APPENDIX I1
TRAFFIC IMPACT ANALYSIS

Michael Baker INTERNATIONAL

We Make a Difference

TRAFFIC STUDY
Tract 38128 at Byers Road
City of Menifee, CA

Prepared for:
City of Menifee
29844 Haun Road
Menifee, CA 92586

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1 EXECUTIVE SUMMARY

1.1 INTRODUCTION

The purpose of the Traffic Study is to document the traffic operational analysis findings of the proposed residential development of Tract 38128 (Project) in the City of Menifee. The Study evaluation included analysis of level of service (LOS), delay, and sight distance. A separate vehicle miles traveled (VMT) assessment memorandum was prepared to evaluate the California Environmental Quality Act (CEQA) transportation metric. Regionally, the Project site is located within the City of Menifee, within the County of Riverside.

The Project proposes the construction of 96 single-family dwelling units on approximately 23.38 acres, constructed in a single phase. The Project proposes two (2) access points along Byers Road just south of Troy Lane. The Project is anticipated to generate approximately 972 daily trips with 72 AM Peak Hour trips and 96 PM Peak Hour trips.

1.2 ANALYSIS SCENARIOS

The study scenarios are listed below.

1. Existing Year 2022 Condition
2. Existing Year 2022 With Project Condition
3. Opening Year 2026 Cumulative Without Project Condition
4. Opening Year 2026 Cumulative With Project Condition

1.3 ANALYSIS FINDINGS

According to the *City of Menifee LOS Traffic Study Guidelines* (October 2020), LOS D will be the minimum acceptable condition given the Project location. The operational analysis findings are as follows:

Existing Year 2022

In the Existing Year 2022 condition, all intersections operate at acceptable LOS D or better during the AM and PM Peak Hours. Additionally, all study segments operate under at LOS D or better.

Existing Year 2022 With Project

In the Existing Year 2022 With Project condition, all study intersections operate at acceptable LOS D or better. Additionally, all study segments are projected to operate at LOS D or better. There are no adverse effects at the study intersections or segments due to the Project.

Opening Year 2026

In the Opening Year 2026 condition, the intersections of Ethanac Road and Byers Road (#1) and Chambers Avenue and Murrieta Road (#6) are projected to operate at unacceptable LOS F during the AM Peak Hour and LOS E during the PM Peak Hour. All other intersections operate at LOS D or better for both the AM and PM peak hours. Additionally, all study segments operate at LOS D or better.

Opening Year 2026 With Project

In the Opening Year 2026 With Project condition, the intersections of Ethanac Road and Byers Road (#1) and Chambers Avenue and Murrieta Road (#6) are projected to continue to operate at unacceptable LOS F during the AM Peak Hour and LOS E during the PM Peak Hour. All other study intersections operate at acceptable LOS D or better. Additionally, all study segments are projected to operate at LOS D or better. A cumulative adverse project effect has been identified at the intersection of Chambers Avenue and Murrieta Road (#6).

Transportation Improvement Needs

Transportation network improvements have been identified in the area given the existing presence of dirt roadways rather than the planned roadway types identified in the City's General Plan Roadway Network. These improvements include construction of Byers Road along the site frontage, the extension of the construction of Byers Road to the south of the project site, and the construction of the Byers Road and Rouse Road Intersection.

1.4 TRAFFIC SIGNAL WARRANTS

The California Manual on Uniform Traffic Control Devices (CA MUTCD), 2014 Edition Revision 6 (Effective 3/30/2021) was used to conduct traffic signal warrants at intersections where the City's LOS standard was not met. Satisfying a warrant itself does not require the installation of a traffic signal. A traffic signal should only be installed if an engineering study, reviewing all appropriate criteria, recommends it. Traffic signal warrant analysis was conducted at Chambers Avenue and Murrieta Road (#6) since a cumulative adverse project effect was identified at that location. Warrant analysis was not conducted for Ethanac Road and Byers Road (#1) since a cumulative adverse project effect was not identified at that location. Warrant 3 (Peak Hour) signal warrants were met as follows:

Opening Year 2026

- Chambers Avenue and Murrieta Road (#6)

Opening Year 2026 With Project

- Chambers Avenue and Murrieta Road (#6)

1.5 ON-SITE CIRCULATION

Intersection sight distance requirements at each of the Project access intersections were evaluated using the *City of Menifee Std. Plan 81- Intersection Sight Distance.* Each of the two (2) proposed site driveways along Byers Road are anticipated to have adequate sight distance. All other internal site intersections provide adequate sight distance with relatively unobstructed views, except the following intersection:

1. Street "C" and Street "F"

The intersection of Street "C" and Street "F" only provides the restrictive condition minimum stopping sight distance of 200 feet rather than the 330-foot corner sight distance requirement. Modifications have been made to the site plan by the applicant (cul-de-sac Street "F") to facilitate approval of the restrictive sight distance. Initial City approval has already been obtained.

Additionally, the Emergency Vehicle Access (EVA) driveways between the Project site and the future Valley Boulevard were evaluated to determine the need for parking restrictions.

1.6 VEHICLE MILES TRAVELED

To satisfy CEQA, a VMT screening assessment was prepared for Tract 38128 At Byers Road Project under a separate memorandum.

1.7 RECOMMENDATIONS

The following recommendations are proposed to address project effects:

Recommendation #1

Install traffic signal at Chambers Avenue and Murrieta Road (#6). Project responsibility would be a fair-share cost of $21,210, or 7.07% of the estimated cost of the traffic signal.

Recommendation #2

Construct Byers Road as a two-lane Collector along site frontage.

Recommendation #3A

Construct Byers Road as a two-lane Collector from the southern Project boundary to Rouse Road.

Recommendation #3B

Construct the intersection of Byers Road and Rouse Road to connect the north leg and the east leg. Implementation should consider future connection to the west by others.

Recommendation #4

Seek City approval of the restrictive condition minimum sight distance of 200 feet at the intersection of Street "C" and Street "F". Initial coordination with the City indicates approval of this condition.

Recommendation #5

Provide 5-foot of red curb on each side of the EVA driveways to discourage individuals from parking too close to the driveway pan. If there is less than 25 feet between the EVA driveway and a residential driveway for the nearby lots, red curb is recommended all the way to the next driveway.

2 INTRODUCTION

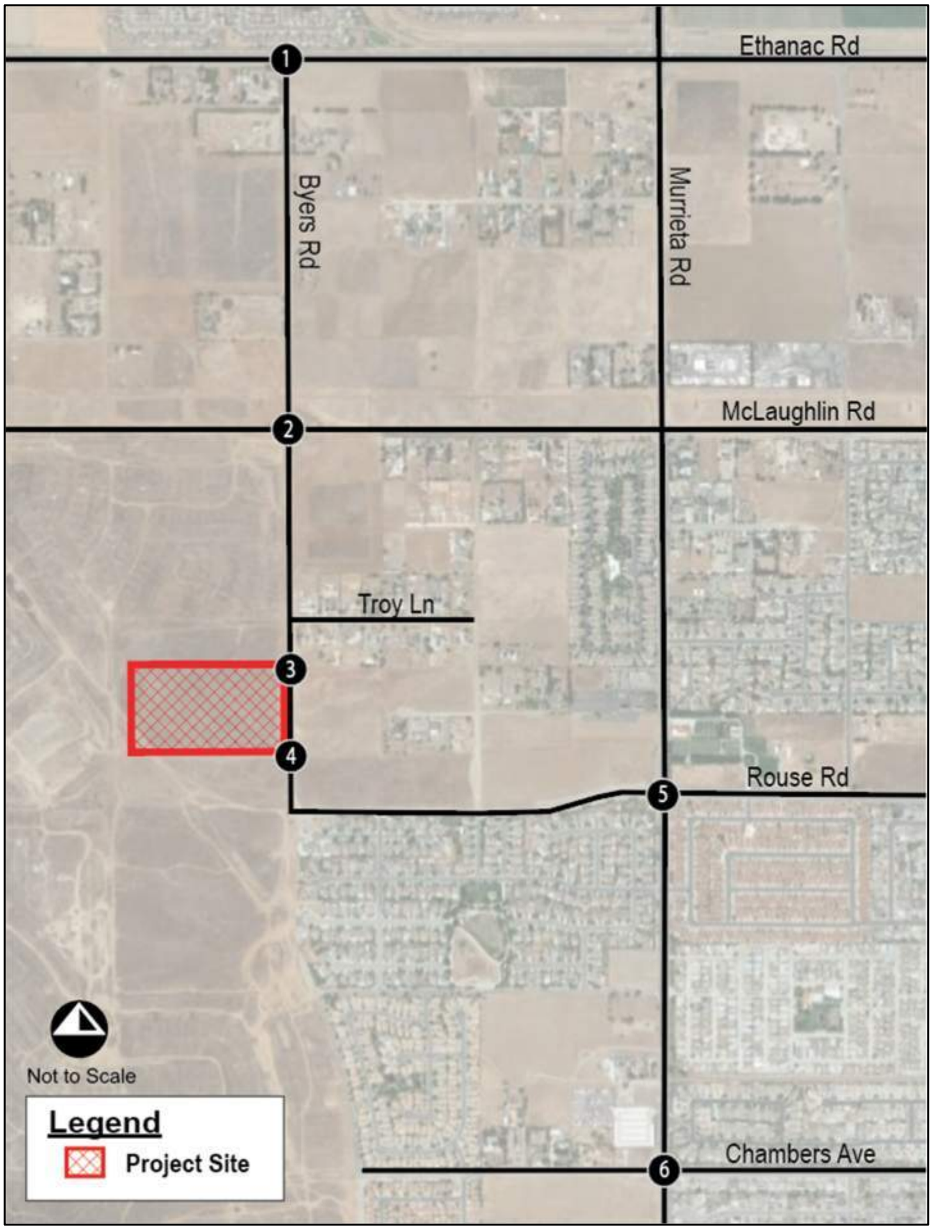
The purpose of the Traffic Study (Study) is to document the traffic analysis findings of the proposed residential development of Tract 38128 (Project) in the City of Menifee. Scenarios examined included Existing, Existing with Project, Opening Year, and Opening Year With Project. Key analysis measures evaluated included level of service (LOS), delay, and sight distance. A separate memorandum documents the VMT screening for this Project.

2.1 PROJECT DESCRIPTION

The Project proposes the construction of 96 single-family dwelling units on approximately 23.38 acres. Regionally, the Project site is located within the City of Menifee (City), within the County of Riverside (County) as shown in **Exhibit 2-1**. Locally, the Project site is located approximately 500 feet north of the Byers Road and Rouse Road Intersection as shown in **Exhibit 2-2**.

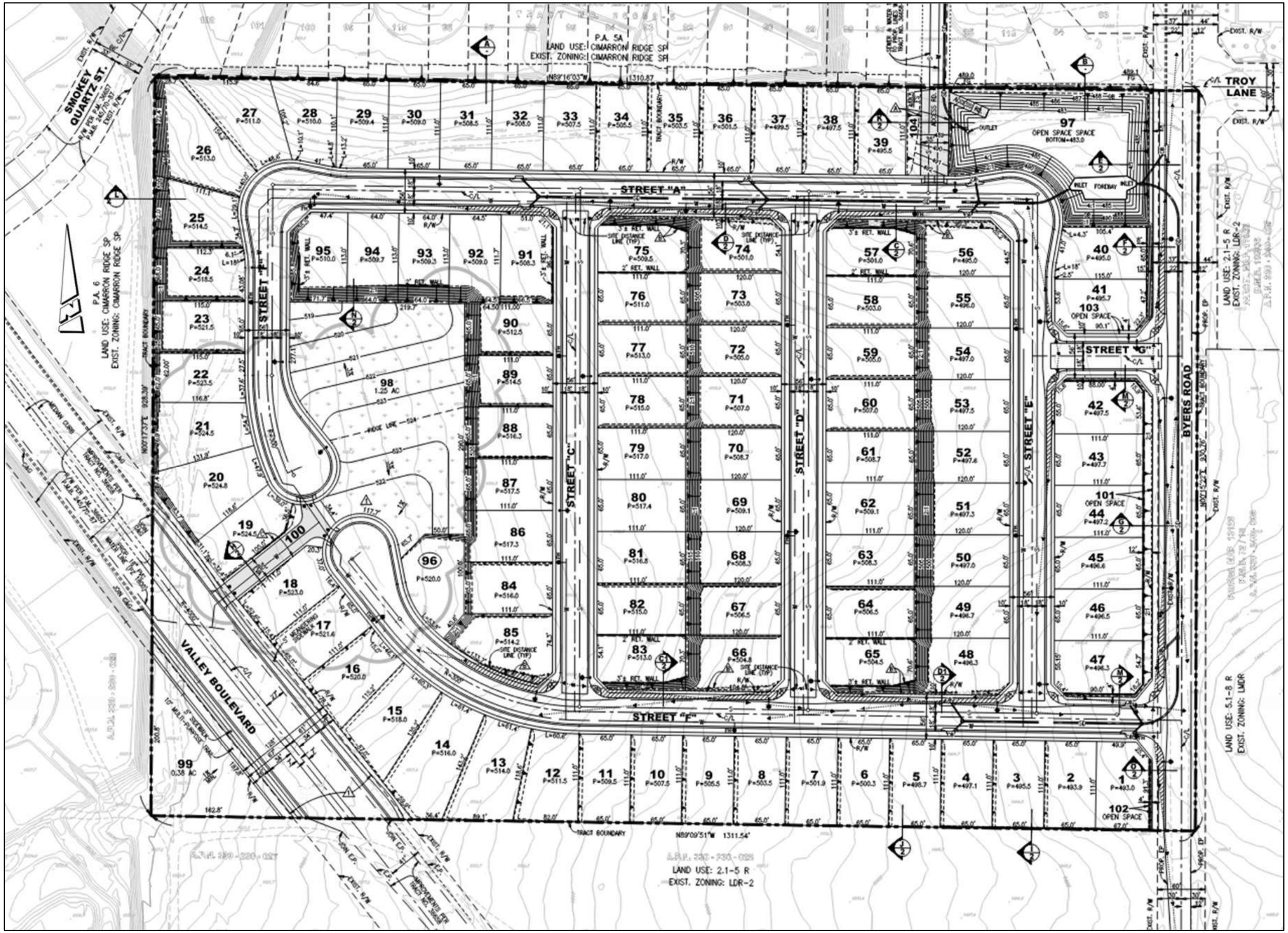
EXHIBIT 2-1: PROJECT LOCATION

EXHIBIT 2-2: PROJECT SITE



The Project proposes two (2) access points along Byers Road. The first proposed project driveway (Street G) is located on the west side of Byers Road, approximately 340 feet south of Troy Lane. The second proposed project driveway (Street F) is also located along the west side of Byers Road, approximately 800 feet south of Troy Lane. **Exhibit 2-3** shows the proposed site plan.

Exhibit 2-3: Project Site Plan



Source: Stevenson, Porto & Pierce, Inc. (dated 10-31-2022)

2.2 STUDY LOCATIONS

The following study intersections and segments were examined as part of this analysis:

Intersections

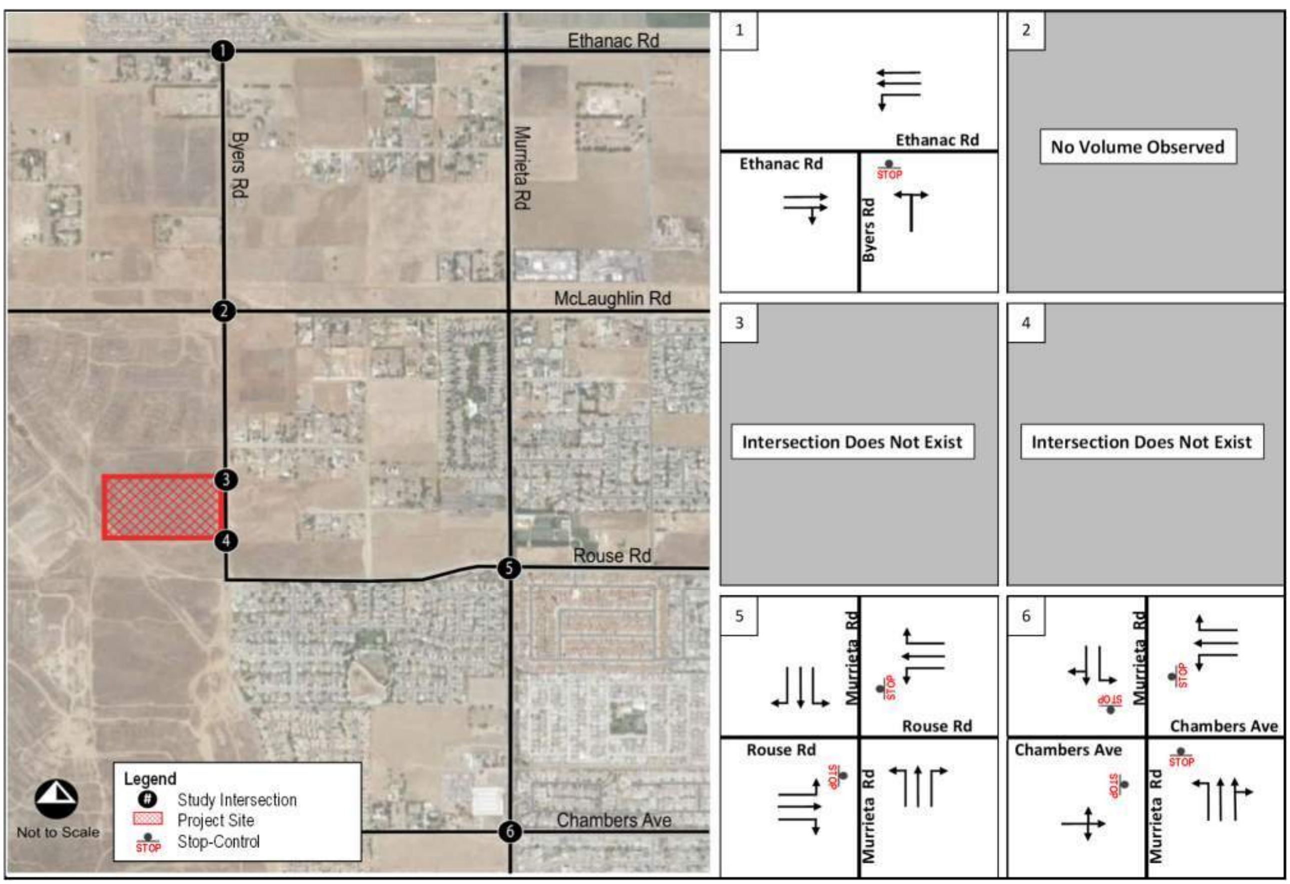
1. Ethanac Road and Byers Road
2. McLaughlin Road and Byers Road
3. Street G (Driveway #1) and Byers Road
4. Street F (Driveway #2) and Byers Road
5. Rouse Road and Murrieta Road
6. Chambers Avenue and Murietta Road

Segments

A. Byers Road North of "Street G"
B. Byers Road South of "Street F"

These six (6) intersections and two (2) segments have been identified in coordination with City staff as locations where traffic operations could potentially be impacted by the proposed Project. It should be noted that Intersections 3 and 4 do not exist without the Project and were not analyzed under the Existing condition. Intersection #2 is the intersection of two dirt roadways where traffic counts showed zero volume during the AM and PM peak periods. **Exhibit 2-4** shows the Existing study intersection lane geometry.

EXHIBIT 2-4: EXISTING LANE GEOMETRY



2.3 ANALYSIS SCENARIOS

In accordance with City guidelines, the analysis scenarios are analyzed are as follows:

1. Existing Year 2022 Condition
2. Existing Year 2022 With Project Condition
3. Opening Year 2026 Cumulative Without Project Condition
4. Opening Year 2026 Cumulative With Project Condition

3 ANALYSIS METHODOLOGY

3.1 LEVEL OF SERVICE ANALYSIS METHODOLOGIES

As required by City of Menifee, this traffic study has been prepared in accordance with the *City of Menifee LOS Traffic Study Guidelines* (October 2020) [City Guidelines]. The scope of this traffic study has been coordinated with the City of Menifee and the approved scoping memo is included as **Appendix A**.

Level of service (LOS) is commonly used as a qualitative description of intersection operation and is based on the type of traffic control and experienced delay at the intersection. The *Highway Capacity Manual* (HCM) 6th Edition published by the Transportation Research Board in 2016 was utilized in this analysis to determine the operating LOS at each of the study intersections. LOS can range from LOS A (free-flow conditions) to LOS F (severely congested conditions). Delay in seconds per vehicle (sec/veh) passing through the intersection, is the primary measure of effectiveness for signalized, stop-controlled, and roundabout intersections. The corresponding average stopped delay range experienced per vehicle per LOS is shown in **Table 3-1**.

TABLE 3-1: HCM INTERSECTION LEVEL OF SERVICE THRESHOLDS

Level of Service	Signalized Intersection Average Delay (seconds/vehicle)	Two-Way Stop-Controlled, All-Way Stop-Controlled, and Roundabout Control Delay (seconds/vehicle)
LOS A	$x \leq 10$	$x \leq 10$
LOS B	$10 < x \leq 20$	$10 < x \leq 15$
LOS C	$20 < x \leq 35$	$15 < x \leq 25$
LOS D	$35 < x \leq 55$	$25 < x \leq 35$
LOS E	$55 < x \leq 80$	$35 < x \leq 50$
LOS F	$80 < x$	$50 < x$

Source: *Highway Capacity Manual*, 6th Edition.
Note: If the volume-to-capacity ratio (v/c) > 1.0, LOS = F.

LOS is reported for the average stopped delay per vehicle for the overall intersection (all movements) for signalized intersections, all-way stop-controlled, and roundabout intersections. For one-way or two-way stop-controlled intersections, LOS is reported for the worst stop-controlled approach. LOS and delay for the intersection analysis was conducted with Synchro/SimTraffic (version 11) software. HCM 6th Edition results were reported.

3.2 PERFORMANCE CRITERIA

The City Guidelines identify two minimum operating conditions. The minimum acceptable condition is LOS D for locations in the City. LOS E is identified as acceptable only in capacity constrained locations near I-215. For the purpose of this evaluation, LOS D will be the minimum acceptable condition given the Project location. Per the City Guidelines, the Project will have adverse effects if:

1. *"If the pre-Project condition at an intersection or roadway segment is at or better than the minimum acceptable LOS (LOS D, or LOS E at constrained locations near I-215) and the addition of project trips results in unacceptable LOS (LOS E or LOS F)."*
2. *"If the pre-Project condition is LOS E or F and the Project adds 50 or more peak hour trips to the intersection or roadway segment. This type of impact would be considered a "cumulative" project impact in which the project would be required to contribute a fair share payment toward reducing the impact."*

4 EXISTING YEAR 2022 CONDITIONS

4.1 ROADWAY NETWORK

The analysis study area roadway network is described below.

Byers Road is an unpaved two-lane roadway in the City of Menifee. Regionally, it travels north-south from Ethanac Road in the north to Rouse Road in the south. The City of Menifee General Plan (December 2013) identifies the section of Byers Road along the project site frontage as a Collector/Interconnected Local. The assumed speed limit within the project vicinity is 25 miles per hour (mph). It is expected that the Cimarron Ridge Project will construct Byers Road from Troy Lane to McLaughlin Road.

Ethanac Road is a divided four-lane roadway in the City of Menifee. Regionally, it travels east-west from Antelope Road in the east to Big Bear Street in the west. The City of Menifee General Plan (December 2013) identifies the road near the project vicinity as an Expressway. The current posted speed limit on Ethanac Road is 50 mph.

McLaughlin Road is a two-lane roadway in the City of Menifee. Regionally, it travels east-west from Evans Road in the east to near Geary Street in the west. West of Murrieta Road, McLaughlin is an unpaved road. The City of Menifee General Plan (December 2013) identifies the road near the project vicinity as a Secondary roadway. The speed limit on McLaughlin Road is assumed to be 25 mph. It is expected that the Cimarron Ridge Project will construct McLaughlin Road from Valley Boulevard to Murrieta Road.

Rouse Road is a two-lane roadway in the City of Menifee. Regionally, it travels east-west from Bradley Road in the east to Byers Road in the west. The City of Menifee General Plan (December 2013) identifies the road near the project vicinity as a Major roadway. The current posted speed limit on Rouse Road is 40 mph

Murrieta Road is generally a three-lane undivided roadway within the Project vicinity in the City of Menifee. From Chambers Avenue to Turfwood Street, it has one southbound travel lane and two (2) northbound travel lanes. From Turfwood Street to Ethanac Road, is a two-lane undivided roadway. Regionally, it travels north-south from Case Road in the north to Scott Road in the south. The City of Menifee General Plan (December 2013) identifies the road near the project vicinity as a Secondary roadway. The current posted speed limit on Rouse Road is 45 mph

Chambers Avenue is generally a four-lane undivided roadway in the City of Menifee. Regionally, it travels east-west from Bradley Road in the east to Valley Boulevard in the West. From Menifee Road to Bradley Road, it has two lanes eastbound and two lanes westbound. From Valley Boulevard to Murrieta Road, it has one lane in each direction. The City of Menifee General Plan (December 2013) identifies the road near the project vicinity as a Secondary roadway. The current posted speed limit on Rouse Road is 35 mph

Valley Boulevard is generally a two-lane roadway in the City of Menifee. Regionally it travels north-south from Thornton Avenue to Murrieta Road in the south. The roadway is currently discontinuous due to several gaps. The City of Menifee General Plan (December 2013) identifies the road as an Arterial roadway. The current posted speed limit on Valley Boulevard is 45 mph. It is not expected that Valley Boulevard will construct the roadway gaps by the Project Opening Year (2026). While direct access is not provided between the site and Valley Boulevard, a portion of the future Valley Boulevard right-of-way extends through the southwest corner of the site.

4.2 MULTIMODAL FACILITIES

The surrounding area of the project site accommodates various modes of travel – passenger cars, delivery trucks, transit vehicles, bicycles, and pedestrians. The information presented in this section focuses on the bicycle and pedestrian activity observed in the study area as well as the available transit options.

4.2.1 Bicyclists and Pedestrians

One bicycle lane corridor currently exists within the Project Area, a Class 2 Bike Lane located along the westbound lanes of Ethanac Road, between Goetz Road and Barnett Road. The eastbound lanes have no bicycle facility. The closest bike infrastructure to the Project site is a set of full Class 2 Bike Lanes on Murrieta Road between McCall Boulevard and Park City Avenue. On all other roadways, bicyclists generally utilize a shoulder adjacent to motor vehicle traffic.

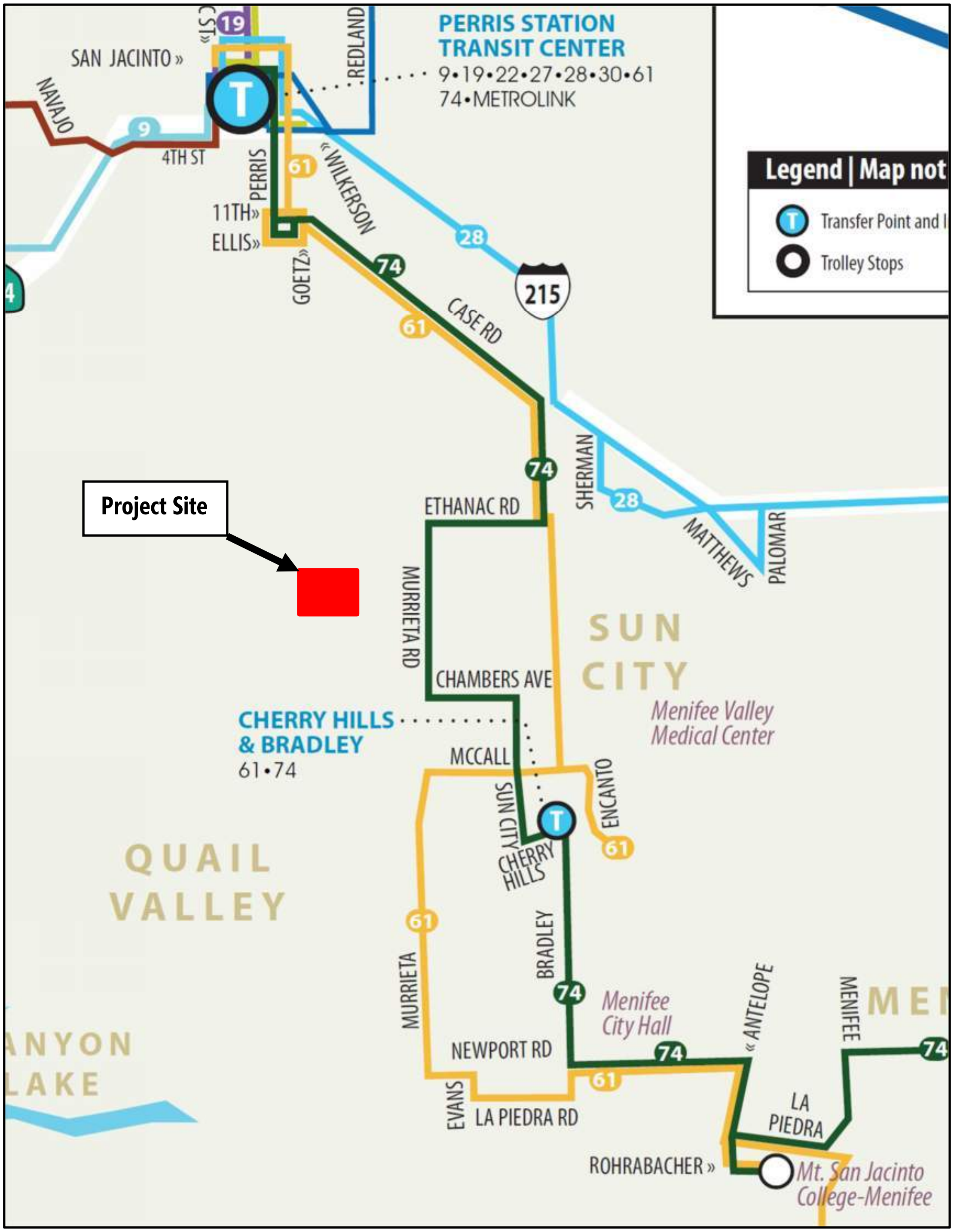
Due to Byers Road not being fully constructed yet, Intersections 1 through 4 currently lack crosswalks, and the roadway in between has no sidewalk. Intersection 5 at Rouse Road and Murrieta Road, as well as Intersection 6 at Chambers Avenue and Murrieta Road, also lack crosswalks. Rouse Road and Murrieta Road both have sidewalks.

4.2.2 Transit Services

Riverside Transit Authority (RTA) provides transit service in the area including fixed-route bus service and Dial-a-Ride service. Dial-a-Ride service is provided for locations within three quarters of a mile of an RTA local route, meaning service is provided in the Project area. RTA provides three types of Dial-A-Ride service: ADA Priority for the disabled and their Personal Care Attendant, Senior/Disabled regular service to those over 65 and disabled, and "Plus Lifeline Service," although trips are restricted to life-sustaining services.

The current bus route map showing the fixed route services is shown in **Exhibit 4-1**, along with the Project location added to the exhibit. Service offered through the Study Area is provided by Route 74 (Green) seven (7) days a week, spanning between the Perris Station Transit Center, Sun City, downtown Menifee, and downtown Hemet. The route runs from about 5 AM to 8 PM on weekdays and 6 AM to 8 PM on weekends, with about 20-minute headways between six major stop locations along its route. Its closest bus stop (travelling either direction) is located at Chambers Avenue and Murrieta Road. Although not in the Study Area, Route 61 (Yellow) also travels north and south, from Perris to the downtowns of Sun City, Murrieta, and Temecula. Its nearest bus stop is located at McCall Boulevard and Murrieta Road.

EXHIBIT 4-1: RTA BUS ROUTE MAP



Source: https://www.riversidetransit.com/index.php/riding-the-bus/maps-schedules

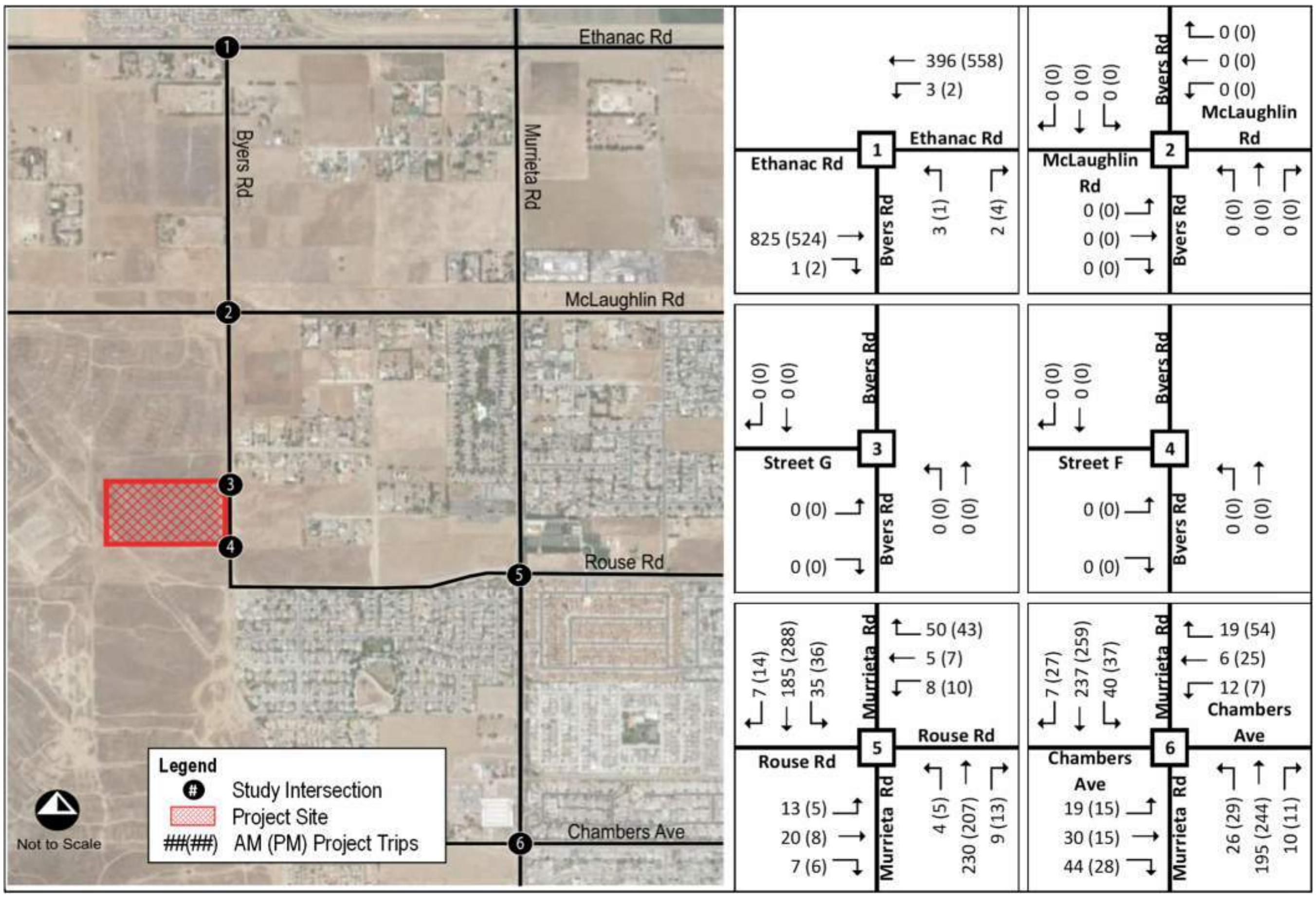
4.3 EXISTING YEAR 2022 TRAFFIC VOLUMES

Traffic counts were collected on Wednesday August 17th, 2022. Intersection counts were collected from 7:00 AM to 9:00 PM and from 4:00 PM to 6:00 PM. The counts used in this analysis represent the peak hour of each period. The count locations were selected in coordination with City staff. **Table 4-1** shows the existing Average Daily Traffic (ADT) volumes and **Exhibit 4-2** shows the existing peak hour intersection volumes. Counts collected for this study are included in **Appendix B**.

TABLE 4-1: EXISTING YEAR 2022 ADTS

ID	Segment	Existing ADT
A	Byers Road North of "Street G"	65
B	Byers Road South of "Street F"	65

EXHIBIT 4-2: EXISTING YEAR 2022 PEAK HOUR VOLUMES



Note: Intersections #2, #3, and #4 do not currently exist.

4.4 EXISTING YEAR 2022 LOS ANALYSIS

4.4.1 Existing Year 2022 Segment Analysis

Table 4-2 summarizes the existing segment results. Per the City Guidelines capacity values, both study segments operate under LOS D capacity.

TABLE 4-2: EXISTING YEAR 2022 SEGMENT ANALYSIS RESULTS

ID	Segment	Existing Year 2022 ADT	LOS D Capacity[1]	LOS D or Better?
A	Byers Road North of "Street G"	65	11,700	Yes
B	Byers Road South of "Street F"	65	11,700	Yes

Note: 1) Capacity of two-lane Collector roadway from *City of Menifee LOS Traffic Study Guidelines, Attachment B*

4.4.2 Existing Intersection Analysis

Table 4-3 summarizes the Existing Year peak hour Synchro intersection analysis results. The analysis results show all intersections operate at acceptable LOS D or better during the AM and PM Peak Hours. The Existing Year AM Peak Hour analysis worksheets are contained in **Appendix D** and the Existing Year PM Peak Hour analysis worksheets are contained in **Appendix E**.

TABLE 4-3: EXISTING YEAR 2022 INTERSECTION ANALYSIS RESULTS

ID	Intersection	Control Type	Existing Year 2022			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
1	Ethanac Rd & Byers Rd	OWSC	C	18.7	B	12.3
2	McLaughlin Rd & Byers Rd	--	*Intersection Does Not Exist Under This Condition*			
3	Street G & Byers Rd	--	*Intersection Does Not Exist Under This Condition*			
4	Street F & Byers Rd	--	*Intersection Does Not Exist Under This Condition*			
5	Rouse Rd & Murrieta Rd	TWSC	B	12.9	B	13.5
6	Chambers Ave & Murrieta Rd	AWSC	B	11.2	B	11.8

Notes: 1) LOS = Level of Service
2) OWSC = One-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled
3) Overall LOS provided for all-way stop intersection. Worst approach LOS provided for one-way and two-way stop-controlled intersections.
4) Delay shown in seconds per vehicle.

5 FORECAST TRAFFIC

5.1 PROPOSED PROJECT

The Project proposes to construct 96 single-family dwelling units on the southwest quadrant of the intersection of Byers Road and Troy Lane. The project is anticipated to be built out by Year 2026.

5.1.1 Project Forecast Trip Generation

The Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition) was used to forecast vehicle trips generated by the proposed Project. **Table 5-1** shows the trip generation rate for Single-Family Detached Housing land use (ITE Code 210). **Table 5-2** summarizes the vehicular trips forecast to be generated by the Project. As shown, the project is anticipated to generate approximately 972 daily trips with 72 AM Peak Hour trips and 96 PM Peak Hour trips. The Project is assumed to be construction in one phase.

TABLE 5-1: TRIP GENERATION RATES

Land Use	ITE Code	Daily Trips Equation	AM Peak Hour		PM Peak Hour	
			Equation	In / Out	Equation	In / Out
Single-Family Detached	210	Ln(T) = 0.92 Ln(X) + 2.68	Ln(T) = 0.91 Ln(X) + 0.12	26% / 74%	Ln(T) = 0.94 Ln(X) + 0.27	63% / 37%

Source: ITE *Trip Generation Manual*, 11th Edition

TABLE 5-2: TRIP GENERATION

Land Use	ITE Code	Intensity		Daily Trips	AM Peak Hour			PM Peak Hour		
					Volume	In	Out	Volume	In	Out
Single-Family Detached	210	96	DU	972	72	19	53	96	60	36

Notes: DU = Dwelling Unit

5.1.2 Project Trip Distribution and Assignment

The regional distribution trends are as follows:

- 60 % to the South via Murrieta Road
- 25% to the East via Ethanac Road and Chambers Avenue
- 15% to the West via Ethanac Road and Chambers Avenue

Exhibit 5-1 shows the Project trip distribution at each of the study intersections and **Exhibit 5-2** shows the Project intersection trips. **Appendix C** contains detailed volume development worksheets.

Exhibit 5-1: Project Trip Distribution

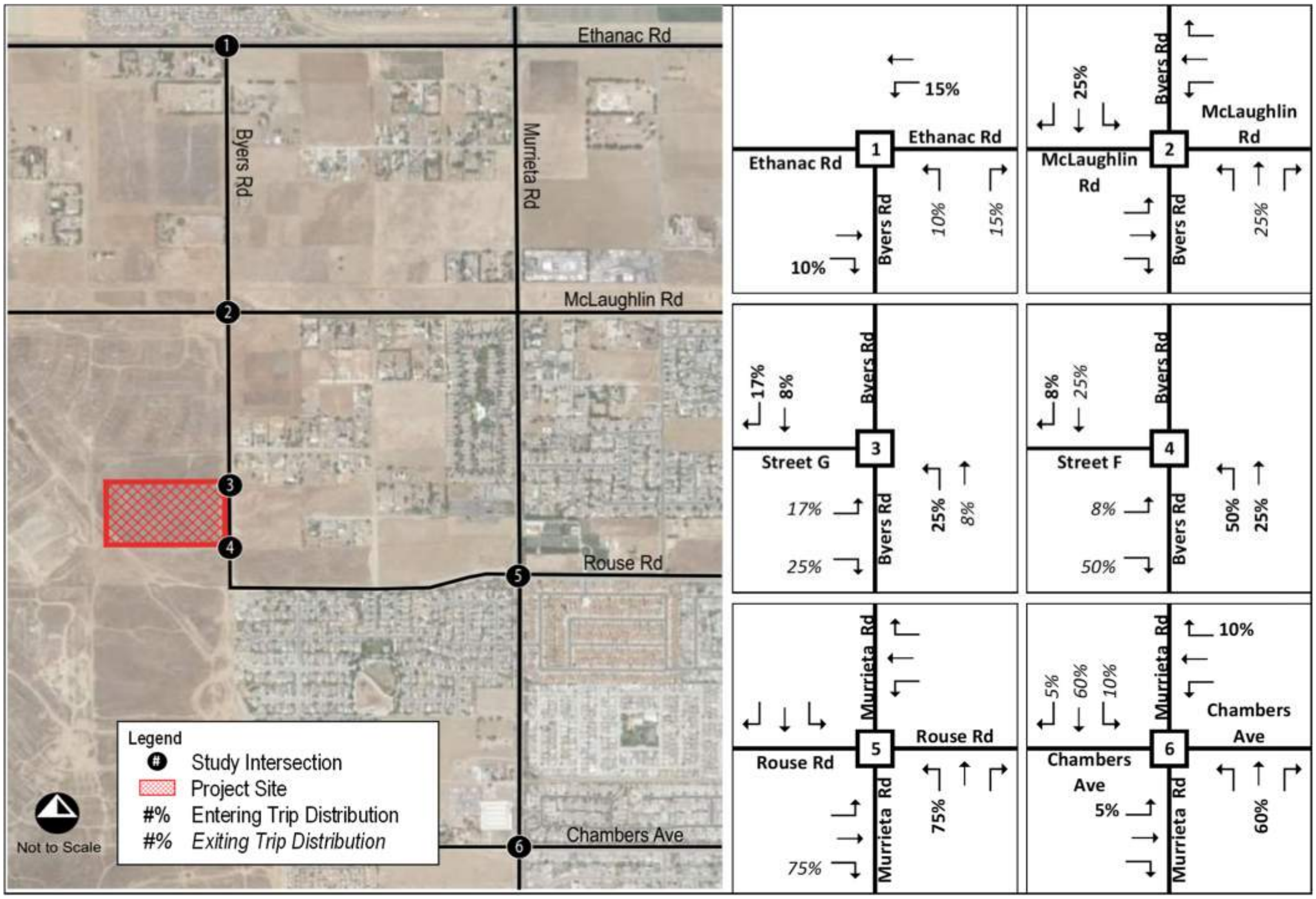
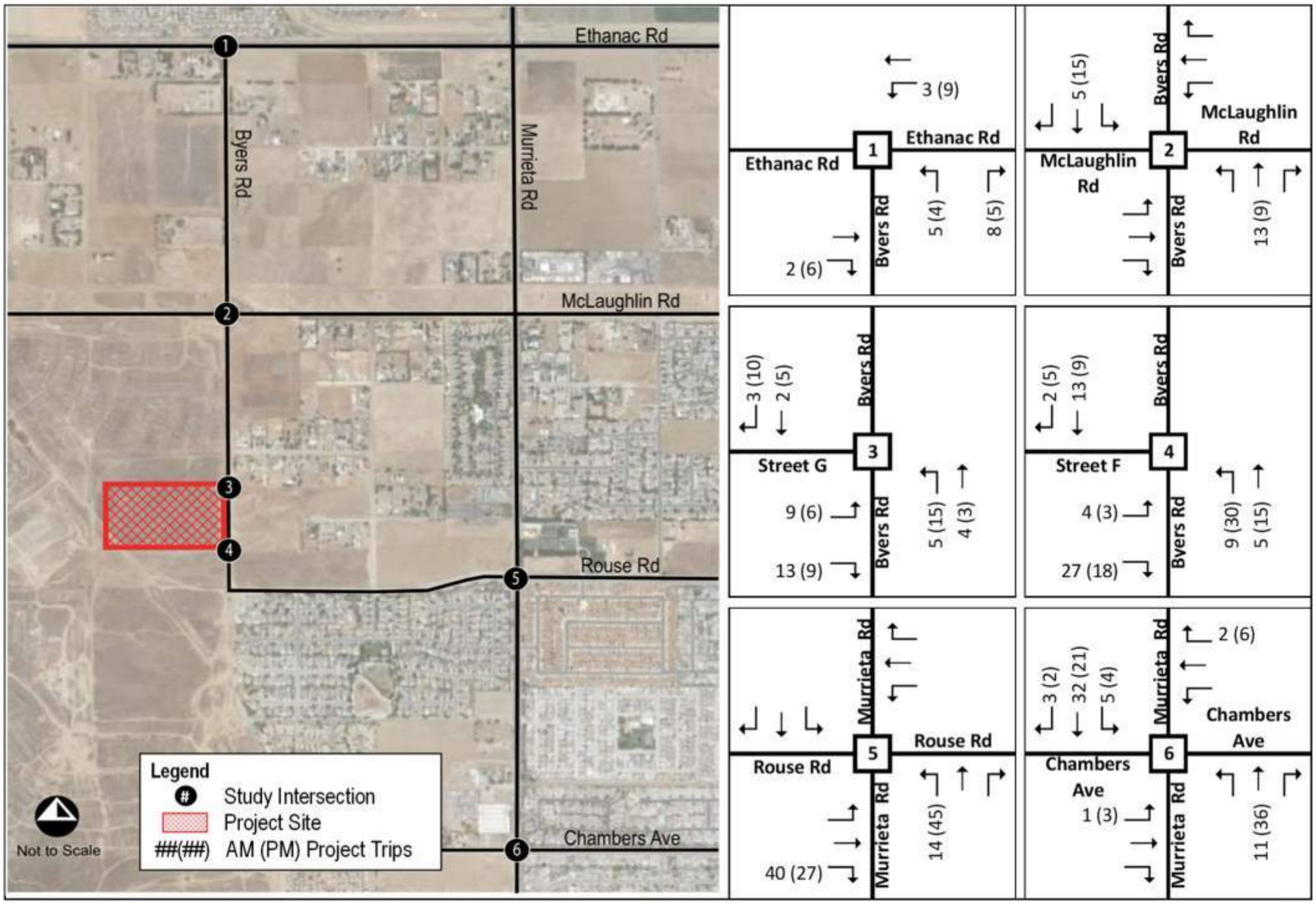


Exhibit 5-2: Forecast Project Trips



5.2 CUMULATIVE PROJECTS

The City of Menifee provided a list of projects to consider in the development of the Cumulative Projects traffic volumes. **Table 5-3** shows the projects considered in the development of the subsequent volumes. Each Cumulative Project was evaluated to determine if any additional traffic from those planned/approved developments would occur at any of the study intersections or segments. A map of the cumulative projects is shown in **Exhibit 5-3. Exhibit 5-4** shows the cumulative project trips affecting the study intersections.

The following assumptions were used in the project volume development and the cumulative projects volume development:

- McLaughlin Road will be constructed by the Cimarron Ridge project.
- Byers Road north of McLaughlin Road will be constructed by others.
- Valley Boulevard is not expected to complete construction between Goetz and Road and Thornton Avenue.
- Rouse Road is not expected to complete construction between Byers Road and Valley Boulevard.

Appendix C contains detailed cumulative projects volume development worksheets.

TABLE 5-3: CUMULATIVE PROJECTS

ID	Project Name	Location	Type	Size	Jurisdiction	Added to Study Intersections?
1	Vista Ridge	Murrieta Rd & Thornton Ave	Residential	30 Condos	Menifee	Yes
2	Capstone Industrial	Ethanac Rd & Wheat St	Industrial	700,037 SF Warehouse	Menifee	Yes
3	Ares	Murrieta Rd & Elm St	Industrial	551,685 SF Warehouse	Menifee	No
4	Green Valley	Ethanac Rd & Goetz Rd	Residential	623 SFR & 842 MFR	Perris	Yes
5	Goetz & Ethanac Commercial	Ethanac Rd & Goetz Rd	Commercial	C-Store-7,250 SF; Car wash 2,790 SF; Retail 7,040 SF; Fuel Canopy	Menifee	Yes
6	Corsica Business Park	Wheat St & Corsica Ln	Industrial	3 warehouses: 30,873 & 81,129 & 164,680 SF	Menifee	Yes
7	Northern Gateway Commerce Center	Ethanac Rd & Evans Rd	Industrial	One industrial building: 1,316,741 SF	Menifee	No
8	Ethanac & Barnett Warehouse	Ethanac Rd & Barnett	Industrial	2 buildings: 125,890 SF each	Menifee	No
9	Ethanac Square	Ethanac Rd & Barnett	Residential	Diesel fuel station; 3,800 SF gas station; C-store; 2,080 SF express car wash	Menifee	Yes
10	Sagewood	Mclaughlin Rd & Evans Rd	Residential	174 SFR	Menifee	Yes
11	McLaughlin Village	Mclaughlin Rd & Sun City Blvd	Residential	126 Condos	Menifee	Yes
12	Valley Blvd Tract Map	Valley Blvd & Chambers Ave	Residential	68 SFR	Menifee	Yes
13	Menifee Commerce Center II	Sherman Rd & Ethanac	Industrial	One concrete tilt-up building 1,139,478 SF	Menifee	Yes

TABLE 5-3: CUMULATIVE PROJECTS (CONT.)

ID	Project Name	Location	Type	Size	Jurisdiction	Added to Study Intersections?
14	Nova Battery Storage	Antelope Rd & Ethanac Rd	Industrial	Re-development of the Inland Empire Energy Center generation plant	Menifee	No
15	McLaughlin San Jacinto Warehouses	McLaughlin & San Jacinto Warehouse	Industrial	Five warehouses: 491,467 SF	Menifee	No
16	Ethanac & Evans Warehouse	Ethanac & Evans Rd	Industrial	137,896 SF warehouse	Menifee	No
17	Trumble & Watson Warehouse	Trumble Rd & Watson Rd	Industrial	Warehouse 327,631 SF	Menifee	Yes
18	Cimarron Ridge	Goetz Rd & Mclaughlin Rd	Residential	756 SFR	Menifee	Yes
19	Cypress & Sands Apartments	Chambers Ave & Antelope Rd	Residential	136 Apartments	Menifee	No

Notes: 1) SFR = Single-Family Residential unit
2) MFR = Multi-Family Residential unit
3) SF = Square Feet

Exhibit 5-3: Cumulative Projects Map

Exhibit 5-4: Cumulative Project Trips

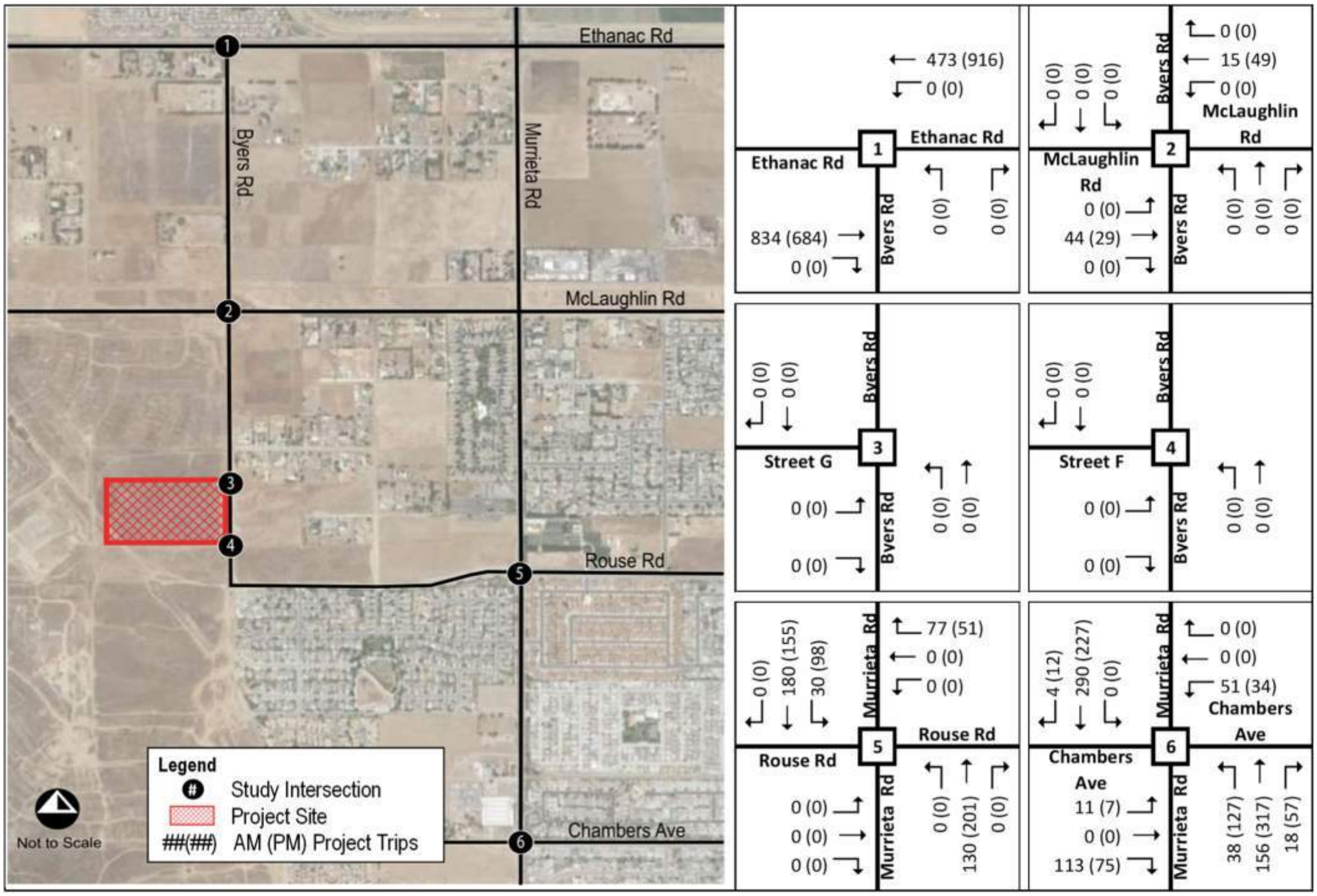
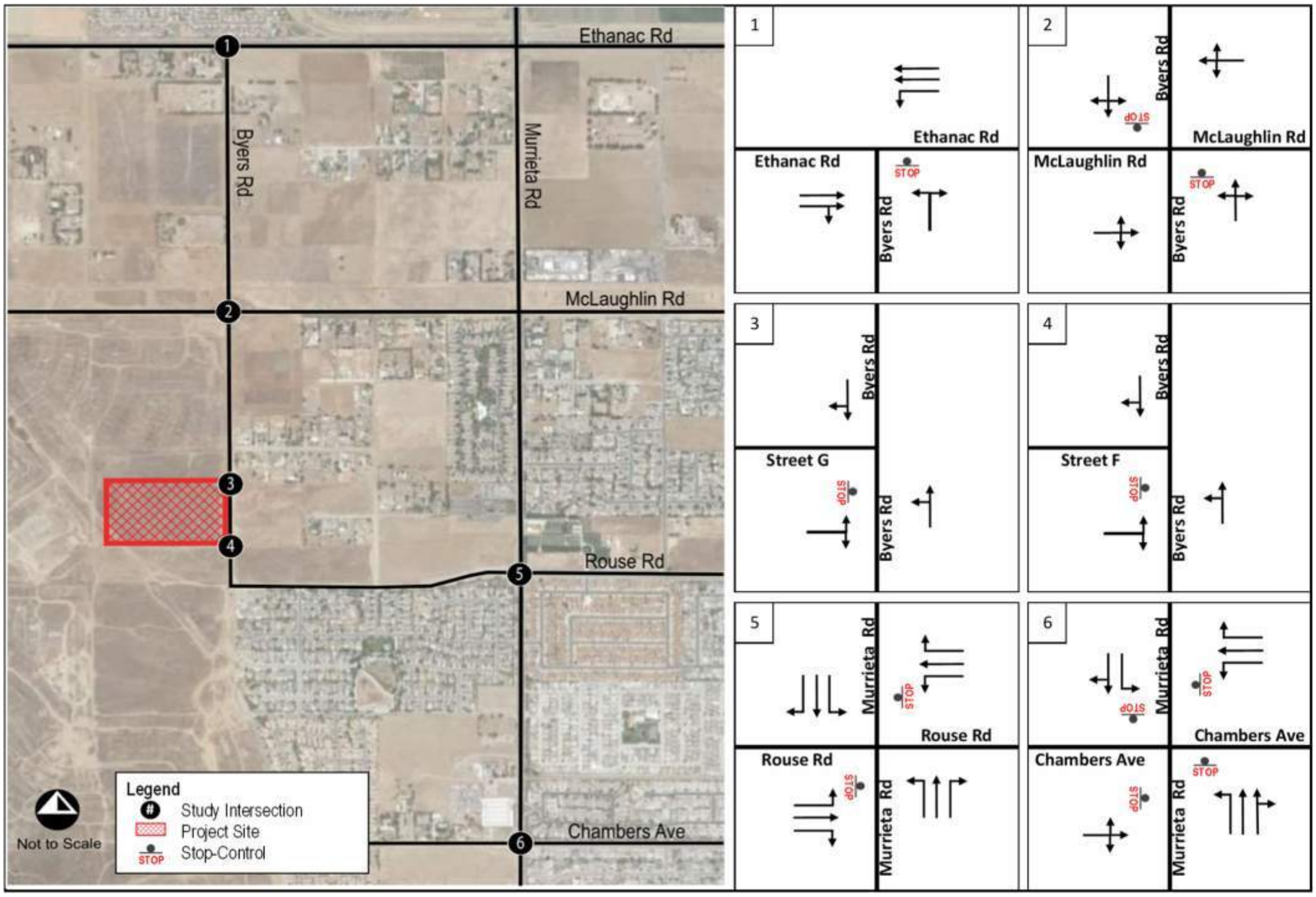


Exhibit 5-5: With Project Lane Configuration



5.3 AMBIENT GROWTH

The project Opening Year is estimated to be 2026. Therefore, Existing traffic volumes need to be adjusted to include 4 years of ambient growth. In coordination with City staff, a 2% annual linear growth rate was used for the Opening Year traffic forecasting.

6 EXISTING YEAR 2022 WITH PROJECT CONDITION

6.1 EXISTING WITH PROJECT TRAFFIC VOLUMES

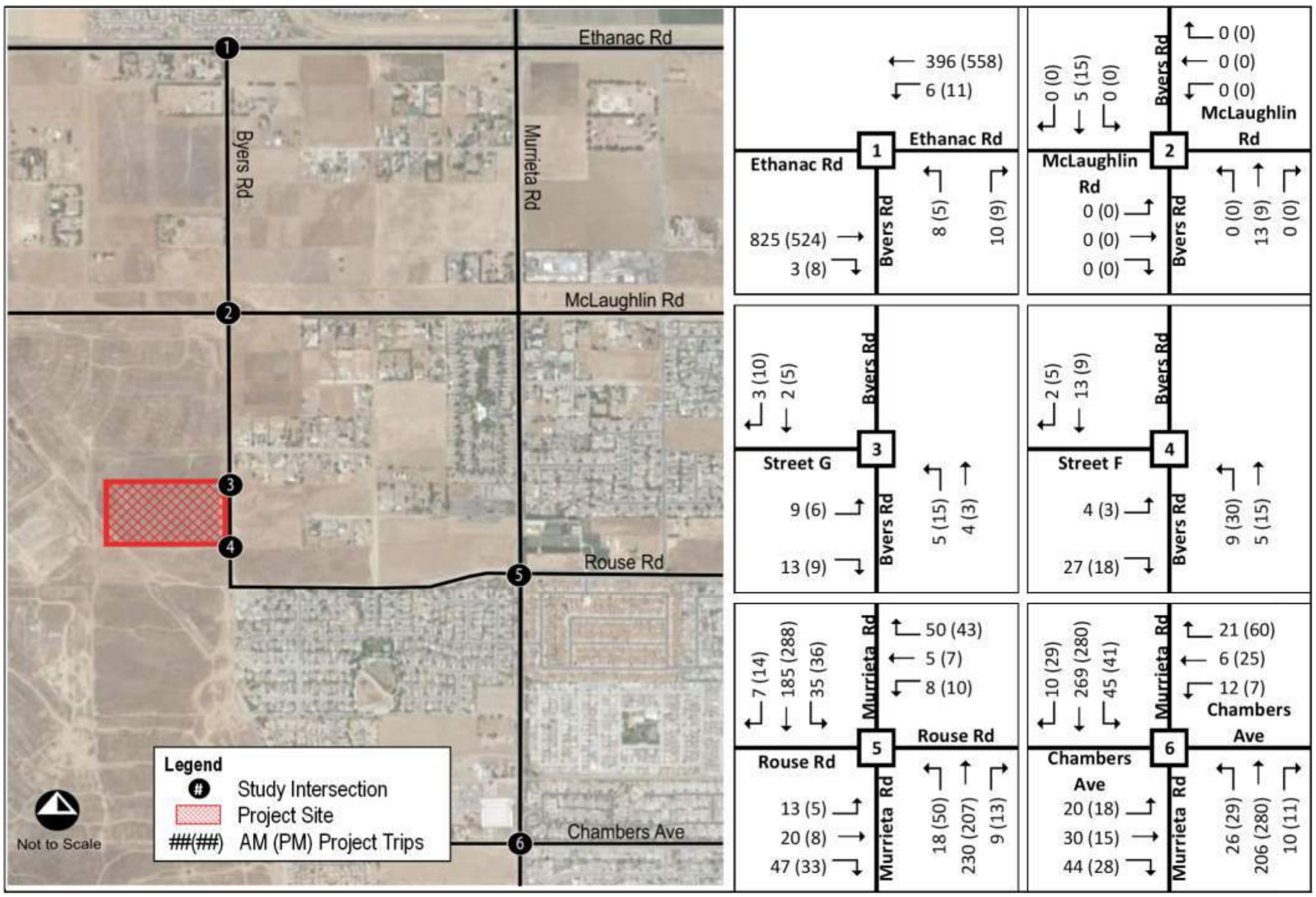
The Existing Year 2022 with Project traffic volumes were developed by adding the forecast project trips to the Existing traffic volumes. **Table 6-1** shows the Existing Year 2022 With Project ADT volumes and **Exhibit 6-1** shows the Existing Year 2022 With Project peak hour intersection volumes.

TABLE 6-1: EXISTING YEAR 2022 WITH PROJECT ADTS

ID	Segment	Existing Year 2022 With Project ADT[1]
A	Byers Road North of "Street G"	310
B	Byers Road South of "Street F"	790

Notes: 1) ADT rounded to the nearest 10

EXHIBIT 6-1: EXISTING YEAR 2022 WITH PROJECT PEAK HOUR VOLUMES



6.2 EXISTING YEAR 2022 WITH PROJECT LOS ANALYSIS

6.2.1 Existing Year 2022 With Project Segment Analysis

Table 6-2 summarizes the Existing Year 2022 With Project segment results. Per the City Guidelines capacity values, both study segments operate under LOS D capacity.

TABLE 6-2: EXISTING YEAR 2022 WITH PROJECT SEGMENT ANALYSIS RESULTS

ID	Segment	Existing With Project ADT[1]	LOS D Capacity[2]	LOS D or Better?
A	Byers Road North of "Street G"	310	11,700	Yes
B	Byers Road South of "Street F"	790	11,700	Yes

Notes: 1) ADT rounded to the nearest 10
2) Capacity of two-lane Collector roadway from *City of Menifee LOS Traffic Study Guidelines, Attachment B*

6.2.2 Existing Year 2022 With Project Intersection Analysis

Table 6-3 summarizes the Existing Year 2022 With Project peak hour Synchro intersection analysis results. The analysis results show all intersections operate at acceptable LOS C or better during the AM and PM Peak Hours. Since each intersection is projected to operate better than the LOS E threshold, no adverse effects on operations are projected. The Existing Year 2022 With Project AM Peak Hour analysis worksheets are contained in **Appendix F** and the Existing Year 2022 With Project PM Peak Hour analysis worksheets are contained in **Appendix G**.

TABLE 6-3: EXISTING YEAR 2022 WITH PROJECT INTERSECTION ANALYSIS RESULTS

ID	Intersection	Control Type	Existing Year 2022				Existing Year 2022 With Project				Adverse Effect?	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour			
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	AM	PM
1	Ethanac Rd & Byers Rd	OWSC	C	18.7	B	12.3	C	17.6	B	14.4	No	No
2	McLaughlin & Byers Rd	TWSC	*Intersection Does Not Exist Under This Condition*				A	9.1	A	9.1	No	No
3	Street G & Byers Rd	OWSC	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	No	No
4	Street F & Byers Rd	OWSC	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	No	No
5	Rouse Rd & Murrieta Rd	TWSC	B	12.9	B	13.5	B	11.4	B	12.1	No	No
6	Chambers Ave & Murrieta Rd	AWSC	B	11.2	B	11.8	B	12.1	B	12.7	No	No

Notes: 1) LOS = Level of Service
2) OWSC = One-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled
3) Overall LOS provided for all-way stop intersections. Worst approach LOS provided for one-way and two-way stop-controlled intersections.
4) Delay shown in seconds per vehicle.
5) Adverse Effect when pre-project is LOS E/F and more than 50 AM or PM peak hour project trips are added to the intersection.

7 OPENING YEAR 2026 CONDITION

7.1 OPENING YEAR 2026 TRAFFIC VOLUMES

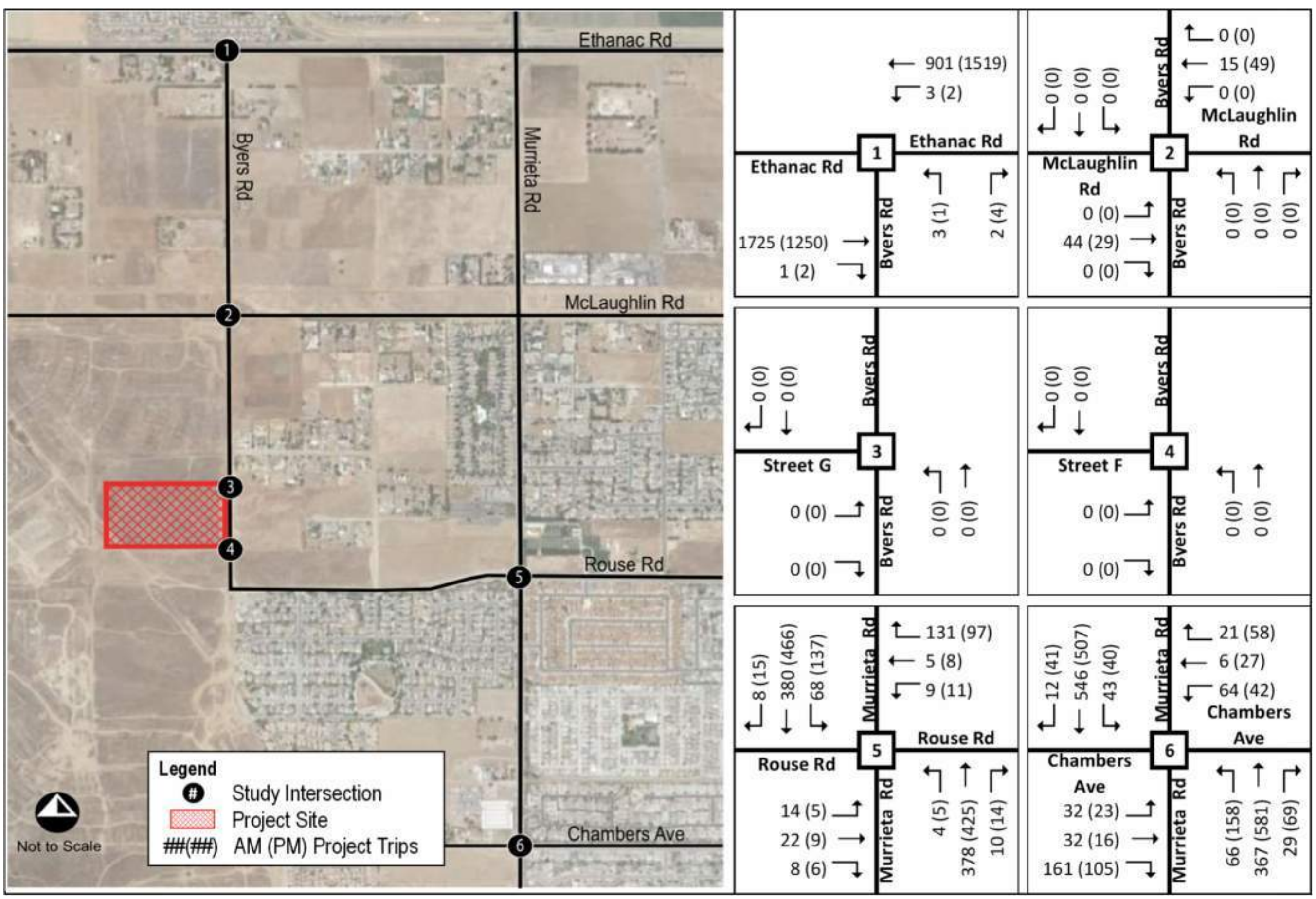
The Opening Year 2026 traffic volumes are developed by adding cumulative project trips and growing the Existing traffic volumes by a 2% linear growth rate. The growth rate used for the traffic forecasting was coordinated with the City. **Table 7-1** shows the Opening Year 2026 Average Daily Traffic (ADT) volumes and **Exhibit 7-1** shows the Opening Year 2026 peak hour intersection volumes. These volumes are Without Project conditions.

TABLE 7-1: OPENING YEAR 2026 ADTS

ID	Segment	Opening Year 2026 ADT[1]
A	Byers Road North of "Street G"	80
B	Byers Road South of "Street F"	80

Notes: 1) ADT rounded to the nearest 10

EXHIBIT 7-1: OPENING YEAR 2026 PEAK HOUR VOLUMES



7.2 OPENING YEAR 2026 LOS ANALYSIS

7.2.1 Opening Year 2026 Segment Analysis

Table 7-2 summarizes the Opening Year 2026 segment results. Per the City Guidelines capacity values, both study segments are projected to operate at LOS D or better.

TABLE 7-2: OPENING YEAR 2026 SEGMENT ANALYSIS RESULTS

ID	Segment	Opening Year 2026 ADT[1]	LOS D Capacity[2]	LOS D or Better?
A	Byers Road North of "Street G"	80	11,700	Yes
B	Byers Road South of "Street F"	80	11,700	Yes

Note: 1) ADT rounded to the nearest 10
2) Capacity of two-lane Collector roadway from *City of Menifee LOS Traffic Study Guidelines, Attachment B*

7.2.2 Opening Year 2026 Intersection Analysis

Table 7-3 summarizes the Opening Year 2026 peak hour Synchro intersection analysis results. The analysis results show the intersections of Ethanac Road and Byers Road (#1) and Chambers Avenue and Murrieta Road (#6), are projected to operate at unacceptable LOS F during the AM Peak Hour and LOS E during the PM Peak Hour. All other intersections in the study area are projected to operate at LOS D or better for both the AM and PM peak hours. The Opening Year 2026 AM Peak Hour analysis worksheets are contained in **Appendix H** and the Opening Year PM Peak Hour analysis worksheets are contained in **Appendix I**.

TABLE 7-3: OPENING YEAR 2026 INTERSECTION ANALYSIS RESULTS

ID	Intersection	Control Type	Opening Year 2026			
			AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay
1	Ethanac Rd & Byers Rd	OWSC	**F**	**95.7**	**E**	**44.6**
2	McLaughlin & Byers Rd	TWSC	A	0.0	A	0
3	Street G & Byers Rd	--	*Intersection Does Not Exist Under This Condition*			
4	Street F & Byers Rd	--	*Intersection Does Not Exist Under This Condition*			
5	Rouse Rd & Murrieta Rd	TWSC	C	21.7	D	30.0
6	Chambers Ave & Murrieta Rd	AWSC	**F**	**107.3**	**F**	**86.8**

Notes: 1) LOS = Level of Service
2) LOS E or LOS F in **red bold font** where applicable.
3) OWSC = One-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled
4) Overall LOS provided for all-way stop intersections. Worst approach LOS provided for one-way and two-way stop-controlled intersections.
5) Delay shown in seconds per vehicle.

8 OPENING YEAR 2026 WITH PROJECT CONDITION

8.1 OPENING YEAR 2026 WITH PROJECT TRAFFIC VOLUMES

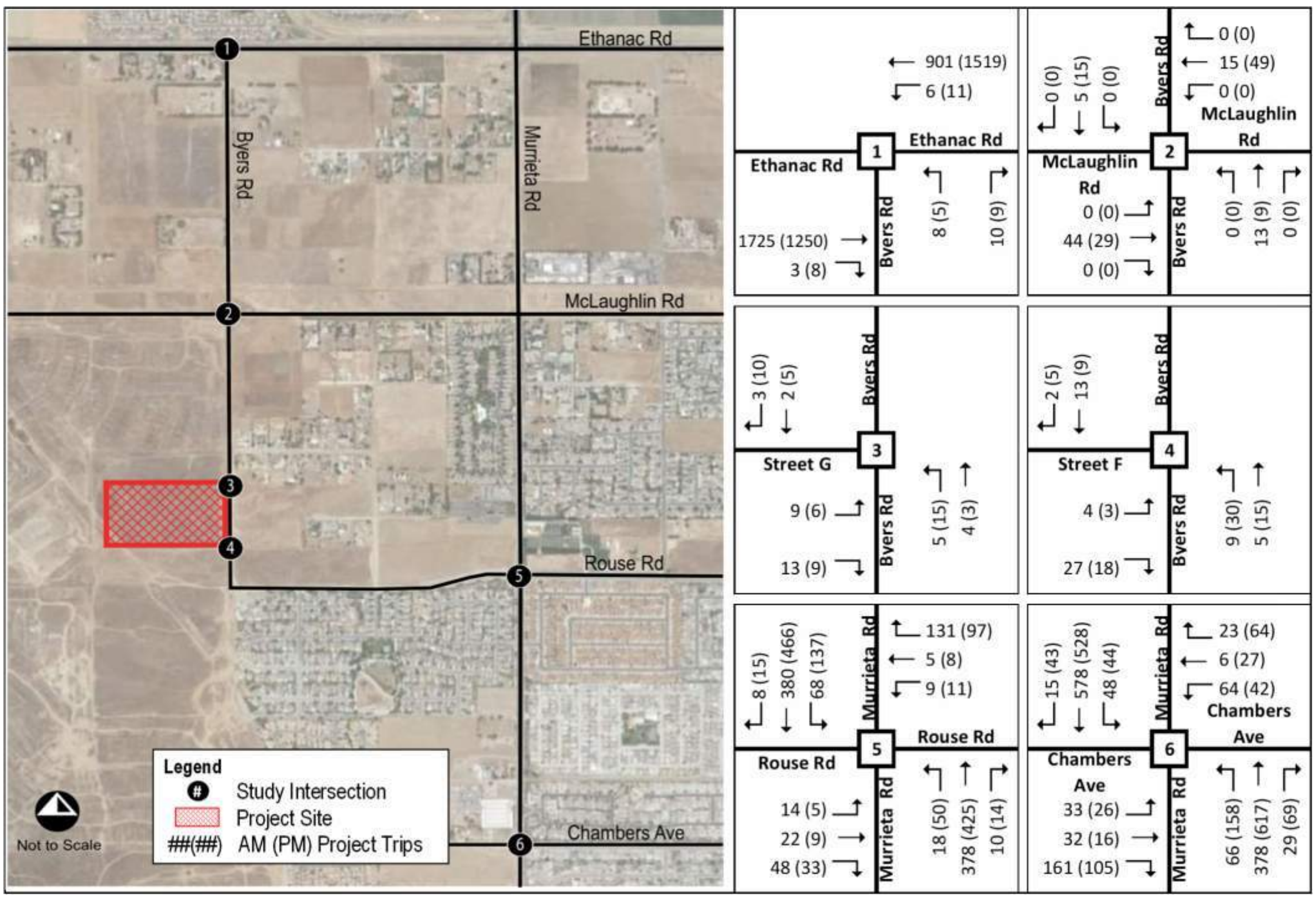
The Opening Year 2026 With Project traffic volumes are developed by adding the estimated Project trips to the Opening Year volumes. **Table 8-1** shows the Opening Year 2026 With Project ADT volumes and **Exhibit 8-1** shows the Opening Year 2026 With Project peak hour intersection volumes.

TABLE 8-1: OPENING YEAR 2026 WITH PROJECT ADTS

ID	Segment	Opening Year 2026 With Project ADT[1]
A	Byers Road North of "Street G"	320
B	Byers Road South of "Street F"	800

Notes: 1) ADT rounded to the nearest 10

EXHIBIT 8-1: OPENING YEAR 2026 WITH PROJECT PEAK HOUR VOLUMES



8.2 OPENING YEAR 2026 WITH PROJECT LOS ANALYSIS

8.2.1 Opening Year 2026 With Project Segment Analysis

Table 8-2 summarizes the Opening Year 2026 With Project segment results. Per the City Guidelines capacity values, both study segments are projected to operate at LOS D or better.

TABLE 8-2: OPENING YEAR WITH PROJECT ADT ANALYSIS RESULTS

ID	Segment	Opening Year 2026 With Project ADT[1]	LOS D Capacity[2]	LOS D or Better?
A	Byers Road North of "Street G"	320	11,700	Yes
B	Byers Road South of "Street F"	800	11,700	Yes

Notes: 1) ADT rounded to the nearest 10
2) Capacity of two-lane Collector roadway from *City of Menifee LOS Traffic Study Guidelines, Attachment B*

8.2.2 Opening Year 2026 With Project Intersection Analysis

Table 8-3 summarizes the Opening Year 2026 With Project peak hour Synchro intersection analysis results. The analysis results show the intersections of Ethanac Road and Byers Road (#1) and Chambers Avenue and Murrieta Road (#6) are projected to operate at unacceptable LOS during both peak hours. All other intersections in the study area are operate at LOS D or better for both the AM and PM peak hours. The Opening Year 2026 With Project AM Peak Hour analysis worksheets are contained in **Appendix J** and the Opening Year 2026 With Project PM Peak Hour analysis worksheets are contained in **Appendix K**.

The intersections of Ethanac Road and Byers Road (#1) and Chambers Avenue and Murrieta Road (#6) both experience unacceptable LOS, with and without the proposed project. According to City Guidelines an improvement should be identified if the following exists:

> *"If the pre-Project condition is LOS E or F and the Project adds 50 or more peak hour trips to the intersection or roadway segment. This type of impact would be considered a "cumulative" project impact in which the project would be required to contribute a fair share payment toward reducing the impact."*

The project is forecast to add 18 AM trips and 24 PM trips at the intersection of Ethanac Road and Byers Road (#1). At the intersection of Chambers Avenue and Murrieta Avenue (#6), the project is forecast to add 54 AM trips and 72 PM trips. Therefore, Intersection #1 does not qualify as a cumulative adverse project effect. Given the added project trips and the intersection analysis, a cumulative adverse project effect is projected at Intersection #6 during the Opening Year 2026 with Project.

As a result of the analysis, the following area of concern has been identified:

Area of Concern #1 (Cumulative Adverse Effect Condition) - Intersection of Chambers Avenue and Murrieta Road (#6) does not meet City's LOS standard and the Project adds 50 or more peak hour trips to the intersection.

TABLE 8-3: OPENING WITH PROJECT INTERSECTION ANALYSIS RESULTS

ID	Intersection	Control Type	Opening Year				Opening Year With Project				Project Trips Added		Adverse Effect?	
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour					
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	AM	PM	AM	PM
1	Ethanac Rd & Byers Rd	OWSC	**F**	**95.7**	**E**	**44.6**	**F**	**100.5**	**F**	**91.1**	18	24	No[6]	No[6]
2	McLaughlin & Byers Rd	TWSC	A	0.0	A	0.0	A	9.4	A	9.6	--	--	No	No
3	Street G & Byers Rd	OWSC	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	--	--	No	No
4	Street F & Byers Rd	OWSC	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	--	--	No	No
5	Rouse Rd & Murrieta Rd	TWSC	C	21.7	D	30.0	C	17.1	C	21.9	--	--	No	No
6	Chambers Ave & Murrieta Rd	AWSC	**F**	**107.3**	**F**	**86.8**	**F**	**128.0**	**F**	**102.4**	**54**	**72**	**Yes**[6]	**Yes**[6]

Notes:
1) LOS = Level of Service
2) LOS E or LOS F in **red bold font** where applicable.
3) OWSC = One-Way Stop-Controlled; TWSC = Two-Way Stop-Controlled; AWSC = All-Way Stop-Controlled
4) Overall LOS provided for all-way stop intersections. Worst approach LOS provided for one-way and two-way stop-controlled intersections.
5) Delay shown in seconds per vehicle.
6) Adverse Effect when pre-project is LOS E/F and more than 50 AM or PM peak hour project trips are added to the intersection.
7) Adverse Effect shown highlighted in yellow.

8.3 IMPROVEMENT EVALUATION

The following findings are based on the analysis results:

Area of Concern #1 (Cumulative Adverse Effect Condition) – Chambers Avenue and Murrieta Road (#6) during the Opening Year With Project during the AM and PM peak hours. A potential improvement at this location would be the installation of a traffic signal to address the below LOS standard condition.

To assess the feasibility of signal installation at the intersection of Chambers Avenue and Murrieta Road (#6), the California Manual on Uniform Traffic Control Devices (CA MUTCD), 2014 Edition Revision 6 (Effective 3/30/2021) was used to conduct traffic signal warrants for the intersection. Warrant 3 (Peak Hour) is considered adequate for analyzing peak hour effects due to the Project. Per the CA MUTCD, satisfying a warrant itself does not require the installation of a traffic signal. Traffic signal installation requires the evaluation of traffic operations, pedestrian characteristics, and physical characteristics of the intersection, among other criteria. A traffic signal should only be installed if the engineering study, reviewing all appropriate criteria, recommends it.

Table 8-4 details the Warrant 3 results for each scenario. Under both the Opening Year and the Opening Year With Project scenario, Warrant 3 is satisfied using the 70% volume analysis given the roadway speed. With the warrant satisfied, the intersection of Chambers Avenue and Murrieta Road (#6) should consider signalization. The traffic warrant analysis worksheets are contained in **Appendix L**.

TABLE 8-4: SIGNAL WARRANT ANALYSIS SUMMARY

Location	Scenario	Warrant 3 (Peak Hour) Met?	
		AM Peak Hour	PM Peak Hour
Chambers Avenue and Murietta Road (#6)	Existing With Project	No	No
	Opening Year	**Yes**	**Yes**
	Opening Year With Project	**Yes**	**Yes**

Previous studies in the vicinity, including the *Cimarron Ridge Specific Plan Revised Traffic Impact Analysis Report* (December 2014), have also identified unacceptable LOS conditions at the intersection of Chambers Avenue and Murrieta Road (#6) and satisfied signal warrants recommending signalization as an improvement. As the intersection satisfies the signal warrant, a LOS analysis was conducted to see if the improvement would properly address the cumulative adverse project effect.

TABLE 8-5: IMPROVEMENT CONDITION LOS

ID	Intersection	Opening Year With Project										
		Without Improvement					With Improvement					
		Control Type	AM Peak Hour		PM Peak Hour		Improvement	Control Type	AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay			LOS	Delay	LOS	Delay
6	Chambers Ave & Murrieta Rd	AWSC	**F**	**128.0**	**F**	**102.4**	Install traffic signal	SIG	A	8.3	A	6.6

Notes: 1) LOS = Level of Service
2) LOS E or LOS F in **red bold font** where applicable.
3) SIG = Signalized; AWSC = All-Way Stop Control.
4) Overall LOS provided for signalized & all-way stop intersections.
5) Delay shown in seconds per vehicle.

As shown in **Table 8-5**, the intersection is projected to operate at acceptable LOS A during both peak hours with the improvement; therefore, the cumulative adverse project effect at Chambers Avenue and Murrieta Road (#6) is expected to be addressed by traffic signal installation.

Recommendation #1 – Install a traffic signal at the intersection of Chambers Avenue and Murrieta Road (#6).

Area of Concern #2 (Transportation Improvement Need) – Byers Road is currently an unpaved two-lane roadway in the City of Menifee. It is expected that the Project will improve Byers Road along the site frontage.

Recommendation #2 – Construct Byers Road as a two-lane Collector along site frontage.

Area of Concern #3 (Transportation Improvement Need) – The majority of the projected site traffic is anticipated to travel to the south of the Project driveways along Byers Road and along Rouse Road to the east of Byers Road. This section of Byers Road is currently a dirt roadway. Construction of the portion of Byers Road to the south and the connection at Rouse Road are needed to facilitate the safe and efficient movement of site traffic along the desired travel path.

Recommendation #3A – Construct Byers Road as a two-lane Collector from the southern Project boundary to Rouse Road.

Recommendation #3B – Construct the intersection of Byers Road and Rouse Road to connect the north leg and the east leg. Implementation should consider future connection to the west by others.

9 SITE CIRCULATION

9.1 INTERSECTION SIGHT DISTANCE

This section evaluates the minimum intersection sight distance requirements at each of the Project intersections. Intersection sight distance methodology utilizes sight triangles to show areas that should be clear of obstructions that might block a driver's view of potentially conflicting vehicles. The sight triangles are based on the roadway design speed and the time gap for minor road (driveways) vehicles to enter the major road. This methodology provides sufficient sight distance for a stopped driver on a minor road approach to depart the intersection and enter the major road (corner sight distance). Likewise, this methodology also provides enough time for a driver of a vehicle on the major road to slow or stop if a vehicle on the minor road approach has entered the roadway and is accelerating to reach the speed limit (stopping sight distance). The City of Menifee provides intersection sight distance requirement under *Standard Plan 81 - Intersection Sight Distance.*

As shown in **Exhibit 2-3**, the Project site plan provides intersection sight lines. Using the *City of Menifee Standard Plan 81*, Project intersections along Byers Road and internal to the site were evaluated to determine the required sight distance and to confirm standard requirements. **Table 9-1** lists the sight distance requirements for given design speeds.

TABLE 9-1: SIGHT DISTANCE REQUIREMENTS

Design Speed (MPH)	Corner Sight Distance[1, 2]	Stopping Sight Distance[1]
25	275	150
30	330	200
35	385	250
45	495	360
50	550	430
55	605	500

Source: *City of Menifee Std. Plan 81- Intersection Sight Distance*
Notes: 1) Increase by 20% on sustained downgrade greater than 3% and longer than one mile.
2) Where restrictive conditions exist, the minimum value for corner sight distance shall be equal to the stopping sight distance with the approval of the Public Works Director

Table 9-2 shows the required and provided sight distance at all project intersections. As shown, except for the intersection of Street "C" and Street "F", all intersections provide adequate sight distance with relatively unobstructed views. At the intersection of Street "C" and Street "F", the available 200-foot left turn sight distance does not comply with the required 330 feet for corner sight distance. However, the Project site plan was modified to adjust for this situation by providing cul-de-sacs along Street "F".

TABLE 9-2: SIGHT DISTANCE COMPLIANCE

ID	Intersection	Assumed Major Street Design Speed	Corner Sight Distance			Stopping Sight Distance		
			Required Sight Distance (feet)	Available Distance (feet)[1,2]	Meet Standard?[3]	Required Sight Distance (feet)	Available Distance (feet)	Meet Standard?
A	Street "G" and Byers Road	35 mph	385	385	Yes	250	385	Yes
B	Street "F" and Byers Road	35 mph	385	385	Yes	250	385	Yes
C	Street "C" and Street "A"	30 mph	330	330	Yes	200	330	Yes
D	Street "D" and Street "A"	30 mph	330	330	Yes	200	330	Yes
E	Street "C" and Street "F"	30 mph	330	330/200[2]	Yes/**No**	200	215	Yes
F	Street "D" and Street "F"	30 mph	330	330	Yes	200	330	Yes
G	Street "E" and Street "F"	30 mph	330	330	Yes	200	330	Yes

Source: *City of Menifee Std. Plan 81- Intersection Sight Distance*
Notes: 1) Available sight distance applies to both left and right turns unless otherwise noted
2) "Right turn / Left turn" sight distance
3) Below standard sight distance shown in **bold red** font

Area of Concern #4 (Adverse Effect Condition) – The intersection of Street "C" and Street "F" does not meet standard intersection sight distance (see **Exhibit 9-1**). According to *Standard Plan – 18*, under restrictive conditions, the minimum sight distance can be the stopping sight distance rather than the corner sight distance. At the intersection of Street "C" and Street "F", the minimum sight distance for 30 mph is 200 feet. The current site provides approximately 200 feet of sight distance due to the restrictive condition of the horizontal curve on Street "F" (see **Exhibit 9-2**). In coordination with City staff, a previous site plan was revised to include dual cul-de-sacs between lots 18 and 19 as seen in **Exhibit 2-3**. Under the current site plan with dual cul-de-sacs, the City has provided initial approval of the restrictive condition sight distance at the intersection of Street "C" and Street "F." Detailed sight distance worksheets included in **Appendix M**.

Recommendation #4 – Seek City approval of the restrictive condition minimum sight distance of 200 feet at the intersection of Street "C" and Street "F". Initial coordination with the City indicates approval of this condition.

EXHIBIT 9-1: REQUIRED SIGHT DISTANCE - STREET "C" AND STREET "F"

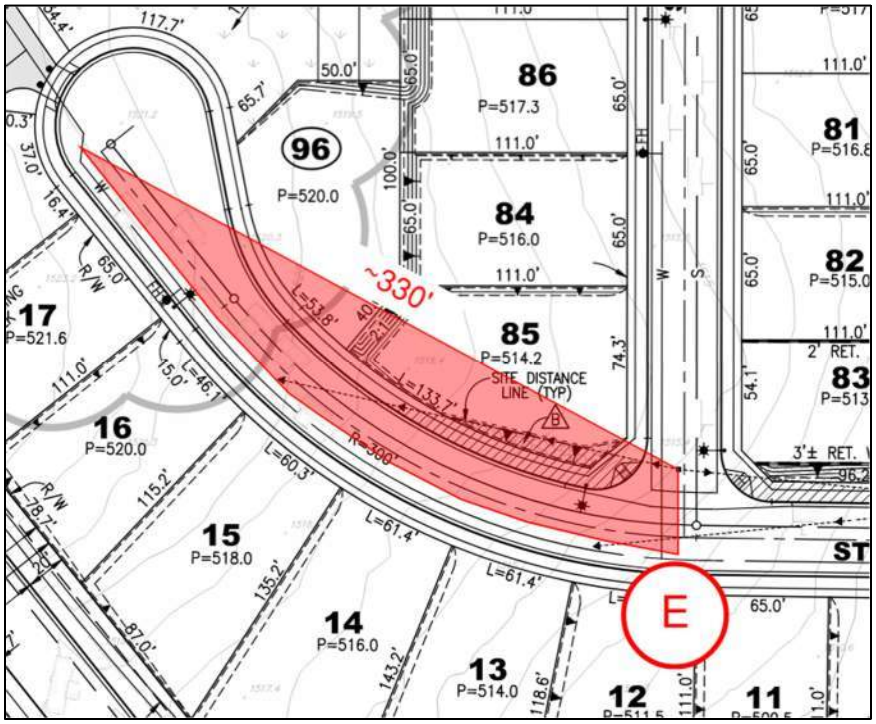
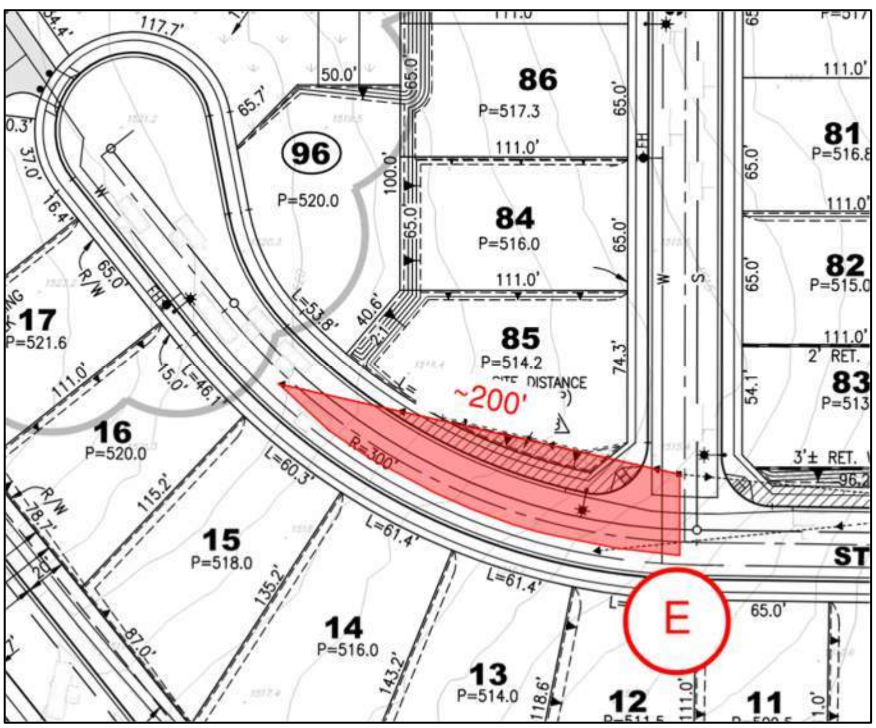


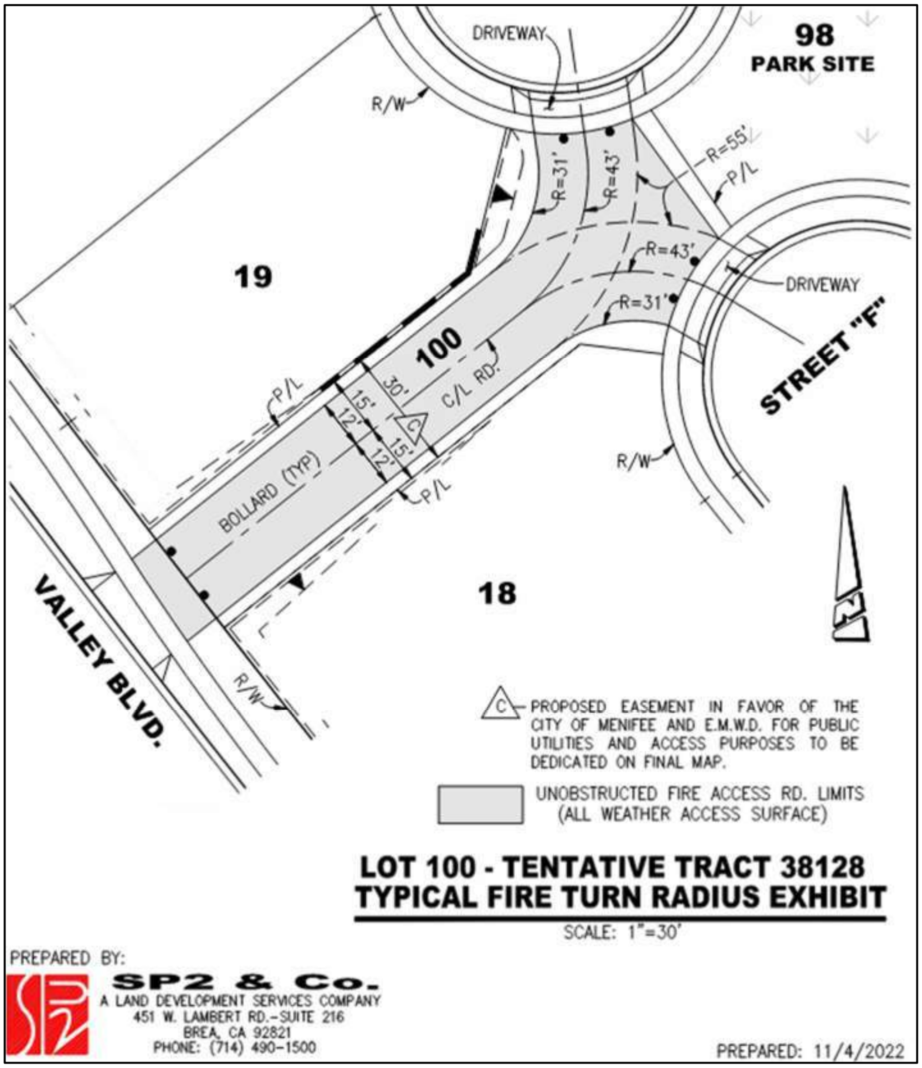
EXHIBIT 9-2: PROPOSED SIGHT DISTANCE - STREET "C" AND STREET "F"



9.2 NO PARKING AREAS NEAR EMERGENCY VEHICLE ACCESS

Area of Concern #5 (EVA Improvement) – The site plan was modified to include cul-de-sacs along Street "F", as well as access to an EVA between the cul-de-sacs and Valley Boulevard. To facilitate access to the EVA driveways from the cul-de-sacs, "No Parking" restrictions should be considered**. Exhibit 9-3** shows the EVA driveways on the turn radius exhibit provided by the applicant.

EXHIBIT 9-3: EVA DRIVEWAYS



Recommendation #5 – Provide 5-foot of red curb on each side of the EVA driveways to discourage individuals from parking too close to the driveway pan. If there is less than 25 feet between the EVA driveway and a residential driveway for the nearby lots, red curb is recommended all the way to the next driveway.

10 VEHICLE MILES TRAVELED

To satisfy California Environmental Quality Act (CEQA), a VMT screening assessment was prepared for Tract 38128 At Byers Road Project under a separate memorandum.

11 FINDINGS AND RECOMMENDATIONS

11.1 LEVEL OF SERVICE ANALYSIS

Table 11-1 summarizes the intersection analysis results for all scenarios and **Table 11-2** summarizes the segment operations analysis results. The key findings are summarized below:

Existing Year 2022

In the Existing Year 2022 condition, all intersections operate at acceptable LOS D or better during the AM and PM Peak Hour. Additionally, all study segments operate under LOS D capacity.

Existing Year 2022 With Project

In the Existing Year 2022 With Project condition, all study intersection operate at acceptable LOS D or better. Additionally, all study segments operate under LOS D capacity. There are no adverse effects at the study intersections or segments due to the Project.

Opening Year 2026

In the Opening Year 2026 condition, the intersections of Ethanac Road and Byers Road (#1) and Chambers Avenue and Murrieta Road (#6) are projected to operate at unacceptable LOS (E or F) during both peak hours. All other intersections operate at LOS D or better during both the AM and PM peak hours. Additionally, all study segments operate under LOS D capacity.

Opening Year 2026 With Project

In the Opening Year 2026 With Project condition, the intersections of Ethanac Road and Byers Road (#1) and Chambers Avenue and Murrieta Road (#6) are projected to continue to operate at unacceptable LOS (E or F) during both peak hours. All other study intersections operate at acceptable LOS D or better. Additionally, all study segments operate under LOS D capacity. **A cumulative adverse project effect has been identified at the intersection of Chambers Avenue and Murrieta Road (#6).**

Transportation Improvement Needs

Beyond the level of service analysis, transportation network improvements have been identified in the area given the existing presence of dirt roadways rather than the planned roadway types identified in the City's General Plan Roadway Network. These improvements include construction of Byers Road along the site frontage, the extension of the construction of Byers Road to the south of the project site, and the construction of the Byers Road and Rouse Road Intersection.

11.2 ADVERSE PROJECT EFFECTS

A cumulative adverse project effect has been identified at the intersection of Chambers Avenue and Murrieta Road (#6). During both the Opening Year 2026 and the Opening Year 2026 With Project conditions, the intersection is project to operate at unacceptable LOS. In addition, the project is expected to add 54 AM trips and 72 PM trips. Under the City Guidelines, unacceptable operations and more than 50 add project trips result in a cumulative adverse effect.

A cumulative adverse project effect has not been identified at the intersection of Ethanac Road and Byers Road (#1). Similar to Intersection #6, during both the Opening Year 2026 and the Opening Year 2026 With Project conditions, the intersection operates at unacceptable LOS. However, the project is not expected to add more than 50 project trips during either peak hour. Thus, the poor operations alone do not constitute a cumulative adverse project effect.

TABLE 11-1: INTERSECTION LOS SUMMARY TABLE

ID	Intersection	Control Type	Existing Year 2022				Existing With Project				Opening Year 2026				Opening Year With Project				Opening Year With Project With Improvement			
			AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
			LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay
1	Ethanac Rd & Byers Rd	OWSC	C	18.7	B	12.3	C	17.6	B	14.4	**F**	**95.7**	**E**	**44.6**	**F**	**100.5**	**F**	**91.1**	--	--	--	--
2	McLaughlin & Byers Rd	TWSC	*Intersection Does Not Exist Under This Condition*				A	9.1	A	9.1	*Intersection Does Not Exist Under This Condition*				A	9.4	A	9.6	--	--	--	--
3	Street G & Byers Rd	OWSC	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	--	--	--	--
4	Street F & Byers Rd	OWSC	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	*Intersection Does Not Exist Under This Condition*				A	8.5	A	8.6	--	--	--	--
5	Rouse Rd & Murrieta Rd	TWSC	B	12.9	B	13.5	B	11.4	B	12.1	C	21.7	D	30.0	C	17.1	C	21.9	--	--	--	--
6	Chambers Ave & Murrieta Rd	AWSC / SIG	B	11.2	B	11.8	B	12.1	B	12.7	**F**	**107.3**	**F**	**86.8**	**F**	**128.0**	**F**	**102.4**	A	8.3	A	6.6

Notes: 1) LOS = Level of Service
2) LOS E or LOS F in **red bold font** where applicable.
3) SIG = Signalized; OWSC = One-Way Stop-Controlled; Two-Way Stop-Controlled; All-Way Stop-Controlled
4) Overall LOS provided for signalized & all-way stop intersections. Worst approach LOS provided for one-way and two-way stop-controlled intersections.
5) Delay shown in seconds per vehicle.
6) Adverse Effect shown highlighted in yellow.
7) AWSC/SIG = AWSC without improvement, Signal with improvement.

TABLE 11-2: SEGMENT LOS SUMMARY TABLE

ID	Segment	Operate at LOS D or Better?			
		Existing	Existing With Project	Opening Year[1]	Opening Year With Project
A	Byers Road North of "Street G"	Yes	Yes	Yes	Yes
B	Byers Road South of "Street F"	Yes	Yes	Yes	Yes

Note: 1) All segments projected to operate at LOS D or better; therefore, no improvements identified.

11.3 ON-SITE CIRCULATION

A review of the project intersections confirm all intersections except for the intersection of Street "C" and Street "F", provide adequate sight distance with relatively unobstructed views per *Standard Plan 81 - Intersection Sight Distance.* The intersection of Street "C" and Street "F" only provides the restrictive condition minimum stopping sight distance of 200 feet. No additional improvements are recommended pending approval of minimum sight distance. Additionally, the EVA driveways between the Project site and the future Valley Boulevard were evaluated to determine the need for parking restrictions.

11.4 IMPROVEMENT SUMMARY

11.4.1 Recommendation #1

As shown in **Table 11-1**, a cumulative adverse project effect has been identified at the intersection of Chambers Avenue and Murrieta Road (#6). In **Section 8.3 Improvement Evaluation**, intersection signalization was found to properly address the adverse project effect. Signalization will improve Opening Year 2026 With Project conditions from LOS F to LOS A for both peak hours. Given the effective improvement, the Project proposes one off-site improvement at the intersection of Chambers Avenue and Murrieta Road (#6).

Recommendation #1 – Install a traffic signal at the intersection of Chambers Avenue and Murrieta Road (#6).

11.4.1.1 Fair Share Contribution

The adverse project effect at the intersection of Chamber Avenue and Murrieta Road (#6) is considered a cumulative effect not a direct effect. As such, a fair share payment is required toward reducing the effect. **Table 11-3** shows the estimated fair share percentage and payment the project will be responsible for.

TABLE 11-3: FAIR SHARE CONTRIBUTION

ID	Intersection	Existing Volume		Project Only Volume		Opening With Project Volume		Fair Share %	Estimated Improvement Cost	Estimated Fair Share Payment
		AM	PM	AM	PM	AM	PM			
6	Chambers Ave & Murrieta Rd	645	751	54	72	1,433	1,739	7.07%	$300,000	$21,210

11.4.2 Recommendation #2

Byers Road is currently an unpaved two-lane roadway in the City of Menifee. It is expected that the Project will improve Byers Road along the site frontage.

Recommendation #2 – Construct Byers Road as a two-lane Collector along site frontage.

11.4.3 Recommendations #3A & #3B

The majority of the projected site traffic is anticipated to travel to the south of the Project driveways along Byers Road and along Rouse Road to the east of Byers Road. This section of Byers Road is currently a dirt roadway. Construction of the portion of Byers Road to the south and the connection at Rouse Road are needed to facilitate the safe and efficient movement of site traffic along the desired travel path.

Recommendation #3A – Construct Byers Road as a two-lane Collector from the southern Project boundary to Rouse Road.

Recommendation #3B – Construct the intersection of Byers Road and Rouse Road to connect the north leg and the east leg. Implementation should consider future connection to the west by others.

11.4.4 Recommendation #4

At the intersection of Street "C" and Street "F", the minimum sight distance for 30 mph is 200 feet. The current site provides approximately 200 feet of sight distance due to the restrictive condition of the horizontal curve on Street "F". In coordination with City staff, a previous site plan was revised to include dual cul-de-sacs between lots 18 and 19. Under the current site plan with dual cul-de-sacs, the City has provided initial approval of the restrictive condition sight distance at the intersection of Street "C" and Street "F."

Recommendation #4 – Seek City approval of the restrictive condition minimum sight distance of 200 feet at the intersection of Street "C" and Street "F". Initial coordination with the City indicates approval of this condition.

11.4.5 Recommendation #5

To facilitate access to the EVA from the cul-de-sacs, "No Parking" restrictions should be considered**.**

Recommendation #5 – Provide 5-foot of red curb on each side of the EVA driveways to discourage individuals from parking too close to the driveway pan. If there is less than 25 feet between the EVA driveway and a residential driveway for the nearby lots, red curb is recommended all the way to the next driveway.

Appendix A:
Traffic Scoping Agreement

ATTACHMENT A
SCOPING AGREEMENT FOR TRAFFIC STUDY

This letter acknowledges the City Menifee Engineering Department requirements for the traffic study of the following project. The analysis must follow the latest City Traffic Study Guidelines dated October 2020

Case No.	TTM 38128
Related Cases	--
SP No.	--
EIR No.	--
GPA No.	--
CZ No.	--
Project Name:	Menifee Tract 38128 at Byers Lane Project
Project Location:	Southwest corner of Byers Road and Troy Lane
Project Description:	The project would allow for the development of 96 single family residential lots, one 35,409 sq/ft water quality basin, and one 1.37-ac park.

	Consultant	**Developer**
Name:	Michael Baker International	
Address:	3536 Concours, Suite 100, Ontario, CA 91764 Carla Dietrich (cdietrich@mbakerintl.com)	
Telephone:	(909) 974-4908	

A. Trip Generation

Source:	ITE Trip Generation Manual, 11th Edition (ITE Code 210)		
Existing Land Use:	Vacant	Proposed Land Use:	Residential
Existing Zoning:	Low-Density Residential	Proposed Zoning:	Low-Density Residential

(Analysis conducted using fitted curve)			
Total Daily Trips =	972		
	In	Out	Total
AM Trips	19	53	72
PM Trips	60	36	96

	Yes	No	% Trip Discount
Internal Trip Allowance		✓	0%
Pass-By Trip Allowance		✓	0%
Trip Credit		✓	--
(Attach additional sheet if this is a multi-use site with a breakdown of trips generated)			

B. Trip Geographic Distribution

N -- % **S** 60 % **E** 25 % **W** 15 %

(See attached exhibit for detailed assignment) – See **Attachment 1**

C. Background Traffic

Project Completion Year:	2026
Annual Ambient Growth Rate:	2% (per City guidelines)
Other area projects to be included:	To be requested from City staff
Model/Forecast methodology if required:	--

D. Horizon Year Analysis

	Yes	No
Does this project require a Horizon Year Analysis?		✓
(Note: GPA, SP, or SPA not required.)		

E. Study Intersections

(NOTE: Subject to revision after other projects, trip generation and distribution are determined, or comments from other agencies.)

1.	Byers Road and Ethanac Road	5.	Byers Road and Street “G”
2.	Byers Road and McLaughlin Road	6.	Byers Road and Street “F”
3.	Murrieta Road and Rouse Road	7.	--
4.	Murrieta Road and Chambers Avenue	8.	--

F. Study Roadway Segments

1.	Byers Road north of Street “G”	5.	--
2.	Byers Road south of Street “F”	6.	--
3.	--	7.	--
4.	--	8.	--

G. Other Jurisdictional Impacts

	Yes	No
Is this project within any other Agency’s Sphere of Influence or one-mile radius of boundaries?		✓
If so, name of Jurisdiction:		
All study intersections and study roadway segments are located within the City of Menifee.		

H. Site Plan

(Please attached a legible 11x17 copy) – See **Attachment 2**

I. Specific issues to be addressed in the Study (in addition to the standard analysis described in the Guideline) (To be filled out by Engineering Department)

1. Confirm intersection sight distance at both project intersections with Byers Road per City standards. (Per City request)
2. Confirm sight distance for all internal roadway intersections per City standards, particularly the intersection of “Street C” and “Street F”, which is very close to a horizontal curve. (Per City request)

J. Other

Analysis Scenarios

1. Existing Conditions
2. Opening Year Cumulative Without Project Conditions
3. Opening Year Cumulative With Project Conditions
4. Opening Year Cumulative With Project Conditions + Improvements (if necessary)

Traffic Count Requirements

1) Collected on a weekday (Tuesday, Wednesday or Thursday).
2) Collected during a non-holiday week and on days of good weather.
3) Counts will be conducted during the Summer 2022. In-session schools are not required given proximity to local schools. The closest school to any of the study intersections is Ridgemoor Elementary which is located 1.5 miles south of the intersection of Murrieta Road and Chambers Avenue.
4) Weekday count time periods: 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM.
5) Per City guidelines, an encroachment permit from the City of Menifee will be obtained if needed.

K. VMT Analysis Scoping Form

MENIFEE
New. Better. Best.

City of Menifee TIA Guidelines
January 2022

Attachment A: Project Scoping Form

This scoping form shall be completed and submitted to the City of Menifee to assist in identifying infrastructure improvements that may be required to support traffic from the proposed project.

Project Identification:

Case Number:	TTM 38128
Related Cases:	
SP No.	
EIR No.	
GPA No.	
CZ No.	
Project Name:	Menifee- Tract 38128 at Byers Lane Project
Project Address:	Southwest corner of Byers Road and Troy Lane
Project Opening Year:	TBD
Project Description:	The project would allow for the development of 96 single family residential lots, one 35,409 sq/ft water quality basin, and one 1.37-ac park.

Trip Generation Information:

Trip Generation Data Source: ITE Trip Generation Manual, 11th Edition.

Current General Plan Land Use: Residential

Proposed General Plan Land Use: Residential

Current Zoning: Low-Density Residential

Proposed Zoning: Low-Density Residential

	Existing Trip Generation Vacant/Undeveloped			Proposed Trip Generation		ITE Code 210
	In	Out	Total	In	Out	Total
AM Trips	0	0	0	19	53	72
PM Trips	0	0	0	60	36	96

Trip Internalization: ☐ Yes ☒ No (0 % Trip Discount)

Pass-By Allowance: ☐ Yes ☒ No (0 % Trip Discount)

*Please see attached for operational analysis distribution and study area (Attachment 1). Project site plan is provided in Attachment 2.

Potential Screening Checks

Is your project screened from specific analyses (see Page 5 of the guidelines related to LOS assessment).

Is the project screened from VMT assessment? ☒ Yes ☐ No

VMT screening justification (see Pages 10-12 of the guidelines):
Step 1: TPA Screening- The project is not located within a TPA (Attachment 3)
Step 2: Low VMT Area - The project is located within a Low VMT Area per WRCOG VMT Tool (Attachment 4), however supplemental screening will be discussed in the VMT screening technical memorandum.
VMT Screening Technical memorandum to document project relative to General Plan land use.

VMT Analysis Scoping

For projects that are not screened, identify the following:

- Travel Demand Forecasting Model Used WRCOG
- Attach WRCOG Screening VMT Assessment output or describe why it is not appropriate for use
- Attach proposed Model Land Use Inputs and Assumed Conversion Factors (attach)

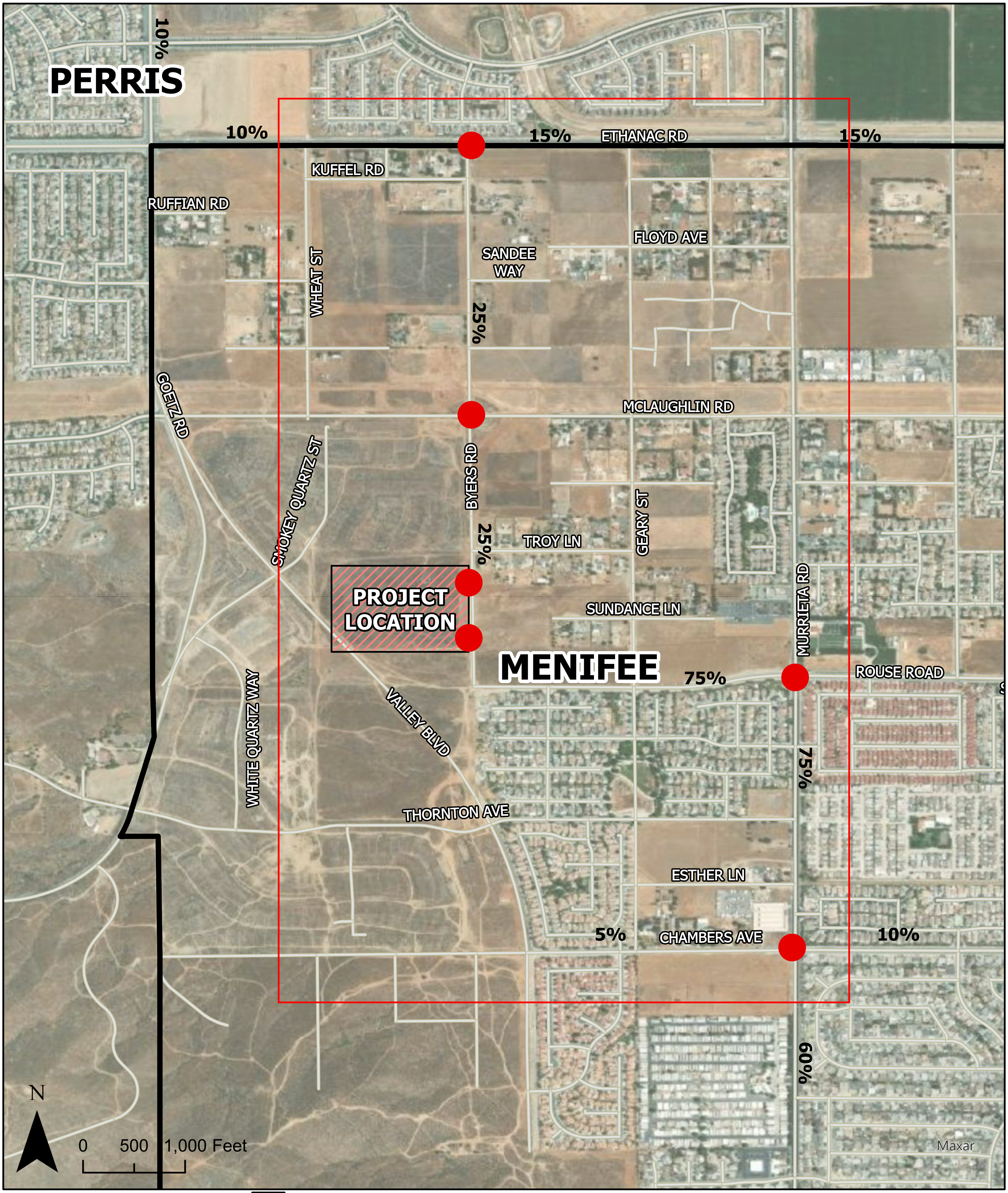
Recommended by:

Carla Dietrich	7/11/2022
Consultant's Representative	Date
	6/20/2022
Scoping Agreement Submitted on	Date
	7/7/2022
Scoping Agreement Resubmitted on	Date

Approved Scoping Agreement:

Rob Blough, PE, TE, Traffic Engineer
07/15/2022

City of Menifee



Project Location
Study Intersections
5% Project Distribution

Michael Baker INTERNATIONAL

PROJECT AREA

REVISIONS		
NO.	BY	DESCRIPTION

Attachment 2: Project Site Plan

TENTATIVE TRACT MAP 38128

PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4, OF SECTION 17, T. 5 S., R. 3 W., S.B.M.
IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA

60' 0 60' 120' 180'
SCALE: 1"=60'

LEGEND:

CL	CENTERLINE	TC	TOP OF CURB
EXIST.	EXISTING	FG	FINISHED GRADE
C&G	CURB AND GUTTER	TW	TOP OF WALL
GB	GRADE BREAK	INV	INVERT ELEVATION
HP	HIGH POINT	HP	HIGH POINT
LP	LOW POINT	P/L	PROPERTY LINE
FL	FLOW LINE	LP	LOW POINT
EP	EDGE OF PAVEMENT	CB	CATCH BASIN
R/W	RIGHT OF WAY	BSL	BUILDING SETBACK LINE
PROP.	PROPOSED		FIRE HYDRANT
P=	PAD ELEVATION		STREET LIGHT
EVA	EMERGENCY VEHICULAR ACCESS		
CMU	CONCRETE MASONRY UNIT		

TYPICAL CROSS- SECTION — SECTION REFERENCE — SHEET NO.
TRACT BOUNDARY
PROP. SLOPE
EXIST. CONTOUR
PROP. SEWER LINE
PROP. WATER LINE
PROP. STORM DRAIN LINE
PROP. HOA MAINTAINED LANDSCAPE EASEMENT
PROP. PARK SITE EASEMENT
LINE OF SIGHT-LIMITED USE AREA

UTILITY PURVEYORS

SCHOOL DISTRICT: MENIFEE UNION-PERRIS UNION HIGH
SEWER: EASTERN MUNICIPAL WATER DISTRICT
WATER: EASTERN MUNICIPAL WATER DISTRICT
DRAINAGE: CITY OF MENIFEE/RIVERSIDE COUNTY FLOOD CONTROL
GAS: SOUTHERN CALIFORNIA GAS COMPANY
ELECTRIC: SOUTHERN CALIFORNIA EDISON COMPANY

FLOOD ZONE DESIGNATION

ZONE X, MAP PANEL #06065C2055H
EFFECTIVE DATE: AUGUST 18, 2014

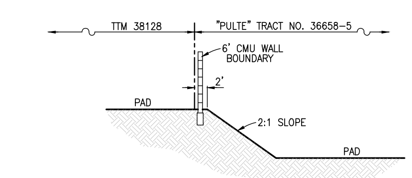
AREA OF 0.2% ANNUAL FLOOD CHANCE; OF 1% ANNUAL FLOOD WITH AVERAGE DEPTHS OF LESS THAN 1 FOOT OR WITH DRAINAGE AREAS LESS THAN 1 SQUARE MILE, AND AREAS PROTECTED BY LEVEES FROM 1% ANNUAL CHANCE FLOOD.

PROPOSED EASEMENT NOTES

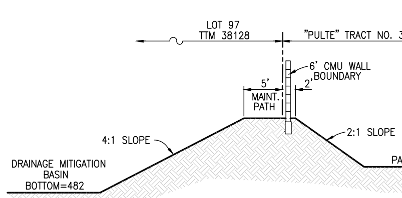
A PROPOSED EASEMENT IN FAVOR OF THE CITY OF MENIFEE AND E.M.W.D. FOR PUBLIC UTILITIES, ACCESS AND EMERGENCY OVERFLOW PURPOSES TO DEDICATED ON FINAL MAP

B PROPOSED EASEMENT IN FAVOR OF H.O.A. FOR LANDSCAPE MAINTENANCE PURPOSES TO BE DEDICATED ON FINAL TRACT MAP.

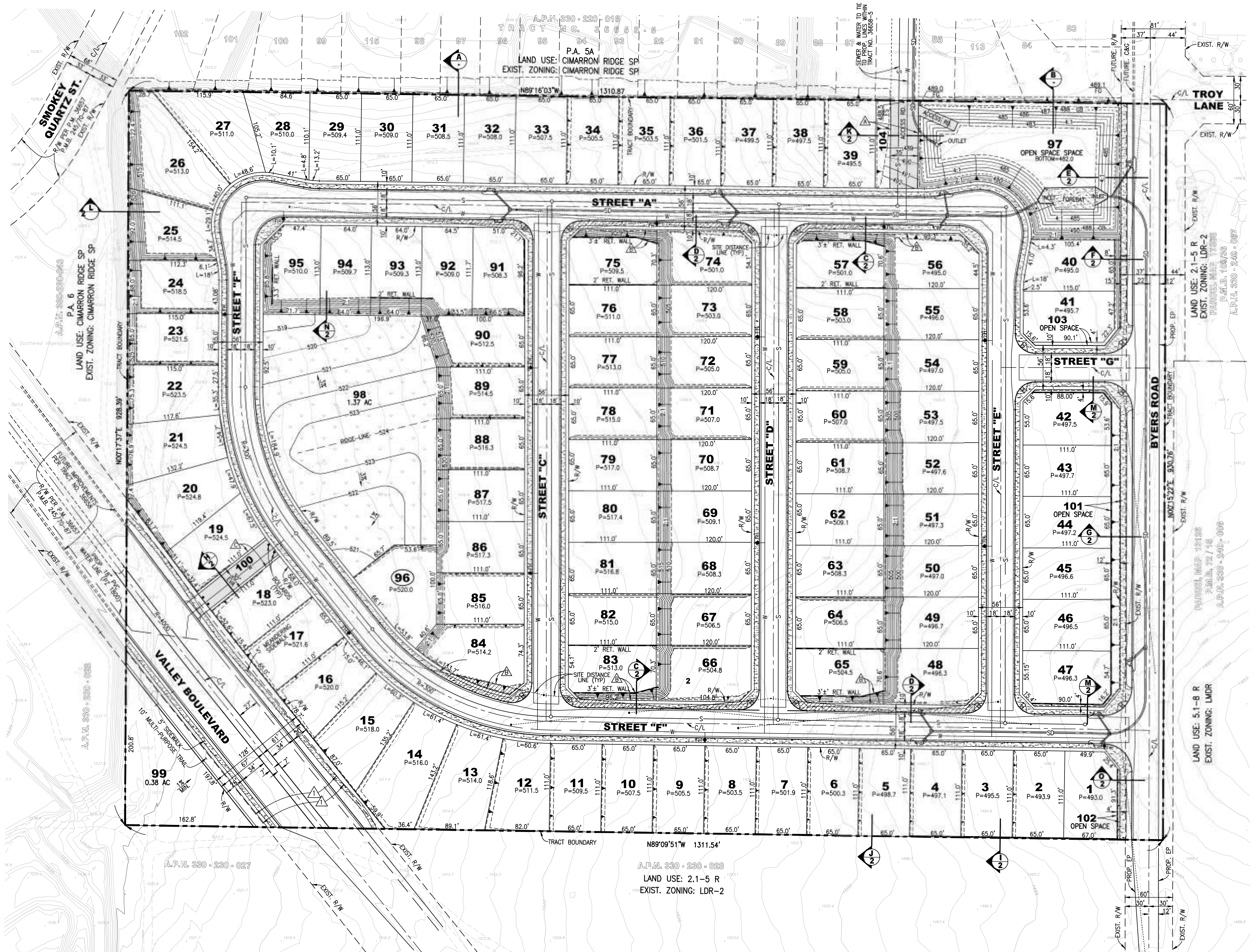
C PROPOSED EASEMENT IN FAVOR OF THE CITY OF MENIFEE AND E.M.W.D. FOR PUBLIC UTILITIES AND ACCESS PURPOSES TO BE DEDICATED ON FINAL MAP.

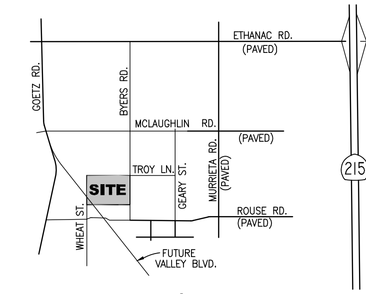


TYP. SECTION "A"
N.T.S.



TYP. SECTION "B"
N.T.S.





VICINITY MAP
N.T.S.

LOT #	LOT AREA (SF)	LOT WIDTH	LOT DEPTH	LOT #	LOT AREA (SF)	LOT WIDTH	LOT DEPTH
1	7,200	67.0'	111.0'	56	8,082	70.6'	120.0'
2	7,215	65.0'	111.0'	57	7,785	65.0'	111.0'
3	7,215	65.0'	111.0'	58	7,215	65.0'	111.0'
4	7,215	65.0'	111.0'	59	7,215	65.0'	111.0'
5	7,215	65.0'	111.0'	60	7,215	65.0'	111.0'
6	7,215	65.0'	111.0'	61	7,215	65.0'	111.0'
7	7,215	65.0'	111.0'	62	7,215	65.0'	111.0'
8	7,215	65.0'	111.0'	63	7,215	65.0'	111.0'
9	7,215	65.0'	111.0'	64	7,215	65.0'	111.0'
10	7,215	65.0'	111.0'	65	7,643	70.6'	111.0'
11	7,215	65.0'	111.0'	66	8,413	70.3'	120.0'
12	8,066	71.0'	113.0'	67	7,800	65.0'	120.0'
13	9,504	74.0'	127.0'	68	7,800	65.0'	120.0'
14	11,072	74.0'	158.0'	69	7,800	65.0'	120.0'
15	8,880	72.0'	123.0'	70	7,800	65.0'	120.0'
16	7,740	69.0'	112.0'	71	7,800	65.0'	120.0'
17	7,215	65.0'	111.0'	72	7,800	65.0'	120.0'
18	7,548	68.0'	111.0'	73	7,800	65.0'	120.0'
19	7,240	63.0'	115.0'	74	8,247	70.3'	111.0'
20	9,368	65.0'	127.0'	75	7,759	70.3'	111.0'
21	8,054	64.5'	123.0'	76	7,215	65.0'	111.0'
22	7,966	69.0'	115.0'	77	7,215	65.0'	111.0'
23	7,475	65.0'	115.0'	78	7,215	65.0'	111.0'
24	7,682	68.0'	113.0'	79	7,215	65.0'	111.0'
25	8,341	60.0'	115.0'	80	7,215	65.0'	111.0'
26	11,544	75.0'	135.0'	81	7,215	65.0'	111.0'
27	9,130	75.0'	115.0'	82	7,215	65.0'	111.0'
28	7,282	68.0'	105.0'	83	7,615	70.3'	111.0'
29	7,211	65.0'	111.0'	84	8,939	78.0'	136.0'
30	7,215	65.0'	111.0'	85	7,215	65.0'	111.0'
31	7,215	65.0'	111.0'	86	7,215	65.0'	111.0'
32	7,215	65.0'	111.0'	87	7,215	65.0'	111.0'
33	7,215	65.0'	111.0'	88	7,215	65.0'	111.0'
34	7,215	65.0'	111.0'	89	7,215	65.0'	111.0'
35	7,215	65.0'	111.0'	90	7,863	65.0'	121.0'
36	7,215	65.0'	111.0'	91	7,228	65.9	111.4'
37	7,215	65.0'	111.0'	92	7,239	64.5'	112.0'
38	7,215	65.0'	111.0'	93	7,232	64.0'	113.0'
39	7,215	65.0'	111.0'	94	7,232	64.0'	113.0'
40	7,213	65.0'	111.0'	95	7,835	72.0'	113.0'
41	7,248	64.0'	115.0'	96	8,939	76.0'	128.0'
42	7,204	66.0'	111.0'	97	35,409	DRAINAGE BASIN	
43	7,215	65.0'	111.0'	98	59,755	OPEN SPACE/PARK	
44	7,215	65.0'	111.0'	99	16,340	OPEN SPACE	
45	7,215	65.0'	111.0'	100	3,318	ACCESS ROAD	
46	7,215	65.0'	111.0'	101	5,222	OPEN SPACE	
47	7,277	66.0'	111.0'	102	355	OPEN SPACE	
48	8,445	70.6'	120.0'	103	1,348	OPEN SPACE	
49	7,800	65.0'	120.0'	104	5,977	ACCESS ROAD	
50	7,800	65.0'	120.0'				
51	7,800	65.0'	120.0'				
52	7,800	65.0'	120.0'				
53	7,800	65.0'	120.0'				
54	7,800	65.0'	120.0'				
55	7,800	65.0'	120.0'				

GENERAL NOTES:

1. MAP PREPARATION DATE: 12/22/2021
2. TOTAL SITE ACREAGE:
   - 27.98 ACRES GROSS - 25.63 ACRES NET
3. ASSESSOR'S PARCEL NUMBERS: 330-230-023 AND 330-230-024
4. EXIST. AND PROPOSED LAND USE: 2.1-5 DU/AC RESIDENTIAL (2.1-5 R)
5. EXIST. AND PROPOSED LAND USE: 2.1-5 DU/AC RESIDENTIAL (2.1-5 R)
6. 96 SINGLE FAMILY RESIDENTIAL LOTS (7,200 SF MIN) ARE PROPOSED WITHIN THE PROJECT.
7. DEVELOPMENT STANDARDS:
   - MIN. NET LOT SIZE: 7,200 SF
   - MIN. LOT WIDTH: 40'
   - MIN. LOT DEPTH: 90'
   - MIN. CUL-DE-SAC FRONTAGE: 35'
   - MIN. FRONT YARD SETBACK: 15'*
   - MIN. REAR YARD SETBACK: 10'
   - MIN. INTERIOR SIDE YARD SETBACK: 5'
   - MIN. CORNER SIDE YARD SETBACK: 15'

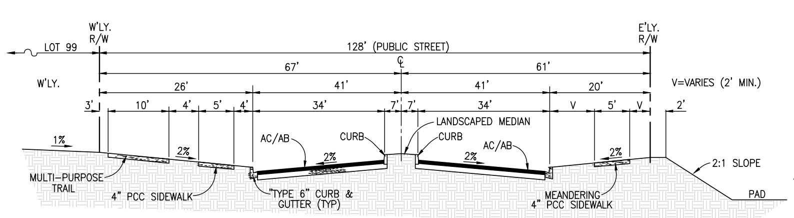
   * MIN. 20' TO FACE OF GARAGE
8. TOPOGRAPHY SOURCE:
   - AEROTECH MAPPING, INC. DATED JULY 2021.
9. BOUNDARY DATA SHOWN HEREON IS BASED ON A FIELD BOUNDARY SURVEY CONDUCTED IN JULY 2021.
10. LOT 97 TO BE DEDICATED FOR DRAINAGE MITIGATION PURPOSES.
11. LOT 98 (PARK SITE) TO BE MAINTAINED BY HOA.
12. LOT 99 TO BE RETAINED BY THE LAND OWNER.
13. EARTHWORK QUANTITIES (EXCLUDED REMEDIAL GRADING):
    CUT: 188,500 C.Y.
    FILL: 172,700 C.Y.
    EXPORT: 15,800 C.Y.
14. THE SITE IS DESIGNATED AS NON-VERY HIGH FIRE HAZARD SEVERITY ZONE (NON-VHFHSZ) PER CAL FIRE HAZARD SEVERITY ZONE MAP ID: FHSZL_C33_MENIFEE
15. THE PROPERTY IS CURRENTLY VACANT AND UNDEVELOPED.
16. SEWER AND WATER SERVICE FOR THE SITE WILL BE PROVIDED BY E.M.W.D.
17. THE TENTATIVE MAP INCLUDES THE ENTIRE CONTIGUOUS OWNERSHIP OF THE LAND DIVIDER.
18. THE SITE IS NOT WITHIN A COUNTY SERVICE AREA (CSA).
19. THE SITE IS NOT WITHIN A EARTHQUAKE FAULT ZONE.
20. THE SITE HAS A VERY LOW LIQUEFACTION POTENTIAL.

PREPARED BY (ENGINEER):
STEVENSON, PORTO & PIERCE, INC.
A LAND DEVELOPMENT SERVICES COMPANY
265 S. RANDOLPH AVENUE #105
BREA, CA 92821
PHONE: (714) 490-1500
CONTACT: HENRY LOZANO

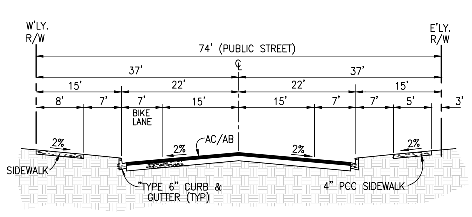
LANDSCAPE ARCHITECT:
STEVEN SANHAMEL LANDSCAPE ARCHITECT
2125 TURNBERRY LANE
CORONA, CA 92881
PHONE: (951) 990-3381
CONTACT: STEVE SANHAMEL

PREPARED FOR (APPLICANT):
JEN SoCaL 4, LLC
556 S. FAIR OAKS AVENUE #337
PASADENA, CA 91105
PHONE: (626) 263-4205
CONTACT: PAUL ONUFER

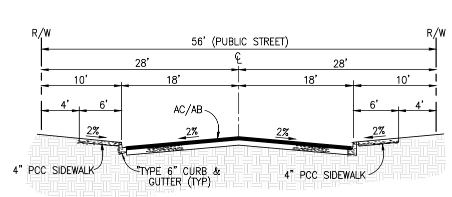
OWNER:
HAN FAMILY TRUST
3913 MALIBU VISTA DRIVE
MALIBU, CA 90265
CONTACT: STEVE SUNGKU HAN



TYPICAL SECTION
(ARTERIAL ROADWAY PER CIMARRON RIDGE SP)
VALLEY BOULEVARD
N.T.S.



TYPICAL SECTION
(COLLECTOR ROADWAY PER CIMARRON RIDGE SP)
BYERS ROAD
N.T.S.



TYPICAL SECTION
(CITY STD. 106, SECTION "A"-LOCAL STREET)
STREETS "A" THROUGH "G"
N.T.S.

LEGAL DESCRIPTION

THE SOUTHEAST QUARTER OF THE SOUTHWEST QUARTER OF SECTION 17, TOWNSHIP 5 SOUTH, RANGE 3 WEST, SAN BERNARDINO MERIDIAN, IN THE COUNTY OF RIVERSIDE, STATE OF CALIFORNIA, ACCORDING TO THE OFFICIAL PLAT THEREOF;

EXCEPT THE SOUTH 390.00 FEET.

EASEMENT NOTES

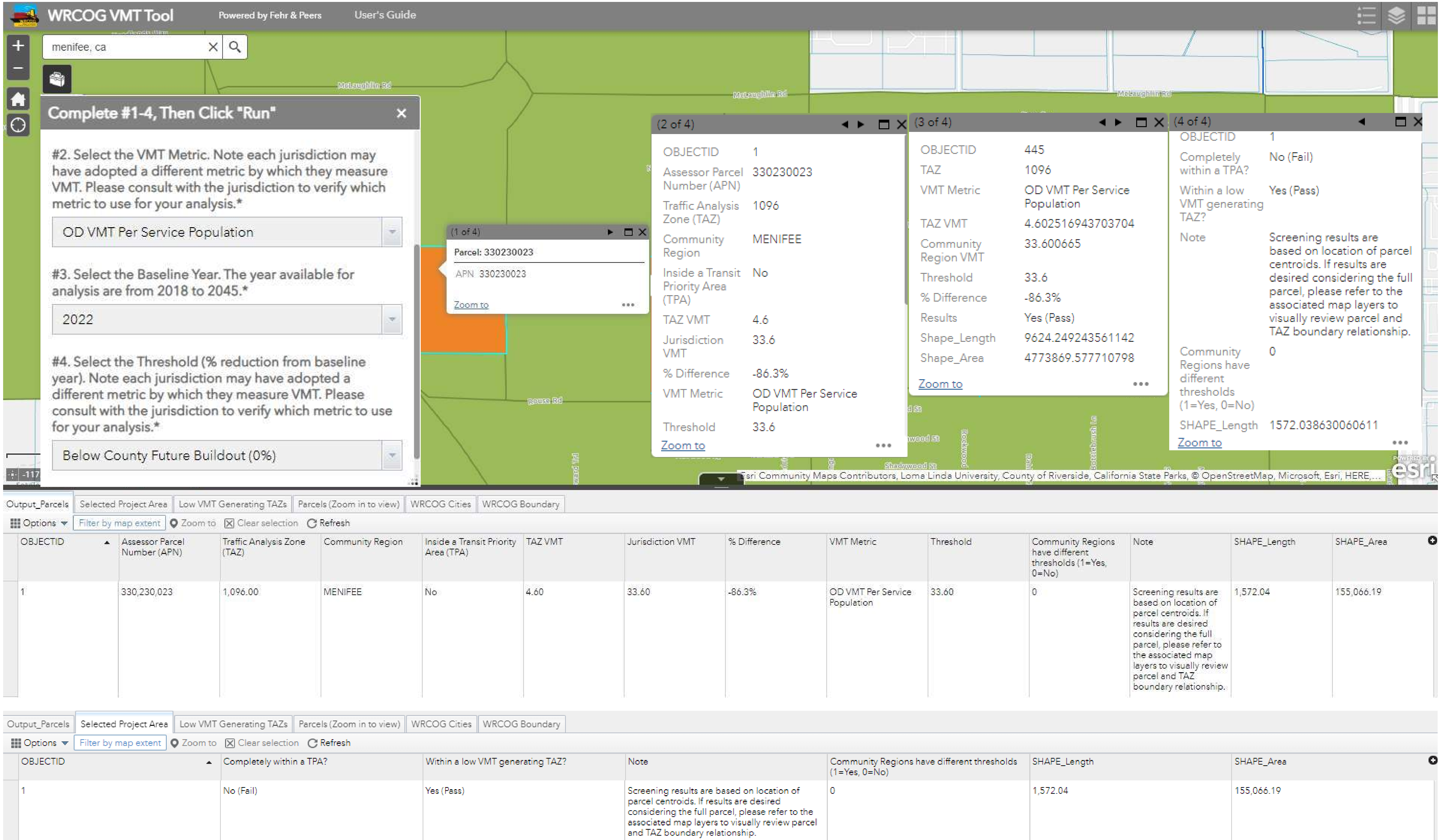
1 AN OFFER OF DEDICATION IN FAVOR OF THE COUNTY OF RIVERSIDE, FOR FOR PUBLIC ROADS, PUBLIC UTILITY AND PUBLIC SERVICES AND INCIDENTAL PURPOSES, RECORDED AUGUST 22, 1962, IN BOOK 3207, PAGE 176, O.R.

PORTION WERE LATER ACCEPTED THROUGH RESOLUTION NO. 2006-070, RECORDED APRIL 13, 2006, AS INSTRUMENT NO. 2006-0266402, O.R

2 AN EASEMENT IN FAVOR OF THE W.G. JENKINS, FOR PIPE LINES, DITCHES, FLUMES, OR OTHER WATER CONDUITS AND INCIDENTAL PURPOSES, RECORDED JANUARY 22, 1930, IN BOOK 836, PAGE 512, O.R.
THE LOCATION OF THE EASEMENT CANNOT BE DETERMINED FROM RECORD INFORMATION.

SHEET INDEX:

Attachment 3: WRCOG VMT Screening Tool



Attachment 4: WRCOG VMT Screening Tool

Project Information

Project Name

Byers Road and Troy Lane

Parcel Number (RIVCOM TAZ#1096)	Analysis Year
330230023	2022

Screening Criteria for Menifee

Use the online WRCOG VMT Tool to determine the following

Is the Project screened by Transit Priority Area or located in a low VMT generating zone?	Yes
Is the Project one of these land use types? (show land use types)	No
Does the project generate fewer than 110 daily trips? (enter project land use in the section below)	No

The Project can be considered for screening from additional analysis. Please refer to the 'secondary screening checks' table in the User Guide.

Project Land Use Information

		Unit
Residential : Single Family Homes	96	Dwelling Units
Residential : MultiFamily Homes	0	Dwelling Units
Office	0	1,000 Square Feet
Retail	0	1,000 Square Feet
Industrial	0	1,000 Square Feet
Manufacturing	0	1,000 Square Feet
Warehousing	0	1,000 Square Feet
Hotel	0	Rooms
University	0	Students
Private School	0	Students

Project Trips, VMT, and TAZ SED Information

Project Summary

Select VMT Methodology: Origin Destination (OD)

Analysis Year Daily Trips: 799 Average Trip Length: 8.3
Service Population: 288
Project VMT per Service Population: 23.1

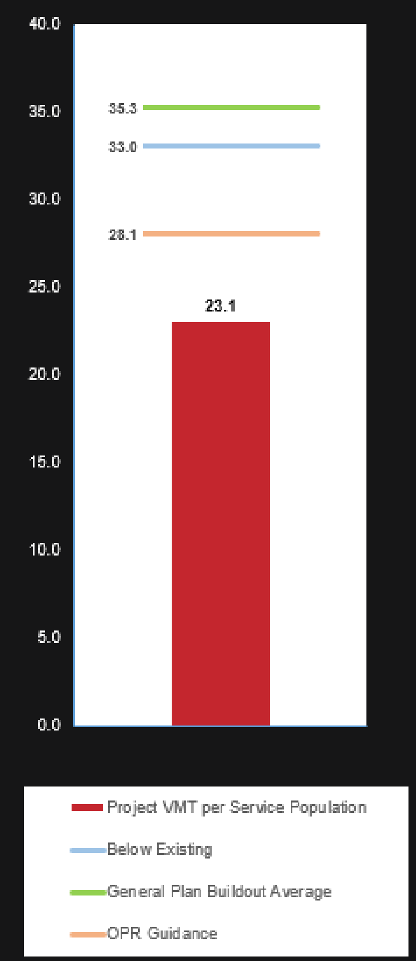
Project Location TAZ Socioeconomic 2018 RIVCOM Model

Land Use		Value	Unit
SFDU	- Single-Family Detached Housing	0	DU
MFDU	- Multi-Family Attached Housing	0	DU
K12	- Kindergarten - 12th Grade Enrollment	0	STU
COLLEGE	- College Enrollment	0	STU
AG	- Agricultural & Mining Employment	0	EMP
CONST	- Construction Employment	0	EMP
MANU	- Manufacturing Employment	0	EMP
WHOLE	- Wholesale Employment	0	EMP
RET	- Retail Employment	0	EMP
TRANS	- Transportation, Warehousing, and Utility Employment	0	EMP
INFOR	- Information Services Employment	0	EMP
FIRE	- Financial Activities Employment	0	EMP
PROF	- Professional and Business Services Employment	0	EMP
EDUC	- Educational and Health Services Employment	0	EMP
ARTENT	- Arts/Entertainment Employment	0	EMP
OTHSER	- Other Services Employment	0	EMP
PUBADMN	- Public Administration Employment	0	EMP

Project VMT Thresholds Comparison

Select the VMT Thresholds for comparison to project VMT

- [x] Below Existing
- [x] Better than General Plan Buildout
- [x] OPR Guidance (15% Below Existing)



ver. 2021.11.24

Appendix B:
Traffic Counts

ADT COUNTS

Counts Unlimited, Inc.

PO Box 1178
Corona, CA 92878
(951) 268-6268
email: counts@countsunlimited.com

City of Menifee
Byers Road
S/ Troy Lane
24 Hour Directional Volume Count

MEN001
Site Code: 122-22693

Start Time	8/17/22 Wed	Northbound Morning	Northbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Southbound Morning	Southbound Afternoon	Hour Totals Morning	Hour Totals Afternoon	Combined Totals Morning	Combined Totals Afternoon
12:00		1	0			0	0				
12:15		0	0			0	0				
12:30		0	0			0	0				
12:45		0	1	1	1	0	1	0	1	1	2
01:00		0	0			0	0				
01:15		0	0			0	0				
01:30		0	0			0	0				
01:45		0	0	0	0	0	0	0	0	0	0
02:00		0	**1**			0	0				
02:15		0	**0**			0	0				
02:30		0	**4**			0	1				
02:45		0	**1**	0	6	0	3	0	4	0	10
03:00		0	0			0	0				
03:15		0	0			0	0				
03:30		0	1			1	1				
03:45		0	1	0	2	0	0	1	1	1	3
04:00		0	0			0	0				
04:15		0	0			1	0				
04:30		0	0			0	0				
04:45		0	1	0	1	0	0	1	0	1	1
05:00		0	0			0	0				
05:15		0	0			0	0				
05:30		0	1			0	1				
05:45		0	3	0	4	1	0	1	1	1	5
06:00		0	1			0	0				
06:15		0	1			0	1				
06:30		0	1			1	**1**				
06:45		0	2	0	5	1	**0**	2	2	2	7
07:00		0	2			0	**2**				
07:15		0	0			0	**2**				
07:30		0	1			0	0				
07:45		**0**	1	0	4	2	0	2	4	2	8
08:00		**0**	1			1	0				
08:15		**0**	0			0	0				
08:30		**2**	0			1	1				
08:45		0	0	2	1	1	0	3	1	5	2
09:00		0	0			0	0				
09:15		0	0			**2**	0				
09:30		0	0			**1**	0				
09:45		1	4	1	4	**1**	0	4	0	5	4
10:00		0	0			**1**	0				
10:15		0	1			0	0				
10:30		0	0			0	0				
10:45		0	0	0	1	0	0	1	0	1	1
11:00		0	0			1	0				
11:15		0	0			1	0				
11:30		1	0			0	0				
11:45		0	0	1	0	0	0	2	0	3	0
Total		5	29	5	29	17	14	17	14	22	43
Combined Total		34		34		31		31		65	
AM Peak	-	07:45	-	-	-	09:15	-	-	-	-	-
Vol.	-	2	-	-	-	5	-	-	-	-	-
P.H.F.		0.250				0.625					
PM Peak	-	-	02:00	-	-	-	06:30	-	-	-	-
Vol.	-	-	6	-	-	-	5	-	-	-	-
P.H.F.			0.375				0.417				
Percentage		14.7%	85.3%			54.8%	45.2%				
ADT/AADT		ADT 65		AADT 65							

ITM COUNTS

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Menifee
N/S: Byers Road
E/W: Ethanac Road
Weather: Clear

File Name : 01_MEN_Byers_Etha AM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 1

Groups Printed- Total Volume

	Ethanac Road Westbound			Byers Road Northbound			Ethanac Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
07:00 AM	0	93	93	0	2	2	156	0	156	251
07:15 AM	1	68	69	1	1	2	212	1	213	284
07:30 AM	1	85	86	2	1	3	247	0	247	336
07:45 AM	0	111	111	0	0	0	210	0	210	321
Total	2	357	359	3	4	7	825	1	826	1192
08:00 AM	1	132	133	0	0	0	156	0	156	289
08:15 AM	1	133	134	0	1	1	116	0	116	251
08:30 AM	0	107	107	0	0	0	103	0	103	210
08:45 AM	0	83	83	0	0	0	93	0	93	176
Total	2	455	457	0	1	1	468	0	468	926
Grand Total	4	812	816	3	5	8	1293	1	1294	2118
Apprch %	0.5	99.5		37.5	62.5		99.9	0.1		
Total %	0.2	38.3	38.5	0.1	0.2	0.4	61	0	61.1	

	Ethanac Road Westbound			Byers Road Northbound			Ethanac Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 07:15 AM										
07:15 AM	**1**	68	69	1	**1**	2	212	**1**	213	284
07:30 AM	1	85	86	**2**	1	**3**	**247**	0	**247**	**336**
07:45 AM	0	111	111	0	0	0	210	0	210	321
08:00 AM	1	**132**	**133**	0	0	0	156	0	156	289
Total Volume	3	396	399	3	2	5	825	1	826	1230
% App. Total	0.8	99.2		60	40		99.9	0.1		
PHF	.750	.750	.750	.375	.500	.417	.835	.250	.836	.915

Counts Unlimited, Inc.
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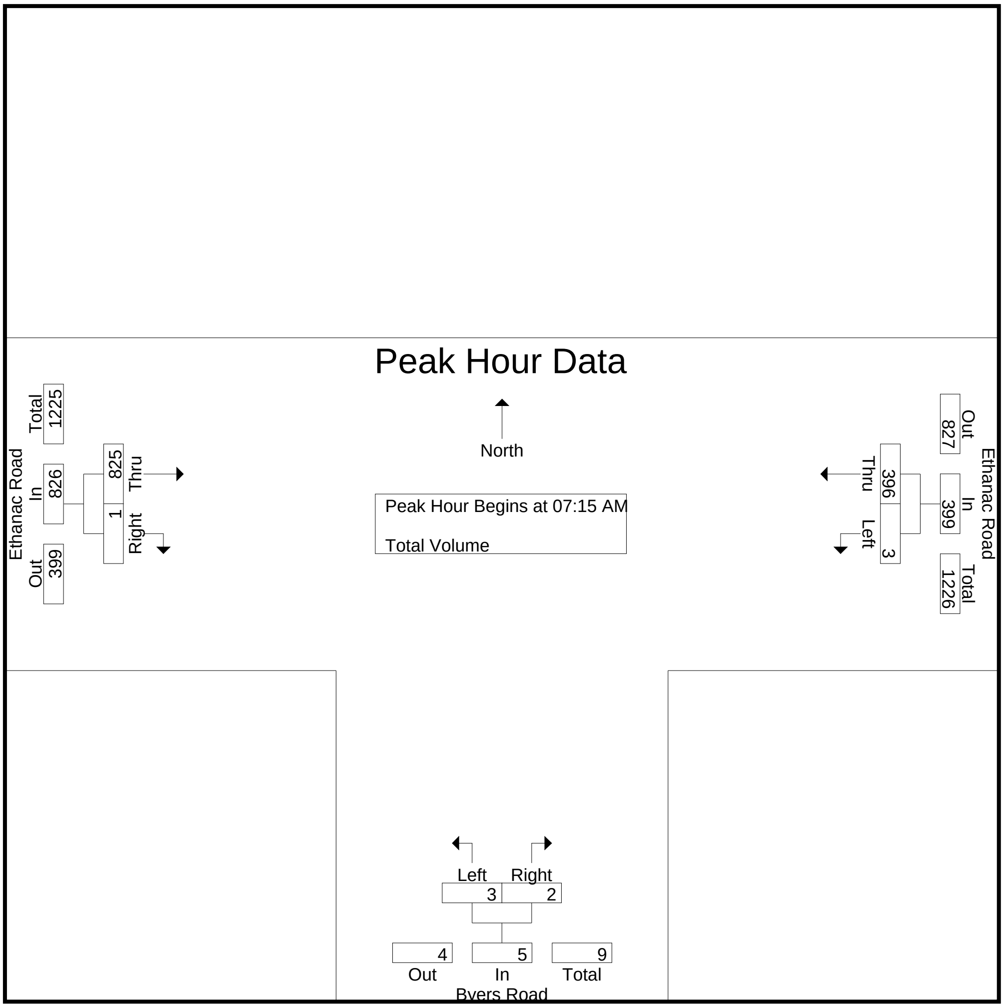
City of Menifee
N/S: Byers Road
E/W: Ethanac Road
Weather: Clear

File Name : 01_MEN_Byers_Etha AM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:45 AM			07:00 AM			07:00 AM		
+0 mins.	0	111	111	0	**2**	2	156	0	156
+15 mins.	**1**	132	133	1	1	2	212	**1**	213
+30 mins.	1	**133**	**134**	**2**	1	**3**	**247**	0	**247**
+45 mins.	0	107	107	0	0	0	210	0	210
Total Volume	2	483	485	3	4	7	825	1	826
% App. Total	0.4	99.6		42.9	57.1		99.9	0.1	
PHF	.500	.908	.905	.375	.500	.583	.835	.250	.836

Counts Unlimited, Inc.
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(951)268-6268

City of Menifee
N/S: Byers Road
E/W: Ethanac Road
Weather: Clear

File Name : 01_MEN_Byers_Etha PM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 1

Groups Printed- Total Volume

	Ethanac Road Westbound			Byers Road Northbound			Ethanac Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
04:00 PM	1	147	148	1	1	2	129	1	130	280
04:15 PM	0	176	176	0	2	2	154	1	155	333
04:30 PM	0	120	120	0	1	1	131	0	131	252
04:45 PM	1	115	116	0	0	0	110	0	110	226
Total	2	558	560	1	4	5	524	2	526	1091
05:00 PM	1	136	137	0	3	3	111	0	111	251
05:15 PM	2	134	136	0	0	0	109	0	109	245
05:30 PM	1	134	135	0	0	0	121	1	122	257
05:45 PM	1	135	136	0	0	0	134	0	134	270
Total	5	539	544	0	3	3	475	1	476	1023
Grand Total	7	1097	1104	1	7	8	999	3	1002	2114
Apprch %	0.6	99.4		12.5	87.5		99.7	0.3		
Total %	0.3	51.9	52.2	0	0.3	0.4	47.3	0.1	47.4	

	Ethanac Road Westbound			Byers Road Northbound			Ethanac Road Eastbound			
Start Time	Left	Thru	App. Total	Left	Right	App. Total	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1										
Peak Hour for Entire Intersection Begins at 04:00 PM										
04:00 PM	**1**	147	148	**1**	1	**2**	129	**1**	130	280
04:15 PM	0	**176**	**176**	0	**2**	2	**154**	1	**155**	**333**
04:30 PM	0	120	120	0	1	1	131	0	131	252
04:45 PM	1	115	116	0	0	0	110	0	110	226
Total Volume	2	558	560	1	4	5	524	2	526	1091
% App. Total	0.4	99.6		20	80		99.6	0.4		
PHF	.500	.793	.795	.250	.500	.625	.851	.500	.848	.819

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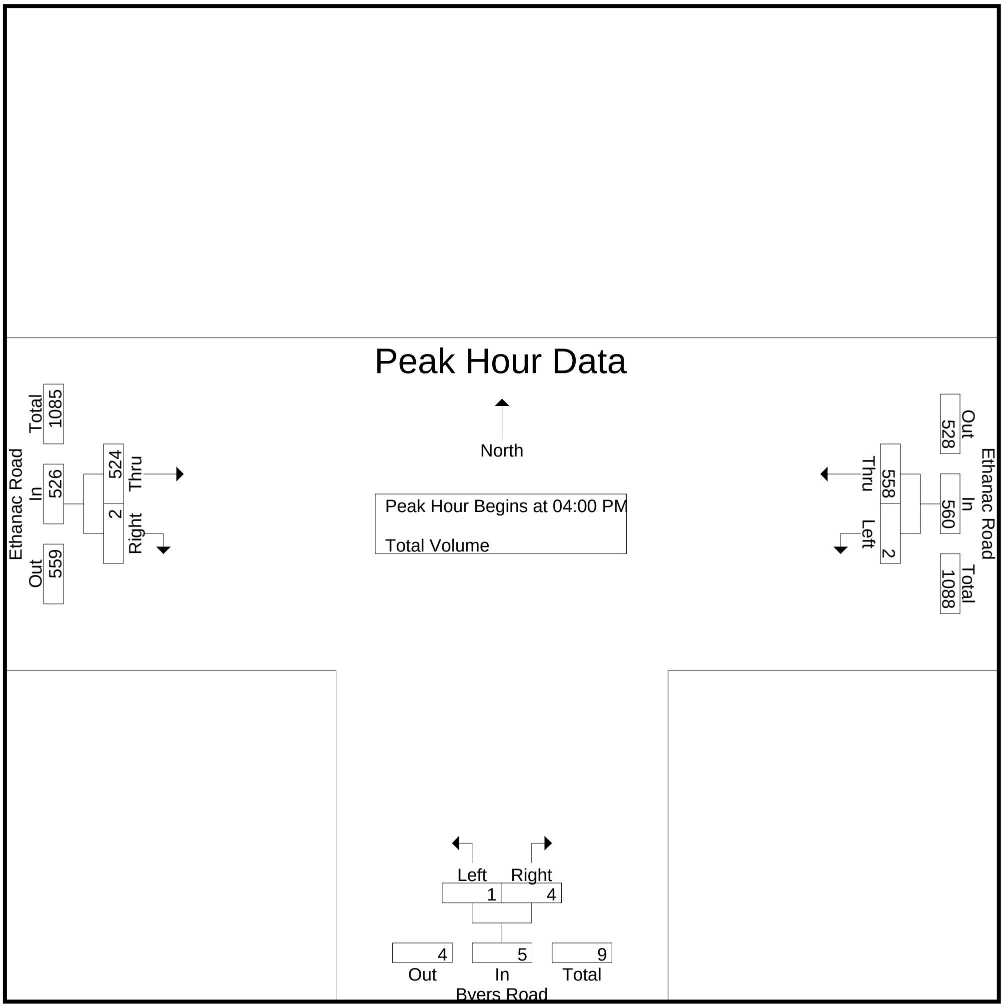
File Name : 01_MEN_Byers_Etha PM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM			04:15 PM			04:00 PM		
+0 mins.	**1**	147	148	0	2	2	129	**1**	130
+15 mins.	0	**176**	**176**	0	1	1	**154**	1	**155**
+30 mins.	0	120	120	0	0	0	131	0	131
+45 mins.	1	115	116	0	**3**	**3**	110	0	110
Total Volume	2	558	560	0	6	6	524	2	526
% App. Total	0.4	99.6		0	100		99.6	0.4	
PHF	.500	.793	.795	.000	.500	.500	.851	.500	.848

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Menifee
N/S: Murrieta Road
E/W: Rouse Road
Weather: Clear

File Name : 03_MEN_Mur_Rouse AM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 1

Groups Printed- Total Volume

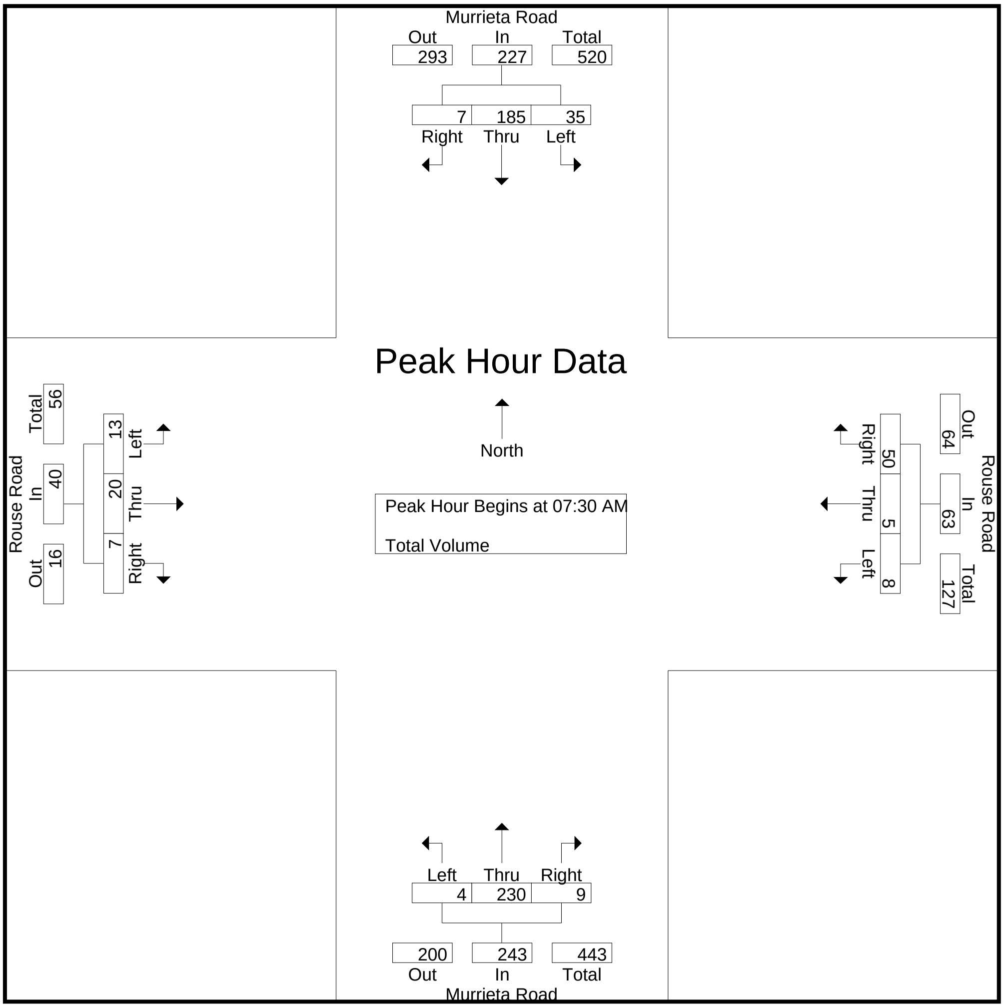
	Murrieta Road Southbound				Rouse Road Westbound				Murrieta Road Northbound				Rouse Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	3	30	2	35	2	0	11	13	2	50	3	55	11	1	1	13	116
07:15 AM	5	55	0	60	5	1	4	10	0	57	4	61	5	6	1	12	143
07:30 AM	9	41	2	52	4	2	12	18	0	62	1	63	4	6	1	11	144
07:45 AM	10	45	2	57	0	1	12	13	0	62	6	68	2	6	2	10	148
Total	27	171	6	204	11	4	39	54	2	231	14	247	22	19	5	46	551
08:00 AM	10	50	3	63	2	1	8	11	1	51	0	52	2	4	1	7	133
08:15 AM	6	49	0	55	2	1	18	21	3	55	2	60	5	4	3	12	148
08:30 AM	3	33	3	39	1	4	19	24	0	40	2	42	1	2	1	4	109
08:45 AM	11	51	1	63	4	3	15	22	2	58	6	66	4	1	0	5	156
Total	30	183	7	220	9	9	60	78	6	204	10	220	12	11	5	28	546
Grand Total	57	354	13	424	20	13	99	132	8	435	24	467	34	30	10	74	1097
Apprch %	13.4	83.5	3.1		15.2	9.8	75		1.7	93.1	5.1		45.9	40.5	13.5		
Total %	5.2	32.3	1.2	38.7	1.8	1.2	9	12	0.7	39.7	2.2	42.6	3.1	2.7	0.9	6.7	

	Murrieta Road Southbound				Rouse Road Westbound				Murrieta Road Northbound				Rouse Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	9	41	2	52	**4**	**2**	12	18	0	**62**	1	63	4	**6**	1	11	144
07:45 AM	**10**	45	2	57	0	1	12	13	0	62	**6**	**68**	2	6	2	10	**148**
08:00 AM	10	**50**	**3**	**63**	2	1	8	11	1	51	0	52	2	4	1	7	133
08:15 AM	6	49	0	55	2	1	**18**	**21**	**3**	55	2	60	**5**	4	**3**	**12**	148
Total Volume	35	185	7	227	8	5	50	63	4	230	9	243	13	20	7	40	573
% App. Total	15.4	81.5	3.1		12.7	7.9	79.4		1.6	94.7	3.7		32.5	50	17.5		
PHF	.875	.925	.583	.901	.500	.625	.694	.750	.333	.927	.375	.893	.650	.833	.583	.833	.968

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Menifee
N/S: Murrieta Road
E/W: Rouse Road
Weather: Clear

File Name : 03_MEN_Mur_Rouse AM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 2



Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:00 AM				07:00 AM			
+0 mins.	5	**55**	0	60	2	1	8	11	**2**	50	3	55	**11**	1	1	**13**
+15 mins.	9	41	2	52	2	1	18	21	0	57	4	61	5	**6**	1	12
+30 mins.	**10**	45	2	57	1	**4**	**19**	**24**	0	**62**	1	63	4	6	1	11
+45 mins.	10	50	**3**	**63**	**4**	3	15	22	0	62	**6**	**68**	2	6	**2**	10
Total Volume	34	191	7	232	9	9	60	78	2	231	14	247	22	19	5	46
% App. Total	14.7	82.3	3		11.5	11.5	76.9		0.8	93.5	5.7		47.8	41.3	10.9	
PHF	.850	.868	.583	.921	.563	.563	.789	.813	.250	.931	.583	.908	.500	.792	.625	.885

Counts Unlimited, Inc.
PO Box 1178
Corona, CA 92878
(951)268-6268

City of Menifee
N/S: Murrieta Road
E/W: Rouse Road
Weather: Clear

File Name : 03_MEN_Mur_Rouse PM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 1

Groups Printed- Total Volume

	Murrieta Road Southbound				Rouse Road Westbound				Murrieta Road Northbound				Rouse Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	9	58	0	67	3	2	16	21	2	54	3	59	0	0	1	1	148
04:15 PM	9	53	3	65	4	5	12	21	2	64	7	73	1	1	1	3	162
04:30 PM	10	71	3	84	5	4	13	22	0	54	2	56	2	2	1	5	167
04:45 PM	7	72	3	82	2	2	10	14	1	51	3	55	1	1	2	4	155
Total	35	254	9	298	14	13	51	78	5	223	15	243	4	4	5	13	632
05:00 PM	4	59	5	68	1	2	13	16	0	49	4	53	0	3	0	3	140
05:15 PM	14	81	4	99	2	2	10	14	2	50	3	55	2	3	2	7	175
05:30 PM	11	76	2	89	5	1	10	16	2	57	3	62	2	1	2	5	172
05:45 PM	11	70	4	85	3	4	13	20	2	39	5	46	2	1	0	3	154
Total	40	286	15	341	11	9	46	66	6	195	15	216	6	8	4	18	641
Grand Total	75	540	24	639	25	22	97	144	11	418	30	459	10	12	9	31	1273
Apprch %	11.7	84.5	3.8		17.4	15.3	67.4		2.4	91.1	6.5		32.3	38.7	29		
Total %	5.9	42.4	1.9	50.2	2	1.7	7.6	11.3	0.9	32.8	2.4	36.1	0.8	0.9	0.7	2.4	

	Murrieta Road Southbound				Rouse Road Westbound				Murrieta Road Northbound				Rouse Road Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	7	72	3	82	2	**2**	10	14	1	51	3	55	1	1	**2**	4	155
05:00 PM	4	59	**5**	68	1	2	**13**	**16**	0	49	**4**	53	0	**3**	0	3	140
05:15 PM	**14**	**81**	4	**99**	2	2	10	14	**2**	50	3	55	**2**	3	2	**7**	**175**
05:30 PM	11	76	2	89	**5**	1	10	16	2	**57**	3	**62**	2	1	2	5	172
Total Volume	36	288	14	338	10	7	43	60	5	207	13	225	5	8	6	19	642
% App. Total	10.7	85.2	4.1		16.7	11.7	71.7		2.2	92	5.8		26.3	42.1	31.6		
PHF	.643	.889	.700	.854	.500	.875	.827	.938	.625	.908	.813	.907	.625	.667	.750	.679	.917

Counts Unlimited, Inc.
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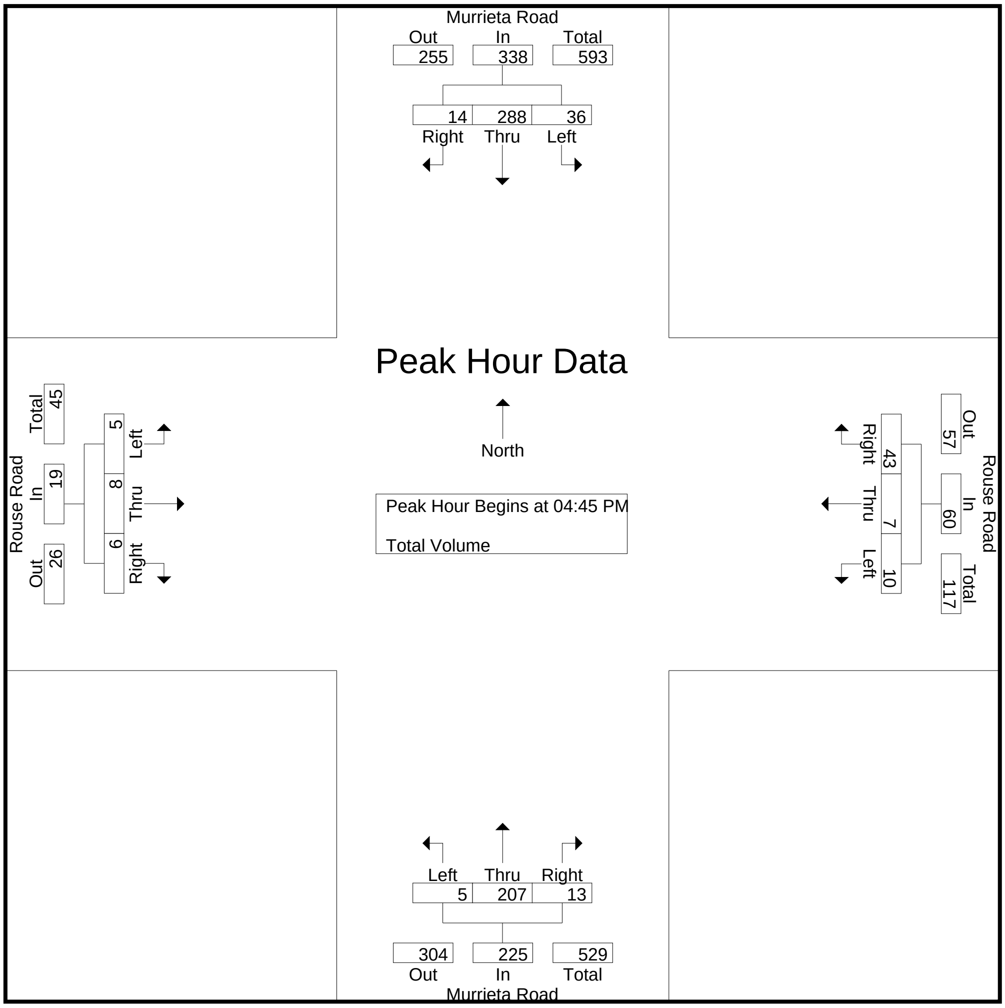
City of Menifee
N/S: Murrieta Road
E/W: Rouse Road
Weather: Clear

File Name : 03_MEN_Mur_Rouse PM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 2



Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				04:00 PM				04:00 PM				04:30 PM			
+0 mins.	4	59	**5**	68	3	2	**16**	21	**2**	54	3	59	**2**	2	1	5
+15 mins.	**14**	**81**	4	**99**	4	**5**	12	21	2	**64**	**7**	**73**	1	1	**2**	4
+30 mins.	11	76	2	89	**5**	4	13	**22**	0	54	2	56	0	**3**	0	3
+45 mins.	11	70	4	85	2	2	10	14	1	51	3	55	2	3	2	**7**
Total Volume	40	286	15	341	14	13	51	78	5	223	15	243	5	9	5	19
% App. Total	11.7	83.9	4.4		17.9	16.7	65.4		2.1	91.8	6.2		26.3	47.4	26.3	
PHF	.714	.883	.750	.861	.700	.650	.797	.886	.625	.871	.536	.832	.625	.750	.625	.679

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Corona, CA 92878
(951)268-6268

City of Menifee
N/S: Murrieta Road
E/W: Chambers Avenue
Weather: Clear

File Name : 04_MEN_Mur_Cham AM
Site Code : 12222693
Start Date : 8/17/2022
Page No : 1

Groups Printed- Total Volume

	Murrieta Road Southbound				Chambers Avenue Westbound				Murrieta Road Northbound				Chambers Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	41	7	53	2	1	1	4	3	46	1	50	3	3	10	16	123
07:15 AM	3	70	1	74	3	1	2	6	4	30	1	35	9	4	16	29	144
07:30 AM	11	77	2	90	3	1	7	11	4	60	5	69	3	3	17	23	193
07:45 AM	12	43	1	56	5	2	4	11	11	52	3	66	0	12	6	18	151
Total	31	231	11	273	13	5	14	32	22	188	10	220	15	22	49	86	611
08:00 AM	14	47	3	64	1	2	6	9	7	53	1	61	7	11	5	23	157
08:15 AM	5	48	0	53	4	7	10	21	5	42	3	50	5	6	8	19	143
08:30 AM	8	46	1	55	1	5	8	14	5	56	2	63	3	4	5	12	144
08:45 AM	7	54	3	64	4	4	5	13	6	49	4	59	7	7	3	17	153
Total	34	195	7	236	10	18	29	57	23	200	10	233	22	28	21	71	597
Grand Total	65	426	18	509	23	23	43	89	45	388	20	453	37	50	70	157	1208
Apprch %	12.8	83.7	3.5		25.8	25.8	48.3		9.9	85.7	4.4		23.6	31.8	44.6		
Total %	5.4	35.3	1.5	42.1	1.9	1.9	3.6	7.4	3.7	32.1	1.7	37.5	3.1	4.1	5.8	13	

	Murrieta Road Southbound				Chambers Avenue Westbound				Murrieta Road Northbound				Chambers Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	70	1	74	3	1	2	6	4	30	1	35	**9**	4	16	**29**	144
07:30 AM	11	**77**	2	**90**	3	1	**7**	**11**	4	**60**	**5**	**69**	3	3	**17**	23	**193**
07:45 AM	12	43	1	56	**5**	**2**	4	11	**11**	52	3	66	0	**12**	6	18	151
08:00 AM	**14**	47	**3**	64	1	2	6	9	7	53	1	61	7	11	5	23	157
Total Volume	40	237	7	284	12	6	19	37	26	195	10	231	19	30	44	93	645
% App. Total	14.1	83.5	2.5		32.4	16.2	51.4		11.3	84.4	4.3		20.4	32.3	47.3		
PHF	.714	.769	.583	.789	.600	.750	.679	.841	.591	.813	.500	.837	.528	.625	.647	.802	.835

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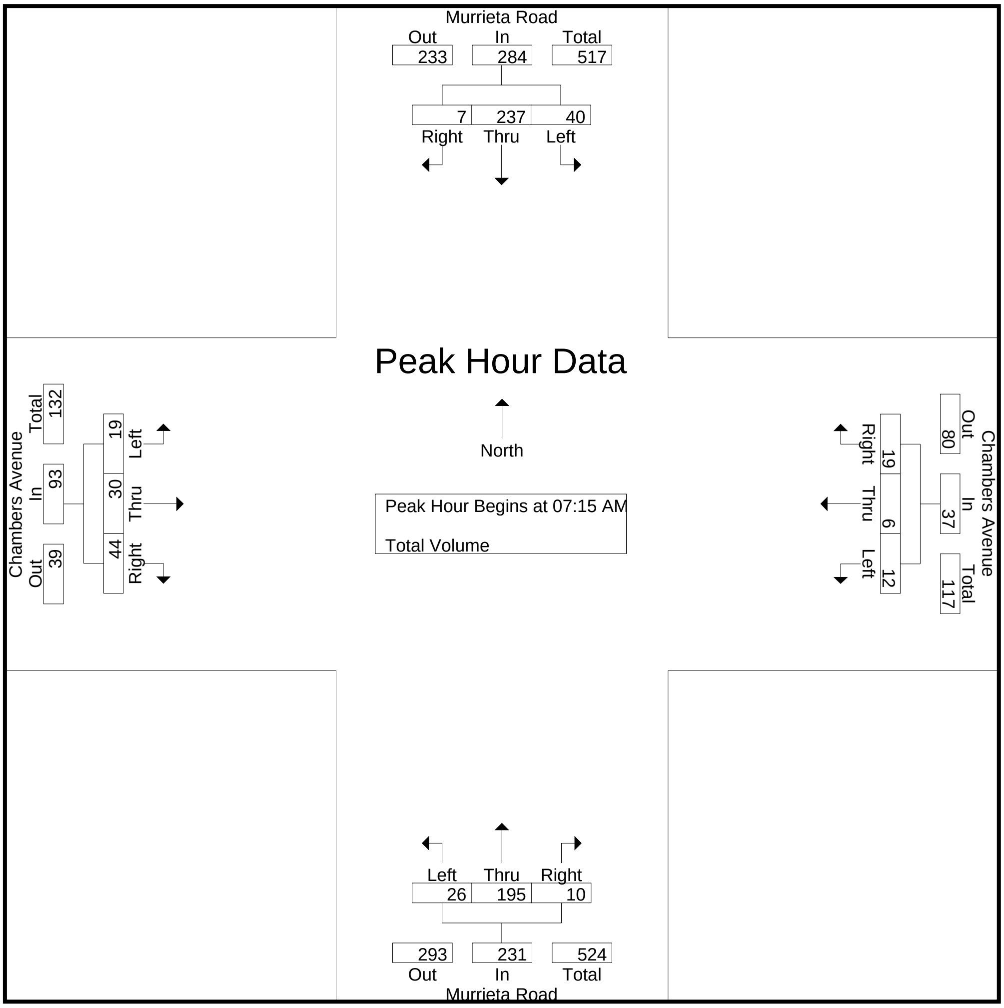

Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:00 AM				07:30 AM				07:15 AM			
+0 mins.	3	70	1	74	1	2	6	9	4	**60**	**5**	**69**	**9**	4	16	**29**
+15 mins.	11	**77**	2	**90**	**4**	**7**	**10**	**21**	**11**	52	3	66	3	3	**17**	23
+30 mins.	12	43	1	56	1	5	8	14	7	53	1	61	0	**12**	6	18
+45 mins.	**14**	47	**3**	64	4	4	5	13	5	42	3	50	7	11	5	23
Total Volume	40	237	7	284	10	18	29	57	27	207	12	246	19	30	44	93
% App. Total	14.1	83.5	2.5		17.5	31.6	50.9		11	84.1	4.9		20.4	32.3	47.3	
PHF	.714	.769	.583	.789	.625	.643	.725	.679	.614	.863	.600	.891	.528	.625	.647	.802

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File Name : 04_MEN_Mur_Cham PM
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Groups Printed- Total Volume

	Murrieta Road Southbound				Chambers Avenue Westbound				Murrieta Road Northbound				Chambers Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
04:00 PM	6	51	3	60	4	9	15	28	9	61	1	71	2	6	6	14	173
04:15 PM	11	52	7	70	2	8	8	18	10	72	2	84	3	3	7	13	185
04:30 PM	8	54	8	70	0	5	8	13	5	39	0	44	2	3	3	8	135
04:45 PM	6	66	6	78	2	11	16	29	5	64	4	73	2	3	7	12	192
Total	31	223	24	278	8	33	47	88	29	236	7	272	9	15	23	47	685
05:00 PM	10	48	7	65	1	4	12	17	8	73	3	84	3	5	2	10	176
05:15 PM	10	85	5	100	1	4	17	22	10	54	4	68	6	2	11	19	209
05:30 PM	11	60	9	80	3	6	9	18	6	53	0	59	4	5	8	17	174
05:45 PM	9	61	7	77	2	6	11	19	7	45	2	54	3	4	3	10	160
Total	40	254	28	322	7	20	49	76	31	225	9	265	16	16	24	56	719
Grand Total	71	477	52	600	15	53	96	164	60	461	16	537	25	31	47	103	1404
Apprch %	11.8	79.5	8.7		9.1	32.3	58.5		11.2	85.8	3		24.3	30.1	45.6		
Total %	5.1	34	3.7	42.7	1.1	3.8	6.8	11.7	4.3	32.8	1.1	38.2	1.8	2.2	3.3	7.3	

	Murrieta Road Southbound				Chambers Avenue Westbound				Murrieta Road Northbound				Chambers Avenue Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	6	66	6	78	2	**11**	16	**29**	5	64	**4**	73	2	3	7	12	192
05:00 PM	10	48	7	65	1	4	12	17	8	**73**	3	**84**	3	**5**	2	10	176
05:15 PM	10	**85**	5	**100**	1	4	**17**	22	**10**	54	4	68	**6**	2	**11**	**19**	**209**
05:30 PM	**11**	60	**9**	80	**3**	6	9	18	6	53	0	59	4	5	8	17	174
Total Volume	37	259	27	323	7	25	54	86	29	244	11	284	15	15	28	58	751
% App. Total	11.5	80.2	8.4		8.1	29.1	62.8		10.2	85.9	3.9		25.9	25.9	48.3		
PHF	.841	.762	.750	.808	.583	.568	.794	.741	.725	.836	.688	.845	.625	.750	.636	.763	.898

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File Name : 04_MEN_Mur_Cham PM
Site Code : 12222693
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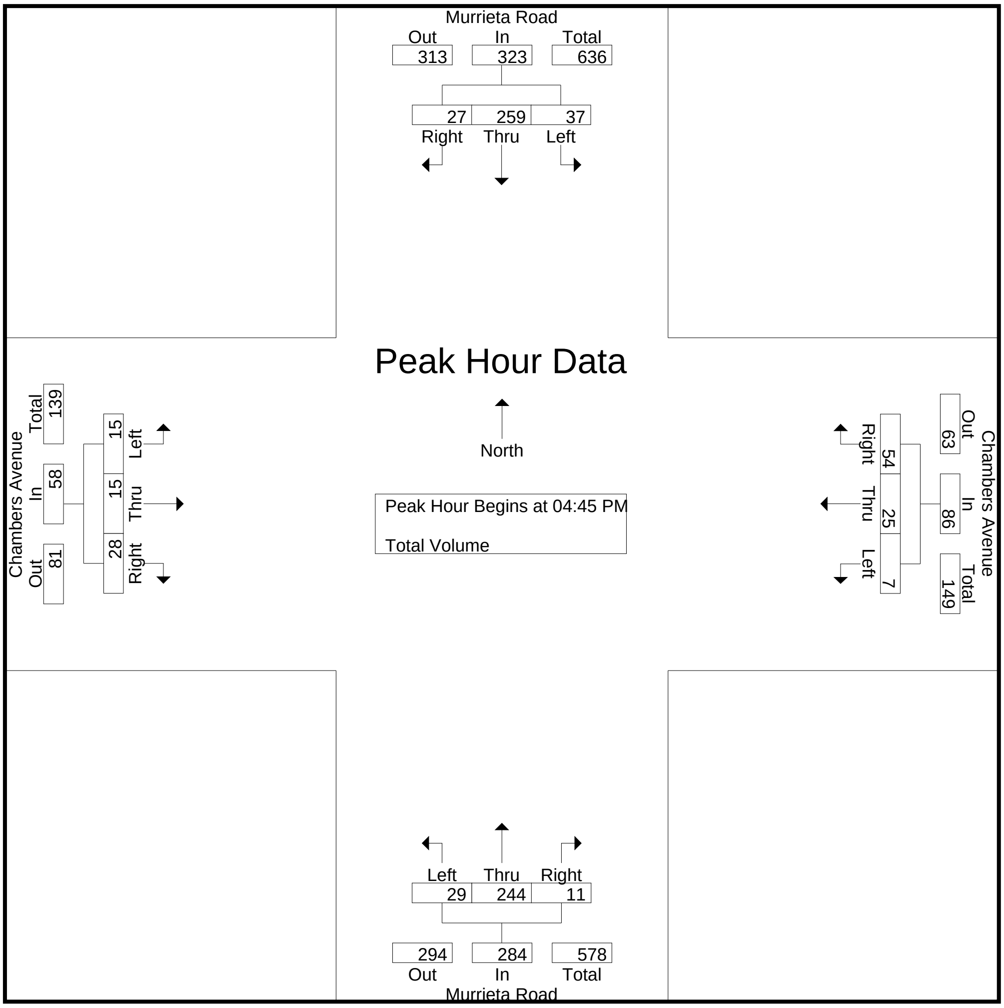


Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:00 PM				04:15 PM				04:45 PM			
+0 mins.	6	66	6	78	**4**	9	15	28	**10**	72	2	**84**	2	3	7	12
+15 mins.	10	48	7	65	2	8	8	18	5	39	0	44	3	**5**	2	10
+30 mins.	10	**85**	5	**100**	0	5	8	13	5	64	**4**	73	**6**	2	**11**	**19**
+45 mins.	**11**	60	**9**	80	2	**11**	**16**	**29**	8	**73**	3	84	4	5	8	17
Total Volume	37	259	27	323	8	33	47	88	28	248	9	285	15	15	28	58
% App. Total	11.5	80.2	8.4		9.1	37.5	53.4		9.8	87	3.2		25.9	25.9	48.3	
PHF	.841	.762	.750	.808	.500	.750	.734	.759	.700	.849	.563	.848	.625	.750	.636	.763

Appendix C:
Traffic Volume Development Worksheets

Menifee Byers Lane

Volume Development

Existing Year:	2022
Ambient Growth:	2.0%
Years till Opening:	4
Opening Year:	2026

Trip Gen						
Daily Trips	AM Peak Hour			PM Peak Hour		
	Volume	In	Out	Volume	In	Out
972	72	19	53	96	60	36

Intersection / Movement		Counts 2022		Project Only				Growth		Cumulative Projects		Opening Year 2026 W/O Project		Opening Year 2026 With Project	
		AM	PM	In %	Out %	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
1) Ethanac Rd & Byers Rd	NBL	3	1		10%	5	4	0	0	0	0	3	1	8	5
	NBT					0	0	0	0	0	0	0	0	0	0
	NBR	2	4		15%	8	5	0	0	0	0	2	4	10	9
	SBL					0	0	0	0	0	0	0	0	0	0
	SBT					0	0	0	0	0	0	0	0	0	0
	SBR					0	0	0	0	0	0	0	0	0	0
	EBL					0	0	0	0	0	0	0	0	0	0
	EBT	825	524			0	0	66	42	834	684	1725	1250	1725	1250
	EBR	1	2	10%		2	6	0	0	0	0	1	2	3	8
	WBL	3	2	15%		3	9	0	0	0	0	3	2	6	11
	WBT	396	558			0	0	32	45	473	916	901	1519	901	1519
	WBR					0	0	0	0	0	0	0	0	0	0
2) McLaughlin & Byers Rd	NBL	0	0			0	0	0	0	0	0	**0**	**0**	**0**	**0**
	NBT	0	0		25%	13	9	0	0	0	0	0	0	13	9
	NBR	0	0			0	0	0	0	0	0	0	0	0	0
	SBL	0	0			0	0	0	0	0	0	0	0	0	0
	SBT	0	0	25%		5	15	0	0	0	0	0	0	5	15
	SBR	0	0			0	0	0	0	0	0	0	0	0	0
	EBL	0	0			0	0	0	0	0	0	0	0	0	0
	EBT	0	0			0	0	0	0	44	29	44	29	44	29
	EBR	0	0			0	0	0	0	0	0	0	0	0	0
	WBL	0	0			0	0	0	0	0	0	0	0	0	0
	WBT	0	0			0	0	0	0	15	49	15	49	15	49
	WBR	0	0			0	0	0	0	0	0	0	0	0	0
3) Street G & Byers Rd	NBL	0	0	25%		5	15	0	0			0	0	5	15
	NBT	0	0		8%	4	3	0	0			0	0	4	3
	NBR	0	0			0	0	0	0			0	0	0	0
	SBL	0	0			0	0	0	0			0	0	0	0
	SBT	0	0	8%		2	5	0	0			0	0	2	5
	SBR	0	0	17%		3	10	0	0			0	0	3	10
	EBL	0	0		17%	9	6	0	0			0	0	9	6
	EBT	0	0			0	0	0	0			0	0	0	0
	EBR	0	0		25%	13	9	0	0			0	0	13	9
	WBL	0	0			0	0	0	0			0	0	0	0
	WBT	0	0			0	0	0	0			0	0	0	0
	WBR	0	0			0	0	0	0			0	0	0	0
4) Street F & Byers Rd	NBL	0	0	50%		9	30	0	0			0	0	9	30
	NBT	0	0	25%		5	15	0	0			0	0	5	15
	NBR	0	0			0	0	0	0			0	0	0	0
	SBL	0	0			0	0	0	0			0	0	0	0
	SBT	0	0		25%	13	9	0	0			0	0	13	9
	SBR	0	0	8%		2	5	0	0			0	0	2	5
	EBL	0	0		8%	4	3	0	0			0	0	4	3
	EBT	0	0			0	0	0	0			0	0	0	0
	EBR	0	0		50%	27	18	0	0			0	0	27	18
	WBL	0	0			0	0	0	0			0	0	0	0
	WBT	0	0			0	0	0	0			0	0	0	0
	WBR	0	0			0	0	0	0			0	0	0	0
5) Rouse Rd & Murrieta Rd	NBL	4	5	75%		14	45	0	0	0	0	4	5	18	50
	NBT	230	207			0	0	18	17	130	201	378	425	378	425
	NBR	9	13			0	0	1	1	0	0	10	14	10	14
	SBL	35	36			0	0	3	3	30	98	68	137	68	137
	SBT	185	288			0	0	15	23	180	155	380	466	380	466
	SBR	7	14			0	0	1	1	0	0	8	15	8	15
	EBL	13	5			0	0	1	0	0	0	14	5	14	5
	EBT	20	8			0	0	2	1	0	0	22	9	22	9
	EBR	7	6		75%	40	27	1	0	0	0	8	6	48	33
	WBL	8	10			0	0	1	1	0	0	9	11	9	11
	WBT	5	7			0	0	0	1	0	0	5	8	5	8
	WBR	50	43			0	0	4	3	77	51	131	97	131	97
6) Chambers Ave & Murrieta Rd	NBL	26	29			0	0	2	2	38	127	66	158	66	158
	NBT	195	244	60%		11	36	16	20	156	317	367	581	378	617
	NBR	10	11			0	0	1	1	18	57	29	69	29	69
	SBL	40	37		10%	5	4	3	3	0	0	43	40	48	44
	SBT	237	259		60%	32	21	19	21	290	227	546	507	578	528
	SBR	7	27		5%	3	2	1	2	4	12	12	41	15	43
	EBL	19	15	5%		1	3	2	1	11	7	32	23	33	26
	EBT	30	15			0	0	2	1	0	0	32	16	32	16
	EBR	44	28			0	0	4	2	113	75	161	105	161	105
	WBL	12	7			0	0	1	1	51	34	64	42	64	42
	WBT	6	25			0	0	0	2	0	0	6	27	6	27
	WBR	19	54	10%		2	6	2	4	0	0	21	58	23	64

Menifee Byers Lane

ADT Volume Development

Existing Year:	2022
Ambient Growth:	2.0%
Years till Opening:	4
Opening Year:	2026

ID	Segment	Counts 2022[1]	Project Only[1]	Existing + Project[2]	Growth[2]	Cumulative Projects[2]	Opening Year 2026 W/O Project[2]	Opening Year 2026 With Project[2]	LOS C ADT Threshold[3]	Acceptable?
A	Byers Lane North of "Street G"	65	245	310	10	0	80	320	10,400	Yes, better than LOS C
B	Byers Lane South of "Street F"	65	725	790	10	0	80	800	10,400	Yes, better than LOS C

Notes:

1) Values rounded to the nearest 5

2) Values rounded to the nearest 10

3) LOS C Threshold sourced from City of Menifee LOS Traffic Study Guidelines (Oct 2020)

Cumulative Projects

Trip Generation (Vehicles)									
ID	Name/Project Number		Daily Trips	AM Peak Hour			PM Peak Hour		
				Volume	In	Out	Volume	In	Out
1	Vista Ridge	2018-159 TM	202	12	3	9	15	9	6
2	Capstone Industrial	PLN21-0370	1,197	119	92	27	126	35	91
3	Ares Warehouse	DEV2022-017	944	94	72	22	99	28	71
4	Green Valley	--	11,550	773	194	579	1,015	639	376
5	Goetz & Ethanac	PP PLN21-0319	5,915	523	263	260	476	238	238
6	Corsica Business	DEV2022-010,	473	47	36	11	50	14	36
7	Northern Gateway Commerce Center	PP PLN21-0281	2,252	224	172	52	237	66	171
8	Ethanac & Barnett	PP PLN21-0290	431	43	33	10	45	12	33
9	Ethanac Square	MJMOD PLN21-0104	4,242	257	128	129	295	147	148
10	Sagewood	TR 37400/2018-065	1,641	122	32	90	164	103	61
11	McLaughlin Village	TM 2015-250	849	50	12	38	64	40	24
12	Valley Blvd Tract Map	TR 2015-211 (TR 36911)	641	48	12	36	64	40	24
13	Menifee Commerce Center II	DEV20222-014	1,949	194	149	45	205	57	148
14	Nova Battery Storage	DEV20222-015	16	8	4	4	0	0	0
15	McLaughlin San Jacinto Warehouses	DEV20222-016	840	84	64	20	88	24	64
16	Ethanac and Evans Warehouse	DEV20222-018	236	23	18	5	25	7	18
17	Trumble and Watson Warehouse	DEV20222-019	561	56	43	13	59	17	42
18	Cimarron Ridge	TTM 36657/PM 36658	7,491	589	148	441	784	494	290
19	Cypress and Sands Apartments	DEV20222-020	917	54	13	41	69	43	26
Total			**33,939**	**2,677**	**1,327**	**1,350**	**3,027**	**1,476**	**1,551**

Cumulative Projects

Intersection #1 **Ethanac Rd & Byers Rd**

	3 Capstone		3 Capstone		101 Green		101 Green		103 Goetz		103 Goetz		105 Corsica		105 Corsica		108 Ethanac		108 Ethanac		194 Menifee		194 Menifee		108 Ethanac		108 Ethanac		103 Goetz		103 Goetz		301 Cimarron		301 Cimarron		Total Trips	
	Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Veh	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
NBL																																					0	0
NBT																																					0	0
NBR																																					0	0
SBL																																					0	0
SBT																																					0	0
SBR																																					0	0
EBL																																					0	0
EBT	100%	100%	27	91	90%	90%	521	338	30%	30%	78	71	100%	100%	11	36	30%	30%	39	44	3%	3%	4	2	20%	20%	0	0	30%	30%	0	0	35%	35%	154	102	834	684
EBR																																					0	0
WBL																																					0	0
WBT	100%	100%	92	35	90%	90%	175	575	30%	30%	79	71	100%	100%	36	14	30%	30%	38	44	3%	3%	1	4	20%	20%	0	0	30%	30%	0	0	35%	35%	52	173	473	916
WBR																																					0	0

Intersection #2 **McLaughlin & Byers Rd**

																																	301 Cimarron		301 Cimarron		Total Trips	
	Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Veh	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
NBL																																					0	0
NBT																																					0	0
NBR																																					0	0
SBL																																					0	0
SBT																																					0	0
SBR																																					0	0
EBL																																					0	0
EBT																																	10%	10%	44	29	44	29
EBR																																					0	0
WBL																																					0	0
WBT																																	10%	10%	15	49	15	49
WBR																																					0	0

Intersection #5 **Rouse Rd & Murrieta Rd**

	1 VISTA RIDGE		1 VISTA RIDGE		101 GREEN		101 GREEN		103 GOETZ &		103 GOETZ &		108 ETHANAC		108 ETHANAC		109 SAGEWO		109 SAGEWO		110 MCLAUG		110 MCLAUG		111 Valley		111 Valley		194 Menifee		194 Menifee		199 Trumble		199 Trumble		301 Cimarron		301 Cimarron		Total Trips	
	Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Veh	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
NBL																																									0	0
NBT	50%	50%	5	3	15%	15%	29	96	15%	15%	39	36	20%	20%	26	29									30%	30%	11	7	6%	6%	9	3	10%	10%	4	2	5%	5%	7	25	130	201
NBR																																									0	0
SBL																	60%	60%	19	62	60%	60%	7	24	30%	30%	4	12													30	98
SBT	50%	50%	2	5	15%	15%	87	56	15%	15%	39	36	20%	20%	26	30													6%	6%	3	9	10%	10%	1	4	5%	5%	22	15	180	155
SBR																																									0	0
EBL																																									0	0
EBT																																									0	0
EBR																																									0	0
WBL																																									0	0
WBT																																									0	0
WBR																	60%	60%	54	37	60%	60%	23	14																	77	51

Intersection #6 **Chambers Ave & Murrieta Rd**

Chambers Ave & Murrieta Rd

	1 VISTA RIDGE		1 VISTA RIDGE		101 GREEN		101 GREEN		103 GOETZ &		103 GOETZ &		108 ETHANAC		108 ETHANAC		109 SAGEWO		109 SAGEWO		110 MCLAUG		110 MCLAUG		111 Valley		111 Valley		194 Menifee		194 Menifee		199 Trumble		199 Trumble		301 Cimarron		301 Cimarron		Total Trips	
	Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Trip Distribution		Veh		Veh	
	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM	AM	PM
NBL																									70%	70%	8	28									20%	20%	30	99	38	127
NBT	50%	50%	5	3	15%	15%	29	96	15%	15%	39	36	20%	20%	26	29													6%	6%	9	3	10%	10%	4	2	30%	30%	44	148	156	317
NBR																	40%	40%	13	41	40%	40%	5	16																	18	57
SBL																																									0	0
SBT	50%	50%	2	5	15%	15%	87	56	15%	15%	39	36	20%	20%	26	30													6%	6%	3	9	10%	10%	1	4	30%	30%	132	87	290	227
SBR																									30%	30%	4	12													4	12
EBL																									30%	30%	11	7													11	7
EBT																																									0	0
EBR																									70%	70%	25	17									20%	20%	88	58	113	75
WBL																	40%	40%	36	24	40%	40%	15	10																	51	34
WBT																																									0	0
WBR																																									0	0

Appendix D:
Existing Year 2022 AM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	825	1	3	396	3	2
Future Volume (vph)	825	1	3	396	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt					0.946	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	3539	0	1770	3539	1711	0
Flt Permitted			0.950		0.971	
Satd. Flow (perm)	3539	0	1770	3539	1711	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	897	1	3	430	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	898	0	3	430	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 32.8%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	825	1	3	396	3	2
Future Vol, veh/h	825	1	3	396	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	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	897	1	3	430	3	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	898	0	1119	449
Stage 1	-	-	-	-	898	-
Stage 2	-	-	-	-	221	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	752	-	201	557
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	795	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	752	-	200	557
Mov Cap-2 Maneuver	-	-	-	-	200	-
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	792	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	18.7
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	269	-	-	752	-
HCM Lane V/C Ratio	0.02	-	-	0.004	-
HCM Control Delay (s)	18.7	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1	1	1	1	1	0	1	0	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	1022	895	1084	1022	895	-	1622	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	895	1084	1022	895	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	895	-	1022	895	-	-	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	-	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	1022	1084	0	-	-	0
Stage 1	1022	-	0	-	-	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	1022	1084	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	20	7	8	5	50	4	230	9	35	185	7
Future Volume (vph)	13	20	7	8	5	50	4	230	9	35	185	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	21	7	8	5	52	4	237	9	36	191	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	21	7	8	5	52	4	237	9	36	191	7
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 32.8%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	2.6

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	20	7	8	5	50	4	230	9	35	185	7
Future Vol, veh/h	13	20	7	8	5	50	4	230	9	35	185	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	21	7	8	5	52	4	237	9	36	191	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	541	517	191	526	515	237	198	0	0	246	0	0
Stage 1	263	263	-	245	245	-	-	-	-	-	-	-
Stage 2	278	254	-	281	270	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	452	462	851	462	464	802	1375	-	-	1320	-	-
Stage 1	742	691	-	759	703	-	-	-	-	-	-	-
Stage 2	728	697	-	726	686	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	410	448	851	432	450	802	1375	-	-	1320	-	-
Mov Cap-2 Maneuver	410	448	-	432	450	-	-	-	-	-	-	-
Stage 1	740	672	-	757	701	-	-	-	-	-	-	-
Stage 2	674	695	-	679	667	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.9	10.5	0.1	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	410	448	851	432	450	802	1320	-	-
HCM Lane V/C Ratio	0.003	-	-	0.033	0.046	0.008	0.019	0.011	0.064	0.027	-	-
HCM Control Delay (s)	7.6	-	-	14.1	13.4	9.3	13.5	13.1	9.8	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.1	0	0.1	0	0.2	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	30	44	12	6	19	26	195	10	40	237	7
Future Volume (vph)	19	30	44	12	6	19	26	195	10	40	237	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.937				0.850		0.993			0.996	
Flt Protected		0.990		0.950			0.950			0.950		
Satd. Flow (prot)	0	1728	0	1770	1863	1583	1770	3514	0	1770	1855	0
Flt Permitted		0.990		0.950			0.950			0.950		
Satd. Flow (perm)	0	1728	0	1770	1863	1583	1770	3514	0	1770	1855	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	23	36	52	14	7	23	31	232	12	48	282	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	111	0	14	7	23	31	244	0	48	290	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 38.2% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	19	30	44	12	6	19	26	195	10	40	237	7
Future Vol, veh/h	19	30	44	12	6	19	26	195	10	40	237	7
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	23	36	52	14	7	23	31	232	12	48	282	8
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	10.4	9.1	10.1	12.7
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	20%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	87%	32%	0%	100%	0%	0%	97%
Vol Right, %	0%	0%	13%	47%	0%	0%	100%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	130	75	93	12	6	19	40	244
LT Vol	26	0	0	19	12	0	0	40	0
Through Vol	0	130	65	30	0	6	0	0	237
RT Vol	0	0	10	44	0	0	19	0	7
Lane Flow Rate	31	155	89	111	14	7	23	48	290
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.055	0.252	0.143	0.191	0.027	0.013	0.035	0.082	0.459
Departure Headway (Hd)	6.37	5.867	5.773	6.214	6.855	6.35	5.644	6.206	5.683
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	563	613	622	578	523	564	634	579	636
Service Time	4.095	3.592	3.498	3.946	4.589	4.085	3.378	3.928	3.405
HCM Lane V/C Ratio	0.055	0.253	0.143	0.192	0.027	0.012	0.036	0.083	0.456
HCM Control Delay	9.5	10.6	9.5	10.4	9.8	9.2	8.6	9.5	13.2
HCM Lane LOS	A	B	A	B	A	A	A	A	B
HCM 95th-tile Q	0.2	1	0.5	0.7	0.1	0	0.1	0.3	2.4

Appendix E:
Existing Year 2022 PM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	524	2	2	558	1	4
Future Volume (vph)	524	2	2	558	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt					0.887	
Flt Protected			0.950		0.992	
Satd. Flow (prot)	3539	0	1770	3539	1639	0
Flt Permitted			0.950		0.992	
Satd. Flow (perm)	3539	0	1770	3539	1639	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	639	2	2	680	1	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	641	0	2	680	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 25.4% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	524	2	2	558	1	4
Future Vol, veh/h	524	2	2	558	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	639	2	2	680	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	641	0	984	321
Stage 1	-	-	-	-	640	-
Stage 2	-	-	-	-	344	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	939	-	246	675
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	689	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	939	-	246	675
Mov Cap-2 Maneuver	-	-	-	-	246	-
Stage 1	-	-	-	-	487	-
Stage 2	-	-	-	-	688	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	500	-	-	939	-
HCM Lane V/C Ratio	0.012	-	-	0.003	-
HCM Control Delay (s)	12.3	-	-	8.8	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	0	0	0	0	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1	1	1	1	1	0	1	0	0	0	0	0
Stage 1	1	1	-	0	0	-	-	-	-	-	-	-
Stage 2	0	0	-	1	1	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	1022	895	1084	1022	895	-	1622	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	-	895	1084	1022	895	-	1622	-	-	-	-	-
Mov Cap-2 Maneuver	-	895	-	1022	895	-	-	-	-	-	-	-
Stage 1	1022	895	-	-	-	-	-	-	-	-	-	-
Stage 2	-	-	-	1022	895	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS	A	A		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	-	-	0	0	0	-	-
HCM Lane LOS	A	-	-	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	-	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	-	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	-	-	-	-
Pot Cap-1 Maneuver	1022	1084	0	-	-	0
Stage 1	1022	-	0	-	-	0
Stage 2	-	-	0	-	-	0
Platoon blocked, %				-	-	
Mov Cap-1 Maneuver	1022	1084	-	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	EBLn1	SBT
Capacity (veh/h)	-	-	-
HCM Lane V/C Ratio	-	-	-
HCM Control Delay (s)	-	0	-
HCM Lane LOS	-	A	-
HCM 95th %tile Q(veh)	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	8	6	10	7	43	5	207	13	36	288	14
Future Volume (vph)	5	8	6	10	7	43	5	207	13	36	288	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	5	9	7	11	8	47	5	225	14	39	313	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	9	7	11	8	47	5	225	14	39	313	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 35.7%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	8	6	10	7	43	5	207	13	36	288	14
Future Vol, veh/h	5	8	6	10	7	43	5	207	13	36	288	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	9	7	11	8	47	5	225	14	39	313	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	661	640	313	642	641	225	328	0	0	239	0	0
Stage 1	391	391	-	235	235	-	-	-	-	-	-	-
Stage 2	270	249	-	407	406	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	376	393	727	387	393	814	1232	-	-	1328	-	-
Stage 1	633	607	-	768	710	-	-	-	-	-	-	-
Stage 2	736	701	-	621	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	340	380	727	367	380	814	1232	-	-	1328	-	-
Mov Cap-2 Maneuver	340	380	-	367	380	-	-	-	-	-	-	-
Stage 1	630	589	-	765	707	-	-	-	-	-	-	-
Stage 2	683	698	-	589	581	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	13.5	11.2	0.2	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	340	380	727	367	380	814	1328	-	-
HCM Lane V/C Ratio	0.004	-	-	0.016	0.023	0.009	0.03	0.02	0.057	0.029	-	-
HCM Control Delay (s)	7.9	-	-	15.8	14.7	10	15.1	14.7	9.7	7.8	-	-
HCM Lane LOS	A	-	-	C	B	B	C	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0	0.1	0	0.1	0.1	0.2	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	15	15	28	7	25	54	29	244	11	37	259	27
Future Volume (vph)	15	15	28	7	25	54	29	244	11	37	259	27
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.936				0.850		0.994			0.986	
Flt Protected		0.987		0.950			0.950			0.950		
Satd. Flow (prot)	0	1721	0	1770	1863	1583	1770	3518	0	1770	1837	0
Flt Permitted		0.987		0.950			0.950			0.950		
Satd. Flow (perm)	0	1721	0	1770	1863	1583	1770	3518	0	1770	1837	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	17	17	31	8	28	60	32	271	12	41	288	30
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	65	0	8	28	60	32	283	0	41	318	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 38.6% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Intersection Delay, s/veh	11.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	15	15	28	7	25	54	29	244	11	37	259	27
Future Vol, veh/h	15	15	28	7	25	54	29	244	11	37	259	27
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	17	31	8	28	60	32	271	12	41	288	30
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	10.2	9.3	10.6	13.8
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	26%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	88%	26%	0%	100%	0%	0%	91%
Vol Right, %	0%	0%	12%	48%	0%	0%	100%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	163	92	58	7	25	54	37	286
LT Vol	29	0	0	15	7	0	0	37	0
Through Vol	0	163	81	15	0	25	0	0	259
RT Vol	0	0	11	28	0	0	54	0	27
Lane Flow Rate	32	181	103	64	8	28	60	41	318
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.058	0.298	0.167	0.117	0.015	0.05	0.095	0.072	0.507
Departure Headway (Hd)	6.439	5.935	5.851	6.535	6.923	6.419	5.713	6.308	5.739
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	557	605	614	548	517	558	627	569	629
Service Time	4.171	3.667	3.583	4.281	4.663	4.159	3.452	4.039	3.47
HCM Lane V/C Ratio	0.057	0.299	0.168	0.117	0.015	0.05	0.096	0.072	0.506
HCM Control Delay	9.6	11.2	9.8	10.2	9.8	9.5	9.1	9.5	14.3
HCM Lane LOS	A	B	A	B	A	A	A	A	B
HCM 95th-tile Q	0.2	1.2	0.6	0.4	0	0.2	0.3	0.2	2.9

Appendix F:
Existing With Project AM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	825	3	6	396	8	10
Future Volume (vph)	825	3	6	396	8	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.926	
Flt Protected			0.950		0.978	
Satd. Flow (prot)	3536	0	1770	3539	1687	0
Flt Permitted			0.950		0.978	
Satd. Flow (perm)	3536	0	1770	3539	1687	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	897	3	7	430	9	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	900	0	7	430	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 32.9%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	825	3	6	396	8	10
Future Vol, veh/h	825	3	6	396	8	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	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	897	3	7	430	9	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	900	0	1128	450
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	229	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	751	-	198	556
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	787	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	751	-	196	556
Mov Cap-2 Maneuver	-	-	-	-	196	-
Stage 1	-	-	-	-	358	-
Stage 2	-	-	-	-	780	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	17.6
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	306	-	-	751	-
HCM Lane V/C Ratio	0.064	-	-	0.009	-
HCM Control Delay (s)	17.6	-	-	9.8	-
HCM Lane LOS	C	-	-	A	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	13	0	0	5	0
Future Volume (vph)	0	0	0	0	0	0	0	13	0	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	14	0	0	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	14	0	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 6.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	8.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	13	0	0	5	0
Future Vol, veh/h	0	0	0	0	0	0	0	13	0	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	14	0	0	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	5	2	1	9	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	4	1	-	8	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1016	894	1084	1010	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1018	895	-	1013	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	1011	894	1084	998	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	1011	894	-	998	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1012	895	-	997	895	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.1	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	894	1622	-	-	1622	-	-	894
HCM Lane V/C Ratio	0.016	-	-	-	-	-	-	0.006
HCM Control Delay (s)	9.1	0	-	-	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	13	5	4	2	3
Future Volume (vph)	9	13	5	4	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.921				0.919	
Flt Protected	0.980			0.973		
Satd. Flow (prot)	1681	0	0	1812	1712	0
Flt Permitted	0.980			0.973		
Satd. Flow (perm)	1681	0	0	1812	1712	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	10	14	5	4	2	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	0	9	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 14.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	6.2					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	13	5	4	2	3
Future Vol, veh/h	9	13	5	4	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	14	5	4	2	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	18	4	5	0	-	0
Stage 1	4	-	-	-	-	-
Stage 2	14	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1000	1080	1616	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1009	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	997	1080	1616	-	-	-
Mov Cap-2 Maneuver	997	-	-	-	-	-
Stage 1	1016	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1616	-	1044	-	-
HCM Lane V/C Ratio	0.003	-	0.023	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	27	9	5	13	2
Future Volume (vph)	4	27	9	5	13	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.881				0.983	
Flt Protected	0.994			0.968		
Satd. Flow (prot)	1631	0	0	1803	1831	0
Flt Permitted	0.994			0.968		
Satd. Flow (perm)	1631	0	0	1803	1831	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	4	29	10	5	14	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	0	15	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 17.4%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	5.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	27	9	5	13	2
Future Vol, veh/h	4	27	9	5	13	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	4	29	10	5	14	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	40	15	16	0	-	0
Stage 1	15	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	972	1065	1602	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	966	1065	1602	-	-	-
Mov Cap-2 Maneuver	966	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1051	-	-
HCM Lane V/C Ratio	0.006	-	0.032	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	20	47	8	5	50	18	230	9	35	185	7
Future Volume (vph)	13	20	47	8	5	50	18	230	9	35	185	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	13	21	48	8	5	52	19	237	9	36	191	7
Shared Lane Traffic (%)												
Lane Group Flow (vph)	13	21	48	8	5	52	19	237	9	36	191	7
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary

Area Type: Other

Control Type: Unsignalized

Intersection Capacity Utilization 32.8% ICU Level of Service A

Analysis Period (min) 15

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	20	47	8	5	50	18	230	9	35	185	7
Future Vol, veh/h	13	20	47	8	5	50	18	230	9	35	185	7
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	21	48	8	5	52	19	237	9	36	191	7

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	571	547	191	576	545	237	198	0	0	246	0	0
Stage 1	263	263	-	275	275	-	-	-	-	-	-	-
Stage 2	308	284	-	301	270	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	432	445	851	428	446	802	1375	-	-	1320	-	-
Stage 1	742	691	-	731	683	-	-	-	-	-	-	-
Stage 2	702	676	-	708	686	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	388	427	851	377	428	802	1375	-	-	1320	-	-
Mov Cap-2 Maneuver	388	427	-	377	428	-	-	-	-	-	-	-
Stage 1	732	672	-	721	673	-	-	-	-	-	-	-
Stage 2	643	667	-	630	667	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	11.4	10.7	0.5	1.2
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1375	-	-	388	427	851	377	428	802	1320	-	-
HCM Lane V/C Ratio	0.013	-	-	0.035	0.048	0.057	0.022	0.012	0.064	0.027	-	-
HCM Control Delay (s)	7.7	-	-	14.6	13.9	9.5	14.8	13.5	9.8	7.8	-	-
HCM Lane LOS	A	-	-	B	B	A	B	B	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.1	0.2	0.2	0.1	0	0.2	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	20	30	44	12	6	21	26	206	10	45	269	10
Future Volume (vph)	20	30	44	12	6	21	26	206	10	45	269	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.937				0.850		0.993			0.995	
Flt Protected		0.989		0.950			0.950			0.950		
Satd. Flow (prot)	0	1726	0	1770	1863	1583	1770	3514	0	1770	1853	0
Flt Permitted		0.989		0.950			0.950			0.950		
Satd. Flow (perm)	0	1726	0	1770	1863	1583	1770	3514	0	1770	1853	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	24	36	52	14	7	25	31	245	12	54	320	12
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	112	0	14	7	25	31	257	0	54	332	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 40.1%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	20	30	44	12	6	21	26	206	10	45	269	10
Future Vol, veh/h	20	30	44	12	6	21	26	206	10	45	269	10
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	24	36	52	14	7	25	31	245	12	54	320	12
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	10.7	9.3	10.4	14.1
HCM LOS	B	A	B	B

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	21%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	87%	32%	0%	100%	0%	0%	96%
Vol Right, %	0%	0%	13%	47%	0%	0%	100%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	26	137	79	94	12	6	21	45	279
LT Vol	26	0	0	20	12	0	0	45	0
Through Vol	0	137	69	30	0	6	0	0	269
RT Vol	0	0	10	44	0	0	21	0	10
Lane Flow Rate	31	163	94	112	14	7	25	54	332
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.056	0.273	0.154	0.199	0.028	0.013	0.04	0.093	0.53
Departure Headway (Hd)	6.511	6.007	5.917	6.412	7.037	6.532	5.825	6.272	5.744
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	551	598	607	560	509	548	614	572	628
Service Time	4.243	3.739	3.649	4.152	4.779	4.273	3.565	4.001	3.473
HCM Lane V/C Ratio	0.056	0.273	0.155	0.2	0.028	0.013	0.041	0.094	0.529
HCM Control Delay	9.6	11	9.7	10.7	10	9.4	8.8	9.6	14.8
HCM Lane LOS	A	B	A	B	A	A	A	A	B
HCM 95th-tile Q	0.2	1.1	0.5	0.7	0.1	0	0.1	0.3	3.1

Appendix G:
Existing With Project PM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	524	8	11	558	5	9
Future Volume (vph)	524	8	11	558	5	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.998				0.913	
Flt Protected			0.950		0.983	
Satd. Flow (prot)	3532	0	1770	3539	1672	0
Flt Permitted			0.950		0.983	
Satd. Flow (perm)	3532	0	1770	3539	1672	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	639	10	13	680	6	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	649	0	13	680	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 25.4%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	524	8	11	558	5	9
Future Vol, veh/h	524	8	11	558	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	639	10	13	680	6	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	649	0	1010	325
Stage 1	-	-	-	-	644	-
Stage 2	-	-	-	-	366	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	933	-	236	671
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	672	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	933	-	233	671
Mov Cap-2 Maneuver	-	-	-	-	233	-
Stage 1	-	-	-	-	485	-
Stage 2	-	-	-	-	663	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	14.4
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	401	-	-	933	-
HCM Lane V/C Ratio	0.043	-	-	0.014	-
HCM Control Delay (s)	14.4	-	-	8.9	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	0	0	0	0	0	0	9	0	0	15	0
Future Volume (vph)	0	0	0	0	0	0	0	9	0	0	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	0	0	0	0	0	0	10	0	0	16	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	0	0	0	0	0	0	10	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 6.7%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	0	0	0	0	9	0	0	15	0
Future Vol, veh/h	0	0	0	0	0	0	0	9	0	0	15	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0	0	10	0	0	16	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1	0	0	1	0	0	10	2	1	7	2	1
Stage 1	-	-	-	-	-	-	1	1	-	1	1	-
Stage 2	-	-	-	-	-	-	9	1	-	6	1	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1622	-	-	1622	-	-	1008	894	1084	1013	894	1084
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	1012	895	-	1016	895	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1622	-	-	1622	-	-	994	894	1084	1005	894	1084
Mov Cap-2 Maneuver	-	-	-	-	-	-	994	894	-	1005	894	-
Stage 1	-	-	-	-	-	-	1022	895	-	1022	895	-
Stage 2	-	-	-	-	-	-	994	895	-	1005	895	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.1	9.1
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	894	1622	-	-	1622	-	-	894
HCM Lane V/C Ratio	0.011	-	-	-	-	-	-	0.018
HCM Control Delay (s)	9.1	0	-	-	0	-	-	9.1
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	9	15	3	5	10
Future Volume (vph)	6	9	15	3	5	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.921				0.907	
Flt Protected	0.980			0.960		
Satd. Flow (prot)	1681	0	0	1788	1690	0
Flt Permitted	0.980			0.960		
Satd. Flow (perm)	1681	0	0	1788	1690	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	7	10	16	3	5	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	19	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 17.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	9	15	3	5	10
Future Vol, veh/h	6	9	15	3	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	10	16	3	5	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	46	11	16	0	-	0
Stage 1	11	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	964	1070	1602	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	954	1070	1602	-	-	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	987	-	-	-	-	-

Approach	EB		NB		SB	
HCM Control Delay, s	8.6		6.1		0	
HCM LOS	A					

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1020	-	-
HCM Lane V/C Ratio	0.01	-	0.016	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	18	30	15	9	5
Future Volume (vph)	3	18	30	15	9	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.883				0.955	
Flt Protected	0.994			0.967		
Satd. Flow (prot)	1635	0	0	1801	1779	0
Flt Permitted	0.994			0.967		
Satd. Flow (perm)	1635	0	0	1801	1779	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	3	20	33	16	10	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	49	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 19.1%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	18	30	15	9	5
Future Vol, veh/h	3	18	30	15	9	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	3	20	33	16	10	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	95	13	15	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	82	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	905	1067	1603	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	886	1067	1603	-	-	-
Mov Cap-2 Maneuver	886	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	941	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	4.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1603	-	1037	-	-
HCM Lane V/C Ratio	0.02	-	0.022	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	8	33	10	7	43	50	207	13	36	288	14
Future Volume (vph)	5	8	33	10	7	43	50	207	13	36	288	14
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	5	9	36	11	8	47	54	225	14	39	313	15
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	9	36	11	8	47	54	225	14	39	313	15
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 35.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	8	33	10	7	43	50	207	13	36	288	14
Future Vol, veh/h	5	8	33	10	7	43	50	207	13	36	288	14
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	9	36	11	8	47	54	225	14	39	313	15

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	759	738	313	754	739	225	328	0	0	239	0	0
Stage 1	391	391	-	333	333	-	-	-	-	-	-	-
Stage 2	368	347	-	421	406	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	323	346	727	326	345	814	1232	-	-	1328	-	-
Stage 1	633	607	-	681	644	-	-	-	-	-	-	-
Stage 2	652	635	-	610	598	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	283	321	727	287	320	814	1232	-	-	1328	-	-
Mov Cap-2 Maneuver	283	321	-	287	320	-	-	-	-	-	-	-
Stage 1	605	589	-	651	616	-	-	-	-	-	-	-
Stage 2	580	607	-	555	581	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	12.1	11.9	1.5	0.8
HCM LOS	B	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1232	-	-	283	321	727	287	320	814	1328	-	-
HCM Lane V/C Ratio	0.044	-	-	0.019	0.027	0.049	0.038	0.024	0.057	0.029	-	-
HCM Control Delay (s)	8.1	-	-	18	16.5	10.2	18	16.5	9.7	7.8	-	-
HCM Lane LOS	A	-	-	C	C	B	C	C	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.1	0.1	0.2	0.1	0.1	0.2	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	18	15	28	7	25	60	29	280	11	41	280	29
Future Volume (vph)	18	15	28	7	25	60	29	280	11	41	280	29
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.938				0.850		0.994			0.986	
Flt Protected		0.986		0.950			0.950			0.950		
Satd. Flow (prot)	0	1723	0	1770	1863	1583	1770	3518	0	1770	1837	0
Flt Permitted		0.986		0.950			0.950			0.950		
Satd. Flow (perm)	0	1723	0	1770	1863	1583	1770	3518	0	1770	1837	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	20	17	31	8	28	67	32	311	12	46	311	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	68	0	8	28	67	32	323	0	46	343	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 40.0%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Intersection Delay, s/veh	12.7
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	18	15	28	7	25	60	29	280	11	41	280	29
Future Vol, veh/h	18	15	28	7	25	60	29	280	11	41	280	29
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	17	31	8	28	67	32	311	12	46	311	32
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	10.6	9.5	11.3	15.3
HCM LOS	B	A	B	C

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	30%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	89%	25%	0%	100%	0%	0%	91%
Vol Right, %	0%	0%	11%	46%	0%	0%	100%	0%	9%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	29	187	104	61	7	25	60	41	309
LT Vol	29	0	0	18	7	0	0	41	0
Through Vol	0	187	93	15	0	25	0	0	280
RT Vol	0	0	11	28	0	0	60	0	29
Lane Flow Rate	32	207	116	68	8	28	67	46	343
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.059	0.35	0.193	0.128	0.015	0.051	0.11	0.082	0.562
Departure Headway (Hd)	6.578	6.074	5.999	6.81	7.131	6.626	5.918	6.459	5.89
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	544	591	598	525	501	540	604	555	611
Service Time	4.32	3.816	3.741	4.567	4.882	4.376	3.668	4.198	3.628
HCM Lane V/C Ratio	0.059	0.35	0.194	0.13	0.016	0.052	0.111	0.083	0.561
HCM Control Delay	9.7	12.1	10.2	10.6	10	9.7	9.4	9.8	16
HCM Lane LOS	A	B	B	B	A	A	A	A	C
HCM 95th-tile Q	0.2	1.6	0.7	0.4	0	0.2	0.4	0.3	3.5

Appendix H:
Opening Year 2026 AM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1725	1	3	901	3	2
Future Volume (vph)	1725	1	3	901	3	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt					0.946	
Flt Protected			0.950		0.971	
Satd. Flow (prot)	3539	0	1770	3539	1711	0
Flt Permitted			0.950		0.971	
Satd. Flow (perm)	3539	0	1770	3539	1711	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1875	1	3	979	3	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1876	0	3	979	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 57.7%	ICU Level of Service B
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	0.2					

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1725	1	3	901	3	2
Future Vol, veh/h	1725	1	3	901	3	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	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	1875	1	3	979	3	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1876	0	2372	938
Stage 1	-	-	-	-	1876	-
Stage 2	-	-	-	-	496	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	316	-	29	266
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	577	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	316	-	29	266
Mov Cap-2 Maneuver	-	-	-	-	29	-
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	572	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	95.7
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	45	-	-	316	-
HCM Lane V/C Ratio	0.121	-	-	0.01	-
HCM Control Delay (s)	95.7	-	-	16.5	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	44	0	0	15	0	0	0	0	0	0	0
Future Volume (vph)	0	44	0	0	15	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	48	0	0	16	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	16	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 6.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	44	0	0	15	0	0	0	0	0	0	0
Future Vol, veh/h	0	44	0	0	15	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	0	0	16	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	16	0	0	48	0	0	64	64	48	64	64	16
Stage 1	-	-	-	-	-	-	48	48	-	16	16	-
Stage 2	-	-	-	-	-	-	16	16	-	48	48	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1602	-	-	1559	-	-	930	827	1021	930	827	1063
Stage 1	-	-	-	-	-	-	965	855	-	1004	882	-
Stage 2	-	-	-	-	-	-	1004	882	-	965	855	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1602	-	-	1559	-	-	930	827	1021	930	827	1063
Mov Cap-2 Maneuver	-	-	-	-	-	-	930	827	-	930	827	-
Stage 1	-	-	-	-	-	-	965	855	-	1004	882	-
Stage 2	-	-	-	-	-	-	1004	882	-	965	855	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1602	-	-	1559	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	22	8	9	5	131	4	378	10	68	380	8
Future Volume (vph)	14	22	8	9	5	131	4	378	10	68	380	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	14	23	8	9	5	135	4	390	10	70	392	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	23	8	9	5	135	4	390	10	70	392	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 41.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	22	8	9	5	131	4	378	10	68	380	8
Future Vol, veh/h	14	22	8	9	5	131	4	378	10	68	380	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	23	8	9	5	135	4	390	10	70	392	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1005	940	392	950	938	390	400	0	0	400	0	0
Stage 1	532	532	-	398	398	-	-	-	-	-	-	-
Stage 2	473	408	-	552	540	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	220	264	657	240	264	658	1159	-	-	1159	-	-
Stage 1	531	526	-	628	603	-	-	-	-	-	-	-
Stage 2	572	597	-	518	521	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	164	247	657	210	247	658	1159	-	-	1159	-	-
Mov Cap-2 Maneuver	164	247	-	210	247	-	-	-	-	-	-	-
Stage 1	529	494	-	626	601	-	-	-	-	-	-	-
Stage 2	449	595	-	459	490	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.7	12.9	0.1	1.2
HCM LOS	C	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1159	-	-	164	247	657	210	247	658	1159	-	-
HCM Lane V/C Ratio	0.004	-	-	0.088	0.092	0.013	0.044	0.021	0.205	0.06	-	-
HCM Control Delay (s)	8.1	-	-	29.1	21	10.5	22.9	19.9	11.9	8.3	-	-
HCM Lane LOS	A	-	-	D	C	B	C	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0	0.1	0.1	0.8	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	32	32	161	64	6	21	66	367	29	43	546	12
Future Volume (vph)	32	32	161	64	6	21	66	367	29	43	546	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.903				0.850		0.989			0.997	
Flt Protected		0.993		0.950			0.950			0.950		
Satd. Flow (prot)	0	1670	0	1770	1863	1583	1770	3500	0	1770	1857	0
Flt Permitted		0.993		0.950			0.950			0.950		
Satd. Flow (perm)	0	1670	0	1770	1863	1583	1770	3500	0	1770	1857	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	38	38	192	76	7	25	79	437	35	51	650	14
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	268	0	76	7	25	79	472	0	51	664	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 63.1%	ICU Level of Service B
Analysis Period (min) 15	

Intersection	
Intersection Delay, s/veh	107.3
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	32	32	161	64	6	21	66	367	29	43	546	12
Future Vol, veh/h	32	32	161	64	6	21	66	367	29	43	546	12
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	38	38	192	76	7	25	79	437	35	51	650	14
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	24.2	14.3	20.7	219
HCM LOS	C	B	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	14%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	81%	14%	0%	100%	0%	0%	98%
Vol Right, %	0%	0%	19%	72%	0%	0%	100%	0%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	245	151	225	64	6	21	43	558
LT Vol	66	0	0	32	64	0	0	43	0
Through Vol	0	245	122	32	0	6	0	0	546
RT Vol	0	0	29	161	0	0	21	0	12
Lane Flow Rate	79	291	180	268	76	7	25	51	664
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.181	0.631	0.383	0.6	0.192	0.017	0.055	0.119	1.448
Departure Headway (Hd)	9.216	8.698	8.559	8.963	10.106	9.582	8.848	8.374	7.846
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	392	419	423	404	357	376	407	431	472
Service Time	6.916	6.398	6.259	6.663	7.806	7.282	6.548	6.074	5.546
HCM Lane V/C Ratio	0.202	0.695	0.426	0.663	0.213	0.019	0.061	0.118	1.407
HCM Control Delay	13.9	25.1	16.5	24.2	15.2	12.4	12.1	12.2	234.9
HCM Lane LOS	B	D	C	C	C	B	B	B	F
HCM 95th-tile Q	0.7	4.2	1.8	3.8	0.7	0.1	0.2	0.4	33.2

Appendix I:
Opening Year 2026 PM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1250	2	2	1519	1	4
Future Volume (vph)	1250	2	2	1519	1	4
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt					0.887	
Flt Protected			0.950		0.992	
Satd. Flow (prot)	3539	0	1770	3539	1639	0
Flt Permitted			0.950		0.992	
Satd. Flow (perm)	3539	0	1770	3539	1639	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1524	2	2	1852	1	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1526	0	2	1852	6	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1250	2	2	1519	1	4
Future Vol, veh/h	1250	2	2	1519	1	4
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1524	2	2	1852	1	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1526	0	2455	763
Stage 1	-	-	-	-	1525	-
Stage 2	-	-	-	-	930	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	433	-	25	347
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	344	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	433	-	25	347
Mov Cap-2 Maneuver	-	-	-	-	25	-
Stage 1	-	-	-	-	166	-
Stage 2	-	-	-	-	342	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	44.6
HCM LOS			E

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	97	-	-	433	-
HCM Lane V/C Ratio	0.063	-	-	0.006	-
HCM Control Delay (s)	44.6	-	-	13.4	-
HCM Lane LOS	E	-	-	B	-
HCM 95th %tile Q(veh)	0.2	-	-	0	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	29	0	0	49	0	0	0	0	0	0	0
Future Volume (vph)	0	29	0	0	49	0	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	32	0	0	53	0	0	0	0	0	0	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	53	0	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 6.7%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	29	0	0	49	0	0	0	0	0	0	0
Future Vol, veh/h	0	29	0	0	49	0	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	0	0	53	0	0	0	0	0	0	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	53	0	0	32	0	0	85	85	32	85	85	53
Stage 1	-	-	-	-	-	-	32	32	-	53	53	-
Stage 2	-	-	-	-	-	-	53	53	-	32	32	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1553	-	-	1580	-	-	901	805	1042	901	805	1014
Stage 1	-	-	-	-	-	-	984	868	-	960	851	-
Stage 2	-	-	-	-	-	-	960	851	-	984	868	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1553	-	-	1580	-	-	901	805	1042	901	805	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	901	805	-	901	805	-
Stage 1	-	-	-	-	-	-	984	868	-	960	851	-
Stage 2	-	-	-	-	-	-	960	851	-	984	868	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	0	0
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	-	1553	-	-	1580	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-	-	-
HCM Control Delay (s)	0	0	-	-	0	-	-	0
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	-	0	-	-	0	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 0.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	0	0	0	0	0	0
Future Volume (vph)	0	0	0	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt						
Flt Protected						
Satd. Flow (prot)	1863	0	0	1863	1863	0
Flt Permitted						
Satd. Flow (perm)	1863	0	0	1863	1863	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	0	0	0	0	0	0
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	0	0	0	0	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 0.0% ICU Level of Service A
Analysis Period (min) 15

Intersection						
Int Delay, s/veh	0					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	0	0	0
Future Vol, veh/h	0	0	0	0	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	0	0	0	0	0	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1	1	1	0	-	0
Stage 1	1	-	-	-	-	-
Stage 2	0	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1022	1084	1622	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	1022	1084	1622	-	-	-
Mov Cap-2 Maneuver	1022	-	-	-	-	-
Stage 1	1022	-	-	-	-	-
Stage 2	-	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1622	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-
HCM Control Delay (s)	0	-	0	-	-
HCM Lane LOS	A	-	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	9	6	11	8	97	5	425	14	137	466	15
Future Volume (vph)	5	9	6	11	8	97	5	425	14	137	466	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	5	10	7	12	9	105	5	462	15	149	507	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	10	7	12	9	105	5	462	15	149	507	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 47.2%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	3.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	9	6	11	8	97	5	425	14	137	466	15
Future Vol, veh/h	5	9	6	11	8	97	5	425	14	137	466	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	10	7	12	9	105	5	462	15	149	507	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1342	1292	507	1294	1293	462	523	0	0	477	0	0
Stage 1	805	805	-	472	472	-	-	-	-	-	-	-
Stage 2	537	487	-	822	821	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	129	163	566	139	163	600	1043	-	-	1085	-	-
Stage 1	376	395	-	573	559	-	-	-	-	-	-	-
Stage 2	528	550	-	368	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	90	140	566	116	140	600	1043	-	-	1085	-	-
Mov Cap-2 Maneuver	90	140	-	116	140	-	-	-	-	-	-	-
Stage 1	374	341	-	570	556	-	-	-	-	-	-	-
Stage 2	426	547	-	305	336	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	30	16.3	0.1	2
HCM LOS	D	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1043	-	-	90	140	566	116	140	600	1085	-	-
HCM Lane V/C Ratio	0.005	-	-	0.06	0.07	0.012	0.103	0.062	0.176	0.137	-	-
HCM Control Delay (s)	8.5	-	-	47.6	32.6	11.4	39.6	32.4	12.3	8.8	-	-
HCM Lane LOS	A	-	-	E	D	B	E	D	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0	0.3	0.2	0.6	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	16	105	42	27	58	158	581	69	40	507	41
Future Volume (vph)	23	16	105	42	27	58	158	581	69	40	507	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.902				0.850		0.984			0.989	
Flt Protected		0.992		0.950			0.950			0.950		
Satd. Flow (prot)	0	1667	0	1770	1863	1583	1770	3483	0	1770	1842	0
Flt Permitted		0.992		0.950			0.950			0.950		
Satd. Flow (perm)	0	1667	0	1770	1863	1583	1770	3483	0	1770	1842	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	26	18	117	47	30	64	176	646	77	44	563	46
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	161	0	47	30	64	176	723	0	44	609	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 63.2%	ICU Level of Service B
Analysis Period (min) 15	

Intersection	
Intersection Delay, s/veh	86.8
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	23	16	105	42	27	58	158	581	69	40	507	41
Future Vol, veh/h	23	16	105	42	27	58	158	581	69	40	507	41
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	26	18	117	47	30	64	176	646	77	44	563	46
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	18.4	13.2	34.1	191.9
HCM LOS	C	B	D	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	16%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	74%	11%	0%	100%	0%	0%	93%
Vol Right, %	0%	0%	26%	73%	0%	0%	100%	0%	7%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	158	387	263	144	42	27	58	40	548
LT Vol	158	0	0	23	42	0	0	40	0
Through Vol	0	387	194	16	0	27	0	0	507
RT Vol	0	0	69	105	0	0	58	0	41
Lane Flow Rate	176	430	292	160	47	30	64	44	609
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.389	0.894	0.592	0.391	0.118	0.072	0.142	0.107	1.374
Departure Headway (Hd)	8.75	8.235	8.046	9.632	9.934	9.411	8.679	8.687	8.123
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	414	443	452	376	363	383	416	415	451
Service Time	6.45	5.935	5.746	7.332	7.634	7.111	6.379	6.387	5.823
HCM Lane V/C Ratio	0.425	0.971	0.646	0.426	0.129	0.078	0.154	0.106	1.35
HCM Control Delay	16.9	49.4	21.8	18.4	14	12.8	12.8	12.4	205
HCM Lane LOS	C	E	C	C	B	B	B	B	F
HCM 95th-tile Q	1.8	9.6	3.7	1.8	0.4	0.2	0.5	0.4	28.7

Appendix J:
Opening Year 2026 With Project AM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1725	3	6	901	8	10
Future Volume (vph)	1725	3	6	901	8	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Frt					0.926	
Flt Protected			0.950		0.978	
Satd. Flow (prot)	3539	0	1770	3539	1687	0
Flt Permitted			0.950		0.978	
Satd. Flow (perm)	3539	0	1770	3539	1687	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	1875	3	7	979	9	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1878	0	7	979	20	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 57.8%	ICU Level of Service B
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1725	3	6	901	8	10
Future Vol, veh/h	1725	3	6	901	8	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	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	1875	3	7	979	9	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1878	0	2381	939
Stage 1	-	-	-	-	1877	-
Stage 2	-	-	-	-	504	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	316	-	29	265
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	572	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	316	-	28	265
Mov Cap-2 Maneuver	-	-	-	-	28	-
Stage 1	-	-	-	-	106	-
Stage 2	-	-	-	-	559	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	100.5
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	56	-	-	316	-
HCM Lane V/C Ratio	0.349	-	-	0.021	-
HCM Control Delay (s)	100.5	-	-	16.6	-
HCM Lane LOS	F	-	-	C	-
HCM 95th %tile Q(veh)	1.3	-	-	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	44	0	0	15	0	0	13	0	0	5	0
Future Volume (vph)	0	44	0	0	15	0	0	13	0	0	5	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
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
Adj. Flow (vph)	0	48	0	0	16	0	0	14	0	0	5	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	48	0	0	16	0	0	14	0	0	5	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Area Type: Other
Control Type: Unsignalized
Intersection Capacity Utilization 13.3% ICU Level of Service A
Analysis Period (min) 15

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	44	0	0	15	0	0	13	0	0	5	0
Future Vol, veh/h	0	44	0	0	15	0	0	13	0	0	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	48	0	0	16	0	0	14	0	0	5	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	16	0	0	48	0	0	67	64	48	71	64	16
Stage 1	-	-	-	-	-	-	48	48	-	16	16	-
Stage 2	-	-	-	-	-	-	19	16	-	55	48	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1602	-	-	1559	-	-	926	827	1021	920	827	1063
Stage 1	-	-	-	-	-	-	965	855	-	1004	882	-
Stage 2	-	-	-	-	-	-	1000	882	-	957	855	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1602	-	-	1559	-	-	921	827	1021	908	827	1063
Mov Cap-2 Maneuver	-	-	-	-	-	-	921	827	-	908	827	-
Stage 1	-	-	-	-	-	-	965	855	-	1004	882	-
Stage 2	-	-	-	-	-	-	994	882	-	941	855	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.4	9.4
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	827	1602	-	-	1559	-	-	827
HCM Lane V/C Ratio	0.017	-	-	-	-	-	-	0.007
HCM Control Delay (s)	9.4	0	-	-	0	-	-	9.4
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	9	13	5	4	2	3
Future Volume (vph)	9	13	5	4	2	3
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.921				0.919	
Flt Protected	0.980			0.973		
Satd. Flow (prot)	1681	0	0	1812	1712	0
Flt Permitted	0.980			0.973		
Satd. Flow (perm)	1681	0	0	1812	1712	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	10	14	5	4	2	3
Shared Lane Traffic (%)						
Lane Group Flow (vph)	24	0	0	9	5	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 14.7%		ICU Level of Service A
Analysis Period (min) 15		

Intersection	
Int Delay, s/veh	6.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	9	13	5	4	2	3
Future Vol, veh/h	9	13	5	4	2	3
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	10	14	5	4	2	3

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	18	4	5	0	-	0
Stage 1	4	-	-	-	-	-
Stage 2	14	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	1000	1080	1616	-	-	-
Stage 1	1019	-	-	-	-	-
Stage 2	1009	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	997	1080	1616	-	-	-
Mov Cap-2 Maneuver	997	-	-	-	-	-
Stage 1	1016	-	-	-	-	-
Stage 2	1009	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1616	-	1044	-	-
HCM Lane V/C Ratio	0.003	-	0.023	-	-
HCM Control Delay (s)	7.2	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	4	27	9	5	13	2
Future Volume (vph)	4	27	9	5	13	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	0.881				0.983	
Flt Protected	0.994			0.968		
Satd. Flow (prot)	1631	0	0	1803	1831	0
Flt Permitted	0.994			0.968		
Satd. Flow (perm)	1631	0	0	1803	1831	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	4	29	10	5	14	2
Shared Lane Traffic (%)						
Lane Group Flow (vph)	33	0	0	15	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 17.4%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	5.5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	4	27	9	5	13	2
Future Vol, veh/h	4	27	9	5	13	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	4	29	10	5	14	2

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	40	15	16	0	-	0
Stage 1	15	-	-	-	-	-
Stage 2	25	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	972	1065	1602	-	-	-
Stage 1	1008	-	-	-	-	-
Stage 2	998	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	966	1065	1602	-	-	-
Mov Cap-2 Maneuver	966	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	998	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.5	4.7	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1051	-	-
HCM Lane V/C Ratio	0.006	-	0.032	-	-
HCM Control Delay (s)	7.3	0	8.5	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	14	22	48	9	5	131	18	378	10	68	380	8
Future Volume (vph)	14	22	48	9	5	131	18	378	10	68	380	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	14	23	49	9	5	135	19	390	10	70	392	8
Shared Lane Traffic (%)												
Lane Group Flow (vph)	14	23	49	9	5	135	19	390	10	70	392	8
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 41.3%		ICU Level of Service A
Analysis Period (min) 15		

Intersection												
Int Delay, s/veh	3.7											

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	14	22	48	9	5	131	18	378	10	68	380	8
Future Vol, veh/h	14	22	48	9	5	131	18	378	10	68	380	8
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	97	97	97	97	97	97	97	97	97	97	97	97
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	23	49	9	5	135	19	390	10	70	392	8

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1035	970	392	1000	968	390	400	0	0	400	0	0
Stage 1	532	532	-	428	428	-	-	-	-	-	-	-
Stage 2	503	438	-	572	540	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	210	253	657	222	254	658	1159	-	-	1159	-	-
Stage 1	531	526	-	605	585	-	-	-	-	-	-	-
Stage 2	551	579	-	505	521	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	155	234	657	179	235	658	1159	-	-	1159	-	-
Mov Cap-2 Maneuver	155	234	-	179	235	-	-	-	-	-	-	-
Stage 1	523	494	-	595	576	-	-	-	-	-	-	-
Stage 2	427	570	-	419	490	-	-	-	-	-	-	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	17.1			13.1			0.4			1.2		
HCM LOS	C			B								

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1159	-	-	155	234	657	179	235	658	1159	-	-
HCM Lane V/C Ratio	0.016	-	-	0.093	0.097	0.075	0.052	0.022	0.205	0.06	-	-
HCM Control Delay (s)	8.2	-	-	30.6	22	10.9	26.2	20.7	11.9	8.3	-	-
HCM Lane LOS	A	-	-	D	C	B	D	C	B	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.3	0.3	0.2	0.2	0.1	0.8	0.2	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	32	161	64	6	23	66	378	29	48	578	15
Future Volume (vph)	33	32	161	64	6	23	66	378	29	48	578	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Frt		0.904				0.850		0.989			0.996	
Flt Protected		0.993		0.950			0.950			0.950		
Satd. Flow (prot)	0	1672	0	1770	1863	1583	1770	3500	0	1770	1855	0
Flt Permitted		0.993		0.950			0.950			0.950		
Satd. Flow (perm)	0	1672	0	1770	1863	1583	1770	3500	0	1770	1855	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Adj. Flow (vph)	39	38	192	76	7	27	79	450	35	57	688	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	269	0	76	7	27	79	485	0	57	706	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 65.1%	ICU Level of Service C
Analysis Period (min) 15	

Intersection	
Intersection Delay, s/veh	128
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	33	32	161	64	6	23	66	378	29	48	578	15
Future Vol, veh/h	33	32	161	64	6	23	66	378	29	48	578	15
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	39	38	192	76	7	27	79	450	35	57	688	18
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	25.1	14.5	21.9	259.1
HCM LOS	D	B	C	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	15%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	81%	14%	0%	100%	0%	0%	97%
Vol Right, %	0%	0%	19%	71%	0%	0%	100%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	66	252	155	226	64	6	23	48	593
LT Vol	66	0	0	33	64	0	0	48	0
Through Vol	0	252	126	32	0	6	0	0	578
RT Vol	0	0	29	161	0	0	23	0	15
Lane Flow Rate	79	300	185	269	76	7	27	57	706
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.182	0.653	0.395	0.607	0.193	0.017	0.06	0.134	1.551
Departure Headway (Hd)	9.408	8.889	8.753	9.185	10.316	9.79	9.054	8.439	7.909
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	384	408	413	396	350	368	398	427	466
Service Time	7.108	6.589	6.453	6.885	8.016	7.49	6.754	6.139	5.609
HCM Lane V/C Ratio	0.206	0.735	0.448	0.679	0.217	0.019	0.068	0.133	1.515
HCM Control Delay	14.2	26.8	17.1	25.1	15.5	12.7	12.3	12.4	279.1
HCM Lane LOS	B	D	C	D	C	B	B	B	F
HCM 95th-tile Q	0.7	4.5	1.8	3.9	0.7	0.1	0.2	0.5	38.3

SIGNAL

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	33	32	161	64	6	23	66	378	29	48	578	15
Future Volume (vph)	33	32	161	64	6	23	66	378	29	48	578	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.904				0.850		0.989			0.996	
Flt Protected		0.993		0.950			0.950			0.950		
Satd. Flow (prot)	0	1672	0	1770	1863	1583	1770	3500	0	1770	1855	0
Flt Permitted		0.952		0.545			0.273			0.476		
Satd. Flow (perm)	0	1603	0	1015	1863	1583	509	3500	0	887	1855	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		192				27		21			3	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	39	38	192	76	7	27	79	450	35	57	688	18
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	269	0	76	7	27	79	485	0	57	706	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	22.6	22.6		22.6	22.6	22.6	37.4	37.4		37.4	37.4	
Total Split (%)	37.7%	37.7%		37.7%	37.7%	37.7%	62.3%	62.3%		62.3%	62.3%	
Maximum Green (s)	18.1	18.1		18.1	18.1	18.1	32.9	32.9		32.9	32.9	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None	None	Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)		9.1		9.1	9.1	9.1	23.1	23.1		23.1	23.1	
Actuated g/C Ratio		0.22		0.22	0.22	0.22	0.56	0.56		0.56	0.56	
v/c Ratio		0.54		0.34	0.02	0.07	0.28	0.25		0.12	0.68	
Control Delay		10.0		19.6	14.5	7.7	8.6	5.2		5.6	11.1	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		10.0		19.6	14.5	7.7	8.6	5.2		5.6	11.1	
LOS		B		B	B	A	A	A		A	B	
Approach Delay		10.0			16.3			5.6			10.7	
Approach LOS		B			B			A			B	
90th %ile Green (s)	14.4	14.4		14.4	14.4	14.4	32.9	32.9		32.9	32.9	
90th %ile Term Code	Gap	Gap		Gap	Gap	Gap	Hold	Hold		Max	Max	
70th %ile Green (s)	10.9	10.9		10.9	10.9	10.9	25.1	25.1		25.1	25.1	
70th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Hold	Hold		Gap	Gap	
50th %ile Green (s)	8.6	8.6		8.6	8.6	8.6	20.1	20.1		20.1	20.1	
50th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Hold	Hold		Gap	Gap	
30th %ile Green (s)	6.9	6.9		6.9	6.9	6.9	15.4	15.4		15.4	15.4	
30th %ile Term Code	Hold	Hold		Hold	Hold	Hold	Hold	Hold		Gap	Gap	
10th %ile Green (s)	5.5	5.5		5.5	5.5	5.5	22.7	22.7		22.7	22.7	
10th %ile Term Code	Gap	Gap		Hold	Hold	Hold	Dwell	Dwell		Dwell	Dwell	
Stops (vph)		68		51	8	9	34	170		22	380	
Fuel Used(gal)		2		1	0	0	1	5		1	16	
CO Emissions (g/hr)		155		75	8	18	66	352		81	1146	
NOx Emissions (g/hr)		30		15	2	4	13	68		16	223	
VOC Emissions (g/hr)		36		17	2	4	15	81		19	266	
Dilemma Vehicles (#)		19		0	1	0	0	40		0	61	
Queue Length 50th (ft)		13		13	1	0	8	22		5	91	
Queue Length 95th (ft)		62		47	9	14	30	48		19	205	
Internal Link Dist (ft)		682			860			862			1917	
Turn Bay Length (ft)						100	100			100		
Base Capacity (vph)		832		460	845	733	414	2854		722	1511	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0		0	0	0	0	0		0	0	
Spillback Cap Reductn		0		0	0	0	0	0		0	0	
Storage Cap Reductn		0		0	0	0	0	0		0	0	
Reduced v/c Ratio		0.32		0.17	0.01	0.04	0.19	0.17		0.08	0.47	

Intersection Summary

Area Type: Other
Cycle Length: 60
Actuated Cycle Length: 41.5
Natural Cycle: 60
Control Type: Actuated-Uncoordinated
Maximum v/c Ratio: 0.68
Intersection Signal Delay: 9.3 Intersection LOS: A
Intersection Capacity Utilization 66.8% ICU Level of Service C
Analysis Period (min) 15
90th %ile Actuated Cycle: 56.3
70th %ile Actuated Cycle: 45
50th %ile Actuated Cycle: 37.7
30th %ile Actuated Cycle: 31.3
10th %ile Actuated Cycle: 37.2

Splits and Phases: 6: Murrieta Rd & Chambers Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	33	32	161	64	6	23	66	378	29	48	578	15
Future Volume (veh/h)	33	32	161	64	6	23	66	378	29	48	578	15
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	39	38	192	76	7	27	79	450	35	57	688	18
Peak Hour Factor	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84	0.84
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	146	74	268	484	435	369	366	1737	135	603	943	25
Arrive On Green	0.23	0.23	0.23	0.23	0.23	0.23	0.52	0.52	0.52	0.52	0.52	0.52
Sat Flow, veh/h	142	320	1151	1151	1870	1585	742	3342	259	911	1814	47
Grp Volume(v), veh/h	269	0	0	76	7	27	79	239	246	57	0	706
Grp Sat Flow(s),veh/h/ln	1612	0	0	1151	1870	1585	742	1777	1824	911	0	1862
Q Serve(g_s), s	2.3	0.0	0.0	0.0	0.1	0.5	3.4	2.7	2.7	1.3	0.0	10.7
Cycle Q Clear(g_c), s	5.5	0.0	0.0	1.8	0.1	0.5	14.0	2.7	2.7	4.1	0.0	10.7
Prop In Lane	0.14		0.71	1.00		1.00	1.00		0.14	1.00		0.03
Lane Grp Cap(c), veh/h	489	0	0	484	435	369	366	924	948	603	0	968
V/C Ratio(X)	0.55	0.00	0.00	0.16	0.02	0.07	0.22	0.26	0.26	0.09	0.00	0.73
Avail Cap(c_a), veh/h	908	0	0	788	931	789	651	1607	1649	953	0	1684
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.8	0.0	0.0	11.4	10.7	10.9	12.2	4.8	4.8	6.0	0.0	6.8
Incr Delay (d2), s/veh	1.0	0.0	0.0	0.1	0.0	0.1	0.3	0.1	0.1	0.1	0.0	1.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	0.0	0.0	0.4	0.0	0.1	0.4	0.4	0.4	0.1	0.0	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.8	0.0	0.0	11.5	10.8	11.0	12.5	5.0	5.0	6.0	0.0	7.8
LnGrp LOS	B	A	A	B	B	B	B	A	A	A	A	A
Approach Vol, veh/h		269			110			564			763	
Approach Delay, s/veh		13.8			11.4			6.0			7.7	
Approach LOS		B			B			A			A	
Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		23.4		13.0		23.4		13.0				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		32.9		18.1		32.9		18.1				
Max Q Clear Time (g_c+I1), s		16.0		7.5		12.7		3.8				
Green Ext Time (p_c), s		2.9		1.1		4.7		0.3				
Intersection Summary												
HCM 6th Ctrl Delay			8.3									
HCM 6th LOS			A									

Appendix K:
Opening Year 2026 With Project PM Peak Hour Analysis Worksheets

Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	1250	8	11	1519	5	9
Future Volume (vph)	1250	8	11	1519	5	9
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)		0	105		0	0
Storage Lanes		0	1		1	0
Taper Length (ft)			75		75	
Lane Util. Factor	0.95	0.95	1.00	0.95	1.00	1.00
Ped Bike Factor						
Frt	0.999				0.913	
Flt Protected			0.950		0.983	
Satd. Flow (prot)	3536	0	1770	3539	1672	0
Flt Permitted			0.950		0.983	
Satd. Flow (perm)	3536	0	1770	3539	1672	0
Link Speed (mph)	50			50	25	
Link Distance (ft)	1312			1292	2673	
Travel Time (s)	17.9			17.6	72.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.82	0.82	0.82	0.82	0.82	0.82
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	1524	10	13	1852	6	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	1534	0	13	1852	17	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			12	12	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)		9	15		15	9
Sign Control	Free			Free	Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 52.0%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	1250	8	11	1519	5	9
Future Vol, veh/h	1250	8	11	1519	5	9
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	105	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	82	82	82	82	82	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	1524	10	13	1852	6	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	1534	0	2481	767
Stage 1	-	-	-	-	1529	-
Stage 2	-	-	-	-	952	-
Critical Hdwy	-	-	4.14	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	5.84	-
Follow-up Hdwy	-	-	2.22	-	3.52	3.32
Pot Cap-1 Maneuver	-	-	430	-	24	345
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	335	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	430	-	23	345
Mov Cap-2 Maneuver	-	-	-	-	23	-
Stage 1	-	-	-	-	165	-
Stage 2	-	-	-	-	325	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.1	91.1
HCM LOS			F

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	58	-	-	430	-
HCM Lane V/C Ratio	0.294	-	-	0.031	-
HCM Control Delay (s)	91.1	-	-	13.6	-
HCM Lane LOS	F	-	-	B	-
HCM 95th %tile Q(veh)	1	-	-	0.1	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		✥			✥			✥			✥	
Traffic Volume (vph)	0	29	0	0	49	0	0	9	0	0	15	0
Future Volume (vph)	0	29	0	0	49	0	0	9	0	0	15	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	150		150	150		150	150		150
Storage Lanes	0		0	0		0	0		0	0		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt												
Flt Protected												
Satd. Flow (prot)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Flt Permitted												
Satd. Flow (perm)	0	1863	0	0	1863	0	0	1863	0	0	1863	0
Link Speed (mph)		25			25			25			25	
Link Distance (ft)		1313			1285			1647			2673	
Travel Time (s)		35.8			35.0			44.9			72.9	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	0	32	0	0	53	0	0	10	0	0	16	0
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	32	0	0	53	0	0	10	0	0	16	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			0			0	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Free			Free			Stop			Stop	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 13.3%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	29	0	0	49	0	0	9	0	0	15	0
Future Vol, veh/h	0	29	0	0	49	0	0	9	0	0	15	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	32	0	0	53	0	0	10	0	0	16	0

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	53	0	0	32	0	0	93	85	32	90	85	53
Stage 1	-	-	-	-	-	-	32	32	-	53	53	-
Stage 2	-	-	-	-	-	-	61	53	-	37	32	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.12	6.52	6.22	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.12	5.52	-	6.12	5.52	-
Follow-up Hdwy	2.218	-	-	2.218	-	-	3.518	4.018	3.318	3.518	4.018	3.318
Pot Cap-1 Maneuver	1553	-	-	1580	-	-	891	805	1042	895	805	1014
Stage 1	-	-	-	-	-	-	984	868	-	960	851	-
Stage 2	-	-	-	-	-	-	950	851	-	978	868	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1553	-	-	1580	-	-	878	805	1042	887	805	1014
Mov Cap-2 Maneuver	-	-	-	-	-	-	878	805	-	887	805	-
Stage 1	-	-	-	-	-	-	984	868	-	960	851	-
Stage 2	-	-	-	-	-	-	932	851	-	967	868	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	9.5	9.6
HCM LOS			A	A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	805	1553	-	-	1580	-	-	805
HCM Lane V/C Ratio	0.012	-	-	-	-	-	-	0.02
HCM Control Delay (s)	9.5	0	-	-	0	-	-	9.6
HCM Lane LOS	A	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0	-	-	0	-	-	0.1

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	6	9	15	3	5	10
Future Volume (vph)	6	9	15	3	5	10
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	0	0	0			0
Storage Lanes	1	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.921				0.907	
Flt Protected	0.980			0.960		
Satd. Flow (prot)	1681	0	0	1788	1690	0
Flt Permitted	0.980			0.960		
Satd. Flow (perm)	1681	0	0	1788	1690	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	309			460	1647	
Travel Time (s)	7.0			12.5	44.9	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	7	10	16	3	5	11
Shared Lane Traffic (%)						
Lane Group Flow (vph)	17	0	0	19	16	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 17.7%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	9	15	3	5	10
Future Vol, veh/h	6	9	15	3	5	10
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	10	16	3	5	11

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	46	11	16	0	-	0
Stage 1	11	-	-	-	-	-
Stage 2	35	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	964	1070	1602	-	-	-
Stage 1	1012	-	-	-	-	-
Stage 2	987	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	954	1070	1602	-	-	-
Mov Cap-2 Maneuver	954	-	-	-	-	-
Stage 1	1002	-	-	-	-	-
Stage 2	987	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	6.1	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1602	-	1020	-	-
HCM Lane V/C Ratio	0.01	-	0.016	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0	-	0	-	-

Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	3	18	30	15	9	5
Future Volume (vph)	3	18	30	15	9	5
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12
Grade (%)	0%			0%	0%	
Storage Length (ft)	150	150	150			150
Storage Lanes	0	0	0			0
Taper Length (ft)	75		75			
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor						
Frt	0.883				0.955	
Flt Protected	0.994			0.967		
Satd. Flow (prot)	1635	0	0	1801	1779	0
Flt Permitted	0.994			0.967		
Satd. Flow (perm)	1635	0	0	1801	1779	0
Link Speed (mph)	30			25	25	
Link Distance (ft)	301			543	460	
Travel Time (s)	6.8			14.8	12.5	
Confl. Peds. (#/hr)						
Confl. Bikes (#/hr)						
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Growth Factor	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0
Parking (#/hr)						
Mid-Block Traffic (%)	0%			0%	0%	
Adj. Flow (vph)	3	20	33	16	10	5
Shared Lane Traffic (%)						
Lane Group Flow (vph)	23	0	0	49	15	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	12			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Sign Control	Stop			Free	Free	

Intersection Summary	
Area Type: Other	
Control Type: Unsignalized	
Intersection Capacity Utilization 19.1%	ICU Level of Service A
Analysis Period (min) 15	

Intersection						
Int Delay, s/veh	5					

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	3	18	30	15	9	5
Future Vol, veh/h	3	18	30	15	9	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	-	-
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	3	20	33	16	10	5

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	95	13	15	0	-	0
Stage 1	13	-	-	-	-	-
Stage 2	82	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	905	1067	1603	-	-	-
Stage 1	1010	-	-	-	-	-
Stage 2	941	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	886	1067	1603	-	-	-
Mov Cap-2 Maneuver	886	-	-	-	-	-
Stage 1	989	-	-	-	-	-
Stage 2	941	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	8.6	4.9	0
HCM LOS	A		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1603	-	1037	-	-
HCM Lane V/C Ratio	0.02	-	0.022	-	-
HCM Control Delay (s)	7.3	0	8.6	-	-
HCM Lane LOS	A	A	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.1	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	9	33	11	8	97	50	425	14	137	466	15
Future Volume (vph)	5	9	33	11	8	97	50	425	14	137	466	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	170		300	160		160	160		0	110		140
Storage Lanes	1		1	1		1	1		1	1		1
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Ped Bike Factor												
Frt			0.850			0.850			0.850			0.850
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Flt Permitted	0.950			0.950			0.950			0.950		
Satd. Flow (perm)	1770	1863	1583	1770	1863	1583	1770	1863	1583	1770	1863	1583
Link Speed (mph)		40			40			45			45	
Link Distance (ft)		849			1139			684			572	
Travel Time (s)		14.5			19.4			10.4			8.7	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
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
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	5	10	36	12	9	105	54	462	15	149	507	16
Shared Lane Traffic (%)												
Lane Group Flow (vph)	5	10	36	12	9	105	54	462	15	149	507	16
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Free			Free	

Intersection Summary	
Area Type:	Other
Control Type: Unsignalized	
Intersection Capacity Utilization 47.2%	ICU Level of Service A
Analysis Period (min) 15	

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	5	9	33	11	8	97	50	425	14	137	466	15
Future Vol, veh/h	5	9	33	11	8	97	50	425	14	137	466	15
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	170	-	300	160	-	160	160	-	0	110	-	140
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	10	36	12	9	105	54	462	15	149	507	16

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1440	1390	507	1406	1391	462	523	0	0	477	0	0
Stage 1	805	805	-	570	570	-	-	-	-	-	-	-
Stage 2	635	585	-	836	821	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	111	142	566	117	142	600	1043	-	-	1085	-	-
Stage 1	376	395	-	506	505	-	-	-	-	-	-	-
Stage 2	467	498	-	362	389	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	74	116	566	88	116	600	1043	-	-	1085	-	-
Mov Cap-2 Maneuver	74	116	-	88	116	-	-	-	-	-	-	-
Stage 1	356	341	-	480	479	-	-	-	-	-	-	-
Stage 2	358	472	-	284	336	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	21.9	17.9	0.9	2
HCM LOS	C	C		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	EBLn2	EBLn3	WBLn1	WBLn2	WBLn3	SBL	SBT	SBR
Capacity (veh/h)	1043	-	-	74	116	566	88	116	600	1085	-	-
HCM Lane V/C Ratio	0.052	-	-	0.073	0.084	0.063	0.136	0.075	0.176	0.137	-	-
HCM Control Delay (s)	8.6	-	-	57.5	38.9	11.8	52.2	38.5	12.3	8.8	-	-
HCM Lane LOS	A	-	-	F	E	B	F	E	B	A	-	-
HCM 95th %tile Q(veh)	0.2	-	-	0.2	0.3	0.2	0.5	0.2	0.6	0.5	-	-

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	16	105	42	27	64	158	617	69	44	528	43
Future Volume (vph)	26	16	105	42	27	64	158	617	69	44	528	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.904				0.850		0.985			0.989	
Flt Protected		0.991		0.950			0.950			0.950		
Satd. Flow (prot)	0	1669	0	1770	1863	1583	1770	3486	0	1770	1842	0
Flt Permitted		0.991		0.950			0.950			0.950		
Satd. Flow (perm)	0	1669	0	1770	1863	1583	1770	3486	0	1770	1842	0
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	18	117	47	30	71	176	686	77	49	587	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	0	47	30	71	176	763	0	49	635	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary		
Area Type:	Other	
Control Type: Unsignalized		
Intersection Capacity Utilization 64.6%		ICU Level of Service C
Analysis Period (min) 15		

Intersection	
Intersection Delay, s/veh	102.4
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	26	16	105	42	27	64	158	617	69	44	528	43
Future Vol, veh/h	26	16	105	42	27	64	158	617	69	44	528	43
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	29	18	117	47	30	71	176	686	77	49	587	48
Number of Lanes	0	1	0	1	1	1	1	2	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	2	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	3	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	2	3	1
HCM Control Delay	19.4	13.5	41.6	224.9
HCM LOS	C	B	E	F

Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1	SBLn2
Vol Left, %	100%	0%	0%	18%	100%	0%	0%	100%	0%
Vol Thru, %	0%	100%	75%	11%	0%	100%	0%	0%	92%
Vol Right, %	0%	0%	25%	71%	0%	0%	100%	0%	8%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	158	411	275	147	42	27	64	44	571
LT Vol	158	0	0	26	42	0	0	44	0
Through Vol	0	411	206	16	0	27	0	0	528
RT Vol	0	0	69	105	0	0	64	0	43
Lane Flow Rate	176	457	305	163	47	30	71	49	634
Geometry Grp	8	8	8	8	7	7	7	8	8
Degree of Util (X)	0.393	0.958	0.625	0.411	0.119	0.073	0.158	0.12	1.459
Departure Headway (Hd)	8.968	8.452	8.27	9.935	10.155	9.631	8.896	8.846	8.281
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	404	434	439	364	355	374	406	407	444
Service Time	6.668	6.152	5.97	7.635	7.855	7.331	6.596	6.557	5.992
HCM Lane V/C Ratio	0.436	1.053	0.695	0.448	0.132	0.08	0.175	0.12	1.428
HCM Control Delay	17.4	62.8	23.8	19.4	14.2	13.1	13.3	12.8	241.2
HCM Lane LOS	C	F	C	C	B	B	B	B	F
HCM 95th-tile Q	1.8	11.3	4.2	2	0.4	0.2	0.6	0.4	32.3

SIGNAL

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	26	16	105	42	27	64	158	617	69	44	528	43
Future Volume (vph)	26	16	105	42	27	64	158	617	69	44	528	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width (ft)	12	12	12	12	12	12	12	12	12	12	12	12
Grade (%)		0%			0%			0%			0%	
Storage Length (ft)	0		0	0		100	100		0	100		0
Storage Lanes	0		0	1		1	1		0	1		0
Taper Length (ft)	75			75			75			75		
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00	1.00	1.00
Ped Bike Factor												
Frt		0.904				0.850		0.985			0.989	
Flt Protected		0.991		0.950			0.950			0.950		
Satd. Flow (prot)	0	1669	0	1770	1863	1583	1770	3486	0	1770	1842	0
Flt Permitted		0.931		0.787			0.356			0.362		
Satd. Flow (perm)	0	1568	0	1466	1863	1583	663	3486	0	674	1842	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		117				71		32			11	
Link Speed (mph)		35			35			45			45	
Link Distance (ft)		762			940			942			1997	
Travel Time (s)		14.8			18.3			14.3			30.3	
Confl. Peds. (#/hr)												
Confl. Bikes (#/hr)												
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Growth Factor	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Heavy Vehicles (%)	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Parking (#/hr)												
Mid-Block Traffic (%)		0%			0%			0%			0%	
Adj. Flow (vph)	29	18	117	47	30	71	176	686	77	49	587	48
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	164	0	47	30	71	176	763	0	49	635	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Turn Type	Perm	NA		Perm	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8		8	2			6		
Detector Phase	4	4		8	8	8	2	2		6	6	
Switch Phase												

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	5.0	5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Minimum Split (s)	22.5	22.5		22.5	22.5	22.5	22.5	22.5		22.5	22.5	
Total Split (s)	22.5	22.5		22.5	22.5	22.5	37.5	37.5		37.5	37.5	
Total Split (%)	37.5%	37.5%		37.5%	37.5%	37.5%	62.5%	62.5%		62.5%	62.5%	
Maximum Green (s)	18.0	18.0		18.0	18.0	18.0	33.0	33.0		33.0	33.0	
Yellow Time (s)	3.5	3.5		3.5	3.5	3.5	3.5	3.5		3.5	3.5	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)		4.5		4.5	4.5	4.5	4.5	4.5		4.5	4.5	
Lead/Lag												
Lead-Lag Optimize?												
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Time Before Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recall Mode	None	None		None	None	None	Min	Min		Min	Min	
Walk Time (s)	7.0	7.0		7.0	7.0	7.0	7.0	7.0		7.0	7.0	
Flash Dont Walk (s)	11.0	11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)	0	0		0	0	0	0	0		0	0	
Act Effct Green (s)		7.6		7.6	7.6	7.6	24.4	24.4		24.4	24.4	
Actuated g/C Ratio		0.20		0.20	0.20	0.20	0.65	0.65		0.65	0.65	
v/c Ratio		0.40		0.16	0.08	0.19	0.41	0.33		0.11	0.53	
Control Delay		9.8		16.3	15.4	6.8	8.7	4.6		4.9	7.2	
Queue Delay		0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay		9.8		16.3	15.4	6.8	8.7	4.6		4.9	7.2	
LOS		A		B	B	A	A	A		A	A	
Approach Delay		9.8			11.6			5.4			7.0	
Approach LOS		A			B			A			A	
90th %ile Green (s)	11.3	11.3		11.3	11.3	11.3	33.0	33.0		33.0	33.0	
90th %ile Term Code	Gap	Gap		Hold	Hold	Hold	Max	Max		Hold	Hold	
70th %ile Green (s)	8.5	8.5		8.5	8.5	8.5	24.5	24.5		24.5	24.5	
70th %ile Term Code	Gap	Gap		Hold	Hold	Hold	Gap	Gap		Hold	Hold	
50th %ile Green (s)	6.8	6.8		6.8	6.8	6.8	17.7	17.7		17.7	17.7	
50th %ile Term Code	Hold	Hold		Gap	Gap	Gap	Gap	Gap		Hold	Hold	
30th %ile Green (s)	6.0	6.0		6.0	6.0	6.0	16.6	16.6		16.6	16.6	
30th %ile Term Code	Hold	Hold		Hold	Hold	Hold	Dwell	Dwell		Dwell	Dwell	
10th %ile Green (s)	0.0	0.0		0.0	0.0	0.0	22.5	22.5		22.5	22.5	
10th %ile Term Code	Skip	Skip		Skip	Skip	Skip	Dwell	Dwell		Dwell	Dwell	
Stops (vph)		51		36	24	18	84	272		20	295	
Fuel Used(gal)		1		1	0	1	2	8		1	14	
CO Emissions (g/hr)		104		49	31	46	160	575		74	1011	
NOx Emissions (g/hr)		20		9	6	9	31	112		14	197	
VOC Emissions (g/hr)		24		11	7	11	37	133		17	234	
Dilemma Vehicles (#)		13		0	2	0	0	68		0	54	
Queue Length 50th (ft)		7		7	4	0	16	33		4	64	
Queue Length 95th (ft)		53		34	25	26	62	72		16	164	
Internal Link Dist (ft)		682			860			862			1917	
Turn Bay Length (ft)						100	100			100		
Base Capacity (vph)		854		744	946	839	582	3064		591	1618	

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Starvation Cap Reductn		0		0	0	0	0	0		0	0	
Spillback Cap Reductn		0		0	0	0	0	0		0	0	
Storage Cap Reductn		0		0	0	0	0	0		0	0	
Reduced v/c Ratio		0.19		0.06	0.03	0.08	0.30	0.25		0.08	0.39	

Intersection Summary	
Area Type: Other	
Cycle Length: 60	
Actuated Cycle Length: 37.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.53	
Intersection Signal Delay: 6.8	Intersection LOS: A
Intersection Capacity Utilization 65.8%	ICU Level of Service C
Analysis Period (min) 15	
90th %ile Actuated Cycle: 53.3	
70th %ile Actuated Cycle: 42	
50th %ile Actuated Cycle: 33.5	
30th %ile Actuated Cycle: 31.6	
10th %ile Actuated Cycle: 27	

Splits and Phases: 6: Murrieta Rd & Chambers Ave

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	26	16	105	42	27	64	158	617	69	44	528	43
Future Volume (veh/h)	26	16	105	42	27	64	158	617	69	44	528	43
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	29	18	117	47	30	71	176	686	77	49	587	48
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	147	44	182	451	302	256	496	1901	213	536	1007	82
Arrive On Green	0.16	0.16	0.16	0.16	0.16	0.16	0.59	0.59	0.59	0.59	0.59	0.59
Sat Flow, veh/h	183	271	1131	1254	1870	1585	793	3221	361	704	1706	139
Grp Volume(v), veh/h	164	0	0	47	30	71	176	378	385	49	0	635
Grp Sat Flow(s),veh/h/ln	1585	0	0	1254	1870	1585	793	1777	1805	704	0	1845
Q Serve(g_s), s	1.5	0.0	0.0	0.0	0.5	1.4	6.5	4.0	4.0	1.4	0.0	7.8
Cycle Q Clear(g_c), s	3.4	0.0	0.0	0.8	0.5	1.4	14.3	4.0	4.0	5.4	0.0	7.8
Prop In Lane	0.18		0.71	1.00		1.00	1.00		0.20	1.00		0.08
Lane Grp Cap(c), veh/h	373	0	0	451	302	256	496	1049	1065	536	0	1089
V/C Ratio(X)	0.44	0.00	0.00	0.10	0.10	0.28	0.35	0.36	0.36	0.09	0.00	0.58
Avail Cap(c_a), veh/h	893	0	0	872	929	788	750	1619	1645	762	0	1681
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	14.2	0.0	0.0	13.1	12.9	13.3	9.1	3.9	3.9	5.3	0.0	4.6
Incr Delay (d2), s/veh	0.8	0.0	0.0	0.1	0.1	0.6	0.4	0.2	0.2	0.1	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	0.0	0.3	0.2	0.4	0.7	0.3	0.3	0.1	0.0	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	15.0	0.0	0.0	13.2	13.1	13.9	9.5	4.1	4.1	5.4	0.0	5.1
LnGrp LOS	B	A	A	B	B	B	A	A	A	A	A	A
Approach Vol, veh/h		164			148			939			684	
Approach Delay, s/veh		15.0			13.5			5.1			5.2	
Approach LOS		B			B			A			A	

Timer - Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.9		10.3		25.9		10.3				
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5				
Max Green Setting (Gmax), s		33.0		18.0		33.0		18.0				
Max Q Clear Time (g_c+I1), s		16.3		5.4		9.8		3.4				
Green Ext Time (p_c), s		5.1		0.7		4.4		0.4				

Intersection Summary			
HCM 6th Ctrl Delay			6.6
HCM 6th LOS			A

Appendix L:
Traffic Signal Warrants

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

Existing With Project Conditions

COUNT DATE 8/17/22
CALC AT DATE 9/19/22
CHK DATE

DIST	CO	RTE	PM
8	RIV		

		Lanes: 1	2 or more			
Major St:	Murrieta Rd	☐	☑	Critical Approach Speed	45	mph
Minor St:	Chambers Ave	☑	☐	Critical Approach Speed	35	mph

Speed Limit or critical speed on major street > 64 km/h (40 mph)………………… ☑
or } RURAL (R)
In built area of isolated community of < 10,000 population………………………….. ☐

☐ URBAN (U)

WARRANT 3 - Peak Hour **100% SATISFIED** **YES** ☐ **NO** ☑
(Part A or Part B must be satisfied)

PART A **SATISFIED** **YES** ☐ **NO** ☑
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP signs equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	YES ☐ NO ☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES ☐ NO ☑
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES ☑ NO ☐

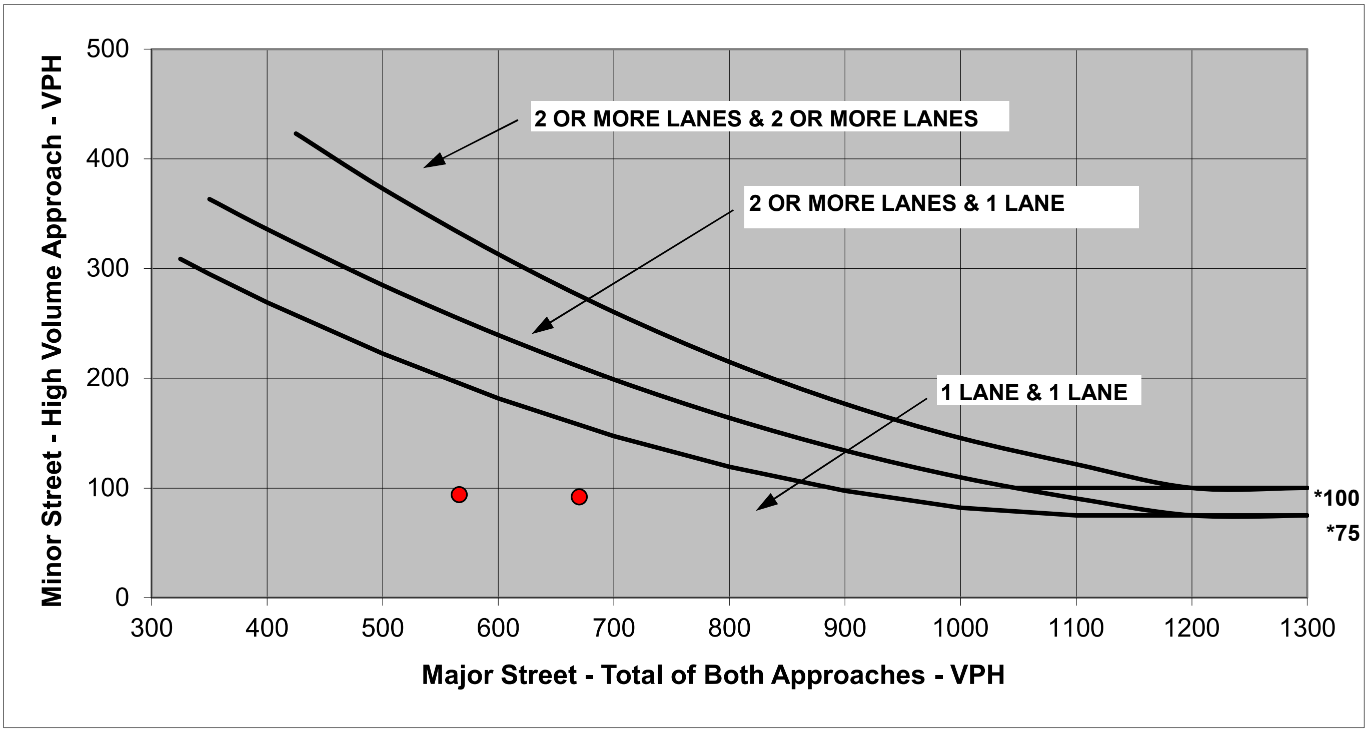
PART B **SATISFIED** **YES** ☐ **NO** ☑

APPROACH LANES	One	2 or More	Hour: 7:15AM - 8:15 AM	4:45PM - 5:45PM
Both Approaches - Major Street		X	566	670
Higher Approach - Minor Street	X		94	92

The plotted point falls above the curve in Figure 4C-3	YES ☐ NO ☑
OR, The plotted points fall above the curves in Figure 4C-4.	YES ☐ NO ☑

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)



Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower thershold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

Opening Conditions

			COUNT DATE		8/17/22
8	RIV		CALC	AT	DATE 9/19/22
DIST	CO	RTE	PM	CHK	DATE

	Lanes 1	Lanes 2 or more			
Major St: Murrieta Rd	☐	☑	Critical Approach Speed	45	mph
Minor St: Chambers Ave	☑	☐	Critical Approach Speed	35	mph

Speed Limit or critical speed on major street > 64 km/h (40 mph)………………… ☑
or — RURAL (R)
In built area of isolated community of < 10,000 population………………………….. ☐

☐ URBAN (U)

WARRANT 3 - Peak Hour **100% SATISFIED** **YES** ☐ **NO** ☑
(Part A or Part B must be satisfied)

PART A **SATISFIED** **YES** ☐ **NO** ☑
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP signs equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; AND	YES	☐	NO	☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; AND	YES	☑	NO	☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES	☑	NO	☐

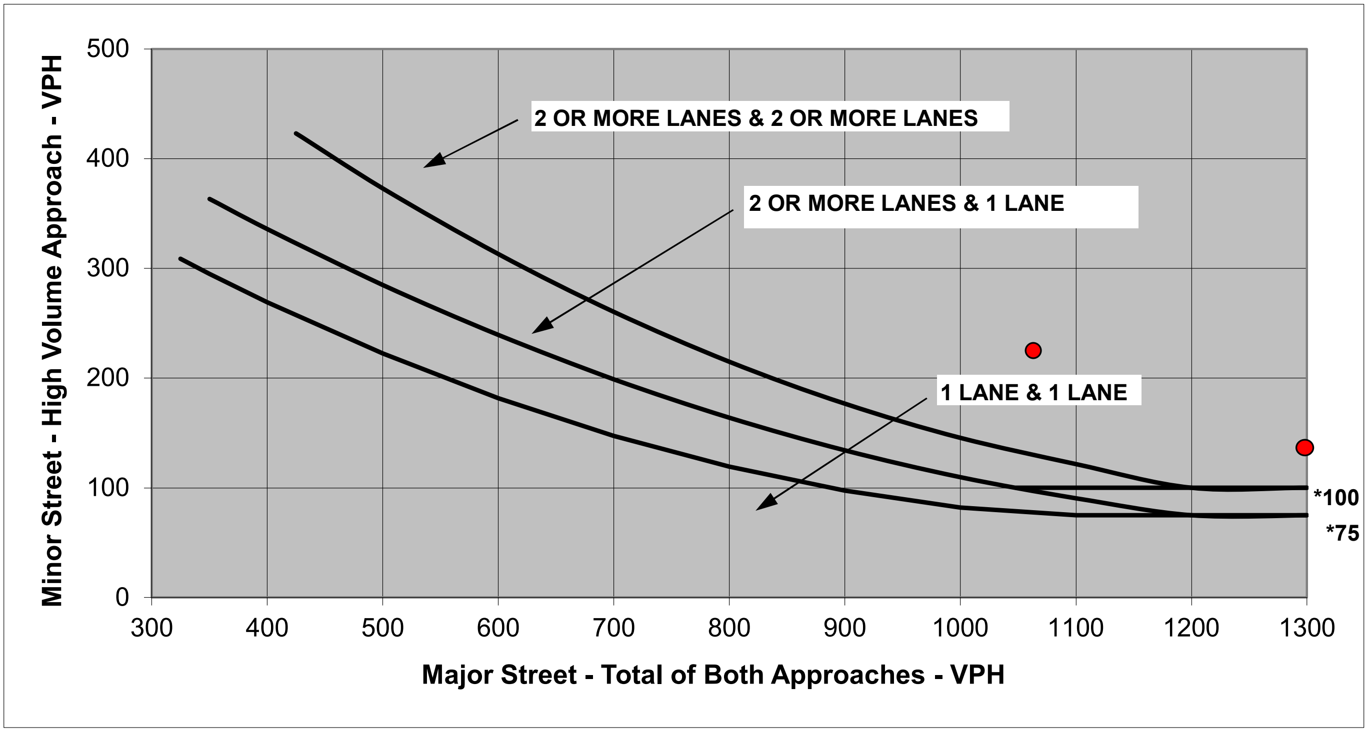
PART B **SATISFIED** **YES** ☑ **NO** ☐

APPROACH LANES	One	2 or More	Hour: 7:15AM - 8:15 AM	Hour: 4:45PM - 5:45PM
Both Approaches - Major Street		X	1063	1396
Higher Approach - Minor Street	X		225	144

The plotted point falls above the curve in Figure 4C-3	YES	☐	NO	☑
OR, The plotted points fall above the curves in Figure 4C-4.	YES	☑	NO	☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)



Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower thershold volume for a minor-street approach with one lane.

Figure 4C-101 (CA). Traffic Signal Warrants Worksheet

Opening With Project Conditions

DIST	CO	RTE	PM
8	RIV		

COUNT DATE 8/17/22
CALC AT DATE 9/19/22
CHK ____ DATE ____

	Lanes: 1	2 or more			
Major St: Murrieta Rd	☐	☑	Critical Approach Speed	45	mph
Minor St: Chambers Ave	☑	☐	Critical Approach Speed	35	mph

Speed Limit or critical speed on major street > 64 km/h (40 mph)………………… ☑
or } RURAL (R)
In built area of isolated community of < 10,000 population………………………….. ☐

☐ URBAN (U)

WARRANT 3 - Peak Hour **100% SATISFIED YES ☐ NO ☑**
(Part A or Part B must be satisfied)

<u>PART A</u> **SATISFIED YES ☐ NO ☑**
(All parts 1, 2, and 3 below must be satisfied for the same one hour, for any four consecutive 15-minute periods)

1. The total delay experienced for traffic on one minor street approach (one direction only) controlled by a STOP signs equals or exceeds four vehicle-hours for a one-lane approach, or five vehicle-hours for a two-lane approach; <u>AND</u>	YES	☐	NO	☑
2. The volume on the same minor street approach (one direction only) equals or exceeds 100 vph for one moving lane of traffic or 150 vph for two moving lanes; <u>AND</u>	YES	☑	NO	☐
3. The total entering volume serviced during the hour equals or exceeds 800 vph for intersections with four or more approaches or 650 vph for intersections with three approaches.	YES	☑	NO	☐

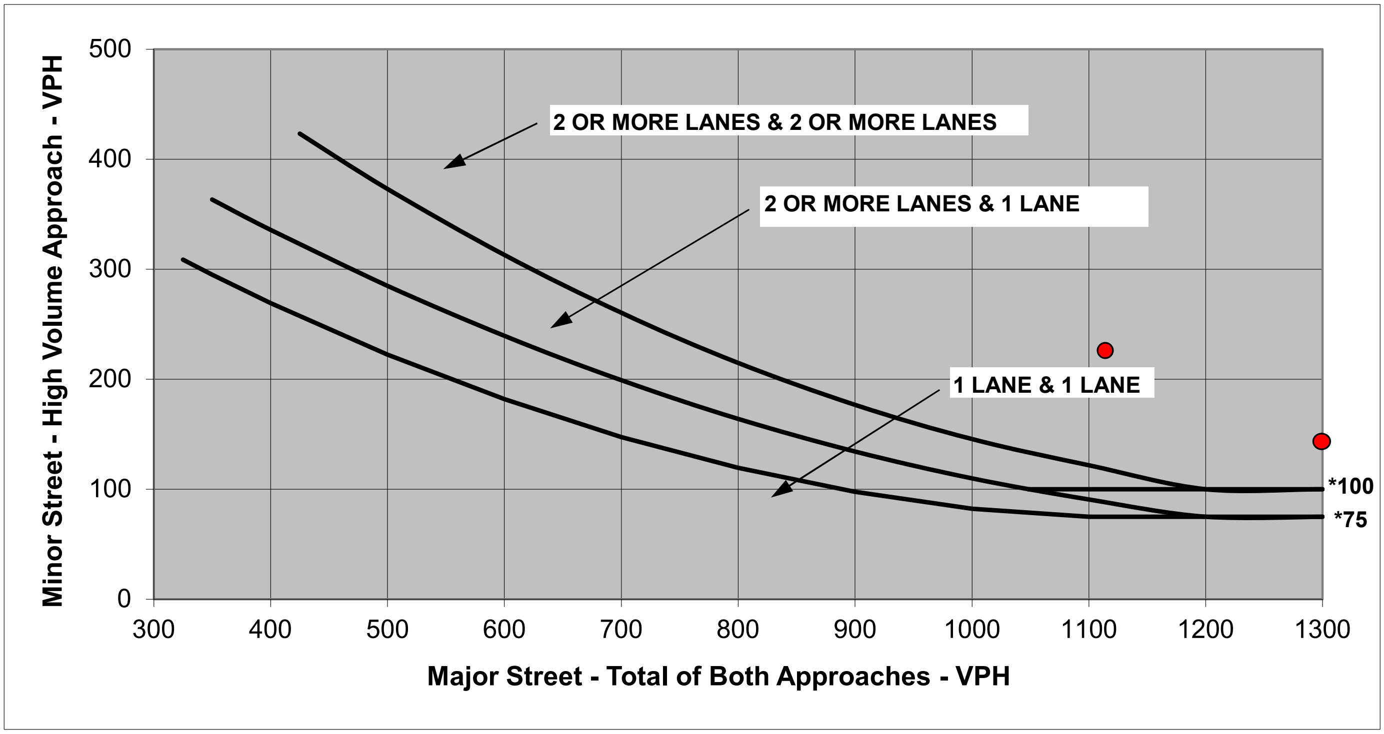
<u>PART B</u> **SATISFIED YES ☑ NO ☐**

APPROACH LANES	One	2 or More	Hour: 7:15AM - 8:15 AM	4:45PM - 5:45PM
Both Approaches - Major Street		X	1114	1459
Higher Approach - Minor Street	X		226	147

The plotted point falls above the curve in Figure 4C-3	YES	☐	NO	☑
<u>OR</u>, The plotted points fall above the curves in Figure 4C-4.	YES	☑	NO	☐

The satisfaction of a traffic signal warrant or warrants shall not in itself require the installation of a traffic control signal.

Figure 4C-4. Warrant 3, Peak Hour (70% Factor)

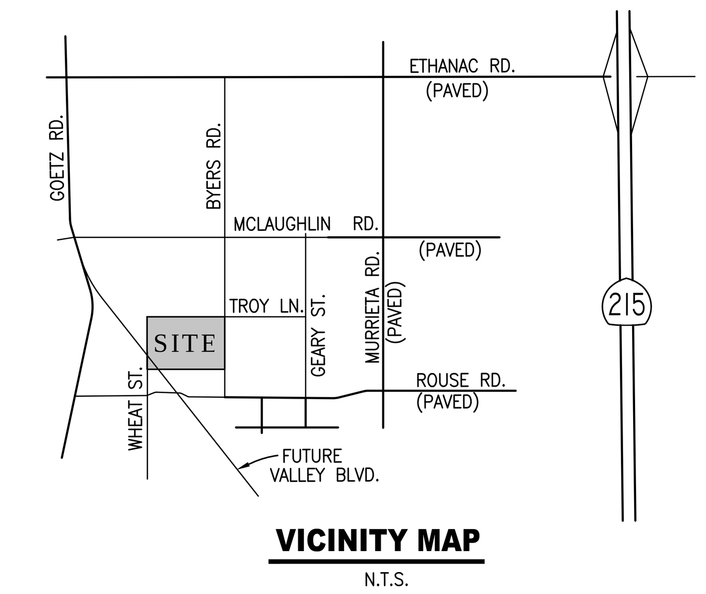


Note: 100 vph applies as the lower threshold volume for a minor-street approach with two or more lanes and 75 vph applies as the lower thershold volume for a minor-street approach with one lane.

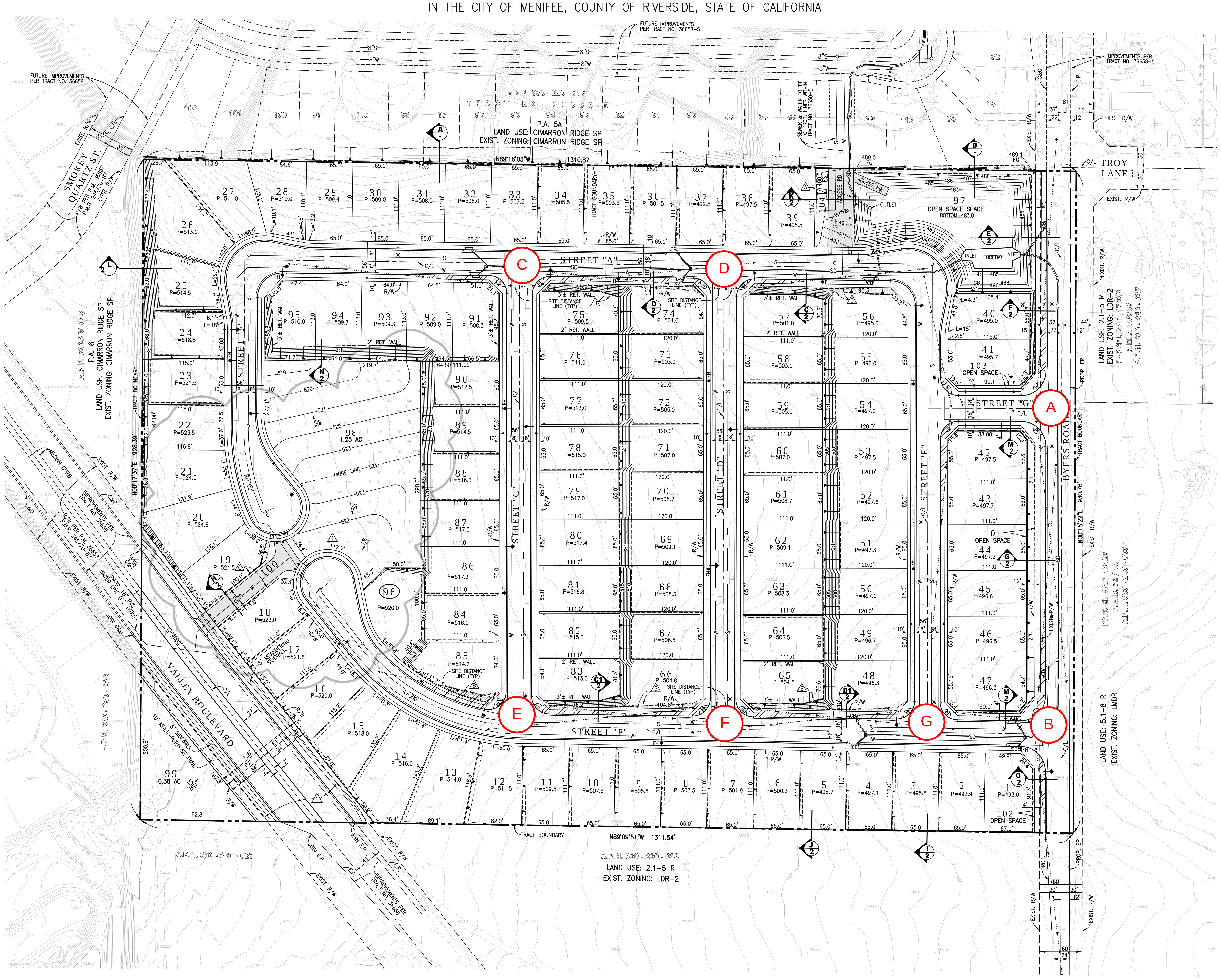
Appendix M:
Sight Distance Worksheets

TENTATIVE TRACT MAP 38128

PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4, OF SECTION 17, T. 5 S., R. 3 W., S.B.M.
IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



VICINITY MAP
N.T.S.



PREPARED BY (ENGINEER):
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451 W. LAMBERT RD.-SUITE 216
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ALTERNATE REDESIGN 10-27-2022

TENTATIVE TRACT MAP 38128

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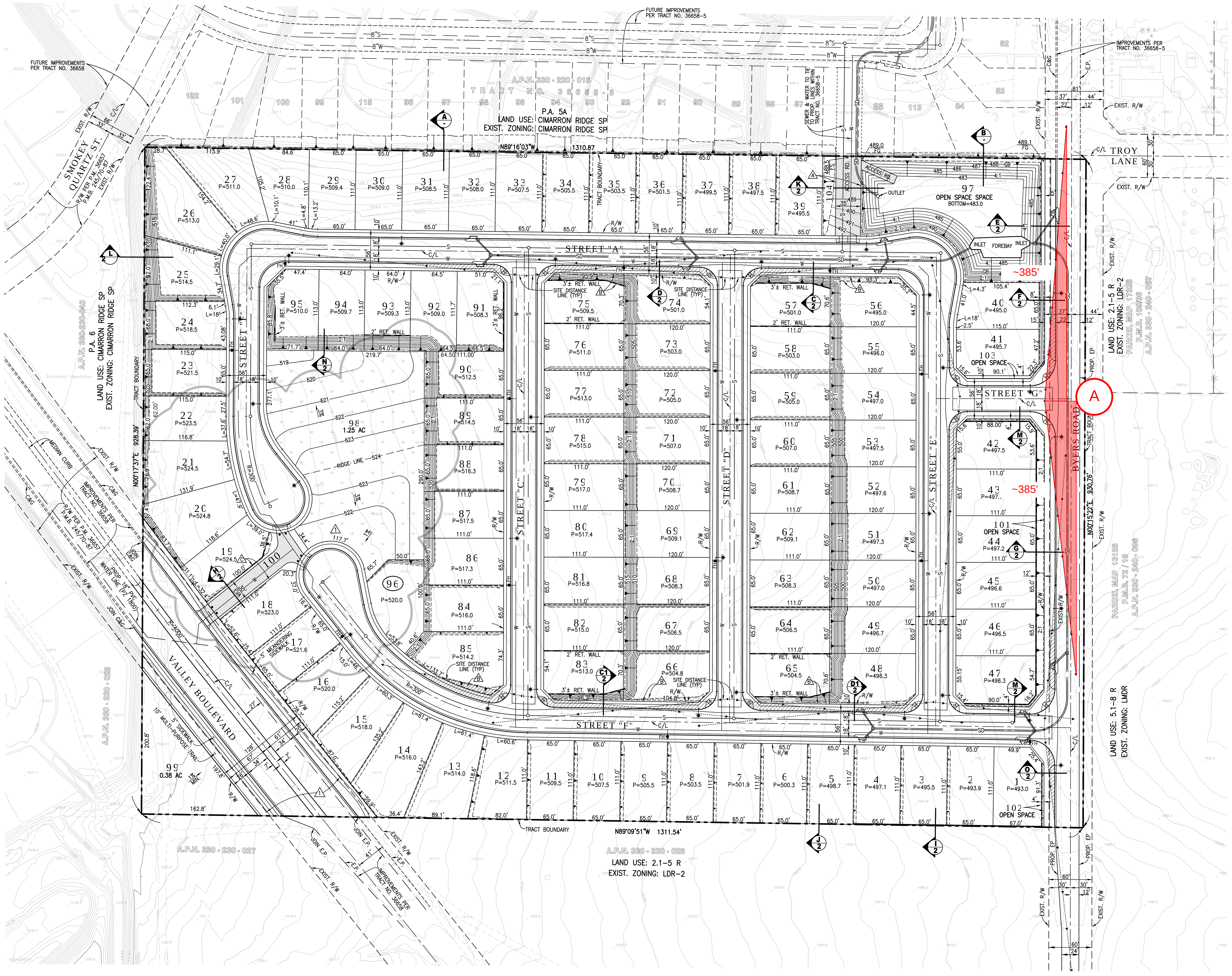

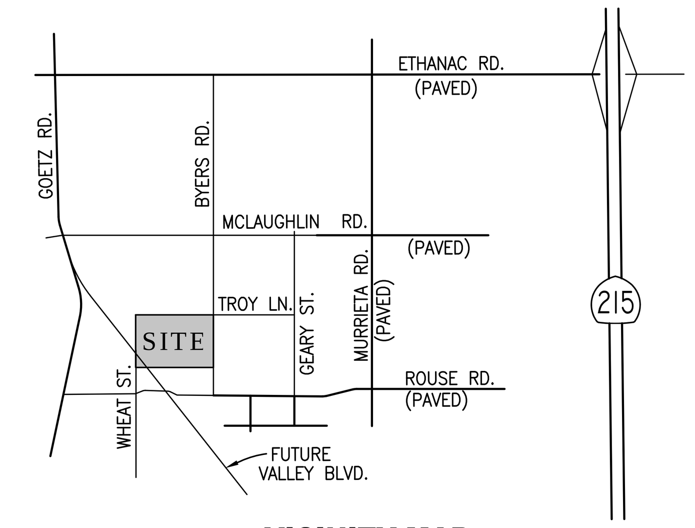

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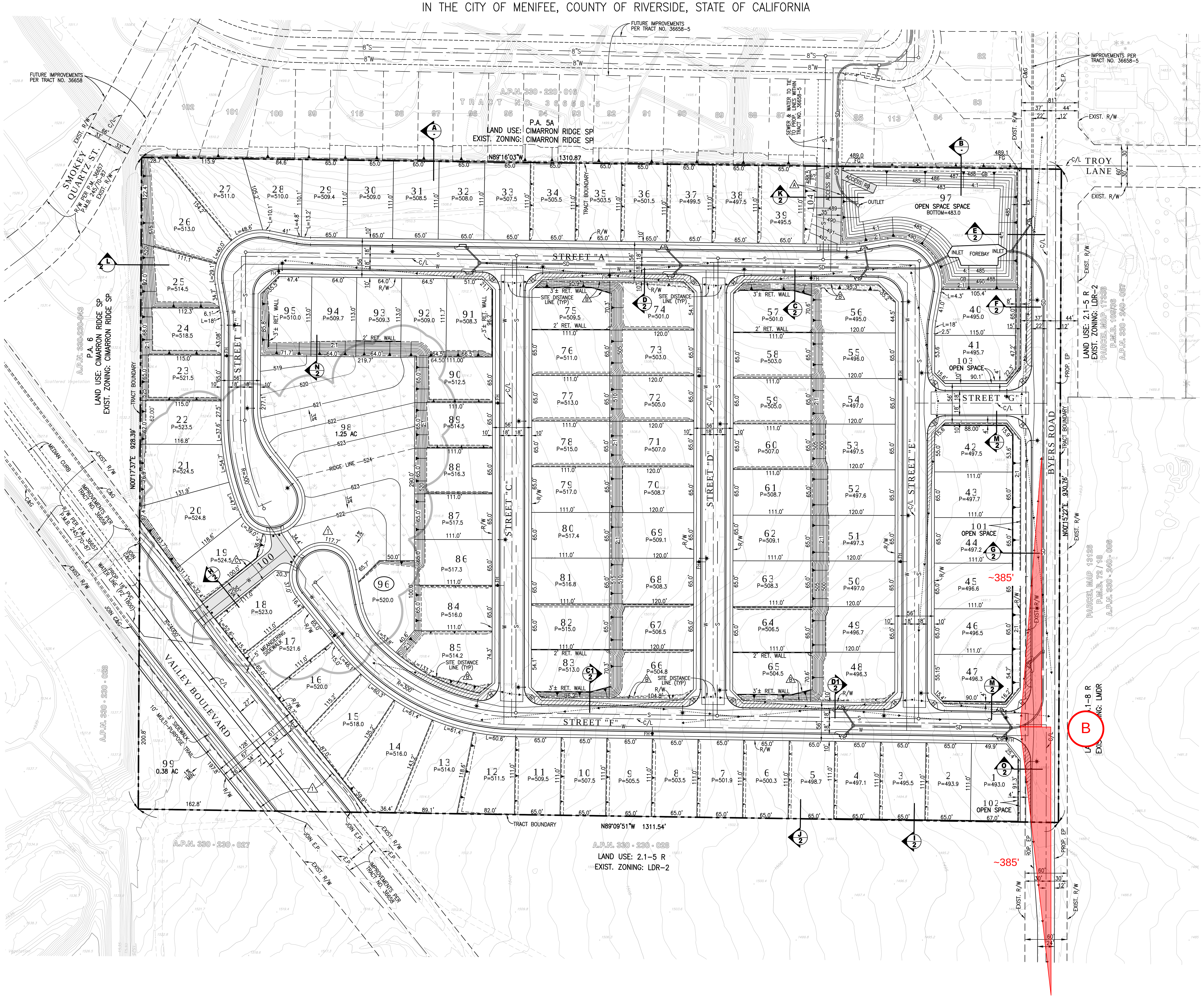

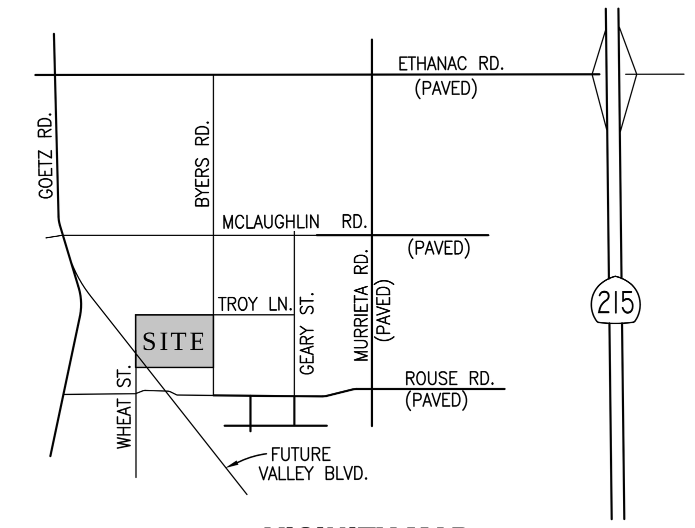

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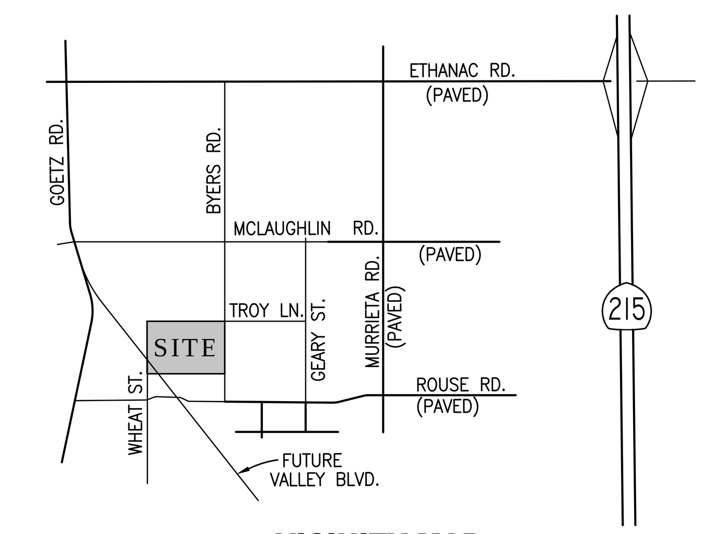

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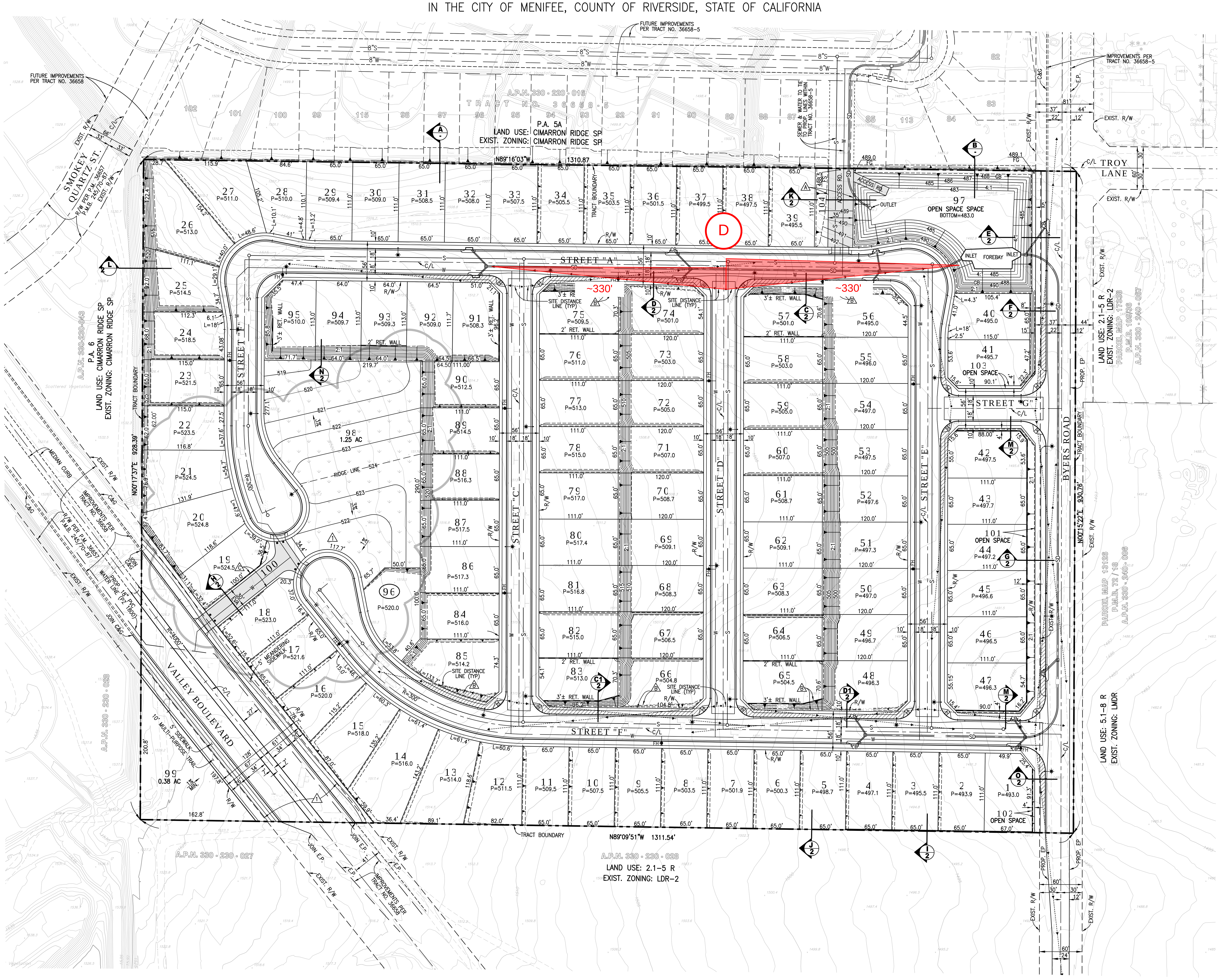
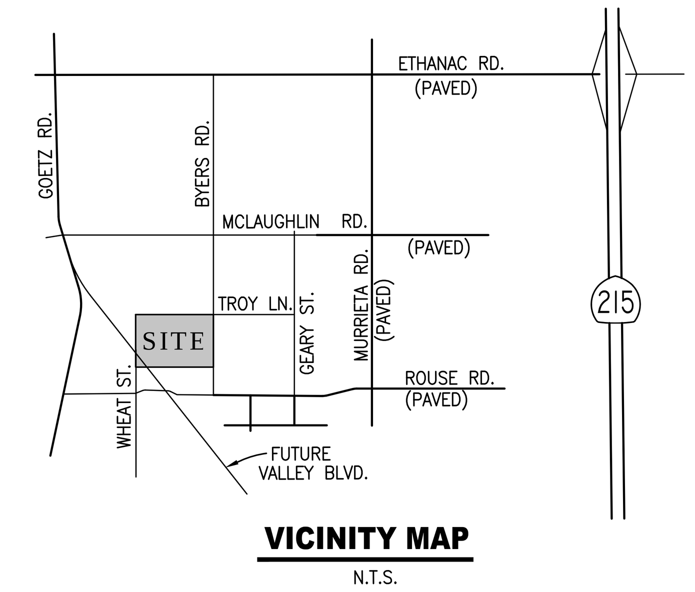
IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA





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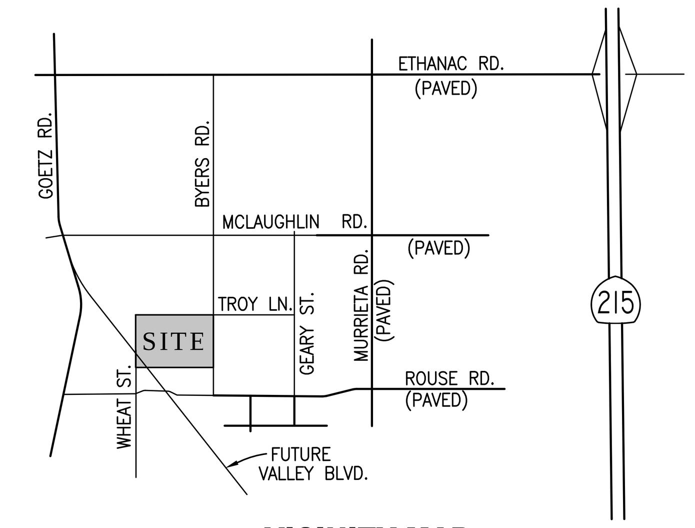
ALTERNATE REDESIGN 10-27-2022

TENTATIVE TRACT MAP 38128

PORTION OF THE SOUTHEAST 1/4 OF THE SOUTHWEST 1/4, OF SECTION 17, T. 5 S., R. 3 W., S.B.M.
IN THE CITY OF MENIFEE, COUNTY OF RIVERSIDE, STATE OF CALIFORNIA



VICINITY MAP
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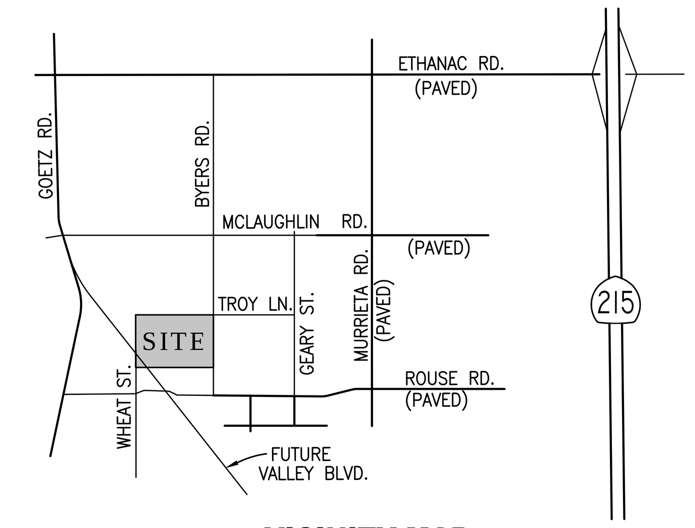

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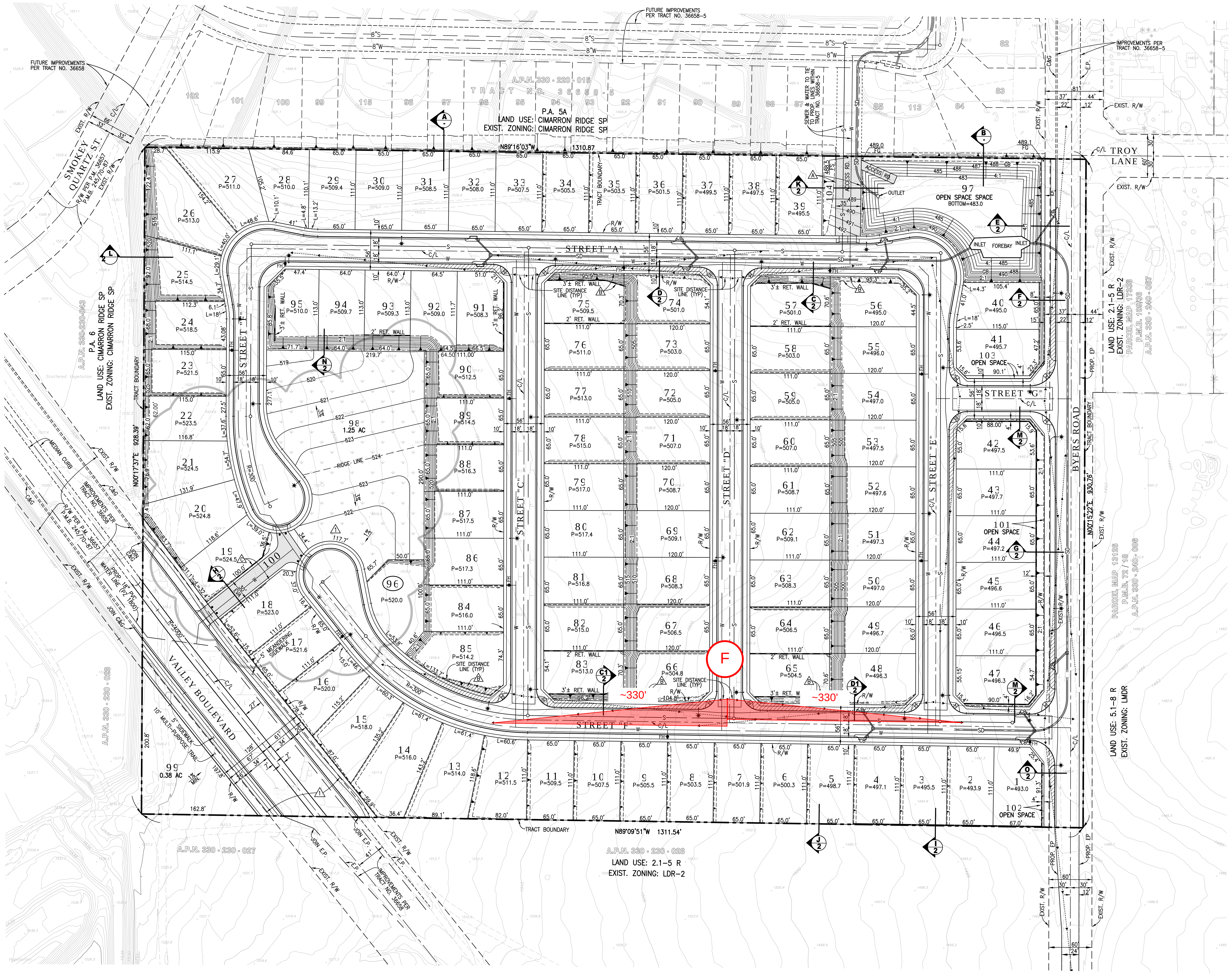

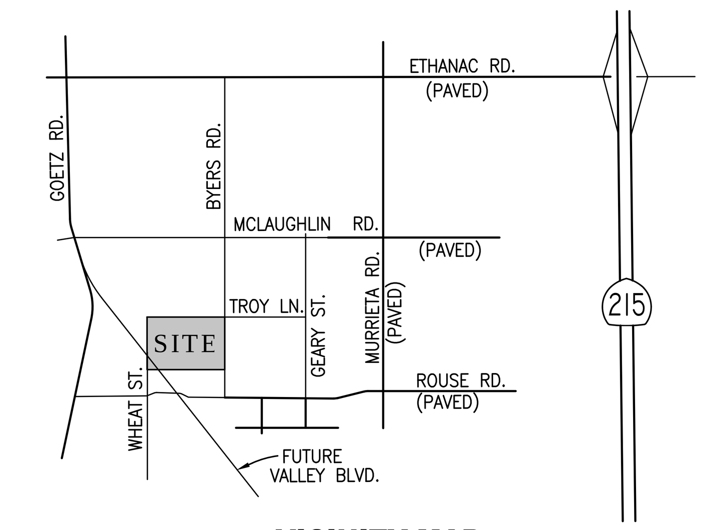

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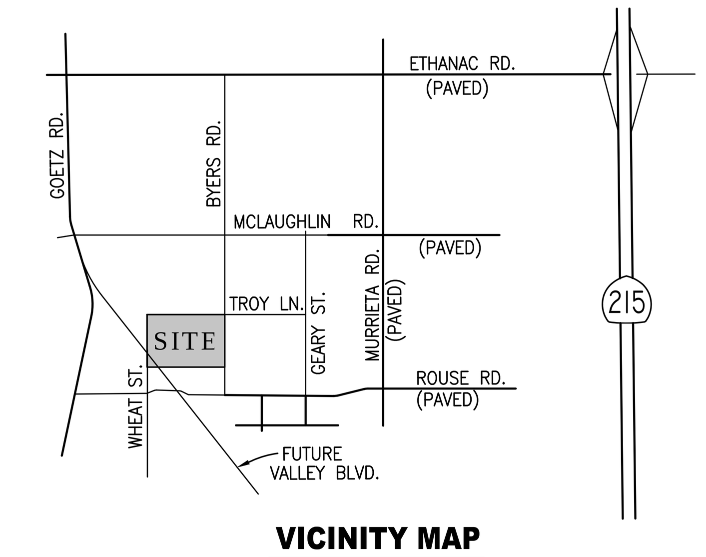

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