Appendix I:
Transportation Supporting Information

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I.1 - Transportation Impact Study

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City of Anaheim

Project at 110-229 W Midway Drive Traffic Impact Study

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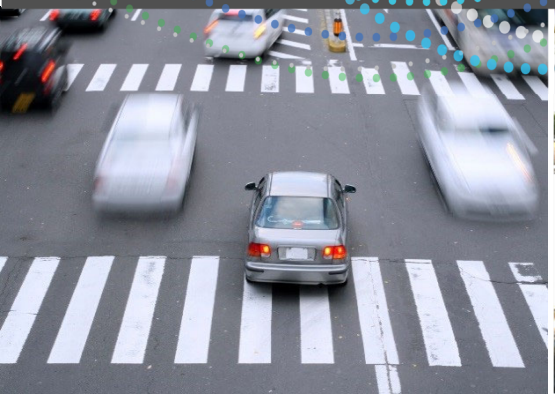

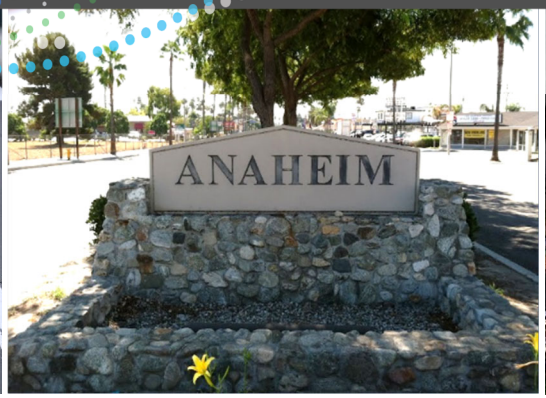

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APPENDICES

1 INTRODUCTION

This report presents the methodology and results of a traffic impact study (TIS) for the proposed Townhomes ('Project') at 110-228 W Midway Drive in the City of Anaheim. The report follows the *Criteria for Preparation of Traffic Impact Studies* and *Traffic Impact Analysis Guidelines for California Environmental Quality Act Analysis* provided by the City of Anaheim.

1.1 Project Description

The proposed project is located at 110-228 West Midway Drive in the City of Anaheim bordered by Anaheim Boulevard to the east, Willow Street and the I-5 to the west, and D Street to the south. The Project proposes to remove the existing Anaheim RV Park and construct new residential community of townhomes. The existing RV park has campsites for 114 RVs as shown in the Anaheim RV Park facilities map in **Appendix A**. The proposed project will have 156 new three-bedroom three-story attached townhomes.

Access to the site will be taken from three (3) access points on Midway Drive. The site description for the existing site and the proposed project is summarized in **Table 1-1**. The proposed site plan and vehicular circulation can be found in **Appendix B**.

Table 1-1: Existing vs. Proposed Project Dwelling Units

Scenario	Land Use	Quantity	Unit[1]
Proposed Project	Proposed Attached Townhomes	156	DU
Existing Site	Existing RV Park	114	Campsite

[1]DU = Dwelling Units

The proposed project requires the reclassification to remove a Mobile Home Park (MHP) Overlay from the City of Anaheim's General Plan on the project site, as the overlay is no longer applicable to the proposed project.

1.2 Study Area

In conjunction with City of Anaheim staff, the following six (6) intersections and three (3) roadway segments were identified as study locations. All study intersections were evaluated for the a.m. and p.m. peak hour weekday conditions. The roadway segments were analyzed for average daily conditions. The study locations are listed below and:

Intersections

1. Midway Drive and Private Drive* (Access Point for Project)
2. Midway Drive and Private Drive/Zeyn Street * (Access Point for Project)
3. Anaheim Boulevard and Midway Drive*
4. Anaheim Boulevard and E. Cerritos Avenue
5. Anaheim Boulevard and Ball Road
6. Palm Street and Ball Road*†

Notes:
*Un-signalized Intersection(s)
*† If trip distribution analysis (**See Section 3.3**) shows the project trip distribution to Palm Street and Ball Road intersection is 50 trips or less during the peak hours, per the City TIA guidelines, this intersection is not required to be studied.*

Figure 1-1 shows the study area map and intersection configuration for the study locations.

Roadway segments

1. Midway Drive between Private Drive/Zeyn Street (Access Point for Project) and Anaheim Boulevard
2. Anaheim Boulevard between Midway Drive and E. Cerritos Avenue
3. Anaheim Boulevard between Ball Road and Midway Drive

1.3 Study Periods

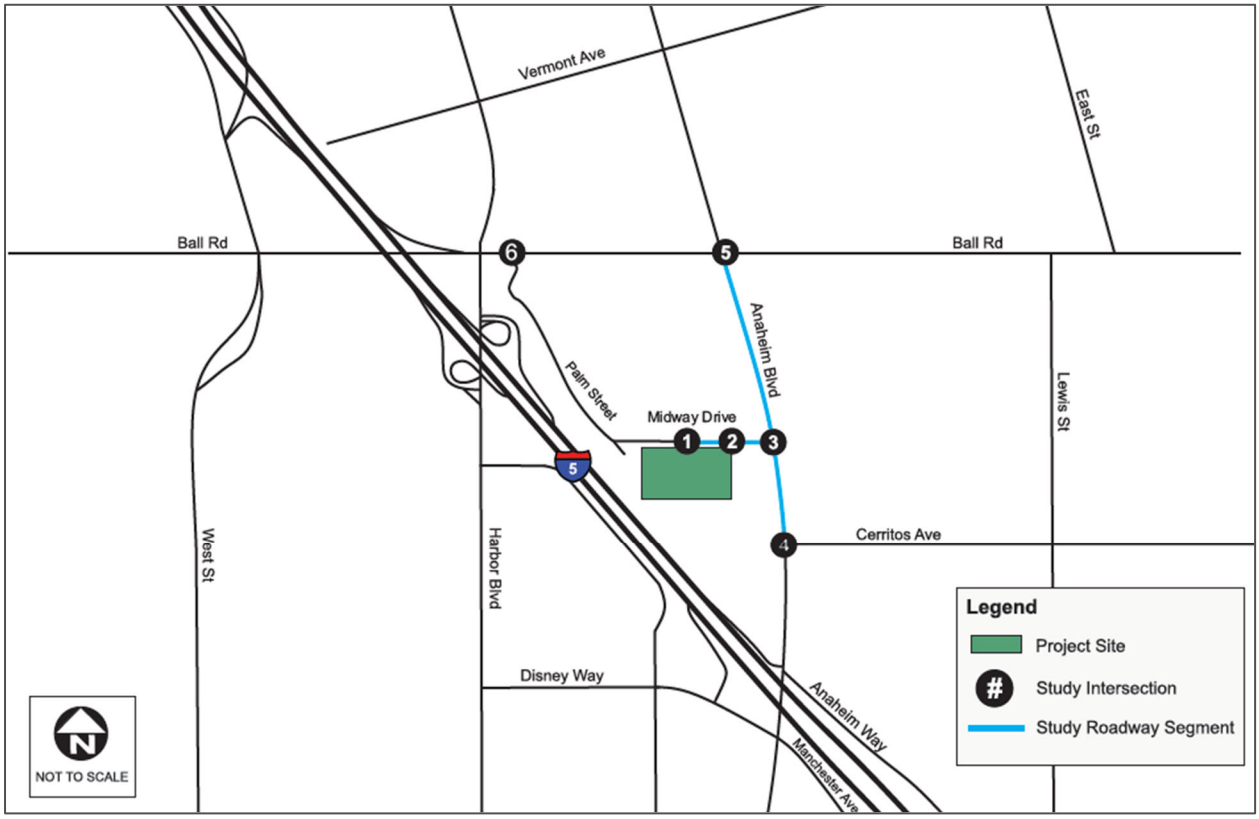
Traffic operations are evaluated for each of the following scenarios during the weekday a.m. peak hour and p.m. peak hour:

- Existing Conditions;
- Existing with Cumulative Conditions;
- Existing with Cumulative Plus Project Conditions;
- Opening Year (2022) Conditions;
- Opening Year (2022) Plus Project Conditions;
- General Plan Buildout Conditions;
- General Plan Buildout Plus Project Conditions

1.4 Additional Analysis

Access driveways, on-site circulation, and queueing at the site access intersection were also evaluated as part of the TIA.

Figure 1-1: Study Area



2 TRAFFIC OPERATIONS ANALYSIS METHODOLOGY

Traffic operations analyses were conducted for the study intersections using methodologies consistent with the *Criteria for Preparation of Traffic Impact Studies* provided by the City of Anaheim Transportation Section of the Department of Public Works.

A Vehicle-Miles Traveled (VMT) screening analysis of the proposed townhome project was completed as part of the *Trip Generation Memorandum for Project at 110-228 W Midway Drive*. A VMT evaluation will not be required as part of the TIA because the project is within a low-VMT area, making it exempt from project-level CEQA VMT assessment.

2.1 Intersection Analysis Methodology

The efficiency of traffic operations on a facility is described in this traffic impact analysis in terms of Level-of-Service (LOS). The LOS concept is a measure of average operating conditions at an intersection during an hour. Levels range from A to F, with A representing excellent (free-flow) conditions and F representing extreme congestion. Intersections were analyzed using either (or both) ICU and HCM 6th Edition methodologies. All study area intersections are under City of Anaheim's jurisdiction, so the impact criteria were established by City of Anaheim criteria.

The Intersection Capacity Utilization (ICU) methodology will be used to evaluate the study intersections. This approach defines the LOS by the volume-to-capacity ratio for the turning movements and intersection characteristics at signalized intersections. Per *City of Anaheim Traffic Impact Studies Criteria*, a volume/capacity ratio of 0.90 (LOS D) shall be the lowest acceptable Service Level at intersections.

The three (3) un-signalized intersection on Midway Drive will be evaluated using the latest Highway Capacity Manual 6th Edition (HCM 6) methodology. Traffic operations analysis for HCM methodologies will be completed using Synchro software.

Table 2-1 presents both the V/C ratio and average delay associated with each LOS grade as well as a qualitative description of intersection operations at that grade.

Table 2-1: Intersection Level-of-Service Definitions

Level of Service	Description	Signalized Intersection Volume-to-Capacity Ratio (V/C)[1]	Unsignalized Intersection Delay (Seconds)[2]
A	There are no **signal cycles** that are fully loaded, and few are even close to loaded. No approach phase is fully utilized by traffic and no vehicle waits longer than one red indication. Typically, the approach appears quite open, turning movements are easily made, and nearly all drivers find freedom of operation.	≤ 0.600	≤ 10.0
B	Stable operation is maintained. An occasional approach phase is fully utilized and a substantial number are approaching full use. Many drivers begin to feel somewhat restricted within groups of vehicles.	> 0.600 to 0.700	> 10.0 to 15.0
C	Stable operation continues. Full signal cycle loading is still intermittent, but more frequent. Occasionally, drivers may have to wait through more than one red signal indication, and backups may develop behind turning vehicles.	> 0.700 to 0.800	> 15.0 to 25.0

Level of Service	Description	Signalized Intersection Volume-to-Capacity Ratio (V/C)[1]	Unsignalized Intersection Delay (Seconds)[2]
D	Encompasses a zone of increasing restriction approaching instability. Delays to approaching vehicles may be substantial during short peaks within the peak period, but enough cycles with lower demand occur to permit periodic clearance of developing queues, thus preventing excessive backups.	> 0.800 to 0.900	> 25.0 to 35.0
E	Represents the most vehicles that any particular intersection approach can accommodate. At capacity (V/C = 1.00), there may be long queues of vehicles waiting upstream of the intersection and delays may be great (up to several signal cycles).	> 0.900 to 1.000	> 35.0 to 50.0
F	Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movement of vehicles out of the approach under consideration; hence, volumes carried are not predictable. V/C values are highly variable, because full utilization of the approach may be prevented by outside conditions.	> 1.000	> 50.0

Note:
1. Source: City of Anaheim General Plan Circulation Element
2. Source: Highway Capacity Manual 2010

2.2 Roadway Segment Analysis Methodology

Roadway segment analysis methodology utilizes the volume-to-capacity (V/C) ratio based on average daily traffic (ADT) and arterial segment daily capacity. **Table 2-2** presents the V/C ratio associated with each LOS grade as well as a qualitative description of intersection operations at that grade. **Table 2-3** presents the daily capacity assumptions by roadway facility type.

Table 2-2: Roadway Segment Level-of-Service V/C Definitions

Level of Service	Description	Roadway Segment Volume-to-Capacity Ratio (V/C)
A	• Free flowing, virtually no delay. • Minimal traffic.	≤ 0.600
B	• Free flow and choice of lanes. • Delays are minimal. • All cars clear intersection easily.	> 0.600 to 0.700
C	• Good operation. • Delays starting to become a factor but still within acceptable limits.	> 0.700 to 0.800
D	• Approaching unstable flow. • Queues at intersection are quite long but most cars clear intersection on their green signal. • Occasionally, several vehicles must wait for a second green signal. • Congestion is moderate.	> 0.800 to 0.900

Level of Service	Description	Roadway Segment Volume-to-Capacity Ratio (V/C)
E	• Severe congestion and delay. • Most of the available capacity is used. • Many cars must wait through a complete signal cycle to clear the intersection.	> 0.900 to 1.000
F	• Excessive delay and congestion. • Most cars must wait through more than one on one signal cycle. • Queues are very long and drivers are obviously irritated.	> 1.000

Source: City of Anaheim General Plan Circulation Element

Table 2-3: Arterial Segment Daily Capacity

Facility Type	Daily Capacity (Vehicles / Day)
8-lane Divided	75,000
6-lane Divided	56,300
4-lane Divided	37,500
4-lane Undivided	25,000
2-lane Divided	18,750
2-lane Undivided	12,500

Source: Anaheim Resort Specific Plan Traffic Study Report, 2010

2.3 Evaluation Criteria

Each study location has been analyzed and evaluated in accordance with the impact criteria established by its governing agency.

2.3.1 City of Anaheim

Intersection

Per *City of Anaheim Traffic Impact Studies Criteria*, a signalized intersection is deemed significantly impacted and requires mitigation based on an increase in V/C ratio under Project conditions as shown in **Table 2-4**. A volume-to-capacity ratio of 0.90 (LOS D) shall be the lowest acceptable LOS at intersections.

Table 2-4: City of Anaheim Intersection Significant Impact Criteria

With Project Conditions		Project-Related Increase In V/C Ratio
LOS	V/C Ratio	
C	0.701 – 0.800	Equal to or greater than 0.050
D	0.801 – 0.900	Equal to or greater than 0.030
E, F	> 0.900	Equal to or greater than 0.010

Source: City of Anaheim Criteria for Preparation of Traffic Impact Studies

The City of Anaheim does not have any criteria for HCM analysis for signalized or unsignalized intersections.

Roadway Segment

The current performance standard adopted by the City of Anaheim for the study area roadway segments is LOS C or better (V/C ≤ 0.800) at the daily level. If the roadway segment is operating at LOS D or worse, a peak hour

link LOS analysis will be conducted to determine if significant impacts must be addressed.

The City of Anaheim applies a methodology which determines the level of service under peak hour traffic volumes on deficient daily segments. The peak hour link analysis determines directional AM and PM peak hour V/C ratios for each link that exceeds the daily LOS threshold. The peak hour capacity is determined by using Equation 18-15 of HCM 2010, multiplying the mid-block number of lanes for each direction by a lane capacity of 1,900 vehicles per hour, then multiplied by the percentage of green time at the controlling signalized intersection for that arterial segment. The percentage of green time is estimated by dividing the directional V/C ratios by the total V/C ratio at signalized intersections along the arterial segment. If the V/C ratio of the arterial segment under peak hour conditions is LOS E or F, improvements should be considered to improve the segment to an acceptable LOS. This methodology is consistent with the Anaheim Resort Specific Plan (FSEIR No. 340).

2.3.2 Orange County Congestion Management Plan Criteria

The Orange County Transportation Authority (OCTA) adopted the Congestion Management Program (CMP) for Orange County. The CMP Highway System (CMPHS) consists of the Orange County smart street network plus the state highway system. Since none of the identified study intersection or roadway segments are part of CMS Highway System, CMS analysis will not be conducted in this study.

3 TRIP GENERATION AND DISTRIBUTION

Trip generation and trip distribution were developed for the proposed townhome to be included in With Project scenario analysis. Trip generation and trip distribution analysis was done prior to scenario analysis to determine if traffic analysis needed to be completed for Intersection #6 Palm Street and Ball Road, per the City of Anaheim TIA criteria.

3.1 Trip Generation

ITE 10th Edition trip generation rates for Multifamily housing (Mid-Rise) (ITE Code 221) and Campground/Recreational Vehicle Park (ITE Code 416) were used to estimate peak hour trip generation rates for existing land use and the proposed project. Multifamily housing (Mid-Rise) (ITE Code 221) weekday daily trip generation rates were used to estimate daily trips for the proposed townhome project. Because there is no data available for Campground/Recreational Vehicle Park (ITE Code 416) weekday daily rates, Mobile Home Park (ITE Code 240) weekday daily trip generation rates were used to estimate daily trips for the existing RV park. These rates are shown in **Table 3-1**.

Table 3-1: Project Trip Generation Rates

ITE Trip Generation 10th Edition			Weekday AM Rates			Weekday PM Rates			Weekday Daily
Land Use	Unit[1]	Code	Inbound	Outbound	Total	Inbound	Outbound	Total	
Multifamily housing (Mid-Rise)	DU	221	0.09	0.27	0.36	0.27	0.17	0.44	5.44
Campground/Recreational Vehicle Park	OC	416	0.08	0.13	0.21	0.18	0.09	0.27	5.00[2]

[1]DU = Dwelling Units; OC = Occupied Campsites

[2]Weekday daily rate for campground/recreational vehicle park not available. Weekday daily rate for Mobile Home Park (ITE Lane Use 240) is assumed for analysis.

The ITE rates were applied to the land use quantities for the existing RV park and proposed townhome project to calculate expected AM peak hour and PM peak hour trips. For the RV park calculation, a 70 percent occupancy rate was assumed for this analysis. The number of occupied campsites was assumed to be $(114\ campsites\ \times 70\%)\ \cong 80\ campsites$.

Trip generation estimates for the existing land use also took into account the transit trips generated by the ART shuttle Lines 6, 7, and 8 which had a stop at the RV park on Midway Drive. The ART shuttle had 20 minute headways and ran from 7:20 a.m to 9:30 p.m. on a typical weekday. The ART shuttle schedule can be found in **Appendix C**. Peak hour and daily shuttle trips were estimated for the existing land use based on this timetable and as followed:

- Peak Hour: $\left(1\ hour\ \times \frac{60\ minutes}{1\ hour} \times \frac{1\ shuttle}{20\ minutes}\right) = \frac{3\ shuttles}{hour}$
- Total Daily Trips: $\left(\frac{850\ minutes}{weekday} \times \frac{1\ shuttle}{20\ minutes}\right) = \frac{42.5\ shuttles}{day}$ (rounded to 42 shuttle trips per day)

No ART shuttle stop on Midway Drive is anticipated for the proposed project.

The net generated trips for the proposed project was calculated by subtracting the existing RV park expected trips and shuttle trips from the proposed townhome project expected trips. **Table 3-2** summarizes the trip generation for the existing land use and the proposed Townhome Project.

Table 3-2: Project Trip Generation Estimates

Land Use	Quantity	Unit[1]	AM Peak Hour Trips			PM Peak Hour Trips			Daily Trips
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Proposed Attached Townhomes	156	DU	15	42	57	42	27	69	1,142
Existing RV Park	80	OC	6	11	17	14	8	22	399
Existing RV Park Shuttle Trips	-	-	3	3	6	3	3	6	42
Net Generated Trips			**6**	**28**	**34**	**25**	**16**	**41**	**701**

[1]DU = Dwelling Units; OC = Occupied Campsites

As shown, the proposed attached townhomes are estimated to generate approximately 57 trips in the AM peak hour, 69 trips in the PM peak hour, and 1,142 daily trips. Accounting for existing trips generated from existing land use, the proposed project is estimated to generate 34 net trips in the AM peak hour, 41 net trips in the PM peak hour, and 701 net daily trips.

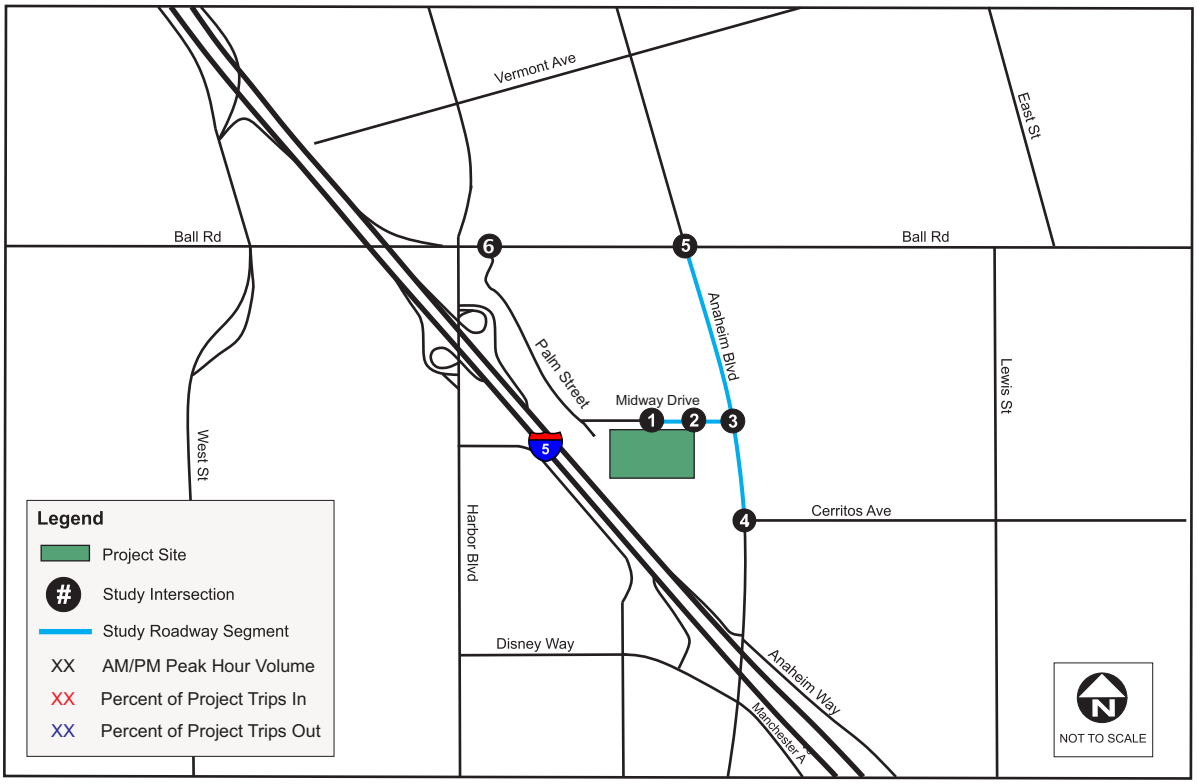
3.2 Trip Distribution

Peak hour and daily trip distribution percentages for the proposed Project were developed based on general area traffic patterns and trip distribution patterns from similar venues within the study area. The distribution percentages developed for the proposed project is shown in **Figure 3-1**. The net weekday peak hour project trip assignments are shown in **Figure 3-2.**

3.3 Palm Street and Ball Road Exemption

Trip distribution calculations show that study intersection, Palm Street/Ball Road, is not required to be studied because the project trip distribution to the intersection is 50 trips or less during the peak hours.

Figure 3-1: Project Trip Distribution Percentages



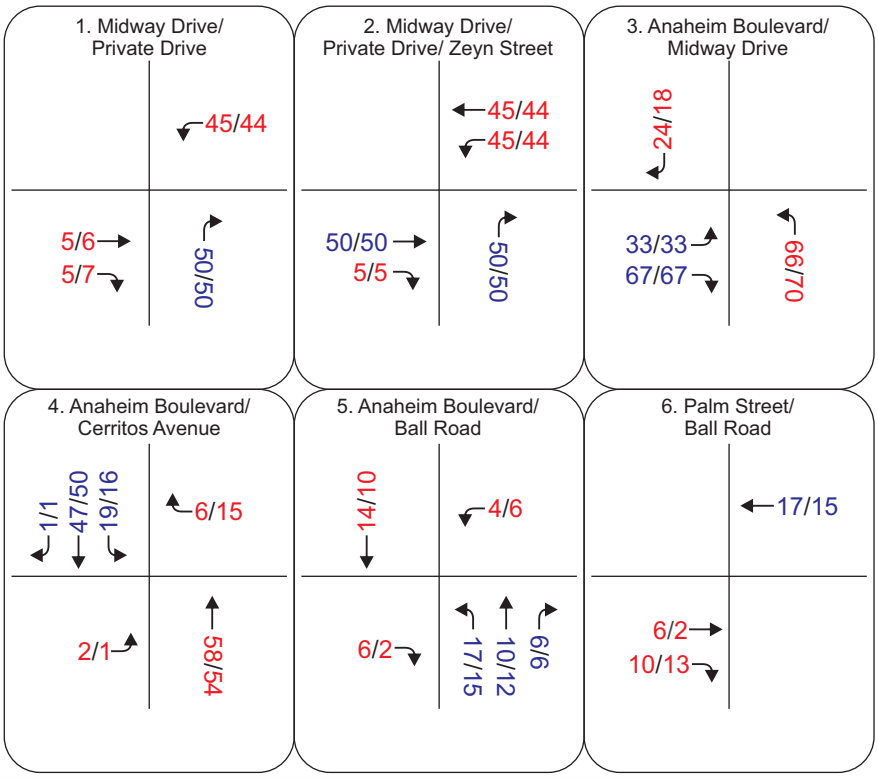
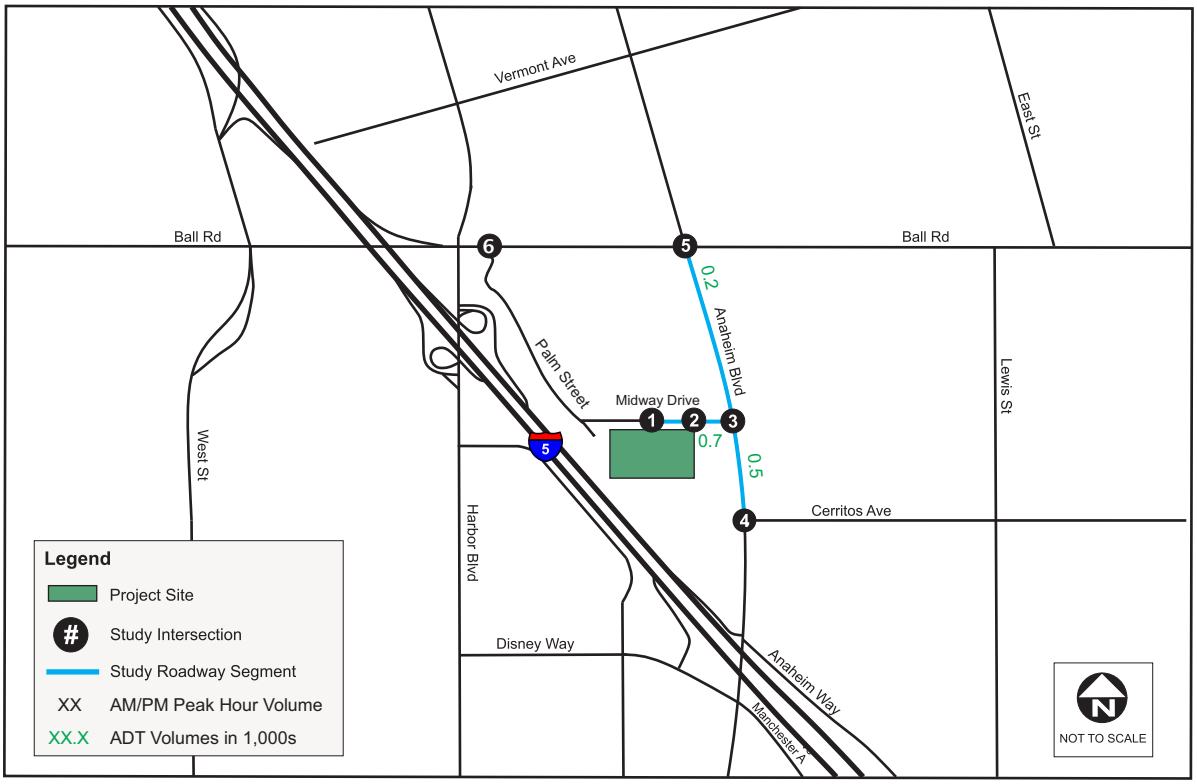
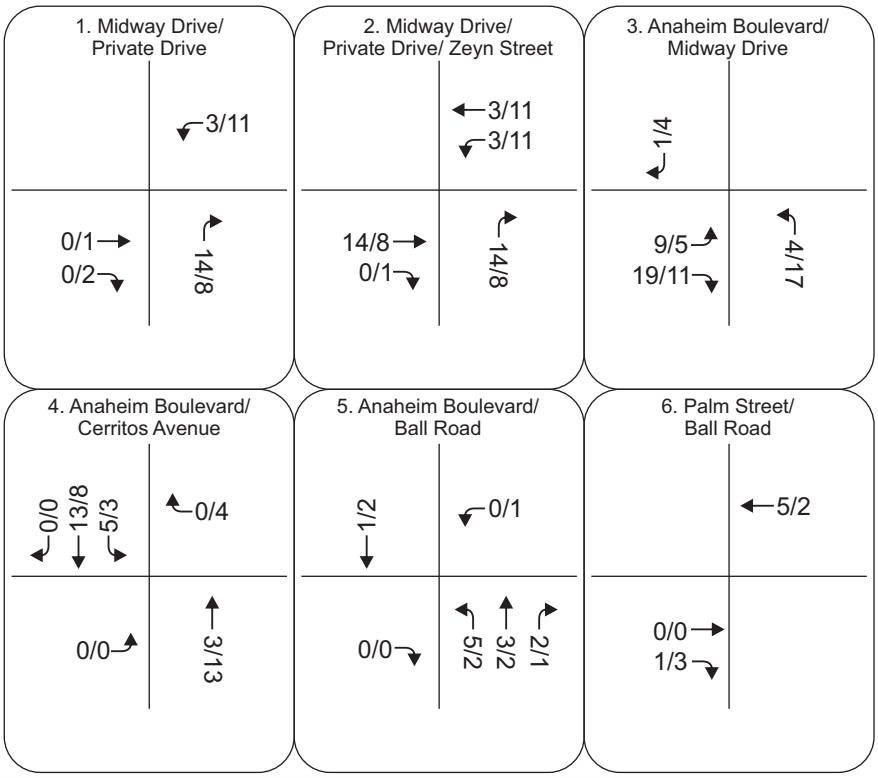


Figure 3-2: Net Project Peak Hour Trip Assignment Volumes and Segment ADTs





4 EXISTING CONDITIONS

This section presents an overview of the existing roadway system within the study area and the methodology used to determine existing traffic volumes. As noted in **Section 3.3**, Intersection #6 Palm Street/Ball Road is not required to be studied because trip distribution to the intersection is 50 trips or less during the peak hours, per the City TIA guidelines.

4.1 Roadway Configurations

The existing configurations of the roadways within the study area are described below:

- *Anaheim Boulevard* – oriented in a north-south direction, is a six-lane divided roadway south of Ball Road and on-street parking is prohibited. There is Class II Bike lane going north-south along Anaheim Boulevard from Ball Road to Cerritos Avenue. In addition, the City of Anaheim Bicycle Master Plan has plans to extend the Class II bike lane along Anaheim Boulevard from Cerritos Avenue to south of Disney Way and from Ball Road to north of Vermont Avenue, within the study area.
- *Midway Drive* – oriented in the east-west direction, is a two-lane undivided roadway with on-street parking.
- *Palm Street* – generally oriented in the north-south direction, Palm Street is located adjacent to I-5 and is a two-lane undivided roadway with on-street parking.

4.2 Transit Operations

The Orange County Transportation Authority (OCTA) and Anaheim Resort Transportation (ART) all operate bus lines within the area of the project site. Descriptions of the transit services are as follows:

OCTA Lines

- *Line 47* – This line operates between Fullerton to Balboa. Within the study area, the line travels north-south along Anaheim Boulevard. Service is provided at 20 minute headways during the weekdays. Weekends and holiday service is also provided.

ART Lines

- *Lines 6, 7, 8* – These lines operate between the Disneyland Transportation Center and the hotels along the GardenWalk. Within the study area, these lines travel north-south along Anaheim Boulevard between Ball Road and Disney Way. Service is provided at 20 minute headways during weekdays and weekends. While the RV Park was open for business, there was a shuttle stop at the RV Park at Midway Drive and Anaheim Boulevard.

ART will provide service on Anaheim Boulevard at 20 minute headways for the Project.

4.3 Bikeway Configurations

The City of Anaheim existing and proposed configurations per the Bicycle Master Plan of the bike route within the study area are described below:

- *Class II Bike Lane* –Class II bikeway provide a restricted right-of-way for use of bicycles alongside motor vehicles traveling through. There are 43.8 miles of existing Class II bikeway within City of Anaheim. Within the study area, Class II bike path exist along Anaheim Boulevard traveling north-south from Ball

Road to Cerritos Avenue and is proposed to be extended past Ball Road to the north, south of Cerritos Avenue, and along Ball Road, east of Lemon Street.

Due to the proposed bikeways connecting to the proposed development, it is recommended that the developer provide visible and adequate bike and bike parking facilities for residents. Also, the developer should coordinate with the City of Anaheim with any proposed bicycle and pedestrian pathway improvement as part of the Project.

4.4 Existing Traffic Volumes

Intersection turning movement count data and daily roadway segment count data were obtained from traffic studies recently conducted by Iteris – Avanti Anaheim Boulevard Traffic Impact Analysis (Avanti TIA) from year 2018 and historic counts from year 2018 provided from the city for locations on Midway Drive. A growth rate of 1% per year was applied to historic counts to represent existing baseline (2020) volumes.

Availability summary of traffic count data for study intersections and roadway segments is listed in **Table 4-1**:

Table 4-1: Traffic Count Data Availability Summary

Location	Availability	Count Year
Intersections		
1. Midway Drive and Private Drive (Access Point for Project)	Not Available	N/A
2. Midway Drive and Private Drive/Zayn Street (Access Point for Project)	Not Available	N/A
3. Anaheim Boulevard and Midway Drive	City Provided	October 2018
4. Anaheim Boulevard and E. Cerritos Avenue	On File	December 2018
5. Anaheim Boulevard and Ball Road	On File	December 2018
6. Palm Street and Ball Road	Not Available	N/A
Roadway Segments		
1. Midway Drive between Private Drive/Zayn Street (Access Point for Project) and Anaheim Boulevard	City Provided	October 2018
2. Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	On File	December 2018
3. Anaheim Boulevard between Ball Road and Midway Drive	On File	December 2018

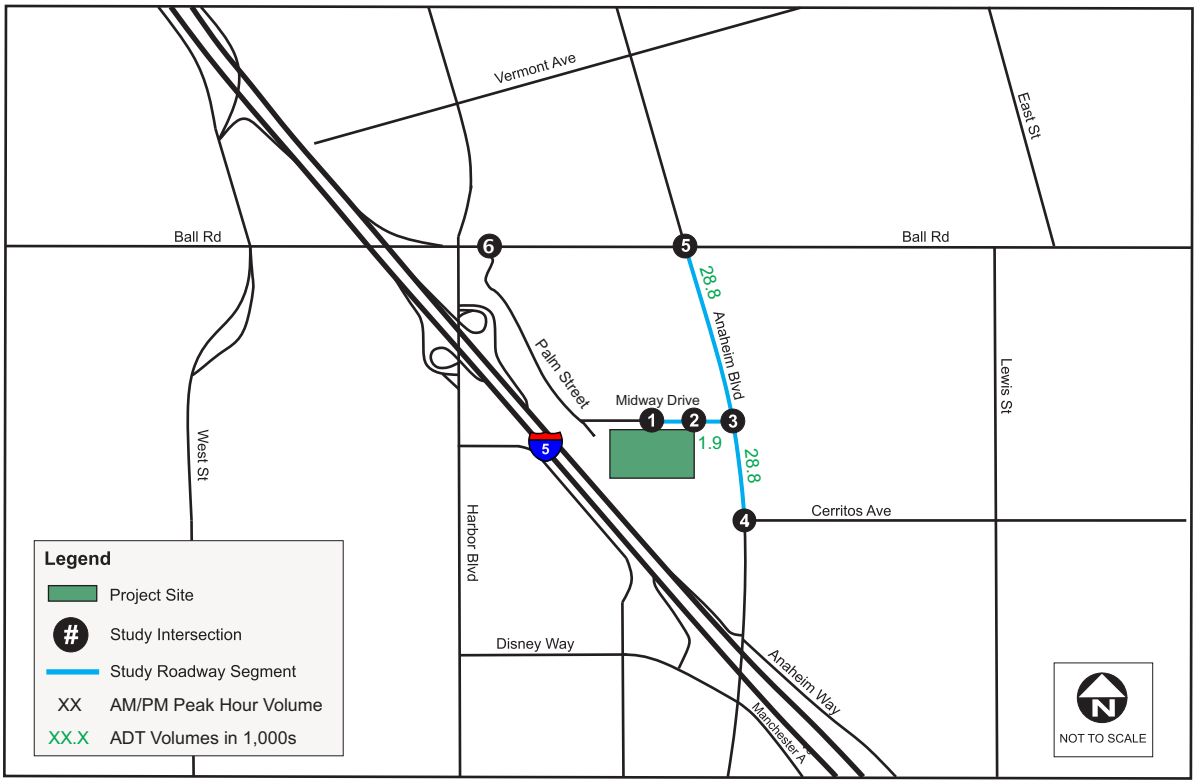
Additional traffic count data for Midway Drive between Willow Street and Clementine Street in October 2018 was also available.

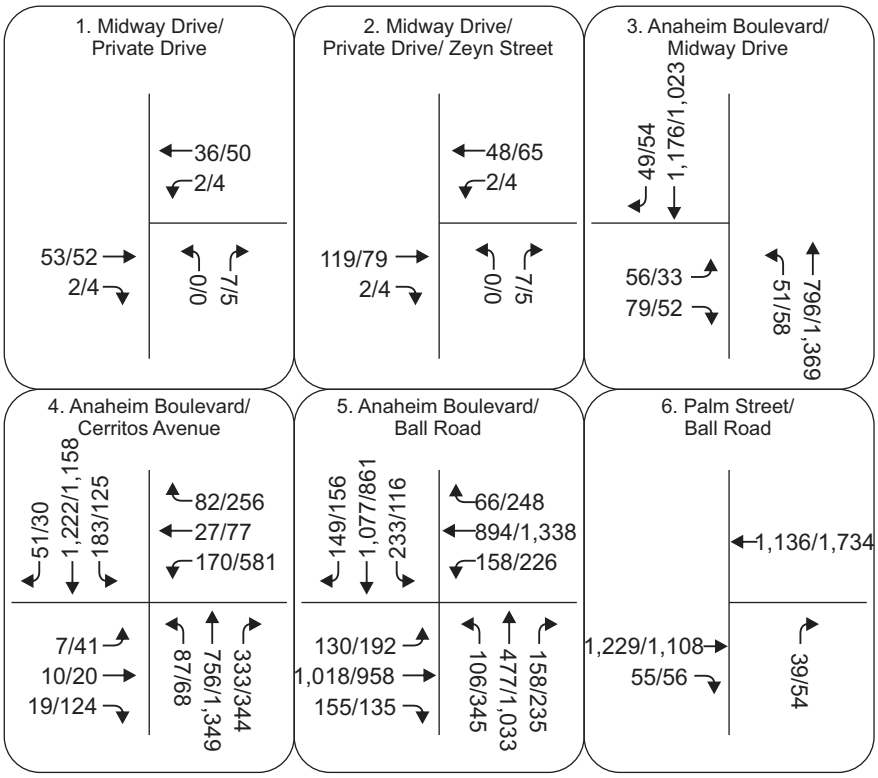
For intersection locations where count data was not available, traffic volumes were calculated by applying flow conservation to count data from neighboring intersections and roadway segments. Flow conservation calculations also took intermediary roads and driveways. Notably, traffic flow between intersections on Midway Drive reflect the significant volume of traffic entering and exiting the driveway at Paul Revere Elementary School. The entrance to the school driveway is between Intersection #3 Midway Drive/Anaheim Boulevard and Intersection #2 Midway Drive/Private Drive/Zayn Street (Access Point for Project). The exit to the school driveway is between Intersection #2 Midway Drive/Private Drive/Zayn Street (Access Point for Project) and Intersection #1 Midway Drive/Private Drive (Access Point for Project). Turning movement counts for the intersections that serve as access points for the Project were calculated by assuming equal distribution

of trips between both access points.

Weekday peak hour turning movement volumes and roadway segment daily volumes are shown in **Figure 4-1**. Detailed traffic count sheets are provided in **Appendix D**.

Figure 4-1: Existing Peak Hour Intersection Volumes and Segment ADTs





4.5 Intersection Level-of-Service

LOS analyses were conducted to evaluate existing intersection operations during the weekday a.m. and p.m. peak hours. Two (2) signalized intersections were analyzed using ICU methodology, and additional HCM analyses were completed for the two (2) unsignalized project driveways and one (1) unsignalized intersections.

4.5.1 ICU LOS

Table 4-2 summarizes the existing V/C ratio and LOS using the ICU methodology at all signalized study intersections. Detailed ICU LOS calculation worksheets are included in **Appendix E**. As shown in the table, all analyzed study intersections are currently operating at LOS D or better.

Table 4-2: Existing Intersection ICU LOS

#	Intersection Location	Existing			
		AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
1	Midway Drive/Private Drive[1] (Access Point for Project)	N/A	N/A	N/A	N/A
2	Midway Drive/Private Drive/Zeyn Street[1] (Access Point for Project)	N/A	N/A	N/A	N/A
3	Anaheim Boulevard/Midway Drive[1]	N/A	N/A	N/A	N/A
4	Anaheim Boulevard/E. Cerritos Avenue	0.47	A	0.81	D
5	Anaheim Boulevard/Ball Road	0.60	A	0.67	B

Notes:
[1] The unsignalized project driveways and unsignalized intersection and not included by ICU methodology. Unsignalized project driveways and unsignalized intersection are only analyzed using HCM methodologies.

4.5.2 HCM LOS

All project driveways and unsignalized intersection were evaluated using HCM 6th Edition methodologies. **Table 4-3** summarizes the existing HCM LOS analysis results. Detailed HCM LOS calculation worksheets are included in **Appendix F**.

Table 4-3: Existing Intersection HCM LOS

#	Intersection Location	Traffic Control	Existing			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Midway Drive/Private Drive (Minor Movement)	Unsignalized	8.6	A	8.6	A
	Midway Drive/Private Drive (Intersection)		0.8	A	0.6	A
2	Midway Drive/Private Drive/Zeyn Street (Minor Movement)	Unsignalized	8.9	A	8.7	A
	Midway Drive/Private Drive/Zeyn Street (Intersection)		0.4	A	0.5	A
3	Anaheim Boulevard/Midway Drive (Minor Movement)	Unsignalized	65.8	**F**	31.7	D
	Anaheim Boulevard/Midway Drive (Intersection)		4.5	A	1.5	A

The intersection of Anaheim Boulevard/Midway Drive is operating at LOS F during AM peak hour under existing conditions for the worst (eastbound left-turn) movement. However, the overall intersection is operating at LOS A during both AM and PM peak hours.

4.5.3 Queuing Analysis

Queuing analysis was completed for the intersection approaches at Anaheim Boulevard/Midway Drive approaches using HCM methodologies. **Table 4-3** summarizes the existing queuing analysis results. Detailed HCM queuing worksheets are included in **Appendix G**. As shown, the intersection approaches currently have adequate storage to accommodate existing traffic conditions.

Table 4-3: Existing Queuing Analysis

#	Intersection Location	Movement	Available Storage (ft.)	Existing Peak Hour		
				95th Percentile Queue (ft.)		Adequate Storage (Yes/No)
				AM	PM	
3	Anaheim Boulevard/Midway Drive	EB	300	37	17	Yes
		NBL	100	8	8	Yes

4.6 Roadway Segment Analysis

Roadway segment LOS analysis was completed for the ADT for existing conditions. **Table 4-4** summarizes the roadway segment ADT volume, segment configuration, segment capacity, volume-to-capacity (V/C) ratio, and daily LOS. As shown, all roadway segments are currently operating at LOS A.

Table 4-4: Existing Roadway Segment LOS

#	Roadway Segment Location	Mid-Block Lanes	Total Capacity	Existing			
				ADT	V/C	LOS	Deficient (Yes/No)
1	Midway Drive between Private/Zeyn Street (Access Point for Project) and Anaheim Boulevard	2U	12,500	1,920	0.154	A	No
2	Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	6D	56,300	28,860	0.513	A	No
3	Anaheim Boulevard between Ball Road and Midway Drive	6D	56,300	28,860	0.513	A	No

5 EXISTING WITH CUMULATIVE CONDITIONS

This section analyzes the existing traffic conditions with the cumulative project.

5.1 Cumulative Projects

The cumulative projects included were obtained from the Anaheim Resort Development Status document, provided by the City of Anaheim on 3/30/2020. The Anaheim Resort Development Status is documented in **Appendix H**, including a figure showing the location of all Anaheim Resort projects currently under development. Since traffic counts are from December 2018, relevant cumulative projects with opening date after December 2018 will be also included. The cumulative projects are summarized as follows:

- **Radisson Blu Hotel:** 326-room hotel, includes swimming pool, restaurant, meeting space, fitness room, coffee shop, and gift shop, located at 1601 S Anaheim Boulevard, anticipated occupancy September 2020.
  - Trip generation and distribution obtained from Radisson Hotel Traffic Impact Study (dated December 2019).
- **Avanti Anaheim Boulevard Townhome:** 292-unit townhomes, located at 100-394 West Cerritos Avenue, anticipated occupancy Spring 2020.
  - Trip generation and distribution will be obtained from Avanti Anaheim Boulevard Townhomes Traffic Impact Analysis (dated May 2019).
- **Starwood Element Anaheim:** 174-room hotel, located at 200 W. Alro Way, anticipated occupancy June 2020.
  - Traffic Study was not available for this project. The trip generation was calculated using the ITE trip generation rates. Since this project is in close proximity to the Country Inn and Suites project site, the same trip distribution was utilized and obtained from the Anaheim Plaza Hotel TIA (dated March 2016).
- **GardenWalk – JW Marriott:** 466-room hotel with meeting rooms, restaurant, and spa, located at 1775 South Clementine Street, anticipated occupancy March 2020.
  - Trip generation and distribution obtained from Anaheim GardenWalk Traffic Impact Study Update (dated November 2015).
- **Cambria Suites:** 352-room hotel with restaurants, located at 1030 West Katella Avenue, anticipated occupancy March 2019.
  - Trip generation and distribution obtained from Cambria Hotel Traffic Impact Study.

Table 5-1 summarizes the trip generation for the cumulative projects.

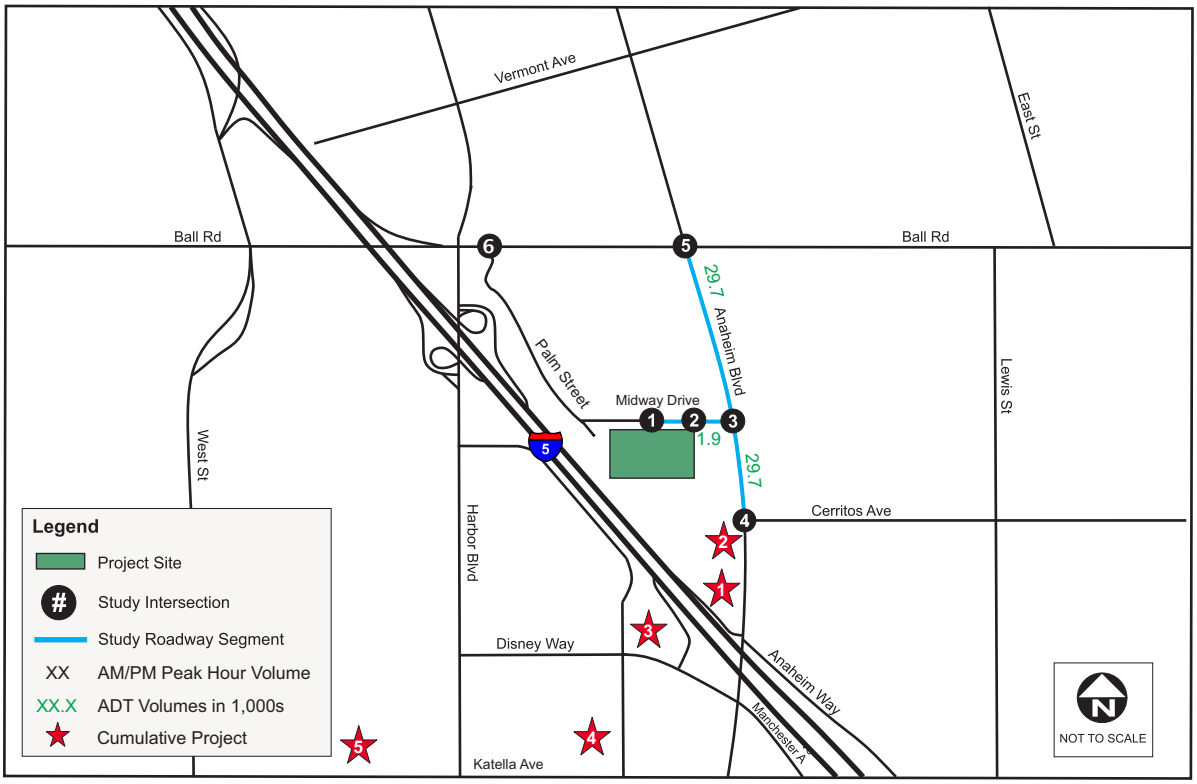
Table 5-1: Cumulative Project Trip Generation

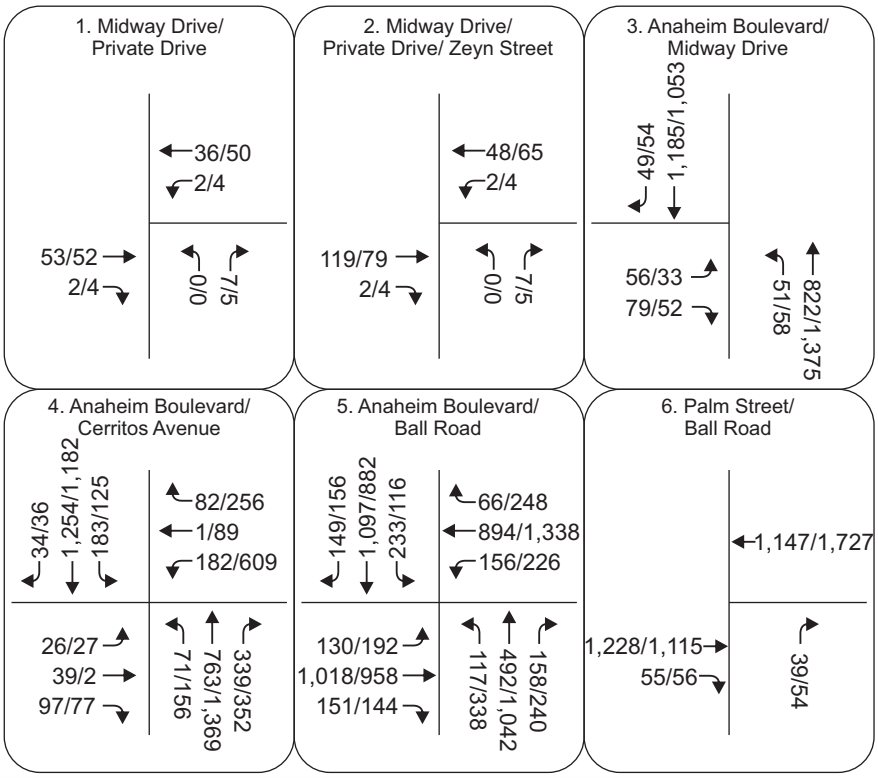
Cumulative Project[1]	Quantity	UNIT	AM Peak Hour			PM Peak Hour			Daily
			Inbound	Outbound	Total	Inbound	Outbound	Total	
Radisson Blu Hotel[2] (Net Project)	326	Rooms	55	48	103	103	66	169	2248
Avanti Anaheim Boulevard Townhome[3] (Net Project)	292	DU	-91	126	35	49	-75	-26	949
Starwood Element Anaheim[4]	174	Rooms	39	15	54	31	42	73	1422
JW Marriott Anaheim[5]	466	Rooms	104	40	144	66	15	81	3807
Cambria Suites[6]	352	Rooms	128	90	218	153	123	276	3229
Net Cumulative Project Trips			**235**	**319**	**554**	**402**	**171**	**573**	**11,655**

[1]Source: https://www.anaheim.net/3348/Development-Activity, retrieved on 09/28/2020.
[2]Trips were taken from Radisson Hotel Traffic Impact Study, December 6, 2019.
[3]Trips were taken from Avanti Anaheim Boulevard Townhomes Traffic Impact Analysis, May 6, 2019.
[4]ITE rates (9th Edition) for Hotel (310), Resort Hotel (330), Retail (820), and Meeting rooms (495) were used.
[5]Trips were taken from Anaheim GardenWalk Traffic Impact Study Update, November 12, 2015.
[6]Trips were taken from Cambria Hotel and Suites Traffic Impact Study.

Figure 5-1 illustrates the weekday peak hour existing with cumulative conditions intersection turning movement and roadway segment ADT volumes.

Figure 5-1: Existing with Cumulative Conditions Intersection Peak Hour Intersection Volumes and Segment ADTs





5.2 Intersection Level-of-Service

LOS analyses were conducted to evaluate existing with cumulative projects intersection operations during the weekday a.m. and p.m. peak hours. Two (2) signalized intersections were analyzed using ICU methodology, and additional HCM analyses were completed for the two (2) unsignalized project driveways and one (1) unsignalized intersections.

5.2.1 ICU LOS

Table 5-1 summarizes the existing V/C ratio and LOS using the ICU methodology at all signalized study intersections. Detailed ICU LOS calculation worksheets are included in **Appendix E**. As shown in the table, all analyzed study intersections operate at LOS C or better for existing with cumulative conditions.

Table 5-1: Existing With Cumulative Intersection ICU LOS

#	Intersection Location	Existing				Existing with Cumulative				Δ In V/C		Sig. Impact (Yes/No)
		AM		PM		AM		PM		AM	PM	
		V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS			
1	Midway Drive/Private Drive[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Midway Drive/Private Drive/Zeyn Street[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Anaheim Boulevard/Midway Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Anaheim Boulevard/E. Cerritos Avenue	0.47	A	0.81	D	0.53	A	0.80	C	0.06	-0.01	No
5	Anaheim Boulevard/Ball Road	0.60	A	0.67	B	0.60	A	0.67	B	0.00	0.00	No

Notes:
[1] The unsignalized project driveways and unsignalized intersection and not included by ICU methodology. Unsignalized project driveways and unsignalized intersection are only analyzed using HCM methodologies.

5.2.2 HCM LOS

All project driveways and unsignalized intersection were evaluated using HCM 6th Edition methodologies. **Table 5-2** summarizes the existing HCM LOS analysis results. Detailed HCM LOS calculation worksheets are included in **Appendix F**.

Table 5-2: Existing With Cumulative Intersection HCM LOS

#	Intersection Location	Traffic Control	Existing				Existing with Cumulative			
			AM		PM		AM		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Midway Drive/Private Drive (Access Point for Project) (Minor Movement)	Unsignalized	8.6	A	8.6	A	8.6	A	8.6	A
	Midway Drive/Private Drive (Access Point for Project) (Overall Intersection)		0.8	A	0.6	A	1.9	A	1.6	A
2	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Minor Movement)	Unsignalized	8.9	A	8.7	A	8.9	A	8.7	A
	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Overall Intersection)		0.4	A	0.5	A	1.1	A	1.1	A
3	Anaheim Boulevard/Midway Drive (Minor Movement)	Unsignalized	65.8	**F**	31.7	D	68.3	**F**	33.6	D
	Anaheim Boulevard/Midway Drive (Overall Intersection)		4.5	A	1.5	A	4.6	A	1.5	A

The intersection of Anaheim Boulevard/Midway Drive is forecasted to operate at LOS F during AM peak hour under existing with cumulative project conditions for the worst (eastbound left-turn) movement. However, the overall intersection is forecasted to operate at LOS A during both AM and PM peak hours.

5.2.3 Queuing Analysis

Queuing analysis was completed for the intersection approaches at Anaheim Boulevard/Midway Drive approaches using HCM methodologies. **Table 5-3** summarizes the existing queuing analysis results. Detailed HCM queuing worksheets are included in **Appendix G**. As shown, the intersection approaches currently have adequate storage to accommodate existing with cumulative traffic conditions.

Table 5-3: Existing With Cumulative Queuing Analysis

#	Intersection Location	Movement	Available Storage (ft.)	Existing with Cumulative		
				95th Percentile Queue (ft.)		Adequate Storage (Yes/No)
				AM	PM	
3	Anaheim Boulevard/Midway Drive	EB	300	38	17	Yes
		NBL	100	8	8	Yes

5.3 Roadway Segment Analysis

Roadway segment LOS analysis was completed for the ADT for existing conditions. **Table 5-4** summarizes the roadway segment ADT volume, segment configuration, segment capacity, volume-to-capacity (V/C) ratio, and daily LOS. As shown, all roadway segments are anticipated to operate at LOS A.

Table 5-4: Existing With Cumulative Roadway Segment LOS

	Roadway Segment	Mid-Block Lanes	Total Capacity	Existing			Existing With Cumulative				Δ in V/C	Sig. Impact (Yes/No)
				ADT	V/C	LOS	ADT	V/C	LOS	Deficient (Yes/No)		
1	Midway Drive between Private/Zeyn Street (Access Point for Project) and Anaheim Boulevard	2U	12,500	1,920	0.154	A	1,920	0.154	A	No	0.000	No
2	Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	6D	56,300	28,860	0.513	A	29,760	0.529	A	No	0.016	No
3	Anaheim Boulevard between Ball Road and Midway Drive	6D	56,300	28,860	0.513	A	29,760	0.529	A	No	0.016	No

6 EXISTING WITH CUMULATIVE PLUS PROJECT CONDITIONS

This section analyzes the existing traffic conditions with the cumulative project and the proposed townhome project.

Trips generated by the project, as shown in **Figure 6-1**, were assigned to the surrounding roadway system based on methodologies discussed in *Section 5* of this report. Project trips were then added to the Existing With Cumulative Conditions baseline volumes to represent the Existing With Cumulative Plus Project conditions. **Figure 6-1** illustrates the weekday existing plus project peak hour volumes.

6.1 Intersection Analysis

LOS analyses were conducted to evaluate existing with cumulative plus project intersection operations during the weekday a.m. and p.m. peak hours. These results were compared to Existing With Cumulative Conditions without the project in order to assess any significant traffic impacts of the project. Detailed ICU and HCM worksheets are included in **Appendices E** and **F**, respectively.

6.1.1 ICU LOS

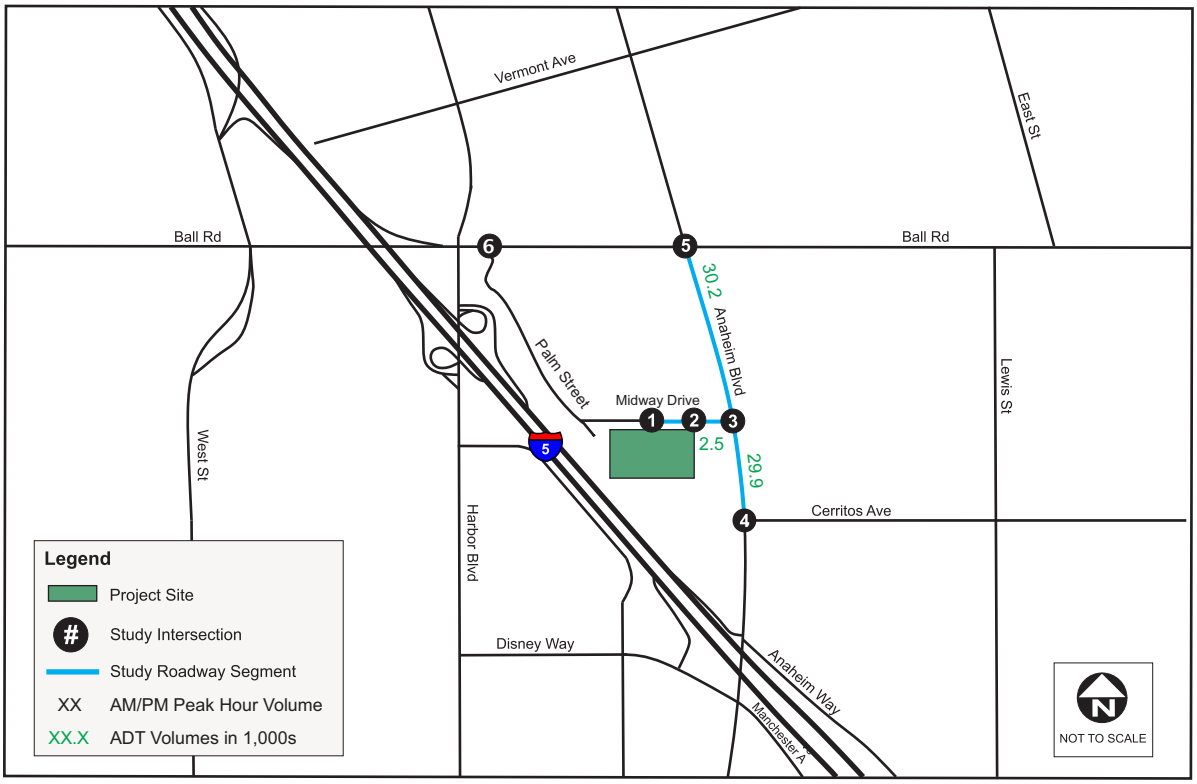
Table 6-1 summarizes the traffic conditions at the study intersections and the project driveways under the existing plus project conditions. As shown, the proposed project is not forecasted to result in any significant impacts to the analyzed study intersections under existing plus project conditions.

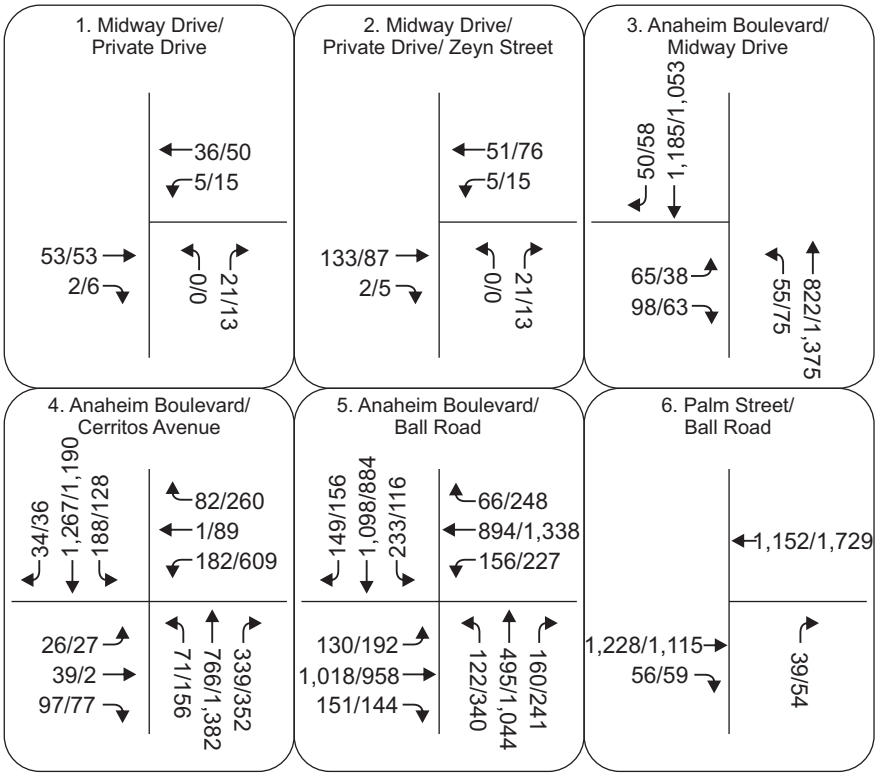
Table 6-1: Existing With Cumulative Plus Project Intersection ICU LOS

#	Intersection Location	Existing With Cumulative				Existing With Cumulative Plus Project				Δ In V/C		Sig. Impact (Yes/No)
		AM		PM		AM		PM		AM	PM	
		V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS			
1	Midway Drive/Private Drive[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Midway Drive/Private Drive/Zeyn Street[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Anaheim Boulevard/Midway Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Anaheim Boulevard/E. Cerritos Avenue	0.53	A	0.80	C	0.53	A	0.80	C	0.00	0.00	No
5	Anaheim Boulevard/Ball Road	0.60	A	0.67	B	0.61	B	0.67	B	0.01	0.00	No

Notes:
[1] The unsignalized project driveways and unsignalized intersection and not included by ICU methodology. Unsignalized project driveways and unsignalized intersection are only analyzed using HCM methodologies.

Figure 6-1: Existing with Cumulative Plus Project Intersection Peak Hour Intersection Volumes and Segment ADTs





6.1.2 HCM LOS

All project driveways and unsignalized intersections were evaluated using HCM 6th Edition methodologies. **Table 6-2** summarizes the existing with cumulative plus project LOS conditions.

Table 6-2: Existing With Cumulative Plus Project Intersection HCM LOS

#	Intersection Location	Traffic Control	Existing With Cumulative				Existing With Cumulative Plus Project			
			AM		PM		AM		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Midway Drive/Private Drive (Access Point for Project) (Minor Movement)	Unsignalized	8.6	A	8.6	A	8.6	A	8.6	A
	Midway Drive/Private Drive (Access Point for Project) (Overall Intersection)		0.8	A	0.6	A	1.9	A	1.6	A
2	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Minor Movement)	Unsignalized	8.9	A	8.7	A	9.1	A	8.8	A
	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Overall Intersection)		0.4	A	0.5	A	1.1	A	1.1	A
3	Anaheim Boulevard/Midway Drive (Minor Movement)	Unsignalized	68.3	**F**	33.6	D	94.1	**F**	41.2	**E**
	Anaheim Boulevard/Midway Drive (Overall Intersection)		4.6	A	1.5	A	7.3	A	2.2	A

The intersection of Anaheim Boulevard/Midway Drive is forecasted to operate at LOS F during AM peak hour under existing with cumulative plus project conditions for the minor (eastbound left-turn) movement. However, the overall intersection is forecasted to operate at LOS A during both AM and PM peak hours.

6.1.3 Queuing Analysis

Queuing analysis was completed for the intersection approaches at Anaheim Boulevard/Midway Drive approaches using HCM methodologies. **Table 6-3** summarizes the existing plus project queuing analysis results. Detailed HCM queuing worksheets are included in **Appendix G**. As shown, the intersection approaches are projected to have adequate storage to accommodate existing plus project traffic conditions.

Table 6-3: Existing With Cumulative Plus Project Queuing Analysis

#	Intersection Location	Movement	Available Storage (ft.)	Existing With Cumulative Plus Project		
				95th Percentile Queue (ft.)		Adequate Storage (Yes/No)
				AM	PM	
3	Anaheim Boulevard/Midway Drive	EB	300	49	21	Yes
		NBL	100	8	11	Yes

6.2 Roadway Segment Analysis

Roadway segment LOS analysis was completed for the ADT for existing plus project conditions. **Table 6-4** summarizes the roadway segment ADT volume, segment configuration, segment capacity, volume-to-capacity (V/C) ratio, and daily LOS. As shown, all roadway segments are anticipated to operate at LOS A.

Table 6-4: Existing With Cumulative Plus Project Roadway Segment ADT LOS

	Roadway Segment	Mid-Block Lanes	Total Capacity	Existing With Cumulative			Existing With Cumulative Plus Project				Δ in V/C	Sig. Impact (Yes/No)
				ADT	V/C	LOS	ADT	V/C	LOS	Deficient (Yes/No)		
1	Midway Drive between Private/Zeyn Street (Access Point for Project) and Anaheim Boulevard	2U	12,500	1,920	0.154	A	2,590	0.207	A	No	0.053	No
2	Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	6D	56,300	29,760	0.529	A	30,240	0.537	A	No	0.008	No
3	Anaheim Boulevard between Ball Road and Midway Drive	6D	56,300	29,760	0.529	A	29,950	0.532	A	No	0.003	No

7 OPENING YEAR (2022) CONDITIONS

The project opening year is 2022. This section analyzes opening year 2022 traffic conditions without the proposed project.

7.1 Opening Year Traffic Volumes

Future baseline intersection turning movement volumes were developed for Opening Year (2022) based on the existing traffic volumes, an ambient growth rate, and the added trips from the cumulative projects within the study area.

7.1.1 Ambient Growth

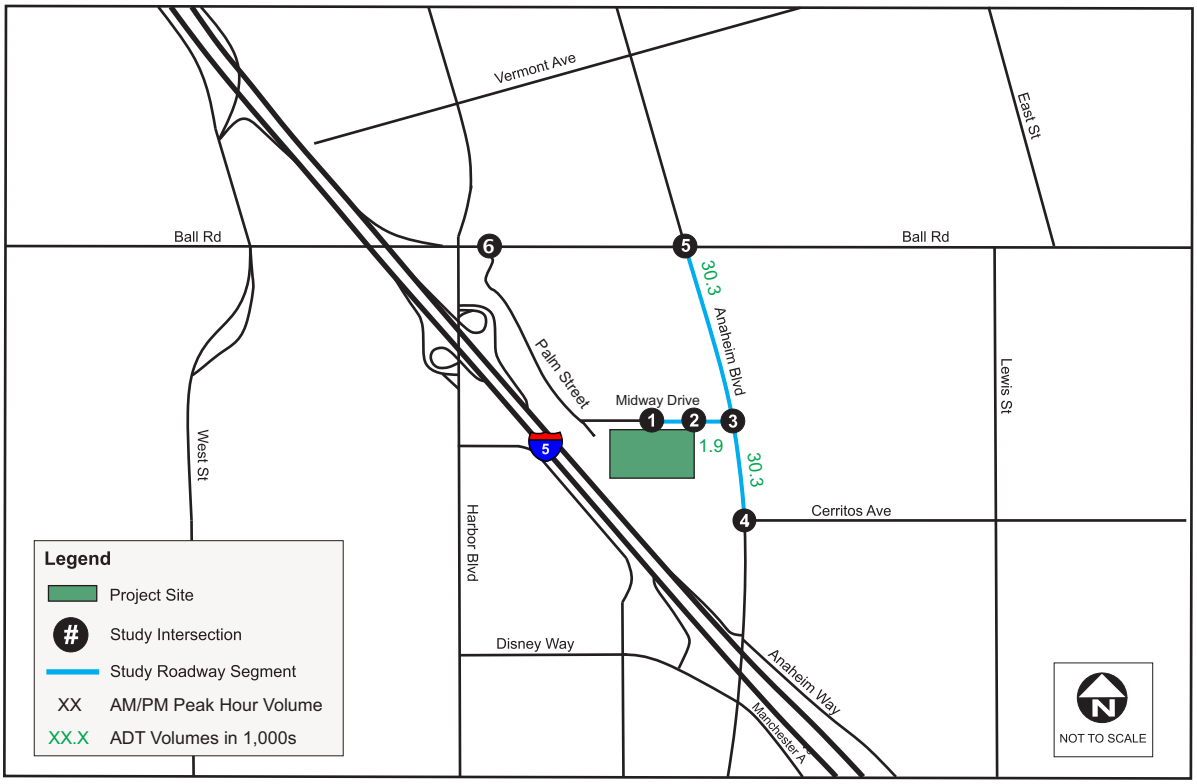
Ambient traffic growth is the traffic growth that will occur in the study area due to general employment growth, housing growth, and growth in regional through trips in Southern California. An ambient growth rate of one percent (1%) per year in the study area was assigned to vehicular traffic, consistent with City direction.

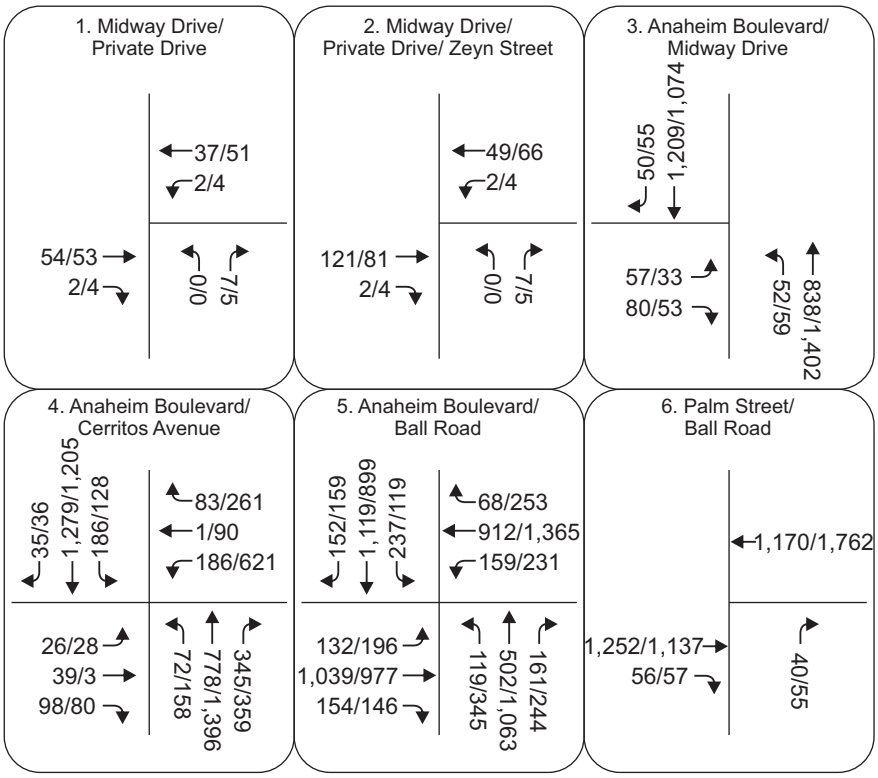
7.1.2 Cumulative Project

In additional to ambient growth assumed for the study area, the opening year (2022) traffic forecast includes known cumulative projects. A list of cumulative projects is documented in **Section 4.1**.

Figure 7-1 illustrates the weekday peak hour opening year intersection turning movement and roadway segment ADT volumes.

Figure 7-1: Opening Year (2022) Peak Hour Intersection Volumes and Segment ADTs





7.2 Intersection Analysis

LOS analyses were conducted to evaluate opening year intersection operations during the weekday a.m. and p.m. peak hours. The signalized intersections were analyzed using ICU methodology, and additional HCM analyses were completed at the project driveways and unsignalized intersections.

7.2.1 ICU LOS

Table 7-1 summarizes the traffic conditions at all the signalized intersections under the Opening Year 2022 No Project conditions. Detailed ICU calculation worksheets are included in **Appendix E**. As shown, all of the study intersections operate at LOS D or better for Opening Year (2022) conditions.

Table 7-1: Opening Year (2022) Intersection ICU LOS

#	Intersection Location	Opening Year (2022)			
		AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
1	Midway Drive/Private Drive[1] (Access Point for Project)	N/A	N/A	N/A	N/A
2	Midway Drive/Private Drive/Zeyn Street[1] (Access Point for Project)	N/A	N/A	N/A	N/A
3	Anaheim Boulevard/Midway Drive[1]	N/A	N/A	N/A	N/A
4	Anaheim Boulevard/E. Cerritos Avenue	0.54	A	0.81	D
5	Anaheim Boulevard/Ball Road	0.61	B	0.68	B

Note:
[1] The project driveway is an unsignalized intersection and only analyzed using HCM methodologies.

7.2.2 HCM LOS

All project driveways and unsignalized intersections were evaluated using HCM methodologies. **Table 7-2** summarizes the opening year LOS conditions. As shown in the table, all study intersections are projected to operate at LOS A, expect for the Intersection #3 Anaheim Boulevard/Midway Drive which is projected to operate at LOS F during the a.m. peak and LOS E during the p.m. peak for the worst movement. However, the overall intersection is forecasted to operate at LOS A during both AM and PM peak hours.

Table 7-2: Opening Year (2022) Intersection HCM LOS

#	Intersection Location	Traffic Control	Opening Year (2022)			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Midway Drive/Private Drive (Access Point for Project) (Minor Movement)	Unsignalized	8.6	A	8.6	A
	Midway Drive/Private Drive (Access Point for Project) (Overall Intersection)		0.8	A	0.6	A
2	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Minor Movement)	Unsignalized	8.9	A	8.7	A
	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Overall Intersection)		0.4	A	0.4	A
3	Anaheim Boulevard/Midway Drive (Minor Movement)	Unsignalized	65.8	**F**	35.5	**E**
	Anaheim Boulevard/Midway Drive (Overall Intersection)		4.5	A	1.6	A

7.2.3 Queuing Analysis

Queuing analysis was completed for the intersection approaches at Anaheim Boulevard/Midway Drive approaches using HCM methodologies. **Table 7-3** summarizes the opening year queuing analysis results. Detailed HCM queuing worksheets are included in **Appendix G**. As shown, the intersection approaches are projected to have adequate storage to accommodate opening year traffic conditions.

Table 7-3: Opening Year (2022) Queuing Analysis

#	Intersection Location	Movement	Available Storage (ft.)	Opening Year (2022)		
				95th Percentile Queue (ft.)		Adequate Storage (Yes/No)
				AM	PM	
3	Anaheim Boulevard/Midway Drive	EB	300	37	17	Yes
		NBL	100	8	8	Yes

7.3 Roadway Segment Analysis

Roadway segment LOS analysis was completed for the ADT for opening year conditions. **Table 7-4** summarizes the roadway segment ADT volume, segment configuration, segment capacity, volume-to-capacity (V/C) ratio, and daily LOS. As shown, all roadway segments are anticipated to operate at LOS A.

Table 7-4: Opening Year (2022) Roadway Segment ADT LOS

#	Roadway Segment Location	Mid-Block Lanes	Total Capacity	Opening Year (2022)			
				ADT	V/C	LOS	Deficient (Yes/No)
1	Midway Drive between Private/Zeyn Street (Access Point for Project) and Anaheim Boulevard	2U	12,500	1,960	0.157	A	No
2	Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	6D	56,300	30,340	0.539	A	No
3	Anaheim Boulevard between Ball Road and Midway Drive	6D	56,300	30,340	0.539	A	No

8 OPENING YEAR (2022) PLUS PROJECT CONDITIONS

Trips generated by the project were assigned to the surrounding roadway system based on methodologies discussed in *Section 5* of this report. Project trips were then added to the Opening Year baseline volumes to represent the Opening Year (2022) Plus Project conditions. **Figure 8-1** illustrates the opening year plus project volumes.

8.1 Intersection Level-of-Service

LOS analyses were conducted to evaluate opening year plus project intersection operations during the weekday a.m. and p.m. peak hours. All signalized intersections were analyzed using ICU methodology, and additional HCM analyses were completed at the project driveways and unsignalized intersections. Opening year "plus project" traffic operations were compared to opening year conditions without the project in order to assess any significant traffic impacts as a result of the project.

8.1.1 ICU LOS

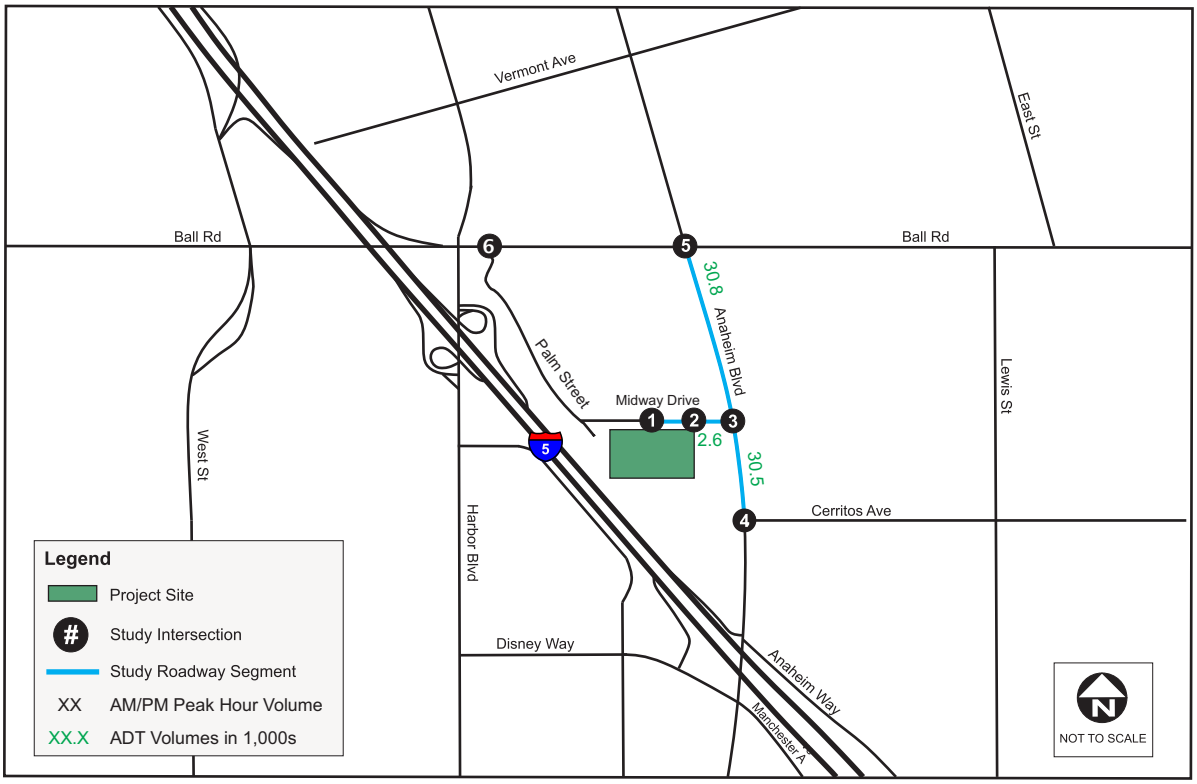
Table 8-1 summarizes the opening year plus project LOS using the ICU methodology. Detailed ICU calculation worksheets are included in **Appendix E**. As shown in the table below, the analyzed intersections are forecast to operate at LOS D or better, and the traffic generated by the proposed project is not expected to exceed the threshold of significance.

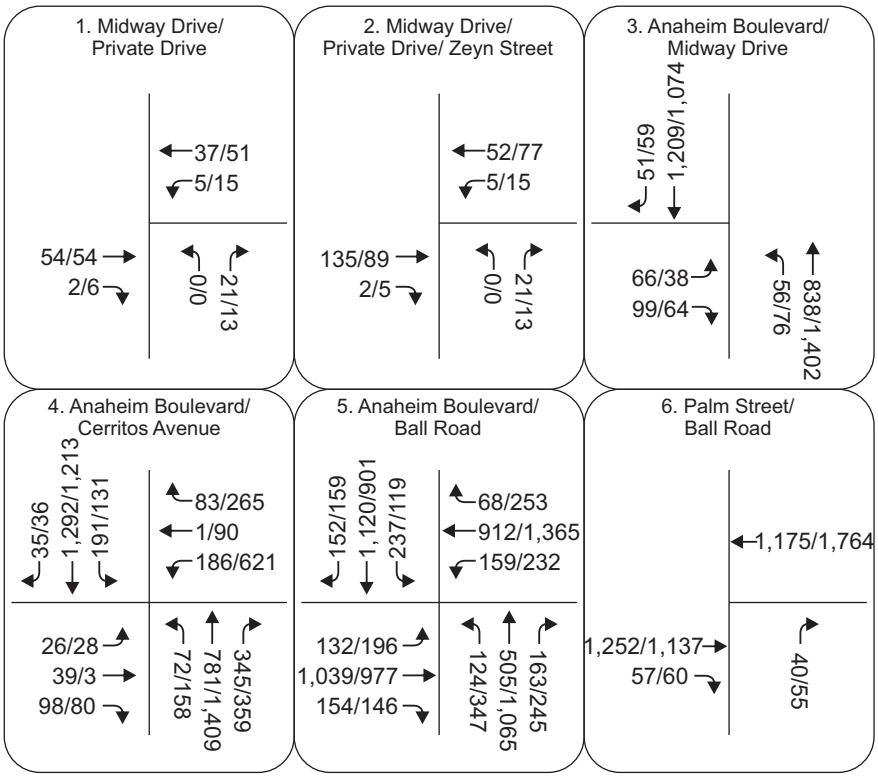
Table 8-1: Opening Year (2022) Plus Project Intersection ICU LOS

#	Intersection Location	Opening Year (2022)				Opening Year (2022) Plus Project				Δ In V/C		Sig. Impact (Yes/No)
		AM		PM		AM		PM		AM	PM	
		V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS			
1	Midway Drive/Private Drive[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Midway Drive/Private Drive/Zeyn Street[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Anaheim Boulevard/Midway Drive	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Anaheim Boulevard/E. Cerritos Avenue	0.54	A	0.81	D	0.54	A	0.82	D	0.00	0.01	No
5	Anaheim Boulevard/Ball Road	0.61	B	0.68	B	0.62	B	0.69	B	0.01	0.01	No

Notes:
[1] The project driveway is an unsignalized intersection and only analyzed using HCM methodologies.

Figure 8-1: Opening Year (2022) Plus Project Peak Hour Intersection Volumes and Segment ADTs





8.1.2 HCM LOS

All project driveways and unsignalized intersections were evaluated using HCM methodologies. **Table 8-2** summarizes the opening year LOS conditions.

Table 8-2: Opening Year (2022) Plus Project Intersection HCM LOS

#	Intersection Location	Traffic Control	Opening Year (2022)				Opening Year (2022) Plus Project			
			AM		PM		AM		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Midway Drive/Private Drive (Access Point for Project) (Minor Movement)	Unsignalized	8.6	A	8.6	A	8.6	A	8.6	A
	Midway Drive/Private Drive (Access Point for Project) (Overall Intersection)		0.8	A	0.6	A	1.8	A	1.6	A
2	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Minor Movement)	Unsignalized	8.9	A	8.7	A	9.1	A	8.8	A
	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Overall Intersection)		0.4	A	0.4	A	1.1	A	1.1	A
3	Anaheim Boulevard/Midway Drive (Minor Movement)	Unsignalized	65.8	**F**	35.5	**E**	110.7	**F**	43.7	**E**
	Anaheim Boulevard/Midway Drive (Overall Intersection)		4.5	A	1.6	A	8.4	A	2.2	**A**

The intersection of Anaheim Boulevard/Midway Drive is forecasted to operate at LOS E or worse during AM and PM peak hour under Opening Year Plus Project conditions for the worst (eastbound left-turn) movement. However, the overall intersection is forecasted to operate at LOS A during both AM and PM peak hours.

8.1.3 Queuing Analysis

Queuing analysis was completed for the intersection approaches at Anaheim Boulevard/Midway Drive approaches using HCM methodologies. **Table 8-3** summarizes the opening year plus project queuing analysis results. Detailed HCM queuing worksheets are included in **Appendix G**. As shown, the intersection approaches are projected to have adequate storage to accommodate opening year plus project traffic conditions.

Table 8-3: Opening Year (2022) Plus Project Queuing Analysis

#	Intersection Location	Movement	Available Storage (ft.)	Opening Year (2022) Plus Project		
				95th Percentile Queue (ft.)		Adequate Storage (Yes/No)
				AM	PM	
3	Anaheim Boulevard/Midway Drive	EB	300	52	21	Yes
		NBL	100	9	11	Yes

8.2 Roadway Segment Analysis

Roadway segment LOS analysis was completed for the ADT for opening year plus project conditions. **Table 8-4** summarizes the roadway segment ADT volume, segment configuration, segment capacity, volume-to-capacity (V/C) ratio, and daily LOS. As shown, all roadway segments are anticipated to operate at LOS A.

Table 8-4: Opening Year (2022) Plus Project Roadway Segment ADT LOS

	Roadway Segment	Mid-Block Lanes	Total Capacity	Opening Year (2022)			Opening Year (2022) Plus Project				Δ in V/C
				ADT	V/C	LOS	ADT	V/C	LOS	Deficient (Yes/No)	
1	Midway Drive between Private/Zeyn Street (Access Point for Project) and Anaheim Boulevard	2U	12,500	1,960	0.157	A	2,630	0.210	A	No	0.053
2	Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	6D	56,300	30,340	0.539	A	30,820	0.547	A	No	0.008
3	Anaheim Boulevard between Ball Road and Midway Drive	6D	56,300	30,340	0.539	A	30,530	0.542	A	No	0.003

9 GENERAL PLAN BUILD OUT YEAR 2035 CONDITIONS

The General Plan Build Out year is 2035. This section analyzes the traffic conditions without the proposed project.

Traffic analysis for General Plan Build Out Year 2035 conditions were performed based on post-processed volumes developed from the ATAM. Future model raw volumes for arterial intersections and roadway segments were post-processed based on the standard post-processing methodology as defined in NCHRP Report 255. Observed existing traffic volumes were used as the bases to develop future post-processed volumes. **Figure 9-1** illustrates the General Plan Build Out Year 2035 intersection and roadway segment volumes.

9.1 Intersection Level-of-Service

LOS analyses were conducted to evaluate the General Plan Build Out Year 2035 intersection operations during the weekday a.m. and p.m. peak hours. All signalized intersections were analyzed using ICU methodology, and additional HCM analyses were completed at the project driveways and unsignalized intersections.

9.1.1 ICU LOS

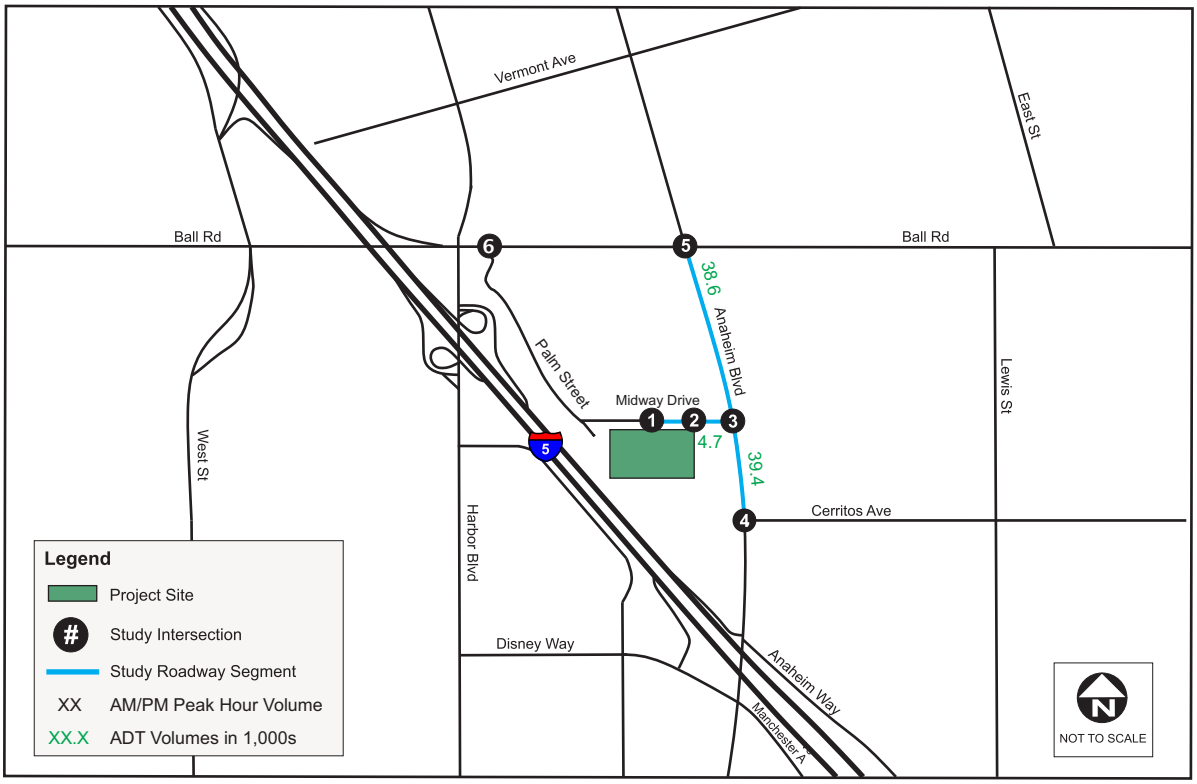
Table 9-1 summarizes the General Plan Build Out Year 2035 LOS using the ICU methodology. Detailed ICU calculation worksheets are included in **Appendix E**. As shown in the table below, the analyzed intersections are forecast to operate at LOS D or better, and the traffic generated by the proposed project is not expected to exceed the threshold of significance.

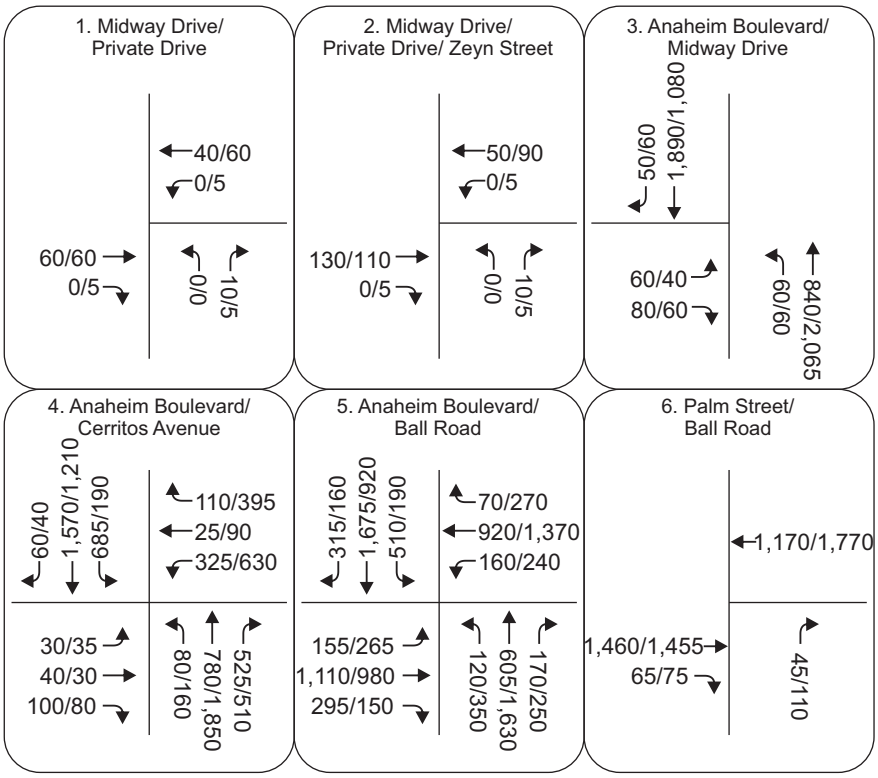
Table 9-1: General Plan Build Out Year (2035) Intersection ICU LOS

#	Intersection Location	General Plan Build Out (2035)			
		AM Peak Hour		PM Peak Hour	
		V/C	LOS	V/C	LOS
1	Midway Drive/Private Drive[1] (Access Point for Project)	N/A	N/A	N/A	N/A
2	Midway Drive/Private Drive/Zeyn Street[1] (Access Point for Project)	N/A	N/A	N/A	N/A
3	Anaheim Boulevard/Midway Drive[2]	N/A	N/A	N/A	N/A
4	Anaheim Boulevard/E. Cerritos Avenue	0.64	B	0.72	C
5	Anaheim Boulevard/Ball Road	0.68	B	0.77	C

Note:
[1] The project driveway is an unsignalized intersection and only analyzed using HCM methodologies.
[2] Anaheim Boulevard/Midway Drive is assumed to be signalized in General Plan Buildout Year 2035 conditions. (*See Section 8.3*)

Figure 9-1: General Plan Build Out Year (2035) Peak Hour Intersection Volumes and Segment ADTs





9.1.2 HCM LOS

All project driveways and unsignalized intersections were evaluated using HCM methodologies. **Table 9-2** summarizes the General Plan Build Out Year 2035 LOS conditions. As shown in the table, all study intersections are projected to operate at LOS B or above, expect for intersection #3 Anaheim Boulevard/Midway Drive which is projected to operate at LOS F during a.m. and p.m. peak hours for the worst movement (eastbound left-turn). However, the overall intersection is forecasted to operate at LOS D or better during AM and PM peak hours.

Table 9-2: General Plan Build Out Year (2035) Intersection HCM LOS

#	Intersection Location	Traffic Control	General Plan Build Out (2035)			
			AM Peak Hour		PM Peak Hour	
			Delay	LOS	Delay	LOS
1	Midway Drive/Private Drive (Access Point for Project) (Minor Movement)	Unsignalized	8.6	A	8.6	A
	Midway Drive/Private Drive (Access Point for Project) (Overall Intersection)		0.8	A	0.6	A
2	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Minor Movement)	Unsignalized	9.0	A	8.9	A
	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Overall Intersection)		0.5	A	0.4	A
3	Anaheim Boulevard/Midway Drive (Minor Movement)	Unsignalized	1316.8	**F**	58.4	**F**
	Anaheim Boulevard/Midway Drive (Overall Intersection)		28.9	D	1.4	A

9.1.3 Queuing Analysis

Queuing analysis was completed for the intersection approaches at Anaheim Boulevard/Midway Drive approaches using HCM methodologies. **Table 9-3** summarizes the General Plan Build Out queuing analysis results. Detailed HCM queuing worksheets are included in **Appendix G**. As shown, the intersection approaches are projected to have adequate storage to accommodate General Plan Build Out Year 2035 conditions.

Table 9-3: General Plan Build Out Year (2035) Queuing Analysis

#	Intersection Location	Movement	Available Storage (ft.)	General Build Out (2035)		
				95th Percentile Queue (ft.)		Adequate Storage (Yes/No)
				AM	PM	
3	Anaheim Boulevard/Midway Drive	EB	300	85	12	Yes
		NBL	100	21	8	Yes

9.2 Roadway Segment Analysis

Roadway segment LOS analysis was completed for the ADT for the General Plan Build Out Year 2035 conditions. **Table 9-4** summarizes the roadway segment ADT volume, segment configuration, segment capacity, volume-to-capacity (V/C) ratio, and daily LOS. As shown, all roadway segments are anticipated to operate at LOS C or better.

Table 9-4: General Plan Build Out Year (2035) Roadway Segment ADT LOS

#	Roadway Segment Location	Mid-Block Lanes	Total Capacity	General Plan Build Out (2035)			
				ADT	V/C	LOS	Deficient (Yes/No)
1	Midway Drive between Private/Zeyn Street (Access Point for Project) and Anaheim Boulevard	2U	12,500	4,700	0.376	A	No
2	Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	6D	56,300	39,400	0.700	C	No
3	Anaheim Boulevard between Ball Road and Midway Drive	6D	56,300	38,600	0.686	B	No

10 GENERAL PLAN BUILD OUT YEAR 2035 PLUS PROJECT CONDITIONS

Trips generated by the project were assigned to the surrounding roadway system based on methodologies discussed in *Section 5* of this report. Project trips were then added to the General Plan Build Out Year 2035 baseline volumes to represent the General Plan Build Out Year 2035 Plus Project conditions. **Figure 10-1** illustrates the General Plan Build Out Year 2035 Plus Project volumes.

10.1 Intersection Level-of-Service

LOS analyses were conducted to evaluate the General Plan build Out Year 2035 plus project intersection operations during the weekday a.m. and p.m. peak hours. All signalized intersections were analyzed using ICU methodology, and additional HCM analyses were completed at the project driveways and unsignalized intersections. The General Plan Build Out Year 2035 "plus project" traffic operations were compared to the General Plan Build Out Year 2035 conditions without the project in order to assess any significant traffic impacts as a result of the project.

10.1.1 ICU LOS

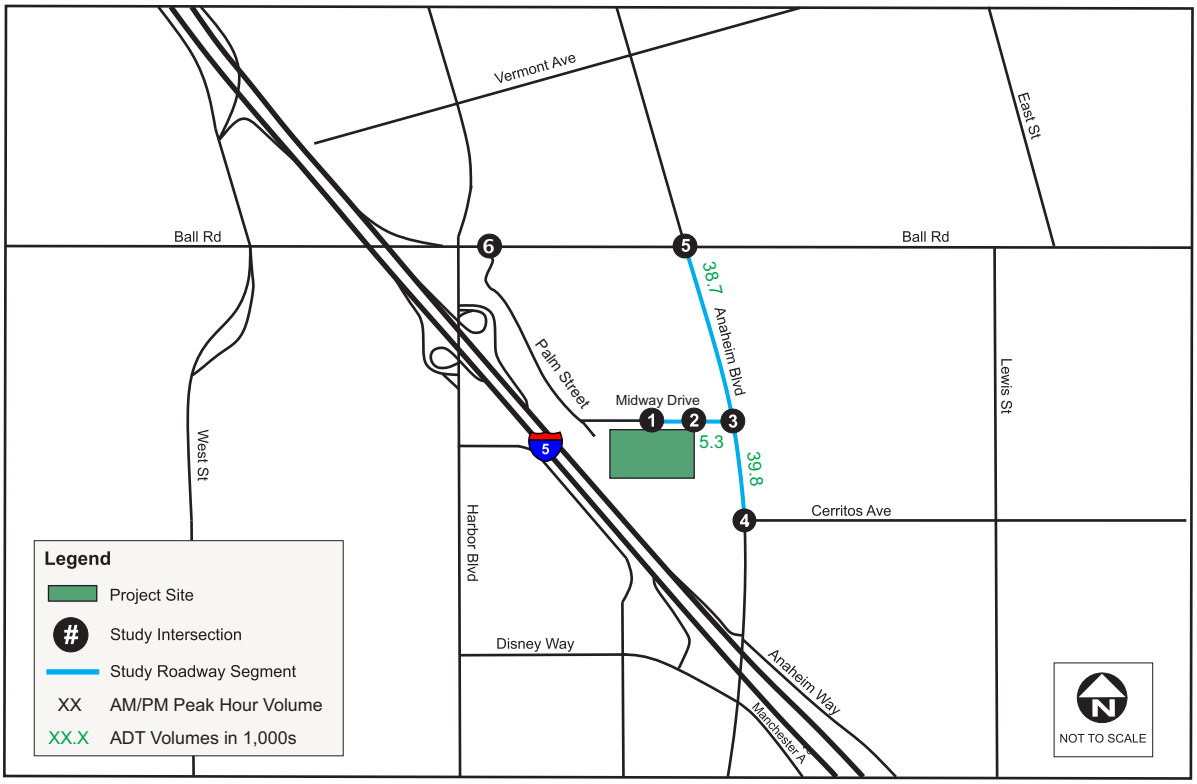
Table 10-1 summarizes the General Plan Build Out Year 2035 plus project LOS using the ICU methodology. Detailed ICU calculation worksheets are included in **Appendix E**. As shown in the table below, the analyzed intersections are forecast to operate at LOS D or better, and the traffic generated by the proposed project is not expected to exceed the threshold of significance.

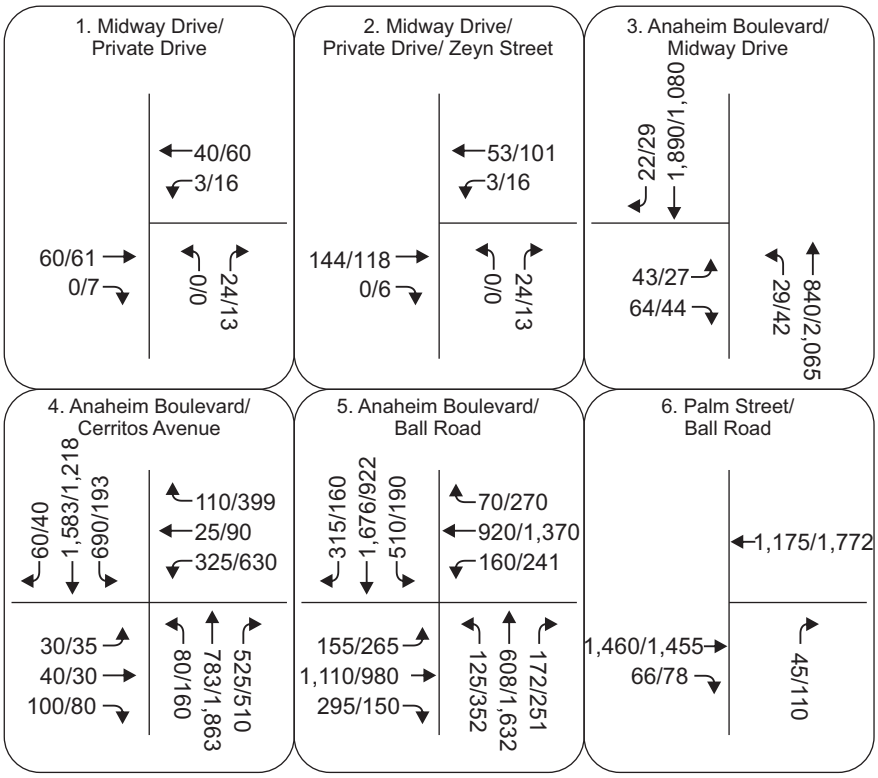
Table 10-1: General Plan Build Out Year (2035) Plus Project Intersection ICU LOS

#	Intersection Location	General Plan Build Out (2035)				General Plan Build Out (2035) Plus Project				Δ In V/C		Sig. Impact (Yes/No)
		AM		PM		AM		PM		AM	PM	
		V/C	LOS	V/C	LOS	V/C	LOS	V/C	LOS			
1	Midway Drive/Private Drive[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
2	Midway Drive/Private Drive/Zeyn Street[1] (Access Point for Project)	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
3	Anaheim Boulevard/Midway Drive[2]	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
4	Anaheim Boulevard/E. Cerritos Avenue	0.64	B	0.72	C	0.64	B	0.72	C	0.00	0.00	No
5	Anaheim Boulevard/Ball Road	0.68	B	0.77	C	0.68	B	0.77	C	0.00	0.00	No

Notes:
[1] The project driveway is an unsignalized intersection and only analyzed using HCM methodologies.
[2] Anaheim Boulevard/Midway Drive is assumed to be signalized in General Plan Buildout Year 2035 Plus Project conditions. (*See Section 8.3)*

Figure 10-1: General Plan Build Out (2035) Plus Project Peak Hour Intersection Volumes and Segment ADTs





10.1.2 HCM LOS

All project driveways and unsignalized intersections were evaluated using HCM methodologies. **Table 10-2** summarizes the opening year LOS conditions.

Table 10-2: General Plan Build Out Year (2035) Plus Project Intersection HCM LOS

#	Intersection Location	Traffic Control	General Plan Build Out (2035)				General Plan Build Out (2035) Plus Project			
			AM		PM		AM		PM	
			Delay	LOS	Delay	LOS	Delay	LOS	Delay	LOS
1	Midway Drive/Private Drive (Access Point for Project) (Minor Movement)	Unsignalized	8.6	A	8.6	A	8.7	A	8.7	A
	Midway Drive/Private Drive (Access Point for Project) (Overall Intersection)		0.8	A	0.6	A	1.8	A	1.5	A
2	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Minor Movement)	Unsignalized	9.0	A	8.9	A	9.1	A	9.0	A
	Midway Drive/Private Drive/Zeyn Street (Access Point for Project) (Overall Intersection)		0.5	A	0.4	A	1.1	A	0.9	A
3	Anaheim Boulevard/Midway Drive (Minor Movement)	Unsignalized	1316.8	**F**	58.4	**F**	399.0	**F**	44.0	**E**
	Anaheim Boulevard/Midway Drive (Overall Intersection)		28.9	D	1.4	A	7.1	A	0.8	A

The intersection of Anaheim Boulevard/Midway Drive is projected to operate at LOS E or worse during AM and PM peak hours under General Plan Build Out Year 2035 Plus Project conditions for the worst (eastbound left-turn) movement. However, the overall intersection is forecasted to operate at LOS D or better during AM and PM peak hours.

10.1.3 Queuing Analysis

Queuing analysis was completed for the intersection approaches at Anaheim Boulevard/Midway Drive approaches using HCM methodologies. **Table 10-3** summarizes the General Plan Build Out Plus Project queuing analysis results. Detailed HCM queuing worksheets are included in **Appendix G**. As shown, the intersection approaches are projected to have adequate storage to accommodate General Plan Build Out Year 2035 Plus Project conditions.

Table 10-3: General Plan Build Out Year (2035) Plus Project Queuing Analysis

#	Intersection Location	Movement	Available Storage (ft.)	General Plan Build Out (2035) Plus Project		
				95th Percentile Queue (ft.)		Adequate Storage (Yes/No)
				AM	PM	
3	Anaheim Boulevard/Midway Drive	EB	300	51	8	Yes
		NBL	100	9	6	Yes

10.2 Roadway Segment Analysis

Roadway segment LOS analysis was completed for the ADT for the General Plan Build Out Year 2035 plus project conditions. **Table 10-4** summarizes the roadway segment ADT volume, segment configuration, segment capacity, volume-to-capacity (V/C) ratio, and daily LOS. As shown, all roadway segments are anticipated to

operate at LOS C or better, and no significant impacts were identified.

Table 10-4: General Plan Build Out Year (2035) Plus Project Roadway Segment ADT LOS

	Roadway Segment	Mid-Block Lanes	Total Capacity	General Plan Build Out (2035)			General Plan Build Out (2035) Plus Project				Δ in V/C
				ADT	V/C	LOS	ADT	V/C	LOS	Deficient (Yes/No)	
1	Midway Drive between Private/Zeyn Street (Access Point for Project) and Anaheim Boulevard	2U	12,500	4,700	0.376	A	5,370	0.430	A	No	0.054
2	Anaheim Boulevard between Midway Drive and E. Cerritos Avenue	6D	56,300	39,400	0.700	C	39,880	0.708	C	No	0.008
3	Anaheim Boulevard between Ball Road and Midway Drive	6D	56,300	38,600	0.686	B	38,790	0.689	B	No	0.003

11 IMPACTS AND RECOMMENDATIONS

This section summarizes the No Project and With Project traffic operating conditions at the study intersections and roadway segments. Traffic operation deficiencies and impacts are identified based on criteria documented in ***Section 2*** of this document.

11.1 Intersections

No significant impact was identified for the study intersections for any of the analyzed scenarios; therefore, no mitigation measures are recommended.

11.2 Roadway Segments

No significant impact was identified for the study arterial roadway segments for Existing with Cumulative, Opening Year 2022, and General Plan Build Out Year 2035 scenarios traffic conditions; therefore, no mitigation measures would be required to address arterial segment impacts.

11.3 Transit, Pedestrian, and Bikeway Access

The developer should consider pedestrian and bike accessibility and safety issues in the projects final design. Designated crosswalks and streetscape designs at the project site can increase pedestrian and bicycle visibility for residents and guests. Nearby pedestrian destinations may include Paul Revere Elementary School and restaurant and retail business on Anaheim Boulevard. Due to the project's proximity to the existing bike route on Anaheim Boulevard, which provides connections to local destinations via the City of Anaheim bikeway network and regional destinations via the Santa Ana River trail, it is recommended that the developer provide visible and adequate bike facilities on site for residents and guests.

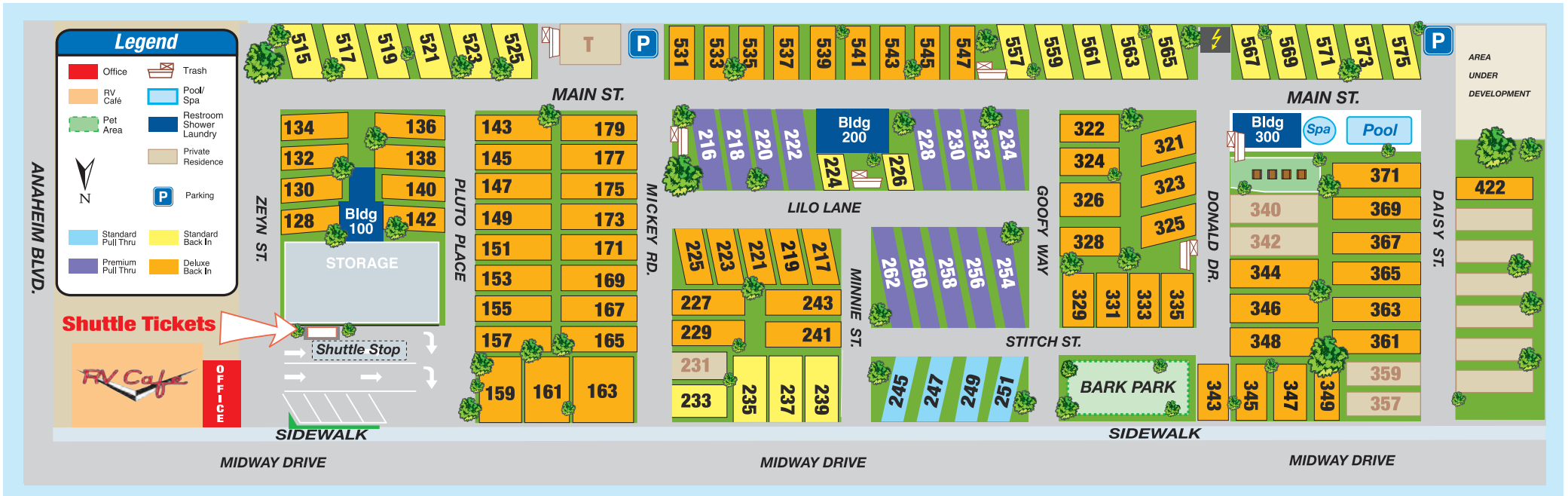
12 CONCLUSIONS

The proposed project is located at 110-228 West Midway Drive in the City of Anaheim is a residential development project with 156 new three-bedroom three-story attached townhomes. The estimated opening year of the proposed project is 2022. The project site is located at West Midway Drive and is bordered by Anaheim Boulevard to the east, Willow Street and the I-5 to the west, and D Street to the south. Access to the site will be taken from three (3) access points on Midway Drive.

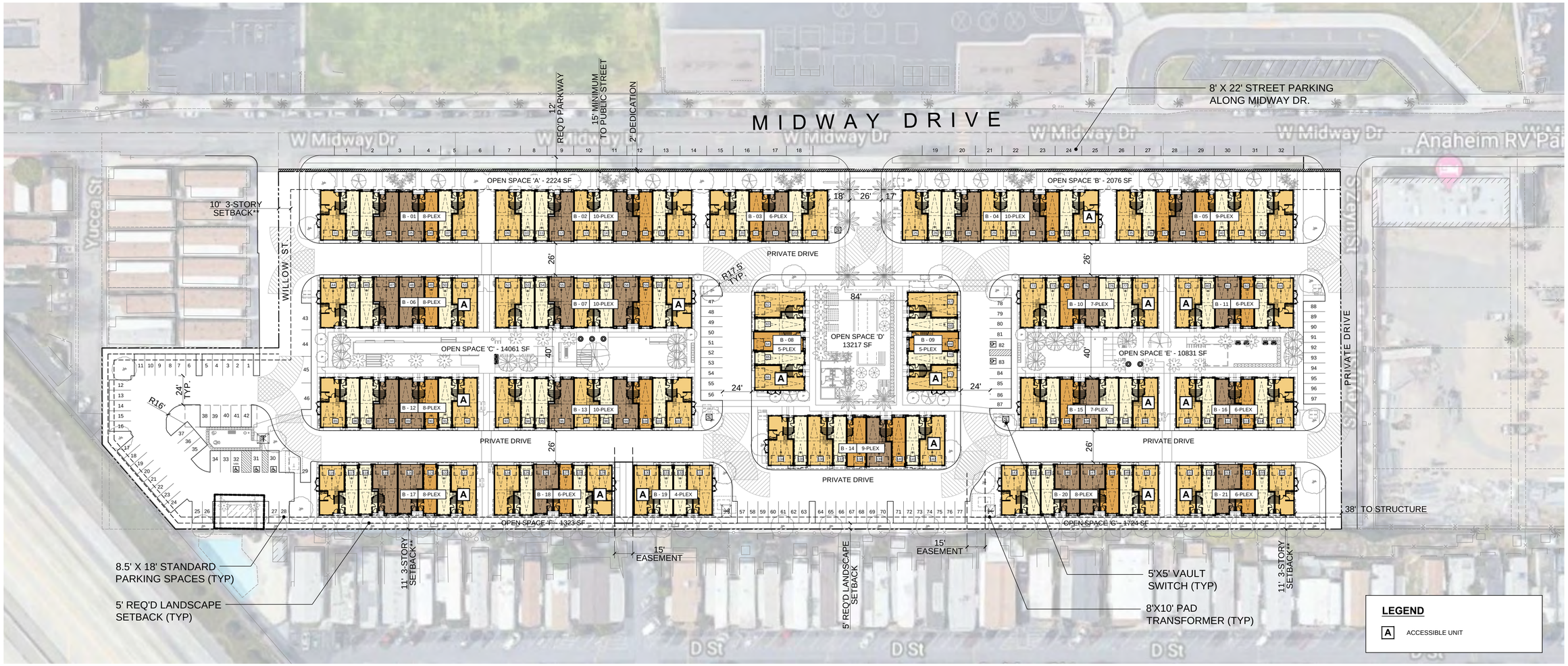
Based on ITE trip generation rates, the proposed townhome project is forecast to generate 40 new AM peak hour trips, 47 new PM peak hour trips, and 701 new weekday daily trips.

The results of the traffic analysis indicate that all study intersections are projected to operate adequately under all no project and with project conditions for Existing, Opening Year, and General Plan Build Out Year 2035 and no mitigation measures are recommended.

APPENDIX A – EXISTING PROJECT SITE MAP


Legend
Office
Trash
RV Café
Pool/ Spa
Pet Area
Restroom Shower Laundry
Private Residence
N
Parking
Standard Pull Thru
Standard Back In
Premium Pull Thru
Deluxe Back In
Shuttle Tickets
RV Cafe
OFFICE
ANAHEIM BLVD.
ZEYN ST.
PLUTO PLACE
MICKEY RD.
MINNIE ST.
GOOFY WAY
DONALD DR.
DAISY ST.
MAIN ST.
MAIN ST.
LILO LANE
STITCH ST.
Bldg 100
Bldg 200
Bldg 300
Spa
Pool
STORAGE
Shuttle Stop
BARK PARK
AREA UNDER DEVELOPMENT
SIDEWALK
SIDEWALK
MIDWAY DRIVE
MIDWAY DRIVE
MIDWAY DRIVE
515 517 519 521 523 525
T
P
531 533 535 537 539 541 543 545 547 557 559 561 563 565
567 569 571 573 575
P
134 132 130 128 136 138 140 142
143 145 147 149 151 153 155 157 159 161 163 179 177 175 173 171 169 167 165
216 218 220 222 224 226 228 230 232 234
225 223 221 219 217 227 229 231 233 235 237 239 243 241
262 260 258 256 254 252 250 248 246 244
322 324 326 328 321 323 325 329 331 333 335
340 342 344 346 348 371 369 367 365 363 361 359 357
343 345 347 349
422

APPENDIX B – PROPOSED PROJECT SITE PLAN



SITE SUMMARY

SITE AREA: ±6.4 ACRES (±279,951 SF)

REQUIRED ZONING: RM-4
HEIGHT: 40 FEET OR 3-STORIES MAYBE INCREASED TO 4-STORIES BY CONDITIONAL USE PERMIT. NO MORE THAN 8-FEET OF PROJECTION PER 18.40.030
DENSITY: 24.0 DU/AC

BUILDING COVERAGE: ±38%

3-STORY BUILDING SEPARATIONS: 18.06.090.050

	REQUIRED	PROPOSED
PRIMARY-PRIMARY:	40'	30'
PRIMARY-SECONDARY:	25'	20'
SECONDARY-SECONDARY:	15'	10'
SECONDARY-BLANK:	15'	10'
BLANK-BLANK:	15'	10'

STRUCTURAL SETBACKS: 18.06.090.030

	REQUIRED	PROPOSED
1-STORY:	10'	10'
3-STORY:	20'	10'

LANDSCAPE SETBACKS:

	REQUIRED	PROPOSED
FRONT:	15'	15'
INTERIOR PROPERTY LINE	5'	5'

NOTES**

PRIMARY. BUILDING WALLS THAT CONTAIN ENTRANCES AND EXITS AND/OR WINDOWS OPENING INTO LIVING SPACES WHERE MOST ACTIVITY OCCURS, SUCH AS DINING ROOMS, LIVING ROOMS, FAMILY ROOMS, KITCHENS AND BEDROOMS. BUILDING WALLS WITH BALCONIES ARE ALSO INCLUDED.

SECONDARY. BUILDING WALLS THAT CONTAIN WINDOWS OPENING INTO BATHROOMS, CLOSETS, STAIRWELLS AND CORRIDORS.

BLANK. BUILDING WALLS WITH NO WINDOW OPENINGS OR POINTS OF ACCESS.

**MIN. 15' SETBACK ABUTTING INTERIOR PL FOR SECONDARY OR BLANK WALL
**MIN. 20' SETBACK ABUTTING INTERIOR PL FOR PRIMARY WALL

UNITS

P1	59 UNITS -	(3 BD) - 2-CAR TANDEM GARAGE
P2	32 UNITS -	(3 BD) - 3-CAR GARAGE
P2-ADA	16 UNITS -	(3 BD) - 2-CAR GARAGE SIDE BY SIDE
P3	22 UNITS -	(3 BD) - 2-CAR TANDEM GARAGE
P4	27 UNITS -	(3 BD) - 3-CAR GARAGE
	156 UNITS:	TOTAL

STORAGE: 100 CUBIC FT

COMPOSITE TYPES

	QTY
4-PLEX	1
5-PLEX	2
6-PLEX	5
7-PLEX	2
8-PLEX	5
9-PLEX	2
10-PLEX	4
TOTAL	21

PARKING

1BD: 2 SP/UNIT
2 BD: 2.25 SP/UNIT
3 BD: 3 SP/UNIT
4 BD: 3.5 SP/UNIT

(REQUIREMENT INCLUDES GUEST WHICH ACCOUNT FOR 25% OF REQUIRED SPACES)

PARKING REQUIRED:
3 BD UNITS: 156 UNITS X 3 SP/UNIT = 468 SPACES REQ'D

PARKING PROVIDED:
371 SPACES - GARAGE
97 SPACES - OPEN PARKING
468 SPACES - TOTAL PROVIDED

PARKING DIMENSION:
90 DEGREES: 8.5' X 18' MINIMUM
PARALLEL: 8' X 22' MINIMUM
COVERED PARKING: 10' X 20' MINIMUM

NOTE:
MIDWAY DR. PARALLEL SPACES DO NOT COUNT TOWARDS REQUIRED PARKING

OPEN SPACE

PRIVATE RECREATIONAL-LEISURE AREA REQUIRED:
100 SF/ PATIO ON GROUND (8 FT MIN. DIMENSION)
70 SF/ UNIT ABOVE GROUND (7 FT MIN. DIMENSION)

COMMON RECREATIONAL-LEISURE AREA REQUIRED:
10 FT MIN. DIMENSION

OPEN SPACE REQUIRED:
156 UNITS X 200 SF/UNIT = 31,200SF REQUIRED

OPEN SPACE PROVIDED:
COMMON OPEN SPACE PROVIDED: 45,456SF (±291 SF/UNIT)
PRIVATE DECKS: ±500SF/UNIT
TOTAL OS PROVIDED (COMMON + PRIVATE): ±791 SF/UNIT

RECREATION-LEISURE AREAS:
200SF/UNIT (PRIVATE OR COMMON)

OPEN SPACE 'A'	2224 SF
OPEN SPACE 'B'	2076 SF
OPEN SPACE 'C'	14061 SF
OPEN SPACE 'D'	13217 SF
OPEN SPACE 'E'	10831 SF
OPEN SPACE 'F'	1323 SF
OPEN SPACE 'G'	1724 SF
	45456 SF

ktgy
Architecture + Planning
17911 Von Karman Ave,
Suite 200
Irvine, CA 92614
949.851.2133
ktgy.com

ENCORE CAPITAL MANAGEMENT

LEGACY - ANAHEIM
Anaheim, CA 190053

Plot Date: 05.28.2020
1st Submittal Date: 05.29.2020

SITE PLAN

0 20 40 80

A1.00

APPENDIX C – ART SHUTTLE SCHEDULE

WEEKLY ART SCHEDULE 2/10 – 2/16/2019

Disneyland Resort Operating Hours

Sunday	Monday	Tuesday & Wednesday	Friday	Thursday & Saturday
8:00AM-12:00AM	8:00AM-11:00PM	9:00AM-9:00PM	9:00AM-11:00PM	**9**:00AM-12:00AM

ART Operating Hours

Lines	Sun	Mon	Tues & Wed	Fri	Thurs & Sat
Lines 1-9 & 11 Approx. every 20 min. **Lines 10 & 12** Approx. every 30 min.	6:20AM-12:30AM	6:20AM-11:30PM	7:20AM-9:30PM	7:20AM-11:30PM	7:20AM-12:30AM
Line 14 Approx. every 40 min.	6:20AM-12:30AM	6:20AM-11:30PM	7:20AM-9:30PM	7:20AM-11:30PM	7:20AM-12:30AM
Line 15 Approx. every 30 min.	6:10AM-12:30AM	6:10AM-11:30PM	7:10AM-9:30PM	7:10AM-11:30PM	7:10AM-12:30AM
Orange Line 16 Approx. every 60 min.	6:20AM-12:30AM	6:20AM-11:30PM	7:20AM-9:30PM	7:20AM-11:30PM	7:20AM-12:30AM
Canyon Line 17 See Map	Sunday Closed	Monday 5:55AM-6:00PM	Tuesday & Wednesday 5:55AM-6:00PM	Friday 5:55AM-6:00PM	Thursday 5:55AM-6:00PM Saturday Closed
Buena Park Line 18 * Every 60 min.	9:00AM-9:30PM	9:00AM-9:30PM	9:00AM-9:30PM	9:00AM-9:30PM	9:00AM-9:30PM
Costa Mesa Line 22 See Map	9:00AM-8:30PM	9:00AM-8:30PM	9:00AM-8:30PM	9:00AM-8:30PM	9:00AM-8:30PM
Extension of Canyon Line 21 ** Every 60 min.	Sunday 6:00AM-12:30AM	Monday 6:00AM-11:30PM	Tuesday & Wednesday 7:00AM-9:30PM	Friday 7:00AM-11:30PM	Thursday & Saturday 7:00AM-12:30AM

***No Service between 12:00 PM- 4:00 PM (Daily) on Line 18. Last return from Buena Park 9:30PM**
****No Service between 11:00 AM- 3:00 PM (Daily) on Line 21**

APPENDIX D – TRAFFIC COUNTS

Transportation Studies, Inc.
2640 Walnut Avenue, Suite L
Tustin, CA. 92780

City: ANAHEIM
N-S Direction: ANAHEIM BOULEVARD
E-W Direction: MIDWAY DRIVE

File Name : H1810031
Site Code : 00000000
Start Date : 10/16/2018
Page No : 1

Groups Printed- Turning Movements

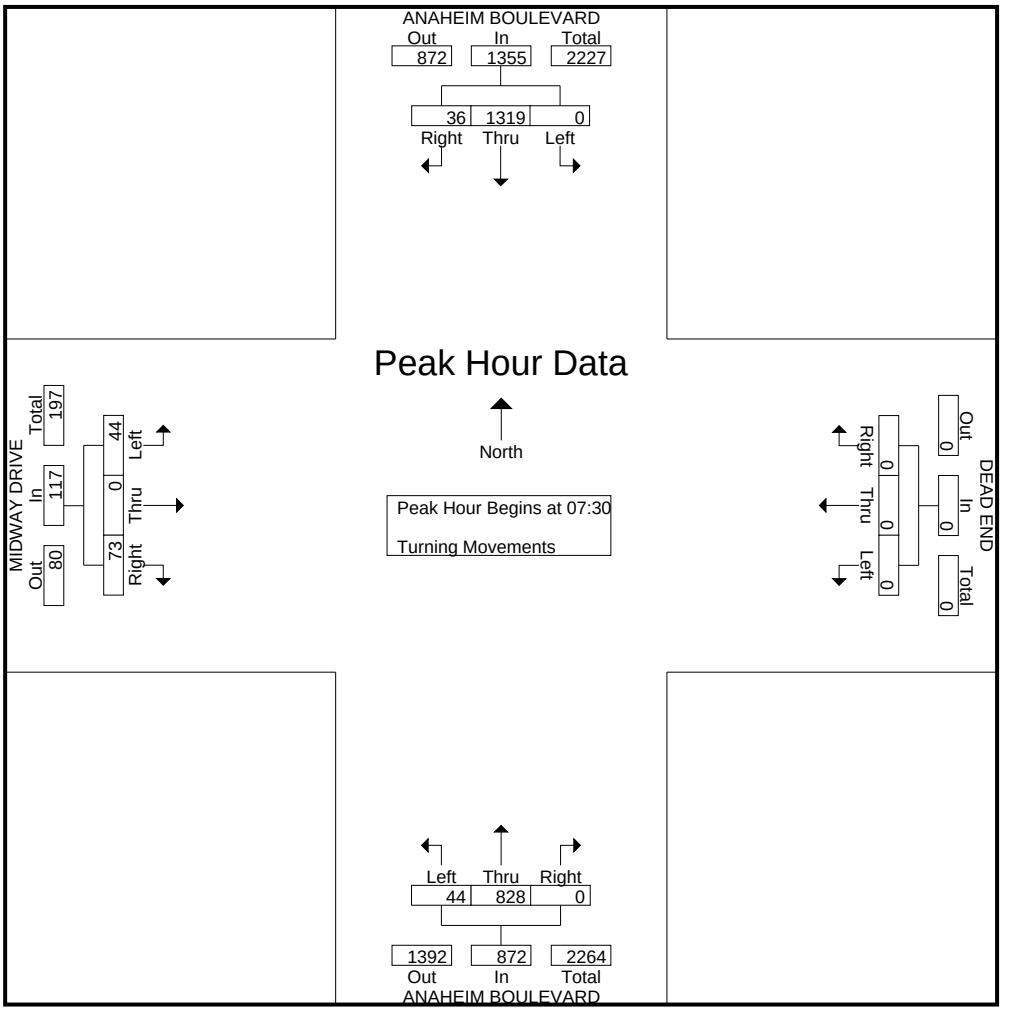
	ANAHEIM BOULEVARD Southbound			DEAD END Westbound			ANAHEIM BOULEVARD Northbound			MIDWAY DRIVE Eastbound			
Start Time	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Right	Thru	Left	Int. Total
07:00	6	323	0	0	0	0	0	140	6	15	0	12	502
07:15	9	371	0	0	0	0	0	165	9	13	0	7	574
07:30	6	315	0	0	0	0	0	190	12	15	0	9	547
07:45	10	363	0	0	0	0	0	221	6	22	0	6	628
Total	31	1372	0	0	0	0	0	716	33	65	0	34	2251
08:00	7	337	0	0	0	0	0	210	9	16	0	6	585
08:15	13	304	0	0	0	0	0	207	17	20	0	23	584
08:30	11	253	0	0	0	0	0	192	12	19	0	17	504
08:45	17	259	0	0	0	0	0	171	12	22	0	9	490
Total	48	1153	0	0	0	0	0	780	50	77	0	55	2163
*** BREAK ***													
16:00	11	266	0	0	0	0	0	290	11	11	0	8	597
16:15	13	276	0	0	0	0	0	336	11	12	0	2	650
16:30	10	305	0	0	0	0	0	348	27	16	0	8	714
16:45	12	225	0	0	0	0	0	305	9	11	0	5	567
Total	46	1072	0	0	0	0	0	1279	58	50	0	23	2528
17:00	8	287	0	0	0	0	0	378	27	13	0	6	719
17:15	12	244	0	0	0	0	0	352	10	11	0	11	640
17:30	18	237	0	0	0	0	0	327	11	11	0	8	612
17:45	15	235	0	0	0	0	0	285	9	16	0	7	567
Total	53	1003	0	0	0	0	0	1342	57	51	0	32	2538
Grand Total	178	4600	0	0	0	0	0	4117	198	243	0	144	9480
Apprch %	3.7	96.3	0	0	0	0	0	95.4	4.6	62.8	0	37.2	
Total %	1.9	48.5	0	0	0	0	0	43.4	2.1	2.6	0	1.5	

Transportation Studies, Inc.
2640 Walnut Avenue, Suite L
Tustin, CA. 92780

City: ANAHEIM
N-S Direction: ANAHEIM BOULEVARD
E-W Direction: MIDWAY DRIVE

File Name : H1810031
Site Code : 00000000
Start Date : 10/16/2018
Page No : 2

	ANAHEIM BOULEVARD Southbound				DEAD END Westbound				ANAHEIM BOULEVARD Northbound				MIDWAY DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30																	
07:30	6	315	0	321	0	0	0	0	0	190	12	202	15	0	9	24	547
07:45	10	**363**	0	**373**	0	0	0	0	0	**221**	6	**227**	**22**	0	6	28	**628**
08:00	7	337	0	344	0	0	0	0	0	210	9	219	16	0	6	22	585
08:15	**13**	304	0	317	0	0	0	0	0	207	**17**	224	20	0	**23**	**43**	584
Total Volume	36	1319	0	1355	0	0	0	0	0	828	44	872	73	0	44	117	2344
% App. Total	2.7	97.3	0		0	0	0		0	95	5		62.4	0	37.6		
PHF	.692	.908	.000	.908	.000	.000	.000	.000	.000	.937	.647	.960	.830	.000	.478	.680	.933

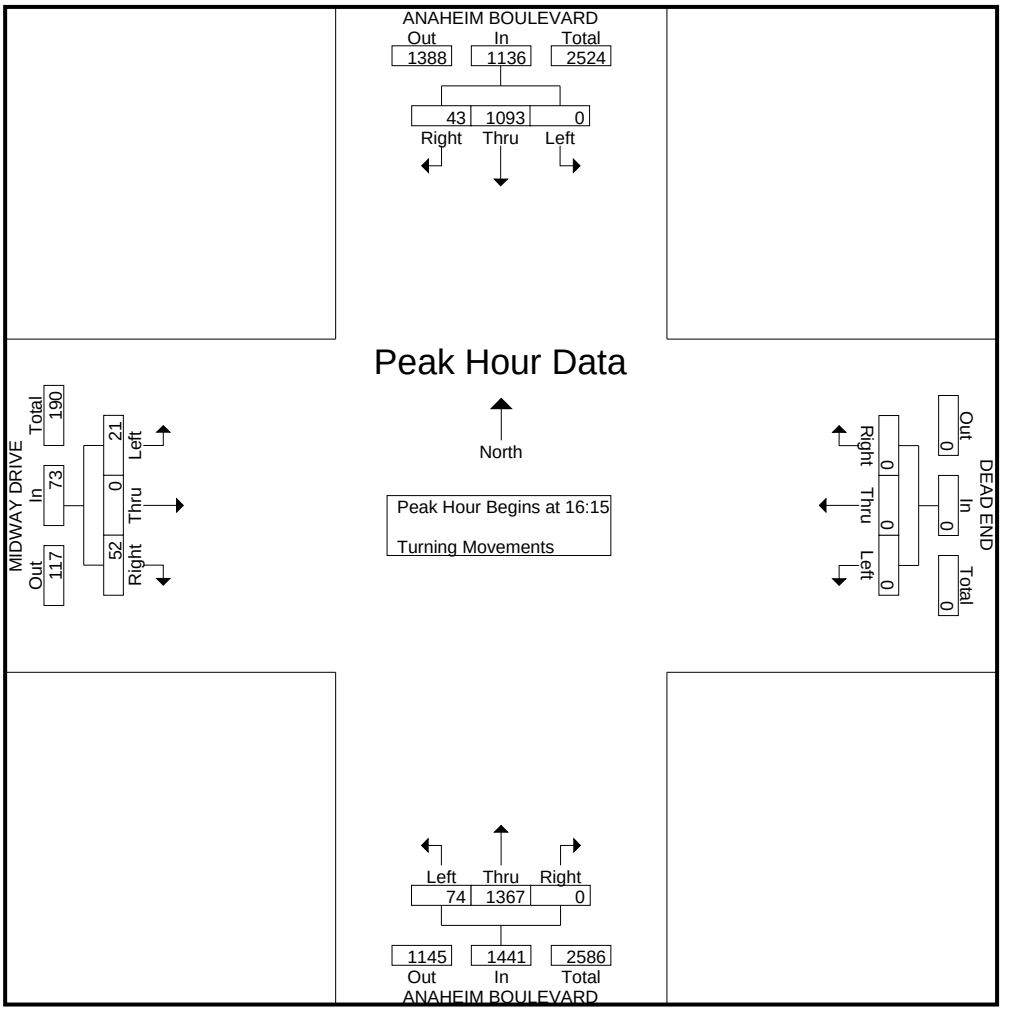


Transportation Studies, Inc.
2640 Walnut Avenue, Suite L
Tustin, CA. 92780

City: ANAHEIM
N-S Direction: ANAHEIM BOULEVARD
E-W Direction: MIDWAY DRIVE

File Name : H1810031
Site Code : 00000000
Start Date : 10/16/2018

	ANAHEIM BOULEVARD Southbound				DEAD END Westbound				ANAHEIM BOULEVARD Northbound				MIDWAY DRIVE Eastbound				
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 16:15																	
16:15	**13**	276	0	289	0	0	0	0	0	336	11	347	12	0	2	14	650
16:30	10	**305**	0	**315**	0	0	0	0	0	348	**27**	375	**16**	0	**8**	**24**	714
16:45	12	225	0	237	0	0	0	0	0	305	9	314	11	0	5	16	567
17:00	8	287	0	295	0	0	0	0	0	**378**	27	**405**	13	0	6	19	**719**
Total Volume	43	1093	0	1136	0	0	0	0	0	1367	74	1441	52	0	21	73	2650
% App. Total	3.8	96.2	0		0	0	0		0	94.9	5.1		71.2	0	28.8		
PHF	.827	.896	.000	.902	.000	.000	.000	.000	.000	.904	.685	.890	.813	.000	.656	.760	.921



National Data & Surveying Services

Intersection Turning Movement Count

Location: Anaheim Blvd & Cerritos Ave
City: Anaheim
Control: Siganlized

Project ID: 17-01160-007
Date: 8/15/2017

Total

NS/EW Streets:	Anaheim Blvd				Anaheim Blvd				Cerritos Ave				Cerritos Ave				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	3	1	0	1	3	0	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	11	131	82	0	41	246	1	0	1	0	2	0	44	1	13	0	573
7:15 AM	10	122	91	3	45	258	11	0	0	2	2	0	33	4	20	0	601
7:30 AM	22	172	84	3	57	291	12	0	3	1	3	0	51	5	14	0	718
7:45 AM	13	198	107	2	57	256	14	0	5	4	7	0	46	5	14	0	728
8:00 AM	14	166	96	4	38	241	17	0	2	3	8	0	51	6	21	0	667
8:15 AM	15	185	90	2	48	245	10	0	5	2	11	0	39	6	14	0	672
8:30 AM	19	189	87	7	28	249	9	0	2	1	13	0	46	2	21	0	673
8:45 AM	19	158	73	4	28	233	4	0	1	5	9	0	55	10	25	0	624
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	123	1321	710	25	342	2019	78	0	19	18	55	0	365	39	142	0	5256
APPROACH %'s :	5.64%	60.62%	32.58%	1.15%	14.02%	82.78%	3.20%	0.00%	20.65%	19.57%	59.78%	0.00%	66.85%	7.14%	26.01%	0.00%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	64	721	377	11	200	1033	53	0	15	10	29	0	187	22	63	0	2785
PEAK HR FACTOR :	0.727	0.910	0.881	0.688	0.877	0.887	0.779	0.000	0.750	0.625	0.659	0.000	0.917	0.917	0.750	0.000	0.956
		0.916				0.893				0.750				0.872			

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1	3	1	0	1	3	0	0	1	1	0	0	1	1	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	11	253	58	10	12	243	12	0	2	9	14	0	126	8	53	0	811
4:15 PM	19	273	61	9	12	279	8	0	10	6	18	0	94	10	39	0	838
4:30 PM	14	283	63	10	31	251	3	0	7	5	17	0	151	8	71	0	914
4:45 PM	9	332	63	7	14	287	7	0	3	4	14	0	101	8	50	0	899
5:00 PM	6	284	56	12	14	310	3	0	10	13	22	0	129	10	51	0	920
5:15 PM	6	293	63	8	17	275	6	0	5	5	17	0	120	5	40	0	860
5:30 PM	11	289	66	11	22	247	5	0	7	5	17	0	112	7	56	0	855
5:45 PM	11	330	52	11	20	211	8	0	5	2	7	0	70	4	40	0	771
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	87	2337	482	78	142	2103	52	0	49	49	126	0	903	60	400	0	6868
APPROACH %'s :	2.92%	78.32%	16.15%	2.61%	6.18%	91.55%	2.26%	0.00%	21.88%	21.88%	56.25%	0.00%	66.25%	4.40%	29.35%	0.00%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	35	1192	245	37	76	1123	19	0	25	27	70	0	501	31	212	0	3593
PEAK HR FACTOR :	0.625	0.898	0.972	0.771	0.613	0.906	0.679	0.000	0.625	0.519	0.795	0.000	0.829	0.775	0.746	0.000	0.976
		0.918				0.931				0.678				0.809			

Prepared by National Data & Surveying Services

Anaheim Blvd & Cerritos Ave

Peak Hour Turning Movement Count

ID: 17-01160-007
City: Anaheim

Day: Tuesday
Date: 08/15/2017

PEAK HOURS

AM	07:30 AM - 08:30 AM
NOON	NONE
PM	04:30 PM - 05:30 PM

COUNT PERIODS

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

Anaheim Blvd — SOUTHBOUND

AM	53	1033	200	0	799	AM
NOON	0	0	0	0	0	NOON
PM	19	1123	76	0	1429	PM

Cerritos Ave — EASTBOUND

AM	NOON	PM		
139	0	85		
0	0	0	0	
15	0	25	1	
10	0	27	1	
29	0	70	0	
AM	NOON	PM		

WESTBOUND — Cerritos Ave

PM	NOON	AM		
212	0	63	1	
31	0	22	1	
501	0	187	1	
0	0	0	0	
PM	NOON	AM		
348	0	587		

Anaheim Blvd — NORTHBOUND

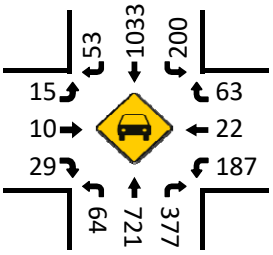
PM	1731	37	35	1192	245	PM
NOON	0	0	0	0	0	NOON
AM	1260	11	64	721	377	AM

	0	3	1	0

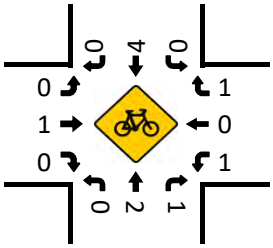
	0	1	3	1

CONTROL			
Siganlized			
TEV	2785	0	3593
	AM	NOON	PM
PHF	0.96		0.98

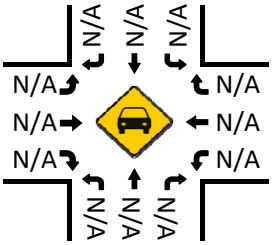
Total Vehicles (AM)



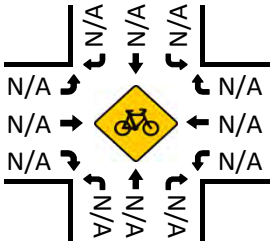
Total Bikes (AM)



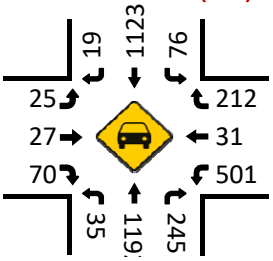
Total Vehicles (Noon)



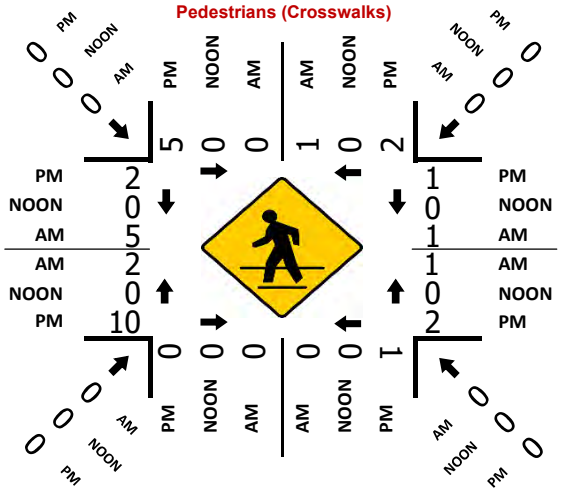
Total Bikes (NOON)



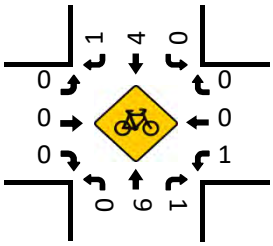
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



National Data & Surveying Services

Intersection Turning Movement Count

Location: Anaheim Blvd & Ball Rd
City: Anaheim
Control: Siganlized

Project ID: 17-01160-008
Date: 8/15/2017

Total

NS/EW Streets:	Anaheim Blvd				Anaheim Blvd				Ball Rd				Ball Rd				
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	3	1	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	27	91	33	0	41	213	19	0	17	222	32	13	30	164	7	0	909
7:15 AM	22	91	36	0	55	230	28	0	16	234	29	6	43	180	20	0	990
7:30 AM	29	123	35	0	73	269	46	0	25	267	37	11	38	167	13	0	1133
7:45 AM	20	121	31	0	54	227	36	0	23	238	32	7	42	198	19	0	1048
8:00 AM	31	96	28	0	53	216	29	0	26	225	30	15	24	199	12	1	985
8:15 AM	32	130	57	0	34	191	25	0	15	252	38	5	42	177	15	1	1014
8:30 AM	29	110	32	0	43	180	34	0	31	198	27	9	40	213	23	0	969
8:45 AM	28	115	28	0	28	163	32	0	22	189	29	10	44	278	18	0	984
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	218	877	280	0	381	1689	249	0	175	1825	254	76	303	1576	127	2	8032
APPROACH %'s :	15.85%	63.78%	20.36%	0.00%	16.43%	72.83%	10.74%	0.00%	7.51%	78.33%	10.90%	3.26%	15.09%	78.49%	6.32%	0.10%	
PEAK HR :	07:30 AM - 08:30 AM																TOTAL
PEAK HR VOL :	112	470	151	0	214	903	136	0	89	982	137	38	146	741	59	2	4180
PEAK HR FACTOR :	0.875	0.904	0.662	0.000	0.733	0.839	0.739	0.000	0.856	0.919	0.901	0.633	0.869	0.931	0.776	0.500	0.922
	0.837				0.807				0.916				0.915				

PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	2	2	1	0	2	3	1	0	1	3	0	0	1	3	1	0	
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	51	230	23	0	23	188	25	0	40	191	35	10	40	304	51	1	1212
4:15 PM	50	200	38	0	22	191	37	0	25	216	22	4	47	316	40	1	1209
4:30 PM	69	256	32	0	24	216	31	0	35	214	37	13	48	323	62	1	1361
4:45 PM	38	267	34	0	23	181	38	0	27	201	26	6	58	322	49	0	1270
5:00 PM	56	238	26	0	31	239	44	0	33	182	21	9	41	277	53	0	1250
5:15 PM	52	235	23	0	26	213	29	0	33	197	32	7	53	344	47	0	1291
5:30 PM	70	245	47	0	36	178	31	0	34	226	28	8	51	264	36	0	1254
5:45 PM	42	251	39	0	29	158	39	0	30	205	28	5	45	269	39	0	1179
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
TOTAL VOLUMES :	428	1922	262	0	214	1564	274	0	257	1632	229	62	383	2419	377	3	10026
APPROACH %'s :	16.39%	73.58%	10.03%	0.00%	10.43%	76.22%	13.35%	0.00%	11.79%	74.86%	10.50%	2.84%	12.04%	76.02%	11.85%	0.09%	
PEAK HR :	04:30 PM - 05:30 PM																TOTAL
PEAK HR VOL :	215	996	115	0	104	849	142	0	128	794	116	35	200	1266	211	1	5172
PEAK HR FACTOR :	0.779	0.933	0.846	0.000	0.839	0.888	0.807	0.000	0.914	0.928	0.784	0.673	0.862	0.920	0.851	0.250	0.950
	0.929				0.872				0.897				0.945				

Prepared by National Data & Surveying Services

Anaheim Blvd & Ball Rd

Peak Hour Turning Movement Count

ID: 17-01160-008
City: Anaheim

Day: Tuesday
Date: 08/15/2017

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

Anaheim Blvd — SOUTHBOUND

AM	136	903	214	0	618	AM
NOON	0	0	0	0	0	NOON
PM	142	849	104	0	1335	PM

Ball Rd — EASTBOUND

AM	NOON	PM		
1027	0	1658	⇦	
38	0	35	↰	0
89	0	128	↱	1
982	0	794	→	3
137	0	116	↳	0
AM	NOON	PM		

CONTROL

Siganlized

TEV	4180 AM	0 NOON	5172 PM
PHF	0.92		0.95

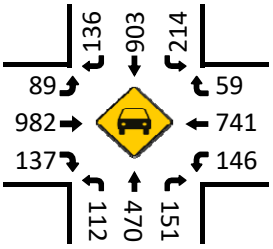
Ball Rd — WESTBOUND

PM	NOON	AM		
211	0	59	↰	1
1266	0	741	←	3
200	0	146	↰	1
1	0	2	↰	0
1014	0	1349	⇨	
PM	NOON	AM		

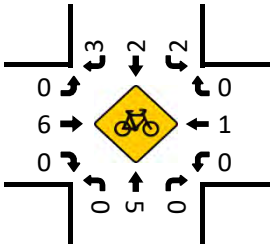
Anaheim Blvd — NORTHBOUND

PM	1165	0	215	996	115	PM
NOON	0	0	0	0	0	NOON
AM	1186	0	112	470	151	AM

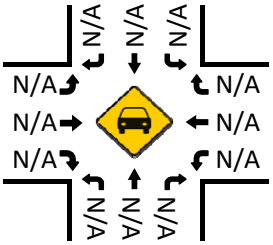
Total Vehicles (AM)



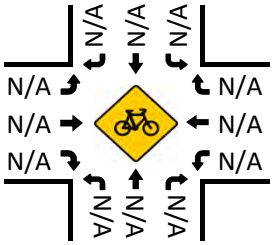
Total Bikes (AM)



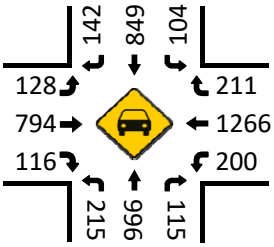
Total Vehicles (Noon)



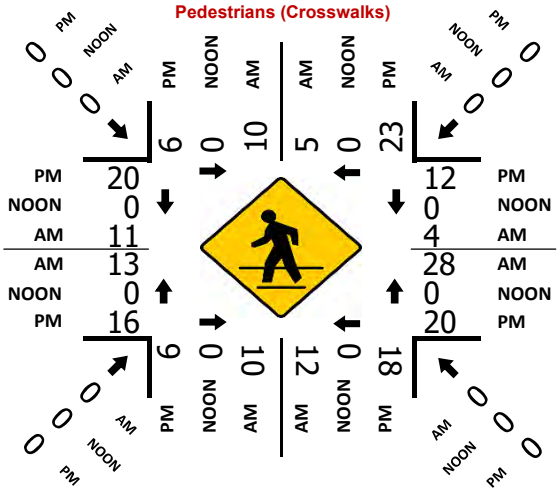
Total Bikes (NOON)



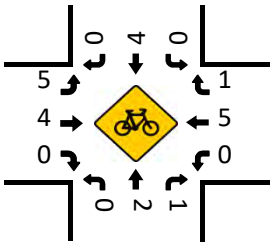
Total Vehicles (PM)



Pedestrians (Crosswalks)



Total Bikes (PM)



ADT Count Sheets

Tuesday, October 09, 2018

PROJECT: SC1899

SPEED19 Midway between Willow and Clementine

AimTD 714 253 7888 cs@aimtd.com

AM Period	EB		WB			PM Period	EB		WB		
0:30	1		1			12:00	8		14		
0:15	1		2			12:15	10		3		
0:30	1		3			12:30	10		11		
0:45	2	5	0	6	11	12:45	9	37	3	31	68
1:00	1		1			13:00	6		5		
1:15	0		1			13:15	5		5		
1:30	2		4			13:30	15		7		
1:45	0	3	0	6	9	13:45	11	37	9	26	63
2:00	1		0			14:00	14		5		
2:15	1		1			14:15	12		7		
2:30	1		1			14:30	16		14		
2:45	0	3	0	2	5	14:45	7	49	13	39	88
3:00	2		5			15:00	12		13		
3:15	1		3			15:15	16		15		
3:30	1		1			15:30	10		7		
3:45	3	7	1	10	17	15:45	16	54	13	48	102
4:00	3		0			16:00	14		19		
4:15	0		2			16:15	10		12		
4:30	3		0			16:30	18		19		
4:45	7	13	1	3	16	16:45	6	48	10	60	108
5:00	4		0			17:00	19		13		
5:15	7		3			17:15	10		14		
5:30	16		1			17:30	10		13		
5:45	13	40	1	5	45	17:45	16	55	13	53	108
6:00	12		2			18:00	16		11		
6:15	19		3			18:15	9		5		
6:30	18		1			18:30	6		11		
6:45	16	65	7	13	78	18:45	11	42	9	36	78
7:00	19		10			19:00	10		4		
7:15	14		4			19:15	6		9		
7:30	11		5			19:30	7		11		
7:45	18	62	5	24	86	19:45	7	30	14	38	68
8:00	13		7			20:00	17		8		
8:15	13		4			20:15	4		3		
8:30	14		16			20:30	4		11		
8:45	14	54	11	38	92	20:45	5	30	8	30	60
9:00	7		6			21:00	3		9		
9:15	10		4			21:15	2		4		
9:30	6		2			21:30	4		7		
9:45	9	32	1	13	45	21:45	3	12	4	24	36
10:00	4		4			22:00	4		7		
10:15	9		7			22:15	5		7		
10:30	11		7			22:30	5		4		
10:45	16	40	6	24	64	22:45	7	21	5	23	44
11:00	9		10			23:00	2		3		
11:15	12		7			23:15	0		2		
11:30	7		11			23:30	1		3		
11:45	12	40	4	32	72	23:45	5	8	3	11	19
Total Vol.		364		176	**540**			423		419	**842**

	Daily Totals		
	EB	WB	**Combined**
	787	595	**1382**

	AM			**PM**		
Split %	67.4%	32.6%	**39.1%**	50.2%	49.8%	**60.9%**
Peak Hour	6:15	8:00	**6:15**	15:45	15:45	**15:45**
Volume	72	38	**93**	58	63	**121**
P.H.F.	0.95	0.59	**0.80**	0.81	0.83	**0.82**

PREPARED BY: AimTD 714 253 7888 cs@aimtd.cor

Tuesday, October 09, 2018

PROJECT: SC1899

SPEED18 Midway between Zeyn and Zeyn

AimTD 714 253 7888 cs@aimtd.com

AM Period	EB		WB			PM Period	EB		WB		
0:30	1		2			12:00	11		16		
0:15	2		3			12:15	15		7		
0:30	1		4			12:30	12		17		
0:45	2	6	0	9	15	12:45	15	53	7	47	100
1:00	1		1			13:00	11		6		
1:15	2		1			13:15	8		9		
1:30	2		4			13:30	20		13		
1:45	0	5	0	6	11	13:45	15	54	8	36	90
2:00	1		0			14:00	18		9		
2:15	2		1			14:15	17		8		
2:30	1		1			14:30	19		16		
2:45	0	4	1	3	7	14:45	11	65	21	54	119
3:00	2		4			15:00	26		25		
3:15	1		3			15:15	36		17		
3:30	1		1			15:30	17		9		
3:45	4	8	3	11	19	15:45	19	98	12	63	161
4:00	3		0			16:00	15		20		
4:15	0		2			16:15	16		15		
4:30	5		0			16:30	17		21		
4:45	8	16	1	3	19	16:45	7	55	16	72	127
5:00	4		0			17:00	25		20		
5:15	9		3			17:15	14		14		
5:30	17		2			17:30	13		19		
5:45	14	44	1	6	50	17:45	30	82	15	68	150
6:00	14		3			18:00	25		14		
6:15	18		6			18:15	10		8		
6:30	20		3			18:30	13		18		
6:45	20	72	10	22	94	18:45	14	62	15	55	117
7:00	27		8			19:00	14		8		
7:15	14		6			19:15	10		10		
7:30	12		5			19:30	15		13		
7:45	20	73	6	25	98	19:45	7	46	16	47	93
8:00	16		13			20:00	15		11		
8:15	39		10			20:15	10		7		
8:30	28		13			20:30	3		15		
8:45	36	119	13	49	168	20:45	7	35	9	42	77
9:00	16		6			21:00	3		11		
9:15	14		6			21:15	2		6		
9:30	10		2			21:30	7		10		
9:45	15	55	2	16	71	21:45	3	15	6	33	48
10:00	8		6			22:00	8		9		
10:15	11		11			22:15	6		10		
10:30	14		8			22:30	9		4		
10:45	17	50	7	32	82	22:45	7	30	9	32	62
11:00	12		10			23:00	3		5		
11:15	13		8			23:15	1		3		
11:30	10		12			23:30	1		4		
11:45	14	49	7	37	86	23:45	4	9	2	14	23
Total Vol.		501		219	**720**			604		563	**1167**

Daily Totals	EB	WB	**Combined**
	1105	782	**1887**

	AM			**PM**		
Split %	69.6%	30.4%	**38.2%**	51.8%	48.2%	**61.8%**
Peak Hour	8:00	8:00	**8:00**	15:00	14:30	**14:30**
Volume	119	49	**168**	98	79	**171**
P.H.F.	0.76	0.94	**0.86**	0.68	0.79	**0.81**

PREPARED BY: AimTD 714 253 7888 cs@aimtd.cor

Prepared by NDS/ATD

VOLUME

Anaheim Blvd Bet. Cerritos Ave & Ball Rd

Day: Tuesday
Date: 8/15/2017

City: Anaheim
Project #: CA17_1161_011

DAILY TOTALS	NB	SB	EB	WB	Total
	13,522	14,487	0	0	28,009

AM Period	NB		SB		EB	WB	TOTAL		PM Period	NB		SB		EB	WB	TOTAL	
00:00	54		36				90		12:00	173		178				351	
00:15	41		40				81		12:15	156		188				344	
00:30	28		24				52		12:30	206		169				375	
00:45	30	153	17	117			47	270	12:45	184	719	198	733			382	1452
01:00	32		13				45		13:00	192		194				386	
01:15	23		21				44		13:15	199		178				377	
01:30	17		15				32		13:30	194		177				371	
01:45	18	90	15	64			33	154	13:45	187	772	207	756			394	1528
02:00	21		16				37		14:00	211		211				422	
02:15	15		13				28		14:15	232		187				419	
02:30	16		15				31		14:30	224		204				428	
02:45	12	64	15	59			27	123	14:45	196	863	233	835			429	1698
03:00	16		19				35		15:00	230		200				430	
03:15	13		18				31		15:15	257		296				553	
03:30	21		26				47		15:30	257		254				511	
03:45	10	60	32	95			42	155	15:45	224	968	205	955			429	1923
04:00	14		31				45		16:00	300		252				552	
04:15	23		41				64		16:15	283		264				547	
04:30	38		66				104		16:30	338		270				608	
04:45	34	109	77	215			111	324	16:45	328	1249	263	1049			591	2298
05:00	40		74				114		17:00	326		294				620	
05:15	49		89				138		17:15	276		263				539	
05:30	63		139				202		17:30	341		256				597	
05:45	93	245	137	439			230	684	17:45	335	1278	208	1021			543	2299
06:00	81		145				226		18:00	285		206				491	
06:15	97		209				306		18:15	266		202				468	
06:30	98		272				370		18:30	257		173				430	
06:45	141	417	231	857			372	1274	18:45	216	1024	155	736			371	1760
07:00	137		267				404		19:00	225		186				411	
07:15	140		288				428		19:15	188		157				345	
07:30	149		344				493		19:30	160		157				317	
07:45	193	619	295	1194			488	1813	19:45	153	726	144	644			297	1370
08:00	151		266				417		20:00	145		151				296	
08:15	217		266				483		20:15	144		138				282	
08:30	178		261				439		20:30	142		121				263	
08:45	173	719	240	1033			413	1752	20:45	147	578	118	528			265	1106
09:00	154		232				386		21:00	103		142				245	
09:15	141		184				325		21:15	124		121				245	
09:30	122		153				275		21:30	114		134				248	
09:45	138	555	151	720			289	1275	21:45	123	464	120	517			243	981
10:00	159		161				320		22:00	83		110				193	
10:15	128		155				283		22:15	128		91				219	
10:30	141		184				325		22:30	99		88				187	
10:45	162	590	153	653			315	1243	22:45	80	390	61	350			141	740
11:00	152		193				345		23:00	60		60				120	
11:15	147		164				311		23:15	67		42				109	
11:30	160		195				355		23:30	63		52				115	
11:45	156	615	180	732			336	1347	23:45	65	255	31	185			96	440
TOTALS		4236		6178				10414	TOTALS		9286		8309				17595
SPLIT %		40.7%		59.3%				37.2%	SPLIT %		52.8%		47.2%				62.8%

DAILY TOTALS	NB	SB	EB	WB	Total
	13,522	14,487	0	0	28,009

AM Peak Hour	07:45	07:00				07:30	PM Peak Hour	17:00	16:15				16:15
AM Pk Volume	739	1194				1881	PM Pk Volume	1278	1091				2366
Pk Hr Factor	0.851	0.868				0.954	Pk Hr Factor	0.937	0.928				0.954
7 - 9 Volume	1338	2227	0	0		3565	4 - 6 Volume	2527	2070	0	0		4597
7 - 9 Peak Hour	07:45	07:00				07:30	4 - 6 Peak Hour	17:00	16:15				16:15
7 - 9 Pk Volume	739	1194	0	0		1881	4 - 6 Pk Volume	1278	1091	0	0		2366
Pk Hr Factor	0.851	0.868	0.000	0.000		0.954	Pk Hr Factor	0.937	0.928	0.000	0.000		0.954

APPENDIX E – ICU ANALYSIS WORKSHEETS

Existing

Project:	Anaheim Midway Townhome TIA
Scenario:	Existing
ID:	193
Intersection:	Anaheim Blvd / Cerritos Ave

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	1.0		1,700	87	0.05	*	1,700	68	0.04	
NBT	3.0		5,100	756	0.15		5,100	1,349	0.26	*
NBR	1.0		1,700	333	0.20		1,700	344	0.20	
SBL	1.0		1,700	183	0.11		1,700	125	0.07	*
SBT	3.0		5,100	1,222	0.25	*	5,100	1,158	0.23	
SBR				51				30		
EBL	1.0		1,700	7	0.00		1,700	41	0.02	
EBT	1.0		1,700	10	0.02	*	1,700	20	0.08	*
EBR				19				124		
WBL	1.0		1,700	170	0.10	*	1,700	581	0.34	*
WBT	1.0		1,700	27	0.02		1,700	77	0.05	
WBR	1.0		1,700	82	0.05		1,700	256	0.15	*
				N/S Movements	0.30			N/S Movements	0.34	
				E/W Movements	0.12			E/W Movements	0.43	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.47				0.81	
LEVEL OF SERVICE (LOS)					A				D	

Project:	Anaheim Midway Townhome TIA
Scenario:	Existing
ID:	191
Intersection:	Anaheim Blvd / Ball Rd

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	106	0.03	*	3,400	345	0.10	*
NBT	3.0		5,100	477	0.09		5,100	1,033	0.20	
NBR	1.0		1,700	158	0.09		1,700	235	0.14	
SBL	2.0		3,400	233	0.07		3,400	116	0.03	
SBT	3.0		5,100	1,077	0.24	*	5,100	861	0.20	*
SBR				149				156		
EBL	2.0		3,400	130	0.04		3,400	192	0.06	*
EBT	3.0		5,100	1,018	0.23	*	5,100	958	0.21	
EBR				155				135		
WBL	2.0		3,400	158	0.05	*	3,400	226	0.07	
WBT	3.0		5,100	894	0.18		5,100	1,338	0.26	*
WBR	1.0		1,700	66	0.04		1,700	248	0.15	
				N/S Movements	0.27			N/S Movements	0.30	
				E/W Movements	0.28			E/W Movements	0.32	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.60				0.67	
LEVEL OF SERVICE (LOS)					A				B	

Existing With Cumulative

Project:	Anaheim Midway Townhome TIA
Scenario:	Existing With Cumulative
ID:	193
Intersection:	Anaheim Blvd / Cerritos Ave

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	1.0		1,700	71	0.04	*	1,700	156	0.09	
NBT	3.0		5,100	763	0.15		5,100	1,369	0.27	*
NBR	1.0		1,700	339	0.20		1,700	352	0.21	
SBL	1.0		1,700	183	0.11		1,700	125	0.07	*
SBT	3.0		5,100	1,254	0.25	*	5,100	1,182	0.24	
SBR				34				36		
EBL	1.0		1,700	26	0.02		1,700	27	0.02	
EBT	1.0		1,700	39	0.08	*	1,700	2	0.05	*
EBR				97				77		
WBL	1.0		1,700	182	0.11	*	1,700	609	0.36	*
WBT	1.0		1,700	1	0.00		1,700	89	0.05	
WBR	1.0		1,700	82	0.05		1,700	256	0.15	*
				N/S Movements	0.29			N/S Movements	0.34	
				E/W Movements	0.19			E/W Movements	0.40	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.53				0.80	
LEVEL OF SERVICE (LOS)					A				C	

Project:	Anaheim Midway Townhome TIA
Scenario:	Existing With Cumulative
ID:	191
Intersection:	Anaheim Blvd / Ball Rd

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	117	0.03	*	3,400	338	0.10	*
NBT	3.0		5,100	492	0.10		5,100	1,042	0.20	
NBR	1.0		1,700	158	0.09		1,700	240	0.14	
SBL	2.0		3,400	233	0.07		3,400	116	0.03	
SBT	3.0		5,100	1,097	0.24	*	5,100	882	0.20	*
SBR				149				156		
EBL	2.0		3,400	130	0.04		3,400	192	0.06	*
EBT	3.0		5,100	1,018	0.23	*	5,100	958	0.22	
EBR				151				144		
WBL	2.0		3,400	156	0.05	*	3,400	226	0.07	
WBT	3.0		5,100	894	0.18		5,100	1,338	0.26	*
WBR	1.0		1,700	66	0.04		1,700	248	0.15	
				N/S Movements	0.28			N/S Movements	0.30	
				E/W Movements	0.28			E/W Movements	0.32	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.60				0.67	
LEVEL OF SERVICE (LOS)					A				B	

Existing with Cumulative Plus Project

Project:	Anaheim Midway Townhome TIA
Scenario:	Existing With Cumulative Plus Project
ID:	193
Intersection:	Anaheim Blvd / Cerritos Ave

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	1.0		1,700	71	0.04	*	1,700	156	0.09	
NBT	3.0		5,100	766	0.15		5,100	1,382	0.27	*
NBR	1.0		1,700	339	0.20		1,700	352	0.21	
SBL	1.0		1,700	188	0.11		1,700	128	0.08	*
SBT	3.0		5,100	1,267	0.26	*	5,100	1,190	0.24	
SBR				34				36		
EBL	1.0		1,700	26	0.02		1,700	27	0.02	
EBT	1.0		1,700	39	0.08	*	1,700	2	0.05	*
EBR				97				77		
WBL	1.0		1,700	182	0.11	*	1,700	609	0.36	*
WBT	1.0		1,700	1	0.00		1,700	89	0.05	
WBR	1.0		1,700	82	0.05		1,700	260	0.15	*
				N/S Movements	0.30			N/S Movements	0.35	
				E/W Movements	0.19			E/W Movements	0.40	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.53				0.80	
LEVEL OF SERVICE (LOS)					A				C	

Project:	Anaheim Midway Townhome TIA
Scenario:	Existing With Cumulative Plus Project
ID:	191
Intersection:	Anaheim Blvd / Ball Rd

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	122	0.04	*	3,400	340	0.10	*
NBT	3.0		5,100	495	0.10		5,100	1,044	0.20	
NBR	1.0		1,700	160	0.09		1,700	241	0.14	
SBL	2.0		3,400	233	0.07		3,400	116	0.03	
SBT	3.0		5,100	1,098	0.24	*	5,100	884	0.20	*
SBR				149				156		
EBL	2.0		3,400	130	0.04		3,400	192	0.06	*
EBT	3.0		5,100	1,018	0.23	*	5,100	958	0.22	
EBR				151				144		
WBL	2.0		3,400	156	0.05	*	3,400	227	0.07	
WBT	3.0		5,100	894	0.18		5,100	1,338	0.26	*
WBR	1.0		1,700	66	0.04		1,700	248	0.15	
				N/S Movements	0.28			N/S Movements	0.30	
				E/W Movements	0.28			E/W Movements	0.32	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.61				0.67	
LEVEL OF SERVICE (LOS)					B				B	

Opening Year (2022)

Project:	Anaheim Midway Townhome TIA
Scenario:	Opening Year (2022)
ID:	193
Intersection:	Anaheim Blvd / Cerritos Ave

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	1.0		1,700	72	0.04	*	1,700	158	0.09	
NBT	3.0		5,100	778	0.15		5,100	1,396	0.27	*
NBR	1.0		1,700	345	0.20		1,700	359	0.21	
SBL	1.0		1,700	186	0.11		1,700	128	0.08	*
SBT	3.0		5,100	1,279	0.26	*	5,100	1,205	0.24	
SBR				35				36		
EBL	1.0		1,700	26	0.02		1,700	28	0.02	
EBT	1.0		1,700	39	0.08	*	1,700	3	0.05	*
EBR				98				80		
WBL	1.0		1,700	186	0.11	*	1,700	621	0.37	*
WBT	1.0		1,700	1	0.00		1,700	90	0.05	
WBR	1.0		1,700	83	0.05		1,700	261	0.15	*
				N/S Movements	0.30			N/S Movements	0.35	
				E/W Movements	0.19			E/W Movements	0.41	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.54				0.81	
LEVEL OF SERVICE (LOS)					A				D	

Project:	Anaheim Midway Townhome TIA
Scenario:	Opening Year (2022)
ID:	191
Intersection:	Anaheim Blvd / Ball Rd

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	119	0.04	*	3,400	345	0.10	*
NBT	3.0		5,100	502	0.10		5,100	1,063	0.21	
NBR	1.0		1,700	161	0.09		1,700	244	0.14	
SBL	2.0		3,400	237	0.07		3,400	119	0.04	
SBT	3.0		5,100	1,119	0.25	*	5,100	899	0.21	*
SBR				152				159		
EBL	2.0		3,400	132	0.04		3,400	196	0.06	*
EBT	3.0		5,100	1,039	0.23	*	5,100	977	0.22	
EBR				154				146		
WBL	2.0		3,400	159	0.05	*	3,400	231	0.07	
WBT	3.0		5,100	912	0.18		5,100	1,365	0.27	*
WBR	1.0		1,700	68	0.04		1,700	253	0.15	
				N/S Movements	0.28			N/S Movements	0.31	
				E/W Movements	0.28			E/W Movements	0.33	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.61				0.68	
LEVEL OF SERVICE (LOS)					B				B	

Opening Year (2022) Plus Project

Project:	Anaheim Midway Townhome TIA
Scenario:	Opening Year (2022) With Project
ID:	193
Intersection:	Anaheim Blvd / Cerritos Ave

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	1.0		1,700	72	0.04	*	1,700	158	0.09	
NBT	3.0		5,100	781	0.15		5,100	1,409	0.28	*
NBR	1.0		1,700	345	0.20		1,700	359	0.21	
SBL	1.0		1,700	191	0.11		1,700	131	0.08	*
SBT	3.0		5,100	1,292	0.26	*	5,100	1,213	0.24	
SBR				35				36		
EBL	1.0		1,700	26	0.02		1,700	28	0.02	
EBT	1.0		1,700	39	0.08	*	1,700	3	0.05	*
EBR				98				80		
WBL	1.0		1,700	186	0.11	*	1,700	621	0.37	*
WBT	1.0		1,700	1	0.00		1,700	90	0.05	
WBR	1.0		1,700	83	0.05		1,700	265	0.16	*
				N/S Movements	0.30			N/S Movements	0.35	
				E/W Movements	0.19			E/W Movements	0.41	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.54				0.82	
LEVEL OF SERVICE (LOS)					A				D	

Project:	Anaheim Midway Townhome TIA
Scenario:	Opening Year (2022) With Project
ID:	191
Intersection:	Anaheim Blvd / Ball Rd

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	124	0.04	*	3,400	347	0.10	*
NBT	3.0		5,100	505	0.10		5,100	1,065	0.21	
NBR	1.0		1,700	163	0.10		1,700	245	0.14	
SBL	2.0		3,400	237	0.07		3,400	119	0.04	
SBT	3.0		5,100	1,120	0.25	*	5,100	901	0.21	*
SBR				152				159		
EBL	2.0		3,400	132	0.04		3,400	196	0.06	*
EBT	3.0		5,100	1,039	0.23	*	5,100	977	0.22	
EBR				154				146		
WBL	2.0		3,400	159	0.05	*	3,400	232	0.07	
WBT	3.0		5,100	912	0.18		5,100	1,365	0.27	*
WBR	1.0		1,700	68	0.04		1,700	253	0.15	
				N/S Movements	0.29			N/S Movements	0.31	
				E/W Movements	0.28			E/W Movements	0.33	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.62				0.69	
LEVEL OF SERVICE (LOS)					B				B	

General Plan Build Out (2035)

Project:	Anaheim Midway Townhome TIA
Scenario:	General Plan Build Out (2035)
ID:	477
Intersection:	Anaheim Blvd / Midway Dr

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	1.0		1,700	65	0.04	*	1,700	140	0.08	
NBT	3.0		5,100	840	0.16		5,100	2,065	0.40	*
NBR				0				0		
SBL				0				0		*
SBT	2.5		4,250	1,890	0.44	*	4,250	1,080	0.25	
SBR	0.5		850	55	0.06		850	90	0.11	
EBL	0.5		850	105	0.12	*	850	50	0.06	*
EBT				0				0		
EBR	0.5		850	170	0.20	*	850	85	0.10	*
WBL				0				0		
WBT				0		*		0		*
WBR				0				0		
				N/S Movements	0.48			N/S Movements	0.40	
				E/W Movements	0.16			E/W Movements	0.06	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.69				0.51	
LEVEL OF SERVICE (LOS)					B				A	

Project:	Anaheim Midway Townhome TIA
Scenario:	General Plan Build Out (2035)
ID:	193
Intersection:	Anaheim Blvd / Cerritos Ave

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	80	0.02		3,400	160	0.05	
NBT	3.0		5,100	780	0.15	*	5,100	1,850	0.36	*
NBR	1.0		1,700	525	0.31	*	1,700	510	0.30	
SBL	2.0		3,400	685	0.20	*	3,400	190	0.06	*
SBT	3.0		5,100	1,570	0.32		5,100	1,210	0.25	
SBR				60				40		
EBL	1.0		1,700	30	0.02		1,700	35	0.02	
EBT	1.0		1,700	40	0.08	*	1,700	30	0.06	*
EBR				100				80		
WBL	2.0		3,400	325	0.10	*	3,400	630	0.19	*
WBT	0.5		850	25	0.03		850	90	0.11	
WBR	1.5		2,550	110	0.04		2,550	395	0.15	
				N/S Movements	0.41			N/S Movements	0.42	
				E/W Movements	0.18			E/W Movements	0.25	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.64				0.72	
LEVEL OF SERVICE (LOS)					B				C	

Project:	Anaheim Midway Townhome TIA
Scenario:	General Plan Build Out (2035)
ID:	191
Intersection:	Anaheim Blvd / Ball Rd

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	120	0.04	*	3,400	350	0.10	
NBT	3.0		5,100	605	0.12		5,100	1,630	0.32	*
NBR	1.0		1,700	170	0.10		1,700	250	0.15	
SBL	2.0		3,400	510	0.15		3,400	190	0.06	*
SBT	3.0		5,100	1,675	0.33	*	5,100	920	0.18	
SBR	1.0		1,700	315	0.19		1,700	160	0.09	
EBL	2.0		3,400	155	0.05		3,400	265	0.08	*
EBT	3.0		5,100	1,110	0.22	*	5,100	980	0.19	
EBR	1.0		1,700	295	0.17		1,700	150	0.09	
WBL	2.0		3,400	160	0.05	*	3,400	240	0.07	
WBT	3.0		5,100	920	0.18		5,100	1,370	0.27	*
WBR	1.0		1,700	70	0.04		1,700	270	0.16	
				N/S Movements	0.36			N/S Movements	0.38	
				E/W Movements	0.26			E/W Movements	0.35	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.68				0.77	
LEVEL OF SERVICE (LOS)					B				C	

General Plan Build Out (2035) Plus Project

Project:	Anaheim Midway Townhome TIA
Scenario:	General Plan Build Out (2035) With Project
ID:	477
Intersection:	Anaheim Blvd / Midway Dr

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	1.0		1,700	69	0.04	*	1,700	157	0.09	
NBT	3.0		5,100	840	0.16		5,100	2,065	0.40	*
NBR				0				0		
SBL				0				0		*
SBT	2.5		4,250	1,890	0.44	*	4,250	1,080	0.25	
SBR	0.5		850	56	0.07		850	94	0.11	
EBL	0.5		850	114	0.13	*	850	55	0.06	*
EBT				0				0		
EBR	0.5		850	189	0.22	*	850	96	0.11	*
WBL				0				0		
WBT				0		*		0		*
WBR				0				0		
				N/S Movements	0.49			N/S Movements	0.40	
				E/W Movements	0.18			E/W Movements	0.06	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.72				0.52	
LEVEL OF SERVICE (LOS)					C				A	

Project:	Anaheim Midway Townhome TIA
Scenario:	General Plan Build Out (2035) With Project
ID:	193
Intersection:	Anaheim Blvd / Cerritos Ave

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	80	0.02		3,400	160	0.05	
NBT	3.0		5,100	783	0.15	*	5,100	1,863	0.37	*
NBR	1.0		1,700	525	0.31	*	1,700	510	0.30	
SBL	2.0		3,400	690	0.20	*	3,400	193	0.06	*
SBT	3.0		5,100	1,583	0.32		5,100	1,218	0.25	
SBR				60				40		
EBL	1.0		1,700	30	0.02		1,700	35	0.02	
EBT	1.0		1,700	40	0.08	*	1,700	30	0.06	*
EBR				100				80		
WBL	2.0		3,400	325	0.10	*	3,400	630	0.19	*
WBT	0.5		850	25	0.03		850	90	0.11	
WBR	1.5		2,550	110	0.04		2,550	399	0.16	
				N/S Movements	0.42			N/S Movements	0.42	
				E/W Movements	0.18			E/W Movements	0.25	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.64				0.72	
LEVEL OF SERVICE (LOS)					B				C	

Project:	Anaheim Midway Townhome TIA
Scenario:	General Plan Build Out (2035) With Project
ID:	191
Intersection:	Anaheim Blvd / Ball Rd

			AM PEAK HOUR				PM PEAK HOUR			
MOVEMENT	LANES	Free?	CAPACITY	VOLUME	V/C		CAPACITY	VOLUME	V/C	
NBL	2.0		3,400	125	0.04	*	3,400	352	0.10	
NBT	3.0		5,100	608	0.12		5,100	1,632	0.32	*
NBR	1.0		1,700	172	0.10		1,700	251	0.15	
SBL	2.0		3,400	510	0.15		3,400	190	0.06	*
SBT	3.0		5,100	1,676	0.33	*	5,100	922	0.18	
SBR	1.0		1,700	315	0.19		1,700	160	0.09	
EBL	2.0		3,400	155	0.05		3,400	265	0.08	*
EBT	3.0		5,100	1,110	0.22	*	5,100	980	0.19	
EBR	1.0		1,700	295	0.17		1,700	150	0.09	
WBL	2.0		3,400	160	0.05	*	3,400	241	0.07	
WBT	3.0		5,100	920	0.18		5,100	1,370	0.27	*
WBR	1.0		1,700	70	0.04		1,700	270	0.16	
				N/S Movements	0.37			N/S Movements	0.38	
				E/W Movements	0.26			E/W Movements	0.35	
				Yellow Clearance	0.05			Yellow Clearance	0.05	
TOTAL CAPACITY UTILIZATION					0.68				0.77	
LEVEL OF SERVICE (LOS)					B				C	

APPENDIX F – HCM ANALYSIS WORKSHEETS

Existing

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	2	2	36	0	7
Future Vol, veh/h	53	2	2	36	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	2	2	39	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	60	0	102	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1556	-	901	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1556	-	900	1012
Mov Cap-2 Maneuver	-	-	-	-	900	-
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	1556	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	119	2	2	48	0	7
Future Vol, veh/h	119	2	2	48	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	129	2	2	52	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	131	0	186	130
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	56	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1467	-	808	925
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	972	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1467	-	807	925
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	925	-	-	1467	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.9	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	79	51	796	1176	49
Future Vol, veh/h	56	79	51	796	1176	49
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	60	85	55	856	1265	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1744	659	1318	0	-	0
Stage 1	1292	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	131	352	279	-	-	-
Stage 1	162	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	105	352	279	-	-	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	130	-	-	-	-	-
Stage 2	561	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	65.8	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	279	-	192	-	-
HCM Lane V/C Ratio	0.197	-	0.756	-	-
HCM Control Delay (s)	21	-	65.8	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	5	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	52	4	4	50	0	5
Future Vol, veh/h	52	4	4	50	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	57	4	4	54	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	61	0	121	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	62	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1555	-	879	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	966	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1555	-	876	1012
Mov Cap-2 Maneuver	-	-	-	-	876	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	966	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	1555	-
HCM Lane V/C Ratio	0.005	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↱	
Traffic Vol, veh/h	79	4	4	65	0	5
Future Vol, veh/h	79	4	4	65	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	86	4	4	71	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	90	0	167	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1518	-	828	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1518	-	826	976
Mov Cap-2 Maneuver	-	-	-	-	826	-
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	949	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	976	-	-	1518	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-
HCM Control Delay (s)	8.7	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	52	58	1369	1023	54
Future Vol, veh/h	33	52	58	1369	1023	54
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	36	57	63	1488	1112	59

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1863	586	1171	0	-	0
Stage 1	1142	-	-	-	-	-
Stage 2	721	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	113	393	329	-	-	-
Stage 1	201	-	-	-	-	-
Stage 2	407	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	91	393	329	-	-	-
Mov Cap-2 Maneuver	134	-	-	-	-	-
Stage 1	163	-	-	-	-	-
Stage 2	407	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	31.7	0.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	329	-	225	-	-
HCM Lane V/C Ratio	0.192	-	0.411	-	-
HCM Control Delay (s)	18.5	-	31.7	-	-
HCM Lane LOS	C	-	D	-	-
HCM 95th %tile Q(veh)	0.7	-	1.9	-	-

Existing With Cumulative

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	2	2	36	0	7
Future Vol, veh/h	53	2	2	36	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	2	2	39	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	60	0	102	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1556	-	901	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1556	-	900	1012
Mov Cap-2 Maneuver	-	-	-	-	900	-
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	1556	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	119	2	2	48	0	7
Future Vol, veh/h	119	2	2	48	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	129	2	2	52	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	131	0	186	130
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	56	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1467	-	808	925
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	972	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1467	-	807	925
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	925	-	-	1467	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.9	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	79	51	822	1185	49
Future Vol, veh/h	56	79	51	822	1185	49
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	60	85	55	884	1274	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1765	664	1327	0	-	0
Stage 1	1301	-	-	-	-	-
Stage 2	464	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	128	349	276	-	-	-
Stage 1	160	-	-	-	-	-
Stage 2	553	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	103	349	276	-	-	-
Mov Cap-2 Maneuver	115	-	-	-	-	-
Stage 1	128	-	-	-	-	-
Stage 2	553	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	68.3	1.2	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	276	-	189	-	-
HCM Lane V/C Ratio	0.199	-	0.768	-	-
HCM Control Delay (s)	21.2	-	68.3	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	5.1	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	52	4	4	50	0	5
Future Vol, veh/h	52	4	4	50	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	57	4	4	54	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	61	0	121	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	62	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1555	-	879	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	966	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1555	-	876	1012
Mov Cap-2 Maneuver	-	-	-	-	876	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	966	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	1555	-
HCM Lane V/C Ratio	0.005	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	79	4	4	65	0	5
Future Vol, veh/h	79	4	4	65	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	86	4	4	71	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	90	0	167	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	79	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1518	-	828	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	949	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1518	-	826	976
Mov Cap-2 Maneuver	-	-	-	-	826	-
Stage 1	-	-	-	-	937	-
Stage 2	-	-	-	-	949	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	976	-	-	1518	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-
HCM Control Delay (s)	8.7	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	52	58	1375	1053	54
Future Vol, veh/h	33	52	58	1375	1053	54
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	36	57	63	1495	1145	59

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1899	602	1204	0	-	0
Stage 1	1175	-	-	-	-	-
Stage 2	724	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	109	383	317	-	-	-
Stage 1	192	-	-	-	-	-
Stage 2	405	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	87	383	317	-	-	-
Mov Cap-2 Maneuver	128	-	-	-	-	-
Stage 1	154	-	-	-	-	-
Stage 2	405	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	33.6	0.8	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	317	-	216	-	-
HCM Lane V/C Ratio	0.199	-	0.428	-	-
HCM Control Delay (s)	19.2	-	33.6	-	-
HCM Lane LOS	C	-	D	-	-
HCM 95th %tile Q(veh)	0.7	-	2	-	-

Existing with Cumulative Plus Project

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	2	5	36	0	21
Future Vol, veh/h	53	2	5	36	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	2	5	39	0	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	60	0	108	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1556	-	894	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	979	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1556	-	891	1012
Mov Cap-2 Maneuver	-	-	-	-	891	-
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	979	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	1556	-
HCM Lane V/C Ratio	0.023	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	133	2	5	51	0	21
Future Vol, veh/h	133	2	5	51	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	145	2	5	55	0	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	147	0	211	146
Stage 1	-	-	-	-	146	-
Stage 2	-	-	-	-	65	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1447	-	782	906
Stage 1	-	-	-	-	886	-
Stage 2	-	-	-	-	963	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1447	-	779	906
Mov Cap-2 Maneuver	-	-	-	-	779	-
Stage 1	-	-	-	-	882	-
Stage 2	-	-	-	-	963	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	906	-	-	1447	-
HCM Lane V/C Ratio	0.025	-	-	0.004	-
HCM Control Delay (s)	9.1	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	7.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	65	98	55	822	1185	50
Future Vol, veh/h	65	98	55	822	1185	50
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	70	105	59	884	1274	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1773	664	1328	0	-	0
Stage 1	1301	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	127	349	276	-	-	-
Stage 1	160	-	-	-	-	-
Stage 2	548	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	100	349	276	-	-	-
Mov Cap-2 Maneuver	114	-	-	-	-	-
Stage 1	126	-	-	-	-	-
Stage 2	548	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	94.1	1.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	276	-	192	-	-
HCM Lane V/C Ratio	0.214	-	0.913	-	-
HCM Control Delay (s)	21.6	-	94.1	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.8	-	7.1	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	6	15	50	0	13
Future Vol, veh/h	53	6	15	50	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	7	16	54	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	65	0	148	62
Stage 1	-	-	-	-	62	-
Stage 2	-	-	-	-	86	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1550	-	849	1009
Stage 1	-	-	-	-	966	-
Stage 2	-	-	-	-	942	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1550	-	840	1009
Mov Cap-2 Maneuver	-	-	-	-	840	-
Stage 1	-	-	-	-	955	-
Stage 2	-	-	-	-	942	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1009	-	-	1550	-
HCM Lane V/C Ratio	0.014	-	-	0.011	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	87	5	15	76	0	13
Future Vol, veh/h	87	5	15	76	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	95	5	16	83	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	100	0	213	98
Stage 1	-	-	-	-	98	-
Stage 2	-	-	-	-	115	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1505	-	780	963
Stage 1	-	-	-	-	931	-
Stage 2	-	-	-	-	915	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1505	-	771	963
Mov Cap-2 Maneuver	-	-	-	-	771	-
Stage 1	-	-	-	-	921	-
Stage 2	-	-	-	-	915	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	963	-	-	1505	-
HCM Lane V/C Ratio	0.015	-	-	0.011	-
HCM Control Delay (s)	8.8	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	63	75	1375	1053	58
Future Vol, veh/h	38	63	75	1375	1053	58
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	68	82	1495	1145	63

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1939	604	1208	0	-	0
Stage 1	1177	-	-	-	-	-
Stage 2	762	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	103	382	316	-	-	-
Stage 1	191	-	-	-	-	-
Stage 2	387	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	76	382	316	-	-	-
Mov Cap-2 Maneuver	116	-	-	-	-	-
Stage 1	142	-	-	-	-	-
Stage 2	387	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	41.2	1.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	316	-	205	-	-
HCM Lane V/C Ratio	0.258	-	0.536	-	-
HCM Control Delay (s)	20.3	-	41.2	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	1	-	2.8	-	-

Opening Year (2022)

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	2	2	36	0	7
Future Vol, veh/h	53	2	2	36	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	2	2	39	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	60	0	102	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1556	-	901	1012
Stage 1	-	-	-	-	969	-
Stage 2	-	-	-	-	985	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1556	-	900	1012
Mov Cap-2 Maneuver	-	-	-	-	900	-
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	985	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1012	-	-	1556	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↱	
Traffic Vol, veh/h	119	2	2	48	0	7
Future Vol, veh/h	119	2	2	48	0	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	129	2	2	52	0	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	131	0	186	130
Stage 1	-	-	-	-	130	-
Stage 2	-	-	-	-	56	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1467	-	808	925
Stage 1	-	-	-	-	901	-
Stage 2	-	-	-	-	972	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1467	-	807	925
Mov Cap-2 Maneuver	-	-	-	-	807	-
Stage 1	-	-	-	-	900	-
Stage 2	-	-	-	-	972	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	925	-	-	1467	-
HCM Lane V/C Ratio	0.008	-	-	0.001	-
HCM Control Delay (s)	8.9	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	4.5

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	56	79	51	796	1176	49
Future Vol, veh/h	56	79	51	796	1176	49
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	60	85	55	856	1265	53

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1744	659	1318	0	-	0
Stage 1	1292	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	131	352	279	-	-	-
Stage 1	162	-	-	-	-	-
Stage 2	561	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	105	352	279	-	-	-
Mov Cap-2 Maneuver	117	-	-	-	-	-
Stage 1	130	-	-	-	-	-
Stage 2	561	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	65.8	1.3	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	279	-	192	-	-
HCM Lane V/C Ratio	0.197	-	0.756	-	-
HCM Control Delay (s)	21	-	65.8	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.7	-	5	-	-

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	4	4	51	0	5
Future Vol, veh/h	53	4	4	51	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	58	4	4	55	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	62	0	123	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	63	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1554	-	877	1011
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	965	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1554	-	874	1011
Mov Cap-2 Maneuver	-	-	-	-	874	-
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	965	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1011	-	-	1554	-
HCM Lane V/C Ratio	0.005	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↱	
Traffic Vol, veh/h	81	4	4	66	0	5
Future Vol, veh/h	81	4	4	66	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	88	4	4	72	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	92	0	170	90
Stage 1	-	-	-	-	90	-
Stage 2	-	-	-	-	80	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1515	-	825	973
Stage 1	-	-	-	-	939	-
Stage 2	-	-	-	-	948	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1515	-	823	973
Mov Cap-2 Maneuver	-	-	-	-	823	-
Stage 1	-	-	-	-	936	-
Stage 2	-	-	-	-	948	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	973	-	-	1515	-
HCM Lane V/C Ratio	0.006	-	-	0.003	-
HCM Control Delay (s)	8.7	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	33	53	59	1402	1074	55
Future Vol, veh/h	33	53	59	1402	1074	55
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	36	58	64	1524	1167	60

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1935	614	1227	0	-	0
Stage 1	1197	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	104	377	309	-	-	-
Stage 1	186	-	-	-	-	-
Stage 2	399	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	82	377	309	-	-	-
Mov Cap-2 Maneuver	122	-	-	-	-	-
Stage 1	147	-	-	-	-	-
Stage 2	399	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	35.5	0.8	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	309	-	209	-	-
HCM Lane V/C Ratio	0.208	-	0.447	-	-
HCM Control Delay (s)	19.7	-	35.5	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	0.8	-	2.1	-	-

Opening Year (2022) Plus Project

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	54	2	5	37	0	21
Future Vol, veh/h	54	2	5	37	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	59	2	5	40	0	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	61	0	110	60
Stage 1	-	-	-	-	60	-
Stage 2	-	-	-	-	50	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1555	-	892	1011
Stage 1	-	-	-	-	968	-
Stage 2	-	-	-	-	978	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1555	-	889	1011
Mov Cap-2 Maneuver	-	-	-	-	889	-
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	978	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.9	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1011	-	-	1555	-
HCM Lane V/C Ratio	0.023	-	-	0.003	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	135	2	5	52	0	21
Future Vol, veh/h	135	2	5	52	0	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	147	2	5	57	0	23

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	149	0	215	148
Stage 1	-	-	-	-	148	-
Stage 2	-	-	-	-	67	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1445	-	778	904
Stage 1	-	-	-	-	884	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1445	-	775	904
Mov Cap-2 Maneuver	-	-	-	-	775	-
Stage 1	-	-	-	-	880	-
Stage 2	-	-	-	-	961	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.7	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	904	-	-	1445	-
HCM Lane V/C Ratio	0.025	-	-	0.004	-
HCM Control Delay (s)	9.1	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	8.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	66	99	56	838	1209	51
Future Vol, veh/h	66	99	56	838	1209	51
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	71	106	60	901	1300	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1808	678	1355	0	-	0
Stage 1	1328	-	-	-	-	-
Stage 2	480	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	121	342	268	-	-	-
Stage 1	154	-	-	-	-	-
Stage 2	543	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	94	342	268	-	-	-
Mov Cap-2 Maneuver	108	-	-	-	-	-
Stage 1	120	-	-	-	-	-
Stage 2	543	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	110.7	1.4	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	268	-	183	-	-
HCM Lane V/C Ratio	0.225	-	0.97	-	-
HCM Control Delay (s)	22.3	-	110.7	-	-
HCM Lane LOS	C	-	F	-	-
HCM 95th %tile Q(veh)	0.8	-	7.8	-	-

Intersection	
Int Delay, s/veh	1.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	54	6	15	51	0	13
Future Vol, veh/h	54	6	15	51	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	59	7	16	55	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	66	0	150	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	87	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1549	-	847	1007
Stage 1	-	-	-	-	965	-
Stage 2	-	-	-	-	941	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1549	-	838	1007
Mov Cap-2 Maneuver	-	-	-	-	838	-
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	941	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1007	-	-	1549	-
HCM Lane V/C Ratio	0.014	-	-	0.011	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	89	5	15	77	0	13
Future Vol, veh/h	89	5	15	77	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	97	5	16	84	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	102	0	216	100
Stage 1	-	-	-	-	100	-
Stage 2	-	-	-	-	116	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1503	-	777	961
Stage 1	-	-	-	-	929	-
Stage 2	-	-	-	-	914	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1503	-	768	961
Mov Cap-2 Maneuver	-	-	-	-	768	-
Stage 1	-	-	-	-	919	-
Stage 2	-	-	-	-	914	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.2	8.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	961	-	-	1503	-
HCM Lane V/C Ratio	0.015	-	-	0.011	-
HCM Control Delay (s)	8.8	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	2.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	38	64	76	1402	1074	59
Future Vol, veh/h	38	64	76	1402	1074	59
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	-	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	41	70	83	1524	1167	64

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1975	616	1231	0	-	0
Stage 1	1199	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	99	375	308	-	-	-
Stage 1	185	-	-	-	-	-
Stage 2	381	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	72	375	308	-	-	-
Mov Cap-2 Maneuver	111	-	-	-	-	-
Stage 1	135	-	-	-	-	-
Stage 2	381	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	43.7	1.1	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	308	-	199	-	-
HCM Lane V/C Ratio	0.268	-	0.557	-	-
HCM Control Delay (s)	20.9	-	43.7	-	-
HCM Lane LOS	C	-	E	-	-
HCM 95th %tile Q(veh)	1.1	-	3	-	-

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	66	99	56	838	1209	51
Future Volume (veh/h)	66	99	56	838	1209	51
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1700	1700	1700	1700	1700	1700
Adj Flow Rate, veh/h	71	106	60	901	1300	55
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	86	129	73	3405	2863	121
Arrive On Green	0.14	0.14	0.04	0.73	0.63	0.63
Sat Flow, veh/h	602	898	1619	4794	4719	193
Grp Volume(v), veh/h	178	0	60	901	881	474
Grp Sat Flow(s),veh/h/ln	1508	0	1619	1547	1547	1665
Q Serve(g_s), s	7.5	0.0	2.4	4.2	9.6	9.6
Cycle Q Clear(g_c), s	7.5	0.0	2.4	4.2	9.6	9.6
Prop In Lane	0.40	0.60	1.00			0.12
Lane Grp Cap(c), veh/h	216	0	73	3405	1940	1044
V/C Ratio(X)	0.82	0.00	0.82	0.26	0.45	0.45
Avail Cap(c_a), veh/h	371	0	199	3405	1940	1044
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.94	0.94	0.96	0.96
Uniform Delay (d), s/veh	27.0	0.0	30.8	2.9	6.3	6.3
Incr Delay (d2), s/veh	7.6	0.0	19.0	0.2	0.7	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	0.0	1.2	0.6	2.3	2.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	34.7	0.0	49.8	3.0	7.1	7.7
LnGrp LOS	C	A	D	A	A	A
Approach Vol, veh/h	178			961	1355	
Approach Delay, s/veh	34.7			6.0	7.3	
Approach LOS	C			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		51.7		13.3	6.9	44.8
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		41.0		16.0	8.0	29.0
Max Q Clear Time (g_c+I1), s		6.2		9.5	4.4	11.6
Green Ext Time (p_c), s		6.9		0.3	0.0	8.2

Intersection Summary	
HCM 6th Ctrl Delay	8.7
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	33	53	59	1402	1074	55
Future Volume (veh/h)	33	53	59	1402	1074	55
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1700	1700	1700	1700	1700	1700
Adj Flow Rate, veh/h	36	58	64	1524	1167	60
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	0	0	0	0
Cap, veh/h	44	72	78	3708	3115	160
Arrive On Green	0.08	0.08	0.05	0.80	0.69	0.69
Sat Flow, veh/h	571	919	1619	4794	4673	232
Grp Volume(v), veh/h	95	0	64	1524	799	428
Grp Sat Flow(s),veh/h/ln	1506	0	1619	1547	1547	1658
Q Serve(g_s), s	4.0	0.0	2.5	6.4	7.0	7.0
Cycle Q Clear(g_c), s	4.0	0.0	2.5	6.4	7.0	7.0
Prop In Lane	0.38	0.61	1.00			0.14
Lane Grp Cap(c), veh/h	117	0	78	3708	2132	1143
V/C Ratio(X)	0.81	0.00	0.82	0.41	0.37	0.37
Avail Cap(c_a), veh/h	371	0	199	3708	2132	1143
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.51	0.51	0.95	0.95
Uniform Delay (d), s/veh	29.5	0.0	30.7	2.0	4.2	4.2
Incr Delay (d2), s/veh	12.3	0.0	10.3	0.2	0.5	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	0.0	1.1	0.3	1.4	1.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.8	0.0	40.9	2.1	4.7	5.1
LnGrp LOS	D	A	D	A	A	A
Approach Vol, veh/h	95			1588	1227	
Approach Delay, s/veh	41.8			3.7	4.9	
Approach LOS	D			A	A	

Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		55.9		9.1	7.1	48.8
Change Period (Y+Rc), s		4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		41.0		16.0	8.0	29.0
Max Q Clear Time (g_c+I1), s		8.4		6.0	4.5	9.0
Green Ext Time (p_c), s		13.6		0.1	0.0	7.9

Intersection Summary	
HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

General Plan Build Out (2035)

Intersection	
Int Delay, s/veh	0.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	0	0	40	0	10
Future Vol, veh/h	60	0	0	40	0	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	65	0	0	43	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	108	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	43	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	894	1005
Stage 1	-	0	0	-	963	-
Stage 2	-	0	0	-	985	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	894	1005
Mov Cap-2 Maneuver	-	-	-	-	894	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	985	-

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

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	1005	-	-
HCM Lane V/C Ratio	0.011	-	-
HCM Control Delay (s)	8.6	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	130	0	0	50	0	10
Future Vol, veh/h	130	0	0	50	0	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	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	141	0	0	54	0	11

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	-	-	195	141
Stage 1	-	-	-	-	141	-
Stage 2	-	-	-	-	54	-
Critical Hdwy	-	-	-	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	-	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	0	-	798	912
Stage 1	-	0	0	-	891	-
Stage 2	-	0	0	-	974	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	-	-	798	912
Mov Cap-2 Maneuver	-	-	-	-	798	-
Stage 1	-	-	-	-	891	-
Stage 2	-	-	-	-	974	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBT
Capacity (veh/h)	912	-	-
HCM Lane V/C Ratio	0.012	-	-
HCM Control Delay (s)	9	-	-
HCM Lane LOS	A	-	-
HCM 95th %tile Q(veh)	0	-	-

Intersection	
Int Delay, s/veh	28.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	60	80	60	840	1890	50
Future Vol, veh/h	60	80	60	840	1890	50
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	65	86	65	903	2032	54

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2550	1043	2086	0	-	0
Stage 1	2059	-	-	-	-	-
Stage 2	491	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	~ 48	197	116	-	-	-
Stage 1	~ 53	-	-	-	-	-
Stage 2	536	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 21	197	116	-	-	-
Mov Cap-2 Maneuver	~ 21	-	-	-	-	-
Stage 1	~ 23	-	-	-	-	-
Stage 2	536	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	$ 585.3	4.6	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	116	-	21	197	-	-
HCM Lane V/C Ratio	0.556	-	3.072	0.437	-	-
HCM Control Delay (s)	69.4	-	$ 1316.8	36.7	-	-
HCM Lane LOS	F	-	F	E	-	-
HCM 95th %tile Q(veh)	2.7	-	8.3	2	-	-

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

Intersection	
Int Delay, s/veh	0.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	5	5	60	0	5
Future Vol, veh/h	60	5	5	60	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	65	5	5	65	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	70	0	143	68
Stage 1	-	-	-	-	68	-
Stage 2	-	-	-	-	75	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1544	-	854	1001
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	953	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1544	-	851	1001
Mov Cap-2 Maneuver	-	-	-	-	851	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	950	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.6	8.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	1001	-	-	1544	-
HCM Lane V/C Ratio	0.005	-	-	0.004	-
HCM Control Delay (s)	8.6	-	-	7.3	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	110	5	5	90	0	5
Future Vol, veh/h	110	5	5	90	0	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	120	5	5	98	0	5

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	125	0	231	123
Stage 1	-	-	-	-	123	-
Stage 2	-	-	-	-	108	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1474	-	762	933
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	921	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1474	-	759	933
Mov Cap-2 Maneuver	-	-	-	-	759	-
Stage 1	-	-	-	-	907	-
Stage 2	-	-	-	-	917	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	8.9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	933	-	-	1474	-
HCM Lane V/C Ratio	0.006	-	-	0.004	-
HCM Control Delay (s)	8.9	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	60	60	2065	1080	60
Future Vol, veh/h	40	60	60	2065	1080	60
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	43	65	65	2245	1174	65

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2235	620	1239	0	-	0
Stage 1	1207	-	-	-	-	-
Stage 2	1028	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	72	373	305	-	-	-
Stage 1	183	-	-	-	-	-
Stage 2	280	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	57	373	305	-	-	-
Mov Cap-2 Maneuver	109	-	-	-	-	-
Stage 1	144	-	-	-	-	-
Stage 2	280	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	33.4	0.6	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	305	-	109	373	-	-
HCM Lane V/C Ratio	0.214	-	0.399	0.175	-	-
HCM Control Delay (s)	20	-	58.4	16.7	-	-
HCM Lane LOS	C	-	F	C	-	-
HCM 95th %tile Q(veh)	0.8	-	1.7	0.6	-	-

General Plan Build Out (2035) Plus Project

Intersection	
Int Delay, s/veh	1.8

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	60	0	3	40	0	24
Future Vol, veh/h	60	0	3	40	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	65	0	3	43	0	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	65	0	114	65
Stage 1	-	-	-	-	65	-
Stage 2	-	-	-	-	49	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	1550	-	887	1005
Stage 1	-	0	-	-	963	-
Stage 2	-	0	-	-	979	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1550	-	885	1005
Mov Cap-2 Maneuver	-	-	-	-	885	-
Stage 1	-	-	-	-	963	-
Stage 2	-	-	-	-	977	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.5	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	1005	-	1550	-
HCM Lane V/C Ratio	0.026	-	0.002	-
HCM Control Delay (s)	8.7	-	7.3	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0.1	-	0	-

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	144	0	3	53	0	24
Future Vol, veh/h	144	0	3	53	0	24
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	157	0	3	58	0	26

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	-	157	0	221	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	64	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	0	1435	-	772	894
Stage 1	-	0	-	-	876	-
Stage 2	-	0	-	-	964	-
Platoon blocked, %	-			-		
Mov Cap-1 Maneuver	-	-	1435	-	770	894
Mov Cap-2 Maneuver	-	-	-	-	770	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	962	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.4	9.1
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	WBL	WBT
Capacity (veh/h)	894	-	1435	-
HCM Lane V/C Ratio	0.029	-	0.002	-
HCM Control Delay (s)	9.1	-	7.5	-
HCM Lane LOS	A	-	A	-
HCM 95th %tile Q(veh)	0.1	-	0	-

Intersection	
Int Delay, s/veh	7.1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	43	64	29	840	1890	22
Future Vol, veh/h	43	64	29	840	1890	22
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	93	93	93	93	93	93
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	46	69	31	903	2032	24

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2467	1028	2056	0	-	0
Stage 1	2044	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	54	202	120	-	-	-
Stage 1	54	-	-	-	-	-
Stage 2	580	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	~ 40	202	120	-	-	-
Mov Cap-2 Maneuver	~ 37	-	-	-	-	-
Stage 1	~ 40	-	-	-	-	-
Stage 2	580	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	179.4	1.5	0
HCM LOS	F		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	120	-	37	202	-	-
HCM Lane V/C Ratio	0.26	-	1.25	0.341	-	-
HCM Control Delay (s)	45.2	-	$ 399	31.8	-	-
HCM Lane LOS	E	-	F	D	-	-
HCM 95th %tile Q(veh)	1	-	4.8	1.4	-	-

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

Intersection	
Int Delay, s/veh	1.5

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	61	7	16	60	0	13
Future Vol, veh/h	61	7	16	60	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	66	8	17	65	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	74	0	169	70
Stage 1	-	-	-	-	70	-
Stage 2	-	-	-	-	99	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1538	-	826	998
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	930	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1538	-	817	998
Mov Cap-2 Maneuver	-	-	-	-	817	-
Stage 1	-	-	-	-	958	-
Stage 2	-	-	-	-	920	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.6	8.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	998	-	-	1538	-
HCM Lane V/C Ratio	0.014	-	-	0.011	-
HCM Control Delay (s)	8.7	-	-	7.4	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	118	6	16	101	0	13
Future Vol, veh/h	118	6	16	101	0	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	128	7	17	110	0	14

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	135	0	276	132
Stage 1	-	-	-	-	132	-
Stage 2	-	-	-	-	144	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1462	-	718	923
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	888	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1462	-	709	923
Mov Cap-2 Maneuver	-	-	-	-	709	-
Stage 1	-	-	-	-	899	-
Stage 2	-	-	-	-	877	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	923	-	-	1462	-
HCM Lane V/C Ratio	0.015	-	-	0.012	-
HCM Control Delay (s)	9	-	-	7.5	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0	-	-	0	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	27	44	42	2065	1080	29
Future Vol, veh/h	27	44	42	2065	1080	29
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	0	100	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	0
Mvmt Flow	29	48	46	2245	1174	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	2180	603	1206	0	-	0
Stage 1	1190	-	-	-	-	-
Stage 2	990	-	-	-	-	-
Critical Hdwy	5.7	7.1	5.3	-	-	-
Critical Hdwy Stg 1	6.6	-	-	-	-	-
Critical Hdwy Stg 2	6	-	-	-	-	-
Follow-up Hdwy	3.8	3.9	3.1	-	-	-
Pot Cap-1 Maneuver	77	383	316	-	-	-
Stage 1	188	-	-	-	-	-
Stage 2	293	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	66	383	316	-	-	-
Mov Cap-2 Maneuver	121	-	-	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	293	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	26.5	0.4	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	316	-	121	383	-	-
HCM Lane V/C Ratio	0.144	-	0.243	0.125	-	-
HCM Control Delay (s)	18.3	-	44	15.7	-	-
HCM Lane LOS	C	-	E	C	-	-
HCM 95th %tile Q(veh)	0.5	-	0.9	0.4	-	-

APPENDIX G – HCM QUEUEING ANALYSIS WORKSHEETS

Existing

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	56	79	51	796	1176	49
Future Volume (vph)	56	79	51	796	1176	49
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.34	0.34	0.09	0.17	0.30	0.18
Control Delay (s)	17.8	17.8	11.7	0.0	0.0	0.0
Level of Service	C	C	B	A	A	A
Queue Length 95th (ft)	37	37	8	0	0	0
Approach Delay (s)	17.8	—	—	0.7	0.0	—

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	33	52	58	1369	1023	54
Future Volume (vph)	33	52	58	1369	1023	54
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.19	0.19	0.09	0.29	0.26	0.17
Control Delay (s)	13.9	13.9	10.9	0.0	0.0	0.0
Level of Service	B	B	B	A	A	A
Queue Length 95th (ft)	17	17	8	0	0	0
Approach Delay (s)	13.9	—	—	0.4	0.0	—

Existing With Cumulative

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	56	79	51	822	1185	49
Future Volume (vph)	56	79	51	822	1185	49
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.34	0.34	0.09	0.17	0.30	0.18
Control Delay (s)	18.0	18.0	11.8	0.0	0.0	0.0
Level of Service	C	C	B	A	A	A
Queue Length 95th (ft)	38	38	8	0	0	0
Approach Delay (s)	18.0	—	—	0.7	0.0	—

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	33	52	58	1375	1053	54
Future Volume (vph)	33	52	58	1375	1053	54
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.19	0.19	0.10	0.29	0.27	0.17
Control Delay (s)	14.0	14.0	11.0	0.0	0.0	0.0
Level of Service	B	B	B	A	A	A
Queue Length 95th (ft)	17	17	8	0	0	0
Approach Delay (s)	14.0	—	—	0.4	0.0	—

Existing with Cumulative Plus Project

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	65	98	55	822	1185	50
Future Volume (vph)	65	98	55	822	1185	50
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.41	0.41	0.10	0.17	0.30	0.18
Control Delay (s)	19.2	19.2	11.8	0.0	0.0	0.0
Level of Service	C	C	B	A	A	A
Queue Length 95th (ft)	49	49	8	0	0	0
Approach Delay (s)	19.2	—	—	0.7	0.0	—

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	38	63	75	1375	1053	58
Future Volume (vph)	38	63	75	1375	1053	58
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.22	0.22	0.12	0.29	0.27	0.17
Control Delay (s)	14.2	14.2	11.3	0.0	0.0	0.0
Level of Service	B	B	B	A	A	A
Queue Length 95th (ft)	21	21	11	0	0	0
Approach Delay (s)	14.2	—	—	0.6	0.0	—

Opening Year (2022)

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	56	79	51	796	1176	49
Future Volume (vph)	56	79	51	796	1176	49
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.34	0.34	0.09	0.17	0.30	0.18
Control Delay (s)	17.8	17.8	11.7	0.0	0.0	0.0
Level of Service	C	C	B	A	A	A
Queue Length 95th (ft)	37	37	8	0	0	0
Approach Delay (s)	17.8	—	—	0.7	0.0	—

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	33	53	59	1402	1074	55
Future Volume (vph)	33	53	59	1402	1074	55
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.19	0.19	0.10	0.30	0.27	0.17
Control Delay (s)	14.0	14.0	11.1	0.0	0.0	0.0
Level of Service	B	B	B	A	A	A
Queue Length 95th (ft)	17	17	8	0	0	0
Approach Delay (s)	14.0	—	—	0.4	0.0	—

Opening Year (2022) Plus Project

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	66	99	56	838	1209	51
Future Volume (vph)	66	99	56	838	1209	51
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.43	0.43	0.10	0.18	0.31	0.19
Control Delay (s)	20.0	20.0	12.0	0.0	0.0	0.0
Level of Service	C	C	B	A	A	A
Queue Length 95th (ft)	52	52	9	0	0	0
Approach Delay (s)	20.0	—	—	0.8	0.0	—

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	38	64	76	1402	1074	59
Future Volume (vph)	38	64	76	1402	1074	59
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.22	0.22	0.13	0.30	0.27	0.17
Control Delay (s)	14.2	14.2	11.4	0.0	0.0	0.0
Level of Service	B	B	B	A	A	A
Queue Length 95th (ft)	21	21	11	0	0	0
Approach Delay (s)	14.2	—	—	0.6	0.0	—

General Plan Build Out (2035)

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	60	80	60	840	1890	50
Future Volume (vph)	60	80	60	840	1890	50
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.68	0.17	0.22	0.18	0.48	0.27
Control Delay (s)	100.1	13.5	21.0	0.0	0.0	0.0
Level of Service	F	B	C	A	A	A
Queue Length 95th (ft)	85	15	21	0	0	0
Approach Delay (s)	50.8	—	—	1.4	0.0	—

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	40	60	60	2065	1080	60
Future Volume (vph)	40	60	60	2065	1080	60
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.14	0.08	0.10	0.44	0.28	0.18
Control Delay (s)	19.1	9.8	11.2	0.0	0.0	0.0
Level of Service	C	A	B	A	A	A
Queue Length 95th (ft)	12	6	8	0	0	0
Approach Delay (s)	13.5	—	—	0.3	0.0	—

General Plan Build Out (2035) Plus Project

3 Anaheim Blvd & Midway Drive

HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	43	64	29	840	1890	22
Future Volume (vph)	43	64	29	840	1890	22
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.47	0.13	0.10	0.18	0.48	0.25
Control Delay (s)	71.1	12.9	18.5	0.0	0.0	0.0
Level of Service	F	B	C	A	A	A
Queue Length 95th (ft)	51	11	9	0	0	0
Approach Delay (s)	36.2	—	—	0.6	0.0	—

3 Anaheim Blvd & Midway Drive

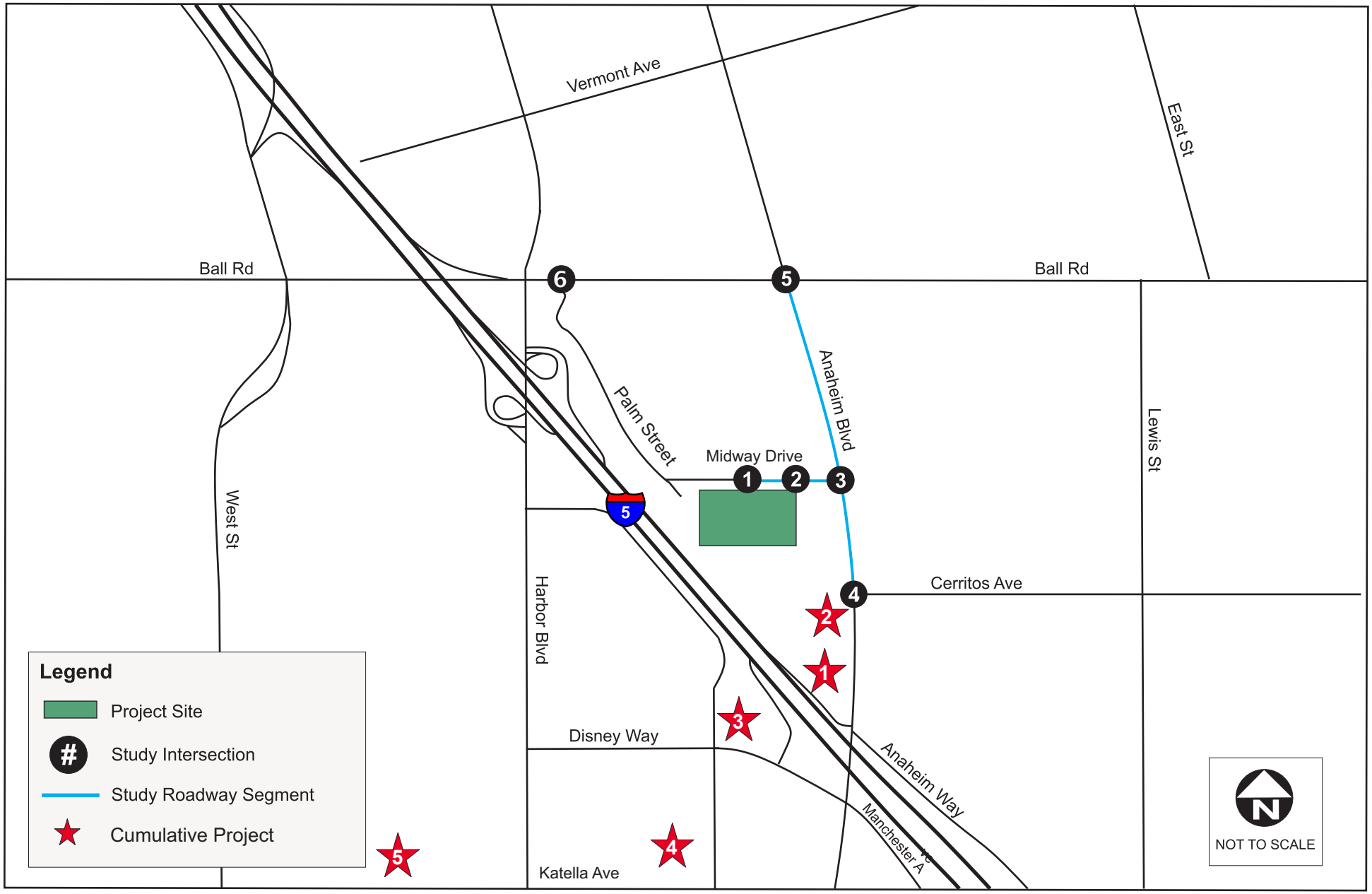
HCM 2000 SIGNING SETTINGS	EBL	EBR	NBL	NBT	SBT	SBR
Lanes and Sharing (#RL)						
Traffic Volume (vph)	27	44	42	2065	1080	29
Future Volume (vph)	27	44	42	2065	1080	29
Sign Control	Stop	—	—	Free	Free	—
Median Width (ft)	12	—	—	12	12	—
TWLTL Median	☐	—	—	☑	☑	—
Right Turn Channelized	—	None	—	None	—	None
Critical Gap, tC (s)	6.8	6.9	4.1	—	—	—
Follow Up Time, tF (s)	3.5	3.3	2.2	—	—	—
Volume to Capacity Ratio	0.10	0.06	0.07	0.44	0.28	0.16
Control Delay (s)	18.3	9.7	10.9	0.0	0.0	0.0
Level of Service	C	A	B	A	A	A
Queue Length 95th (ft)	8	5	6	0	0	0
Approach Delay (s)	12.9	—	—	0.2	0.0	—

APPENDIX H – CUMULATIVE PROJECTS

Cumulative Project List

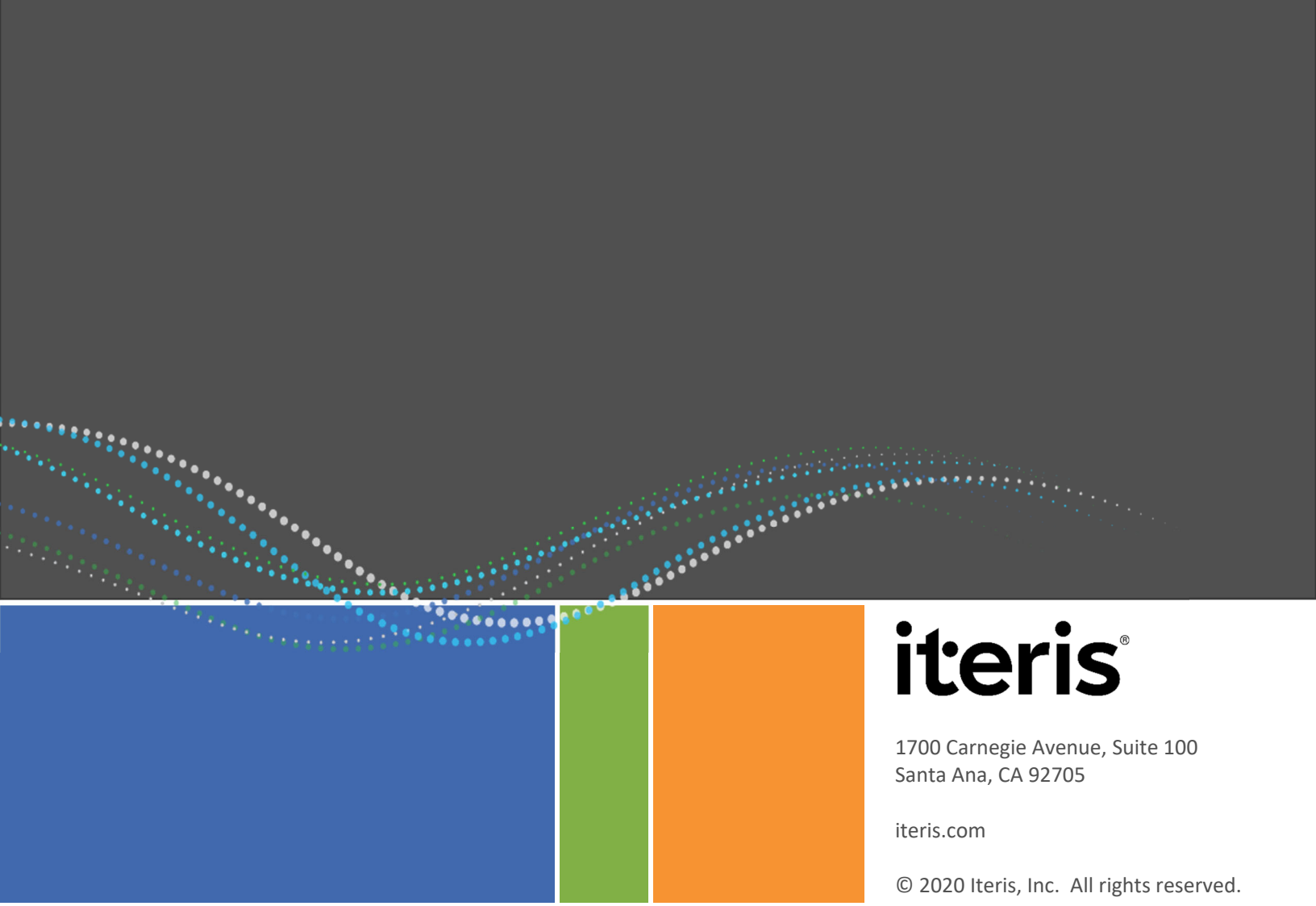
Map ID	Case Number	Project	Address	Description	Phase	Opening Date	TIA Available?
1	DEV2017-00035	RADISSON BLUE HOTEL	1601 S ANAHEIM BLVD	The proposed project includes a 12-story, 326-room hotel and a four-level parking garage. The hotel would include amenities on the ground level, including a swimming pool, restaurant, meeting space, fitness room, coffee shop, and gift shop. The 12th floor would include a rooftop pool, sun deck, and restaurant and bar. The roof-top restaurant and bar is proposed for hotel guest use only.	Construction	September 2020	On File
2	DEV2018-00081	AVANTI ANAHEIM BOULEVARD TWNHM	100 W CERRITOS AVE	The construction of 292 attached single-family residential units with modified development standards and density bonus incentives to permit affordable units for moderate income occupants.	Approved	Spring 2020	On File
3	DEV2016-00055	STARWOOD ELEMENT ANAHEIM	200 W ALRO WAY	To demolish a vacant commercial building (formerly Bergstroms Childrens Store) and construct a new five-story, 174-room hotel with a narrower street landscape setback, narrower interior building and landscape setbacks, more wall signs than allowed, and fewer parking spaces than required by the Zoning Code.	Construction	June 2020	Not Available. Will refer to Radisson Blu Hotel TIA.
4	DEV2015-00094	JW MARRIOTT ANAHEIM	1775 S CLEMENTINE ST	To construct a 466-room, 12-story hotel with two levels of subterranean parking.	Construction	March 2020	On File
5	DEV2016-0038	CAMBRIA HOTEL AND SUITES	1030 W KATELLA AVE	The applicant requests approval of a final site plan to construct a 12-story, 352-room hotel, three restaurant tenant spaces and one-level of subterranean parking.	Approved	March 2019	On File

Source: https://www.anaheim.net/3348/Development-Activity, retrieved on 03/03/2020.



Cumulative Projects

FIGURE 1



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I.2 - VMT Screening Analysis

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MEMORANDUM

To:	Vincent Tran City of Anaheim Department of Public Works 200 S. Anaheim Boulevard, Suite 276 Anaheim, CA 92805	**From:**	Kristin Tso, PE, TE Iteris, Inc. 1700 Carnegie Avenue, Ste. 100 Santa Ana, CA 92705
Date:	January 14, 2021		
RE:	Vehicle Miles of Travel (VMT) Screening Analysis for Project at 110-228 W Midway Drive		

INTRODUCTION

This memorandum documents the results of a Vehicle Miles of Travel (VMT) Screening Analysis prepared for the proposed Townhomes ('Project') at 110-228 West Midway Drive in the City of Anaheim. The project VMT-screening used the latest City of Anaheim Traffic Impact Analysis (TIA) Guidelines for California Environmental Quality Act (CEQA) Analysis to determine if a TIA VMT assessment is required for the proposed project.

BACKGROUND

The proposed project is located at 110-228 West Midway Drive in the City of Anaheim bordered by Anaheim Boulevard to the east, Willow Street and the I-5 to the west, and D Street to the south. The Project proposes to remove the existing Anaheim RV Park and construct new residential community of townhomes. The existing RV park has campsites for 114 RVs as shown in the Anaheim RV Park facilities map in **Appendix A**. The proposed project will have 156 new three-bedroom three-story attached townhomes. Access to the site will be taken from three (3) access points on Midway Drive. The site description for the existing site and the proposed project is summarized in **Table 1**. The proposed site plan and vehicular circulation can be found in **Appendix B**.

Table 1: Existing vs. Proposed Project Dwelling Units

Scenario	Land Use	Quantity	Unit[1]
Proposed Project	Proposed Attached Townhomes	156	DU
Existing Site	Existing RV Park	114	Campsite

[1]DU = Dwelling Units

The proposed project requires the reclassification to remove a Mobile Home Park (MHP) Overlay from the City of Anaheim's General Plan on the project site, as the overlay is no longer applicable to the proposed project. Additional details regarding the site reclassification can be found in **Appendix C**.

VMT SCREENING TIA FOR CEQA ANALYSIS

A project-level VMT analysis is required as part of the City's TIA process to fulfill CEQA requirements for identifying impacts for land use projects. However, the City's TIA Guidelines for CEQA analysis allow for three

(3) types of project screening that can be applied to effectively screen projects from project-level assessment. The project only needs to fulfill one of the screening types to qualify for screening. The three (3) screening types are:

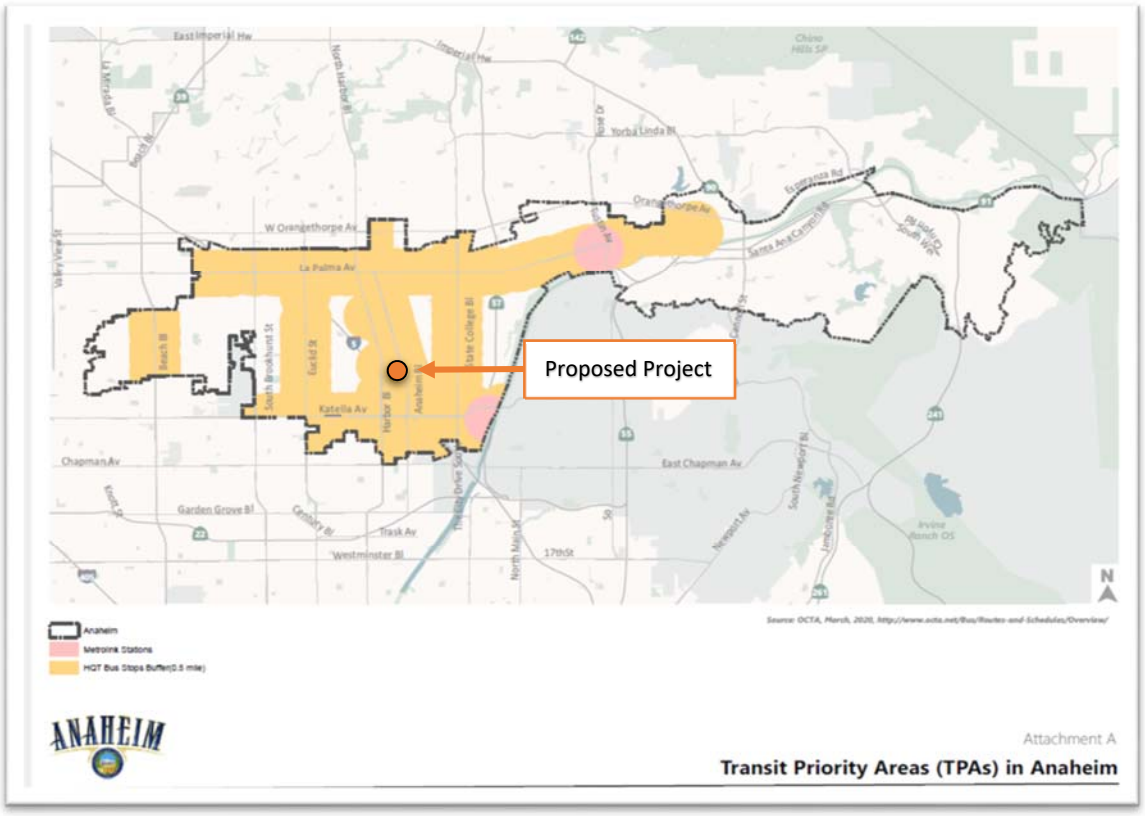
1. Transit Priority Areas Screening
2. Low VMT-generating Areas Screening
3. Project Type Screening

Analysis for each of the screening types is discussed below.

Type 1: Transit Priority Area (TPA) Screening

Projects located within a Transit Priority Area (TPA) may be presumed to have a less than significant impact. A TPA is defined as a half mile area around an existing major transit stop or an existing stop along a high-quality transit corridor. The proposed project is located within half a mile of a stop for a high-quality bus route, as identified in *Attachment A* of the City of Anaheim TIA Guidelines for CEQA shown in **Figure 1**.

Figure 1: Project Location within *Attachment A* TPAs



The Type 1: TPA Screening can only apply if the project does *not* meet any of the following criteria:

1. Has total Floor Area Ratio (FAR) of less than 0.75.

Meets Criteria: Proposed project site plan (Attachment A) notes that FAR is +/-0.38, which is less than 0.75.

2. Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking).
Does Not Meet Criteria: Proposed project site plan (Attachment A) includes 468 parking spaces, which is exactly the amount of parking required by the City of Anaheim

3. Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization).
Not analyzed

4. Replaces affordable residential units with a smaller number of moderate- or high-income residential units.
Does Not Meet Criteria: The proposed project does not remove or replace any affordable residential units**.**

Because the proposed project has a FAR of +/-0.38, which is less than the FAR threshold criteria of 0.75, **the Type 1: TPA Screening is <u>not</u> appropriate for the project**.

<u>Type 2: Low VMT Area Screening</u>

Residential projects located within a low VMT-generating area may be presumed to have a less than significant impact. Low VMT-generating areas are defined in the City of Anaheim TIA Guidelines for CEQA as traffic analysis zones (TAZs) in the OCTAM travel forecasting model which produce VMT per service population that is 15 percent below the County average. The proposed project is located within a low VMT area (< -15% below the Orange County Average) as identified in *Attachment B* of the City of Anaheim TIA Guidelines for CEQA shown in **Figure 2**.

In addition, in accordance with the guidelines, the *Attachment B* TAZ VMT per service population data is applicable to the proposed project because the project is consistent with the existing land use within that TAZ. The proposed project is within OCTAM TAZ 370. Existing land use data for TAZ 370 from the OCTAM model is confirmed to be consistent with the proposed residential development project. Residential land uses (Single-Family Residential, Low-Density Multi-Family Residential, High-Density Multi-Family Residential, and Mobile Home) are the majority of land use in TAZ 370. A summary of land use in OCTAM TAZ 370 is shown in **Table 5**.

Figure 2: Project Location within *Attachment B* Low-VMT Areas

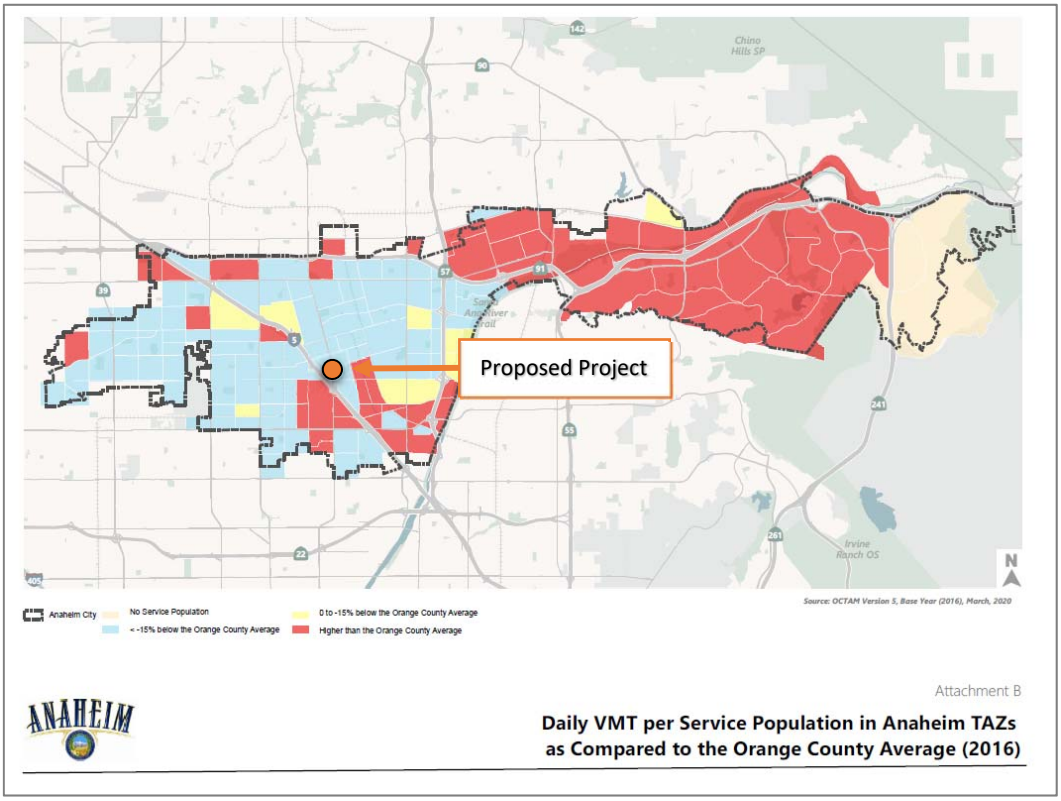


Table 5: Summary of Land Use for OCTAM TAZ 370

OCTAM TAZ 370		
Land Use Description	**Land Use Units**	**Land Use Quantity**
Single-Family Residential	DU	161
Low-Density Multi-Family Residential	DU	35
High-Density Multi-Family Residential	DU	313
Mobile Home	DU	136
Neighborhood Commercial	TSF	86
Resort Hotel	Room	157
Hotel/Motel	Room	209
Office - Low Density	TSF	174
Light Industrial	TSF	5
Elementary/Middle School	Stu	912
Day Care Center	Attendee	140
Convalescent Housing	Bed	80
Open Space	Acre	3

Source: OCTAM

Because the proposed project is within a low-VMT generating area, **the criteria for Type 2: Low-VMT Area Screening is met**.

Type 3: Project Type Screening

Some project types are presumed to have a less than significant transportation impact as their uses are local serving in nature. The TIA Guidelines for CEQA list the land uses that can be screened from project-level assessment, as they are presumed to have less than significant impact due to their local serving nature. The exempt land uses are:

- Local-serving K-12 schools
- Pocket, neighborhood and community parks as defined by the General Plan
- Day care centers
- Local-serving retail uses less than 50,000 square feet

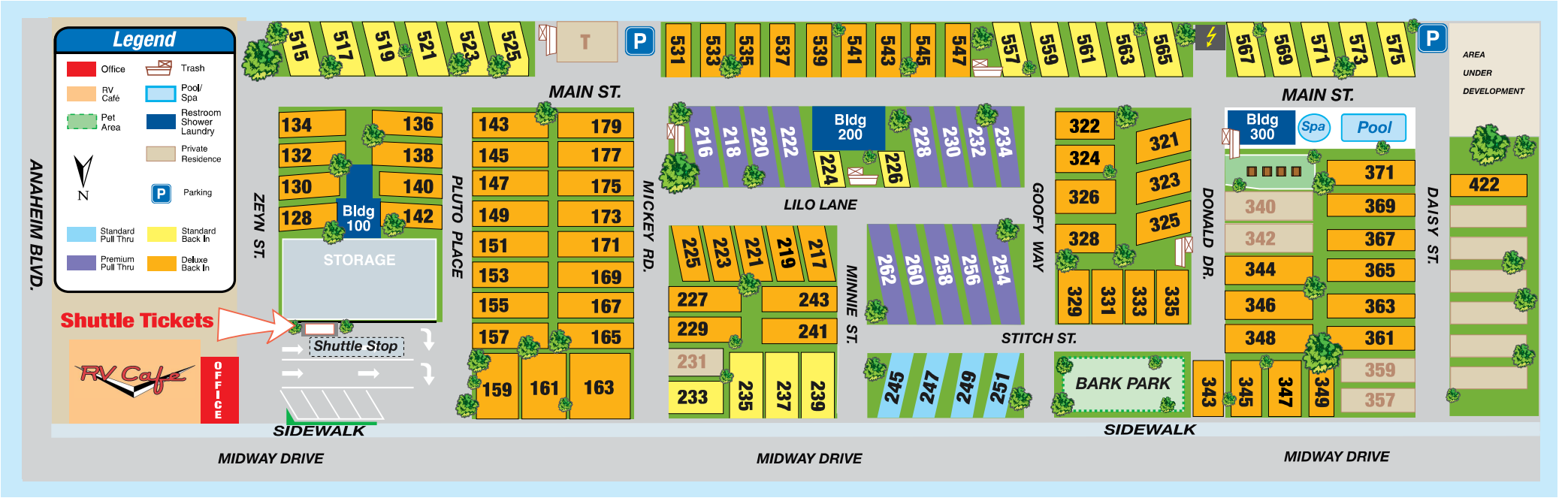
The proposed project is a residential land use and is not described by any of the exempt land uses above. Because the proposed project is not local-serving in nature, **the Type 3: Project Type Screening is not met**.

The proposed project meets the criteria of VMT Screen Type 2 because it is located in a Low VMT Area and the project is consistent with the existing land use within that TAZ. Therefore, **a VMT analysis is not required** as part of the TIA for the proposed project.

CONCLUSION

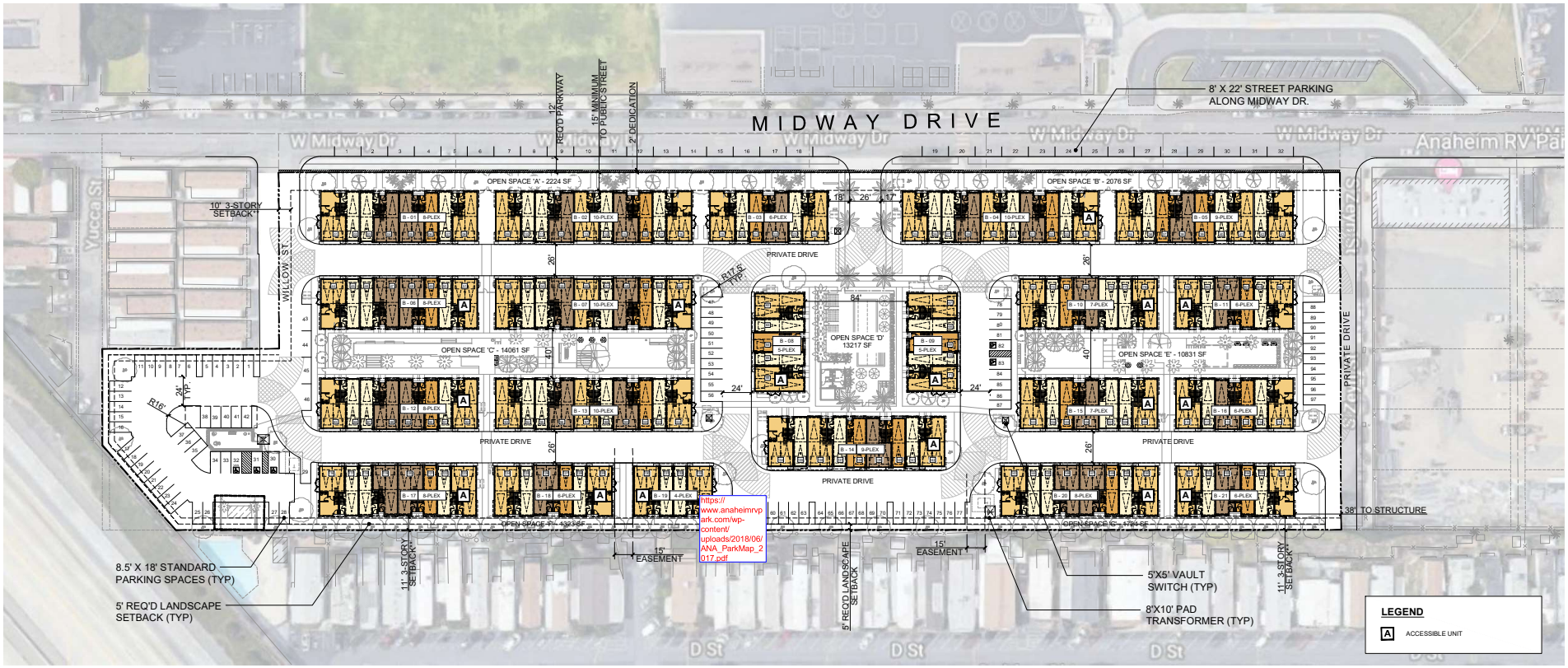
A **VMT evaluation will not be required** as part of the TIA because the proposed project is within a low-VMT area, making it exempt from project-level CEQA VMT assessment.

Appendix A: Anaheim RV Park Facilities Map



Source: https://www.anaheimrvpark.com/wp-content/uploads/2018/06/ANA_ParkMap_2017.pdf

Appendix B: Site Plan and Circulation Map



SITE SUMMARY

SITE AREA: ±6.4 ACRES (±279,951 SF)

REQUIRED ZONING: RM-4
HEIGHT: 40 FEET OR 3-STORIES MAYBE INCREASED TO 4-STORIES BY CONDITIONAL USE PERMIT. NO MORE THAN 8-FEET OF PROJECTION PER 18.40.030
DENSITY: 24.0 DU/AC

BUILDING COVERAGE: ±38%

3-STORY BUILDING SEPARATIONS: 18.06.090.050

	REQUIRED	PROPOSED
PRIMARY-PRIMARY:	40'	30'
PRIMARY-SECONDARY:	25'	20'
SECONDARY-SECONDARY:	15'	10'
SECONDARY-BLANK:	15'	10'
BLANK-BLANK:	15'	10'

STRUCTURAL SETBACKS: 18.06.090.030

	REQUIRED	PROPOSED
1-STORY:	10'	10'
3-STORY:	20'	10'

LANDSCAPE SETBACKS:

	REQUIRED	PROPOSED
FRONT:	15'	15'
INTERIOR PROPERTY LINE	5'	5'

NOTES**

PRIMARY: BUILDING WALLS THAT CONTAIN ENTRANCES AND EXITS AND/OR WINDOWS OPENING INTO LIVING SPACES WHERE MOST ACTIVITY OCCURS, SUCH AS DINING ROOMS, LIVING ROOMS, FAMILY ROOMS, KITCHENS AND BEDROOMS. BUILDING WALLS WITH BALCONIES ARE ALSO INCLUDED.

SECONDARY: BUILDING WALLS THAT CONTAIN WINDOWS OPENING INTO BATHROOMS, CLOSETS, STAIRWELLS AND CORRIDORS.

BLANK: BUILDING WALLS WITH NO WINDOW OPENINGS OR POINTS OF ACCESS.

**MIN. 15' SETBACK ABUTTING INTERIOR PL FOR SECONDARY OR BLANK WALL
**MIN. 20' SETBACK ABUTTING INTERIOR PL FOR PRIMARY WALL

UNITS

P1	59 UNITS -	(3 BD) - 2-CAR TANDEM GARAGE
P2	32 UNITS -	(3 BD) - 3-CAR GARAGE
P2-ADA	16 UNITS -	(3 BD) - 2-CAR GARAGE SIDE BY SIDE
P3	22 UNITS -	(3 BD) - 2-CAR TANDEM GARAGE
P4	27 UNITS -	(3 BD) - 3-CAR GARAGE
	156 UNITS:	TOTAL

STORAGE: 100 CUBIC FT

COMPOSITE TYPES

	QTY
4-PLEX	1
5-PLEX	2
6-PLEX	5
7-PLEX	2
8-PLEX	5
9-PLEX	2
10-PLEX	4
TOTAL	21

PARKING

1BD: 2 SP/UNIT
2 BD: 2.25 SP/UNIT
3 BD: 3 SP/UNIT
4 BD: 3.5 SP/UNIT

(REQUIREMENT INCLUDES GUEST WHICH ACCOUNT FOR 25% OF REQUIRED SPACES)

PARKING REQUIRED:
3 BD UNITS: 156 UNITS X 3 SP/UNIT = 468 SPACES REQ'D

PARKING PROVIDED:
371 SPACES - GARAGE
97 SPACES - OPEN PARKING
468 SPACES - TOTAL PROVIDED

PARKING DIMENSION:
90 DEGREES: 8.5' X 18' MINIMUM
PARALLEL: 8' X 22' MINIMUM
COVERED PARKING: 10' X 20' MINIMUM

NOTE:
MIDWAY DR. PARALLEL SPACES DO NOT COUNT TOWARDS REQUIRED PARKING

OPEN SPACE

PRIVATE RECREATIONAL-LEISURE AREA REQUIRED:
100 SF/ PATIO ON GROUND (8 FT MIN. DIMENSION)
70 SF/ UNIT ABOVE GROUND (7 FT MIN. DIMENSION)

COMMON RECREATIONAL-LEISURE AREA REQUIRED:
10 FT MIN. DIMENSION

OPEN SPACE REQUIRED:
156 UNITS X 200 SF/UNIT = 31,200SF REQUIRED

OPEN SPACE PROVIDED:
COMMON OPEN SPACE PROVIDED: 45,456SF (±291 SF/UNIT)
PRIVATE DECKS: ±500SF/UNIT
TOTAL OS PROVIDED (COMMON + PRIVATE): ±791 SF/UNIT

RECREATION-LEISURE AREAS:
200SF/UNIT (PRIVATE OR COMMON)

OPEN SPACE 'A'	2224 SF
OPEN SPACE 'B'	2076 SF
OPEN SPACE 'C'	14061 SF
OPEN SPACE 'D'	13217 SF
OPEN SPACE 'E'	10831 SF
OPEN SPACE 'F'	1323 SF
OPEN SPACE 'G'	1724 SF
	45456 SF

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Architecture + Planning
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Irvine, CA 92614
949.851.2133
ktgy.com

ENCORE CAPITAL MANAGEMENT

LEGACY - ANAHEIM
Anaheim, CA 190053

Plot Date: 05.28.2020
1st Submittal Date: 05.29.2020

SITE PLAN

0 20 40 80

A1.00

Appendix C: Proposed Project Reclassification Justification to Remove Mobile Home Park (MHP) Overlay Letter for CUP

ENCORE CAPITAL MANAGEMENT

July 21, 2020

Peter Lange
City of Anaheim
200 S Anaheim Boulevard
Anaheim, CA 92805

Re: **Justification for Reclassification**
Anaheim RV Park
200 West Midway Drive, Anaheim, CA 92805

Applications: **Conditional Use Permit**
TTM 19112
Reclassification to Remove Mobile Home Park (MHP) Overlay

Dear Mr. Lange,

On behalf of Encore Anaheim LLC, we thank you for the City of Anaheim's attentiveness and dedication to our proposed development of 156 residential townhomes at the Anaheim RV Park (the "Project"). We look forward to working with the City to deliver a quality community designed to enhance and revitalize this neighborhood within the City.

Reclassification to Remove MHP Overlay Request

Our Conceptual Development Review application (PRE2019-00004) requested a Reclassification to remove a Mobile Home Park (MHP) Overlay on the subject site. There have been no mobile home tenants or long-term residents on the property within the past two years and therefore no closure impact report or relocation can be conducted. The site operates as an RV Park where typical reservations are three to four nights per visit. We are requesting to reclassify the MHP Overlay on the site as it is no longer applicable to the current and future use.

Required Findings for Approval

1. **Identify the existing zone and the zone you are proposing to reclassify to.**

The site is subject to a Residential Opportunity Overlay Zone, providing "by-right" housing development consistent with the site's "Medium Density" residential General Plan land use designation (Anaheim Municipal Code 18.34.010) which permits multiple family dwellings. The Project will comply with the underlying zone and a Reclassification is being requested to remove an MHP Overlay.

2. **Indicate how the proposed zone is necessary or desirable for the development of the community and in harmony with the objective of the City's General Plan.**

As intended by the Residential Opportunity Overlay Zone, the site achieves the following objectives:

- Creating "by-right" opportunities for residential development consistent with the density allowed by the current General Plan designation.
- Implementing state laws satisfying Anaheim's requirement to demonstrate available land capacity and zoning tools to accommodate the City's projected need for housing.

- Providing a mix of housing types.
- Stimulating market-driven development investment.

3. Indicate how the proposed zone is compatible and complementary to existing permitted uses in the vicinity.

The Project complies with the City's Residential Opportunity Overlay Zone and is complementary with its surrounding uses which include older residential neighborhoods and an elementary school.

4. Indicate how the site is adequate in size and shape to accommodate development under the proposed zone and that adequate area is provided for all yards, setbacks, walls, landscaping, and other site development requirements in order to harmonize the potential use with existing or permitted uses in the same vicinity.

The Project meets all the development standards within the permitted residential use except for the minor modifications requested in the Conditional Use Permit.

5. Indicate how the site properly relates to streets and highways designed and improved to carry the type and quantity of traffic which may be generated in the immediate vicinity under the proposed zone.

The streets currently service existing residential neighborhoods along with 115 recreational vehicles coming in and out of the RV park. The Project will replace traffic generated by these large vehicles with smaller vehicles dispersed more evenly throughout the week, mitigating any impacts to the existing streets.

Thank you again for the opportunity to deliver this exciting new community to the local neighborhood. We look forward to Planning Commission approval of our submitted applications.

Please feel free to contact me with any questions or comments at julian.nan@encorefunds.com.

Sincerely,

Julian Nan
Vice President
Encore Anaheim LLC
Applicant

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