18	19	5	0	42	156
Total Volume	4	69	107	0	180	21	130	10	0	161	45	102	26	0	173	72	68	24	0	164	678
% App Total	2.2%	38.3%	59.4%	0.0%		13.0%	80.7%	6.2%	0.0%		26.0%	59.0%	15.0%	0.0%		43.9%	41.5%	14.6%	0.0%		
PHF	.500	.639	.811	.000	.865	.375	.903	.625	.000	.774	.865	.850	.650	.000	.865	.900	.810	.750	.000	.872	.852

PM PEAK HOUR	Chiles Rd / Drummond Ave Southbound					Cowell Blvd Westbound					Chiles Rd / Drummond Ave Northbound					Cowell Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
% App Total	0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	100.0%		0.0%	0.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.250	.250	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.250

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-07704-002
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	Chiles Rd / Drummond Ave Southbound					Cowell Blvd Westbound					Chiles Rd / Drummond Ave Northbound					Cowell Blvd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	1
7:30	0	0	0	3	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	3
7:45	0	1	0	2	1	0	2	0	7	2	0	1	2	2	3	0	0	0	0	0	6	11
Total	0	1	0	6	1	0	4	0	7	4	0	1	2	2	3	0	0	0	0	0	8	15
8:00	0	0	0	0	0	0	1	0	0	1	0	0	9	1	9	1	0	0	0	1	11	1
8:15	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	0	0	0	0	0	2	2
8:30	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0	0	0	0	0	0	1	3
8:45	0	1	0	2	1	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	2	2
Total	0	1	0	3	1	0	4	0	0	4	0	0	10	5	10	1	0	0	0	1	16	8
Grand Total	0	2	0	11	2	0	9	0	10	9	0	2	15	12	17	1	1	0	0	2	30	33
Apprch %	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	11.8%	88.2%			50.0%	50.0%	0.0%				
Total %	0.0%	6.7%	0.0%		6.7%	0.0%	30.0%	0.0%		30.0%	0.0%	6.7%	50.0%		56.7%	3.3%	3.3%	0.0%		6.7%	100.0%	

AM PEAK HOUR	Chiles Rd / Drummond Ave Southbound					Cowell Blvd Westbound					Chiles Rd / Drummond Ave Northbound					Cowell Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	1	0	2	1	0	2	0	7	2	0	1	2	2	3	0	0	0	0	0	6
8:00	0	0	0	0	0	0	1	0	0	1	0	0	9	1	9	1	0	0	0	1	11
8:15	0	0	0	1	0	0	2	0	0	2	0	0	0	1	0	0	0	0	0	0	2
8:30	0	0	0	0	0	0	1	0	0	1	0	0	0	3	0	0	0	0	0	0	1
Total Volume	0	1	0	3	1	0	6	0	7	6	0	1	11	7	12	1	0	0	0	1	20
% App Total	0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			0.0%	8.3%	91.7%			100.0%	0.0%	0.0%			
PHF	.000	.250	.000		.250	.000	.750	.000		.750	.000	.250	.306		.333	.250	.000	.000		.250	.455

PM PEAK HOUR	Chiles Rd / Drummond Ave Southbound					Cowell Blvd Westbound					Chiles Rd / Drummond Ave Northbound					Cowell Blvd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:15 to 17:15																					
Peak Hour For Entire Intersection Begins at 16:15																					
16:15	0	0	0	1	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
Total Volume	0	0	0	1	0	0	1	0	3	1	0	1	1	0	2	0	1	0	0	1	4
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.250	.250		.250	.000	.250	.000		.250	.500

Prepared by National Data & Surveying Services

Chiles Rd / Drummond Ave & Cowell Blvd

Peak Hour Turning Movement Count

ID: 17-07704-002
City: Davis

Day: Tuesday
Date: 10/10/2017

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:15 PM - 05:15 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

Chiles Rd / Drummond Ave — SOUTHBOUND

AM	107	69	4	0	184	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Cowell Blvd — EASTBOUND

AM	NOON	PM		
282	0	0	⇦	
0	0	0	↶	0
72	0	0	↰	0
68	0	0	←	0
24	0	0	↲	0
AM	NOON	PM		

WESTBOUND — Cowell Blvd

PM	NOON	AM		
0	0	10	↷	0
0	0	130	→	0
0	0	21	↳	0
1	0	0	↱	0
1	0	98	⇨	
PM	NOON	AM		

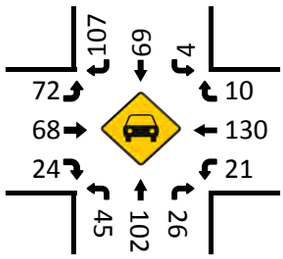
CONTROL: 0

TEV	678	0	1
	AM	NOON	PM
PHF	0.85		0.25

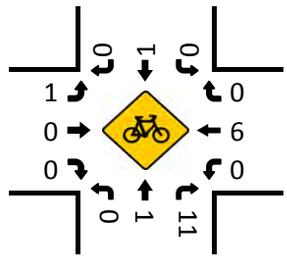
Chiles Rd / Drummond Ave — NORTHBOUND

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	114	0	45	102	26	AM

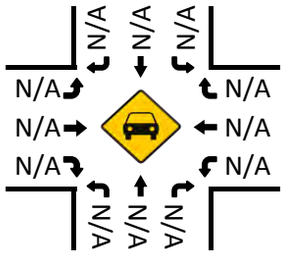
Total Vehicles (AM)



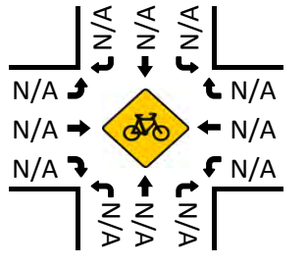
Bikes (AM)



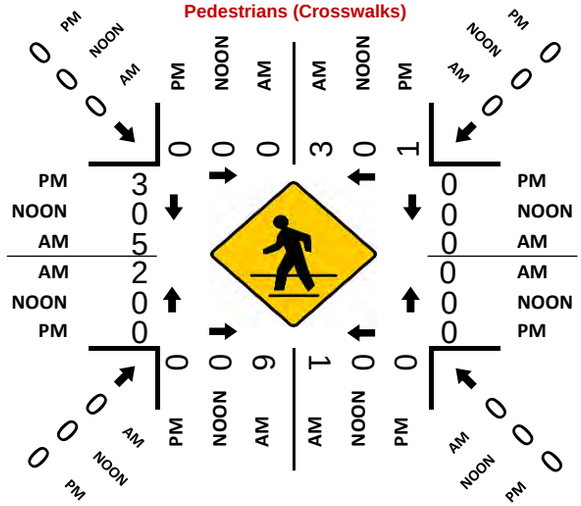
Total Vehicles (Noon)



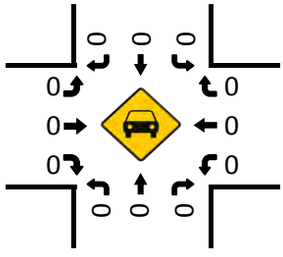
Bikes (NOON)



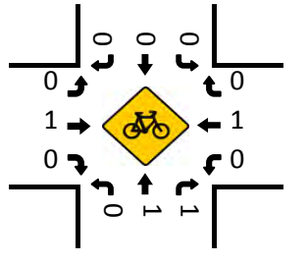
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-003
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	La Vida Way Southbound					Chiles Rd Westbound					La Vida Way Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	3	17	0	0	20	5	0	5	0	10	0	25	0	0	25	55	0
7:15	0	0	0	0	0	4	23	0	0	27	2	0	13	0	15	0	39	1	0	40	82	0
7:30	0	0	0	0	0	6	26	0	0	32	3	0	15	0	18	0	40	0	0	40	90	0
7:45	0	0	0	0	0	9	34	0	0	43	0	0	12	0	12	0	37	2	0	39	94	0
Total	0	0	0	0	0	22	100	0	0	122	10	0	45	0	55	0	141	3	0	144	321	0
8:00	0	0	0	0	0	6	50	0	0	56	3	0	13	0	16	0	44	4	0	48	120	0
8:15	0	0	0	0	0	10	51	0	0	61	4	0	12	0	16	0	51	3	0	54	131	0
8:30	0	0	0	0	0	13	35	0	0	48	4	0	9	0	13	0	49	1	0	50	111	0
8:45	0	0	0	0	0	14	27	0	0	41	2	0	9	0	11	0	24	2	0	26	78	0
Total	0	0	0	0	0	43	163	0	0	206	13	0	43	0	56	0	168	10	0	178	440	0
16:00	0	0	0	0	0	9	32	0	0	41	5	0	10	0	15	0	112	19	0	131	187	0
16:15	0	0	0	0	0	16	33	0	0	49	3	0	9	0	12	0	86	12	0	98	159	0
16:30	0	0	0	0	0	14	42	0	0	56	5	0	6	0	11	0	76	12	0	88	155	0
16:45	0	0	0	0	0	13	45	0	0	58	7	0	6	0	13	0	75	21	0	96	167	0
Total	0	0	0	0	0	52	152	0	0	204	20	0	31	0	51	0	349	64	0	413	668	0
17:00	0	0	0	0	0	19	34	0	0	53	4	0	10	0	14	0	87	19	0	106	173	0
17:15	0	0	0	0	0	25	45	0	0	70	8	0	12	0	20	0	73	17	0	90	180	0
17:30	0	0	0	0	0	27	48	0	0	75	4	0	11	0	15	0	72	21	0	93	183	0
17:45	0	0	0	0	0	29	45	0	0	74	5	0	13	0	18	0	41	17	0	58	150	0
Total	0	0	0	0	0	100	172	0	0	272	21	0	46	0	67	0	273	74	0	347	686	0
Grand Total	0	0	0	0	0	217	587	0	0	804	64	0	165	0	229	0	931	151	0	1082	2115	0
Apprch %	0.0%	0.0%	0.0%	0.0%		27.0%	73.0%	0.0%	0.0%		27.9%	0.0%	72.1%	0.0%		0.0%	86.0%	14.0%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	10.3%	27.8%	0.0%	0.0%	38.0%	3.0%	0.0%	7.8%	0.0%	10.8%	0.0%	44.0%	7.1%	0.0%	51.2%	100.0%	

AM PEAK HOUR	La Vida Way Southbound					Chiles Rd Westbound					La Vida Way Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	9	34	0	0	43	0	0	12	0	12	0	37	2	0	39	94
8:00	0	0	0	0	0	6	50	0	0	56	3	0	13	0	16	0	44	4	0	48	120
8:15	0	0	0	0	0	10	51	0	0	61	4	0	12	0	16	0	51	3	0	54	131
8:30	0	0	0	0	0	13	35	0	0	48	4	0	9	0	13	0	49	1	0	50	111
Total Volume	0	0	0	0	0	38	170	0	0	208	11	0	46	0	57	0	181	10	0	191	456
% App Total	0.0%	0.0%	0.0%	0.0%		18.3%	81.7%	0.0%	0.0%		19.3%	0.0%	80.7%	0.0%		0.0%	94.8%	5.2%	0.0%		
PHF	.000	.000	.000	.000	.000	.731	.833	.000	.000	.852	.688	.000	.885	.000	.891	.000	.887	.625	.000	.884	.870

PM PEAK HOUR	La Vida Way Southbound					Chiles Rd Westbound					La Vida Way Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	13	45	0	0	58	7	0	6	0	13	0	75	21	0	96	167
17:00	0	0	0	0	0	19	34	0	0	53	4	0	10	0	14	0	87	19	0	106	173
17:15	0	0	0	0	0	25	45	0	0	70	8	0	12	0	20	0	73	17	0	90	180
17:30	0	0	0	0	0	27	48	0	0	75	4	0	11	0	15	0	72	21	0	93	183
Total Volume	0	0	0	0	0	84	172	0	0	256	23	0	39	0	62	0	307	78	0	385	703
% App Total	0.0%	0.0%	0.0%	0.0%		32.8%	67.2%	0.0%	0.0%		37.1%	0.0%	62.9%	0.0%		0.0%	79.7%	20.3%	0.0%		
PHF	.000	.000	.000	.000	.000	.778	.896	.000	.000	.853	.719	.000	.813	.000	.775	.000	.882	.929	.000	.908	.960

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-07704-003
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	La Vida Way Southbound					Chiles Rd Westbound					La Vida Way Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
7:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	1	0	2	4	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	2	2	1
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	2	0	0	1	1	0	2	4	2
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:30	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	1	0	0	1	1	0	1	1	2	0	2	0	0	2	5	1
Grand Total	0	0	0	0	0	0	4	0	0	4	1	0	2	4	3	0	4	2	0	6	13	4
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			33.3%	0.0%	66.7%			0.0%	66.7%	33.3%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	30.8%	0.0%		30.8%	7.7%	0.0%	15.4%		23.1%	0.0%	30.8%	15.4%		46.2%	100.0%	

AM PEAK HOUR	La Vida Way Southbound					Chiles Rd Westbound					La Vida Way Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0	2	2
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	2	0	0	2	0	0	0	1	0	0	2	1	0	3	5
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	66.7%	33.3%			
PHF	.000	.000	.000		.000	.000	.500	.000		.500	.000	.000	.000		.000	.000	.500	.250		.375	.625

PM PEAK HOUR	La Vida Way Southbound					Chiles Rd Westbound					La Vida Way Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	0	1	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
17:30	0	0	0	0	0	0	1	0	0	1	1	0	0	0	1	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	1	0	0	1	1	0	1	0	2	0	2	0	0	2	5
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			50.0%	0.0%	50.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.250	.000	.250		.500	.000	.500	.000		.500	.625

Prepared by National Data & Surveying Services

La Vida Way & Chiles Rd

Peak Hour Turning Movement Count

ID: 17-07704-003
City: Davis

Day: Tuesday
Date: 10/10/2017

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:45 PM - 05:45 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

La Vida Way — SOUTHBOUND

AM	0	0	0	0	0	AM
NOON	0	0	0	0	0	NOON
PM	0	0	0	0	0	PM

Chiles Rd — EASTBOUND

AM	NOON	PM	
181	0	195	⇦
0	0	0	↶ 0
0	0	0	↱ 0
181	0	307	→ 0
10	0	78	↴ 0
AM	NOON	PM	

Chiles Rd — WESTBOUND

PM	NOON	AM	
0	0	0	0 ↰
172	0	170	0 ←
84	0	38	0 ↰
0	0	0	0 ↰
346	0	227	⇨
PM	NOON	AM	

CONTROL

0

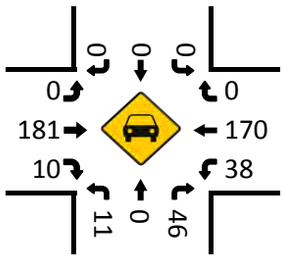
TEV	456 AM	0 NOON	703 PM
PHF	0.87		0.96

0 0 0 0

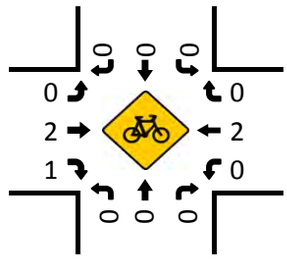
La Vida Way — NORTHBOUND

PM	162	0	23	0	39	PM
NOON	0	0	0	0	0	NOON
AM	48	0	11	0	46	AM

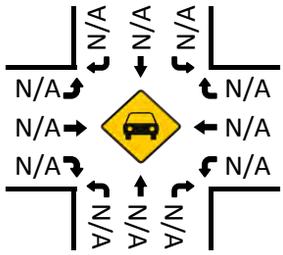
Total Vehicles (AM)



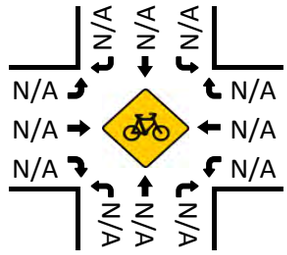
Bikes (AM)



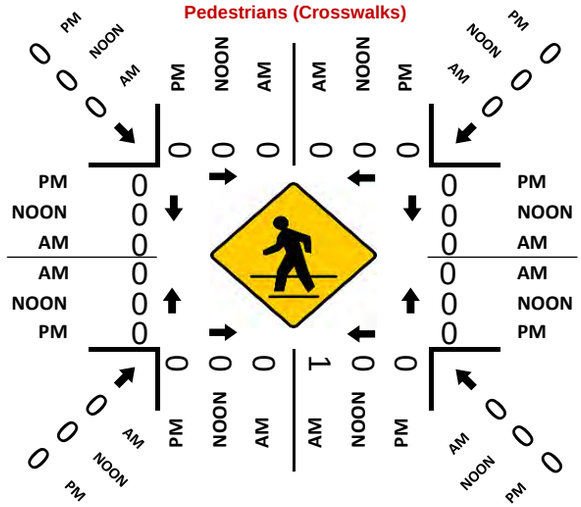
Total Vehicles (Noon)



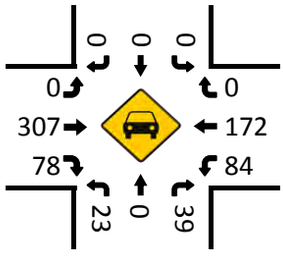
Bikes (NOON)



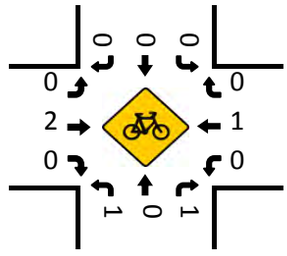
Pedestrians (Crosswalks)



Total Vehicles (PM)



Bikes (PM)



ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-004
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	Ensenada Dr Southbound					Chiles Rd Westbound					Ensenada Dr Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	10	20	0	0	30	1	0	12	0	13	0	28	0	1	29	72	1
7:15	0	0	0	0	0	7	27	0	0	34	0	0	15	0	15	0	53	0	0	53	102	0
7:30	0	0	0	0	0	4	31	0	0	35	3	0	13	0	16	0	54	1	0	55	106	0
7:45	0	0	0	0	0	7	46	0	0	53	0	0	12	0	12	0	50	1	0	51	116	0
Total	0	0	0	0	0	28	124	0	0	152	4	0	52	0	56	0	185	2	1	188	396	1
8:00	0	0	0	0	0	7	51	0	0	58	2	0	25	0	27	0	54	0	0	54	139	0
8:15	0	0	0	0	0	15	65	0	0	80	2	0	19	0	21	0	64	1	0	65	166	0
8:30	0	0	0	0	0	8	48	0	2	58	0	0	14	0	14	0	52	3	0	55	127	2
8:45	0	0	0	0	0	10	42	0	1	53	1	0	19	0	20	0	35	0	0	35	108	1
Total	0	0	0	0	0	40	206	0	3	249	5	0	77	0	82	0	205	4	0	209	540	3
16:00	0	0	0	0	0	14	40	0	0	54	2	0	22	0	24	0	108	15	0	123	201	0
16:15	0	0	0	0	0	26	48	0	0	74	5	0	13	0	18	0	92	12	0	104	196	0
16:30	0	0	0	0	0	28	61	0	0	89	3	0	16	0	19	0	79	6	0	85	193	0
16:45	0	0	0	0	0	12	48	0	0	60	6	0	15	0	21	0	68	14	0	82	163	0
Total	0	0	0	0	0	80	197	0	0	277	16	0	66	0	82	0	347	47	0	394	753	0
17:00	0	0	0	0	0	24	51	0	0	75	7	0	15	0	22	0	83	14	0	97	194	0
17:15	0	0	0	0	0	25	61	0	0	86	7	0	17	0	24	0	66	17	0	83	193	0
17:30	0	0	0	0	0	23	76	0	0	99	6	0	20	0	26	0	79	7	0	86	211	0
17:45	0	0	0	0	0	21	66	0	0	87	10	0	11	0	21	0	43	11	0	54	162	0
Total	0	0	0	0	0	93	254	0	0	347	30	0	63	0	93	0	271	49	0	320	760	0
Grand Total	0	0	0	0	0	241	781	0	3	1025	55	0	258	0	313	0	1008	102	1	1111	2449	4
Apprch %	0.0%	0.0%	0.0%	0.0%		23.5%	76.2%	0.0%	0.3%		17.6%	0.0%	82.4%	0.0%		0.0%	90.7%	9.2%	0.1%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	9.8%	31.9%	0.0%	0.1%	41.9%	2.2%	0.0%	10.5%	0.0%	12.8%	0.0%	41.2%	4.2%	0.0%	45.4%	100.0%	

AM PEAK HOUR	Ensenada Dr Southbound					Chiles Rd Westbound					Ensenada Dr Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	7	46	0	0	53	0	0	12	0	12	0	50	1	0	51	116
8:00	0	0	0	0	0	7	51	0	0	58	2	0	25	0	27	0	54	0	0	54	139
8:15	0	0	0	0	0	15	65	0	0	80	2	0	19	0	21	0	64	1	0	65	166
8:30	0	0	0	0	0	8	48	0	2	58	0	0	14	0	14	0	52	3	0	55	127
Total Volume	0	0	0	0	0	37	210	0	2	249	4	0	70	0	74	0	220	5	0	225	548
% App Total	0.0%	0.0%	0.0%	0.0%		14.9%	84.3%	0.0%	0.8%		5.4%	0.0%	94.6%	0.0%		0.0%	97.8%	2.2%	0.0%		
PHF	.000	.000	.000	.000	.000	.617	.808	.000	.250	.778	.500	.000	.700	.000	.685	.000	.859	.417	.000	.865	.825

PM PEAK HOUR	Ensenada Dr Southbound					Chiles Rd Westbound					Ensenada Dr Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	12	48	0	0	60	6	0	15	0	21	0	68	14	0	82	163
17:00	0	0	0	0	0	24	51	0	0	75	7	0	15	0	22	0	83	14	0	97	194
17:15	0	0	0	0	0	25	61	0	0	86	7	0	17	0	24	0	66	17	0	83	193
17:30	0	0	0	0	0	23	76	0	0	99	6	0	20	0	26	0	79	7	0	86	211
Total Volume	0	0	0	0	0	84	236	0	0	320	26	0	67	0	93	0	296	52	0	348	761
% App Total	0.0%	0.0%	0.0%	0.0%		26.3%	73.8%	0.0%	0.0%		28.0%	0.0%	72.0%	0.0%		0.0%	85.1%	14.9%	0.0%		
PHF	.000	.000	.000	.000	.000	.840	.776	.000	.000	.808	.929	.000	.838	.000	.894	.000	.892	.765	.000	.897	.902

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-07704-004
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	Ensenada Dr Southbound					Chiles Rd Westbound					Ensenada Dr Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	0	0	0	0	2	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	0	0	0	0	0	1	0	0	1	0	0	1	0	1	0	1	0	0	1	3	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	2	0	0	1	0	0	1	3	2
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	3
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	2	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:30	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	0	0	0	0	0	2	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	1	0	1	4	2	0	3	0	0	3	5	4
Grand Total	0	0	0	0	0	0	3	0	0	3	1	0	2	9	3	0	5	0	0	5	11	9
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			33.3%	0.0%	66.7%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	27.3%	0.0%		27.3%	9.1%	0.0%	18.2%		27.3%	0.0%	45.5%	0.0%		45.5%	100.0%	

AM PEAK HOUR	Ensenada Dr Southbound					Chiles Rd Westbound					Ensenada Dr Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	2	0	0	2	3
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.000	.500	.000		.500	.750

PM PEAK HOUR	Ensenada Dr Southbound					Chiles Rd Westbound					Ensenada Dr Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	2
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
17:30	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	0	0	0	0	0	2
Total Volume	0	0	0	0	0	0	0	0	0	0	1	0	1	3	2	0	3	0	0	3	5
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			50.0%	0.0%	50.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.250	.000	.250		.250	.000	.375	.000		.375	.625

Prepared by National Data & Surveying Services

Ensenada Dr & Chiles Rd

Peak Hour Turning Movement Count

ID: 17-07704-004
City: Davis

Day: Tuesday
Date: 10/10/2017

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Ensenada Dr – SOUTHBOUND

	U-turn	Left	Through	Right	Departing
AM	0	0	0	0	0
NOON	0	0	0	0	0
PM	0	0	0	0	0
	0	0	0	0	

Chiles Rd – EASTBOUND

	AM	NOON	PM	
Departing	214	0	262	
U-turn	0	0	0	0
Left	0	0	0	0
Through	220	0	296	0
Right	5	0	52	0

Chiles Rd – WESTBOUND

		PM	NOON	AM
Right	0	0	0	0
Through	0	236	0	210
Left	0	84	0	37
U-turn	0	0	0	2
Departing		363	0	292

CONTROL

0

	AM	NOON	PM
TEV	548	0	761
PHF	0.83		0.90

Ensenada Dr – NORTHBOUND

		0	0	0	0
	Departing	U-turn	Left	Through	Right
PM	136	0	26	0	67
NOON	0	0	0	0	0
AM	42	0	4	0	70

Total Vehicles (AM)

Approach	U-turn	Left	Through	Right
Southbound	0	0	0	0
Eastbound		0	220	5
Westbound		37	210	0
Northbound		4	0	70

Total Vehicles (Noon)

All movements: N/A

Total Vehicles (PM)

Approach	U-turn	Left	Through	Right
Southbound	0	0	0	0
Eastbound		0	296	52
Westbound		84	236	0
Northbound		26	0	67

Bikes (AM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	2	0
Westbound	0	1	0
Northbound	0	0	0

Bikes (NOON)

All movements: N/A

Bikes (PM)

Approach	Left	Through	Right
Southbound	0	0	0
Eastbound	0	3	0
Westbound	0	0	0
Northbound	1	0	1

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North (westward)	0	0	0
North (eastward)	0	0	0
West (southward)	0	0	0
West (northward)	0	0	0
East (southward)	0	0	0
East (northward)	0	0	0
South (eastward)	0	0	1
South (westward)	1	0	2
Diagonals	0	0	0

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-005
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	I-80 EB Ramps Southbound					Chiles Rd Westbound					I-80 EB Ramps Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	35	0	16	0	51	0	44	0	0	44	0	0	0	0	0	0	55	0	0	55	150	0
7:15	36	0	22	0	58	0	55	0	0	55	0	0	0	0	0	0	91	0	0	91	204	0
7:30	58	0	20	0	78	0	56	0	0	56	0	0	0	0	0	0	95	0	0	95	229	0
7:45	92	0	21	0	113	0	70	0	0	70	0	0	0	0	0	0	94	0	0	94	277	0
Total	221	0	79	0	300	0	225	0	0	225	0	0	0	0	0	0	335	0	0	335	860	0
8:00	96	0	18	0	114	0	68	0	0	68	0	0	0	0	0	0	106	0	0	106	288	0
8:15	85	0	29	0	114	0	85	0	0	85	0	0	0	0	0	0	101	0	0	101	300	0
8:30	74	0	33	0	107	0	64	0	0	64	0	0	0	0	0	0	85	0	0	85	256	0
8:45	64	0	28	0	92	0	56	0	0	56	0	0	0	0	0	0	81	0	0	81	229	0
Total	319	0	108	0	427	0	273	0	0	273	0	0	0	0	0	0	373	0	0	373	1073	0
16:00	97	0	13	0	110	0	67	0	0	67	0	0	0	0	0	0	171	0	0	171	348	0
16:15	106	0	22	0	128	0	77	0	0	77	0	0	0	0	0	0	138	0	0	138	343	0
16:30	90	0	20	0	110	0	91	0	0	91	0	0	0	0	0	0	139	0	0	139	340	0
16:45	107	0	7	0	114	0	81	0	0	81	0	0	0	0	0	0	109	0	0	109	304	0
Total	400	0	62	0	462	0	316	0	0	316	0	0	0	0	0	0	557	0	0	557	1335	0
17:00	105	0	18	0	123	0	82	0	0	82	0	0	0	0	0	0	130	0	0	130	335	0
17:15	106	0	26	0	132	0	86	0	0	86	0	0	0	0	0	0	109	0	0	109	327	0
17:30	77	0	30	0	107	0	85	0	0	85	0	0	0	0	0	0	137	0	0	137	329	0
17:45	70	0	24	0	94	0	76	0	0	76	0	0	0	0	0	0	68	0	0	68	238	0
Total	358	0	98	0	456	0	329	0	0	329	0	0	0	0	0	0	444	0	0	444	1229	0
Grand Total	1298	0	347	0	1645	0	1143	0	0	1143	0	0	0	0	0	0	1709	0	0	1709	4497	0
Apprch %	78.9%	0.0%	21.1%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%			
Total %	28.9%	0.0%	7.7%	0.0%	36.6%	0.0%	25.4%	0.0%	0.0%	25.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	38.0%	0.0%	0.0%	38.0%	100.0%	

AM PEAK HOUR	I-80 EB Ramps Southbound					Chiles Rd Westbound					I-80 EB Ramps Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	92	0	21	0	113	0	70	0	0	70	0	0	0	0	0	0	94	0	0	94	277
8:00	96	0	18	0	114	0	68	0	0	68	0	0	0	0	0	0	106	0	0	106	288
8:15	85	0	29	0	114	0	85	0	0	85	0	0	0	0	0	0	101	0	0	101	300
8:30	74	0	33	0	107	0	64	0	0	64	0	0	0	0	0	0	85	0	0	85	256
Total Volume	347	0	101	0	448	0	287	0	0	287	0	0	0	0	0	0	386	0	0	386	1121
% App Total	77.5%	0.0%	22.5%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		
PHF	.904	.000	.765	.000	.982	.000	.844	.000	.000	.844	.000	.000	.000	.000	.000	.000	.910	.000	.000	.910	.934

PM PEAK HOUR	I-80 EB Ramps Southbound					Chiles Rd Westbound					I-80 EB Ramps Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	97	0	13	0	110	0	67	0	0	67	0	0	0	0	0	0	171	0	0	171	348
16:15	106	0	22	0	128	0	77	0	0	77	0	0	0	0	0	0	138	0	0	138	343
16:30	90	0	20	0	110	0	91	0	0	91	0	0	0	0	0	0	139	0	0	139	340
16:45	107	0	7	0	114	0	81	0	0	81	0	0	0	0	0	0	109	0	0	109	304
Total Volume	400	0	62	0	462	0	316	0	0	316	0	0	0	0	0	0	557	0	0	557	1335
% App Total	86.6%	0.0%	13.4%	0.0%		0.0%	100.0%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		0.0%	100.0%	0.0%	0.0%		
PHF	.935	.000	.705	.000	.902	.000	.868	.000	.000	.868	.000	.000	.000	.000	.000	.000	.814	.000	.000	.814	.959

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-07704-005
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	I-80 EB Ramps Southbound					Chiles Rd Westbound					I-80 EB Ramps Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
8:15	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	1	0	0	1	2	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	2	0	0	2	3	1
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	2	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1	0
17:30	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	1	0
17:45	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	1	2	0
Total	0	0	0	0	0	0	2	0	0	2	0	0	0	0	0	0	4	0	0	4	6	0
Grand Total	0	0	0	0	0	0	3	0	1	3	0	0	0	0	0	0	8	0	0	8	11	1
Apprch %	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%				
Total %	0.0%	0.0%	0.0%		0.0%	0.0%	27.3%	0.0%		27.3%	0.0%	0.0%	0.0%		0.0%	0.0%	72.7%	0.0%		72.7%	100.0%	

AM PEAK HOUR	I-80 EB Ramps Southbound					Chiles Rd Westbound					I-80 EB Ramps Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	1
8:15	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	1	0	0	1	2
8:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	3	0	0	3	4
% App Total	0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.250	.000		.250	.000	.000	.000		.000	.000	.750	.000		.750	.500

PM PEAK HOUR	I-80 EB Ramps Southbound					Chiles Rd Westbound					I-80 EB Ramps Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:00 to 17:00																					
Peak Hour For Entire Intersection Begins at 16:00																					
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000	.000	.000		.000	.000

Prepared by National Data & Surveying Services

I-80 EB Ramps & Chiles Rd

Peak Hour Turning Movement Count

ID: 17-07704-005
City: Davis

Day: Tuesday
Date: 10/10/2017

PEAK HOURS

AM: 07:45 AM - 08:45 AM
NOON: NONE
PM: 04:00 PM - 05:00 PM

COUNT PERIODS

AM: 07:00 AM - 09:00 AM
NOON: NONE
PM: 04:00 PM - 06:00 PM

I-80 EB Ramps — SOUTHBOUND

AM	101	0	347	0	0	AM
NOON	0	0	0	0	0	NOON
PM	62	0	400	0	0	PM

Chiles Rd — EASTBOUND

AM	NOON	PM	
388	0	378	⇦
0	0	0	↶ 0
0	0	0	↱ 0
386	0	557	→ 0
0	0	0	↷ 0
AM	NOON	PM	

WESTBOUND — Chiles Rd

PM	NOON	AM	
0	0	0	0 ↰
316	0	287	0 ←
0	0	0	0 ↶
0	0	0	0 ↷
957	0	733	⇨
PM	NOON	AM	

CONTROL

0

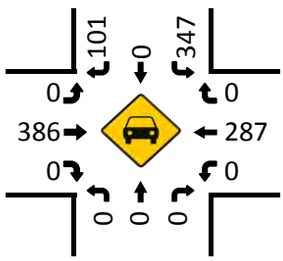
TEV	1121 AM	0 NOON	1335 PM
PHF	0.93		0.96

0	0	0	0	↰ ↑ ↱ ↷

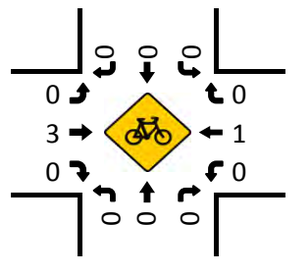
NORTHBOUND — I-80 EB Ramps

PM	0	0	0	0	0	PM
NOON	0	0	0	0	0	NOON
AM	0	0	0	0	0	AM

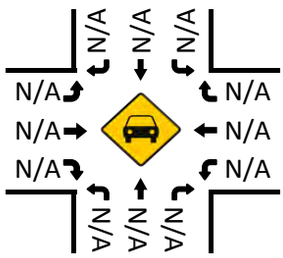
Total Vehicles (AM)



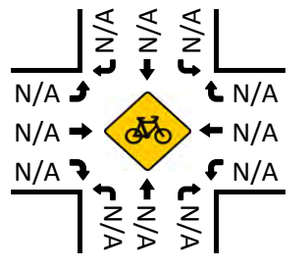
Bikes (AM)



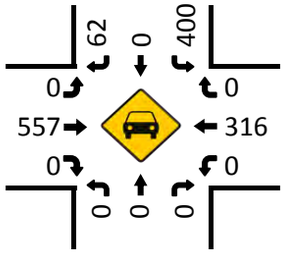
Total Vehicles (Noon)



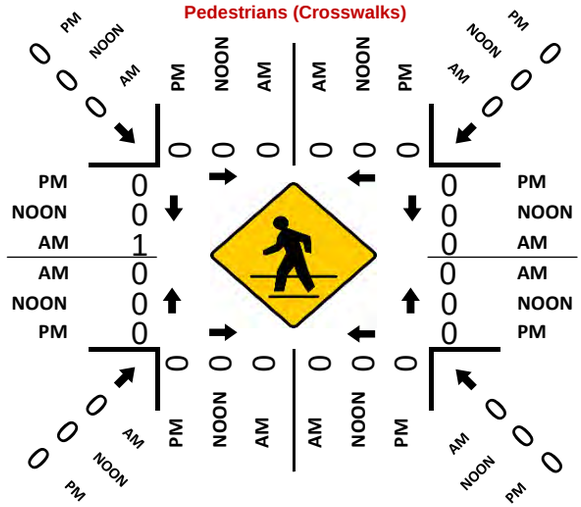
Bikes (NOON)



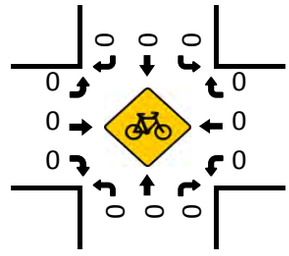
Total Vehicles (PM)



Pedestrians (Crosswalks)



Bikes (PM)



ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-006
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	Mace Blvd Southbound					Chiles Rd Westbound					Mace Blvd Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	18	52	34	0	104	2	4	34	0	40	6	120	15	0	141	64	11	20	0	95	380	0
7:15	30	51	39	6	126	1	9	37	0	47	7	127	14	0	148	74	24	21	0	119	440	6
7:30	24	66	41	1	132	5	8	50	0	63	7	149	23	0	179	102	30	32	0	164	538	1
7:45	33	69	57	1	160	5	12	67	0	84	5	177	22	0	204	107	39	37	0	183	631	1
Total	105	238	171	8	522	13	33	188	0	234	25	573	74	0	672	347	104	110	0	561	1989	8
8:00	50	83	55	2	190	6	10	69	0	85	2	192	12	0	206	128	40	41	0	209	690	2
8:15	53	105	70	1	229	9	12	96	0	117	6	167	18	0	191	126	39	18	0	183	720	1
8:30	34	84	47	0	165	8	17	66	0	91	3	125	16	0	144	106	26	34	0	166	566	0
8:45	28	64	43	0	135	6	6	39	0	51	4	141	15	0	160	94	18	31	0	143	489	0
Total	165	336	215	3	719	29	45	270	0	344	15	625	61	0	701	454	123	124	0	701	2465	3
16:00	43	104	50	3	200	9	9	38	0	56	7	127	47	0	181	111	99	51	0	261	698	3
16:15	35	123	72	2	232	2	8	43	0	53	3	114	34	0	151	110	108	45	0	263	699	2
16:30	55	83	70	1	209	5	10	56	0	71	9	122	29	0	160	103	84	43	0	230	670	1
16:45	48	135	58	0	241	8	14	52	0	74	7	121	31	0	159	105	80	37	0	222	696	0
Total	181	445	250	6	882	24	41	189	0	254	26	484	141	0	651	429	371	176	0	976	2763	6
17:00	45	130	67	0	242	8	10	50	0	68	7	139	45	0	191	106	84	52	0	242	743	0
17:15	56	128	73	3	260	9	7	53	0	69	5	136	32	0	173	99	54	65	0	218	720	3
17:30	38	127	65	2	232	4	8	40	0	52	5	126	17	0	148	123	53	42	0	218	650	2
17:45	40	161	63	0	264	11	9	31	0	51	8	116	14	0	138	67	33	42	0	142	595	0
Total	179	546	268	5	998	32	34	174	0	240	25	517	108	0	650	395	224	201	0	820	2708	5
Grand Total	630	1565	904	22	3121	98	153	821	0	1072	91	2199	384	0	2674	1625	822	611	0	3058	9925	22
Apprch %	20.2%	50.1%	29.0%	0.7%		9.1%	14.3%	76.6%	0.0%		3.4%	82.2%	14.4%	0.0%		53.1%	26.9%	20.0%	0.0%			
Total %	6.3%	15.8%	9.1%	0.2%	31.4%	1.0%	1.5%	8.3%	0.0%	10.8%	0.9%	22.2%	3.9%	0.0%	26.9%	16.4%	8.3%	6.2%	0.0%	30.8%	100.0%	

AM PEAK HOUR	Mace Blvd Southbound					Chiles Rd Westbound					Mace Blvd Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	33	69	57	1	160	5	12	67	0	84	5	177	22	0	204	107	39	37	0	183	631
8:00	50	83	55	2	190	6	10	69	0	85	2	192	12	0	206	128	40	41	0	209	690
8:15	53	105	70	1	229	9	12	96	0	117	6	167	18	0	191	126	39	18	0	183	720
8:30	34	84	47	0	165	8	17	66	0	91	3	125	16	0	144	106	26	34	0	166	566
Total Volume	170	341	229	4	744	28	51	298	0	377	16	661	68	0	745	467	144	130	0	741	2607
% App Total	22.8%	45.8%	30.8%	0.5%		7.4%	13.5%	79.0%	0.0%		2.1%	88.7%	9.1%	0.0%		63.0%	19.4%	17.5%	0.0%		
PHF	.802	.812	.818	.500	.812	.778	.750	.776	.000	.806	.667	.861	.773	.000	.904	.912	.900	.793	.000	.886	.905

PM PEAK HOUR	Mace Blvd Southbound					Chiles Rd Westbound					Mace Blvd Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	55	83	70	1	209	5	10	56	0	71	9	122	29	0	160	103	84	43	0	230	670
16:45	48	135	58	0	241	8	14	52	0	74	7	121	31	0	159	105	80	37	0	222	696
17:00	45	130	67	0	242	8	10	50	0	68	7	139	45	0	191	106	84	52	0	242	743
17:15	56	128	73	3	260	9	7	53	0	69	5	136	32	0	173	99	54	65	0	218	720
Total Volume	204	476	268	4	952	30	41	211	0	282	28	518	137	0	683	413	302	197	0	912	2829
% App Total	21.4%	50.0%	28.2%	0.4%		10.6%	14.5%	74.8%	0.0%		4.1%	75.8%	20.1%	0.0%		45.3%	33.1%	21.6%	0.0%		
PHF	.911	.881	.918	.333	.915	.833	.732	.942	.000	.953	.778	.932	.761	.000	.894	.974	.899	.758	.000	.942	.952

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-07704-006
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	Mace Blvd Southbound					Chiles Rd Westbound					Mace Blvd Northbound					Chiles Rd Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
7:30	0	0	0	0	0	0	0	1	0	1	0	0	0	2	0	0	0	0	2	0	1	4
7:45	1	0	0	0	1	0	0	1	0	1	0	0	0	2	0	0	1	0	0	1	3	2
Total	3	0	0	0	3	0	0	2	0	2	0	0	0	5	0	0	1	0	3	1	6	8
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	1
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1	1
8:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1	0	0	2
Total	0	0	0	0	0	0	1	0	0	1	0	1	0	3	1	0	1	0	2	1	3	5
16:00	0	0	0	0	0	0	0	1	0	1	0	0	0	1	0	0	0	0	0	0	1	1
16:15	1	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	0	0	1	0	1	5
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
Total	1	0	0	0	1	0	0	1	0	1	0	0	0	10	0	0	0	0	1	0	2	11
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	2	0	1	2	2	7
17:15	1	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1	3
17:30	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	1	0	2	1
17:45	1	0	0	0	1	0	0	0	0	0	0	0	0	4	0	0	1	0	4	1	2	8
Total	2	0	0	0	2	0	1	1	0	2	0	0	0	13	0	0	3	0	6	3	7	19
Grand Total	6	0	0	0	6	0	2	4	0	6	0	1	0	31	1	0	5	0	12	5	18	43
Apprch %	100.0%	0.0%	0.0%			0.0%	33.3%	66.7%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%				
Total %	33.3%	0.0%	0.0%		33.3%	0.0%	11.1%	22.2%		33.3%	0.0%	5.6%	0.0%		5.6%	0.0%	27.8%	0.0%		27.8%	100.0%	

AM PEAK HOUR	Mace Blvd Southbound					Chiles Rd Westbound					Mace Blvd Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	1	0	0	0	1	0	0	1	0	1	0	0	0	2	0	0	1	0	0	1	3
8:00	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1
8:15	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1
Total Volume	1	0	0	0	1	0	1	1	0	2	0	1	0	4	1	0	2	0	1	2	6
% App Total	100.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.250	.250		.500	.000	.250	.000		.250	.000	.500	.000		.500	.500

PM PEAK HOUR	Mace Blvd Southbound					Chiles Rd Westbound					Mace Blvd Northbound					Chiles Rd Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:30 to 17:30																					
Peak Hour For Entire Intersection Begins at 16:30																					
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	2	0	1	2	2
17:15	1	0	0	0	1	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	1
Total Volume	1	0	0	0	1	0	0	0	0	0	0	0	0	14	0	0	2	0	1	2	3
% App Total	100.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.250	.000	.000		.250	.000	.000	.000		.000	.000	.000	.000		.000	.000	.250	.000		.250	.375

Prepared by National Data & Surveying Services

Mace Blvd & Chiles Rd

Peak Hour Turning Movement Count

ID: 17-07704-006
City: Davis

Day: Tuesday
Date: 10/10/2017

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:30 PM - 05:30 PM	04:00 PM - 06:00 PM

Mace Blvd — SOUTHBOUND

	Right	Through	Left	U-Turn	Northbound departing
AM	229	341	170	4	1430
NOON	0	0	0	0	0
PM	268	476	204	4	1146
(red)	0	0	0	0	

Chiles Rd — EASTBOUND

	AM	NOON	PM	(red)
Westbound departing	296	0	337	
U-Turn	0	0	0	0
Left	467	0	413	0
Through	144	0	302	0
Right	130	0	197	0

Chiles Rd — WESTBOUND

	(red)	PM	NOON	AM
Right	0	211	0	298
Through	0	41	0	51
Left	0	30	0	28
U-Turn	0	0	0	0
Eastbound departing		643	0	382

Mace Blvd — NORTHBOUND

	Southbound departing	U-Turn	Left	Through	Right
(red)		0	0	0	0
PM	703	0	28	518	137
NOON	0	0	0	0	0
AM	499	0	16	661	68

CONTROL: 0

	AM	NOON	PM
TEV	2607	0	2829
PHF	0.91		0.95

Total Vehicles (AM)

Approach	Left	Through	Right
Southbound	170	341	229
Eastbound	467	144	130
Westbound	28	51	298
Northbound	16	661	68

Total Vehicles (Noon)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Through	Right
Southbound	204	476	268
Eastbound	413	302	197
Westbound	30	41	211
Northbound	28	518	137

Bikes (AM)

Approach	Left	Through	Right
Southbound	1	0	0
Eastbound	0	2	0
Westbound	0	1	1
Northbound	0	1	0

Bikes (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Through	Right
Southbound	1	0	0
Eastbound	0	2	0
Westbound	0	0	0
Northbound	0	0	0

Pedestrians (Crosswalks)

Crosswalk	Direction	AM	NOON	PM
North	Eastbound	0	0	0
North	Westbound	0	0	0
West	Southbound	0	0	0
West	Northbound	0	0	0
East	Southbound	1	0	1
East	Northbound	0	0	0
South	Eastbound	3	0	4
South	Westbound	1	0	10
NW corner (diagonal)		0	0	0
NE corner (diagonal)		0	0	0
SW corner (diagonal)		0	0	0
SE corner (diagonal)		0	0	0

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-007
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	Mace Blvd Southbound					2nd St Westbound					Mace Blvd Northbound					2nd St Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	12	169	3	5	189	7	4	2	0	13	101	87	7	0	195	2	4	39	1	46	443	6
7:15	8	214	6	0	228	5	13	6	0	24	109	74	8	0	191	7	4	60	0	71	514	0
7:30	15	198	2	1	216	1	6	3	0	10	118	102	1	0	221	5	3	55	1	64	511	2
7:45	11	224	17	0	252	3	13	3	0	19	166	171	3	0	340	1	3	59	1	64	675	1
Total	46	805	28	6	885	16	36	14	0	66	494	434	19	0	947	15	14	213	3	245	2143	9
8:00	15	264	10	1	290	2	10	0	0	12	143	167	5	0	315	8	7	62	0	77	694	1
8:15	13	272	23	1	309	4	9	2	0	15	152	172	6	0	330	5	6	77	2	90	744	3
8:30	29	249	33	0	311	5	8	1	0	14	163	109	2	0	274	8	4	95	1	108	707	1
8:45	5	170	21	0	196	2	7	5	0	14	133	114	4	0	251	10	3	63	1	77	538	1
Total	62	955	87	2	1106	13	34	8	0	55	591	562	17	0	1170	31	20	297	4	352	2683	6
16:00	38	136	19	1	194	4	5	8	0	17	98	161	12	0	271	18	51	138	4	211	693	5
16:15	30	127	21	2	180	14	4	6	0	24	101	181	18	0	300	29	63	131	6	229	733	8
16:30	40	129	22	3	194	7	6	13	0	26	98	145	14	0	257	28	58	130	5	221	698	8
16:45	36	145	19	1	201	7	7	6	0	20	119	187	16	0	322	25	49	143	9	226	769	10
Total	144	537	81	7	769	32	22	33	0	87	416	674	60	0	1150	100	221	542	24	887	2893	31
17:00	27	119	17	0	163	12	5	7	0	24	102	187	15	0	304	38	67	192	12	309	800	12
17:15	40	130	22	1	193	2	8	12	0	22	116	237	7	0	360	27	55	159	8	249	824	9
17:30	23	124	28	1	176	5	9	7	0	21	127	205	14	0	346	27	33	151	9	220	763	10
17:45	12	107	20	1	140	4	6	5	0	15	108	200	4	0	312	25	28	143	7	203	670	8
Total	102	480	87	3	672	23	28	31	0	82	453	829	40	0	1322	117	183	645	36	981	3057	39
Grand Total	354	2777	283	18	3432	84	120	86	0	290	1954	2499	136	0	4589	263	438	1697	67	2465	10776	85
Apprch %	10.3%	80.9%	8.2%	0.5%		29.0%	41.4%	29.7%	0.0%		42.6%	54.5%	3.0%	0.0%		10.7%	17.8%	68.8%	2.7%			
Total %	3.3%	25.8%	2.6%	0.2%	31.8%	0.8%	1.1%	0.8%	0.0%	2.7%	18.1%	23.2%	1.3%	0.0%	42.6%	2.4%	4.1%	15.7%	0.6%	22.9%	100.0%	

AM PEAK HOUR	Mace Blvd Southbound					2nd St Westbound					Mace Blvd Northbound					2nd St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	11	224	17	0	252	3	13	3	0	19	166	171	3	0	340	1	3	59	1	64	675
8:00	15	264	10	1	290	2	10	0	0	12	143	167	5	0	315	8	7	62	0	77	694
8:15	13	272	23	1	309	4	9	2	0	15	152	172	6	0	330	5	6	77	2	90	744
8:30	29	249	33	0	311	5	8	1	0	14	163	109	2	0	274	8	4	95	1	108	707
Total Volume	68	1009	83	2	1162	14	40	6	0	60	624	619	16	0	1259	22	20	293	4	339	2820
% App Total	5.9%	86.8%	7.1%	0.2%		23.3%	66.7%	10.0%	0.0%		49.6%	49.2%	1.3%	0.0%		6.5%	5.9%	86.4%	1.2%		
PHF	.586	.927	.629	.500	.934	.700	.769	.500	.000	.789	.940	.900	.667	.000	.926	.688	.714	.771	.500	.785	.948

PM PEAK HOUR	Mace Blvd Southbound					2nd St Westbound					Mace Blvd Northbound					2nd St Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	36	145	19	1	201	7	7	6	0	20	119	187	16	0	322	25	49	143	9	226	769
17:00	27	119	17	0	163	12	5	7	0	24	102	187	15	0	304	38	67	192	12	309	800
17:15	40	130	22	1	193	2	8	12	0	22	116	237	7	0	360	27	55	159	8	249	824
17:30	23	124	28	1	176	5	9	7	0	21	127	205	14	0	346	27	33	151	9	220	763
Total Volume	126	518	86	3	733	26	29	32	0	87	464	816	52	0	1332	117	204	645	38	1004	3156
% App Total	17.2%	70.7%	11.7%	0.4%		29.9%	33.3%	36.8%	0.0%		34.8%	61.3%	3.9%	0.0%		11.7%	20.3%	64.2%	3.8%		
PHF	.788	.893	.768	.750	.912	.542	.806	.667	.000	.906	.913	.861	.813	.000	.925	.770	.761	.840	.792	.812	.958

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-07704-007
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	Mace Blvd Southbound					2nd St Westbound					Mace Blvd Northbound					2nd St Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	1	0	0	1	1	0	0	0	0	0	0	0	0	2	0	0	1	1	1	2	3	4
7:15	2	0	0	6	2	0	2	1	0	3	0	0	0	0	0	0	0	0	0	0	5	6
7:30	2	0	0	1	2	0	0	1	1	1	0	0	0	1	0	0	0	0	1	0	3	4
7:45	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2	2
Total	6	0	0	9	6	0	2	2	1	4	0	0	0	3	0	0	2	1	3	3	13	16
8:00	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5	0
8:15	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2	0
8:30	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	3	0
8:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	2	1	0	1	3	0	1	3	0	4	0	0	0	0	0	0	3	0	0	3	10	1
16:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	4
16:15	1	0	0	1	1	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	2	2
16:30	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	1	0
16:45	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	0	0	2	0	2	6	0
Total	1	0	0	3	1	0	3	1	0	4	0	2	0	0	2	0	0	2	3	2	9	6
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0	0	2	0	0	2	2	6
17:15	1	0	0	0	1	0	1	3	0	4	0	1	0	0	1	0	0	0	0	0	6	0
17:30	0	0	0	1	0	0	1	2	0	3	0	0	0	1	0	0	0	1	0	1	4	2
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	0	0	1	1	0	2	5	1	7	0	1	0	6	1	0	2	1	0	3	12	8
Grand Total	10	1	0	14	11	0	8	11	2	19	0	3	0	9	3	0	7	4	6	11	44	31
Apprch %	90.9%	9.1%	0.0%			0.0%	42.1%	57.9%			0.0%	100.0%	0.0%			0.0%	63.6%	36.4%				
Total %	22.7%	2.3%	0.0%		25.0%	0.0%	18.2%	25.0%		43.2%	0.0%	6.8%	0.0%		6.8%	0.0%	15.9%	9.1%		25.0%	100.0%	

AM PEAK HOUR	Mace Blvd Southbound					2nd St Westbound					Mace Blvd Northbound					2nd St Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1	2
8:00	2	1	0	0	3	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2	5
8:15	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	0	0	0	0	0	2
8:30	0	0	0	0	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	1	3
Total Volume	3	1	0	1	4	0	1	3	0	4	0	0	0	0	0	0	4	0	1	4	12
% App Total	75.0%	25.0%	0.0%			0.0%	25.0%	75.0%			0.0%	0.0%	0.0%			0.0%	100.0%	0.0%			
PHF	.375	.250	.000		.333	.000	.250	.375		.500	.000	.000	.000		.000	.000	.500	.000		.500	.600

PM PEAK HOUR	Mace Blvd Southbound					2nd St Westbound					Mace Blvd Northbound					2nd St Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	3	0	0	3	0	1	0	0	1	0	0	2	0	2	6
17:00	0	0	0	0	0	0	0	0	1	0	0	0	0	5	0	0	2	0	0	2	2
17:15	1	0	0	0	1	0	1	3	0	4	0	1	0	0	1	0	0	0	0	0	6
17:30	0	0	0	1	0	0	1	2	0	3	0	0	0	1	0	0	0	1	0	1	4
Total Volume	1	0	0	1	1	0	5	5	1	10	0	2	0	6	2	0	2	3	0	5	18
% App Total	100.0%	0.0%	0.0%			0.0%	50.0%	50.0%			0.0%	100.0%	0.0%			0.0%	40.0%	60.0%			
PHF	.250	.000	.000		.250	.000	.417	.417		.625	.000	.500	.000		.500	.000	.250	.375		.625	.750

Prepared by National Data & Surveying Services

Mace Blvd & 2nd St

Peak Hour Turning Movement Count

ID: 17-07704-007
City: Davis

Day: Tuesday
Date: 10/10/2017

PEAK HOURS		COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Mace Blvd — SOUTHBOUND

	Right	Through	Left	U-Turn	Exit (Northbound departing)
AM	83	1009	68	2	649
NOON	0	0	0	0	0
PM	86	518	126	3	968
	0	0	0	0	

2nd St — WESTBOUND

	PM	NOON	AM	
Right	32	0	6	0
Through	29	0	40	0
Left	26	0	14	0
U-Turn	0	0	0	0
Exit	382	0	104	

2nd St — EASTBOUND

	AM	NOON	PM	
Exit	751	0	617	
U-Turn	4	0	38	0
Left	22	0	117	0
Through	20	0	204	0
Right	293	0	645	0

Mace Blvd — NORTHBOUND

	Exit (Southbound departing)	U-Turn	Left	Through	Right
		0	0	0	0
PM	1189	0	464	816	52
NOON	0	0	0	0	0
AM	1316	0	624	619	16

CONTROL

0

	AM	NOON	PM
TEV	2820	0	3156
PHF	0.95		0.96

Total Vehicles (AM)

Approach	Left	Through	Right
Southbound	68	1009	83
Eastbound	22	20	293
Westbound	14	40	6
Northbound	624	619	16

Total Vehicles (Noon)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Total Vehicles (PM)

Approach	Left	Through	Right
Southbound	126	518	86
Eastbound	117	204	645
Westbound	26	29	32
Northbound	464	816	52

Bikes (AM)

Approach	Left	Through	Right
Southbound	3	1	0
Eastbound	0	4	0
Westbound	0	1	3
Northbound	0	0	0

Bikes (NOON)

Approach	Left	Through	Right
Southbound	N/A	N/A	N/A
Eastbound	N/A	N/A	N/A
Westbound	N/A	N/A	N/A
Northbound	N/A	N/A	N/A

Bikes (PM)

Approach	Left	Through	Right
Southbound	1	0	0
Eastbound	0	2	3
Westbound	0	5	5
Northbound	0	2	0

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (eastbound)	1	0	0
North leg (westbound)	0	0	1
West leg (southbound)	0	0	1
West leg (northbound)	0	0	0
East leg (southbound)	1	0	0
East leg (northbound)	0	0	0
South leg (eastbound)	0	0	3
South leg (westbound)	0	0	3
NW corner (diagonal)	0	0	0
NE corner (diagonal)	0	0	0
SW corner (diagonal)	0	0	0
SE corner (diagonal)	0	0	0

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

6581-01

File Name : 17-07704-008
Date : 10/10/2017

Unshifted Count = All Vehicles & Uturns

	Mace Blvd Southbound					I-80 WB Ramps Westbound					Mace Blvd Northbound					I-80 WB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	178	31	0	209	65	0	137	0	202	76	54	0	0	130	0	0	0	0	0	541	0
7:15	0	255	37	0	292	62	0	136	0	198	67	53	0	0	120	0	0	0	0	0	610	0
7:30	0	213	44	0	257	83	0	131	0	214	80	96	0	0	176	0	0	0	0	0	647	0
7:45	0	216	46	0	262	89	0	183	0	272	119	148	0	0	267	0	0	0	0	0	801	0
Total	0	862	158	0	1020	299	0	587	0	886	342	351	0	0	693	0	0	0	0	0	2599	0
8:00	0	252	52	0	304	68	0	129	0	197	116	181	0	0	297	0	0	0	0	0	798	0
8:15	0	311	45	0	356	83	0	150	0	233	95	197	0	0	292	0	0	0	0	0	881	0
8:30	0	320	48	0	368	56	2	132	0	190	89	125	0	0	214	0	0	0	0	0	772	0
8:45	0	172	50	0	222	65	0	128	0	193	79	122	0	0	201	0	0	0	0	0	616	0
Total	0	1055	195	0	1250	272	2	539	0	813	379	625	0	0	1004	0	0	0	0	0	3067	0
16:00	0	226	54	0	280	76	0	119	0	195	64	137	0	0	201	0	0	0	0	0	676	0
16:15	0	215	50	0	265	89	1	167	0	257	64	134	0	0	198	0	0	0	0	0	720	0
16:30	0	220	37	0	257	100	2	148	0	250	69	116	0	0	185	0	0	0	0	0	692	0
16:45	0	241	60	0	301	86	0	172	0	258	67	146	0	0	213	0	0	0	0	0	772	0
Total	0	902	201	0	1103	351	3	606	0	960	264	533	0	0	797	0	0	0	0	0	2860	0
17:00	0	261	55	0	316	111	1	164	0	276	61	144	0	0	205	0	0	0	0	0	797	0
17:15	0	267	38	0	305	97	0	185	0	282	75	168	0	0	243	0	0	0	0	0	830	0
17:30	0	225	54	0	279	108	0	197	0	305	66	152	0	0	218	0	0	0	0	0	802	0
17:45	0	225	48	0	273	122	0	191	0	313	66	103	0	0	169	0	0	0	0	0	755	0
Total	0	978	195	0	1173	438	1	737	0	1176	268	567	0	0	835	0	0	0	0	0	3184	0
Grand Total	0	3797	749	0	4546	1360	6	2469	0	3835	1253	2076	0	0	3329	0	0	0	0	0	11710	0
Apprch %	0.0%	83.5%	16.5%	0.0%		35.5%	0.2%	64.4%	0.0%		37.6%	62.4%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%			
Total %	0.0%	32.4%	6.4%	0.0%	38.8%	11.6%	0.1%	21.1%	0.0%	32.7%	10.7%	17.7%	0.0%	0.0%	28.4%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	

AM PEAK HOUR	Mace Blvd Southbound					I-80 WB Ramps Westbound					Mace Blvd Northbound					I-80 WB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	216	46	0	262	89	0	183	0	272	119	148	0	0	267	0	0	0	0	0	801
8:00	0	252	52	0	304	68	0	129	0	197	116	181	0	0	297	0	0	0	0	0	798
8:15	0	311	45	0	356	83	0	150	0	233	95	197	0	0	292	0	0	0	0	0	881
8:30	0	320	48	0	368	56	2	132	0	190	89	125	0	0	214	0	0	0	0	0	772
Total Volume	0	1099	191	0	1290	296	2	594	0	892	419	651	0	0	1070	0	0	0	0	0	3252
% App Total	0.0%	85.2%	14.8%	0.0%		33.2%	0.2%	66.6%	0.0%		39.2%	60.8%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.859	.918	.000	.876	.831	.250	.811	.000	.820	.880	.826	.000	.000	.901	.000	.000	.000	.000	.000	.923

PM PEAK HOUR	Mace Blvd Southbound					I-80 WB Ramps Westbound					Mace Blvd Northbound					I-80 WB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	241	60	0	301	86	0	172	0	258	67	146	0	0	213	0	0	0	0	0	772
17:00	0	261	55	0	316	111	1	164	0	276	61	144	0	0	205	0	0	0	0	0	797
17:15	0	267	38	0	305	97	0	185	0	282	75	168	0	0	243	0	0	0	0	0	830
17:30	0	225	54	0	279	108	0	197	0	305	66	152	0	0	218	0	0	0	0	0	802
Total Volume	0	994	207	0	1201	402	1	718	0	1121	269	610	0	0	879	0	0	0	0	0	3201
% App Total	0.0%	82.8%	17.2%	0.0%		35.9%	0.1%	64.0%	0.0%		30.6%	69.4%	0.0%	0.0%		0.0%	0.0%	0.0%	0.0%		
PHF	.000	.931	.863	.000	.950	.905	.250	.911	.000	.919	.897	.908	.000	.000	.904	.000	.000	.000	.000	.000	.964

ALL TRAFFIC DATA

(916) 771-8700
orders@atdtraffic.com

File Name : 17-07704-008
Date : 10/10/2017

Bank 1 Count = Bikes & Peds

	Mace Blvd Southbound					I-80 WB Ramps Westbound					Mace Blvd Northbound					I-80 WB Ramps Eastbound						
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total	Peds Total
7:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	2	1
7:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:30	0	0	0	0	0	0	0	0	0	0	1	0	1	0	2	0	0	0	0	0	2	0
7:45	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2	0
Total	0	1	0	0	1	1	0	0	0	1	1	0	2	0	3	0	0	1	1	1	6	1
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
8:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
8:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1	0
8:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	1	0	2	0	3	0	0	0	0	0	3	0
16:00	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1	0
16:15	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	1	0	1	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	0
Total	0	0	2	0	2	0	0	0	0	0	1	1	0	0	2	1	0	0	1	1	5	1
17:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	1
17:15	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2	0
17:30	0	0	1	0	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	3	0
17:45	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
Total	0	2	1	0	3	1	0	0	0	1	1	1	1	0	3	0	0	0	1	0	7	1
Grand Total	0	3	3	0	6	2	0	0	0	2	4	2	5	0	11	1	0	1	3	2	21	3
Apprch %	0.0%	50.0%	50.0%			100.0%	0.0%	0.0%			36.4%	18.2%	45.5%			50.0%	0.0%	50.0%				
Total %	0.0%	14.3%	14.3%		28.6%	9.5%	0.0%	0.0%		9.5%	19.0%	9.5%	23.8%		52.4%	4.8%	0.0%	4.8%		9.5%	100.0%	

AM PEAK HOUR	Mace Blvd Southbound					I-80 WB Ramps Westbound					Mace Blvd Northbound					I-80 WB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	1	0	0	0	1	0	0	1	0	1	0	0	0	0	0	2
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
8:15	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	0	1
8:30	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
Total Volume	0	0	0	0	0	1	0	0	0	1	1	0	3	0	4	0	0	0	0	0	5
% App Total	0.0%	0.0%	0.0%			100.0%	0.0%	0.0%			25.0%	0.0%	75.0%			0.0%	0.0%	0.0%			
PHF	.000	.000	.000		.000	.250	.000	.000		.250	.250	.000	.750		1.000	.000	.000	.000		.000	.625

PM PEAK HOUR	Mace Blvd Southbound					I-80 WB Ramps Westbound					Mace Blvd Northbound					I-80 WB Ramps Eastbound					
START TIME	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	LEFT	THRU	RIGHT	PEDS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	2	0	2	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3
17:00	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	0	2
17:30	0	0	1	0	1	1	0	0	0	1	1	0	0	0	1	0	0	0	0	0	3
Total Volume	0	1	3	0	4	1	0	0	0	1	1	1	1	0	3	1	0	0	1	1	9
% App Total	0.0%	25.0%	75.0%			100.0%	0.0%	0.0%			33.3%	33.3%	33.3%			100.0%	0.0%	0.0%			
PHF	.000	.250	.375		.500	.250	.000	.000		.250	.250	.250	.250		.375	.250	.000	.000		.250	.750

Prepared by National Data & Surveying Services

Mace Blvd & I-80 WB Ramps

Peak Hour Turning Movement Count

ID: 17-07704-008
City: Davis

Day: Tuesday
Date: 10/10/2017

	PEAK HOURS	COUNT PERIODS
AM	07:45 AM - 08:45 AM	07:00 AM - 09:00 AM
NOON	NONE	NONE
PM	04:45 PM - 05:45 PM	04:00 PM - 06:00 PM

Mace Blvd — SOUTHBOUND

	Right	Thru	Left	U-Turn	Departing
AM	191	1099	0	0	1245
NOON	0	0	0	0	0
PM	207	994	0	0	1328
	0	0	0	0	

I-80 WB Ramps — EASTBOUND

	AM	NOON	PM	
Departing	612	0	477	
U-Turn	0	0	0	0
Left	0	0	0	0
Thru	0	0	0	0
Right	0	0	0	0

I-80 WB Ramps — WESTBOUND

		PM	NOON	AM
Right	0	718	0	594
Thru	0	1	0	2
Left	0	402	0	296
U-Turn	0	0	0	0
Departing		0	0	0

Mace Blvd — NORTHBOUND

	Departing	U-Turn	Left	Thru	Right
		0	0	0	0
PM	1396	0	269	610	0
NOON	0	0	0	0	0
AM	1395	0	419	651	0

CONTROL

0

	AM	NOON	PM
TEV	3252	0	3201
PHF	0.92		0.96

Total Vehicles (AM)

Approach	Right	Thru	Left	U-Turn
SB	191	1099	0	
EB	0	0	0	
WB	594	2	296	
NB	0	651	419	

Total Vehicles (Noon)

All movements: N/A

Total Vehicles (PM)

Approach	Right	Thru	Left
SB	207	994	0
EB	0	0	0
WB	718	1	402
NB	0	610	269

Bikes (AM)

Approach	Right	Thru	Left
SB	0	0	0
EB	0	0	0
WB	0	0	1
NB	3	0	1

Bikes (NOON)

All movements: N/A

Bikes (PM)

Approach	Right	Thru	Left
SB	3	1	0
EB	0	0	1
WB	0	0	1
NB	1	1	1

Pedestrians (Crosswalks)

Crosswalk	AM	NOON	PM
North leg (west half)	0	0	0
North leg (east half)	0	0	0
West leg (north half)	0	0	0
West leg (south half)	0	0	0
East leg (north half)	0	0	1
East leg (south half)	0	0	0
South leg (west half)	0	0	0
South leg (east half)	0	0	0
NW corner diagonal	0	0	0
NE corner diagonal	0	0	0
SW corner diagonal	0	0	0
SE corner diagonal	0	0	0

KD ANDERSON & ASSOCIATES, INC.

(916) 660-1555

6581-01

Davis
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : Chiles Road & Ensenada Drive
Date : 9/19/2017

Unshifted Count = All Vehicles & Uturns

	Ensenada Drive Southbound					Chiles Road Westbound					Ensenada Drive Northbound					Chiles Road Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	10	25	0	0	35	2	0	12	0	14	0	29	1	0	30	79	0
7:15	0	0	0	0	0	11	23	0	0	34	1	0	11	0	12	0	45	0	0	45	91	0
7:30	0	0	0	0	0	8	32	0	0	40	3	0	10	0	13	0	63	2	0	65	118	0
7:45	0	0	0	0	0	7	57	0	0	64	4	0	10	0	14	0	46	2	0	48	126	0
Total	0	0	0	0	0	36	137	0	0	173	10	0	43	0	53	0	183	5	0	188	414	0
8:00	0	0	0	0	0	12	58	0	0	70	5	0	19	0	24	0	60	3	0	63	157	0
8:15	0	0	0	0	0	14	60	0	0	74	3	0	12	0	15	0	56	2	0	58	147	0
8:30	0	0	0	0	0	13	56	0	0	69	5	0	17	0	22	0	59	5	0	64	155	0
8:45	0	0	0	0	0	22	58	0	0	80	2	0	19	0	21	0	59	3	0	62	163	0
Total	0	0	0	0	0	61	232	0	0	293	15	0	67	0	82	0	234	13	0	247	622	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	12	74	0	0	86	3	0	15	0	18	0	85	4	0	89	193	0
16:15	0	0	0	0	0	26	53	0	0	79	1	0	22	0	23	0	90	13	0	103	205	0
16:30	0	0	0	0	0	14	53	0	0	67	4	0	16	0	20	0	114	6	0	120	207	0
16:45	0	0	0	0	0	14	66	0	0	80	1	0	16	0	17	0	122	6	0	128	225	0
Total	0	0	0	0	0	66	246	0	0	312	9	0	69	0	78	0	411	29	0	440	830	0
17:00	0	0	0	0	0	21	79	0	0	100	5	0	19	0	24	0	131	6	0	137	261	0
17:15	0	0	0	0	0	25	99	0	0	124	3	0	19	0	22	0	99	6	0	105	251	0
17:30	0	0	0	0	0	20	92	0	0	112	12	0	23	0	35	0	117	10	0	127	274	0
17:45	0	0	0	0	0	26	68	0	0	94	3	0	15	0	18	0	70	8	0	78	190	0
Total	0	0	0	0	0	92	338	0	0	430	23	0	76	0	99	0	417	30	0	447	976	0
Grand Total	0	0	0	0	0	255	953	0	0	1208	57	0	255	0	312	0	1245	77	0	1322	2842	0
Apprch %	0.0%	0.0%	0.0%	0.0%		21.1%	78.9%	0.0%	0.0%		18.3%	0.0%	81.7%	0.0%		0.0%	94.2%	5.8%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	9.0%	33.5%	0.0%	0.0%	42.5%	2.0%	0.0%	9.0%	0.0%	11.0%	0.0%	43.8%	2.7%	0.0%	46.5%	100.0%	

AM PEAK HOUR	Ensenada Drive Southbound					Chiles Road Westbound					Ensenada Drive Northbound					Chiles Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 08:00 to 09:00																					
Peak Hour For Entire Intersection Begins at 08:00																					
8:00	0	0	0	0	0	12	58	0	0	70	5	0	19	0	24	0	60	3	0	63	157
8:15	0	0	0	0	0	14	60	0	0	74	3	0	12	0	15	0	56	2	0	58	147
8:30	0	0	0	0	0	13	56	0	0	69	5	0	17	0	22	0	59	5	0	64	155
8:45	0	0	0	0	0	22	58	0	0	80	2	0	19	0	21	0	59	3	0	62	163
Total Volume	0	0	0	0	0	61	232	0	0	293	15	0	67	0	82	0	234	13	0	247	622
% App Total	0.0%	0.0%	0.0%	0.0%		20.8%	79.2%	0.0%	0.0%		18.3%	0.0%	81.7%	0.0%		0.0%	94.7%	5.3%	0.0%		
PHF	.000	.000	.000	.000	.000	.693	.967	.000	.000	.916	.750	.000	.882	.000	.854	.000	.975	.650	.000	.965	.954

NOON PEAK	Ensenada Drive Southbound					Chiles Road Westbound					Ensenada Drive Northbound					Chiles Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	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%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	Ensenada Drive Southbound					Chiles Road Westbound					Ensenada Drive Northbound					Chiles Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 16:45 to 17:45																					
Peak Hour For Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	14	66	0	0	80	1	0	16	0	17	0	122	6	0	128	225
17:00	0	0	0	0	0	21	79	0	0	100	5	0	19	0	24	0	131	6	0	137	261
17:15	0	0	0	0	0	25	99	0	0	124	3	0	19	0	22	0	99	6	0	105	251
17:30	0	0	0	0	0	20	92	0	0	112	12	0	23	0	35	0	117	10	0	127	274
Total Volume	0	0	0	0	0	80	336	0	0	416	21	0	77	0	98	0	469	28	0	497	1011
% App Total	0.0%	0.0%	0.0%	0.0%		19.2%	80.8%	0.0%	0.0%		21.4%	0.0%	78.6%	0.0%		0.0%	94.4%	5.6%	0.0%		
PHF	.000	.000	.000	.000	.000	.800	.848	.000	.000	.839	.438	.000	.837	.000	.700	.000	.895	.700	.000	.907	.922

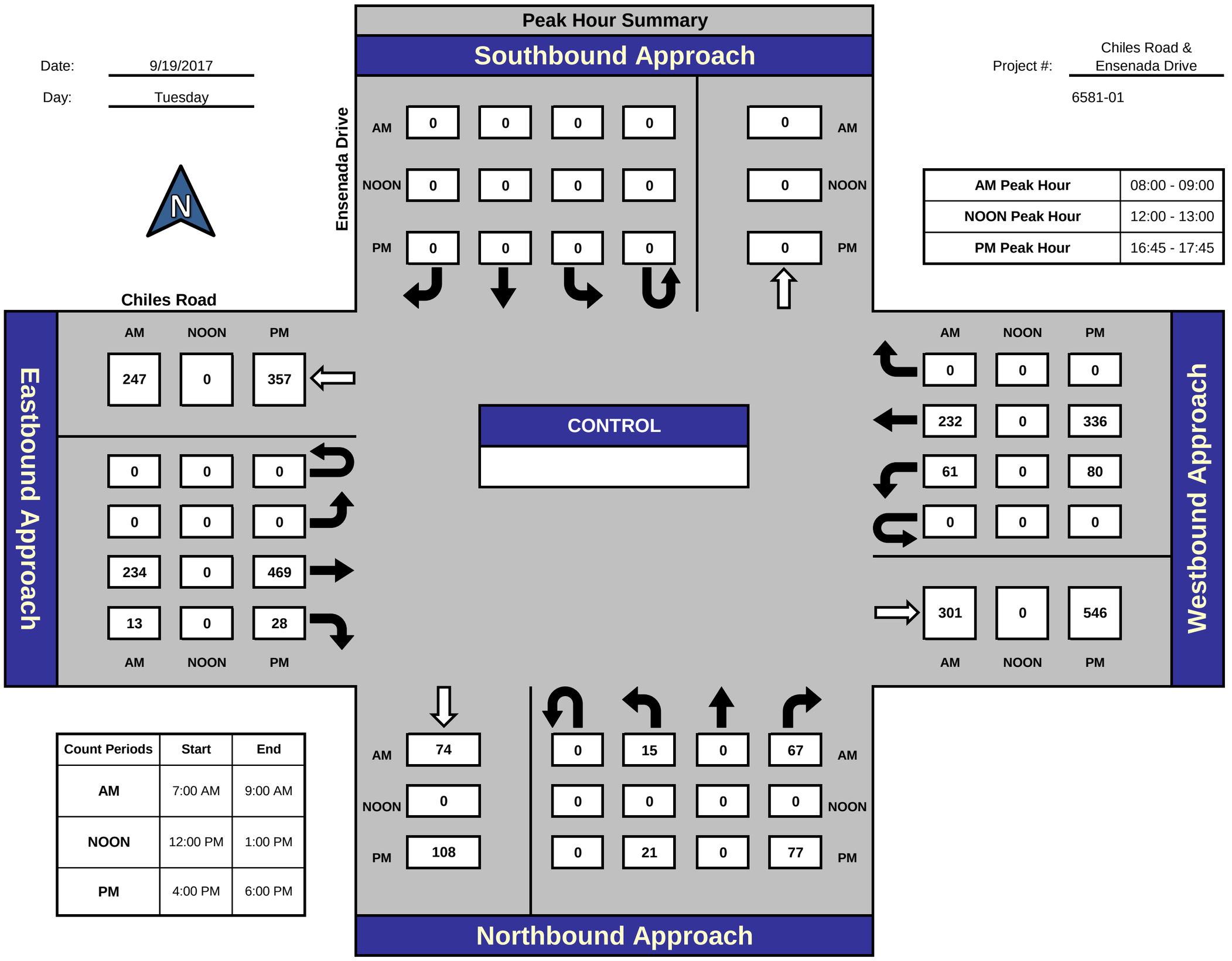
Chiles Road & Ensenada Drive

Date: 9/19/2017

Day: Tuesday

Project #: Chiles Road & Ensenada Drive

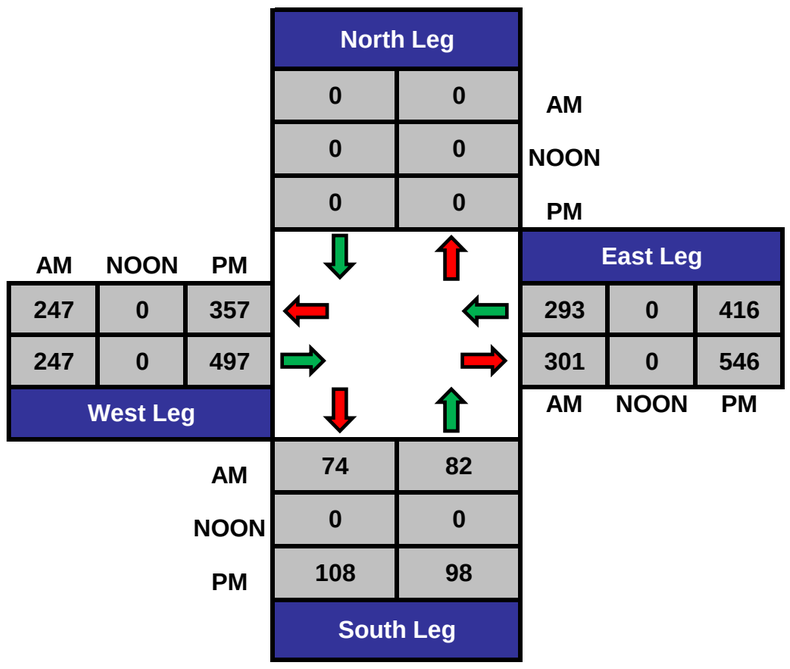
6581-01



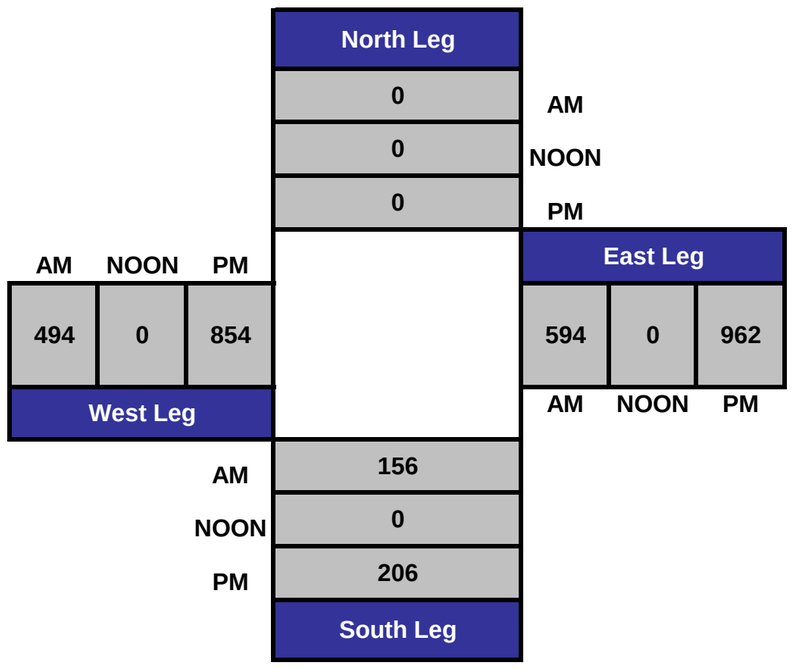
AM Peak Hour	08:00 - 09:00
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	16:45 - 17:45

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs



Total Volume Per Leg



KD ANDERSON & ASSOCIATES, INC.

(916) 660-1555

6581-01

Davis
All Vehicles & Uturns On Unshifted
Bikes & Peds On Bank 1
Nothing On Bank 2

File Name : Chiles Road & La Vida Way
Date : 9/14/2017

Unshifted Count = All Vehicles & Uturns

	La Vida Way Southbound					Chiles Road Westbound					La Vida Way Northbound					Chiles Road Eastbound						
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total	Uturns Total
7:00	0	0	0	0	0	1	12	0	0	13	0	0	2	0	2	0	14	0	0	14	29	0
7:15	0	0	0	0	0	4	24	0	0	28	2	0	8	0	10	0	28	0	0	28	66	0
7:30	0	0	0	0	0	4	23	0	0	27	3	0	11	0	14	0	34	0	0	34	75	0
7:45	0	0	0	0	0	6	55	0	0	61	5	0	15	0	20	0	55	2	0	57	138	0
Total	0	0	0	0	0	15	114	0	0	129	10	0	36	0	46	0	131	2	0	133	308	0
8:00	0	0	0	0	0	10	45	0	0	55	6	0	22	0	28	0	55	2	0	57	140	0
8:15	0	0	0	0	0	6	66	0	0	72	1	0	6	0	7	0	54	3	0	57	136	0
8:30	0	0	0	0	0	11	48	0	0	59	5	0	12	0	17	0	51	2	0	53	129	0
8:45	0	0	0	0	0	11	35	0	0	46	6	0	11	0	17	0	33	3	0	36	99	0
Total	0	0	0	0	0	38	194	0	0	232	18	0	51	0	69	0	193	10	0	203	504	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:00	0	0	0	0	0	5	52	0	0	57	1	0	5	0	6	0	75	2	0	77	140	0
16:15	0	0	0	0	0	8	41	0	0	49	2	0	6	0	8	0	106	1	0	107	164	0
16:30	0	0	0	0	0	7	47	0	0	54	1	0	7	0	8	0	106	2	0	108	170	0
16:45	0	0	0	0	0	14	62	0	0	76	2	0	6	0	8	0	139	3	0	142	226	0
Total	0	0	0	0	0	34	202	0	0	236	6	0	24	0	30	0	426	8	0	434	700	0
17:00	0	0	0	0	0	9	41	0	0	50	1	0	7	0	8	0	125	5	0	130	188	0
17:15	0	0	0	0	0	17	70	0	0	87	1	0	6	0	7	0	140	6	0	146	240	0
17:30	0	0	0	0	0	10	69	0	0	79	3	0	7	0	10	0	162	3	0	165	254	0
17:45	0	0	0	0	0	15	69	0	0	84	4	0	8	0	12	0	140	6	0	146	242	0
Total	0	0	0	0	0	51	249	0	0	300	9	0	28	0	37	0	567	20	0	587	924	0
Grand Total	0	0	0	0	0	138	759	0	0	897	43	0	139	0	182	0	1317	40	0	1357	2436	0
Apprch %	0.0%	0.0%	0.0%	0.0%		15.4%	84.6%	0.0%	0.0%		23.6%	0.0%	76.4%	0.0%		0.0%	97.1%	2.9%	0.0%			
Total %	0.0%	0.0%	0.0%	0.0%	0.0%	5.7%	31.2%	0.0%	0.0%	36.8%	1.8%	0.0%	5.7%	0.0%	7.5%	0.0%	54.1%	1.6%	0.0%	55.7%	100.0%	

AM PEAK HOUR	La Vida Way Southbound					Chiles Road Westbound					La Vida Way Northbound					Chiles Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 07:45 to 08:45																					
Peak Hour For Entire Intersection Begins at 07:45																					
7:45	0	0	0	0	0	6	55	0	0	61	5	0	15	0	20	0	55	2	0	57	138
8:00	0	0	0	0	0	10	45	0	0	55	6	0	22	0	28	0	55	2	0	57	140
8:15	0	0	0	0	0	6	66	0	0	72	1	0	6	0	7	0	54	3	0	57	136
8:30	0	0	0	0	0	11	48	0	0	59	5	0	12	0	17	0	51	2	0	53	129
Total Volume	0	0	0	0	0	33	214	0	0	247	17	0	55	0	72	0	215	9	0	224	543
% App Total	0.0%	0.0%	0.0%	0.0%		13.4%	86.6%	0.0%	0.0%		23.6%	0.0%	76.4%	0.0%		0.0%	96.0%	4.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.750	.811	.000	.000	.858	.708	.000	.625	.000	.643	.000	.977	.750	.000	.982	.970

NOON PEAK	La Vida Way Southbound					Chiles Road Westbound					La Vida Way Northbound					Chiles Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 12:00 to 13:00																					
Peak Hour For Entire Intersection Begins at 12:00																					
12:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
% App Total	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%	0.0%	0.0%	0.0%		
PHF	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

PM PEAK HOUR	La Vida Way Southbound					Chiles Road Westbound					La Vida Way Northbound					Chiles Road Eastbound					
START TIME	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	LEFT	THRU	RIGHT	UTURNS	APP.TOTAL	Total
Peak Hour Analysis From 17:00 to 18:00																					
Peak Hour For Entire Intersection Begins at 17:00																					
17:00	0	0	0	0	0	9	41	0	0	50	1	0	7	0	8	0	125	5	0	130	188
17:15	0	0	0	0	0	17	70	0	0	87	1	0	6	0	7	0	140	6	0	146	240
17:30	0	0	0	0	0	10	69	0	0	79	3	0	7	0	10	0	162	3	0	165	254
17:45	0	0	0	0	0	15	69	0	0	84	4	0	8	0	12	0	140	6	0	146	242
Total Volume	0	0	0	0	0	51	249	0	0	300	9	0	28	0	37	0	567	20	0	587	924
% App Total	0.0%	0.0%	0.0%	0.0%		17.0%	83.0%	0.0%	0.0%		24.3%	0.0%	75.7%	0.0%		0.0%	96.6%	3.4%	0.0%		
PHF	.000	.000	.000	.000	.000	.750	.889	.000	.000	.862	.563	.000	.875	.000	.771	.000	.875	.833	.000	.889	.909

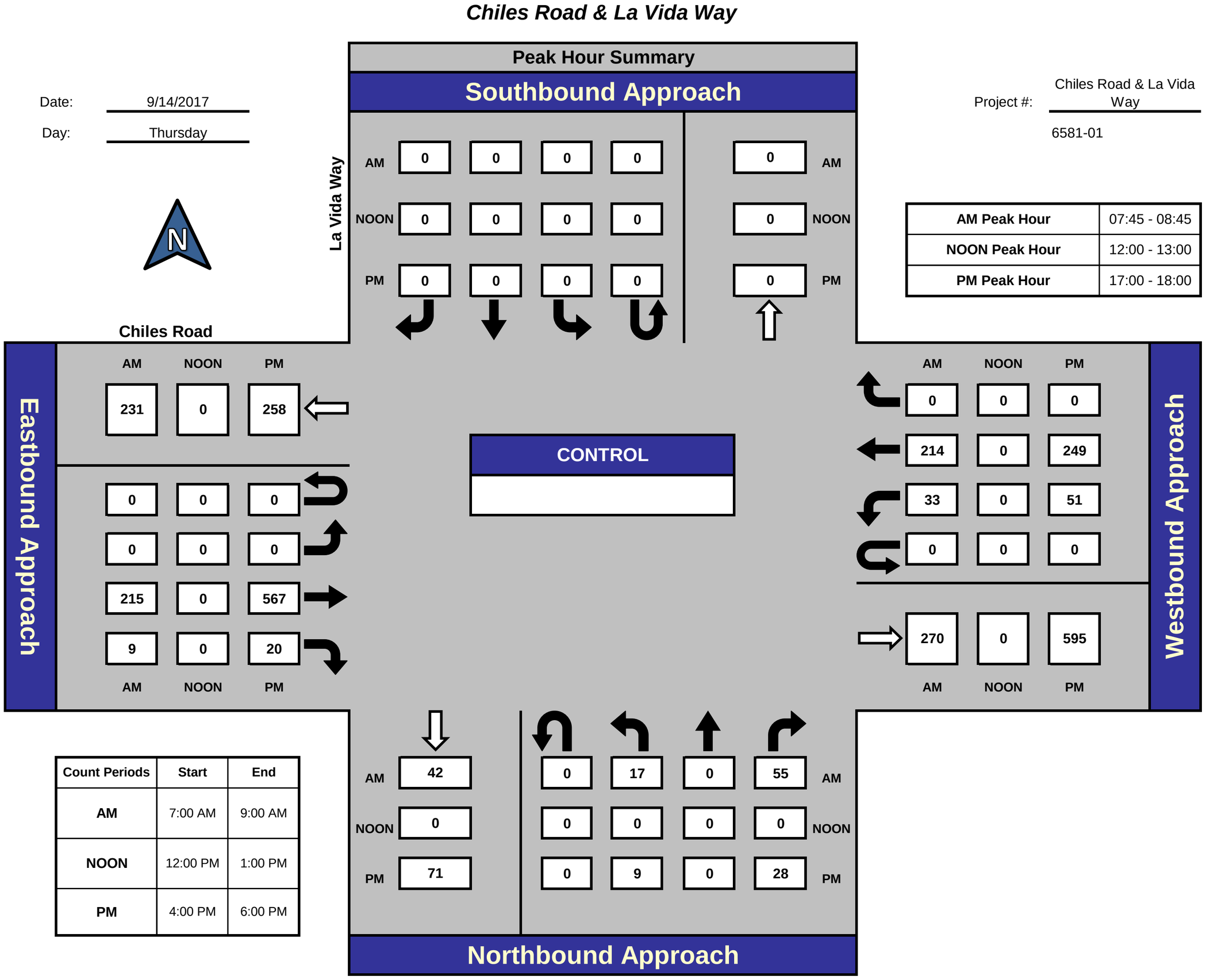
Chiles Road & La Vida Way

Date: 9/14/2017

Day: Thursday

Project #: Chiles Road & La Vida Way

6581-01



Peak Hour	
AM Peak Hour	07:45 - 08:45
NOON Peak Hour	12:00 - 13:00
PM Peak Hour	17:00 - 18:00

Count Periods	Start	End
AM	7:00 AM	9:00 AM
NOON	12:00 PM	1:00 PM
PM	4:00 PM	6:00 PM

Total Ins & Outs

	North Leg		
	0	0	AM
	0	0	NOON
	0	0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
231	0	258	247	0	300
224	0	587	270	0	595

	South Leg	
AM	42	72
NOON	0	0
PM	71	37

Total Volume Per Leg

	North Leg	
	0	AM
	0	NOON
	0	PM

West Leg			East Leg		
AM	NOON	PM	AM	NOON	PM
455	0	845	517	0	895

	South Leg	
AM	114	
NOON	0	
PM	108	

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.3	0.0	0.2	0.2
Total Del/Veh (s)	5.7	9.3	34.9	18.0

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.2	0.3	0.0	0.6
Total Del/Veh (s)	34.4	21.8	27.3	18.2	25.9

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.1
Total Del/Veh (s)	1.7	9.5	5.6

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.0	0.1
Total Del/Veh (s)	22.5	19.5	24.7	22.4

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.3	6.4	4.1	4.6
Total Del/Veh (s)	11.0	52.3	63.2	28.0	42.2

Total Zone Performance

Denied Del/Veh (s)	4.6
Total Del/Veh (s)	1339.0

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	1.9	1.2	7.7	11.6	5.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	130	205	184	208	302	34	126	34	136	13	54	153
Future Volume (veh/h)	130	205	184	208	302	34	126	34	136	13	54	153
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	141	223	0	226	328	0	137	37	0	14	59	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	184	331	281	294	849	380	177	294	250	26	135	114
Arrive On Green	0.10	0.18	0.00	0.17	0.24	0.00	0.10	0.16	0.00	0.01	0.07	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	141	223	0	226	328	0	137	37	0	14	59	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	2.9	4.2	0.0	4.6	3.0	0.0	2.9	0.6	0.0	0.3	1.2	0.0
Cycle Q Clear(g_c), s	2.9	4.2	0.0	4.6	3.0	0.0	2.9	0.6	0.0	0.3	1.2	0.0
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	184	331	281	294	849	380	177	294	250	26	135	114
V/C Ratio(X)	0.77	0.67	0.00	0.77	0.39	0.00	0.77	0.13	0.00	0.55	0.44	0.00
Avail Cap(c_a), veh/h	481	559	475	579	1258	563	392	677	575	187	461	392
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.6	14.6	0.0	15.1	12.1	0.0	16.7	13.7	0.0	18.6	16.9	0.0
Incr Delay (d2), s/veh	6.5	2.4	0.0	4.2	0.3	0.0	7.0	0.2	0.0	16.8	2.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	2.4	0.0	2.6	1.4	0.0	1.7	0.3	0.0	0.3	0.7	0.0
LnGrp Delay(d),s/veh	23.1	17.0	0.0	19.4	12.4	0.0	23.7	13.9	0.0	35.4	19.1	0.0
LnGrp LOS	C	B		B	B		C	B		D	B	
Approach Vol, veh/h		364			554			174			73	
Approach Delay, s/veh		19.4			15.2			21.6			22.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.1	10.6	10.9	11.3	8.4	7.3	8.5	13.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	4.0	13.8	12.4	11.4	8.4	9.4	10.3	13.5
Max Q Clear Time (g_c+I1), s	2.3	2.6	6.6	6.2	4.9	3.2	4.9	5.0
Green Ext Time (p_c), s	0.0	0.1	0.3	0.5	0.1	0.1	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	181	10	38	170	11	46
Future Vol, veh/h	181	10	38	170	11	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	197	11	41	185	12	50

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	208	0	470	203
Stage 1	-	-	-	-	203	-
Stage 2	-	-	-	-	267	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1363	-	552	838
Stage 1	-	-	-	-	831	-
Stage 2	-	-	-	-	778	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1363	-	533	838
Mov Cap-2 Maneuver	-	-	-	-	533	-
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	778	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	755	-	-	1363	-
HCM Lane V/C Ratio	0.082	-	-	0.03	-
HCM Control Delay (s)	10.2	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	220	5	39	210	4	70
Future Vol, veh/h	220	5	39	210	4	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	239	5	42	228	4	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	244	0	554	242
Stage 1	-	-	-	-	242	-
Stage 2	-	-	-	-	312	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1322	-	493	797
Stage 1	-	-	-	-	798	-
Stage 2	-	-	-	-	742	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1322	-	475	797
Mov Cap-2 Maneuver	-	-	-	-	475	-
Stage 1	-	-	-	-	769	-
Stage 2	-	-	-	-	742	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	769	-	-	1322	-
HCM Lane V/C Ratio	0.105	-	-	0.032	-
HCM Control Delay (s)	10.2	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

Existing AM
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	49	3.0	0.201	5.8	LOS A	0.8	20.0	0.31	0.20	34.1
8	T1	111	3.0	0.201	5.8	LOS A	0.8	20.0	0.31	0.20	34.0
18	R2	28	3.0	0.201	5.8	LOS A	0.8	20.0	0.31	0.20	33.1
Approach		188	3.0	0.201	5.8	LOS A	0.8	20.0	0.31	0.20	33.9
East: RoadName											
1	L2	23	3.0	0.204	6.3	LOS A	0.8	19.9	0.39	0.29	34.2
6	T1	141	3.0	0.204	6.3	LOS A	0.8	19.9	0.39	0.29	34.2
16	R2	11	3.0	0.204	6.3	LOS A	0.8	19.9	0.39	0.29	33.2
Approach		175	3.0	0.204	6.3	LOS A	0.8	19.9	0.39	0.29	34.1
North: RoadName											
7	L2	4	3.0	0.222	6.4	LOS A	0.9	22.2	0.37	0.28	34.4
4	T1	75	3.0	0.222	6.4	LOS A	0.9	22.2	0.37	0.28	34.4
14	R2	116	3.0	0.222	6.4	LOS A	0.9	22.2	0.37	0.28	33.4
Approach		196	3.0	0.222	6.4	LOS A	0.9	22.2	0.37	0.28	33.8
West: RoadName											
5	L2	78	3.0	0.177	5.2	LOS A	0.7	17.5	0.24	0.13	33.9
2	T1	74	3.0	0.177	5.2	LOS A	0.7	17.5	0.24	0.13	33.8
12	R2	26	3.0	0.177	5.2	LOS A	0.7	17.5	0.24	0.13	32.9
Approach		178	3.0	0.177	5.2	LOS A	0.7	17.5	0.24	0.13	33.7
All Vehicles		737	3.0	0.222	5.9	LOS A	0.9	22.2	0.33	0.23	33.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.2	0.3
Total Del/Veh (s)	8.8	8.7	18.6	12.2

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.0	0.4	0.0	0.4
Total Del/Veh (s)	35.6	24.3	29.3	15.5	26.3

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.0	5.7	4.0

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.0	0.2	0.3
Total Del/Veh (s)	15.2	20.1	24.3	20.0

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.6	0.0	0.6	0.2
Total Del/Veh (s)	25.6	45.5	69.5	32.2	46.4

Total Zone Performance

Denied Del/Veh (s)	0.9
Total Del/Veh (s)	1293.1

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	1.4	5.0	7.1	4.0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	187	285	171	127	249	31	230	101	165	79	75	138
Future Volume (veh/h)	187	285	171	127	249	31	230	101	165	79	75	138
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	203	310	0	138	271	0	250	110	0	86	82	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	261	434	369	181	665	297	317	377	320	110	159	135
Arrive On Green	0.15	0.23	0.00	0.10	0.19	0.00	0.18	0.20	0.00	0.06	0.09	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	203	310	0	138	271	0	250	110	0	86	82	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.1	7.0	0.0	3.5	3.1	0.0	6.2	2.3	0.0	2.2	1.9	0.0
Cycle Q Clear(g_c), s	5.1	7.0	0.0	3.5	3.1	0.0	6.2	2.3	0.0	2.2	1.9	0.0
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	261	434	369	181	665	297	317	377	320	110	159	135
V/C Ratio(X)	0.78	0.71	0.00	0.76	0.41	0.00	0.79	0.29	0.00	0.78	0.52	0.00
Avail Cap(c_a), veh/h	479	1080	918	495	2082	931	557	515	438	367	317	269
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.8	16.2	0.0	20.1	16.4	0.0	18.0	15.5	0.0	21.2	20.1	0.0
Incr Delay (d2), s/veh	4.9	2.2	0.0	6.5	0.4	0.0	4.4	0.4	0.0	11.5	2.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	3.9	0.0	2.0	1.5	0.0	3.4	1.2	0.0	1.4	1.1	0.0
LnGrp Delay(d),s/veh	23.8	18.4	0.0	26.5	16.8	0.0	22.4	16.0	0.0	32.7	22.7	0.0
LnGrp LOS	C	B		C	B		C	B		C	C	
Approach Vol, veh/h		513			409			360			168	
Approach Delay, s/veh		20.5			20.1			20.4			27.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.4	13.9	9.3	15.3	12.8	8.5	11.4	13.2
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	9.5	12.7	12.8	26.6	14.4	7.8	12.4	27.0
Max Q Clear Time (g_c+I1), s	4.2	4.3	5.5	9.0	8.2	3.9	7.1	5.1
Green Ext Time (p_c), s	0.1	0.3	0.2	1.7	0.4	0.1	0.3	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.2
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	307	78	84	172	23	39
Future Vol, veh/h	307	78	84	172	23	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	334	85	91	187	25	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	419	0	746	377
Stage 1	-	-	-	-	377	-
Stage 2	-	-	-	-	369	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1140	-	381	670
Stage 1	-	-	-	-	694	-
Stage 2	-	-	-	-	699	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1140	-	347	670
Mov Cap-2 Maneuver	-	-	-	-	347	-
Stage 1	-	-	-	-	632	-
Stage 2	-	-	-	-	699	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	498	-	-	1140	-
HCM Lane V/C Ratio	0.135	-	-	0.08	-
HCM Control Delay (s)	13.4	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	296	52	84	236	26	67
Future Vol, veh/h	296	52	84	236	26	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	322	57	91	257	28	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	379	0	790	351
Stage 1	-	-	-	-	351	-
Stage 2	-	-	-	-	439	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1179	-	359	692
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	650	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1179	-	327	692
Mov Cap-2 Maneuver	-	-	-	-	327	-
Stage 1	-	-	-	-	649	-
Stage 2	-	-	-	-	650	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.2	13.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	527	-	-	1179	-
HCM Lane V/C Ratio	0.192	-	-	0.077	-
HCM Control Delay (s)	13.4	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.3	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

Existing PM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	26	3.0	0.149	5.8	LOS A	0.5	13.7	0.39	0.30	34.2
8	T1	75	3.0	0.149	5.8	LOS A	0.5	13.7	0.39	0.30	34.2
18	R2	23	3.0	0.149	5.8	LOS A	0.5	13.7	0.39	0.30	33.2
Approach		124	3.0	0.149	5.8	LOS A	0.5	13.7	0.39	0.30	34.0
East: RoadName											
1	L2	28	3.0	0.121	5.3	LOS A	0.4	11.1	0.34	0.24	34.4
6	T1	74	3.0	0.121	5.3	LOS A	0.4	11.1	0.34	0.24	34.3
16	R2	4	3.0	0.121	5.3	LOS A	0.4	11.1	0.34	0.24	33.3
Approach		107	3.0	0.121	5.3	LOS A	0.4	11.1	0.34	0.24	34.3
North: RoadName											
7	L2	11	3.0	0.205	5.7	LOS A	0.8	20.7	0.28	0.17	34.7
4	T1	111	3.0	0.205	5.7	LOS A	0.8	20.7	0.28	0.17	34.7
14	R2	78	3.0	0.205	5.7	LOS A	0.8	20.7	0.28	0.17	33.7
Approach		200	3.0	0.205	5.7	LOS A	0.8	20.7	0.28	0.17	34.3
West: RoadName											
5	L2	116	3.0	0.318	7.1	LOS A	1.4	35.9	0.34	0.23	33.1
2	T1	141	3.0	0.318	7.1	LOS A	1.4	35.9	0.34	0.23	33.1
12	R2	49	3.0	0.318	7.1	LOS A	1.4	35.9	0.34	0.23	32.2
Approach		307	3.0	0.318	7.1	LOS A	1.4	35.9	0.34	0.23	33.0
All Vehicles		737	3.0	0.318	6.2	LOS A	1.4	35.9	0.33	0.23	33.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.3	0.0	0.2	0.2
Total Del/Veh (s)	5.8	8.8	34.8	17.7

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.2	0.3	0.0	0.6
Total Del/Veh (s)	33.8	23.2	29.1	17.5	26.2

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.1
Total Del/Veh (s)	1.8	9.7	5.7

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.0	0.1
Total Del/Veh (s)	22.5	19.3	26.9	23.2

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	1.5	3.1	2.0
Total Del/Veh (s)	10.5	52.7	53.1	27.8	37.4

Total Zone Performance

Denied Del/Veh (s)	2.4
Total Del/Veh (s)	1225.1

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	2.0	1.2	8.0	11.7	5.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	134	206	184	209	306	34	126	36	136	13	72	167
Future Volume (veh/h)	134	206	184	209	306	34	126	36	136	13	72	167
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	146	224	0	227	333	0	137	39	0	14	78	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	191	330	281	295	836	374	177	305	259	26	146	124
Arrive On Green	0.11	0.18	0.00	0.17	0.24	0.00	0.10	0.16	0.00	0.01	0.08	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	146	224	0	227	333	0	137	39	0	14	78	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.1	4.3	0.0	4.7	3.1	0.0	2.9	0.7	0.0	0.3	1.6	0.0
Cycle Q Clear(g_c), s	3.1	4.3	0.0	4.7	3.1	0.0	2.9	0.7	0.0	0.3	1.6	0.0
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	191	330	281	295	836	374	177	305	259	26	146	124
V/C Ratio(X)	0.77	0.68	0.00	0.77	0.40	0.00	0.77	0.13	0.00	0.55	0.53	0.00
Avail Cap(c_a), veh/h	475	552	469	572	1242	555	387	668	568	184	455	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	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	16.7	14.8	0.0	15.3	12.4	0.0	16.9	13.7	0.0	18.8	17.1	0.0
Incr Delay (d2), s/veh	6.3	2.4	0.0	4.2	0.3	0.0	7.0	0.2	0.0	16.9	3.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	2.4	0.0	2.6	1.5	0.0	1.8	0.4	0.0	0.3	0.9	0.0
LnGrp Delay(d),s/veh	23.0	17.2	0.0	19.6	12.7	0.0	23.9	13.9	0.0	35.7	20.1	0.0
LnGrp LOS	C	B		B	B		C	B		D	C	
Approach Vol, veh/h		370			560			176			92	
Approach Delay, s/veh		19.5			15.5			21.7			22.5	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	10.9	11.0	11.4	8.4	7.6	8.7	13.7
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	4.0	13.8	12.4	11.4	8.4	9.4	10.3	13.5
Max Q Clear Time (g_c+I1), s	2.3	2.7	6.7	6.3	4.9	3.6	5.1	5.1
Green Ext Time (p_c), s	0.0	0.1	0.3	0.5	0.1	0.1	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	188	10	41	210	11	47
Future Vol, veh/h	188	10	41	210	11	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	204	11	45	228	12	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	215	0	528	210
Stage 1	-	-	-	-	210	-
Stage 2	-	-	-	-	318	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1355	-	511	830
Stage 1	-	-	-	-	825	-
Stage 2	-	-	-	-	738	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1355	-	492	830
Mov Cap-2 Maneuver	-	-	-	-	492	-
Stage 1	-	-	-	-	794	-
Stage 2	-	-	-	-	738	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	10.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	734	-	-	1355	-
HCM Lane V/C Ratio	0.086	-	-	0.033	-
HCM Control Delay (s)	10.4	-	-	7.7	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	252	20	39	222	7	70
Future Vol, veh/h	252	20	39	222	7	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	274	22	42	241	8	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	296	0	610	285
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	325	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1265	-	458	754
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	732	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1265	-	441	754
Mov Cap-2 Maneuver	-	-	-	-	441	-
Stage 1	-	-	-	-	734	-
Stage 2	-	-	-	-	732	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	708	-	-	1265	-
HCM Lane V/C Ratio	0.118	-	-	0.034	-
HCM Control Delay (s)	10.8	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	227	8	15	214	43	47
Future Vol, veh/h	227	8	15	214	43	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	247	9	16	233	47	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	256	0	517	252
Stage 1	-	-	-	-	252	-
Stage 2	-	-	-	-	265	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1309	-	518	787
Stage 1	-	-	-	-	790	-
Stage 2	-	-	-	-	779	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1309	-	511	787
Mov Cap-2 Maneuver	-	-	-	-	511	-
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	779	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	11.8
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	626	-	-	1309	-
HCM Lane V/C Ratio	0.156	-	-	0.012	-
HCM Control Delay (s)	11.8	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

Existing plus Project AM
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	49	3.0	0.203	5.9	LOS A	0.8	20.1	0.32	0.21	34.1
8	T1	111	3.0	0.203	5.9	LOS A	0.8	20.1	0.32	0.21	34.0
18	R2	28	3.0	0.203	5.9	LOS A	0.8	20.1	0.32	0.21	33.0
Approach		188	3.0	0.203	5.9	LOS A	0.8	20.1	0.32	0.21	33.9
East: RoadName											
1	L2	23	3.0	0.205	6.3	LOS A	0.8	20.0	0.39	0.30	34.2
6	T1	141	3.0	0.205	6.3	LOS A	0.8	20.0	0.39	0.30	34.1
16	R2	11	3.0	0.205	6.3	LOS A	0.8	20.0	0.39	0.30	33.2
Approach		175	3.0	0.205	6.3	LOS A	0.8	20.0	0.39	0.30	34.1
North: RoadName											
7	L2	4	3.0	0.271	6.9	LOS A	1.1	28.4	0.39	0.29	34.1
4	T1	77	3.0	0.271	6.9	LOS A	1.1	28.4	0.39	0.29	34.1
14	R2	158	3.0	0.271	6.9	LOS A	1.1	28.4	0.39	0.29	33.1
Approach		239	3.0	0.271	6.9	LOS A	1.1	28.4	0.39	0.29	33.4
West: RoadName											
5	L2	86	3.0	0.185	5.3	LOS A	0.7	18.4	0.25	0.14	33.8
2	T1	74	3.0	0.185	5.3	LOS A	0.7	18.4	0.25	0.14	33.7
12	R2	26	3.0	0.185	5.3	LOS A	0.7	18.4	0.25	0.14	32.8
Approach		186	3.0	0.185	5.3	LOS A	0.7	18.4	0.25	0.14	33.6
All Vehicles		788	3.0	0.271	6.2	LOS A	1.1	28.4	0.34	0.24	33.7

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.2	0.3
Total Del/Veh (s)	8.6	8.6	18.4	11.8

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.0	0.4	0.0	0.4
Total Del/Veh (s)	35.2	24.4	29.8	17.3	26.8

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.0	5.7	4.0

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.0	0.2	0.3
Total Del/Veh (s)	17.4	19.8	24.8	20.8

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.5	0.2	0.8	0.4
Total Del/Veh (s)	25.6	51.3	83.3	32.6	52.4

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	1460.0

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	1.4	5.1	7.1	4.0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	289	171	128	251	31	230	107	165	79	85	143
Future Volume (veh/h)	197	289	171	128	251	31	230	107	165	79	85	143
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	214	314	0	139	273	0	250	116	0	86	92	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	274	436	371	182	647	289	317	385	327	110	168	143
Arrive On Green	0.15	0.23	0.00	0.10	0.18	0.00	0.18	0.21	0.00	0.06	0.09	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	214	314	0	139	273	0	250	116	0	86	92	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	5.4	7.2	0.0	3.6	3.2	0.0	6.3	2.5	0.0	2.2	2.2	0.0
Cycle Q Clear(g_c), s	5.4	7.2	0.0	3.6	3.2	0.0	6.3	2.5	0.0	2.2	2.2	0.0
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	274	436	371	182	647	289	317	385	327	110	168	143
V/C Ratio(X)	0.78	0.72	0.00	0.76	0.42	0.00	0.79	0.30	0.00	0.78	0.55	0.00
Avail Cap(c_a), veh/h	471	1062	903	487	2048	916	547	507	431	361	311	265
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	19.0	16.5	0.0	20.4	16.9	0.0	18.3	15.7	0.0	21.6	20.3	0.0
Incr Delay (d2), s/veh	4.9	2.2	0.0	6.4	0.4	0.0	4.4	0.4	0.0	11.4	2.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	3.9	0.0	2.1	1.6	0.0	3.4	1.3	0.0	1.4	1.3	0.0
LnGrp Delay(d),s/veh	23.8	18.7	0.0	26.8	17.3	0.0	22.7	16.1	0.0	33.0	23.1	0.0
LnGrp LOS	C	B		C	B		C	B		C	C	
Approach Vol, veh/h		528			412			366			178	
Approach Delay, s/veh		20.8			20.5			20.6			27.9	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.5	14.2	9.4	15.5	12.9	8.8	11.8	13.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	9.5	12.7	12.8	26.6	14.4	7.8	12.4	27.0
Max Q Clear Time (g_c+I1), s	4.2	4.5	5.6	9.2	8.3	4.2	7.4	5.2
Green Ext Time (p_c), s	0.1	0.3	0.2	1.7	0.4	0.1	0.3	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	21.5
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	330	78	86	191	23	41
Future Vol, veh/h	330	78	86	191	23	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	359	85	93	208	25	45

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	444	0	796	402
Stage 1	-	-	-	-	402	-
Stage 2	-	-	-	-	394	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1116	-	356	648
Stage 1	-	-	-	-	676	-
Stage 2	-	-	-	-	681	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1116	-	323	648
Mov Cap-2 Maneuver	-	-	-	-	323	-
Stage 1	-	-	-	-	612	-
Stage 2	-	-	-	-	681	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.6	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	476	-	-	1116	-
HCM Lane V/C Ratio	0.146	-	-	0.084	-
HCM Control Delay (s)	13.9	-	-	8.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	314	62	84	287	40	67
Future Vol, veh/h	314	62	84	287	40	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	341	67	91	312	43	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	408	0	869	375
Stage 1	-	-	-	-	375	-
Stage 2	-	-	-	-	494	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1151	-	322	671
Stage 1	-	-	-	-	695	-
Stage 2	-	-	-	-	613	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1151	-	291	671
Mov Cap-2 Maneuver	-	-	-	-	291	-
Stage 1	-	-	-	-	628	-
Stage 2	-	-	-	-	613	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.9	15.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	451	-	-	1151	-
HCM Lane V/C Ratio	0.258	-	-	0.079	-
HCM Control Delay (s)	15.7	-	-	8.4	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	346	25	66	262	21	28
Future Vol, veh/h	346	25	66	262	21	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	376	27	72	285	23	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	403	0	819	390
Stage 1	-	-	-	-	390	-
Stage 2	-	-	-	-	429	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1156	-	345	658
Stage 1	-	-	-	-	684	-
Stage 2	-	-	-	-	657	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1156	-	319	658
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	633	-
Stage 2	-	-	-	-	657	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	452	-	-	1156	-
HCM Lane V/C Ratio	0.118	-	-	0.062	-
HCM Control Delay (s)	14	-	-	8.3	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

Existing plus Project PM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	26	3.0	0.154	6.0	LOS A	0.6	14.2	0.41	0.33	34.1
8	T1	76	3.0	0.154	6.0	LOS A	0.6	14.2	0.41	0.33	34.1
18	R2	23	3.0	0.154	6.0	LOS A	0.6	14.2	0.41	0.33	33.1
Approach		125	3.0	0.154	6.0	LOS A	0.6	14.2	0.41	0.33	33.9
East: RoadName											
1	L2	28	3.0	0.125	5.4	LOS A	0.4	11.3	0.36	0.27	34.3
6	T1	74	3.0	0.125	5.4	LOS A	0.4	11.3	0.36	0.27	34.2
16	R2	4	3.0	0.125	5.4	LOS A	0.4	11.3	0.36	0.27	33.2
Approach		107	3.0	0.125	5.4	LOS A	0.4	11.3	0.36	0.27	34.2
North: RoadName											
7	L2	11	3.0	0.226	5.9	LOS A	0.9	23.2	0.29	0.17	34.6
4	T1	112	3.0	0.226	5.9	LOS A	0.9	23.2	0.29	0.17	34.6
14	R2	98	3.0	0.226	5.9	LOS A	0.9	23.2	0.29	0.17	33.6
Approach		221	3.0	0.226	5.9	LOS A	0.9	23.2	0.29	0.17	34.1
West: RoadName											
5	L2	140	3.0	0.342	7.4	LOS A	1.6	39.7	0.35	0.24	32.9
2	T1	141	3.0	0.342	7.4	LOS A	1.6	39.7	0.35	0.24	32.8
12	R2	49	3.0	0.342	7.4	LOS A	1.6	39.7	0.35	0.24	31.9
Approach		330	3.0	0.342	7.4	LOS A	1.6	39.7	0.35	0.24	32.7
All Vehicles		783	3.0	0.342	6.5	LOS A	1.6	39.7	0.34	0.24	33.5

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.3	0.0	0.2	0.2
Total Del/Veh (s)	6.0	8.9	33.6	17.3

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.2	0.3	0.0	0.6
Total Del/Veh (s)	33.8	23.6	29.5	17.6	26.5

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.1	0.1
Total Del/Veh (s)	2.6	10.1	6.3

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.0	0.1
Total Del/Veh (s)	53.3	35.0	25.5	36.2

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	3.7	3.8	3.2
Total Del/Veh (s)	11.9	49.8	86.5	27.5	51.7

Total Zone Performance

Denied Del/Veh (s)	3.4
Total Del/Veh (s)	1370.8

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.2	0.1
Total Del/Veh (s)	3.2	1.1	8.1	12.3	6.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	140	205	195	210	304	34	129	74	136	13	122	176
Future Volume (veh/h)	140	205	195	210	304	34	129	74	136	13	122	176
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	152	223	0	228	330	0	140	80	0	14	133	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	198	321	273	294	802	359	181	374	318	25	211	179
Arrive On Green	0.11	0.17	0.00	0.17	0.23	0.00	0.10	0.20	0.00	0.01	0.11	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	152	223	0	228	330	0	140	80	0	14	133	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.4	4.6	0.0	5.1	3.3	0.0	3.2	1.5	0.0	0.3	2.8	0.0
Cycle Q Clear(g_c), s	3.4	4.6	0.0	5.1	3.3	0.0	3.2	1.5	0.0	0.3	2.8	0.0
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	198	321	273	294	802	359	181	374	318	25	211	179
V/C Ratio(X)	0.77	0.69	0.00	0.78	0.41	0.00	0.77	0.21	0.00	0.55	0.63	0.00
Avail Cap(c_a), veh/h	444	515	438	534	1160	519	362	624	530	172	425	361
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	17.8	16.0	0.0	16.5	13.6	0.0	18.0	13.7	0.0	20.2	17.5	0.0
Incr Delay (d2), s/veh	6.1	2.7	0.0	4.4	0.3	0.0	6.9	0.3	0.0	17.1	3.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	2.6	0.0	2.8	1.6	0.0	1.9	0.8	0.0	0.3	1.6	0.0
LnGrp Delay(d),s/veh	23.9	18.7	0.0	20.8	13.9	0.0	24.9	14.0	0.0	37.3	20.6	0.0
LnGrp LOS	C	B		C	B		C	B		D	C	
Approach Vol, veh/h		375			558			220			147	
Approach Delay, s/veh		20.8			16.8			20.9			22.2	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	12.9	11.4	11.7	8.8	9.3	9.2	13.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	4.0	13.8	12.4	11.4	8.4	9.4	10.3	13.5
Max Q Clear Time (g_c+I1), s	2.3	3.5	7.1	6.6	5.2	4.8	5.4	5.3
Green Ext Time (p_c), s	0.0	0.2	0.3	0.5	0.1	0.2	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	212	10	38	191	11	46
Future Vol, veh/h	212	10	38	191	11	46
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	230	11	41	208	12	50

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	241	0	526	236
Stage 1	-	-	-	-	236	-
Stage 2	-	-	-	-	290	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1326	-	512	803
Stage 1	-	-	-	-	803	-
Stage 2	-	-	-	-	759	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1326	-	494	803
Mov Cap-2 Maneuver	-	-	-	-	494	-
Stage 1	-	-	-	-	775	-
Stage 2	-	-	-	-	759	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	717	-	-	1326	-
HCM Lane V/C Ratio	0.086	-	-	0.031	-
HCM Control Delay (s)	10.5	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	251	5	39	231	4	70
Future Vol, veh/h	251	5	39	231	4	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	273	5	42	251	4	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	278	0	611	276
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	335	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1285	-	457	763
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	725	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1285	-	440	763
Mov Cap-2 Maneuver	-	-	-	-	440	-
Stage 1	-	-	-	-	742	-
Stage 2	-	-	-	-	725	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	734	-	-	1285	-
HCM Lane V/C Ratio	0.11	-	-	0.033	-
HCM Control Delay (s)	10.5	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

EPAP AM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	52	3.0	0.221	6.3	LOS A	0.9	22.1	0.36	0.26	33.9
8	T1	115	3.0	0.221	6.3	LOS A	0.9	22.1	0.36	0.26	33.8
18	R2	30	3.0	0.221	6.3	LOS A	0.9	22.1	0.36	0.26	32.8
Approach		198	3.0	0.221	6.3	LOS A	0.9	22.1	0.36	0.26	33.7
East: RoadName											
1	L2	23	3.0	0.229	6.8	LOS A	0.9	22.6	0.42	0.34	34.0
6	T1	151	3.0	0.229	6.8	LOS A	0.9	22.6	0.42	0.34	33.9
16	R2	15	3.0	0.229	6.8	LOS A	0.9	22.6	0.42	0.34	33.0
Approach		189	3.0	0.229	6.8	LOS A	0.9	22.6	0.42	0.34	33.9
North: RoadName											
7	L2	7	3.0	0.253	6.8	LOS A	1.0	25.8	0.39	0.30	34.2
4	T1	76	3.0	0.253	6.8	LOS A	1.0	25.8	0.39	0.30	34.1
14	R2	137	3.0	0.253	6.8	LOS A	1.0	25.8	0.39	0.30	33.1
Approach		220	3.0	0.253	6.8	LOS A	1.0	25.8	0.39	0.30	33.5
West: RoadName											
5	L2	108	3.0	0.216	5.6	LOS A	0.9	22.1	0.25	0.14	33.5
2	T1	83	3.0	0.216	5.6	LOS A	0.9	22.1	0.25	0.14	33.5
12	R2	27	3.0	0.216	5.6	LOS A	0.9	22.1	0.25	0.14	32.5
Approach		217	3.0	0.216	5.6	LOS A	0.9	22.1	0.25	0.14	33.4
All Vehicles		824	3.0	0.253	6.4	LOS A	1.0	25.8	0.35	0.26	33.6

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.2	0.3
Total Del/Veh (s)	9.0	8.7	18.2	12.0

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	2.9	0.4	0.0	0.4
Total Del/Veh (s)	35.4	24.6	31.5	16.3	27.0

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.0	5.8	4.1

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.1	0.3	0.4
Total Del/Veh (s)	47.2	27.4	27.1	34.5

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.3	0.4	0.0	0.9	0.3
Total Del/Veh (s)	26.7	47.8	94.5	32.6	57.1

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	1403.7

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	1.5	5.1	7.4	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	210	289	181	128	251	31	255	169	167	79	116	157
Future Volume (veh/h)	210	289	181	128	251	31	255	169	167	79	116	157
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	228	314	0	139	273	0	277	184	0	86	126	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	428	363	182	603	270	342	442	376	110	199	169
Arrive On Green	0.16	0.23	0.00	0.10	0.17	0.00	0.19	0.24	0.00	0.06	0.11	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	228	314	0	139	273	0	277	184	0	86	126	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.2	7.8	0.0	3.8	3.5	0.0	7.5	4.2	0.0	2.4	3.2	0.0
Cycle Q Clear(g_c), s	6.2	7.8	0.0	3.8	3.5	0.0	7.5	4.2	0.0	2.4	3.2	0.0
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	287	428	363	182	603	270	342	442	376	110	199	169
V/C Ratio(X)	0.80	0.73	0.00	0.76	0.45	0.00	0.81	0.42	0.00	0.78	0.63	0.00
Avail Cap(c_a), veh/h	441	992	843	455	1914	856	512	474	403	337	291	247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.1	17.8	0.0	21.8	18.6	0.0	19.3	16.1	0.0	23.1	21.4	0.0
Incr Delay (d2), s/veh	5.6	2.5	0.0	6.5	0.5	0.0	5.9	0.6	0.0	11.2	3.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.4	4.3	0.0	2.2	1.7	0.0	4.2	2.2	0.0	1.5	1.8	0.0
LnGrp Delay(d),s/veh	25.7	20.3	0.0	28.4	19.1	0.0	25.2	16.7	0.0	34.3	24.7	0.0
LnGrp LOS	C	C		C	B		C	B		C	C	
Approach Vol, veh/h		542			412			461			212	
Approach Delay, s/veh		22.6			22.3			21.8			28.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.7	16.5	9.7	16.1	14.2	9.9	12.7	13.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	9.5	12.7	12.8	26.6	14.4	7.8	12.4	27.0
Max Q Clear Time (g_c+I1), s	4.4	6.2	5.8	9.8	9.5	5.2	8.2	5.5
Green Ext Time (p_c), s	0.1	0.5	0.2	1.7	0.4	0.1	0.3	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	323	78	84	210	23	39
Future Vol, veh/h	323	78	84	210	23	39
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	351	85	91	228	25	42

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	436	0	804	394
Stage 1	-	-	-	-	394	-
Stage 2	-	-	-	-	410	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1124	-	352	655
Stage 1	-	-	-	-	681	-
Stage 2	-	-	-	-	670	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1124	-	319	655
Mov Cap-2 Maneuver	-	-	-	-	319	-
Stage 1	-	-	-	-	618	-
Stage 2	-	-	-	-	670	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	13.9
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	471	-	-	1124	-
HCM Lane V/C Ratio	0.143	-	-	0.081	-
HCM Control Delay (s)	13.9	-	-	8.5	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	312	52	84	274	26	67
Future Vol, veh/h	312	52	84	274	26	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	339	57	91	298	28	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	396	0	848	368
Stage 1	-	-	-	-	368	-
Stage 2	-	-	-	-	480	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1163	-	332	677
Stage 1	-	-	-	-	700	-
Stage 2	-	-	-	-	622	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1163	-	301	677
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	634	-
Stage 2	-	-	-	-	622	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2	14
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	502	-	-	1163	-
HCM Lane V/C Ratio	0.201	-	-	0.079	-
HCM Control Delay (s)	14	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.3	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

EPAP PM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	28	3.0	0.161	6.2	LOS A	0.6	14.9	0.42	0.34	34.0
8	T1	77	3.0	0.161	6.2	LOS A	0.6	14.9	0.42	0.34	34.0
18	R2	24	3.0	0.161	6.2	LOS A	0.6	14.9	0.42	0.34	33.0
Approach		129	3.0	0.161	6.2	LOS A	0.6	14.9	0.42	0.34	33.8
East: RoadName											
1	L2	30	3.0	0.141	5.6	LOS A	0.5	13.0	0.37	0.27	34.2
6	T1	84	3.0	0.141	5.6	LOS A	0.5	13.0	0.37	0.27	34.2
16	R2	7	3.0	0.141	5.6	LOS A	0.5	13.0	0.37	0.27	33.2
Approach		121	3.0	0.141	5.6	LOS A	0.5	13.0	0.37	0.27	34.1
North: RoadName											
7	L2	15	3.0	0.253	6.3	LOS A	1.0	26.6	0.31	0.20	34.4
4	T1	114	3.0	0.253	6.3	LOS A	1.0	26.6	0.31	0.20	34.3
14	R2	114	3.0	0.253	6.3	LOS A	1.0	26.6	0.31	0.20	33.3
Approach		243	3.0	0.253	6.3	LOS A	1.0	26.6	0.31	0.20	33.9
West: RoadName											
5	L2	135	3.0	0.357	7.6	LOS A	1.6	42.0	0.37	0.26	32.8
2	T1	154	3.0	0.357	7.6	LOS A	1.6	42.0	0.37	0.26	32.8
12	R2	52	3.0	0.357	7.6	LOS A	1.6	42.0	0.37	0.26	31.9
Approach		341	3.0	0.357	7.6	LOS A	1.6	42.0	0.37	0.26	32.7
All Vehicles		835	3.0	0.357	6.7	LOS A	1.6	42.0	0.36	0.25	33.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.2	0.2
Total Del/Veh (s)	6.5	9.4	34.5	17.9

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.2	0.3	0.0	0.5
Total Del/Veh (s)	35.0	22.7	28.3	17.8	26.6

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	0.1
Total Del/Veh (s)	2.0	10.1	6.0

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.0	0.1
Total Del/Veh (s)	37.6	31.8	26.6	31.3

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	0.2	7.7	4.5	5.2
Total Del/Veh (s)	11.0	54.6	81.5	28.7	50.1

Total Zone Performance

Denied Del/Veh (s)	5.1
Total Del/Veh (s)	1383.2

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.3	0.1
Total Del/Veh (s)	2.2	1.2	8.4	12.1	6.0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	206	195	211	308	34	129	76	136	13	140	190
Future Volume (veh/h)	144	206	195	211	308	34	129	76	136	13	140	190
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	157	224	0	229	335	0	140	83	0	14	152	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	205	320	272	294	787	352	181	394	335	25	231	196
Arrive On Green	0.12	0.17	0.00	0.17	0.22	0.00	0.10	0.21	0.00	0.01	0.12	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	157	224	0	229	335	0	140	83	0	14	152	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	3.6	4.8	0.0	5.2	3.4	0.0	3.2	1.6	0.0	0.3	3.3	0.0
Cycle Q Clear(g_c), s	3.6	4.8	0.0	5.2	3.4	0.0	3.2	1.6	0.0	0.3	3.3	0.0
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	205	320	272	294	787	352	181	394	335	25	231	196
V/C Ratio(X)	0.77	0.70	0.00	0.78	0.43	0.00	0.77	0.21	0.00	0.55	0.66	0.00
Avail Cap(c_a), veh/h	433	504	428	522	1133	507	353	610	518	168	415	353
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.1	16.4	0.0	16.8	14.1	0.0	18.5	13.7	0.0	20.6	17.6	0.0
Incr Delay (d2), s/veh	5.9	2.8	0.0	4.4	0.4	0.0	6.9	0.3	0.0	17.2	3.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	2.7	0.0	2.9	1.7	0.0	1.9	0.8	0.0	0.3	1.9	0.0
LnGrp Delay(d),s/veh	24.0	19.2	0.0	21.3	14.5	0.0	25.3	14.0	0.0	37.9	20.8	0.0
LnGrp LOS	C	B		C	B		C	B		D	C	
Approach Vol, veh/h		381			564			223			166	
Approach Delay, s/veh		21.2			17.2			21.1			22.2	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.2	13.5	11.6	11.8	8.9	9.8	9.5	14.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	4.0	13.8	12.4	11.4	8.4	9.4	10.3	13.5
Max Q Clear Time (g_c+I1), s	2.3	3.6	7.2	6.8	5.2	5.3	5.6	5.4
Green Ext Time (p_c), s	0.0	0.2	0.3	0.5	0.1	0.2	0.2	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	19.6
HCM 2010 LOS	B

Notes

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	219	10	41	231	11	47
Future Vol, veh/h	219	10	41	231	11	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	238	11	45	251	12	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	249	0	585	244
Stage 1	-	-	-	-	244	-
Stage 2	-	-	-	-	341	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1317	-	473	795
Stage 1	-	-	-	-	797	-
Stage 2	-	-	-	-	720	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1317	-	454	795
Mov Cap-2 Maneuver	-	-	-	-	454	-
Stage 1	-	-	-	-	765	-
Stage 2	-	-	-	-	720	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	10.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	696	-	-	1317	-
HCM Lane V/C Ratio	0.091	-	-	0.034	-
HCM Control Delay (s)	10.7	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	283	20	39	243	7	70
Future Vol, veh/h	283	20	39	243	7	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	308	22	42	264	8	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	330	0	667	319
Stage 1	-	-	-	-	319	-
Stage 2	-	-	-	-	348	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1229	-	424	722
Stage 1	-	-	-	-	737	-
Stage 2	-	-	-	-	715	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1229	-	407	722
Mov Cap-2 Maneuver	-	-	-	-	407	-
Stage 1	-	-	-	-	708	-
Stage 2	-	-	-	-	715	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.1	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	675	-	-	1229	-
HCM Lane V/C Ratio	0.124	-	-	0.034	-
HCM Control Delay (s)	11.1	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	258	8	15	235	43	47
Future Vol, veh/h	258	8	15	235	43	47
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	280	9	16	255	47	51

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	289	0	572	285
Stage 1	-	-	-	-	285	-
Stage 2	-	-	-	-	287	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1273	-	482	754
Stage 1	-	-	-	-	763	-
Stage 2	-	-	-	-	762	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1273	-	475	754
Mov Cap-2 Maneuver	-	-	-	-	475	-
Stage 1	-	-	-	-	752	-
Stage 2	-	-	-	-	762	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	589	-	-	1273	-
HCM Lane V/C Ratio	0.166	-	-	0.013	-
HCM Control Delay (s)	12.3	-	-	7.9	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.6	-	-	0	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

EPAP plus Project AM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	52	3.0	0.223	6.3	LOS A	0.9	22.3	0.36	0.27	33.8
8	T1	115	3.0	0.223	6.3	LOS A	0.9	22.3	0.36	0.27	33.8
18	R2	30	3.0	0.223	6.3	LOS A	0.9	22.3	0.36	0.27	32.8
Approach		198	3.0	0.223	6.3	LOS A	0.9	22.3	0.36	0.27	33.6
East: RoadName											
1	L2	23	3.0	0.231	6.9	LOS A	0.9	22.7	0.43	0.35	34.0
6	T1	151	3.0	0.231	6.9	LOS A	0.9	22.7	0.43	0.35	33.9
16	R2	15	3.0	0.231	6.9	LOS A	0.9	22.7	0.43	0.35	32.9
Approach		189	3.0	0.231	6.9	LOS A	0.9	22.7	0.43	0.35	33.8
North: RoadName											
7	L2	7	3.0	0.302	7.4	LOS A	1.3	32.4	0.41	0.32	33.9
4	T1	78	3.0	0.302	7.4	LOS A	1.3	32.4	0.41	0.32	33.8
14	R2	178	3.0	0.302	7.4	LOS A	1.3	32.4	0.41	0.32	32.8
Approach		263	3.0	0.302	7.4	LOS A	1.3	32.4	0.41	0.32	33.1
West: RoadName											
5	L2	115	3.0	0.224	5.7	LOS A	0.9	23.1	0.26	0.15	33.4
2	T1	83	3.0	0.224	5.7	LOS A	0.9	23.1	0.26	0.15	33.4
12	R2	27	3.0	0.224	5.7	LOS A	0.9	23.1	0.26	0.15	32.4
Approach		225	3.0	0.224	5.7	LOS A	0.9	23.1	0.26	0.15	33.3
All Vehicles		875	3.0	0.302	6.6	LOS A	1.3	32.4	0.37	0.27	33.4

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.2	0.3
Total Del/Veh (s)	8.7	8.8	18.3	11.9

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	2.9	0.4	0.0	0.4
Total Del/Veh (s)	34.7	25.4	32.9	16.6	27.2

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.0	5.8	4.1

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.0	0.2	0.3
Total Del/Veh (s)	41.9	26.7	26.2	32.0

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	0.5	0.1	0.9	0.4
Total Del/Veh (s)	25.9	46.8	94.5	32.2	56.5

Total Zone Performance

Denied Del/Veh (s)	1.0
Total Del/Veh (s)	1373.0

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.2	1.4	5.2	7.3	4.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	220	293	181	129	253	31	255	175	167	79	126	162
Future Volume (veh/h)	220	293	181	129	253	31	255	175	167	79	126	162
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	239	318	0	140	275	0	277	190	0	86	137	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	298	430	365	183	588	263	341	450	383	110	208	177
Arrive On Green	0.17	0.23	0.00	0.10	0.17	0.00	0.19	0.24	0.00	0.06	0.11	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	239	318	0	140	275	0	277	190	0	86	137	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.6	8.0	0.0	3.9	3.6	0.0	7.6	4.4	0.0	2.4	3.6	0.0
Cycle Q Clear(g_c), s	6.6	8.0	0.0	3.9	3.6	0.0	7.6	4.4	0.0	2.4	3.6	0.0
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	298	430	365	183	588	263	341	450	383	110	208	177
V/C Ratio(X)	0.80	0.74	0.00	0.77	0.47	0.00	0.81	0.42	0.00	0.78	0.66	0.00
Avail Cap(c_a), veh/h	433	975	829	447	1881	841	503	466	396	332	286	243
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	20.3	18.1	0.0	22.2	19.2	0.0	19.7	16.3	0.0	23.5	21.6	0.0
Incr Delay (d2), s/veh	6.8	2.5	0.0	6.5	0.6	0.0	6.3	0.6	0.0	11.2	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	4.4	0.0	2.2	1.8	0.0	4.3	2.3	0.0	1.5	2.0	0.0
LnGrp Delay(d),s/veh	27.1	20.6	0.0	28.7	19.7	0.0	26.0	16.9	0.0	34.7	25.1	0.0
LnGrp LOS	C	C		C	B		C	B		C	C	
Approach Vol, veh/h		557			415			467			223	
Approach Delay, s/veh		23.4			22.8			22.3			28.8	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	7.8	16.9	9.8	16.3	14.4	10.3	13.1	13.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	9.5	12.7	12.8	26.6	14.4	7.8	12.4	27.0
Max Q Clear Time (g_c+I1), s	4.4	6.4	5.9	10.0	9.6	5.6	8.6	5.6
Green Ext Time (p_c), s	0.1	0.5	0.2	1.7	0.4	0.1	0.2	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.7
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	346	78	86	229	23	41
Future Vol, veh/h	346	78	86	229	23	41
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	376	85	93	249	25	45

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	461	0	854	419
Stage 1	-	-	-	-	419	-
Stage 2	-	-	-	-	435	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1100	-	329	634
Stage 1	-	-	-	-	664	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1100	-	297	634
Mov Cap-2 Maneuver	-	-	-	-	297	-
Stage 1	-	-	-	-	599	-
Stage 2	-	-	-	-	653	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.3	14.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	450	-	-	1100	-
HCM Lane V/C Ratio	0.155	-	-	0.085	-
HCM Control Delay (s)	14.5	-	-	8.6	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	330	62	84	325	40	67
Future Vol, veh/h	330	62	84	325	40	67
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	359	67	91	353	43	73

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	426	0	928	393
Stage 1	-	-	-	-	393	-
Stage 2	-	-	-	-	535	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1133	-	297	656
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	587	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1133	-	267	656
Mov Cap-2 Maneuver	-	-	-	-	267	-
Stage 1	-	-	-	-	614	-
Stage 2	-	-	-	-	587	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	16.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	425	-	-	1133	-
HCM Lane V/C Ratio	0.274	-	-	0.081	-
HCM Control Delay (s)	16.6	-	-	8.5	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.1	-	-	0.3	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	362	25	66	300	21	28
Future Vol, veh/h	362	25	66	300	21	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	393	27	72	326	23	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	420	0	877	407
Stage 1	-	-	-	-	407	-
Stage 2	-	-	-	-	470	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1139	-	319	644
Stage 1	-	-	-	-	672	-
Stage 2	-	-	-	-	629	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1139	-	294	644
Mov Cap-2 Maneuver	-	-	-	-	294	-
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	629	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	14.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	426	-	-	1139	-
HCM Lane V/C Ratio	0.125	-	-	0.063	-
HCM Control Delay (s)	14.7	-	-	8.4	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

EPAP plus Project PM
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	28	3.0	0.167	6.4	LOS A	0.6	15.4	0.43	0.36	33.9
8	T1	78	3.0	0.167	6.4	LOS A	0.6	15.4	0.43	0.36	33.9
18	R2	24	3.0	0.167	6.4	LOS A	0.6	15.4	0.43	0.36	32.9
Approach		130	3.0	0.167	6.4	LOS A	0.6	15.4	0.43	0.36	33.7
East: RoadName											
1	L2	30	3.0	0.145	5.8	LOS A	0.5	13.3	0.39	0.30	34.1
6	T1	84	3.0	0.145	5.8	LOS A	0.5	13.3	0.39	0.30	34.1
16	R2	7	3.0	0.145	5.8	LOS A	0.5	13.3	0.39	0.30	33.1
Approach		121	3.0	0.145	5.8	LOS A	0.5	13.3	0.39	0.30	34.1
North: RoadName											
7	L2	15	3.0	0.273	6.5	LOS A	1.1	29.4	0.32	0.21	34.3
4	T1	115	3.0	0.273	6.5	LOS A	1.1	29.4	0.32	0.21	34.2
14	R2	134	3.0	0.273	6.5	LOS A	1.1	29.4	0.32	0.21	33.2
Approach		264	3.0	0.273	6.5	LOS A	1.1	29.4	0.32	0.21	33.7
West: RoadName											
5	L2	159	3.0	0.381	8.0	LOS A	1.8	46.2	0.38	0.27	32.6
2	T1	154	3.0	0.381	8.0	LOS A	1.8	46.2	0.38	0.27	32.5
12	R2	52	3.0	0.381	8.0	LOS A	1.8	46.2	0.38	0.27	31.6
Approach		365	3.0	0.381	8.0	LOS A	1.8	46.2	0.38	0.27	32.4
All Vehicles		880	3.0	0.381	7.0	LOS A	1.8	46.2	0.37	0.27	33.2

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.2	0.2
Total Del/Veh (s)	9.6	11.0	15.7	12.7

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.2	0.3	0.0	0.5
Total Del/Veh (s)	35.2	34.2	39.6	19.5	31.9

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	0.1
Total Del/Veh (s)	2.6	9.7	6.0

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.0	0.1
Total Del/Veh (s)	59.7	34.5	24.6	37.7

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.3	0.2	9.8	58.0	29.1
Total Del/Veh (s)	18.9	54.9	69.3	79.9	66.7

Total Zone Performance

Denied Del/Veh (s)	24.3
Total Del/Veh (s)	1383.5

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.3	0.1
Total Del/Veh (s)	3.0	1.3	8.0	12.0	6.0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	239	280	209	366	80	150	39	190	20	126	149
Future Volume (veh/h)	167	239	280	209	366	80	150	39	190	20	126	149
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	182	260	0	227	398	0	163	42	0	22	137	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	233	347	295	287	767	343	209	384	327	38	205	174
Arrive On Green	0.13	0.19	0.00	0.16	0.22	0.00	0.12	0.21	0.00	0.02	0.11	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	182	260	0	227	398	0	163	42	0	22	137	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.3	5.7	0.0	5.3	4.3	0.0	3.9	0.8	0.0	0.5	3.1	0.0
Cycle Q Clear(g_c), s	4.3	5.7	0.0	5.3	4.3	0.0	3.9	0.8	0.0	0.5	3.1	0.0
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	233	347	295	287	767	343	209	384	327	38	205	174
V/C Ratio(X)	0.78	0.75	0.00	0.79	0.52	0.00	0.78	0.11	0.00	0.58	0.67	0.00
Avail Cap(c_a), veh/h	356	446	379	413	962	430	319	519	441	164	356	303
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.2	16.7	0.0	17.5	15.0	0.0	18.6	14.0	0.0	21.0	18.6	0.0
Incr Delay (d2), s/veh	6.1	5.1	0.0	6.5	0.5	0.0	6.7	0.1	0.0	13.1	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	3.4	0.0	3.1	2.2	0.0	2.3	0.4	0.0	0.4	1.8	0.0
LnGrp Delay(d),s/veh	24.3	21.8	0.0	24.0	15.5	0.0	25.3	14.1	0.0	34.1	22.3	0.0
LnGrp LOS	C	C		C	B		C	B		C	C	
Approach Vol, veh/h		442			625			205			159	
Approach Delay, s/veh		22.8			18.6			23.0			23.9	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	13.6	11.6	12.7	9.7	9.4	10.3	14.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	4.0	12.1	10.1	10.4	7.8	8.3	8.7	11.8
Max Q Clear Time (g_c+I1), s	2.5	2.8	7.3	7.7	5.9	5.1	6.3	6.3
Green Ext Time (p_c), s	0.0	0.1	0.2	0.4	0.1	0.2	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.1
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	194	20	47	227	20	49
Future Vol, veh/h	194	20	47	227	20	49
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	211	22	51	247	22	53

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	233	0	571	222
Stage 1	-	-	-	-	222	-
Stage 2	-	-	-	-	349	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1335	-	482	818
Stage 1	-	-	-	-	815	-
Stage 2	-	-	-	-	714	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1335	-	461	818
Mov Cap-2 Maneuver	-	-	-	-	461	-
Stage 1	-	-	-	-	779	-
Stage 2	-	-	-	-	714	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	11.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	668	-	-	1335	-
HCM Lane V/C Ratio	0.112	-	-	0.038	-
HCM Control Delay (s)	11.1	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	2.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	261	10	60	269	7	80
Future Vol, veh/h	261	10	60	269	7	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	284	11	65	292	8	87

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	295	0	712	290
Stage 1	-	-	-	-	290	-
Stage 2	-	-	-	-	422	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1266	-	399	749
Stage 1	-	-	-	-	759	-
Stage 2	-	-	-	-	662	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1266	-	375	749
Mov Cap-2 Maneuver	-	-	-	-	375	-
Stage 1	-	-	-	-	713	-
Stage 2	-	-	-	-	662	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	11
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	693	-	-	1266	-
HCM Lane V/C Ratio	0.136	-	-	0.052	-
HCM Control Delay (s)	11	-	-	8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

2035 AM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	87	3.0	0.272	6.7	LOS A	1.1	28.8	0.36	0.25	33.4
8	T1	120	3.0	0.272	6.7	LOS A	1.1	28.8	0.36	0.25	33.3
18	R2	43	3.0	0.272	6.7	LOS A	1.1	28.8	0.36	0.25	32.4
Approach		250	3.0	0.272	6.7	LOS A	1.1	28.8	0.36	0.25	33.2
East: RoadName											
1	L2	33	3.0	0.243	7.1	LOS A	0.9	24.0	0.44	0.37	33.7
6	T1	152	3.0	0.243	7.1	LOS A	0.9	24.0	0.44	0.37	33.7
16	R2	11	3.0	0.243	7.1	LOS A	0.9	24.0	0.44	0.37	32.7
Approach		196	3.0	0.243	7.1	LOS A	0.9	24.0	0.44	0.37	33.6
North: RoadName											
7	L2	11	3.0	0.311	7.8	LOS A	1.3	33.0	0.45	0.38	33.6
4	T1	74	3.0	0.311	7.8	LOS A	1.3	33.0	0.45	0.38	33.6
14	R2	173	3.0	0.311	7.8	LOS A	1.3	33.0	0.45	0.38	32.6
Approach		258	3.0	0.311	7.8	LOS A	1.3	33.0	0.45	0.38	32.9
West: RoadName											
5	L2	92	3.0	0.203	5.6	LOS A	0.8	20.5	0.27	0.16	33.6
2	T1	76	3.0	0.203	5.6	LOS A	0.8	20.5	0.27	0.16	33.6
12	R2	33	3.0	0.203	5.6	LOS A	0.8	20.5	0.27	0.16	32.6
Approach		201	3.0	0.203	5.6	LOS A	0.8	20.5	0.27	0.16	33.4
All Vehicles		904	3.0	0.311	6.9	LOS A	1.3	33.0	0.38	0.29	33.3

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.2	0.3
Total Del/Veh (s)	7.4	10.4	20.5	12.8

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.0	0.4	0.0	0.5
Total Del/Veh (s)	26.6	25.5	43.9	16.3	27.4

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.5	7.3	4.9

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.1	0.1	0.3
Total Del/Veh (s)	37.0	22.5	25.7	28.4

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	27.7	0.3	0.3	77.8	30.0
Total Del/Veh (s)	55.4	44.7	64.6	107.6	71.7

Total Zone Performance

Denied Del/Veh (s)	25.9
Total Del/Veh (s)	1627.5

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	2.7	1.5	6.2	9.9	4.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	367	230	139	249	40	270	145	170	80	92	137
Future Volume (veh/h)	185	367	230	139	249	40	270	145	170	80	92	137
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	201	399	0	151	271	0	293	158	0	87	100	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	250	507	431	193	850	380	350	233	198	286	166	141
Arrive On Green	0.14	0.27	0.00	0.11	0.24	0.00	0.20	0.13	0.00	0.16	0.09	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	201	399	0	151	271	0	293	158	0	87	100	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.1	11.0	0.0	4.6	3.5	0.0	8.8	4.5	0.0	2.4	2.9	0.0
Cycle Q Clear(g_c), s	6.1	11.0	0.0	4.6	3.5	0.0	8.8	4.5	0.0	2.4	2.9	0.0
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	250	507	431	193	850	380	350	233	198	286	166	141
V/C Ratio(X)	0.80	0.79	0.00	0.78	0.32	0.00	0.84	0.68	0.00	0.30	0.60	0.00
Avail Cap(c_a), veh/h	308	913	776	305	1728	773	436	488	415	286	249	212
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.0	18.7	0.0	24.0	17.3	0.0	21.3	23.1	0.0	20.5	24.3	0.0
Incr Delay (d2), s/veh	11.9	2.8	0.0	6.7	0.2	0.0	11.1	3.4	0.0	0.6	3.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	6.0	0.0	2.6	1.7	0.0	5.3	2.5	0.0	1.2	1.6	0.0
LnGrp Delay(d),s/veh	34.9	21.4	0.0	30.7	17.5	0.0	32.4	26.5	0.0	21.1	27.8	0.0
LnGrp LOS	C	C		C	B		C	C		C	C	
Approach Vol, veh/h		600			422			451			187	
Approach Delay, s/veh		25.9			22.2			30.4			24.6	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.5	11.5	10.6	19.6	15.5	9.5	12.4	17.9
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	6.5	14.5	9.5	27.1	13.6	7.4	9.6	27.0
Max Q Clear Time (g_c+I1), s	4.4	6.5	6.6	13.0	10.8	4.9	8.1	5.5
Green Ext Time (p_c), s	0.0	0.4	0.1	2.1	0.3	0.1	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.1
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	406	80	89	187	30	48
Future Vol, veh/h	406	80	89	187	30	48
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	441	87	97	203	33	52

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	528	0	882	485
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	397	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1039	-	317	582
Stage 1	-	-	-	-	619	-
Stage 2	-	-	-	-	679	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1039	-	284	582
Mov Cap-2 Maneuver	-	-	-	-	284	-
Stage 1	-	-	-	-	554	-
Stage 2	-	-	-	-	679	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	15.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	415	-	-	1039	-
HCM Lane V/C Ratio	0.204	-	-	0.093	-
HCM Control Delay (s)	15.9	-	-	8.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	392	60	120	272	15	70
Future Vol, veh/h	392	60	120	272	15	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	426	65	130	296	16	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	491	0	1015	459
Stage 1	-	-	-	-	459	-
Stage 2	-	-	-	-	556	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1072	-	264	602
Stage 1	-	-	-	-	636	-
Stage 2	-	-	-	-	574	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1072	-	226	602
Mov Cap-2 Maneuver	-	-	-	-	226	-
Stage 1	-	-	-	-	544	-
Stage 2	-	-	-	-	574	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.7	14.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	465	-	-	1072	-
HCM Lane V/C Ratio	0.199	-	-	0.122	-
HCM Control Delay (s)	14.7	-	-	8.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.7	-	-	0.4	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

2035 PM
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	33	3.0	0.330	8.5	LOS A	1.4	35.0	0.49	0.44	33.2
8	T1	195	3.0	0.330	8.5	LOS A	1.4	35.0	0.49	0.44	33.1
18	R2	33	3.0	0.330	8.5	LOS A	1.4	35.0	0.49	0.44	32.2
Approach		260	3.0	0.330	8.5	LOS A	1.4	35.0	0.49	0.44	33.0
East: RoadName											
1	L2	43	3.0	0.265	7.6	LOS A	1.0	26.5	0.47	0.42	33.4
6	T1	152	3.0	0.265	7.6	LOS A	1.0	26.5	0.47	0.42	33.3
16	R2	11	3.0	0.265	7.6	LOS A	1.0	26.5	0.47	0.42	32.4
Approach		207	3.0	0.265	7.6	LOS A	1.0	26.5	0.47	0.42	33.3
North: RoadName											
7	L2	11	3.0	0.283	7.2	LOS A	1.2	29.8	0.41	0.32	34.0
4	T1	118	3.0	0.283	7.2	LOS A	1.2	29.8	0.41	0.32	33.9
14	R2	116	3.0	0.283	7.2	LOS A	1.2	29.8	0.41	0.32	32.9
Approach		246	3.0	0.283	7.2	LOS A	1.2	29.8	0.41	0.32	33.4
West: RoadName											
5	L2	104	3.0	0.431	8.8	LOS A	2.2	55.1	0.42	0.30	32.6
2	T1	207	3.0	0.431	8.8	LOS A	2.2	55.1	0.42	0.30	32.6
12	R2	98	3.0	0.431	8.8	LOS A	2.2	55.1	0.42	0.30	31.7
Approach		409	3.0	0.431	8.8	LOS A	2.2	55.1	0.42	0.30	32.4
All Vehicles		1121	3.0	0.431	8.1	LOS A	2.2	55.1	0.44	0.36	32.9

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.4	0.0	0.2	0.2
Total Del/Veh (s)	11.0	11.7	15.2	13.1

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.2	0.4	0.0	0.5
Total Del/Veh (s)	38.3	38.1	38.5	20.2	33.4

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.2	0.1
Total Del/Veh (s)	3.0	9.7	6.2

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.5	0.0	0.0	0.1
Total Del/Veh (s)	49.7	36.1	25.4	35.7

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.3	0.2	13.8	68.2	35.3
Total Del/Veh (s)	20.0	51.3	67.0	80.8	66.2

Total Zone Performance

Denied Del/Veh (s)	29.3
Total Del/Veh (s)	1355.6

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.1	0.3	0.1
Total Del/Veh (s)	3.6	1.3	8.0	11.9	6.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	170	240	280	210	370	80	150	40	190	20	140	160
Future Volume (veh/h)	170	240	280	210	370	80	150	40	190	20	140	160
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	185	261	0	228	402	0	163	43	0	22	152	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	236	346	294	288	759	340	209	400	340	38	221	188
Arrive On Green	0.13	0.19	0.00	0.16	0.21	0.00	0.12	0.22	0.00	0.02	0.12	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	185	261	0	228	402	0	163	43	0	22	152	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	4.5	5.9	0.0	5.5	4.5	0.0	3.9	0.8	0.0	0.5	3.5	0.0
Cycle Q Clear(g_c), s	4.5	5.9	0.0	5.5	4.5	0.0	3.9	0.8	0.0	0.5	3.5	0.0
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	236	346	294	288	759	340	209	400	340	38	221	188
V/C Ratio(X)	0.78	0.75	0.00	0.79	0.53	0.00	0.78	0.11	0.00	0.58	0.69	0.00
Avail Cap(c_a), veh/h	349	438	372	405	944	422	313	509	433	160	349	297
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	18.6	17.1	0.0	17.8	15.4	0.0	19.0	14.0	0.0	21.5	18.7	0.0
Incr Delay (d2), s/veh	6.8	5.6	0.0	7.0	0.6	0.0	7.1	0.1	0.0	13.2	3.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	3.5	0.0	3.2	2.2	0.0	2.3	0.4	0.0	0.4	2.0	0.0
LnGrp Delay(d),s/veh	25.3	22.7	0.0	24.8	16.0	0.0	26.1	14.1	0.0	34.6	22.5	0.0
LnGrp LOS	C	C		C	B		C	B		C	C	
Approach Vol, veh/h		446			630			206			174	
Approach Delay, s/veh		23.8			19.2			23.6			24.0	
Approach LOS		C			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	5.5	14.1	11.8	12.8	9.8	9.8	10.5	14.1
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	4.0	12.1	10.1	10.4	7.8	8.3	8.7	11.8
Max Q Clear Time (g_c+I1), s	2.5	2.8	7.5	7.9	5.9	5.5	6.5	6.5
Green Ext Time (p_c), s	0.0	0.1	0.2	0.3	0.1	0.2	0.1	1.2

Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	200	20	50	260	20	50
Future Vol, veh/h	200	20	50	260	20	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	217	22	54	283	22	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	239	0	619	228
Stage 1	-	-	-	-	228	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1328	-	452	811
Stage 1	-	-	-	-	810	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1328	-	430	811
Mov Cap-2 Maneuver	-	-	-	-	430	-
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	683	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	11.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	647	-	-	1328	-
HCM Lane V/C Ratio	0.118	-	-	0.041	-
HCM Control Delay (s)	11.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.1	-

Intersection	
Int Delay, s/veh	2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	290	26	60	280	10	80
Future Vol, veh/h	290	26	60	280	10	80
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	315	28	65	304	11	87

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	343	0	763	329
Stage 1	-	-	-	-	329	-
Stage 2	-	-	-	-	434	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1216	-	372	712
Stage 1	-	-	-	-	729	-
Stage 2	-	-	-	-	653	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1216	-	348	712
Mov Cap-2 Maneuver	-	-	-	-	348	-
Stage 1	-	-	-	-	682	-
Stage 2	-	-	-	-	653	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.4	11.7
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	638	-	-	1216	-
HCM Lane V/C Ratio	0.153	-	-	0.054	-
HCM Control Delay (s)	11.7	-	-	8.1	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0.2	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	250	6	14	290	36	45
Future Vol, veh/h	250	6	14	290	36	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	272	7	15	315	39	49

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	279	0	621	276
Stage 1	-	-	-	-	276	-
Stage 2	-	-	-	-	345	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1284	-	451	763
Stage 1	-	-	-	-	771	-
Stage 2	-	-	-	-	717	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1284	-	445	763
Mov Cap-2 Maneuver	-	-	-	-	445	-
Stage 1	-	-	-	-	760	-
Stage 2	-	-	-	-	717	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	12.3
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	579	-	-	1284	-
HCM Lane V/C Ratio	0.152	-	-	0.012	-
HCM Control Delay (s)	12.3	-	-	7.8	0
HCM Lane LOS	B	-	-	A	A
HCM 95th %tile Q(veh)	0.5	-	-	0	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

2035 plus Project AM
Roundabout

Movement Performance - Vehicles											
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	87	3.0	0.274	6.8	LOS A	1.1	29.0	0.36	0.26	33.4
8	T1	120	3.0	0.274	6.8	LOS A	1.1	29.0	0.36	0.26	33.3
18	R2	43	3.0	0.274	6.8	LOS A	1.1	29.0	0.36	0.26	32.4
Approach		250	3.0	0.274	6.8	LOS A	1.1	29.0	0.36	0.26	33.2
East: RoadName											
1	L2	33	3.0	0.244	7.2	LOS A	0.9	24.2	0.45	0.38	33.7
6	T1	152	3.0	0.244	7.2	LOS A	0.9	24.2	0.45	0.38	33.6
16	R2	11	3.0	0.244	7.2	LOS A	0.9	24.2	0.45	0.38	32.7
Approach		196	3.0	0.244	7.2	LOS A	0.9	24.2	0.45	0.38	33.6
North: RoadName											
7	L2	11	3.0	0.354	8.5	LOS A	1.5	39.2	0.47	0.40	33.3
4	T1	76	3.0	0.354	8.5	LOS A	1.5	39.2	0.47	0.40	33.3
14	R2	207	3.0	0.354	8.5	LOS A	1.5	39.2	0.47	0.40	32.3
Approach		293	3.0	0.354	8.5	LOS A	1.5	39.2	0.47	0.40	32.6
West: RoadName											
5	L2	98	3.0	0.209	5.7	LOS A	0.8	21.2	0.27	0.16	33.6
2	T1	76	3.0	0.209	5.7	LOS A	0.8	21.2	0.27	0.16	33.5
12	R2	33	3.0	0.209	5.7	LOS A	0.8	21.2	0.27	0.16	32.6
Approach		207	3.0	0.209	5.7	LOS A	0.8	21.2	0.27	0.16	33.4
All Vehicles		946	3.0	0.354	7.1	LOS A	1.5	39.2	0.39	0.31	33.1

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

5: Chiles Rd & I-80 EB Off-Ramp Performance by approach

Approach	EB	WB	SB	All
Denied Del/Veh (s)	0.6	0.0	0.2	0.3
Total Del/Veh (s)	7.8	3.6	20.0	11.2

6: Mace Blvd & Chiles Rd Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.0	3.0	0.4	0.0	0.5
Total Del/Veh (s)	29.1	28.9	42.1	19.3	29.2

7: I-80 EB Ramp & Mace Blvd Performance by approach

Approach	NB	SB	All
Denied Del/Veh (s)	0.0	0.0	0.0
Total Del/Veh (s)	2.4	7.7	5.0

8: Mace Blvd & I-80 WB Ramp Performance by approach

Approach	WB	NB	SB	All
Denied Del/Veh (s)	0.6	0.0	0.1	0.3
Total Del/Veh (s)	27.0	20.3	27.3	25.0

9: Mace Blvd & 2nd St/CR 32A Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	7.2	0.3	0.2	103.5	30.2
Total Del/Veh (s)	42.1	45.5	62.6	113.8	68.1

Total Zone Performance

Denied Del/Veh (s)	25.8
Total Del/Veh (s)	1629.5

7: I-80 EB Ramp & Mace Blvd Performance by movement

Movement	NBT	NBR	SBT	SBR	All
Denied Del/Veh (s)	0.0	0.0	0.0	0.1	0.0
Total Del/Veh (s)	2.6	1.5	6.5	10.4	5.0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	370	230	140	250	40	270	150	170	80	100	140
Future Volume (veh/h)	190	370	230	140	250	40	270	150	170	80	100	140
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	207	402	0	152	272	0	293	163	0	87	109	0
Adj No. of Lanes	1	1	1	1	2	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, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	256	508	432	194	843	377	349	237	202	289	174	148
Arrive On Green	0.14	0.27	0.00	0.11	0.24	0.00	0.20	0.13	0.00	0.16	0.09	0.00
Sat Flow, veh/h	1774	1863	1583	1774	3539	1583	1774	1863	1583	1774	1863	1583
Grp Volume(v), veh/h	207	402	0	152	272	0	293	163	0	87	109	0
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1774	1770	1583	1774	1863	1583	1774	1863	1583
Q Serve(g_s), s	6.3	11.2	0.0	4.7	3.6	0.0	8.9	4.7	0.0	2.4	3.2	0.0
Cycle Q Clear(g_c), s	6.3	11.2	0.0	4.7	3.6	0.0	8.9	4.7	0.0	2.4	3.2	0.0
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	256	508	432	194	843	377	349	237	202	289	174	148
V/C Ratio(X)	0.81	0.79	0.00	0.78	0.32	0.00	0.84	0.69	0.00	0.30	0.63	0.00
Avail Cap(c_a), veh/h	303	899	764	300	1702	762	430	481	409	289	246	209
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	23.3	18.9	0.0	24.3	17.6	0.0	21.7	23.4	0.0	20.7	24.5	0.0
Incr Delay (d2), s/veh	13.1	2.8	0.0	7.0	0.2	0.0	11.6	3.5	0.0	0.6	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	6.1	0.0	2.7	1.8	0.0	5.4	2.6	0.0	1.2	1.8	0.0
LnGrp Delay(d),s/veh	36.3	21.8	0.0	31.4	17.9	0.0	33.3	26.9	0.0	21.3	28.2	0.0
LnGrp LOS	D	C		C	B		C	C		C	C	
Approach Vol, veh/h		609			424			456			196	
Approach Delay, s/veh		26.7			22.7			31.0			25.1	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.7	11.7	10.7	19.9	15.6	9.8	12.7	18.0
Change Period (Y+Rc), s	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
Max Green Setting (Gmax), s	6.5	14.5	9.5	27.1	13.6	7.4	9.6	27.0
Max Q Clear Time (g_c+I1), s	4.4	6.7	6.7	13.2	10.9	5.2	8.3	5.6
Green Ext Time (p_c), s	0.0	0.5	0.1	2.1	0.2	0.1	0.1	1.7

Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Notes

Intersection	
Int Delay, s/veh	2.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	420	80	90	200	30	50
Future Vol, veh/h	420	80	90	200	30	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	457	87	98	217	33	54

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	544	0	914	501
Stage 1	-	-	-	-	501	-
Stage 2	-	-	-	-	413	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1025	-	303	570
Stage 1	-	-	-	-	609	-
Stage 2	-	-	-	-	668	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1025	-	270	570
Mov Cap-2 Maneuver	-	-	-	-	270	-
Stage 1	-	-	-	-	543	-
Stage 2	-	-	-	-	668	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.8	16.4
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	402	-	-	1025	-
HCM Lane V/C Ratio	0.216	-	-	0.095	-
HCM Control Delay (s)	16.4	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.8	-	-	0.3	-

Intersection	
Int Delay, s/veh	2.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	410	70	120	320	30	70
Future Vol, veh/h	410	70	120	320	30	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	446	76	130	348	33	76

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	522	0	1092	484
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	608	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1044	-	237	583
Stage 1	-	-	-	-	620	-
Stage 2	-	-	-	-	543	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1044	-	201	583
Mov Cap-2 Maneuver	-	-	-	-	201	-
Stage 1	-	-	-	-	525	-
Stage 2	-	-	-	-	543	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.4	18.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	371	-	-	1044	-
HCM Lane V/C Ratio	0.293	-	-	0.125	-
HCM Control Delay (s)	18.7	-	-	8.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	1.2	-	-	0.4	-

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	470	16	63	350	15	28
Future Vol, veh/h	470	16	63	350	15	28
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	511	17	68	380	16	30

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	528	0	1036	520
Stage 1	-	-	-	-	520	-
Stage 2	-	-	-	-	516	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1039	-	256	556
Stage 1	-	-	-	-	597	-
Stage 2	-	-	-	-	599	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1039	-	235	556
Mov Cap-2 Maneuver	-	-	-	-	235	-
Stage 1	-	-	-	-	547	-
Stage 2	-	-	-	-	599	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.3	15.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	377	-	-	1039	-
HCM Lane V/C Ratio	0.124	-	-	0.066	-
HCM Control Delay (s)	15.9	-	-	8.7	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0.2	-

MOVEMENT SUMMARY

Site: 2 [Chiles Rd - Drummond Ave/ Cowell Blvd]

2035 plus Project PM
Roundabout

Movement Performance - Vehicles												
Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate per veh	Average Speed mph
South: RoadName											
3	L2	33	3.0	0.336	8.7	LOS A	1.4	35.7	0.50	0.46	33.1
8	T1	196	3.0	0.336	8.7	LOS A	1.4	35.7	0.50	0.46	33.0
18	R2	33	3.0	0.336	8.7	LOS A	1.4	35.7	0.50	0.46	32.1
Approach		261	3.0	0.336	8.7	LOS A	1.4	35.7	0.50	0.46	32.9
East: RoadName											
1	L2	43	3.0	0.269	7.8	LOS A	1.1	26.9	0.48	0.43	33.3
6	T1	152	3.0	0.269	7.8	LOS A	1.1	26.9	0.48	0.43	33.2
16	R2	11	3.0	0.269	7.8	LOS A	1.1	26.9	0.48	0.43	32.3
Approach		207	3.0	0.269	7.8	LOS A	1.1	26.9	0.48	0.43	33.2
North: RoadName											
7	L2	11	3.0	0.300	7.4	LOS A	1.3	32.2	0.41	0.32	33.9
4	T1	120	3.0	0.300	7.4	LOS A	1.3	32.2	0.41	0.32	33.8
14	R2	130	3.0	0.300	7.4	LOS A	1.3	32.2	0.41	0.32	32.8
Approach		261	3.0	0.300	7.4	LOS A	1.3	32.2	0.41	0.32	33.3
West: RoadName											
5	L2	120	3.0	0.447	9.1	LOS A	2.3	58.3	0.43	0.31	32.4
2	T1	207	3.0	0.447	9.1	LOS A	2.3	58.3	0.43	0.31	32.4
12	R2	98	3.0	0.447	9.1	LOS A	2.3	58.3	0.43	0.31	31.5
Approach		424	3.0	0.447	9.1	LOS A	2.3	58.3	0.43	0.31	32.2
All Vehicles		1152	3.0	0.447	8.4	LOS A	2.3	58.3	0.45	0.37	32.8

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.
LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all movements (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 2010.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	197	84	107	200	246	58
Average Queue (ft)	82	30	55	112	138	20
95th Queue (ft)	157	79	95	181	213	48
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	276	248	188	28	69	209	162	138	330	308	230	249
Average Queue (ft)	153	123	61	1	17	45	93	27	197	174	141	71
95th Queue (ft)	239	204	135	13	47	130	152	92	296	280	223	193
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)											1	1
Queuing Penalty (veh)											0	4
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	3	0	24		1	1
Queuing Penalty (veh)						0	2	0	4		1	2

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB
Directions Served	T
Maximum Queue (ft)	210
Average Queue (ft)	47
95th Queue (ft)	144
Link Distance (ft)	250
Upstream Blk Time (%)	0
Queuing Penalty (veh)	0
Storage Bay Dist (ft)	
Storage Blk Time (%)	0
Queuing Penalty (veh)	0

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	TR
Maximum Queue (ft)	44	4	334	508
Average Queue (ft)	2	0	15	34
95th Queue (ft)	26	4	143	219
Link Distance (ft)	250	250	534	534
Upstream Blk Time (%)			0	0
Queuing Penalty (veh)			0	1
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	188	215	81	290	532	462	382	395	295	370	396
Average Queue (ft)	98	122	5	238	173	52	206	249	99	34	47
95th Queue (ft)	160	193	58	326	450	219	375	413	287	211	238
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					0	0	4	9	0		
Queuing Penalty (veh)					2	0	25	59	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				10	0			13	0		
Queuing Penalty (veh)				32	1			25	0		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

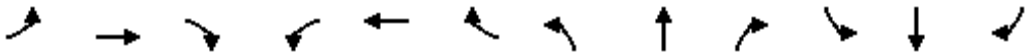
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	82	68	187	60	111	285	903	866	326	285	245	207
Average Queue (ft)	26	21	20	15	45	282	716	582	118	86	43	83
95th Queue (ft)	63	55	112	46	91	299	1116	1072	329	284	230	186
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							32	2	2	0	3	0
Queuing Penalty (veh)							197	15	7	1	11	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)				0	7	38	4					0
Queuing Penalty (veh)				0	1	118	24					0

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	B21	B21
Directions Served	T	T	T	T
Maximum Queue (ft)	284	294	142	197
Average Queue (ft)	222	247	15	32
95th Queue (ft)	299	317	77	125
Link Distance (ft)	207	207	544	544
Upstream Blk Time (%)	12	20		0
Queuing Penalty (veh)	38	65		0
Storage Bay Dist (ft)				
Storage Blk Time (%)	15			
Queuing Penalty (veh)	11			

Zone Summary

Zone wide Queuing Penalty: 648



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	141	223	200	226	328	37	137	37	148	14	59	166
v/c Ratio	0.31	0.41	0.13	0.42	0.30	0.02	0.32	0.06	0.09	0.06	0.14	0.10
Control Delay	23.6	23.6	0.2	22.9	17.9	0.0	25.5	15.6	0.1	26.8	23.0	0.1
Queue 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
Total Delay	23.6	23.6	0.2	22.9	17.9	0.0	25.5	15.6	0.1	26.8	23.0	0.1
Queue Length 50th (ft)	45	71	0	71	50	0	45	8	0	5	19	0
Queue Length 95th (ft)	94	#152	0	#143	86	0	#99	31	0	20	47	0
Internal Link Dist (ft)		2510			1923			1140			3087	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	632	696	1583	688	1443	1583	524	852	1583	249	617	1583
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	0.22	0.32	0.13	0.33	0.23	0.02	0.26	0.04	0.09	0.06	0.10	0.10

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	243	65	85	129	213	59
Average Queue (ft)	110	17	46	60	116	17
95th Queue (ft)	202	49	78	107	188	45
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	252	241	375	70	78	130	146	141	318	333	216	206
Average Queue (ft)	149	136	203	9	21	37	71	34	167	176	126	91
95th Queue (ft)	229	217	322	43	55	93	126	101	277	289	197	173
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)			0								0	0
Queuing Penalty (veh)			0								0	0
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	1	0	17		0	0
Queuing Penalty (veh)						0	1	0	5		0	0

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	184	26
Average Queue (ft)	74	1
95th Queue (ft)	139	22
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	1	13	32
Average Queue (ft)	0	0	1
95th Queue (ft)	0	9	14
Link Distance (ft)	250	534	534
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	132	155	210	275	322	245	341	373	275	98	154
Average Queue (ft)	77	94	25	169	117	51	187	233	87	14	23
95th Queue (ft)	124	139	196	272	245	141	333	372	251	143	178
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					0	0	3	7	0		
Queuing Penalty (veh)					0	0	17	43	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				3	0			10	0		
Queuing Penalty (veh)				9	0			21	0		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

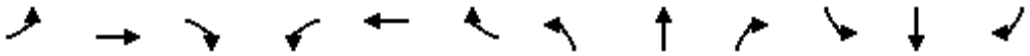
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	263	285	391	78	108	285	906	876	332	309	288	200
Average Queue (ft)	131	143	110	28	42	276	668	562	104	83	58	104
95th Queue (ft)	224	239	319	65	87	314	1084	1074	316	286	273	178
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							26	7	2	1	4	0
Queuing Penalty (veh)							175	44	9	4	20	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)	0	1		3	6	19	26					1
Queuing Penalty (veh)	1	2		2	2	78	121					2

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	SB	B21	B21	B21
Directions Served	T	T	R	T	T	T
Maximum Queue (ft)	245	259	12	23	64	52
Average Queue (ft)	144	154	0	1	2	2
95th Queue (ft)	219	230	0	14	53	53
Link Distance (ft)	207	207	207	544	544	544
Upstream Blk Time (%)	1	2				
Queuing Penalty (veh)	3	5				
Storage Bay Dist (ft)						
Storage Blk Time (%)	2					
Queuing Penalty (veh)	3					

Zone Summary

Zone wide Queuing Penalty: 566



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	203	310	186	138	271	34	250	110	179	86	82	150
v/c Ratio	0.63	0.53	0.12	0.48	0.33	0.02	0.68	0.30	0.11	0.37	0.37	0.09
Control Delay	38.2	25.9	0.2	33.7	22.0	0.0	37.4	28.4	0.1	34.2	35.5	0.1
Queue 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
Total Delay	38.2	25.9	0.2	33.7	22.0	0.0	37.4	28.4	0.1	34.2	35.5	0.1
Queue Length 50th (ft)	78	117	0	53	50	0	95	39	0	33	32	0
Queue Length 95th (ft)	#188	200	0	114	79	0	#224	94	0	81	80	0
Internal Link Dist (ft)		3481			2550			1736			3164	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	373	843	1583	385	1626	1583	434	407	1583	286	247	1583
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	0.54	0.37	0.12	0.36	0.17	0.02	0.58	0.27	0.11	0.30	0.33	0.09

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	188	86	91	211	254	60
Average Queue (ft)	87	30	53	111	137	23
95th Queue (ft)	167	74	89	184	219	51
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	292	273	148	19	68	196	163	142	362	343	235	250
Average Queue (ft)	154	131	56	1	22	46	97	31	212	185	139	73
95th Queue (ft)	247	221	116	12	56	132	156	97	327	301	223	189
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)	0	0									1	1
Queuing Penalty (veh)	0	0									0	4
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	4	0	26		1	1
Queuing Penalty (veh)						0	4	0	5		1	2

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	234	21
Average Queue (ft)	50	1
95th Queue (ft)	143	21
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	TR
Maximum Queue (ft)	47	17	229	386
Average Queue (ft)	2	0	12	34
95th Queue (ft)	22	6	119	228
Link Distance (ft)	250	250	534	534
Upstream Blk Time (%)			0	0
Queuing Penalty (veh)			0	1
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	171	207	76	290	536	440	379	399	295	375	443
Average Queue (ft)	98	121	7	238	176	60	219	266	116	45	65
95th Queue (ft)	157	189	71	326	455	253	392	434	318	224	277
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					0	0	5	13	0		0
Queuing Penalty (veh)					2	0	31	86	0		0
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				10	0			16	0		
Queuing Penalty (veh)				34	0			32	1		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

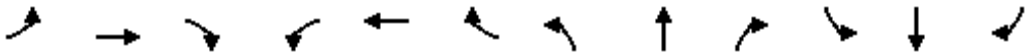
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	72	71	215	68	115	285	906	837	297	284	233	207
Average Queue (ft)	23	21	27	14	42	280	649	483	66	52	29	91
95th Queue (ft)	59	56	133	43	90	310	1037	988	248	221	188	201
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							16	1	1	1	2	0
Queuing Penalty (veh)							103	6	6	2	10	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)				0	5	37	2					0
Queuing Penalty (veh)				0	1	117	15					0

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	SB	B21	B21
Directions Served	T	T	R	T	T
Maximum Queue (ft)	281	296	13	106	126
Average Queue (ft)	222	246	0	14	31
95th Queue (ft)	307	324	13	64	96
Link Distance (ft)	207	207	207	544	544
Upstream Blk Time (%)	12	20			
Queuing Penalty (veh)	38	64			
Storage Bay Dist (ft)					
Storage Blk Time (%)	14				
Queuing Penalty (veh)	10				

Zone Summary

Zone wide Queuing Penalty: 574



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	146	224	200	227	333	37	137	39	148	14	78	182
v/c Ratio	0.32	0.42	0.13	0.43	0.31	0.02	0.32	0.06	0.09	0.06	0.18	0.11
Control Delay	23.8	23.8	0.2	23.2	18.2	0.0	25.7	15.6	0.1	26.9	23.3	0.1
Queue 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
Total Delay	23.8	23.8	0.2	23.2	18.2	0.0	25.7	15.6	0.1	26.9	23.3	0.1
Queue Length 50th (ft)	47	73	0	72	52	0	45	9	0	5	25	0
Queue Length 95th (ft)	97	#153	0	#144	87	0	#99	32	0	20	59	0
Internal Link Dist (ft)		2510			389			1140			3087	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	630	694	1583	687	1436	1583	522	858	1583	249	616	1583
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	0.23	0.32	0.13	0.33	0.23	0.02	0.26	0.05	0.09	0.06	0.13	0.11

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	236	79	95	124	211	63
Average Queue (ft)	107	21	46	62	112	21
95th Queue (ft)	197	60	81	105	182	49
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	251	247	376	72	81	129	153	149	303	304	229	255
Average Queue (ft)	148	143	193	12	24	37	74	51	163	167	140	107
95th Queue (ft)	222	220	316	49	59	91	130	123	265	279	221	210
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)			0								1	1
Queuing Penalty (veh)			0								0	4
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	1	0	16		1	1
Queuing Penalty (veh)						0	1	0	6		2	2

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	227	38
Average Queue (ft)	83	1
95th Queue (ft)	166	10
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	SB	SB
Directions Served	T	TR
Maximum Queue (ft)	33	41
Average Queue (ft)	3	2
95th Queue (ft)	28	27
Link Distance (ft)	534	534
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	146	170	374	267	314	194	342	379	275	73	132
Average Queue (ft)	78	99	60	155	116	55	191	238	101	6	18
95th Queue (ft)	125	149	324	251	246	157	334	379	278	54	104
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					0	0	2	7	0		
Queuing Penalty (veh)					0	0	14	45	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				2	0			10	0		
Queuing Penalty (veh)				5	0			21	0		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

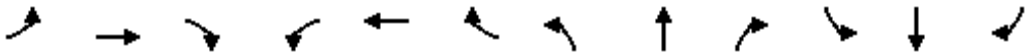
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	257	328	399	86	161	285	911	883	340	336	374	202
Average Queue (ft)	127	149	125	28	56	277	731	652	163	137	117	105
95th Queue (ft)	222	259	352	69	121	315	1127	1129	394	367	390	183
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							41	12	6	3	12	1
Queuing Penalty (veh)							276	84	25	13	56	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)	1	1		3	11	20	29					1
Queuing Penalty (veh)	1	2		2	3	84	138					2

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	B21	B21	B21
Directions Served	T	T	T	T	T
Maximum Queue (ft)	238	245	13	118	50
Average Queue (ft)	141	150	1	2	2
95th Queue (ft)	220	228	15	53	51
Link Distance (ft)	207	207	544	544	544
Upstream Blk Time (%)	1	2		0	
Queuing Penalty (veh)	3	4		0	
Storage Bay Dist (ft)					
Storage Blk Time (%)	2				
Queuing Penalty (veh)	3				

Zone Summary

Zone wide Queuing Penalty: 797



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	214	314	186	139	273	34	250	116	179	86	92	155
v/c Ratio	0.65	0.54	0.12	0.49	0.33	0.02	0.68	0.32	0.11	0.38	0.42	0.10
Control Delay	39.2	25.9	0.2	34.0	22.0	0.0	37.9	28.8	0.1	34.4	36.7	0.1
Queue 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
Total Delay	39.2	25.9	0.2	34.0	22.0	0.0	37.9	28.8	0.1	34.4	36.7	0.1
Queue Length 50th (ft)	83	119	0	54	51	0	96	41	0	33	36	0
Queue Length 95th (ft)	#203	202	0	115	80	0	#224	98	0	82	88	0
Internal Link Dist (ft)		3481			2550			1736			3164	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	370	836	1583	382	1612	1583	430	405	1583	283	245	1583
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	0.58	0.38	0.12	0.36	0.17	0.02	0.58	0.29	0.11	0.30	0.38	0.10

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	191	99	106	203	245	52
Average Queue (ft)	89	32	55	106	139	21
95th Queue (ft)	165	80	94	175	219	47
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	284	256	153	31	74	207	164	149	342	308	215	236
Average Queue (ft)	158	134	60	2	19	49	100	34	209	180	140	73
95th Queue (ft)	250	222	125	17	53	136	162	100	324	296	216	175
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)											1	1
Queuing Penalty (veh)											0	2
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)					0	0	4		26		1	1
Queuing Penalty (veh)					0	0	4		6		1	1

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	180	21
Average Queue (ft)	48	1
95th Queue (ft)	124	21
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	TR
Maximum Queue (ft)	135	83	347	534
Average Queue (ft)	18	9	17	70
95th Queue (ft)	111	75	151	345
Link Distance (ft)	250	250	534	534
Upstream Blk Time (%)	0	0	0	0
Queuing Penalty (veh)	2	0	0	2
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	227	233	950	290	552	479	382	395	295	280	328
Average Queue (ft)	105	129	304	246	259	136	218	263	124	39	56
95th Queue (ft)	179	201	961	329	554	384	390	424	329	216	264
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					4	0	5	11	0		
Queuing Penalty (veh)					20	1	32	73	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				11	8			14	0		
Queuing Penalty (veh)				36	35			29	0		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

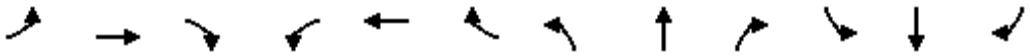
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	82	61	250	70	109	285	922	889	362	352	396	206
Average Queue (ft)	29	21	34	15	43	284	849	755	264	240	245	83
95th Queue (ft)	67	54	161	47	90	296	1063	1064	464	453	529	186
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							64	8	27	13	50	0
Queuing Penalty (veh)							413	51	115	54	213	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)				1	5	45	4					0
Queuing Penalty (veh)				0	1	143	24					0

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	B21	B21
Directions Served	T	T	T	T
Maximum Queue (ft)	280	291	133	159
Average Queue (ft)	217	244	15	28
95th Queue (ft)	296	315	71	102
Link Distance (ft)	207	207	544	544
Upstream Blk Time (%)	11	20		
Queuing Penalty (veh)	34	62		
Storage Bay Dist (ft)				
Storage Blk Time (%)	14			
Queuing Penalty (veh)	10			

Zone Summary

Zone wide Queuing Penalty: 1365



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	152	223	212	228	330	37	140	80	148	14	133	191
v/c Ratio	0.34	0.43	0.13	0.44	0.32	0.02	0.34	0.11	0.09	0.06	0.30	0.12
Control Delay	25.3	25.3	0.2	24.7	19.6	0.0	27.3	15.6	0.1	27.2	25.3	0.2
Queue 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
Total Delay	25.3	25.3	0.2	24.7	19.6	0.0	27.3	15.6	0.1	27.2	25.3	0.2
Queue Length 50th (ft)	50	75	0	76	53	0	48	18	0	5	44	0
Queue Length 95th (ft)	100	#152	0	#145	87	0	#108	54	0	20	90	0
Internal Link Dist (ft)		2510			1923			1140			3087	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	602	661	1583	652	1358	1583	499	876	1583	238	588	1583
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	0.25	0.34	0.13	0.35	0.24	0.02	0.28	0.09	0.09	0.06	0.23	0.12

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	257	74	92	141	212	61
Average Queue (ft)	109	20	48	65	114	20
95th Queue (ft)	202	56	81	116	184	47
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	276	257	353	74	75	150	154	144	315	316	218	225
Average Queue (ft)	158	145	195	9	21	39	75	47	172	174	133	101
95th Queue (ft)	243	226	307	44	55	96	131	119	275	285	201	182
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)			0								0	0
Queuing Penalty (veh)			0								0	1
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	1	0	18		0	0
Queuing Penalty (veh)						0	1	0	6		0	0

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	207	58
Average Queue (ft)	85	3
95th Queue (ft)	161	42
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	0
Queuing Penalty (veh)	0	0

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	1	7	20
Average Queue (ft)	0	0	1
95th Queue (ft)	1	5	11
Link Distance (ft)	250	534	534
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	148	178	1284	282	394	286	371	397	295	177	238
Average Queue (ft)	84	102	398	169	157	84	213	261	130	17	34
95th Queue (ft)	130	154	1237	276	315	215	367	406	330	113	171
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					0	0	4	11	0		
Queuing Penalty (veh)					0	0	24	70	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				1	3			14	0		
Queuing Penalty (veh)				3	9			32	1		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

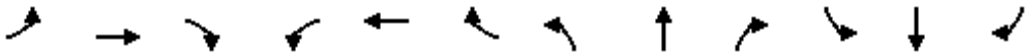
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	249	301	389	89	146	285	920	907	355	347	397	199
Average Queue (ft)	134	156	143	27	55	279	797	738	229	213	227	101
95th Queue (ft)	223	264	359	69	116	319	1101	1140	458	448	519	176
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							56	22	17	10	36	0
Queuing Penalty (veh)							398	155	81	49	170	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)	1	1		2	10	25	28					1
Queuing Penalty (veh)	3	1		1	3	107	144					2

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	B21	B21	B21
Directions Served	T	T	T	T	T
Maximum Queue (ft)	234	254	5	11	4
Average Queue (ft)	141	153	0	0	0
95th Queue (ft)	217	230	4	9	4
Link Distance (ft)	207	207	544	544	544
Upstream Blk Time (%)	1	2			
Queuing Penalty (veh)	2	4			
Storage Bay Dist (ft)					
Storage Blk Time (%)	2				
Queuing Penalty (veh)	2				

Zone Summary

Zone wide Queuing Penalty: 1271



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	228	314	197	139	273	34	277	184	182	86	126	171
v/c Ratio	0.69	0.54	0.12	0.50	0.34	0.02	0.72	0.47	0.11	0.39	0.56	0.11
Control Delay	40.9	26.1	0.2	34.5	22.4	0.0	39.7	31.2	0.1	34.9	42.6	0.1
Queue 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
Total Delay	40.9	26.1	0.2	34.5	22.4	0.0	39.7	31.2	0.1	34.9	42.6	0.1
Queue Length 50th (ft)	90	119	0	54	51	0	108	68	0	33	51	0
Queue Length 95th (ft)	#220	202	0	115	80	0	#259	147	0	82	#136	0
Internal Link Dist (ft)		3481			2550			1736			3164	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	355	802	1583	367	1548	1583	412	401	1583	272	235	1583
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	0.64	0.39	0.12	0.38	0.18	0.02	0.67	0.46	0.11	0.32	0.54	0.11

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	233	107	110	220	264	59
Average Queue (ft)	98	35	58	110	144	22
95th Queue (ft)	193	82	95	186	232	51
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	283	272	190	32	58	176	162	142	330	294	231	259
Average Queue (ft)	165	145	64	1	17	42	93	31	199	175	135	73
95th Queue (ft)	258	232	140	15	46	110	150	92	307	274	222	192
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)											0	1
Queuing Penalty (veh)											0	5
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	3		24		0	1
Queuing Penalty (veh)						0	2		6		1	2

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	224	27
Average Queue (ft)	54	1
95th Queue (ft)	159	21
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	TR
Maximum Queue (ft)	91	40	395	500
Average Queue (ft)	10	2	22	57
95th Queue (ft)	65	22	178	312
Link Distance (ft)	250	250	534	534
Upstream Blk Time (%)			0	0
Queuing Penalty (veh)			0	1
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	189	214	720	290	527	468	378	403	295	400	406
Average Queue (ft)	106	134	159	246	255	136	214	263	122	55	70
95th Queue (ft)	171	201	650	332	557	404	394	436	328	281	311
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					2	0	6	13	0		0
Queuing Penalty (veh)					10	0	41	88	0		0
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				12	7			17	0		
Queuing Penalty (veh)				41	28			35	0		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

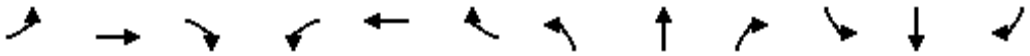
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	83	61	220	52	105	285	921	886	361	352	393	206
Average Queue (ft)	30	17	37	11	43	283	831	725	241	207	210	87
95th Queue (ft)	69	49	156	37	84	295	1108	1091	454	444	502	194
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							57	6	21	11	33	0
Queuing Penalty (veh)							371	39	89	48	142	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)				0	7	43	5					0
Queuing Penalty (veh)				0	1	137	33					0

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	SB	B21	B21	B21
Directions Served	T	T	R	T	T	T
Maximum Queue (ft)	286	298	13	127	212	50
Average Queue (ft)	225	247	1	18	39	2
95th Queue (ft)	303	315	17	82	138	51
Link Distance (ft)	207	207	207	544	544	544
Upstream Blk Time (%)	13	21			0	
Queuing Penalty (veh)	41	66			0	
Storage Bay Dist (ft)						
Storage Blk Time (%)	15					
Queuing Penalty (veh)	11					

Zone Summary

Zone wide Queuing Penalty: 1240



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	157	224	212	229	335	37	140	83	148	14	152	207
v/c Ratio	0.36	0.43	0.13	0.44	0.32	0.02	0.34	0.12	0.09	0.06	0.34	0.13
Control Delay	25.4	25.4	0.2	24.8	19.7	0.0	27.4	15.6	0.1	27.2	25.8	0.2
Queue 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
Total Delay	25.4	25.4	0.2	24.8	19.7	0.0	27.4	15.6	0.1	27.2	25.8	0.2
Queue Length 50th (ft)	52	75	0	76	54	0	48	19	0	5	51	0
Queue Length 95th (ft)	103	#153	0	#153	88	0	#108	55	0	20	101	0
Internal Link Dist (ft)		2510			1923			1140			3087	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	601	660	1583	651	1356	1583	498	878	1583	238	587	1583
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	0.26	0.34	0.13	0.35	0.25	0.02	0.28	0.09	0.09	0.06	0.26	0.13

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	216	74	91	129	219	59
Average Queue (ft)	109	24	49	67	115	21
95th Queue (ft)	187	65	88	115	187	47
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	273	260	360	68	81	130	148	149	306	325	226	238
Average Queue (ft)	158	146	189	10	25	43	73	61	174	185	133	111
95th Queue (ft)	235	223	306	44	63	97	129	138	282	302	212	202
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)			0								0	0
Queuing Penalty (veh)			0								0	2
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	1	0	19		0	0
Queuing Penalty (veh)						0	1	0	9		1	1

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	206	37
Average Queue (ft)	87	2
95th Queue (ft)	166	27
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	2	15	15
Average Queue (ft)	0	1	1
95th Queue (ft)	2	10	12
Link Distance (ft)	250	534	534
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	148	190	1239	282	362	271	346	388	295	114	188
Average Queue (ft)	85	112	331	168	143	78	205	257	116	10	21
95th Queue (ft)	134	169	1128	275	292	200	345	398	305	96	134
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					0	0	2	8	0		
Queuing Penalty (veh)					1	0	11	50	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				1	3			12	0		
Queuing Penalty (veh)				3	8			27	1		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

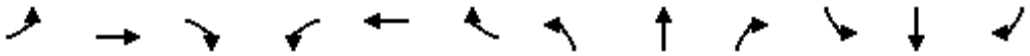
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	268	320	442	83	146	285	921	902	361	347	396	203
Average Queue (ft)	133	155	156	28	51	281	789	723	216	203	213	106
95th Queue (ft)	228	267	381	68	113	311	1094	1141	460	439	510	186
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							55	22	15	9	35	0
Queuing Penalty (veh)							392	153	70	40	165	0
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)	0	1		3	9	26	29					1
Queuing Penalty (veh)	1	2		2	2	110	154					2

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	B21	B21
Directions Served	T	T	T	T
Maximum Queue (ft)	245	268	64	70
Average Queue (ft)	141	150	2	3
95th Queue (ft)	224	230	53	53
Link Distance (ft)	207	207	544	544
Upstream Blk Time (%)	1	2		
Queuing Penalty (veh)	3	5		
Storage Bay Dist (ft)				
Storage Blk Time (%)	2			
Queuing Penalty (veh)	3			

Zone Summary

Zone wide Queuing Penalty: 1218



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	239	318	197	140	275	34	277	190	182	86	137	176
v/c Ratio	0.75	0.58	0.12	0.53	0.35	0.02	0.77	0.43	0.11	0.41	0.64	0.11
Control Delay	45.8	27.0	0.2	35.7	22.7	0.0	43.4	30.2	0.1	36.0	47.2	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	45.8	27.0	0.2	35.7	22.7	0.0	43.4	30.2	0.1	36.0	47.2	0.1
Queue Length 50th (ft)	95	120	0	54	51	0	108	71	0	34	56	0
Queue Length 95th (ft)	#240	204	0	119	80	0	#264	#160	0	83	#154	0
Internal Link Dist (ft)		3481			2550			1736			3164	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	329	743	1583	340	1434	1583	382	444	1583	252	218	1583
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	0.73	0.43	0.12	0.41	0.19	0.02	0.73	0.43	0.11	0.34	0.63	0.11

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	202	110	120	179	235	85
Average Queue (ft)	107	45	65	88	121	38
95th Queue (ft)	176	90	103	145	196	70
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	321	299	207	61	80	400	165	149	452	419	234	250
Average Queue (ft)	199	182	94	4	18	118	130	32	275	255	144	74
95th Queue (ft)	296	277	174	27	53	312	191	103	406	378	225	185
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)	0										0	0
Queuing Penalty (veh)	0										0	1
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	18	0	39		0	0
Queuing Penalty (veh)						1	16	0	7		0	1

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	217	44
Average Queue (ft)	58	2
95th Queue (ft)	154	29
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	TR
Maximum Queue (ft)	107	77	177	518
Average Queue (ft)	15	8	8	43
95th Queue (ft)	102	66	101	265
Link Distance (ft)	250	250	534	534
Upstream Blk Time (%)	0	0	0	0
Queuing Penalty (veh)	1	0	0	1
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	217	336	1074	290	547	456	380	394	295	302	351
Average Queue (ft)	116	150	351	264	262	124	213	258	97	27	39
95th Queue (ft)	191	279	1217	329	576	364	371	404	281	181	207
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					3	0	4	9	0		
Queuing Penalty (veh)					21	3	26	68	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				23	6			13	0		
Queuing Penalty (veh)				96	23			27	0		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

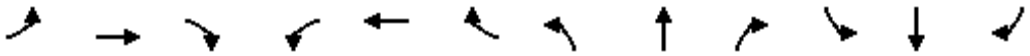
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	147	90	270	88	137	285	920	890	354	360	389	214
Average Queue (ft)	73	31	53	25	56	284	821	601	223	211	211	124
95th Queue (ft)	128	73	199	63	115	299	1083	1063	440	450	505	250
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							45	3	16	17	37	
Queuing Penalty (veh)							339	23	79	88	189	
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)				1	11	50	0					0
Queuing Penalty (veh)				1	2	191	1					0

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	684	703	618
Average Queue (ft)	516	536	323
95th Queue (ft)	690	705	662
Link Distance (ft)	808	808	808
Upstream Blk Time (%)			0
Queuing Penalty (veh)			0
Storage Bay Dist (ft)			
Storage Blk Time (%)	60		
Queuing Penalty (veh)	49		

Zone Summary

Zone wide Queuing Penalty: 1256



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	182	260	304	227	398	87	163	42	207	22	137	162
v/c Ratio	0.45	0.53	0.19	0.50	0.40	0.05	0.43	0.06	0.13	0.10	0.35	0.10
Control Delay	27.4	26.8	0.3	26.7	19.3	0.1	28.3	14.3	0.2	25.3	24.6	0.1
Queue 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
Total Delay	27.4	26.8	0.3	26.7	19.3	0.1	28.3	14.3	0.2	25.3	24.6	0.1
Queue Length 50th (ft)	57	81	0	70	61	0	51	8	0	7	42	0
Queue Length 95th (ft)	#132	#179	0	#158	97	0	#124	31	0	25	87	0
Internal Link Dist (ft)		2510			1923			1140			3087	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	468	589	1583	544	1271	1583	420	858	1583	215	471	1583
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	0.39	0.44	0.19	0.42	0.31	0.05	0.39	0.05	0.13	0.10	0.29	0.10

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	197	83	92	145	274	63
Average Queue (ft)	96	37	54	72	135	25
95th Queue (ft)	164	70	83	122	228	51
Link Distance (ft)	775	414	414	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	240	232	324	68	114	271	165	140	453	426	236	264
Average Queue (ft)	151	128	175	9	37	53	112	33	256	249	143	80
95th Queue (ft)	228	204	283	42	82	167	170	105	399	395	228	195
Link Distance (ft)	414	414	414	414		987			1132	1132		250
Upstream Blk Time (%)											0	1
Queuing Penalty (veh)											0	4
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)					0	0	7	0	38		0	1
Queuing Penalty (veh)					0	0	7	0	9		1	2

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	200	61
Average Queue (ft)	74	3
95th Queue (ft)	152	30
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	0
Queuing Penalty (veh)	0	0

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	TR
Maximum Queue (ft)	55	12	28	24
Average Queue (ft)	4	0	1	1
95th Queue (ft)	44	9	17	14
Link Distance (ft)	250	250	534	534
Upstream Blk Time (%)	0			
Queuing Penalty (veh)	0			
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	251	269	413	290	504	325	347	389	295	156	215
Average Queue (ft)	144	170	158	224	147	67	224	274	152	13	24
95th Queue (ft)	227	252	840	320	397	191	350	405	343	110	158
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					1	0	2	8	0		
Queuing Penalty (veh)					4	0	15	59	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				11	0			12	0		
Queuing Penalty (veh)				44	1			46	1		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

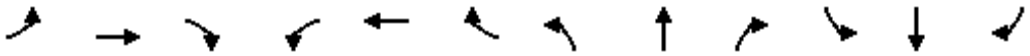
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	275	896	819	87	149	285	867	816	278	306	262	215
Average Queue (ft)	266	574	357	31	62	275	603	481	105	100	83	169
95th Queue (ft)	305	1017	794	74	117	317	1042	924	328	330	332	274
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							21	2	4	4	11	
Queuing Penalty (veh)							163	14	19	19	57	
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)	49	1		3	12	41	7					3
Queuing Penalty (veh)	106	4		2	4	198	39					13

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	617	636	556
Average Queue (ft)	439	461	244
95th Queue (ft)	671	676	628
Link Distance (ft)	808	808	808
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	59		
Queuing Penalty (veh)	84		

Zone Summary

Zone wide Queuing Penalty: 913



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	201	399	250	151	271	43	293	158	185	87	100	149
v/c Ratio	0.74	0.62	0.16	0.61	0.28	0.03	0.78	0.45	0.12	0.37	0.48	0.09
Control Delay	49.6	25.5	0.2	42.1	19.0	0.0	45.5	31.3	0.2	36.0	39.6	0.1
Queue 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
Total Delay	49.6	25.5	0.2	42.1	19.0	0.0	45.5	31.3	0.2	36.0	39.6	0.1
Queue Length 50th (ft)	83	151	0	61	46	0	119	62	0	33	40	0
Queue Length 95th (ft)	#214	240	0	#151	73	0	#280	122	0	#98	#101	0
Internal Link Dist (ft)		3481			2550			1736			3164	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	273	812	1583	270	1538	1583	387	434	1583	239	221	1583
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	0.74	0.49	0.16	0.56	0.18	0.03	0.76	0.36	0.12	0.36	0.45	0.09

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	253	106	131	172	251	80
Average Queue (ft)	120	45	63	85	123	36
95th Queue (ft)	200	91	105	142	199	66
Link Distance (ft)	775	416	416	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	352	343	212	61	83	424	165	149	429	420	230	215
Average Queue (ft)	225	207	103	5	21	133	132	35	275	250	136	60
95th Queue (ft)	326	312	182	33	59	374	194	111	389	363	224	163
Link Distance (ft)	416	416	416	416		987			1132	1132		250
Upstream Blk Time (%)	0	0									0	0
Queuing Penalty (veh)	0	0									0	2
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)						0	20	0	38		0	0
Queuing Penalty (veh)						0	19	0	8		1	1

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	177	20
Average Queue (ft)	46	1
95th Queue (ft)	131	21
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	0	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	
Queuing Penalty (veh)	0	

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	NB	SB	SB
Directions Served	T	T	T	TR
Maximum Queue (ft)	162	146	194	461
Average Queue (ft)	24	12	9	56
95th Queue (ft)	131	88	103	303
Link Distance (ft)	250	250	534	534
Upstream Blk Time (%)	0	0	0	0
Queuing Penalty (veh)	2	0	0	1
Storage Bay Dist (ft)				
Storage Blk Time (%)				
Queuing Penalty (veh)				

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	207	245	1067	290	569	455	375	393	295	297	376
Average Queue (ft)	112	142	263	265	296	144	217	256	90	25	38
95th Queue (ft)	183	215	965	330	605	417	364	390	262	176	221
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					5	0	4	9	0		0
Queuing Penalty (veh)					33	2	31	67	0		0
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				23	7			13	0		
Queuing Penalty (veh)				100	31			27	0		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

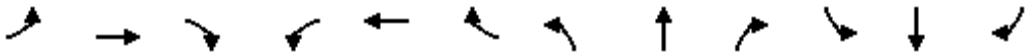
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	156	86	251	85	137	285	916	887	358	352	390	215
Average Queue (ft)	78	31	48	20	57	283	796	575	219	200	200	122
95th Queue (ft)	147	69	186	54	112	302	1125	1061	444	446	498	250
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							44	3	16	16	35	
Queuing Penalty (veh)							339	26	81	82	179	
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)				0	11	49	0					0
Queuing Penalty (veh)				0	2	188	1					2

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	693	730	681
Average Queue (ft)	524	547	328
95th Queue (ft)	701	720	704
Link Distance (ft)	808	808	808
Upstream Blk Time (%)		0	0
Queuing Penalty (veh)		0	0
Storage Bay Dist (ft)			
Storage Blk Time (%)	60		
Queuing Penalty (veh)	49		

Zone Summary

Zone wide Queuing Penalty: 1277



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	261	304	228	402	87	163	43	207	22	152	174
v/c Ratio	0.46	0.53	0.19	0.50	0.40	0.05	0.43	0.06	0.13	0.10	0.39	0.11
Control Delay	27.5	26.8	0.3	26.8	19.3	0.1	28.3	14.3	0.2	25.3	25.1	0.1
Queue 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
Total Delay	27.5	26.8	0.3	26.8	19.3	0.1	28.3	14.3	0.2	25.3	25.1	0.1
Queue Length 50th (ft)	58	81	0	71	61	0	51	9	0	7	47	0
Queue Length 95th (ft)	#134	#179	0	#158	98	0	#124	32	0	25	#96	0
Internal Link Dist (ft)		2510			1923			1140			3087	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	470	592	1583	546	1275	1583	422	863	1583	216	472	1583
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	0.39	0.44	0.19	0.42	0.32	0.05	0.39	0.05	0.13	0.10	0.32	0.11

Intersection Summary

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

Intersection: 5: Chiles Rd & I-80 EB Off-Ramp

Movement	EB	WB	WB	SB	SB	SB
Directions Served	T	T	T	L	L	R
Maximum Queue (ft)	244	66	87	167	259	76
Average Queue (ft)	104	17	37	73	130	30
95th Queue (ft)	186	50	71	126	213	60
Link Distance (ft)	775	398	398	651	651	651
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)						
Storage Blk Time (%)						
Queuing Penalty (veh)						

Intersection: 6: Mace Blvd & Chiles Rd

Movement	EB	EB	EB	EB	WB	WB	WB	NB	NB	NB	SB	SB
Directions Served	L	L	T	R	L	T	R	L	T	TR	L	T
Maximum Queue (ft)	292	251	328	98	107	313	165	149	441	410	238	253
Average Queue (ft)	168	143	168	39	45	80	116	41	257	241	144	93
95th Queue (ft)	257	226	286	77	93	225	178	118	401	374	230	222
Link Distance (ft)	398	398	398	398		988			1120	1120		250
Upstream Blk Time (%)			0								1	2
Queuing Penalty (veh)			0								0	11
Storage Bay Dist (ft)					140		140	125			300	
Storage Blk Time (%)					0	0	10	0	36		1	2
Queuing Penalty (veh)					0	0	12	0	11		4	5

Intersection: 6: Mace Blvd & Chiles Rd

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	236	182
Average Queue (ft)	93	56
95th Queue (ft)	194	112
Link Distance (ft)	250	
Upstream Blk Time (%)	0	
Queuing Penalty (veh)	1	
Storage Bay Dist (ft)		185
Storage Blk Time (%)	0	0
Queuing Penalty (veh)	1	0

Intersection: 7: I-80 EB Ramp & Mace Blvd

Movement	NB	SB	SB
Directions Served	T	T	TR
Maximum Queue (ft)	25	52	87
Average Queue (ft)	2	4	5
95th Queue (ft)	35	35	68
Link Distance (ft)	250	534	534
Upstream Blk Time (%)	0		0
Queuing Penalty (veh)	0		0
Storage Bay Dist (ft)			
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 8: Mace Blvd & I-80 WB Ramp

Movement	WB	WB	WB	NB	NB	NB	SB	SB	SB	B22	B22
Directions Served	L	LT	R	L	T	T	T	T	R	T	T
Maximum Queue (ft)	233	265	324	289	420	228	365	387	295	243	318
Average Queue (ft)	140	166	41	220	118	63	230	282	160	20	37
95th Queue (ft)	214	237	357	311	308	170	358	406	348	150	204
Link Distance (ft)		2753	2753		534	534	311	311		814	814
Upstream Blk Time (%)					0	0	3	10	0		
Queuing Penalty (veh)					2	0	22	76	0		
Storage Bay Dist (ft)	700			265					270		
Storage Blk Time (%)				8	0			14	0		
Queuing Penalty (veh)				33	1			53	1		

Intersection: 9: Mace Blvd & 2nd St/CR 32A

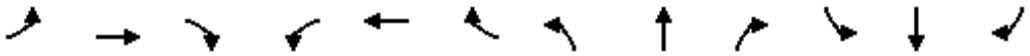
Movement	EB	EB	EB	WB	WB	NB	NB	NB	B22	B22	B22	SB
Directions Served	L	T	R	L	TR	L	T	TR	T	T		L
Maximum Queue (ft)	275	791	668	93	136	285	843	793	289	316	324	215
Average Queue (ft)	258	440	271	30	60	279	586	482	76	81	62	177
95th Queue (ft)	313	869	660	70	111	308	988	895	278	293	282	278
Link Distance (ft)		1251	1251		2733		814	814	311	311	311	
Upstream Blk Time (%)							16	2	2	3	6	
Queuing Penalty (veh)							124	13	11	14	31	
Storage Bay Dist (ft)	250			70		260						190
Storage Blk Time (%)	37	0		2	12	38	9					4
Queuing Penalty (veh)	79	2		2	4	184	49					14

Intersection: 9: Mace Blvd & 2nd St/CR 32A

Movement	SB	SB	SB
Directions Served	T	T	R
Maximum Queue (ft)	633	652	582
Average Queue (ft)	469	492	272
95th Queue (ft)	654	664	655
Link Distance (ft)	808	808	808
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)			
Storage Blk Time (%)	65		
Queuing Penalty (veh)	92		

Zone Summary

Zone wide Queuing Penalty: 853



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	402	250	152	272	43	293	163	185	87	109	152
v/c Ratio	0.76	0.73	0.16	0.62	0.27	0.03	0.79	0.46	0.12	0.38	0.52	0.10
Control Delay	52.1	30.1	0.2	42.6	18.9	0.0	46.1	31.5	0.2	36.4	41.5	0.1
Queue 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
Total Delay	52.1	30.1	0.2	42.6	18.9	0.0	46.1	31.5	0.2	36.4	41.5	0.1
Queue Length 50th (ft)	86	153	0	61	46	0	119	64	0	33	44	0
Queue Length 95th (ft)	#221	242	0	#152	73	0	#280	126	0	#98	#113	0
Internal Link Dist (ft)		3481			2550			1736			3164	
Turn Bay Length (ft)	500		225	145		100	165		85	175		600
Base Capacity (vph)	271	806	1583	268	1526	1583	384	431	1583	234	220	1583
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	0.76	0.50	0.16	0.57	0.18	0.03	0.76	0.38	0.12	0.37	0.50	0.10

Intersection Summary

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

Existing AM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	No / No	??? / ???
# 4 Chiles / Ensenada	No / No	??? / ???

Existing AM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0 0	0	0	0 0 0	1	0	0 1 0	0	0
Initial Vol:	11	0	46	0	0	0	0	181	10	38	170	0
ApproachDel:	9.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=57]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=456]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	11	0	46	0	0	0	0	181	10	38	170	0

Major Street Volume: 399
Minor Approach Volume: 57
Minor Approach Volume Threshold: 464

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing AM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	4	0	70	0	0	0	0	220	5	39	210	0
ApproachDel:	10.0			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=74]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=548]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	4	0	70	0	0	0	0	220	5	39	210	0

Major Street Volume: 474
Minor Approach Volume: 74
Minor Approach Volume Threshold: 419

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing PM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	No / No	??? / ???
# 4 Chiles / Ensenada	No / No	??? / ???

Existing PM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0 0	0	0	0 0 0	1	0	0 1 0	0	0
Initial Vol:	23	0	39	0	0	0	0 307		78	84	172	0
ApproachDel:	12.5			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=62]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=703]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	23	0	39	0	0	0	0	307	78	84	172	0

Major Street Volume: 641
Minor Approach Volume: 62
Minor Approach Volume Threshold: 338

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing PM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	26	0	67	0	0	0	0	296	52	84	236	0
ApproachDel:	12.5			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=93]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=761]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	26	0	67	0	0	0	0	296	52	84	236	0

Major Street Volume: 668
Minor Approach Volume: 93
Minor Approach Volume Threshold: 327

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project AM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	??? / ???	No / No
# 4 Chiles / Ensenada	??? / ???	No / No
# 10 Chiles / Project Access	??? / ???	No / No

Existing plus Project AM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	11	0	47	0	0	0	0	188	10	41	210	0
ApproachDel:	10.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=58]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=507]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	11	0	47	0	0	0	0	188	10	41	210	0

Major Street Volume: 449
Minor Approach Volume: 58
Minor Approach Volume Threshold: 433

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project AM

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Chiles / Ensenada

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1! 0 0			0 0 0 0 0			0 0 0 1 0			0 1 0 0 0		
Initial Vol:	7	0	70	0	0	0	0	252	20	39	222	0
ApproachDel:	10.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=77]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=610]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	7	0	70	0	0	0	0	252	20	39	222	0

Major Street Volume: 533
Minor Approach Volume: 77
Minor Approach Volume Threshold: 387

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project AM

Peak Hour Delay Signal Warrant Report

****

Intersection #10 Chiles / Project Access

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	43	0	47	0	0	0	0 227		8	15 214		0
ApproachDel:	11.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=90]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=554]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Chiles / Project Access

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	43	0	47	0	0	0	0	227	8	15	214	0

Major Street Volume: 464
Minor Approach Volume: 90
Minor Approach Volume Threshold: 424

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project PM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	??? / ???	No / No
# 4 Chiles / Ensenada	??? / ???	No / No
# 10 Chiles / Project Access	??? / ???	No / No

Existing plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	23	0	41	0	0	0	0	330	78	86	191	0
ApproachDel:	12.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=749]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0	0	0	0 0	0	1	0 0	0	0
Initial Vol:	23	0	41	0	0	0	0	330	78	86	191	0

Major Street Volume: 685
Minor Approach Volume: 64
Minor Approach Volume Threshold: 320

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	40	0	67	0	0	0	0	314	62	84	287	0
ApproachDel:	14.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=107]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=854]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	40	0	67	0	0	0	0	314	62	84	287	0

Major Street Volume: 747
Minor Approach Volume: 107
Minor Approach Volume Threshold: 297

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #10 Chiles / Project Access

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	21	0	28	0	0	0	0	346	25	66	262	0
ApproachDel:	13.0			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=49]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=748]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Existing plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Chiles / Project Access

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	21	0	28	0	0	0	0	346	25	66	262	0

Major Street Volume: 699
Minor Approach Volume: 49
Minor Approach Volume Threshold: 315

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP AM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	No / No	??? / ???
# 4 Chiles / Ensenada	No / No	??? / ???

EPAP AM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0 0	0	0	0 0 0	1	0	0 1 0	0	0
Initial Vol:	11	0	46	0	0	0	0	212	10	38	191	0
ApproachDel:	10.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=57]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=508]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	11	0	46	0	0	0	0	212	10	38	191	0

Major Street Volume: 451
Minor Approach Volume: 57
Minor Approach Volume Threshold: 432

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP AM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	1	0	0 1	0	0 0
Initial Vol:	4	0	70	0	0	0	0	251	5	39	231	0
ApproachDel:	10.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=74]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=600]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	4	0	70	0	0	0	0	251	5	39	231	0

Major Street Volume: 526
Minor Approach Volume: 74
Minor Approach Volume Threshold: 391

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP PM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	No / No	??? / ???
# 4 Chiles / Ensenada	No / No	??? / ???

EPAP PM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	23	0	39	0	0	0	0	323	78	84	210	0
ApproachDel:	12.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=62]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=757]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	23	0	39	0	0	0	0	323	78	84	210	0

Major Street Volume: 695
Minor Approach Volume: 62
Minor Approach Volume Threshold: 316

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP PM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	26	0	67	0	0	0	0	312	52	84	274	0
ApproachDel:	12.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=93]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=815]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	26	0	67	0	0	0	0	312	52	84	274	0

Major Street Volume: 722
Minor Approach Volume: 93
Minor Approach Volume Threshold: 306

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project AM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	??? / ???	No / No
# 4 Chiles / Ensenada	??? / ???	No / No
# 10 Chiles / Project Access	??? / ???	No / No

EPAP plus Project AM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1 0	0 1	0	0 0
Initial Vol:	11	0	47	0	0	0	0	219	10	41	231	0
ApproachDel:	10.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=58]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=559]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	11	0	47	0	0	0	0	219	10	41	231	0

Major Street Volume: 501
Minor Approach Volume: 58
Minor Approach Volume Threshold: 404

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project AM

Peak Hour Delay Signal Warrant Report

****

Intersection #4 Chiles / Ensenada

****

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	7	0	70	0	0	0	0	283	20	39	243	0
ApproachDel:	10.7			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=77]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=662]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	7	0	70	0	0	0	0	283	20	39	243	0

Major Street Volume: 585
Minor Approach Volume: 77
Minor Approach Volume Threshold: 362

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project AM

Peak Hour Delay Signal Warrant Report

Intersection #10 Chiles / Project Access

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	43	0	47	0	0	0	0 258		8	15 235		0
ApproachDel:	11.7			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=90]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=606]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Chiles / Project Access

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	43	0	47	0	0	0	0	258	8	15	235	0

Major Street Volume: 516
Minor Approach Volume: 90
Minor Approach Volume Threshold: 396

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project PM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	??? / ???	No / No
# 4 Chiles / Ensenada	??? / ???	No / No
# 10 Chiles / Project Access	??? / ???	No / No

EPAP plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	23	0	41	0	0	0	0	346	78	86	229	0
ApproachDel:	13.3			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=64]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=803]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	23	0	41	0	0	0	0	346	78	86	229	0

Major Street Volume: 739
Minor Approach Volume: 64
Minor Approach Volume Threshold: 300

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	40	0	67	0	0	0	0	330	62	84	325	0
ApproachDel:	14.8			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=107]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=908]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	40	0	67	0	0	0	0	330	62	84	325	0

Major Street Volume: 801
Minor Approach Volume: 107
Minor Approach Volume Threshold: 279

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #10 Chiles / Project Access

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	21	0	28	0	0	0	0	362	25	66	300	0
ApproachDel:	13.5			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=49]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=802]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

EPAP plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Chiles / Project Access

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	21	0	28	0	0	0	0	362	25	66	300	0

Major Street Volume: 753
Minor Approach Volume: 49
Minor Approach Volume Threshold: 295

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative AM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	??? / ???	No / No
# 4 Chiles / Ensenada	??? / ???	No / No

Cumulative AM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	20	0	49	0	0	0	0	194	20	47	227	0
ApproachDel:	10.7			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=69]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=557]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	20	0	49	0	0	0	0	194	20	47	227	0

Major Street Volume: 488
Minor Approach Volume: 69
Minor Approach Volume Threshold: 411

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative AM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound				West Bound			
Movement:	L	T	R	L	T	R	L	T	R		L	T	R	
Control:	Stop Sign			Stop Sign			Uncontrolled				Uncontrolled			
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0		0 1	0 0	0	
Initial Vol:	7	0	80	0	0	0	0	261	10		60	269	0	
ApproachDel:	10.6			xxxxxx			xxxxxx				xxxxxx			

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=87]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=687]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	7	0	80	0	0	0	0 261		10	60 269		0

Major Street Volume: 600
Minor Approach Volume: 87
Minor Approach Volume Threshold: 356

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative PM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	??? / ???	No / No
# 4 Chiles / Ensenada	??? / ???	No / No

Cumulative PM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	30	0	48	0	0	0	0	406	80	89	187	0
ApproachDel:	14.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=78]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=840]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	30	0	48	0	0	0	0	406	80	89	187	0

Major Street Volume: 762
Minor Approach Volume: 78
Minor Approach Volume Threshold: 292

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative PM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	15	0	70	0	0	0	0	392	60	120	272	0
ApproachDel:	13.4			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=85]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=929]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Future Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	15	0	70	0	0	0	0	392	60	120	272	0

Major Street Volume: 844
Minor Approach Volume: 85
Minor Approach Volume Threshold: 265

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project AM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	No / No	??? / ???
# 4 Chiles / Ensenada	No / No	??? / ???
# 10 Chiles / Project Access	No / No	??? / ???

Cumulative plus Project AM

Peak Hour Delay Signal Warrant Report

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	20	0	50	0	0	0	0	200	20	50	260	0
ApproachDel:	10.9			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=70]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=600]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	20	0	50	0	0	0	0	200	20	50	260	0

Major Street Volume: 530
Minor Approach Volume: 70
Minor Approach Volume Threshold: 389

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project AM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	10	0	80	0	0	0	0	290	26	60	280	0
ApproachDel:	11.2			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=90]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=746]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	10	0	80	0	0	0	0 290		26	60 280		0

Major Street Volume: 656
Minor Approach Volume: 90
Minor Approach Volume Threshold: 332

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project AM

Peak Hour Delay Signal Warrant Report

Intersection #10 Chiles / Project Access

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1 0	0 1	0	0 0
Initial Vol:	36	0	45	0	0	0	0	250	6	14	290	0
ApproachDel:	11.7			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=81]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=641]
FAIL - Total volume less than 650 for intersection
with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project AM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Chiles / Project Access

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 0	1	0
Initial Vol:	36	0	45	0	0	0	0	250	6	14	290	0

Major Street Volume: 560
Minor Approach Volume: 81
Minor Approach Volume Threshold: 374

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project PM

Signal Warrant Summary Report

Intersection	Base Met [Del / Vol]	Future Met [Del / Vol]
# 3 Chiles / La Vida	No / No	??? / ???
# 4 Chiles / Ensenada	No / No	??? / ???
# 10 Chiles / Project Access	No / No	??? / ???

Cumulative plus Project PM

Peak Hour Delay Signal Warrant Report

****

Intersection #3 Chiles / La Vida

****

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	30	0	50	0	0	0	0	420	80	90	200	0
ApproachDel:	14.7			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.3]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=80]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=870]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #3 Chiles / La Vida

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	30	0	50	0	0	0	0	420	80	90	200	0

Major Street Volume: 790
Minor Approach Volume: 80
Minor Approach Volume Threshold: 282

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0	0	0 0	0	0	0 0	0	1	0 1	0	0
Initial Vol:	30	0	70	0	0	0	0	410	70	120	320	0
ApproachDel:	16.1			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.4]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=100]
SUCCEED - Approach volume greater than or equal to 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=1020]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #4 Chiles / Ensenada

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	30	0	70	0	0	0	0	410	70	120	320	0

Major Street Volume: 920
Minor Approach Volume: 100
Minor Approach Volume Threshold: 242

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project PM

Peak Hour Delay Signal Warrant Report

Intersection #10 Chiles / Project Access

Base Volume Alternative: Peak Hour Warrant NOT Met

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0 1!	0		0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	15	0	28	0	0	0	0	470	16	63	350	0
ApproachDel:	14.5			xxxxxx			xxxxxx			xxxxxx		

Approach[northbound][lanes=1][control=Stop Sign]
Signal Warrant Rule #1: [vehicle-hours=0.2]
FAIL - Vehicle-hours less than 4 for one lane approach.
Signal Warrant Rule #2: [approach volume=43]
FAIL - Approach volume less than 100 for one lane approach.
Signal Warrant Rule #3: [approach count=3][total volume=942]
SUCCEED - Total volume greater than or equal to 650 for intersection with less than four approaches.

SIGNAL WARRANT DISCLAIMER

This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.

Cumulative plus Project PM

Peak Hour Volume Signal Warrant Report [Urban]

Intersection #10 Chiles / Project Access

Base Volume Alternative: Peak Hour Warrant NOT Met

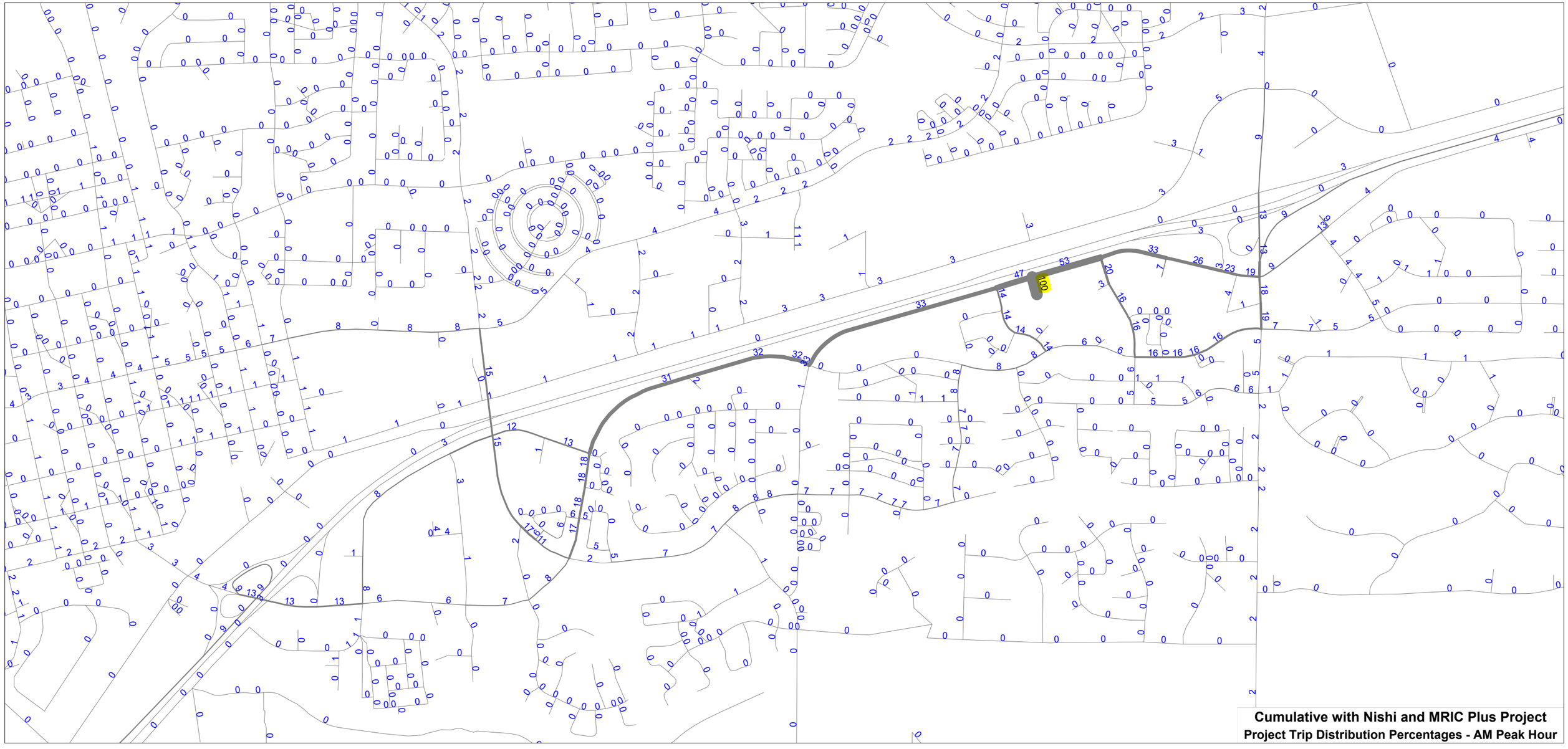
Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Stop Sign			Stop Sign			Uncontrolled			Uncontrolled		
Lanes:	0 0	1! 0	0	0 0	0 0	0	0 0	0 1	0	0 1	0 0	0
Initial Vol:	15	0	28	0	0	0	0	470	16	63	350	0

Major Street Volume: 899
Minor Approach Volume: 43
Minor Approach Volume Threshold: 248

SIGNAL WARRANT DISCLAIMER

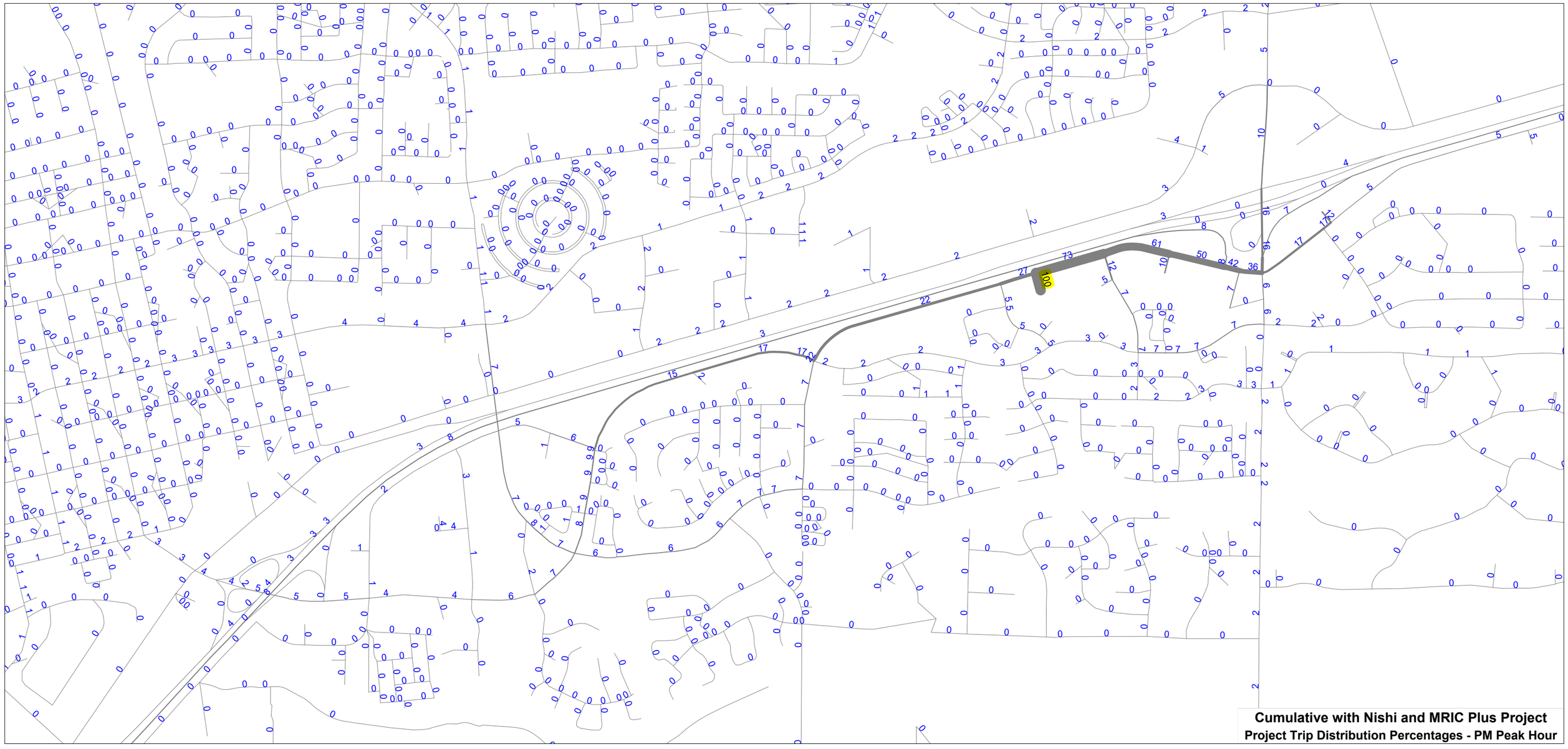
This peak hour signal warrant analysis should be considered solely as an "indicator" of the likelihood of an unsignalized intersection warranting a traffic signal in the future. Intersections that exceed this warrant are probably more likely to meet one or more of the other volume based signal warrant (such as the 4-hour or 8-hour warrants).

The peak hour warrant analysis in this report is not intended to replace a rigorous and complete traffic signal warrant analysis by the responsible jurisdiction. Consideration of the other signal warrants, which is beyond the scope of this software, may yield different results.



Cumulative with Nishi and MRIC Plus Project

Project Trip Distribution Percentages - AM Peak Hour



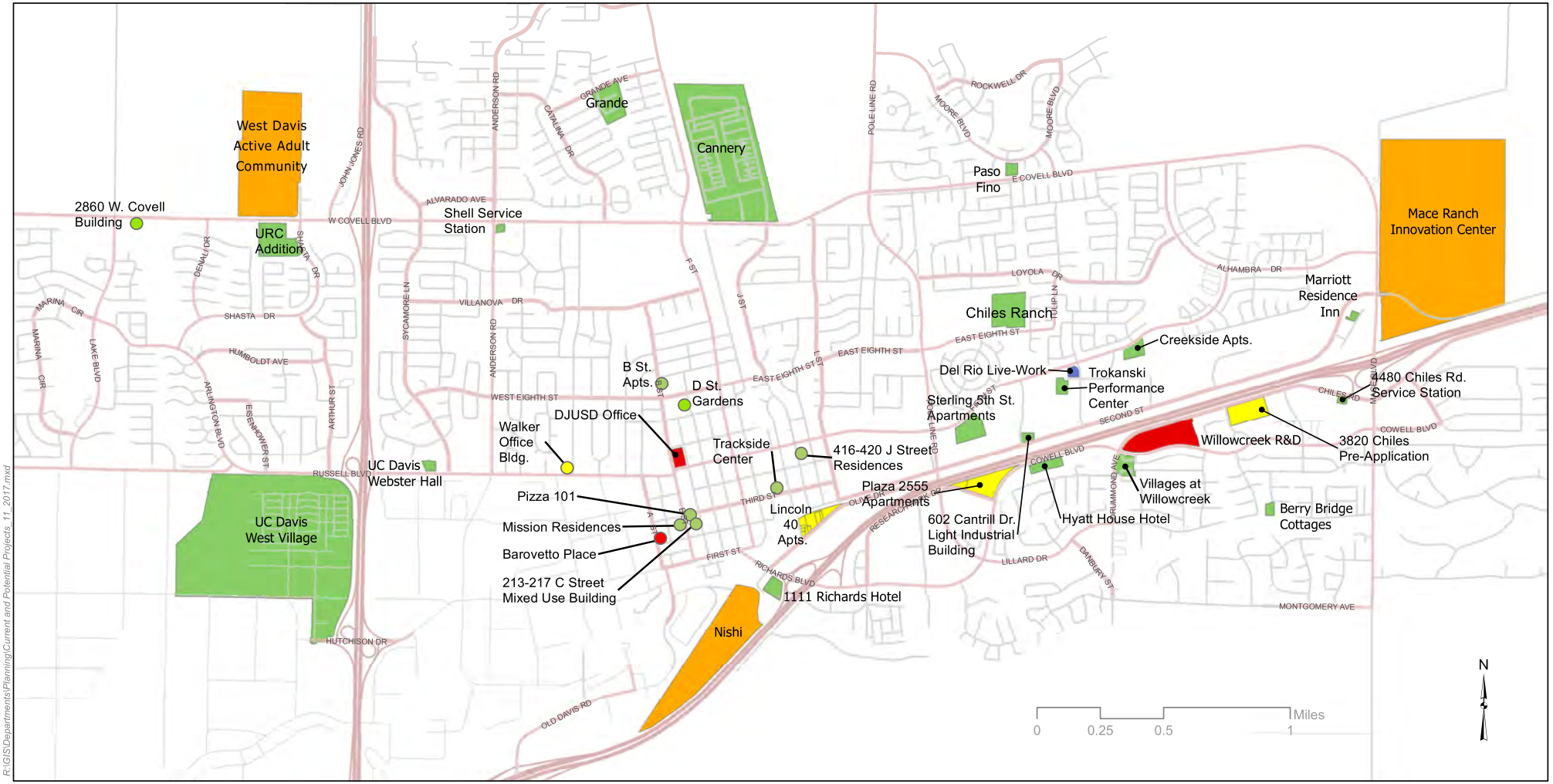
Cumulative with Nishi and MRIC Plus Project
Project Trip Distribution Percentages - PM Peak Hour

ID	Intersection	Turning Movement		INT	MOVEMENT	ID	Existing Balanced Counts AM	Existing Balanced Counts PM	Existing Balanced Counts (by Approach) AM	Existing Balanced Counts (by Approach) PM	Existing	Cumulative GP Plus Project Forecast (Rounded up to nearest 10) AM	Cumulative GP Plus Project Forecast (Rounded up to nearest 10) PM	Cumulative GP Plus Project Comment	Cumulative GP Plus Project	Cumulative Nishi MRIC Plus Project Forecast (Rounded up to nearest 10) AM	Cumulative Nishi MRIC Plus Project Forecast (Rounded up to nearest 10) PM	Cumulative Nishi MRIC Plus Project Comment	Cumulative Nishi MRIC Plus Project
1	1. Pole Line Road / Cowell Blvd / Lillard Drive	NB	LT	1	NBL	1-NBL	126	230				150	270			130	330		
			TH	1	NBT	1-NBT	34	101	296	496		40	150			130	190		
			RT	1	NBR	1-NBR	136	165				190	170			170	190		
		SB	LT	1	SBL	1-SBL	13	79				20	80			20	80		
			TH	1	SBT	1-SBT	54	75	220	292		140	100			110	100		
			RT	1	SBR	1-SBR	153	138				160	140			160	140		
		EB	LT	1	EBL	1-EBL	130	187				170	190			150	190		
			TH	1	EBT	1-EBT	205	285	519	643		240	370			350	420		
			RT	1	EBR	1-EBR	184	171				280	230			300	220		
		WB	LT	1	WBL	1-WBL	208	127				210	140			260	200		
			TH	1	WBT	1-WBT	302	249	544	407		370	250			410	250		
			RT	1	WBR	1-WBR	34	31				80	40			130	40		
2	2. Cowell Blvd / Chiles Road / Drummond Ave	NB	LT	2	NBL	2-NBL	45	24				80	30			120	30		
			TH	2	NBT	2-NBT	102	69	173	114		110	180			140	290		
			RT	2	NBR	2-NBR	26	21				40	30			40	30		
		SB	LT	2	SBL	2-SBL	4	10				10	10			10	10		
			TH	2	SBT	2-SBT	69	102	180	184		70	110			70	120		
			RT	2	SBR	2-SBR	107	72				190	120			210	90		
		EB	LT	2	EBL	2-EBL	72	107				90	110			140	110		
			TH	2	EBT	2-EBT	68	130	164	282		70	190			90	210		
			RT	2	EBR	2-EBR	24	45				30	90			30	120		
		WB	LT	2	WBL	2-WBL	21	26				30	40			40	50		
			TH	2	WBT	2-WBT	130	68	161	98		140	140			150	220		
			RT	2	WBR	2-WBR	10	4				10	10			10	10		
3	3. Chiles Road / La Vida Way	NB	LT	3	NBL	3-NBL	11	23				20	30			20	30		
			TH	3	NBT	3-NBT	0	0	57	62									
			RT	3	NBR	3-NBR	46	39				50	50			60	50		
		SB	LT	3	SBL	3-SBL	0	0											
			TH	3	SBT	3-SBT	0	0	0	0									
			RT	3	SBR	3-SBR	0	0											
		EB	LT	3	EBL	3-EBL	0	0											
			TH	3	EBT	3-EBT	181	307	191	385		200	420			280	510		
			RT	3	EBR	3-EBR	10	78				20	80			20	90		
		WB	LT	3	WBL	3-WBL	38	84				50	90			60	100		
			TH	3	WBT	3-WBT	170	172	208	256		260	200			280	210		
			RT	3	WBR	3-WBR	0	0											
4	4. Chiles Road / Ensanada Drive	NB	LT	4	NBL	4-NBL	4	26				10	30			10	40		
			TH	4	NBT	4-NBT	0	0	74	93									
			RT	4	NBR	4-NBR	70	67				80	70			110	70		
		SB	LT	4	SBL	4-SBL	0	0											
			TH	4	SBT	4-SBT	0	0	0	0									
			RT	4	SBR	4-SBR	0	0											
		EB	LT	4	EBL	4-EBL	0	0											
			TH	4	EBT	4-EBT	220	296	225	348		290	410			350	490		
			RT	4	EBR	4-EBR	5	52				10	70			30	70		
		WB	LT	4	WBL	4-WBL	39	84				60	120			90	200		
			TH	4	WBT	4-WBT	210	236	249	320		280	320			300	320		
			RT	4	WBR	4-WBR	0	0											
5	5. Chiles Road / I-80 EB Ramps	NB	LT	5	NBL	5-NBL	0	0											
			TH	5	NBT	5-NBT	0	0	0	0									
			RT	5	NBR	5-NBR	0	0											
		SB	LT	5	SBL	5-SBL	347	400				550	470			780	490		
			TH	5	SBT	5-SBT	0	0	448	462									
			RT	5	SBR	5-SBR	101	62				140	110			160	160		
		EB	LT	5	EBL	5-EBL	0	0											
			TH	5	EBT	5-EBT	386	557	386	557		450	670			510	720		
			RT	5	EBR	5-EBR	0	0											
		WB	LT	5	WBL	5-WBL	0	0											
			TH	5	WBT	5-WBT	287	316	287	316		340	380			330	370		
			RT	5	WBR	5-WBR	0	0											
6	6. Chiles Road / Mace Blvd	NB	LT	6	NBL	6-NBL	16	28				20	30			20	30		
			TH	6	NBT	6-NBT	661	518	745	683		750	680			680	690		
			RT	6	NBR	6-NBR	68	137				80	150			90	160		
		SB	LT	6	SBL	6-SBL	174	208				210	240			190	220		
			TH	6	SBT	6-SBT	341	476	744	952		400	570			390	550		
			RT	6	SBR	6-SBR	229	268				290	320			280	340		
		EB	LT	6	EBL	6-EBL	467	413				590	530			910	600		
			TH	6	EBT	6-EBT	144	302	741	912		220	370			170	370		
			RT	6	EBR	6-EBR	130	197				190	200			200	200		
		WB	LT	6	WBL	6-WBL	28	30				30	60			30	70		
			TH	6	WBT	6-WBT	51	41	377	282		60	60			60	50		
			RT	6	WBR	6-WBR	298	211				360	340			370	380		
7	7. Mace Blvd / 2nd Street	NB	LT	7	NBL	7-NBL	624	464				760	550			720	590		
			TH	7	NBT	7-NBT	619	816	1,259	1,332		760	950			1,370	1,010		
			RT	7	NBR	7-NBR	16	52				20	60			60	100		
		SB	LT	7	SBL	7-SBL	70	129				80	140			80	140		
			TH	7	SBT	7-SBT	1,009	518	1,162	733		1,110	740			1,100	1,200		
			RT	7	SBR	7-SBR	83	86				340	250			550	210		
		EB	LT	7	EBL	7-EBL	26	155				80	470			80	600		
			TH	7	EBT	7-EBT	20	204	339	1,004		30	210			180	210		
			RT	7	EBR	7-EBR	293	645				350	750			330	790		
		WB	LT	7	WBL	7-WBL	14	26				20	30			50	70		
			TH	7	WBT	7-WBT	40	29	60	87		40	40			40	50		
			RT	7	WBR	7-WBR	6	32				20	40			10	50		
8	8. Mace Blvd / I-80 WB Ramps	NB	LT	8	NBL	8-NBL	419	269				420	430			420	420		
			TH	8	NBT	8-NBT	651	610	1,070	879		850	780			1,130	830		
			RT	8	NBR	8-NBR	0	0											
		SB	LT	8	SBL	8-SBL	0	0											
			TH	8	SBT	8-SBT	1,099	994	1,290	1,201		1,230	1,170			1,230	1,460		
			RT	8	SBR	8-SBR	191	207				210	360			220	610		
		EB	LT	8	EBL	8-EBL	0	0											
			TH	8	EBT	8-EBT	0	0	0	0									
			RT	8	EBR	8-EBR	0	0											
		WB	LT	8	WBL	8-WBL	296	402				340	450			300	440		
			TH	8	WBT	8-WBT	2	1	892	1,121		10	10			10	10		
			RT	8	WBR	8-WBR	594	718				670	770			990	870		
9	9. Mace Blvd / I-80 EB Ramps	NB	LT	9	NBL	9-NBL	0	0											
			TH	9	NBT	9-NBT	1,067	860	1,433	1,159		1,270	1,190			1,510	1,220		
			RT	9	NBR	9-NBR	366	299				430	370			450	470		
		SB	LT	9	SBL	9-SBL	0	0											
			TH	9	SBT	9-SBT	755	975	1,416	1,415		900	1,140			870	1,130		
			RT	9	SBR	9-SBR	661	440				690	500			680	790		
		EB	LT	9	EBL	9-EBL	0	0											
			TH	9	EBT	9-EBT	0	0	0	0									
			RT	9	EBR	9-EBR	0	0											
		WB	LT	9	WBL	9-WBL	0	0											
			TH	9	WBT	9-WBT	0	0	0	0									
			RT	9	WBR	9-WBR	0	0											

Current and Potential Planning Projects (updated 11/15/17)

Project Name	Address/Location	Status	Use	Units	Non-Res Sq. Ft.	Planner
Pre-Applications or Preliminary Discussions						
DJUSD Site (SACOG grant)	Fifth and B Street	Planning Grant	Residential	N/A	N/A	Bob Wolcott
Panattoni (Willowcreek R&D)	Chiles/Cowell Blvd.	To Be Submitted	R&D/Light Industrial	N/A	150-225,000	N/A
Barovetto Place	2nd and A Street	Pre-Application	Extended Stay Hotel	N/A	22 rooms	Ike Njoku
Subject to City Review and Measure R Vote						
Mace Ranch Innovation Center	Mace Blvd.	Planning Review (subject to Measure R)	Innovation Center	N/A	2,650,000	Katherine Hess
Nishi Innovation District	East Olive Drive	Planning Review (subject to Measure R)	Residential/Business Park	650	350,000	Katherine Hess
West Davis Active Adult Community (WDAAC)	39660 W. Covell Blvd	Planning Review (subject to Measure R)	Senior Residential Community	475	TBD	Katherine Hess
Undergoing Plannning Review						
3820 Chiles Road Apartments	3820 Chiles Road	Planning Review	Apartments	200-220	N/A	Katherine Hess
Lincoln 40 Apartments	East Olive Drive	Planning Review	Apartments	130	N/A	Ike Njoku
Plaza 2555 Apartments	2555 Research Park Dr.	Planning Review	Apartments	179	N/A	Ike Njoku
Walker Office Building	501 Oak Avenue	Planning Review	2-story Office Bldg.	N/A	12,000	Eric Lee
Completed Planning Review and Pending Construction						
Storage Warehouse	612 Cantril Drive	Pending Construction	Warehouse/Storage Building	N/A	9,680	Tom Callinan
4480 Chiles Service Station	4480 Chiles Road	Pending Construction	Station/Store/Carwash/Fastfood	N/A	2,800	Cathy Camacho
Cannery Market Place	Cannery M-U District	Pending Construction	Mixed-Use Office/Commercial	36	171,000	Eric Lee
Chiles Ranch Subd. Revisions	2411 E. 8th St.	Pending Construction	Single-Family Dwellings	96 plus ADUs	N/A	Cathy Camacho
Creekside Apts.	2990 5th Street	Pending Construction	Affordable Apartments	72	N/A	Cathy Camacho
D Street Gardens	717 D Street	Pending Construction	9-Lot Subdivision	7 net new	N/A	Ike Njoku
Marriott Residence Inn	4647 Fermi	Pending Construction	Extended Stay Hotel	N/A	120 rooms plus 78,000 sq. ft.	Katherine Hess
1111 Richards Hotel	1111 Richards Blvd.	Pending Construction	Hotel Conference	N/A	132 rooms	Katherine Hess
Hyatt House Hotel	2750 Cowell Blvd.	Pending Construction	Hotel	N/A	118 rooms plus 76,000 sq. ft.	Katherine Hess
Pizza 101	236 B Street	Pending Construction	Addition/Conversion for Restaurant	N/A	2,500	Ike Njoku
Trackside Center	901-919 3rd Street	Pending Construction	4-story Mixed-Use Bldg.	27	8,950	Eric Lee
Trokanski Performance Center	2720 Del Rio Place	Pending Construction	Performance Center	N/A	22,000	Cathy Camacho

Project Name	Address/Location	Status	Use	Units	Non-Res Sq. Ft.	Planner
UCD Webster Hall Replacement	541 Oxford Circle	Pending Construction	Replace	370 beds (104 net new)	N/A	UCD Project
Under Construction						
213-217 C St Mixed Use Bldg	213-217 C Street	Under Construction	Office/Apts	2	14,064	Bob Wolcott
416-420 J St Residences	416-420 J Street	Under Construction	SFD/ADU and Duplex	4	N/A	Eric Lee
602 Cantrill Dr. Building	602 Cantrill Dr.	Under Construction	Office/Light Industrial	N/A	11,600	Cathy Camacho
2860 W. Covell Building	2860 W. Covell Blvd.	Under Construction	New Commercial Bldg.	N/A	8,657	Tom Callinan
B Street Apartments	820/822 B Street	Under Construction	12-unit apt. building	10 net new	N/A	Cathy Camacho
Berry Bridge Cottages	4100 Hackberry Pl.	Under Construction	Affordable SFDs	8	N/A	Cathy Camacho
Cannery Subdivision	1111 E. Covell	Under Construction	Residential & Commercial	585	170,000	Eric Lee
Grande Subdivision	Grande Avenue	Under Construction	Single-Family Dwellings	41	N/A	Ike Njoku
Mission Residences	225-229 B Street	Under Construction	Condominiums	14	N/A	Eric Lee
Paso Fino Subdivision	2627 E. Covell Blvd.	Under Construction	Single-Family Dwellings	6	N/A	Ike Njoku
Shell Service Station	1944 Anderson Rd.	Under Construction	Service Station/Carwash/Store	N/A	3,132	Tom Callinan
Sterling 5th St. Apartments	2100 5th Street	Under Construction	Apartments	198	N/A	Eric Lee
URC expansion	1515 Shasta Drive	Under Construction	Skilled nursing expansion	17 beds	7,413	Cathy Camacho
Villages at Willowcreek	Drummond & Cowell	Under Construction	Single-family dwellings	35	N/A	Ike Njoku
Recently Completed						
Del Rio Live Work	2751 Del Rio Place	Completed	Live Work Units	16	N/A	Cathy Camacho



R:\GIS\Departments\Planning\Current and Potential Projects_11_2017.mxd

Major Current and Potential Projects

For General Information Only

November 2017

- Potential, Land Entitlements Needed
- Subject to City Review and Measure R Vote
- Land Use Entitlements in Review
- Under Construction or Pending Construction
- Recently Completed

M E M O

To: Chuck Cunningham, Cunningham Engineering

From: Jonathan Flecker, KD Anderson & Associates, Inc.

Date: May 30, 2018

Re: **Unit Increase – 3820 Chiles Road**

Chuck

We understand the 3820 Chiles Road project will now contain 225 units instead of the 222 units originally laid out. A question has arisen as to whether there would be a material change in the results of the study. The addition of 3 multi-family units will result in the site generating 2 additional p.m. peak hour trips, one inbound and one outbound. I reviewed the level of service results for each intersection as well as the study roadway segments under the Existing plus Project, EPAP and Cumulative plus Project conditions.

Under the Existing plus Project all intersections operate at LOS D or better, with all roadway segments operating at LOS C or better. There is adequate capacity for these additional trips. Under EPAP plus Project conditions, all intersections operate at LOS E or better, with the roadway segments operating at LOS D or better. The Mace Blvd / 2nd Street intersection is the only intersection operating at LOS E, with an overall delay of 57 seconds. When considering the trip distribution of the project, adding three more units could result in a single vehicle being expected to pass through this intersection with the remaining trip staying in South Davis or heading west towards Pole Line Road. There is adequate capacity before approaching an LOS F condition at 80 seconds of delay at this intersection. Similarly, the addition of two trips to any of the study roadway segments will not create an impact as adequate capacity exists along the segments as well.

I also reviewed the Cumulative plus Project scenarios. Under Scenario #1, all intersections will continue to operate at LOS E or better. Again, the Mace Blvd / 2nd Street intersection is the only intersection that will operate at LOS E, with a delay of 68 seconds. All other intersections will operate at LOS D or better. Similar to the EPAP plus Project scenario there is adequate capacity at the intersection to accommodate the additional trip at this intersection. All roadway segments can accommodate the additional two trips.

Under Scenario 2, the "Super Cumulative" scenario, there is adequate capacity along the roadways to accommodate the additional trips.

Finally, I reviewed the VMT results. Qualitatively, the addition of two trips should have minimal effect in the overall vehicles miles travelled, with the VMT per capita still below the City of Davis / UC Davis Area generated 18.0 VMT per capita per day.

Let me know if you have any questions.

KDA

M E M O

To: Chuck Cunningham, Cunningham Engineering

From: Jonathan Flecker, KD Anderson & Associates, Inc.

Date: May 31, 2018

Re: **Trip Generation for Alternative Land Uses –3820 Chiles Road**

Trip generation estimates for two alternative uses on the 3820 Chiles Road site were prepared based on a request from the City. The two alternatives include a commercial mixed-use (CMU) alternative totaling 78,299 square feet and a light industrial / business park alternative of about 110,000 square feet.[1] The potential uses for the CMU alternative could include uses such as: automobile sales, offices, auto supplies, and service establishments. The light industrial / business park (LI/BP) alternative could include laboratories, research and development, light manufacturing, administrative/office uses.

I talked with Eric Lee at the City to define the specific uses for the CMU alternative as there is no "one-size-fits-all" retail/commercial land use. The city requested a qualitative assessment, therefore, there is no specific set of retail/commercial uses nor square footages of the potential various uses. Without any identified land uses the shopping center land use is the best "average" retail/commercial site available. ITE defines shopping centers to include: non-merchandising facilities, such as office buildings, movie theaters, restaurants, post offices, banks, health clubs, and recreational facilities with perimeter pads including drive-in banks, retail stores, restaurants, or small offices. There is some overlap between the CMU zoning and the shopping center land use.

A comparison was also made between shopping center and auto sales daily trip generation rates. The auto sales land use daily trip rate is about 73% of a shopping center. As indicated in the CMU zoning, there are other uses that could be expected including offices and service establishments such as restaurants. The shopping center land use, therefore, may provide a representative trip rate, considering the additional uses expected on a CMU site. The business park land use was used for the other alternative rather than light industrial as it more closely represents the expected uses.

Table 1 presents the trips generation for the site under both alternatives. The business park alternative would be expected to generate about 1,884 daily trips, 44 a.m. peak hour trips and 46 p.m. peak hour trips while the CMU alternative could generate about 2,956 daily trips, 74 a.m. peak hour trips and 298 p.m. peak hour trips.

[1] Square footages provided by Raney Planning and Management, May 24, 2018 e-mail

TABLE 1
TRIP GENERATION – ALTERNATIVE LAND USES

Land Use	Amount	Trip Generation Rate			Trips		
		Daily	AM Peak Hour	PM Peak Hour	Daily	AM Peak Hour	PM Peak Hour
Business Park							
Business Park (LU 770)	110 ksf	17.13*	0.40†	0.42†	**1,884**	**44**	**46**
Commercial Mixed Use							
General Retail (LU 820)	78.30 ksf	37.75‡	0.94†	3.81†	**2,956**	**74**	**298**

Ksf – thousand square feet

* ITE rate used; City traffic model traffic daily trip generation rate based on acreage

† Rates from ITE *Trip Generation*

‡ ITE rate used; lowest city rate for commercial higher than ITE

KDA