City of Calexico

CALEXICO HIGH SCHOOL TRAFFIC STUDY (DRAFT)

NOVEMBER 2021

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1.0 INTRODUCTION & ANALYSIS METHODOLOGY

1.1 PROJECT DESCRIPTION

This Traffic Impact Study (TIS) serves to identify and document the potential transportation impacts related to the relocation of the Calexico 9th Grade students from the 9th grade campus to the current Calexico High School located at 1030 Encinas Avenue, in the Year 2025, and recommend improvements/mitigation measures to the surrounding network including the State facility located at E. Birch Street, as appropriate.

Throughout this report, the 9th Grade Campus, located at 824 Blair Avenue, City of Calexico, Imperial County will be referenced as the "proposed project".

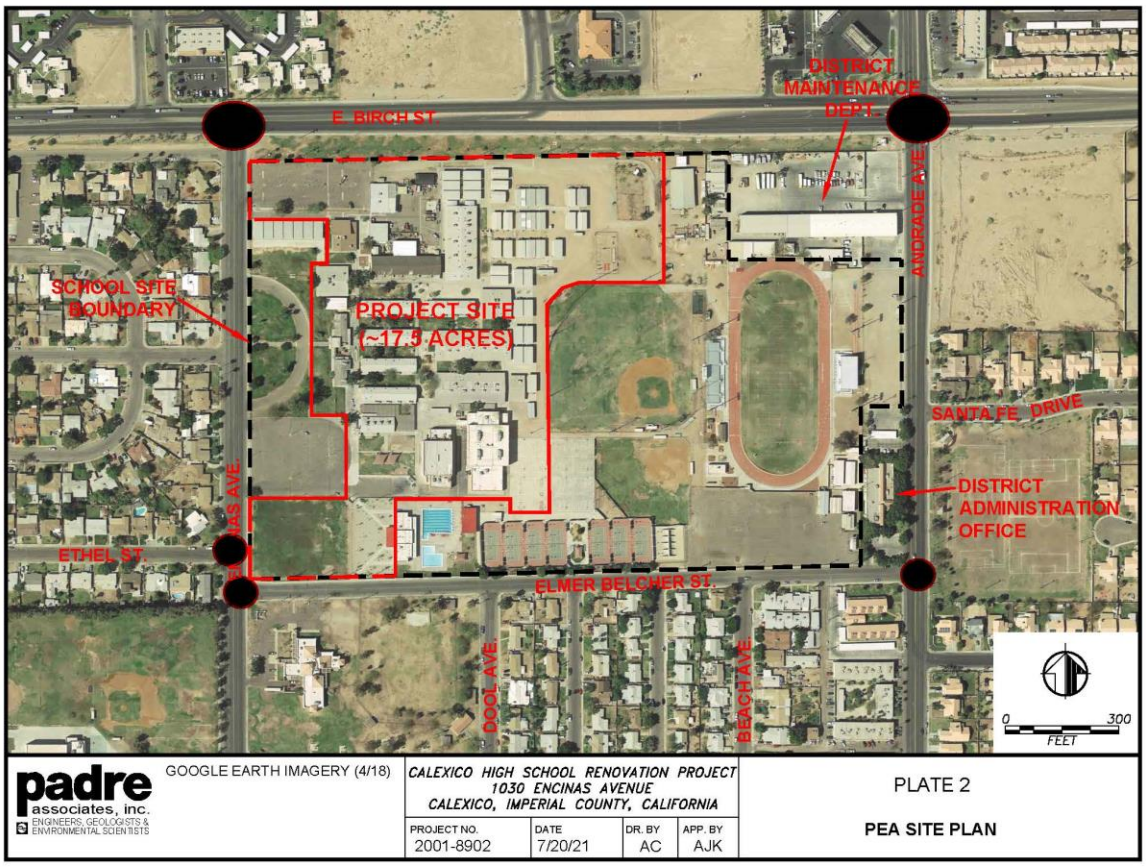
It is proposed that the Calexico Unified School District will relocate the 9th grade students, a total of 686, from the Calexico High School 9th grade Campus, located at 824 Blair Avenue (west of Encinas Avenue) to the existing Calexico High School, located at 1030 Encinas Avenue (East of Encinas Avenue).

The Calexico High School currently has 102 classrooms on campus, which includes students from 10th grade through 12th grade, a total of 2,267 students. The future master plan for the project, anticipated to be completed by the year 2025, encompasses most of the Calexico High School campus and consists of the comprehensive modernization and rehabilitation of the campus, including demolition, new construction, and renovation/modernization activities.

In 2025, the 9th grade students, a total of 686 will be relocated to the current Calexico high school site, resulting in a total student of 2,953. The project site is shown in Figure 1.1.

The entrance to the 17.5-acre high school is located on Encinas Avenue between E. Birch Street to the north and Elmer Belcher Street to the south. This will represent the access to the school to allow both ingress and egress for the project traffic. The school parking is located along Elmer Belcher Street south of the project campus. Circulation on the project site will be described in further detail in Section 3 of this report.

FIGURE 1.1 – PROJECT SITE PLAN



1.2 PROJECT STUDY AREA

The project study area was defined in coordination with the Calexico Unified School District at the kick off meeting conducted on October 26, 2021. The study area includes two (2) signalized study intersections along E. Birch Street/Andrade Avenue and E. Birch Street/Encinas Avenue, three (3) un-signalized intersections at Encinas Avenue & Ethel Street, Encinas Avenue & Elmer Belcher Street and Andrade Avenue & Elmer Belcher Street and an access to the high school access at Encinas Avenue.

The signalized study intersections are listed below in Tables 1.1. The study intersection locations are depicted in Figure 1.2.

Table 1.1 – Study Intersections

#	Intersection
1	E. Birch Street & Andrade Avenue (Signalized)
2	E. Birch Street & Encinas Avenue (Signalized)
3	Encinas Avenue & Ethel Street (Unsignalized)
4	Encinas Avenue & Elmer Belcher Street (Unsignalized)
5	Andrade Avenue & Elmer Belcher Street (Unsignalized)
6	High school access @ Encinas Avenue

FIGURE 1.2 – STUDY INTERSECTION LOCATIONS

1.3 STUDY SCENARIOS

In accordance with the "Calexico Design Procedures and Improvement Standards", Appendix K for Traffic Study requirements for the City of Calexico, traffic impacts associated with the development of the proposed project were analyzed for the weekday AM and PM peak hours. The analysis scenarios included within this study and, under which project impacts were identified, are listed below:

- Existing (2021) conditions;
- Opening Year (2025) Without Project conditions; and
- Opening Year (2025) With Project conditions;

Existing (2021) Conditions

Existing Turning movement counts were collected on a "typical" weekday (Tuesday through Thursday) during the AM (7:00 AM to 9:00 AM) and PM (2:30 PM to 4:30 PM) peak periods. The turning movement counts were collected at the six (6) study intersections, identified above, on October 21, 2021 by SurveyCount, a traffic count specialty firm.

Information pertaining to intersection characteristics, such as traffic control devices, approach lane configurations, and pedestrian, bicycle counts were identified at the study locations. The existing traffic controls, lane configurations, and LOS conditions at the study intersections are summarized later in Appendix A of this report.

Opening Year (2025) Without Project Conditions

The proposed project is anticipated to be completed and operational by 2025. Therefore, this year was selected as the analysis year for the Opening Year conditions. In order to account for traffic growth in the study area, an ambient/background traffic growth rate of one percent per year was applied to the Existing traffic volumes. Based on the information provided by the Unified School District, there are no future developments anticipated in the surrounding area. The ambient growth rate, related project traffic volumes, and study intersection LOS conditions for the Opening Year (2025) Without Project conditions are discussed in further detail in Section 5 of this report.

Opening Year (2025) With Project Conditions

The traffic volumes for the Opening Year With Project conditions were determined by superimposing the project volumes onto the Opening Year Without Project traffic volumes. The LOS conditions for this scenario at the study intersections were determined using these volumes and are discussed in Section 6 of this report.

1.4 INTERSECTION ANALYSIS METHODOLOGY

An analysis of existing and future weekday AM and PM peak hour traffic conditions at the study intersections was performed through the use of established traffic engineering techniques. This section outlines the methodologies used to develop traffic conditions for each analysis scenario and techniques used to determine delay and level-of-service (LOS) conditions at the study intersections

Intersection Level of Service Definition

For analysis of LOS at both signalized and unsignalized intersections, the City of Calexico required that the Highway Capacity Manual (HCM) methodology be the preferred method for identifying LOS conditions at study intersections. The HCM methodology determines intersection LOS based on operational delay. For signalized intersections, the operational delay corresponds to the overall delay for all movements at the

intersection. For unsignalized two-way stop intersections, the operational delay corresponds to the delay for the stop-controlled movements. The term LOS describes the quality of traffic flow. LOS values of A through C indicate excellent-to-good traffic flow conditions for both intersections and roadways and is the standard for the City of Calexico street network. LOS D corresponds with fair conditions that may experience substantial delay during portions of the peak hours, but without excessive backups. LOS D is the standard for Caltrans highway facilities. LOS E represents poor conditions, with volumes at or near the capacity of the intersection and long lines of vehicles that may have to wait through several signal cycles. LOS F is characteristic of failure (i.e., the intersection is overloaded, vehicular movements may be restricted or prevented, and delays and queue lengths become increasingly longer). The LOS criteria for the HCM methodology are shown in **Tables 1.2 and 1.3** for signalized and unsignalized intersections, respectively. These criteria were applied to the study intersections for this analysis.

Table 1.2 – Signalized Intersection Level of Service Definitions

Level of Service	Definition	Average Control Delay per Vehicle (in seconds)
A	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.	0.0 – 10.0
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	10.1 – 20.0
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	20.1 – 35.0
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	35.1 – 55.0
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	55.1 – 80.0
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	80.1 or more

SOURCES: Transportation Research Board, *Highway Capacity Manual* (6th Edition)

Table 1.3 – Unsignalized Intersection Level of Service Definitions

Level of Service	Definition	Average Approach Delay per Vehicle (in seconds)
A	EXCELLENT. No Vehicle waits longer than one red light and no approach phase is fully used.	0.0 – 10.0
B	VERY GOOD. An occasional approach phase is fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.	10.1 – 15.0
C	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.	15.1 – 25.0
D	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.	25.1 – 35.0
E	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.	35.1 – 50.0
F	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Tremendous delays with continuously increasing queue lengths.	50.1 or more

SOURCES: Transportation Research Board, *Highway Capacity Manual* (6th Edition)

Deficient Intersection Impacts

As defined in the City of Calexico Traffic Study Requirements, the City has established a LOS C or better as a minimum acceptable Level of Service for both intersections and roadways segment, except for Highway 111 and Highway 98 locations. A LOS D or better shall be maintained for these State Highway locations. Level of Service (LOS) criteria is contained in the Circulation Element of the General Plan. LOS D is acceptable for Highway 111 and Highway 98 south intersections. LOS that drops below these thresholds will be considered a significant impact if the delay or volume threshold contained in Table 1.4 below is exceeded.

Table 1.4 – City of Calexico Study Intersection Deficient Effect Thresholds

Level of Service	Deficient Effect Threshold Signalized Intersections	Deficient Effect Threshold Unsignalized Intersections
E	2.0 seconds	20 peak hour trips on a critical movement
F	1.0 second	5 peak hour trips on a critical movement

SOURCES: *City of Calexico Traffic Impact Study Requirements, Calexico Design Procedures, and Improvement Standards*

1.5 ROADWAY SEGMENT ANALYSIS METHODOLOGY

An analysis of daily traffic operations on roadway segments within the study area was also conducted for the two roadway segment locations previously outlined. The analysis of these roadway segments was conducted per standard traffic engineering methodologies. This section outlines the procedures used to collect traffic data, forecast future traffic volumes, and calculate volume to capacity (V/C) ratios for the study roadway segments.

Existing (2021) Conditions
Average Daily Traffic (ADT) counts were collected for a 24-hour period on a "typical" weekday (Tuesday through Thursday).

Project Trip Generation and Distribution
The project trip generation was calculated based on trip generation rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual* (11th Edition, 2021). The daily project trip generation was then multiplied by the project trip distribution percentages projected to travel along the study roadway segments to determine the project's volumes added to these roadways. The project trip distribution percentages were derived based on a review of enrolled student home addresses provided by the client. The methodology used to determine the project trip generation and trip distribution percentages is described in greater detail in Section 3 of this report.

Opening Year (2025) Without Project Conditions
Operations of the study roadway segments was also conducted for the Opening Year (2025) conditions. Roadway segment volumes for this scenario were developed by applying an ambient/background traffic growth rate of one percent per year to the Existing ADT volumes. In addition, daily traffic from related/area projects, including both approved and pending projects, was incorporated into the Opening Year baseline traffic volumes. The ambient growth rate, related project traffic volumes, and study segment V/C ratios for the Opening Year (2025) Without Project conditions are discussed in further detail in Section 4 of this report.

Opening Year (2025) With Project Conditions
The ADT volumes for the Opening Year With Project conditions were determined by superimposing the daily project volumes onto the Opening Year Without Project traffic volumes for the two roadway segments. The study roadway segment V/C ratios for this condition were determined using these volumes and are discussed in Section 5 of this report.

Roadway Segment Level of Service Definition
For analysis of operations along the two study roadway segments, the conditions are evaluated based on V/C ratios calculated from daily traffic volumes. Roadway capacities were determined based on standard daily roadway lane capacity assumptions for arterial streets and the number of travel lanes provided on each roadway segment. According to the City of Calexico General Plan, the existing roadway segment capacity for State Route 98/Encinas Avenue for a 4-lane roadway with painted median is 37,500. The daily volume traveling along each roadway segment was then divided by the total roadway capacity to determine the segment V/C ratio. Based on these ratios, a LOS value was assigned to the roadway segment per the HCM LOS criteria described below in Table 1.5.

Deficient Roadway Segment Impacts
As defined in the City's Traffic Study Requirements, the City has established a LOS C or better as a minimum acceptable Level of Service for both intersections and roadway segment, except for Highway 98 locations. A LOS D or better shall be maintained for this State Highway locations.

Table 1.5 – Urban Roadway Segment Level of Service Definitions

Level of Service	Definition	Volume-to-Capacity Ratio
A	EXCELLENT. Primarily free-flow operation. Vehicles are unimpeded in their ability to maneuver within the traffic stream. Minimal control delay at boundary intersections.	0.000-0.600
B	VERY GOOD. Reasonably unimpeded operation. The ability to maneuver within the traffic stream is slightly impeded and insignificant control delay at boundary intersections.	0.601-0.700
C	GOOD. Stable operation. Maneuvering within traffic stream is more restrictive and longer queues are present at boundary intersections.	0.701-0.800
D	FAIR. Less stable conditions. Small increases in flow may cause substantial increases in delay and decreases in travel speed.	0.801-0.900
E	POOR. Unstable operation and significant delay. Conditions may result from adverse progression, high volumes, and inappropriate signal timing at boundary intersections.	0.901-1.000
F	FAILURE. Flow at extremely low speeds. Congestion is likely to occur at boundary intersections, indicated by high delay and extensive queuing.	>1.000

SOURCES: Transportation Research Board, *Highway Capacity Manual* (6th Edition)

2.0 EXISTING CONDITIONS

2.1 EXISTING ROADWAY SYSTEM

The key roadways within the study area are described below. The discussion presented is limited to specific roadways that traverse the study intersections and serve the project site. Figure 2.1 illustrates the existing traffic controls and approach lane geometries at the study intersections.

E. Birch Street/Highway 98 This road is classified as a State Highway and is a primary east-west arterial roadway. According to the circulation element of the 2015 City of Calexico General Plan, this roadway is designated as a 4-lane painted median, primary road from Encinas Avenue to East Riviera Avenue within the study area. Currently, E. Birch Street provides two lanes in each direction and presents the northern boundary of the study area between Encinas Avenue and Andrade Avenue. It includes two signalized intersections at Encinas Avenue and Andrade Avenue.

Encinas Avenue is a north/south roadway, designated as a secondary two-lane roadway in the 2015 City's General Plan. Based on the field trip and google maps, Encinas Avenue is shown as a four-lane undivided roadway. The city has added traffic delineator posts along few sections of the road to guide vehicle traffic. This north-south roadway that bounds the western boundary of the study area, provides the primary access to the Calexico High School at Linda Street. The western side of the road is strictly residential. Parking was identified along the western side of the road by those residential properties.

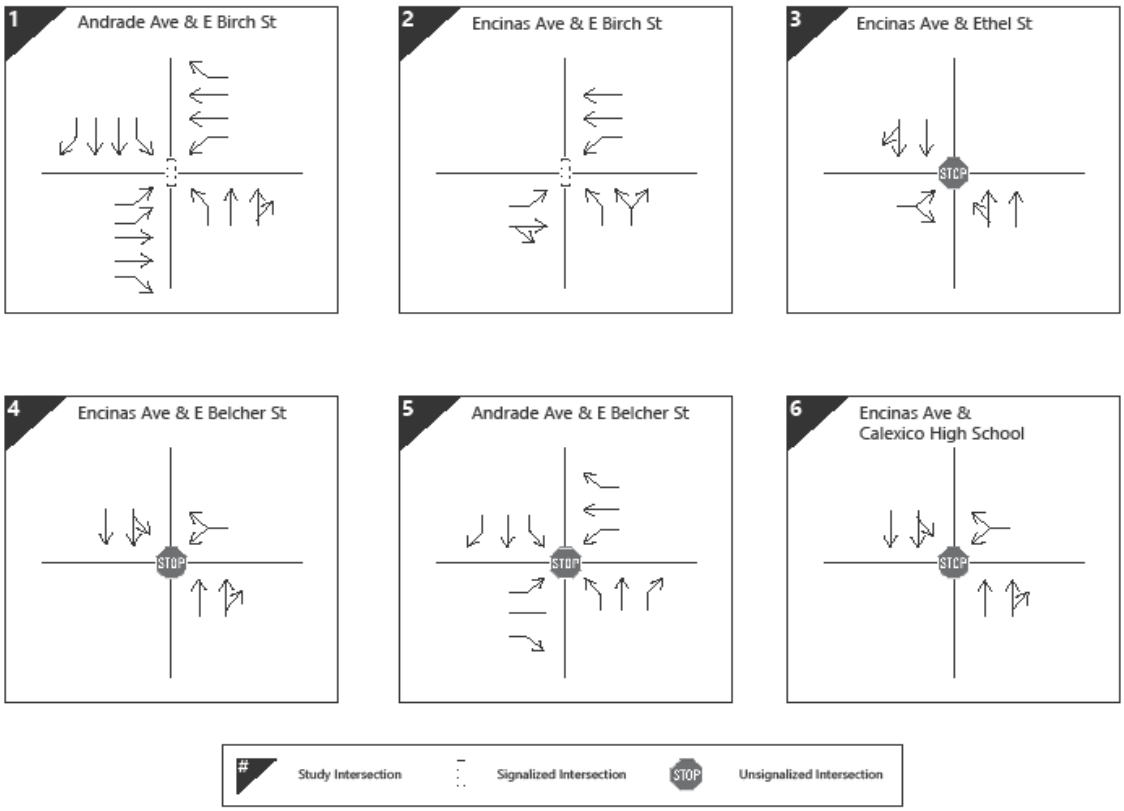
Encinas Avenue provides one left-turn lane and shared left-turn right-turn at its intersection with E. Birch Street, the north-west corner of the study area. Encinas Avenue intersects Ethel Street and Elmer Belcher Street at the southern corner of the study area. Both Ethel Street and Elmer Belcher Street are controlled by a stop sign.

Currently, transit services are no longer in service at this stretch of the road. However, a bus stop at Encinas and Elmer Belcher Street has been identified.

Elmer Belcher Street is a two-lane collector road that runs in the east west direction and bounds the study area from the south. This road intersects Encinas Avenue on the west and Andrade Avenue on the east as well as four other residential streets south of Belcher Street, Dool Avenue, Encanto Terrace, Encanto Drive and Beach Avenue which are all controlled by one-way stop signs. The intersection of Elmer Belcher with Beach Street has access to the Calexico High School parking located at the southeast corner of the study area.

Andrade Avenue is a major north-south roadway, designated as a 4-lane major arterial in the City's General Plan. This road represents the eastern boundary of the study area and is currently a 4-lane undivided roadway. It's intersection with Santa Fe on the east is controlled by a stop sign at Santa Fe Drive. It's indicated by the unified School District that the neighborhood traffic to the high school utilize that road. Andrade intersection with E. Birch Street/State Highway 98 is controlled by a traffic signal and allows for a protected left-turn lanes at each approach of the signalized intersection.

FIGURE 2.1 – EXISTING INTERSECTION GEOMETRY



2.2 TRANSIT SERVICE

Currently the Calexico Transit System, a local private transit operator that previously operated two lines (Line 1 and 2) within the City of Calexico is no longer in service throughout the whole city.

Imperial Valley Transit (IVT) provides local and regional services in Imperial County. None of the IVT transit services operate within the study area. Therefore, traffic generated by buses will not be an included in this traffic impact study.

Currently the only means of transit services to the school is by taxis.

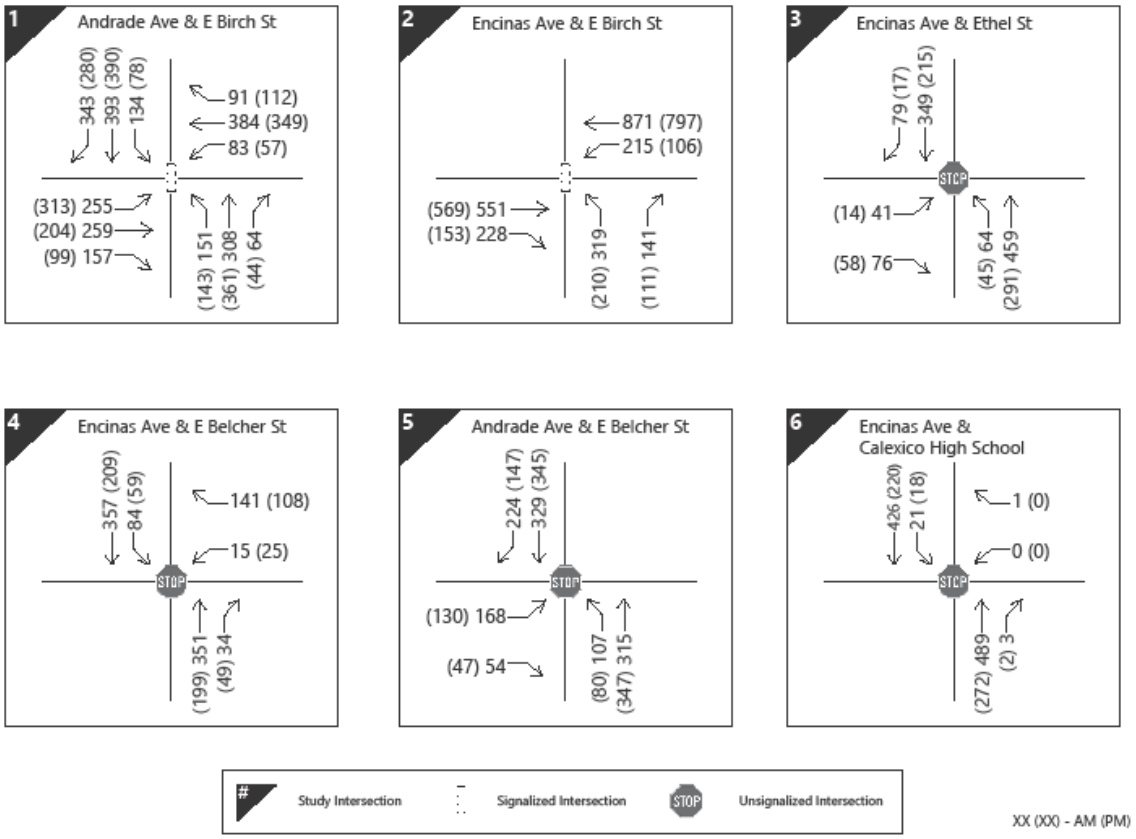
2.3 EXISTING TRAFFIC VOLUMES

Vehicle turning movement counts were collected at the study intersections on Thursday, October 21,2021 from 7:00 AM to 9:00 AM and 2:30 PM to 4:30 PM. Pedestrian and Bicycle trips were also identified at each intersection. It was indicated by staff that a significant number of student trips, approximately 60% of the trips, are by walking or biking to the school. No adjustments were made to the existing traffic counts to account for any reduction of student trips.

The weekday AM and PM peak hour traffic volumes were selected as the highest consecutive four 15-minute count volumes from the morning and afternoon/evening count periods studied. The AM peak hour is occurring from 7:30-8:30 am and the PM Peak hour is occurring from 2:45-3:45 pm.
The existing weekday AM and PM peak hour traffic turn movement volumes are illustrated in **Figure 2.2**.

The traffic count data sheets are provided in **Appendix A**.

FIGURE 2.2 – EXISTING - WEEKDAY AM/PM PEAK HOUR TRAFFIC VOLUMES



2.4 EXISTING INTERSECTION LEVELS OF SERVICE

Based on the intersection lane geometries depicted in Figure 2.1, and the existing traffic volumes illustrated in Figure 2.2, the intersection delay and level of service (LOS) values were determined for each of the study intersections during the weekday AM and PM peak hours. Peak hour factors (PHFs) based on the existing counts were applied at the intersections.

Table 2.1 summarizes the delay and LOS values for the existing traffic conditions.

Table 2.1 – Intersection Performance- Existing Conditions

Study Intersections		AM Peak Hour		PM Peak Hour	
		Delay in Seconds	LOS	Delay in Seconds	LOS
1	E. Birch Street & Andrade Avenue	11.4	B	11.1	B
2	E. Birch Street & Encinas Avenue	8.9	A	6.4	A
3	Encinas Avenue & Ethel Street	2.3	A	1.7	A
4	Encinas Avenue & Elmer Belcher Street	2.7	A	3.0	A
5	Andrade Avenue & Elmer Belcher Street	13.6	B	12.1	B
6	High school access @ Encinas Avenue	0	A	0	A

LOS = Level-of-Service

As shown in Table 2.1, all study intersections are currently operating at LOS B or better during the weekday AM and PM peak hours, which is acceptable by the City's Traffic Study Requirements.

The existing traffic analysis scenario worksheets are provided in Appendix B of this report.

2.5 EXISTING ROADWAY SEGMENT LEVELS OF SERVICE

According to the City of Calexico General Plan, the existing roadway segment capacity for State Route 98/Encinas Avenue for a 4-lane roadway with painted median is 37,500. Based on the Average Daily Traffic on Encinas Avenue, the V/C ratio is calculated in Table 2.2 for the existing conditions.

Table 2.2 – Roadway Segment Performance- Existing Conditions

Study Roadway Segments		ADT	Capacity	V/C Ratio	LOS
1	Encinas Avenue, south of E Birch Street	8,968	37,500	0.24	A
2	Encinas Avenue, north of Ethel Street	8,660	37,500	0.23	A

ADT = Average Daily Traffic
V/C = Volume to Capacity
LOS = Level-of-Service

As shown in Table 2.2, both study roadway segments are currently operating at LOS A.

3.0 PROPOSED PROJECT TRAFFIC

This section defines the traffic that is expected to be generated by the proposed project. The estimation of traffic volumes is completed through a three-step process, which includes trip generation, trip distribution, and trip assignment.

3.1 PROJECT TRIP GENERATION

The trip generation for the additional trips generated by the proposed project (the additional 686 students), was calculated using trip generation rates published in the ITE *Trip Generation Manual* (11th Edition, 2021). The trip generation equations and rates in the ITE manual are nationally recognized and are used as the basis for most transportation-related studies conducted in the surrounding region. Information was obtained from the *Trip Generation Manual* for ITE Land Use Code (LUC) 530, High School. The project trip generation was conducted per the student-based trip generation rates based on the additional school's enrollment. The General Urban/Suburban setting trip rates were selected for this use, given that those rates are based on vehicle trip data collected at sites with little transit, pedestrian, and bicycle accessibility. To be conservative, the project trip generation estimation did not include transit/walk-in trip adjustments.

The proposed project trip generation summary is presented in **Table 3.1**. As analyzed, the project would generate 1,392 daily trips, including 357 weekday AM peak hour trips (239 inbound trips and118 outbound trips) and 96 weekday PM peak hour trips (46 inbound trips and 50 outbound trips).

Table 3.1 – Project Trip Generation

Land Use	ITE Code	Intensity		Weekday						
				Average Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Trip Generation Rates										
High School	530	1	student	2.03	67%	33%	0.52	48%	52%	0.14
Estimated Trips										
High School	530	686	students	1,392	239	118	357	46	50	96

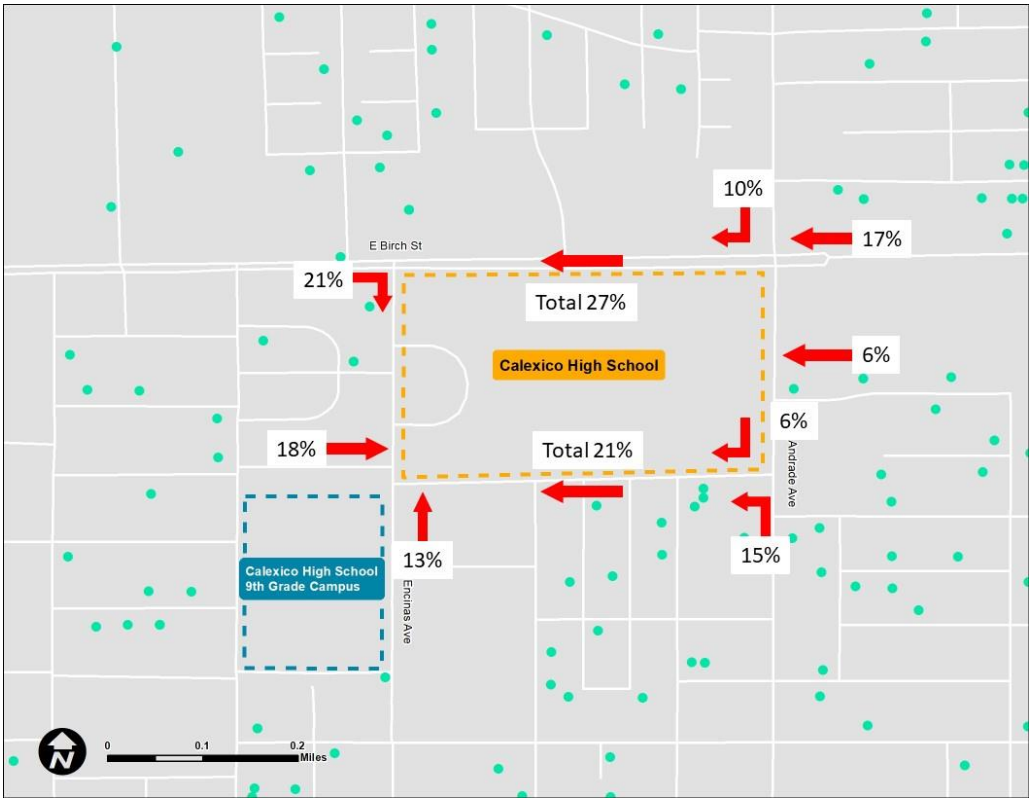
Source of Trip Generation Rates: ITE, 10th Edition

3.2 PROJECT TRIP DISTRIBUTION

Trip distribution is the process of assigning the direction from which traffic will access the project site. Typically, trip distribution is dependent upon the land use characteristics of the project, local roadway network, and the general location of other land uses to and from which project trips would originate or terminate. The local roadway network and the land use characteristics for this project is not changing by relocating students from the 9th grade campus to the Calexico high school located on 1030 Encinas Avenue. In order to find the impact of relocating the 9th grade students onto the existing intersections, it was important to find where those trips are being originating. The trip distribution for the relocated students was based on the actual home address for the 9th grade students. The home addresses for each of the 9th grade students were obtained from the Calexico High School district and assigned on a GIS map. Then based on the distribution of those locations, the percentage of trips originating from those locations with a destination to the Calexico High School was determined.

It was determined, based on the information above, that 10% of the student trips are originating from the north, 28% from the south, 23% from the East and 39% from the west, as shown in **Figure 3.1**.

Figure 3.1 – Geographic Trip Distribution Percentages



3.3 SCHOOL OPERATION PLAN

The Calexico High School Bell schedule for a regular day, starts at 8:00 AM till 3:10 PM end time. Students are allowed to arrive starting at 7:00 AM and stay after end time. Due to after school programs, students leave the campus at various times between 3:10 PM and 4:30 PM.

During the morning drop-off and afternoon pick-up hours, vehicles will enter via Encinas Avenue, the main access to the school. Traffic either arrive from the north via E Birch Street or from the south then access the eastern driveway to the school. Students are dropped off or picked up at Encinas Avenue in front of the school. Several students park at the student parking lot located along Encinas Avenue south of the school entrance or park at the south-east parking lot off Elmer Belcher Street.

3.4 PROJECT SITE CIRCULATION

The new Calexico high school plan will have three access driveways to the school. The main Entrance/Exit to the school is located on the east side of Encinas Avenue and represents the gateway to the Calexico High School. This access leads to two student parking lots on each side of the main entrance path. This circular driveway access is designed to allow for a safe and smooth flow of traffic while dropping off and picking up students. The other two access driveways are for the parking lots located on Encinas Avenue

and Elmer Belcher Street. The Encinas parking lot, located north of the main school entrance is designated for the teachers.

3.5 PROJECT TRIP ASSIGNMENT

Based on the trip generation and trip distribution assumptions described above, the proposed project traffic was assigned to the roadway system. Vehicles were assumed to approach the project site from both the north and the south and exit to the north along northbound Encinas Avenue, based on the school's master plan. The geographic project trip distribution percentages presented previously in Table 3.2 were disaggregated and assigned to specific routes and intersections within the study area that are expected to be used for project access/egress. All vehicles enter the project site by making a right-turn into the project site; vehicles arriving from the north were assumed to continue south past the project site and make a U-turn at Encinas Avenue. Furthermore, vehicles arriving from the south are assumed to leave the site via a right turn onto Encinas Avenue, and then proceed to make either right or left on E Birch Street. The project assignment percentages at the study intersections are shown in **Figure 3.3**. These inbound and outbound percentages were then applied to the project trip generation estimates previously shown in Table 3.1 to determine the project traffic volumes added to the study intersections. **Figure 3.4** illustrates the proposed project trips at the study intersections during the weekday AM and PM peak hours.

FIGURE 3.2 – CALEXICO HIGH SCHOOL CIRCULATION PLAN

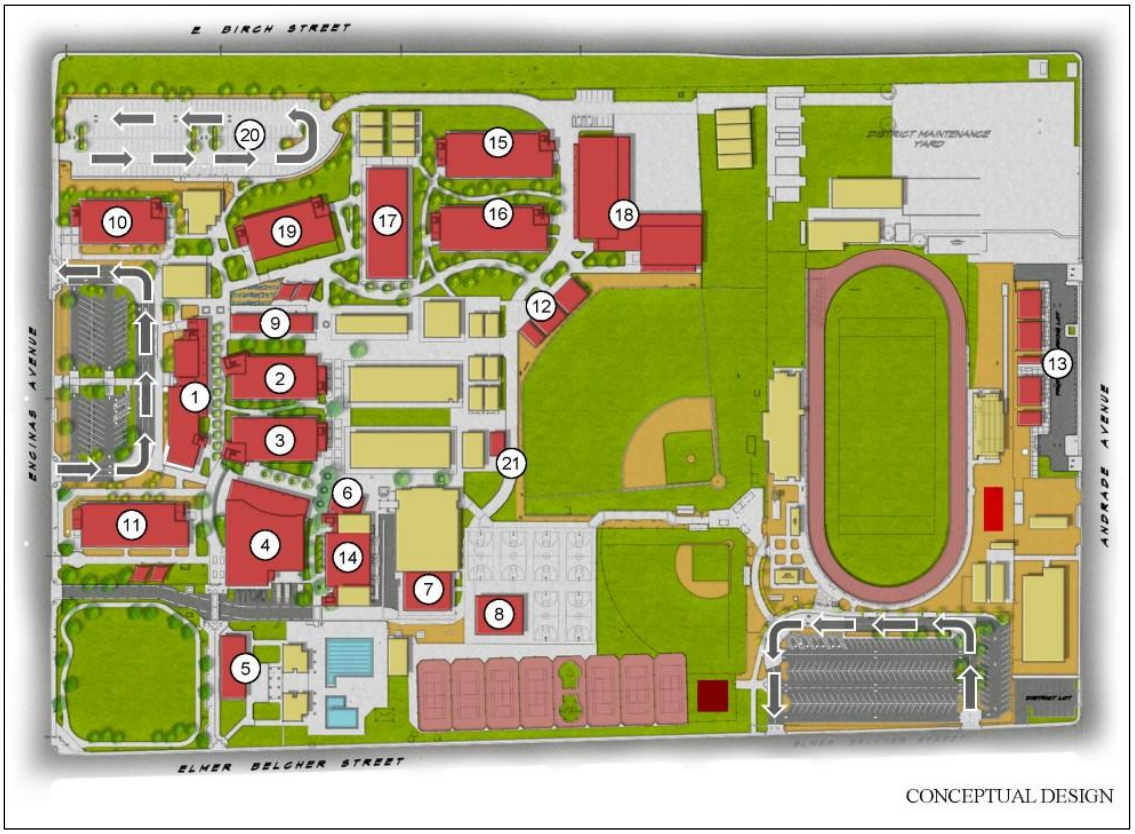


FIGURE 3.3 – PROPOSED PROJECT TRIP DISTRIBUTION

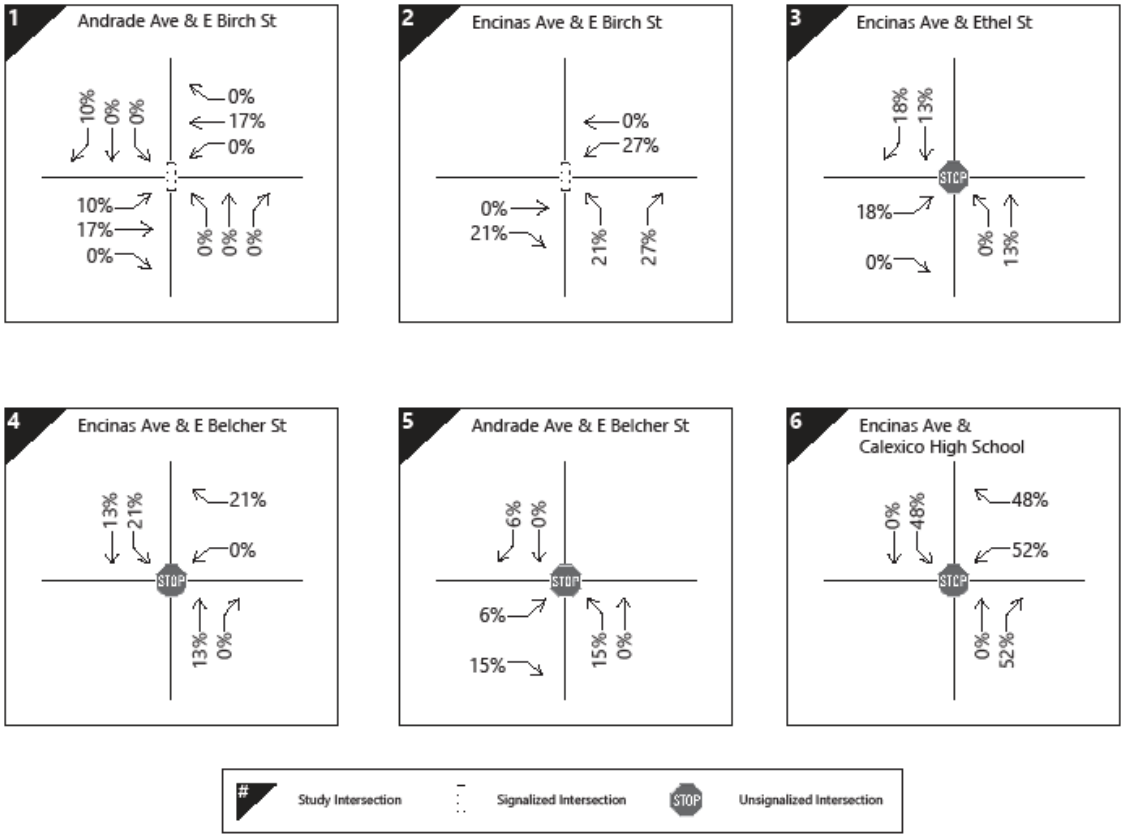
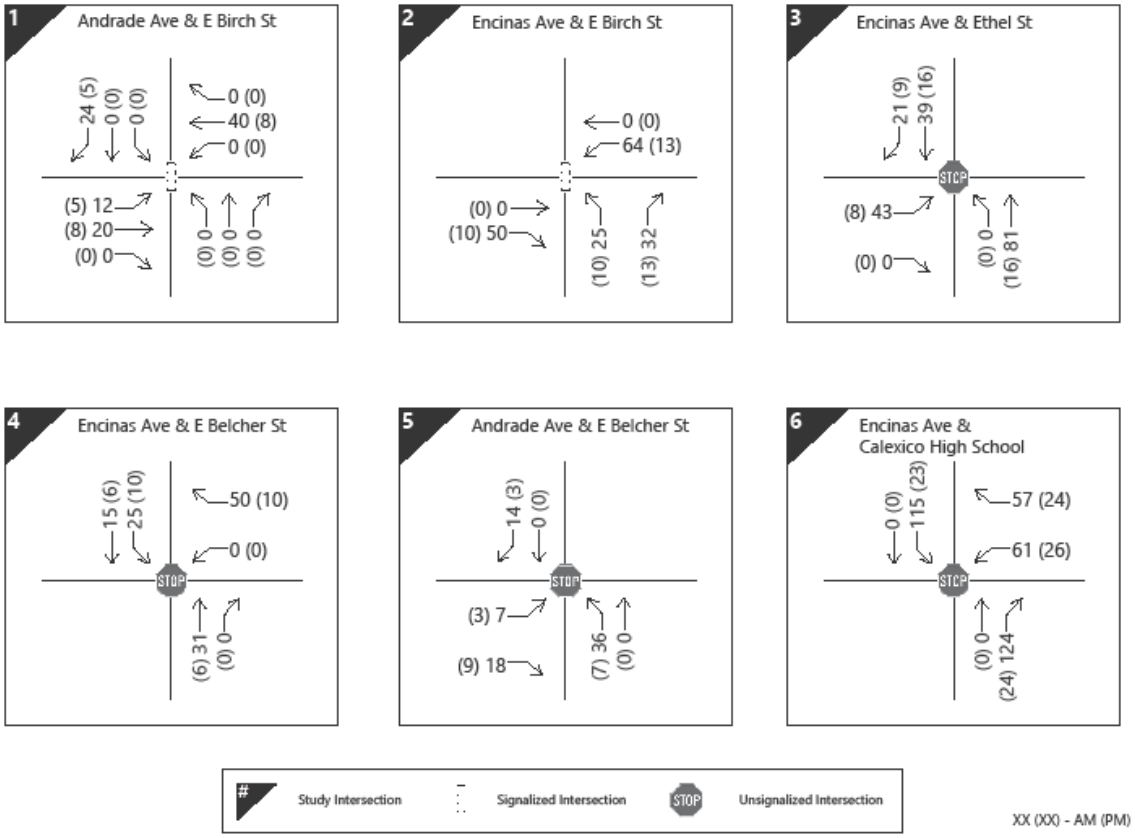


FIGURE 3.4 – PROPOSED PROJECT TRIP ASSIGNMENT – WEEKDAY AM/PM PEAK HOUR TRAFFIC VOLUMES



4.0 OPENING YEAR "WITHOUT" PROJECT CONDITIONS

This section evaluates the future traffic conditions for the existing high school study area prior to the relocation of the 9th grade students to this school. This means that the analysis does not include the proposed project traffic, which is the traffic generated by relocating the 9th grade students. The year 2025 was selected for analysis of opening year conditions since the high school future master plan is anticipated to be completed and operational by the end of 2024.

4.1 AMBIENT GROWTH

In discussions with the City of Calexico staff and the Calexico Unified School District, it was agreed that no future development will take place in the next few years that may generate additional traffic resulting in an impact to the study area. Meanwhile, there are no expansions nor geometric changes to the current intersections or roadway network within the study area. However, to account for regional population and employment growth outside of the study area, an ambient/background traffic growth of one percent (1%) per year was applied to the existing turning movement and ADT counts. There are three years until project opening in year 2025, the growth factor used is 1.00 for the opening year scenarios. This ambient growth rate of one percent was confirmed with the Calexico Unified School District.

4.2 OPENING YEAR "WITHOUT" PROJECT - INTERSECTION LEVELS OF SERVICE

The Opening Year (2025) "Without" Project traffic volumes for the weekday AM and PM peak hours are illustrated on **Figure 4.1**.

Table 4.1 summarizes the resulting delay and LOS values at the study intersections during the weekday AM and PM peak hours for the Opening Year Without Project traffic conditions. The Opening Year Without Project traffic analysis worksheets for this scenario are provided in Appendix C of the report.

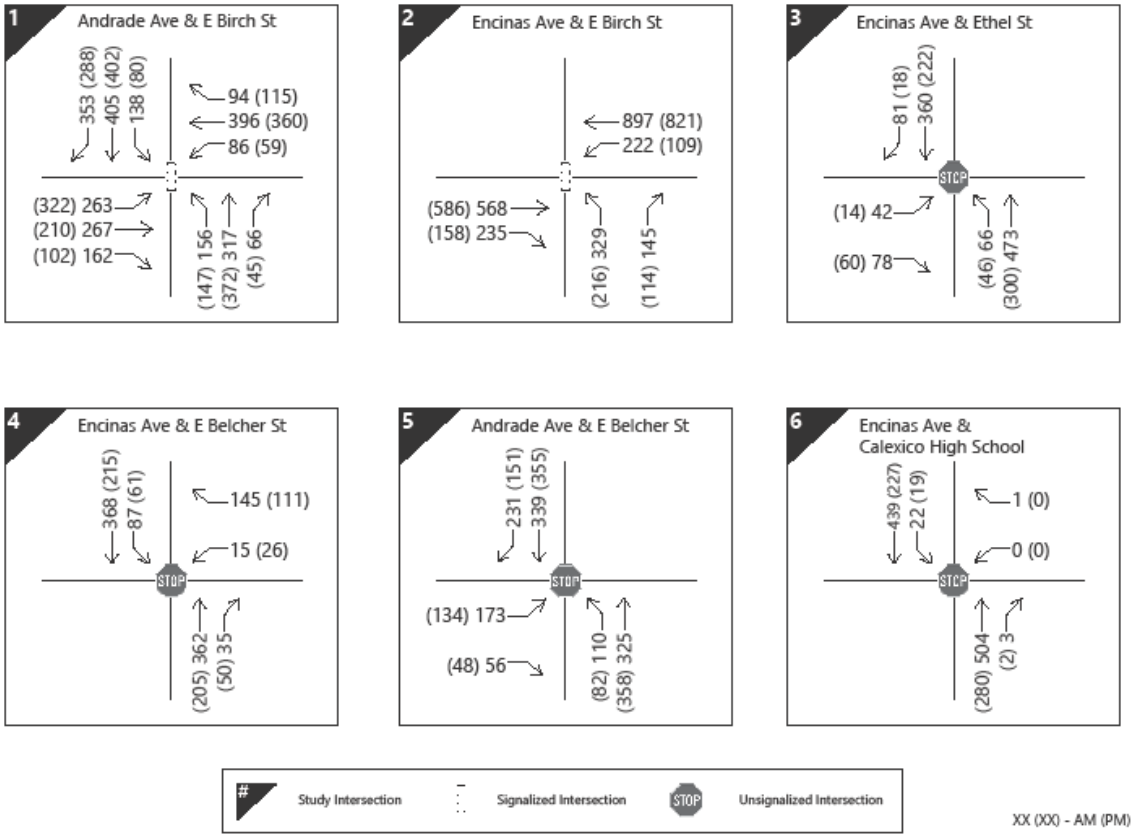
Table 4.1 – Intersection Performance- Opening Year Without Project Conditions

Study Intersections		AM Peak Hour		PM Peak Hour	
		Delay in Seconds	LOS	Delay in Seconds	LOS
1	E. Birch Street & Andrade Avenue	11.6	B	11.2	B
2	E. Birch Street & Encinas Avenue	9.4	A	13.0	B
3	Encinas Avenue & Ethel Street	2.3	A	1.7	A
4	Encinas Avenue & Elmer Belcher Street	2.7	A	3.0	A
5	Andrade Avenue & Elmer Belcher Street	14.1	B	12.5	B
6	High school access @ Encinas Avenue	0.2	A	0.3	A

LOS = Level-of-Service

As shown in Table 4.1, all study intersections are expected to operate at LOS B or better during the weekday AM and PM peak hours under opening year conditions.

FIGURE 4.1 – OPENING YEAR WITHOUT PROJECT – WEEKDAY AM/PM PEAK HOUR TRAFFIC VOLUMES



4.3 OPENING YEAR WITHOUT PROJECT ROADWAY SEGMENT LEVELS OF SERVICE

Table 4.2 summarizes the ADT volumes and V/C ratios at the two study roadway segments for the Opening Year Without Project traffic conditions.

Table 4.2 – Roadway Segment Performance- Opening Year Without Project Conditions

Study Roadway Segments		ADT	Capacity (at LOS E)	V/C Ratio	LOS
1	Encinas Avenue, south of E Birch Street	9,240	37,500	0.25	A
2	Encinas Avenue, north of Ethel Street	8,922	37,500	0.24	A

ADT = Average Daily Traffic
V/C = Volume to Capacity
LOS = Level-of-Service

As shown in Table 4.2, both study roadway segments are expected to operate at LOS A under Opening Year (2025) Without Project conditions.

5.0 OPENING YEAR WITH PROJECT CONDITIONS

This section documents opening year traffic conditions at the study locations with the addition of project-generated traffic. Traffic volumes for these conditions were derived by adding project trips to the Opening Year (2025) Without Project traffic volumes.

The Calexico Unified School District plan to finalize the completion of the future master plan for the Calexico High School is by the end of 2024. This is the time when the 9th grade students will be relocated to the current location of the high school east of encinas. The Opening Year (2025) With Project traffic volumes for the weekday AM and PM peak hours are illustrated on **Figure 5.1**.

5.1 OPENING YEAR WITH PROJECT INTERSECTION LEVELS OF SERVICE

The resulting delay and LOS values at the study intersections during the weekday AM and PM peak hours for the Opening Year With Project traffic conditions are summarized in **Table 5.1**. The Opening Year With Project traffic analysis worksheets for this scenario are provided in Appendix D of the report.

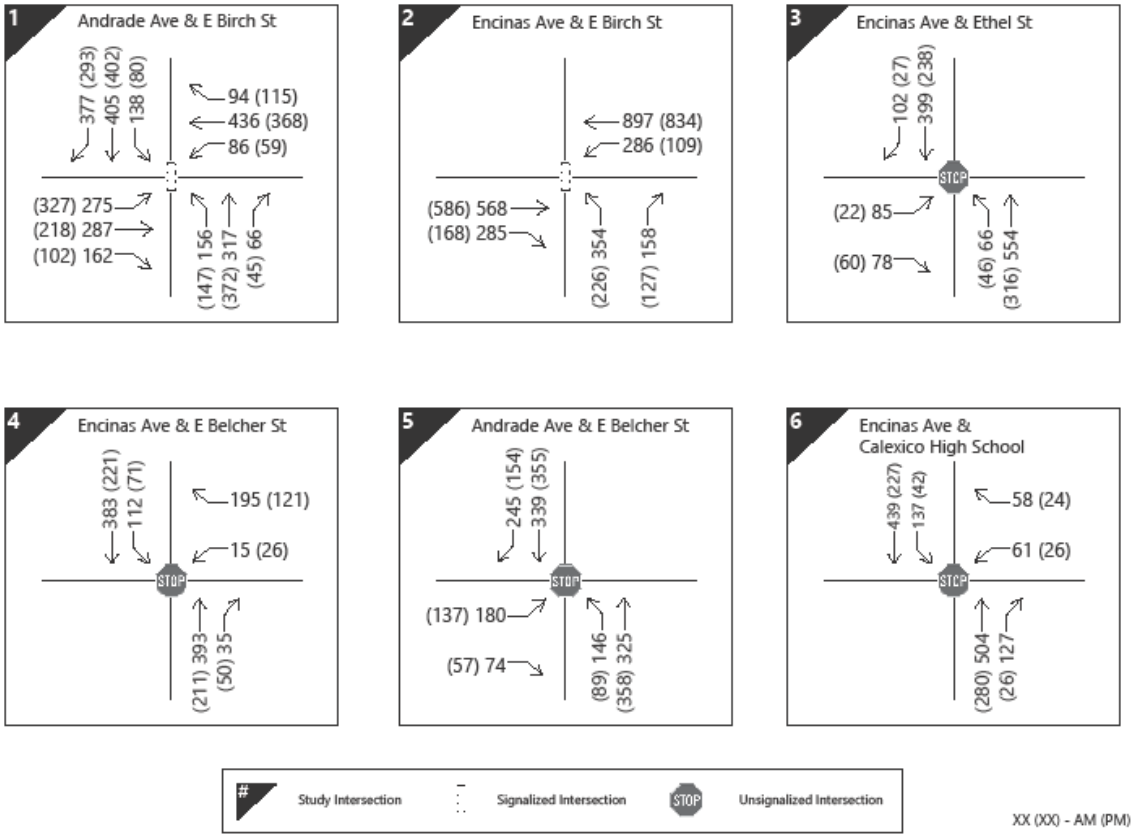
Table 5.1 – Intersection Performance- Opening Year With Project Conditions

Study Intersections		AM Peak Hour		PM Peak Hour	
		Delay in Seconds	LOS	Delay in Seconds	LOS
1	E. Birch Street & Andrade Avenue	11.9	B	11.3	B
2	E. Birch Street & Encinas Avenue	15.1	B	13.1	B
3	Encinas Avenue & Ethel Street	3.9	A	1.9	A
4	Encinas Avenue & Elmer Belcher Street	3.5	A	3.2	A
5	Andrade Avenue & Elmer Belcher Street	15.5	C	12.8	B
6	High school access @ Encinas Avenue	4.6	A	1.5	A

LOS = Level-of-Service
**Note: Driveways are analyzed as unsignalized intersections*

As shown in Table 5.1, all study intersections are expected to operate at LOS C or better during the weekday AM and PM peak hours under opening year conditions.

FIGURE 5.1 – OPENING YEAR WITH PROJECT – WEEKDAY AM/PM PEAK HOUR TRAFFIC VOLUMES



5.2 OPENING YEAR WITH PROJECT ROADWAY SEGMENT LEVELS OF SERVICE

Table 5.2 summarizes the ADT volumes and V/C ratios at the two study roadway segments for the Opening Year With Project traffic conditions.

Table 5.2 – Roadway Segment Performance- Opening Year With Project Conditions

Study Roadway Segments		ADT	Capacity	V/C Ratio	LOS
1	Encinas Avenue, south of E Birch Street	9922	37,500	0.26	A
2	Encinas Avenue, north of Ethel Street	9632	37,500	0.26	A

ADT = Average Daily Traffic
V/C = Volume to Capacity
LOS = Level-of-Service

As shown in Table 5.2, both study roadway segments are expected to operate at LOS A under Opening Year (2025) With Project conditions.

6.0 PROJECT TRAFFIC IMPACTS

6.1 DETERMINATION OF TRAFIC IMPACTS

According to the City's Traffic Study Requirements, in order to maintain consistency with the City's General Plan, study intersections and roadway segments forecast to operate at LOS D or worse shall be identified as deficient intersections. Additionally, the determination of deficient intersections shall be based on the increase in delay at study intersections for each of the analysis years. The delay thresholds shown previously in Table 1.6 will be used to identify a deficient intersection effect. These thresholds do not apply for LOS A through C for projects which are consistent with the General Plan.

These criteria were implemented by first determining which intersections would operate at LOS D or worse during one or both peak hours after completion of the project. Then, if the increase in delay at the intersection is projected to exceed the thresholds defined in the City's TIA Guidelines, a deficient effect was identified at the intersection. If the project is determined to have a deficient effect based on the previously outlined criteria, improvements to the study intersections shall be identified to offset the increase in delay resulting from the project. A fair share cost calculation should be conducted for the project's contribution to these improvements. Further, if study locations are determined to operate at LOS D or worse, feasible improvements for the circulation system shall be recommended.

6.2 PROJECT TRAFFIC IMPACTS – OPENING YEAR WITH PROJECT CONDITIONS

A summary of the project impacts under opening year conditions (2025) is shown in **Table 6.1**. Traffic impacts resulting from the development of the proposed project were determined by comparing the delay results for the Opening Year (2025) Without Project scenario to the delay results for the Opening Year (2025) With Project scenario.

As shown in Table 6.1, following the relocation of the 9th grade campus of the proposed project, the following intersections are expected to have an insignificant increase in delay with the project condition. However, even with that slight increase, all intersections will operate at acceptable LOS during weekday peak hours under future conditions:

- E. Birch Street & Encinas Avenue – dropped from LOS A to LOS B during the weekday AM peak hour
- Andrade Avenue & Elmer Belcher Street – dropped from LOS B to LOS C during the weekday AM peak hour

Of these intersections, the increase in delay resulting from the project does not exceed the City's thresholds at any locations, and therefore none are considered to have a deficient impact under future conditions.

Table 6.1 – Determination of Project Intersection Impacts- Opening Year (2025) Conditions

Study Intersections		Peak Hour	Opening Year (2025) w/o Project Conditions		Opening Year (2025) w/ Project Conditions		Change in Delay	Deficient Impact?
			Delay in Seconds	LOS	Delay in Seconds	LOS		
1	E. Birch Street & Andrade Avenue	AM	11.6	B	11.9	B	0.3	No
		PM	11.2	B	11.3	B	0.1	No
2	E. Birch Street & Encinas Avenue	AM	9.4	A	15.1	B	5.7	No
		PM	13.0	B	13.1	B	0.1	No
3	Encinas Avenue & Ethel Street	AM	2.3	A	3.9	A	1.6	No
		PM	1.7	A	1.9	A	0.2	No
4	Encinas Avenue & Elmer Belcher Street	AM	2.7	A	3.5	A	0.8	No
		PM	3.0	A	3.2	A	0.2	No
5	Andrade Avenue & Elmer Belcher Street	AM	14.1	B	15.5	C	1.4	No
		PM	12.5	B	12.8	B	0.3	No
6	High school access @ Encinas Avenue	AM	0.2	A	4.6	A	4.4	No
		PM	0.3	A	1.5	A	1.2	No

LOS = Level-of-Service

Table 6.2 provides a summary of the change in V/C ratios along the two roadway segments between Opening Year Without and With Project conditions. As shown, both study segments are expected to operate at LOS A under both opening year conditions. Thus, no improvements are necessary along the roadway segments.

Table 6.2 – Determination of Project Roadway Segment Impacts- Opening Year Conditions

Study Roadway Segments		Opening Year (2025) w/o Project Conditions		Opening Year (2025) w/ Project Conditions		Change in V/C Ratio	Deficient Impact?
		V/C Ratio	LOS	V/C Ratio	LOS		
1	Encinas Avenue, south of E Birch Street	0.25	A	0.26	A	0.01	No
2	Encinas Avenue, north of Ethel Street	0.24	A	0.26	A	0.02	No

7.0 VMT ASSESSMENT

Vehicle Miles Traveled (VMT), is a metric that accounts for the number of vehicle trips generated and the length or distance of those trips.

Senate Bill 743 (SB 743) was approved by California legislature in September 2013. SB 743 requires changes to California Environmental Quality Act (CEQA), specifically directing the Governor's Office of Planning and Research (OPR) to develop alternative metrics to the use of vehicular "Level of Service" (LOS) for evaluating transportation projects. OPR has prepared a technical advisory ("OPR Technical Advisory") for evaluating transportation impacts in CEQA and has recommended that Vehicle Miles Traveled (VMT) replace LOS as the primary measure of transportation impacts. The Natural Resources Agency has adopted updates to CEQA Guidelines to incorporate SB 743 that requires VMT for the purposes of determining a significant transportation impact under CEQA.

The OPR Technical Advisory provides guidance for setting screening thresholds and thresholds of significance that can be used to identify when a proposed land use project is anticipated to result in a less than significant impact without conducting a more detailed level analysis. The following activities generally will not require a TIA that includes VMT. This presumption is based on the substantial evidence provided in the OPR Technical Advisory supporting SB 743 implementation or is related to projects that are local-serving which, by definition, would decrease the number of trips or the distance those trips travel to access the development (and are VMT reducing projects).

Projects located in a Transit Priority Areas (TPA) (as defined later in this guidance)
Projects located in a low-VMT generating area (as defined later in this guidance)

- K-12 schools
- Local parks
- Day care centers

Secondly, the project does not result in an increase in students. It reflects a 1-2 block change in location for the 9th grade students.

7.1 SUMMARY

As a K-12 school, this project is exempt from VMT analysis and is considered by OPR to have a less than significant impact on transportation and circulation.

8.0 ANALYSIS SUMMARY AND CONCLUSIONS

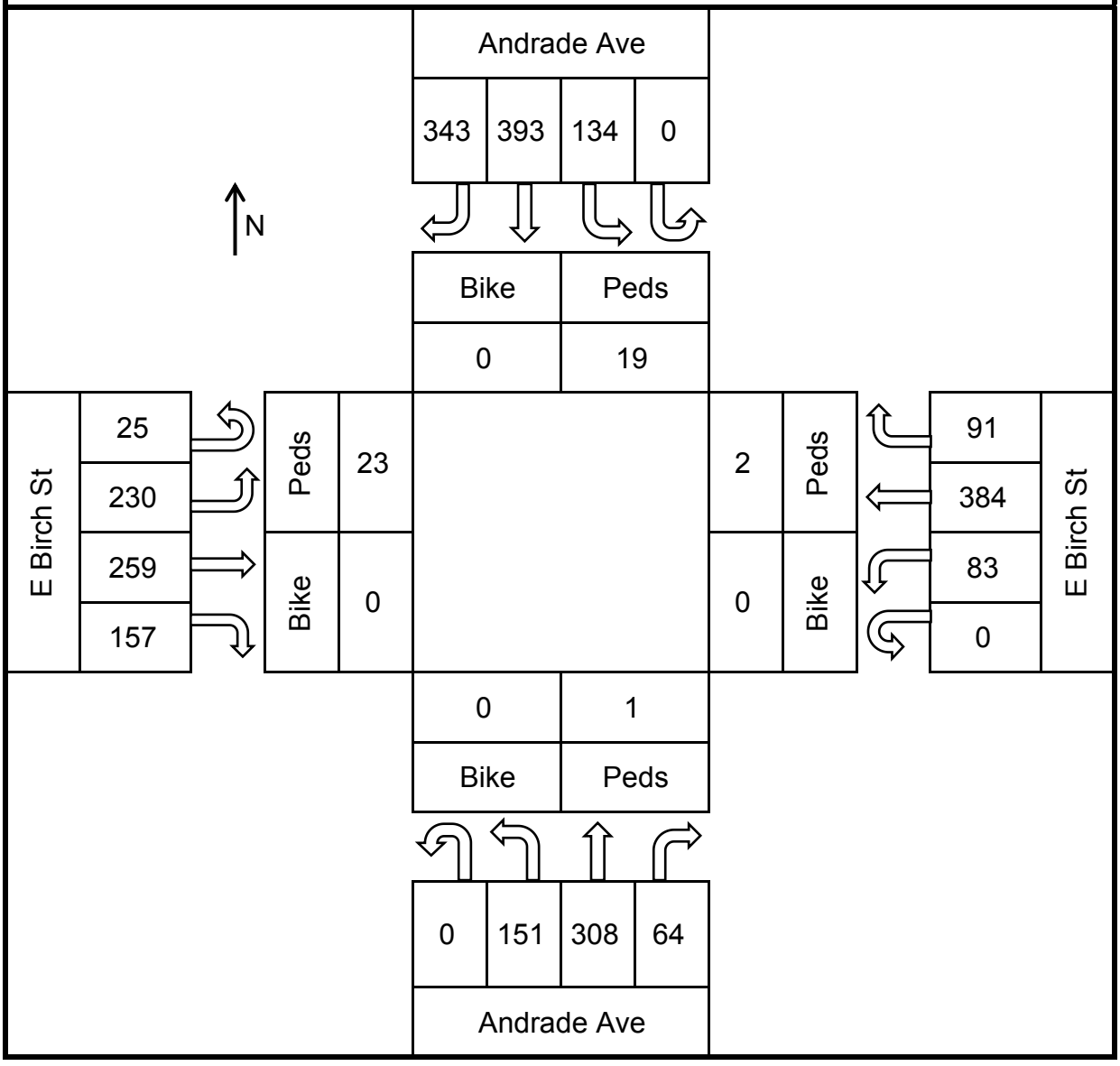
The following summarizes the traffic study results and conclusions:

- It is proposed that the Calexico Unified School District will relocate the 9th grade students, a total of 686, from the Calexico High School 9th grade Campus, located at 824 Blair Avenue (west of Encinas Avenue) to the existing Calexico High School, located at 1030 Encinas Avenue (East of Encinas Avenue). This will result in increasing the number of students from 2,267 students to a total of 2,953 students.
- Project access will be provided via three driveways along the east side of Encinas Avenue which will provide both vehicular ingress and egress access. As a result of the City's proposed improvements to Encinas Avenue, including the installation of a raised center median, access to the project driveways will be restricted to right-turn in and right-turn out movements only.
- The proposed project is expected to generate 1,392 daily trips, including 357 weekday AM peak hour trips (239 inbound trips and 118 outbound trips) and 96 weekday PM peak hour trips (46 inbound trips and 50 outbound trips).
- The City's Traffic Study Requirements has established a LOS C or better as a minimum acceptable Level of Service for both intersections and roadway segments, except for Highway 98 locations. A LOS D or better shall be maintained for this State Highway locations.
- Traffic circulation around the school will be as follows: traffic arriving from the north will end up using E. Birch Street then head south along Encinas Avenue and proceed south to make a U-turn then either drop students in front of the school or proceed to the student parking lot. Traffic arriving from the south either on Encinas Avenue will continue heading north to the school or Elmer Belcher Street turning north into Encinas Avenue to arrive at the school.
- Based on the results shown in chapter 6 above, all the six study intersections will operate at acceptable LOS C or better for both the AM and PM peak hours at the opening year of the proposed project in 2025. Therefore, the relocation of students from the 9th grade campus to the current Calexico high school will have no impact on the surrounding road network nor the State Highway 98, the northern boundary of the study area.
- Since the proposed project is determined to have no significant impact onto the roadway network at opening year 2025, improvements to the study intersections or the study area circulation system is not feasible at this time.
- A VMT Assessment was conducted for the project. The project is presumed to have a less than significant impact on VMT as it is a local-serving school.

Appendix A – Traffic Count Data Sheets

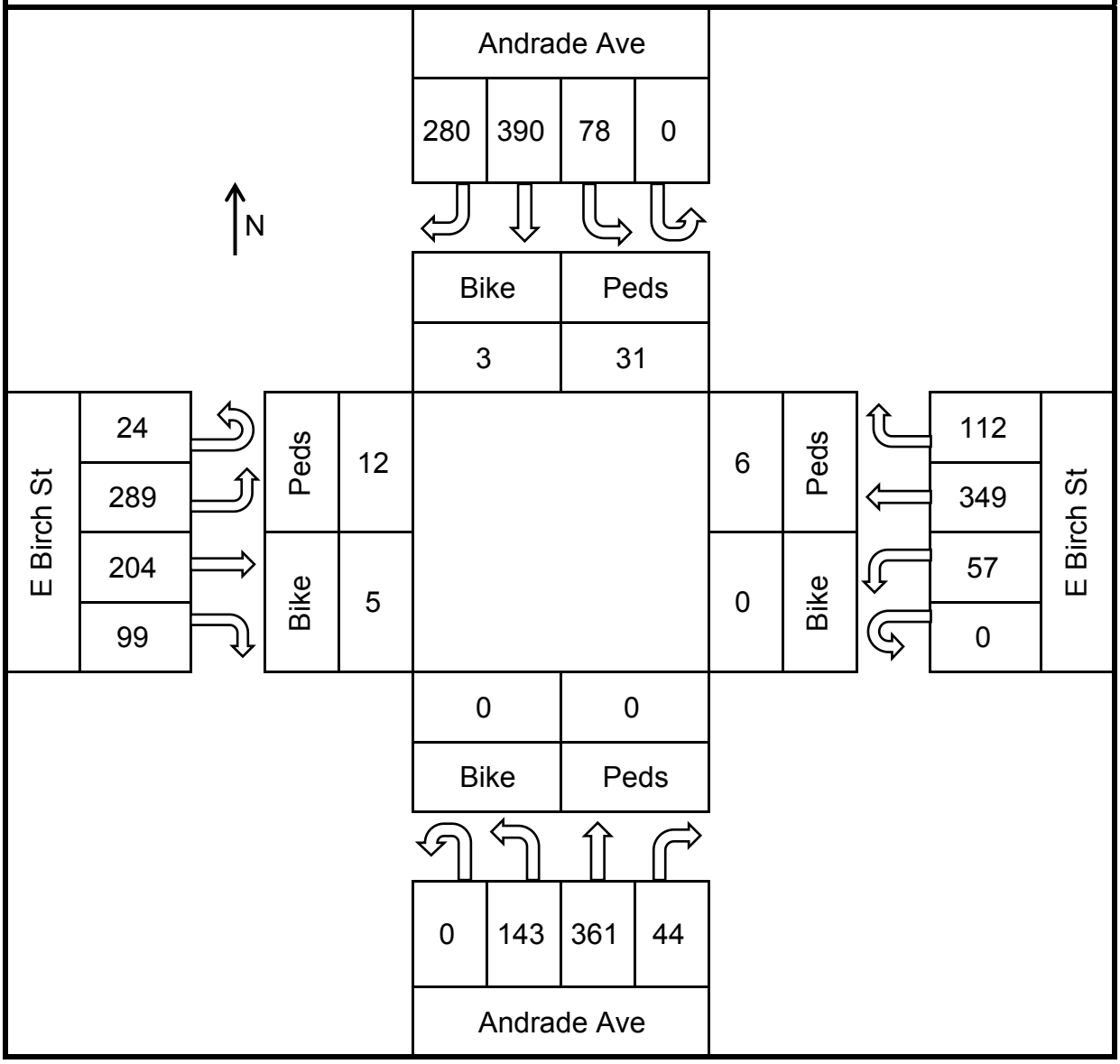
	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Andrade Ave	And	E Birch St
	Date	10/21/2021	Thursday	AM

Andrade Ave and E Birch St. AM Peak Hour



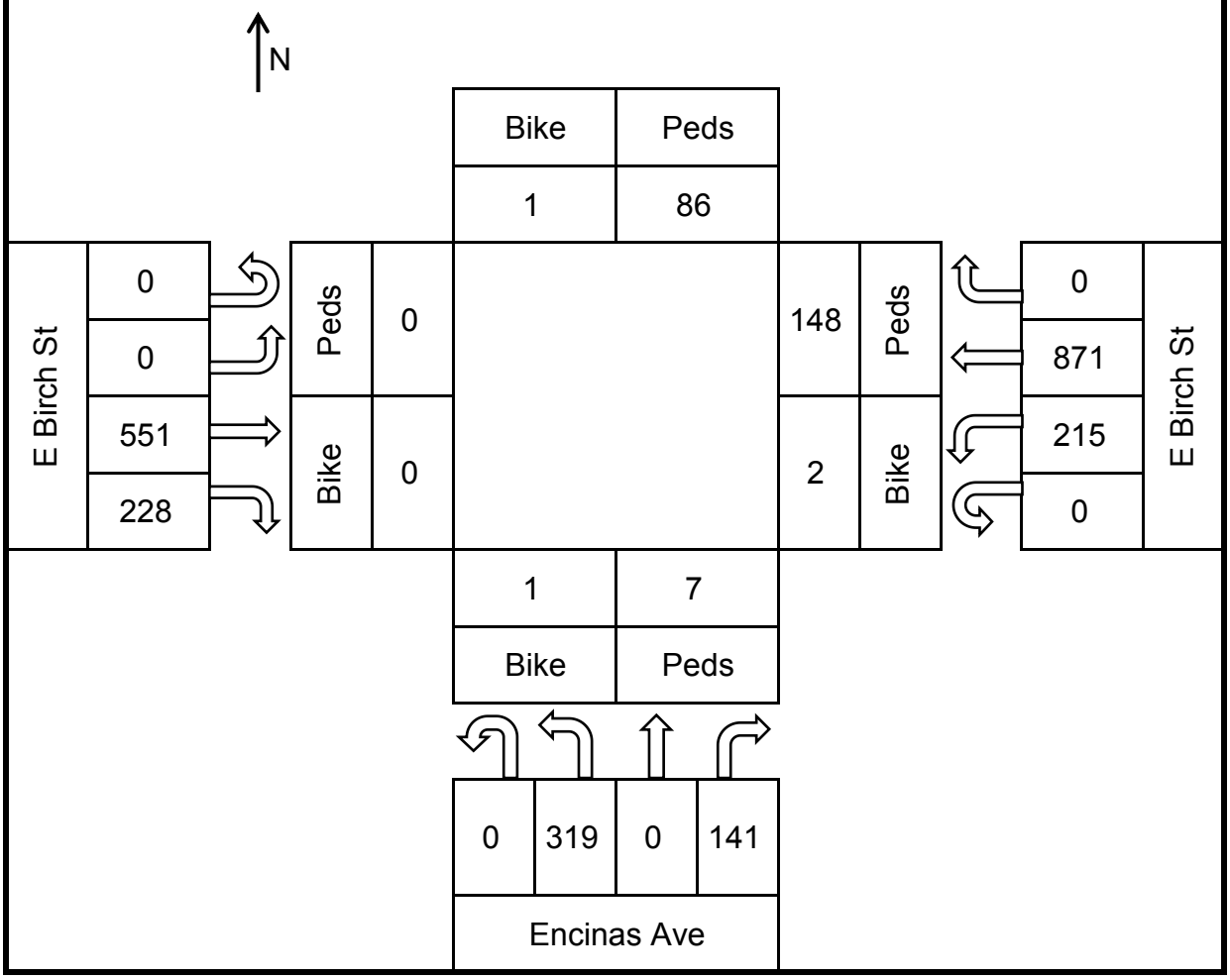
	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Andrade Ave	And	E Birch St
	Date	10/21/2021	Thursday	PM

Andrade Ave and E Birch St. PM Peak Hour



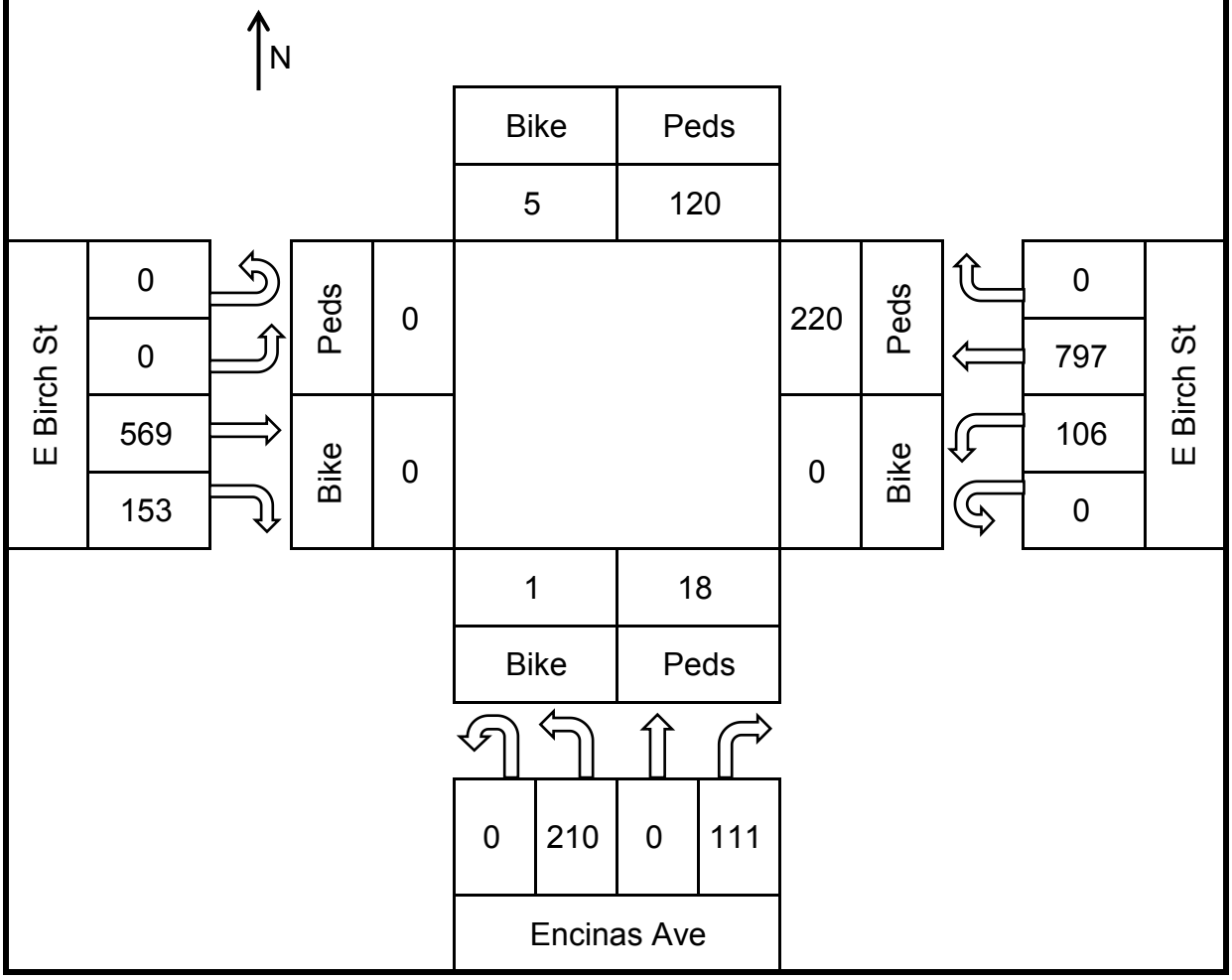
	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Encinas Ave	And	E Birch St
	Date	10/21/2021	Thursday	AM

Encinas Ave and E Birch St. AM Peak Hour



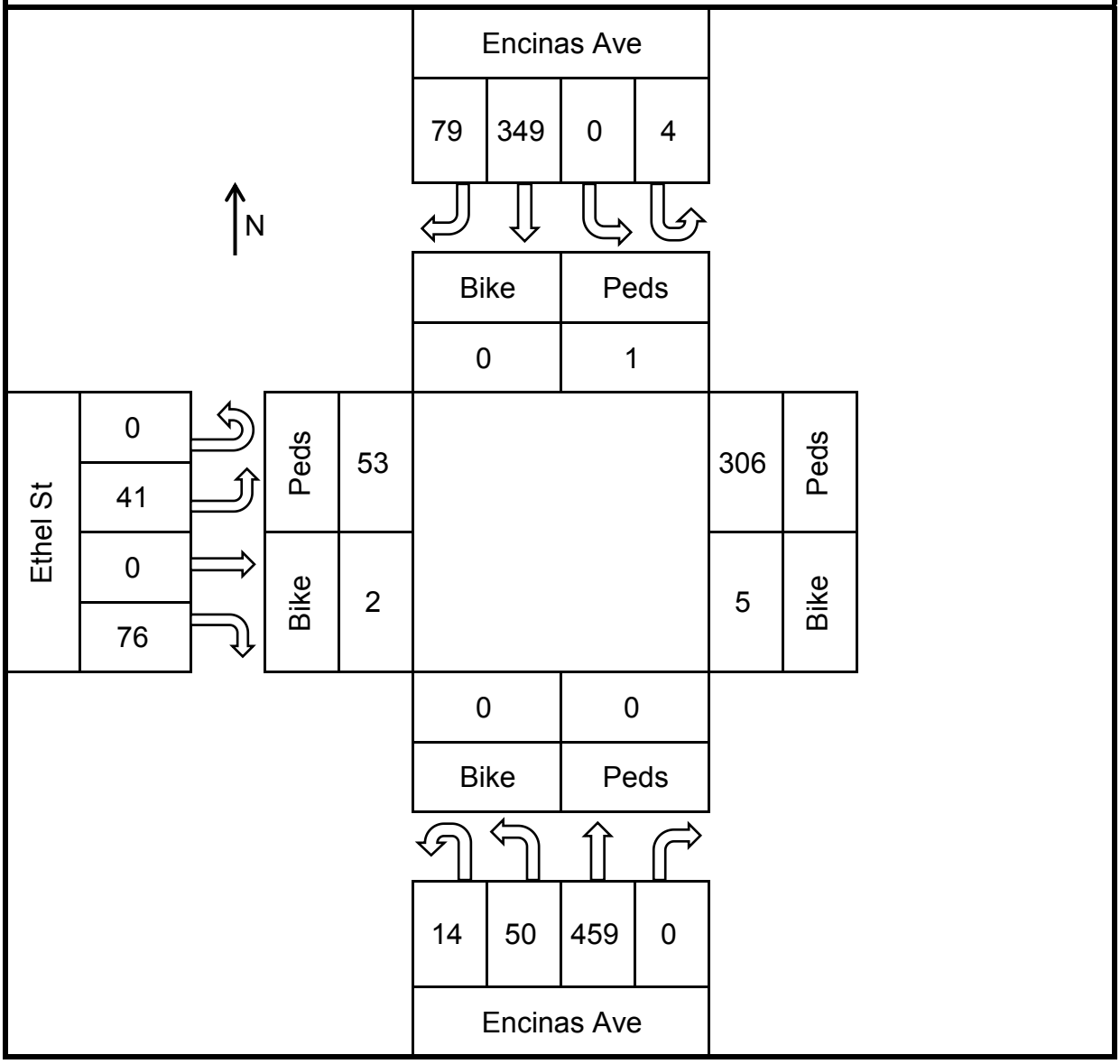
SurveyCount	Project: SC0266	Contact: (949)-543-5767	
For	City of Calexico	Task	Intersection Count
Location	Encinas Ave	And	E Birch St
Date	10/21/2021	Thursday	PM

Encinas Ave and E Birch St. PM Peak Hour



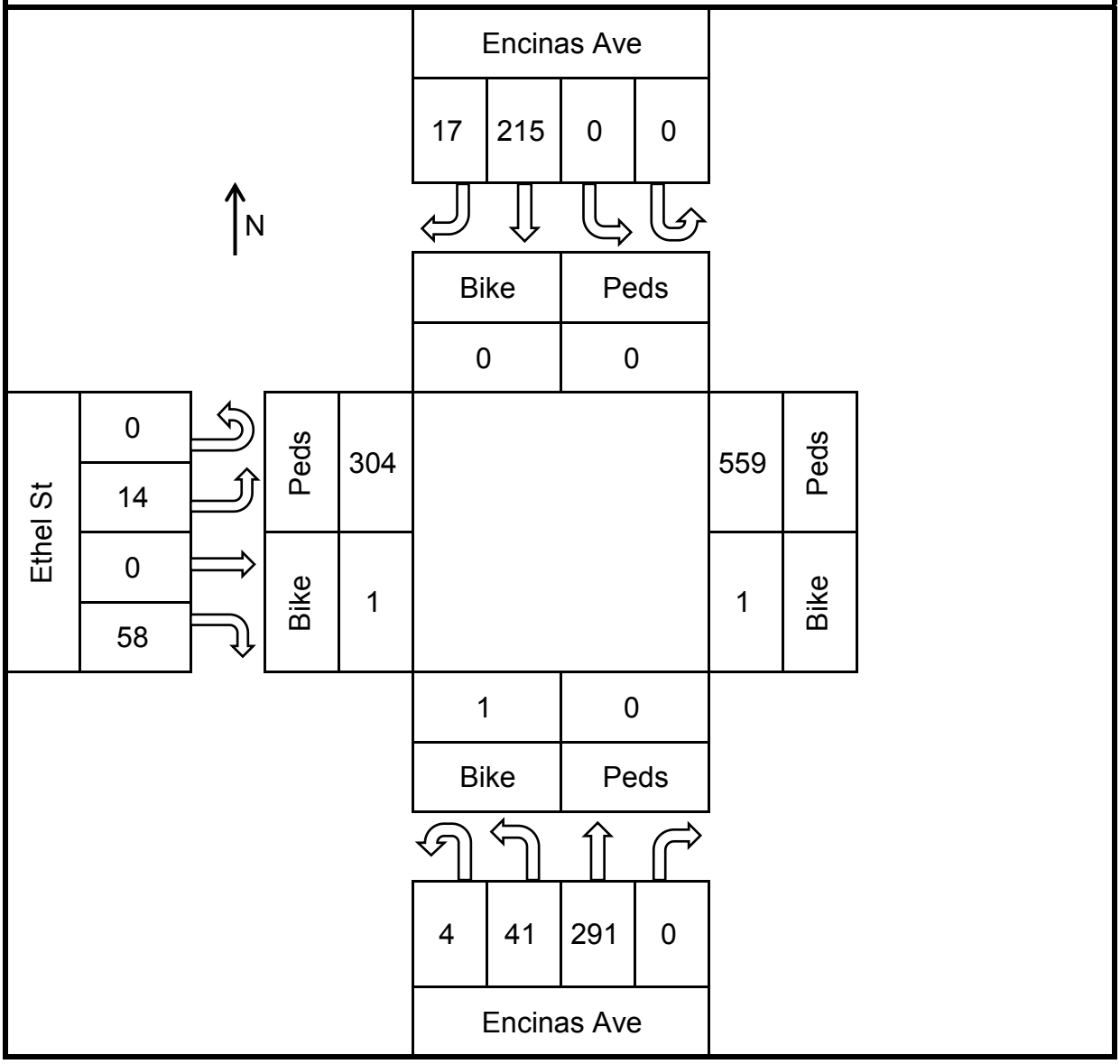
SurveyCount	Project: SC0266	Contact: (949)-543-5767	
For	City of Calexico	Task	Intersection Count
Location	Encinas Ave	And	Ethel St
Date	10/21/2021	Thursday	AM

Encinas Ave and Ethel St. AM Peak Hour



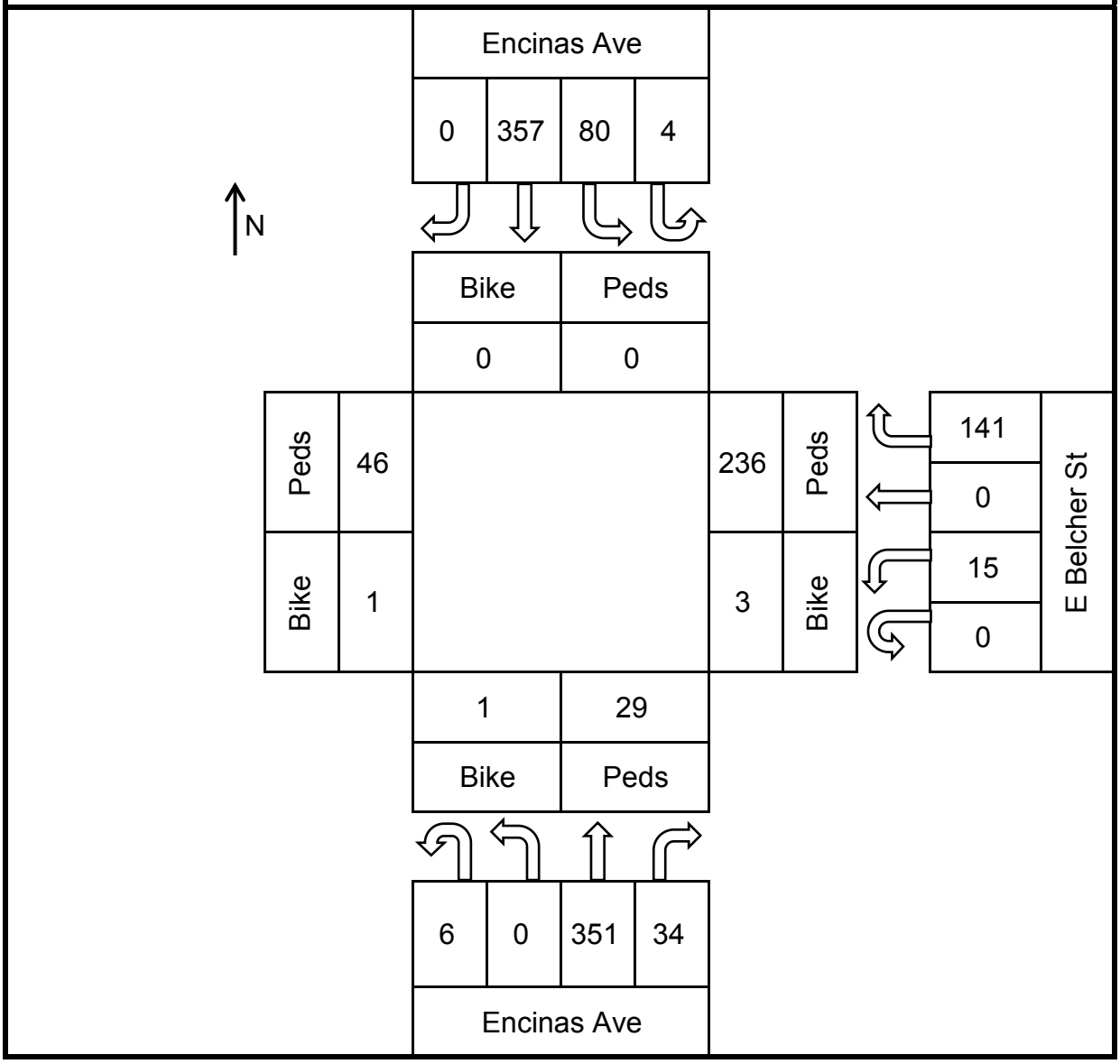
	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Encinas Ave	And	Ethel St
	Date	10/21/2021	Thursday	PM

Encinas Ave and Ethel St. PM Peak Hour



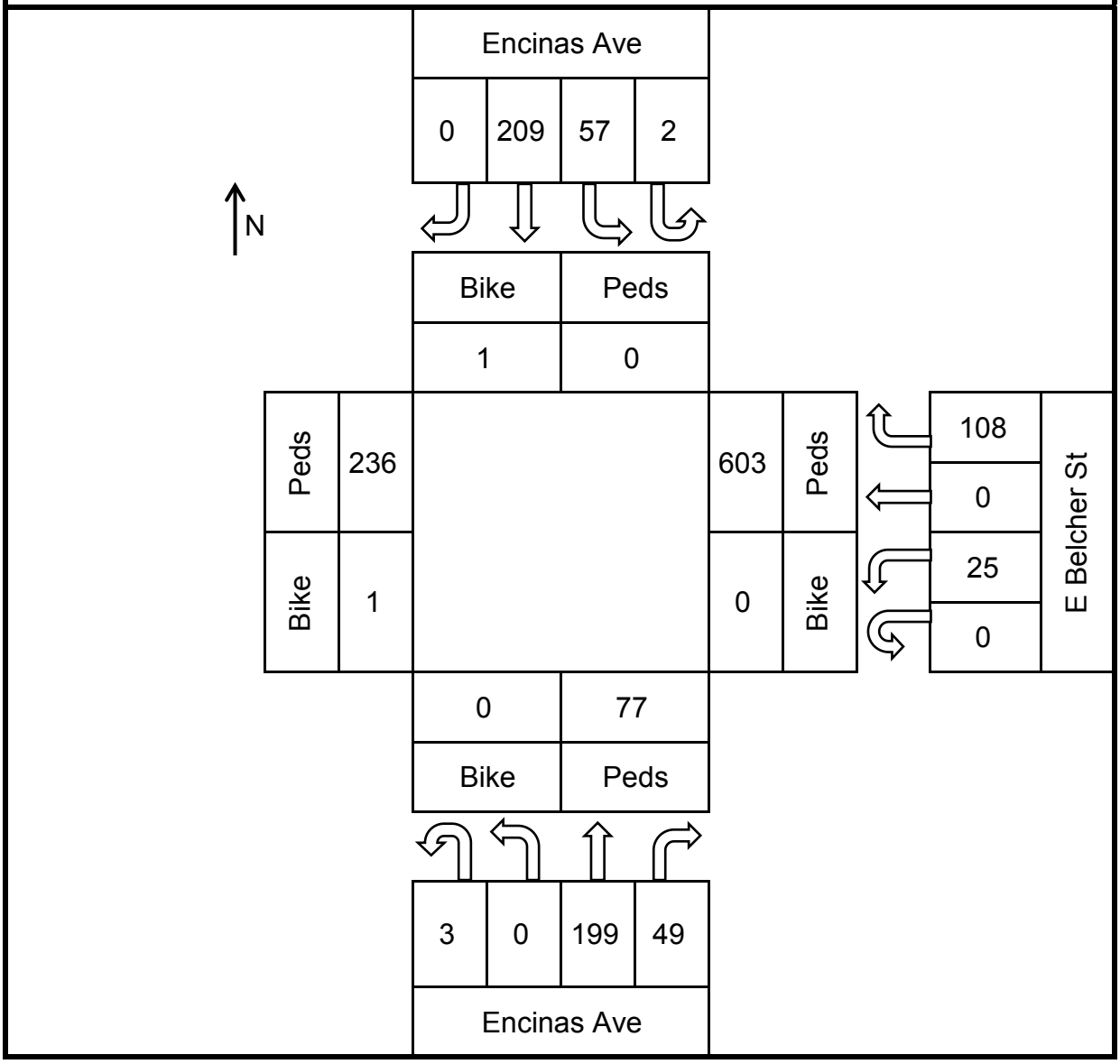
	SurveyCount	Project: SC0266	Contact: (949)-543-5767	
	For	City of Calexico	Task	Intersection Count
	Location	Encinas Ave	And	E Belcher St
	Date	10/21/2021	Thursday	AM

Encinas Ave and E Belcher St. AM Peak Hour



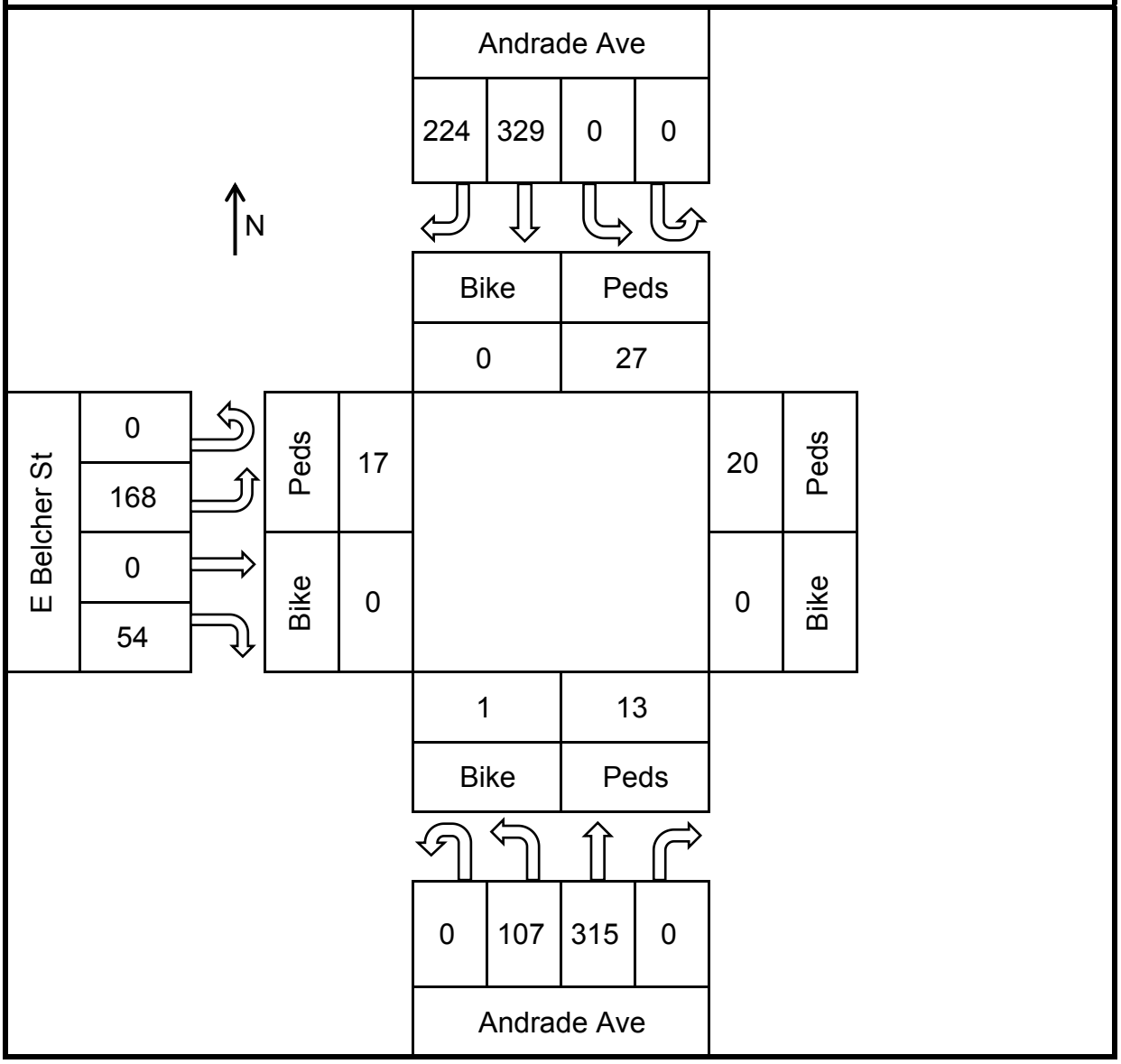
	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Encinas Ave	And	E Belcher St
	Date	10/21/2021	Thursday	PM

Encinas Ave and E Belcher St. PM Peak Hour



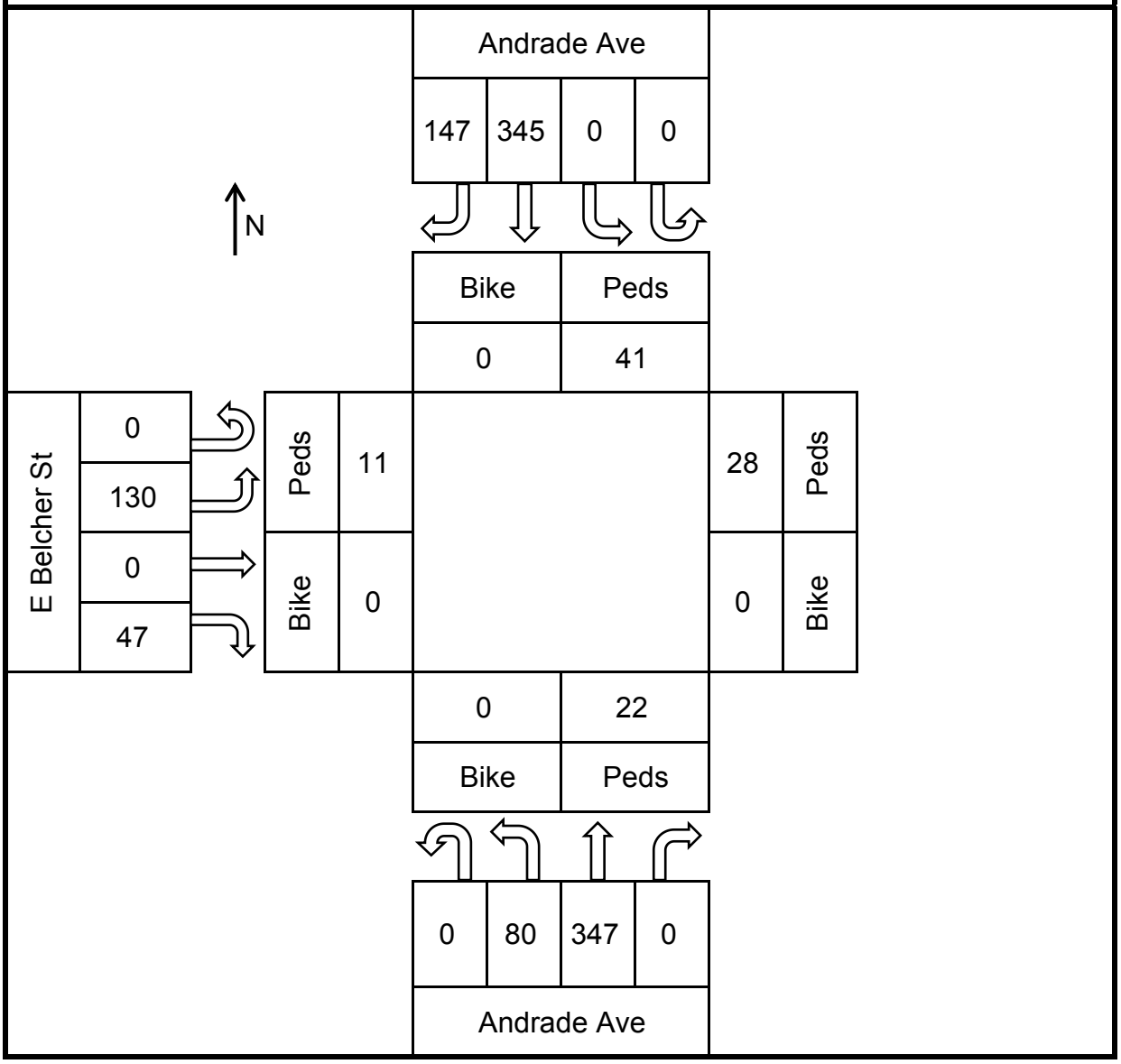
	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Andrade Ave	And	E Belcher St
	Date	10/21/2021	Thursday	AM

Andrade Ave and E Belcher St. AM Peak Hour



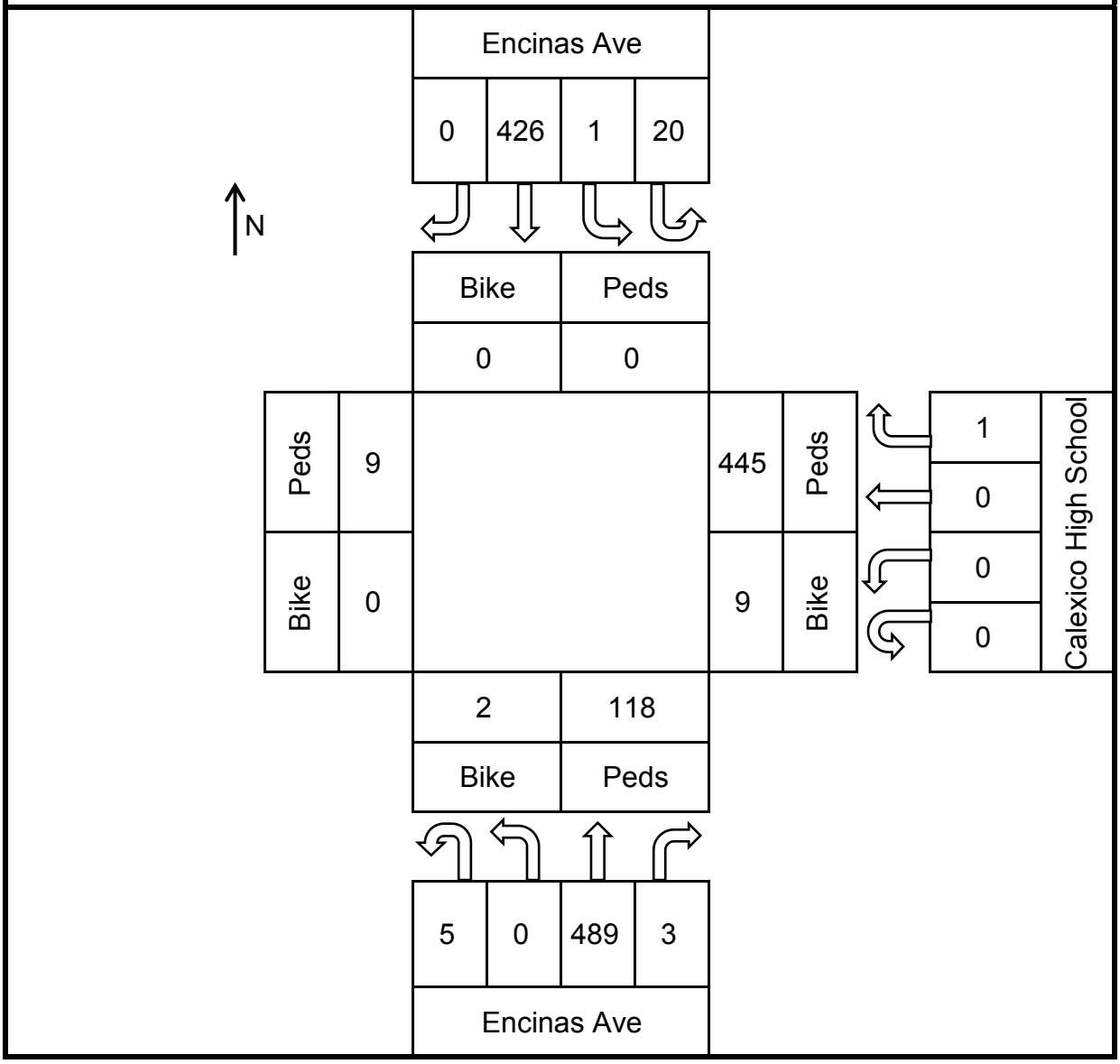
SurveyCount	Project: SC0266	Contact: (949)-543-5767	
For	City of Calexico	Task	Intersection Count
Location	Andrade Ave	And	E Belcher St
Date	10/21/2021	Thursday	PM

Andrade Ave and E Belcher St. PM Peak Hour



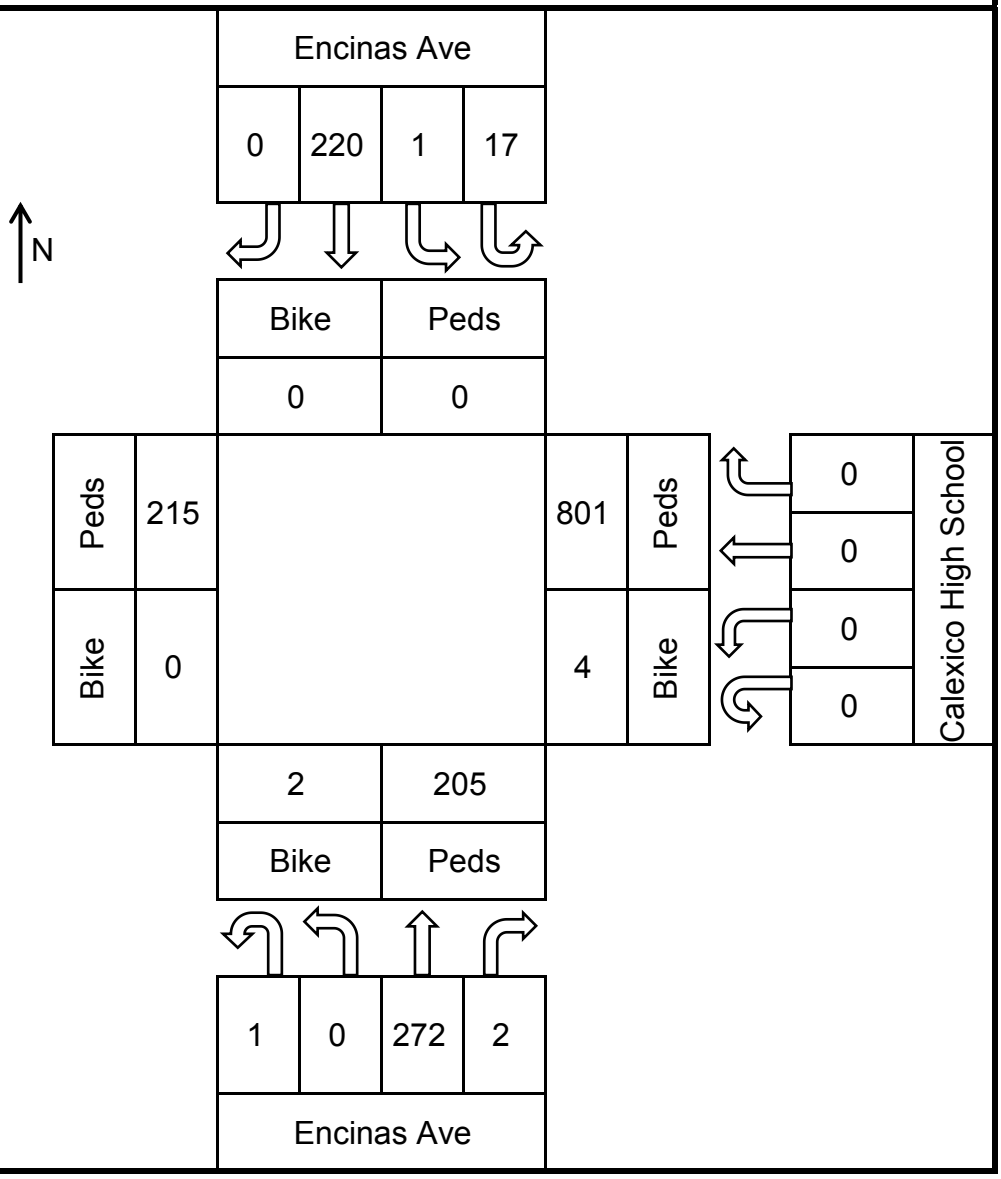
	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Encinas Ave	And	Calexico High School
	Date	10/21/2021	Thursday	AM

Encinas Ave and Calexico High School AM Peak Hour

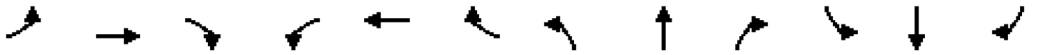


	SurveyCount	Project: SC0266		Contact: (949)-543-5767
	For	City of Calexico	Task	Intersection Count
	Location	Encinas Ave	And	Calexico High School
	Date	10/21/2021	Thursday	PM

Encinas Ave and Calexico High School PM Peak Hour



Appendix B – Existing Level of Service Worksheets



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	255	259	157	83	384	91	151	308	64	134	393	343
Future Volume (veh/h)	255	259	157	83	384	91	151	308	64	134	393	343
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	277	282	171	90	417	99	164	335	70	146	427	373
Adj No. of Lanes	2	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	867	1416	633	485	1416	633	375	1169	241	474	1416	633
Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Sat Flow, veh/h	1710	3539	1583	934	3539	1583	677	2922	603	976	3539	1583
Grp Volume(v), veh/h	277	282	171	90	417	99	164	201	204	146	427	373
Grp Sat Flow(s),veh/h/ln	855	1770	1583	934	1770	1583	677	1770	1756	976	1770	1583
Q Serve(g_s), s	5.9	2.3	3.3	3.1	3.6	1.8	9.8	3.5	3.5	5.4	3.7	8.3
Cycle Q Clear(g_c), s	9.5	2.3	3.3	5.5	3.6	1.8	13.5	3.5	3.5	8.9	3.7	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.34	1.00		1.00
Lane Grp Cap(c), veh/h	867	1416	633	485	1416	633	375	708	703	474	1416	633
V/C Ratio(X)	0.32	0.20	0.27	0.19	0.29	0.16	0.44	0.28	0.29	0.31	0.30	0.59
Avail Cap(c_a), veh/h	867	1416	633	485	1416	633	375	708	703	474	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.4	8.8	9.1	10.6	9.2	8.6	13.8	9.1	9.2	12.2	9.2	10.6
Incr Delay (d2), s/veh	1.0	0.3	1.0	0.8	0.5	0.5	3.7	1.0	1.0	1.7	0.5	4.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	1.2	1.6	0.9	1.8	0.9	2.2	1.9	1.9	1.6	1.9	4.3
LnGrp Delay(d),s/veh	13.4	9.1	10.1	11.4	9.7	9.2	17.5	10.1	10.2	13.9	9.8	14.6
LnGrp LOS	B	A	B	B	A	A	B	B	B	B	A	B
Approach Vol, veh/h		730			606			569			946	
Approach Delay, s/veh		11.0			9.9			12.3			12.3	
Approach LOS		B			A			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green Setting (Gmax), s		18.0		18.0		18.0		18.0
Max Q Clear Time (g_c+I1), s		15.5		11.5		10.9		7.5
Green Ext Time (p_c), s		0.9		2.3		2.9		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	11.4
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	313	204	99	57	349	112	143	361	44	78	390	280
Future Volume (veh/h)	313	204	99	57	349	112	143	361	44	78	390	280
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	340	222	108	62	379	122	155	392	48	85	424	304
Adj No. of Lanes	2	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	889	1416	633	536	1416	633	390	1271	155	458	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Ln Grp Delay, s/veh	13.9	8.9	9.3	10.2	9.5	9.5	16.3	10.4	10.4	12.5	9.7	12.6
Ln Grp LOS	B	A	A	B	A	A	B	B	B	B	A	B
Approach Vol, veh/h		670			563			595			813	
Approach Delay, s/veh		11.5			9.6			11.9			11.1	
Approach LOS		B			A			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.5		5.1		4.8		4.9
Max Q Clear (g_c+I1), s		14.0		12.6		8.9		5.6
Green Ext Time (g_e), s		1.4		1.9		3.0		2.6
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		724		1734		945		1046

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3177		3539		3539		3539

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		387		1583		1583		1583

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment								

Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	155	0	340	0	85	0	62
Grp Sat Flow (s), veh/h/ln	0	724	0	867	0	945	0	1046
Q Serve Time (g_s), s	0.0	8.4	0.0	7.4	0.0	3.0	0.0	1.8
Cycle Q Clear Time (g_c), s	0.0	12.0	0.0	10.6	0.0	6.9	0.0	3.6
Perm LT Sat Flow (s_l), veh/h/ln	0	724	0	867	0	945	0	1046
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	14.3	0.0	14.8	0.0	14.2	0.0	16.2
Perm LT Q Serve Time (g_ps), s	0.0	8.4	0.0	7.4	0.0	3.0	0.0	1.8
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	390	0	889	0	458	0	536
V/C Ratio (X)	0.00	0.40	0.00	0.38	0.00	0.19	0.00	0.12
Avail Cap (c_a), veh/h	0	390	0	889	0	458	0	536
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.3	0.0	12.6	0.0	11.6	0.0	9.8
Incr Delay (d2), s/veh	0.0	3.0	0.0	1.2	0.0	0.9	0.0	0.4
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.3	0.0	13.9	0.0	12.5	0.0	10.2
1st-Term Q (Q1), veh/ln	0.0	1.6	0.0	1.7	0.0	0.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.3	0.0	0.2	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	1.9	0.0	0.9	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.03	0.00	0.07	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	2	0	2
Grp Vol (v), veh/h	0	217	0	222	0	424	0	379
Grp Sat Flow (s), veh/h/ln	0	1770	0	1770	0	1770	0	1770
Q Serve Time (g_s), s	0.0	3.8	0.0	1.8	0.0	3.7	0.0	3.2
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	1.8	0.0	3.7	0.0	3.2
Lane Grp Cap (c), veh/h	0	708	0	1416	0	1416	0	1416
V/C Ratio (X)	0.00	0.31	0.00	0.16	0.00	0.30	0.00	0.27
Avail Cap (c_a), veh/h	0	708	0	1416	0	1416	0	1416
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	8.6	0.0	9.2	0.0	9.1
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.2	0.0	0.5	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.4	0.0	8.9	0.0	9.7	0.0	9.5
1st-Term Q (Q1), veh/ln	0.0	1.8	0.0	0.9	0.0	1.8	0.0	1.6

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	0.9	0.0	1.9	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.14	0.00	0.05
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	223	0	108	0	304	0	122
Grp Sat Flow (s), veh/h/ln	0	1795	0	1583	0	1583	0	1583
Q Serve Time (g_s), s	0.0	3.8	0.0	2.0	0.0	6.4	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	3.8	0.0	2.0	0.0	6.4	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.22	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	718	0	633	0	633	0	633
V/C Ratio (X)	0.00	0.31	0.00	0.17	0.00	0.48	0.00	0.19
Avail Cap (c_a), veh/h	0	718	0	633	0	633	0	633
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	8.7	0.0	10.0	0.0	8.8
Incr Delay (d2), s/veh	0.0	1.1	0.0	0.6	0.0	2.6	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.4	0.0	9.3	0.0	12.6	0.0	9.5
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.8	0.0	2.8	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.9	0.0	3.2	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.24	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.1
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	551	228	215	871	319	141
Future Volume (vph)	551	228	215	871	319	141
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3384		1770	3539	3332	
Flt Permitted	1.00		0.33	1.00	0.97	
Satd. Flow (perm)	3384		618	3539	3332	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	599	248	234	947	347	153
RTOR Reduction (vph)	109	0	0	0	129	0
Lane Group Flow (vph)	739	0	234	947	371	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	5	
Permitted Phases			8			
Actuated Green, G (s)	18.0		18.0	18.0	5.0	
Effective Green, g (s)	18.0		18.0	18.0	5.0	
Actuated g/C Ratio	0.56		0.56	0.56	0.16	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1903		347	1990	520	
v/s Ratio Prot	0.22			0.27	c0.11	
v/s Ratio Perm			c0.38			
v/c Ratio	0.39		0.67	0.48	0.71	
Uniform Delay, d1	3.9		4.9	4.2	12.8	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.6		10.1	0.8	8.1	
Delay (s)	4.5		15.0	5.0	20.9	
Level of Service	A		B	A	C	
Approach Delay (s)	4.5			7.0	20.9	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	8.9	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.68		
Actuated Cycle Length (s)	32.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	59.2%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	569	153	106	797	210	111
Future Volume (vph)	569	153	106	797	210	111
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.97		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3427		1770	3539	3317	
Flt Permitted	1.00		0.35	1.00	0.97	
Satd. Flow (perm)	3427		661	3539	3317	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	618	166	115	866	228	121
RTOR Reduction (vph)	73	0	0	0	102	0
Lane Group Flow (vph)	711	0	115	866	247	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	5	
Permitted Phases			8			
Actuated Green, G (s)	18.0		18.0	18.0	5.0	
Effective Green, g (s)	18.0		18.0	18.0	5.0	
Actuated g/C Ratio	0.56		0.56	0.56	0.16	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1927		371	1990	518	
v/s Ratio Prot	0.21			c0.24	c0.07	
v/s Ratio Perm			0.17			
v/c Ratio	0.37		0.31	0.44	0.48	
Uniform Delay, d1	3.9		3.7	4.1	12.3	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.5		2.2	0.7	3.1	
Delay (s)	4.4		5.9	4.8	15.4	
Level of Service	A		A	A	B	
Approach Delay (s)	4.4			4.9	15.4	
Approach LOS	A			A	B	

Intersection Summary			
HCM 2000 Control Delay	6.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	32.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	47.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	41	76	64	459	349	79
Future Vol, veh/h	41	76	64	459	349	79
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	83	70	499	379	86

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	812	233	465	0	-	0
Stage 1	422	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	317	769	1093	-	-	-
Stage 1	629	-	-	-	-	-
Stage 2	653	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	289	769	1093	-	-	-
Mov Cap-2 Maneuver	289	-	-	-	-	-
Stage 1	573	-	-	-	-	-
Stage 2	653	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1093	-	486	-	-
HCM Lane V/C Ratio	0.064	-	0.262	-	-
HCM Control Delay (s)	8.5	0.3	15	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	58	45	291	215	17
Future Vol, veh/h	14	58	45	291	215	17
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	63	49	316	234	18

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	499	126	252	0	-	0
Stage 1	243	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	501	901	1310	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	478	901	1310	-	-	-
Mov Cap-2 Maneuver	478	-	-	-	-	-
Stage 1	740	-	-	-	-	-
Stage 2	763	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1310	-	769	-	-
HCM Lane V/C Ratio	0.037	-	0.102	-	-
HCM Control Delay (s)	7.9	0.1	10.2	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	141	351	34	84	357
Future Vol, veh/h	15	141	351	34	84	357
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	153	382	37	91	388

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	777	210	0	0	419	0
Stage 1	401	-	-	-	-	-
Stage 2	376	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	334	796	-	-	1137	-
Stage 1	645	-	-	-	-	-
Stage 2	664	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	300	796	-	-	1137	-
Mov Cap-2 Maneuver	300	-	-	-	-	-
Stage 1	645	-	-	-	-	-
Stage 2	596	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.9	0	1.9
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	687	1137	-
HCM Lane V/C Ratio	-	-	0.247	0.08	-
HCM Control Delay (s)	-	-	11.9	8.4	0.3
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1	0.3	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	25	108	199	49	59	209
Future Vol, veh/h	25	108	199	49	59	209
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	117	216	53	64	227

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	485	135	0	0	269	0
Stage 1	243	-	-	-	-	-
Stage 2	242	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	511	889	-	-	1292	-
Stage 1	775	-	-	-	-	-
Stage 2	776	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	482	889	-	-	1292	-
Mov Cap-2 Maneuver	482	-	-	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	732	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.8	0	1.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	767	1292	-
HCM Lane V/C Ratio	-	-	0.188	0.05	-
HCM Control Delay (s)	-	-	10.8	7.9	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Intersection Delay, s/veh	13.6
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	168	54	107	315	329	224
Future Vol, veh/h	168	54	107	315	329	224
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	183	59	116	342	358	243
Number of Lanes	1	0	0	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	13.7	13.1	14
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1	SBLn2
Vol Left, %	50%	0%	76%	0%	0%
Vol Thru, %	50%	100%	0%	100%	33%
Vol Right, %	0%	0%	24%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	212	210	222	219	334
LT Vol	107	0	168	0	0
Through Vol	105	210	0	219	110
RT Vol	0	0	54	0	224
Lane Flow Rate	230	228	241	238	363
Geometry Grp	7	7	2	7	7
Degree of Util (X)	0.407	0.387	0.417	0.396	0.555
Departure Headway (Hd)	6.363	6.106	6.225	5.983	5.506
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	565	589	577	601	653
Service Time	4.109	3.852	4.269	3.724	3.247
HCM Lane V/C Ratio	0.407	0.387	0.418	0.396	0.556
HCM Control Delay	13.4	12.7	13.7	12.6	14.9
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	2	1.8	2	1.9	3.4

Intersection	
Intersection Delay, s/veh	12.1
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	130	47	80	347	345	147
Future Vol, veh/h	130	47	80	347	345	147
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	141	51	87	377	375	160
Number of Lanes	1	0	0	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	12	12.2	12.1
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1	SBLn2
Vol Left, %	41%	0%	73%	0%	0%
Vol Thru, %	59%	100%	0%	100%	44%
Vol Right, %	0%	0%	27%	0%	56%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	196	231	177	230	262
LT Vol	80	0	130	0	0
Through Vol	116	231	0	230	115
RT Vol	0	0	47	0	147
Lane Flow Rate	213	251	192	250	285
Geometry Grp	7	7	2	7	7
Degree of Util (X)	0.355	0.405	0.324	0.4	0.424
Departure Headway (Hd)	6.01	5.803	6.069	5.753	5.355
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	600	621	593	628	672
Service Time	3.74	3.532	4.102	3.481	3.083
HCM Lane V/C Ratio	0.355	0.404	0.324	0.398	0.424
HCM Control Delay	12	12.4	12	12.3	12
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	1.6	2	1.4	1.9	2.1

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	489	3	21	426
Future Vol, veh/h	0	1	489	3	21	426
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	532	3	23	463

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	812	268	0	0	535	0
Stage 1	534	-	-	-	-	-
Stage 2	278	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	317	730	-	-	1029	-
Stage 1	552	-	-	-	-	-
Stage 2	744	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	307	730	-	-	1029	-
Mov Cap-2 Maneuver	307	-	-	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	722	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.9	0	0.5
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	730	1029	-
HCM Lane V/C Ratio	-	-	0.001	0.022	-
HCM Control Delay (s)	-	-	9.9	8.6	0.1
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	272	2	18	220
Future Vol, veh/h	0	0	272	2	18	220
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	296	2	20	239

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	457	149	0	0	298	0
Stage 1	297	-	-	-	-	-
Stage 2	160	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	532	871	-	-	1260	-
Stage 1	728	-	-	-	-	-
Stage 2	852	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	522	871	-	-	1260	-
Mov Cap-2 Maneuver	522	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	837	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1260	-
HCM Lane V/C Ratio	-	-	-	0.016	-
HCM Control Delay (s)	-	-	0	7.9	0.1
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0	-

Appendix C – Opening Year Without Project Level of Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	263	267	162	86	396	94	156	317	66	138	405	353
Future Volume (veh/h)	263	267	162	86	396	94	156	317	66	138	405	353
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	286	290	176	93	430	102	170	345	72	150	440	384
Adj No. of Lanes	2	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	854	1416	633	480	1416	633	368	1169	241	468	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Ln Grp Delay, s/veh	13.7	9.2	10.2	11.6	9.8	9.2	18.3	10.2	10.3	14.2	9.8	15.0
Ln Grp LOS	B	A	B	B	A	A	B	B	B	B	A	B
Approach Vol, veh/h		752			625			587			974	
Approach Delay, s/veh		11.1			10.0			12.6			12.5	
Approach LOS		B			A			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.7		5.1		4.7		5.0
Max Q Clear (g_c+I1), s		16.5		12.0		11.3		7.7
Green Ext Time (g_e), s		0.6		2.3		2.9		2.7
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		662		1685		965		923

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2923		3539		3539		3539

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		603		1583		1583		1583

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment								

Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	170	0	286	0	150	0	93
Grp Sat Flow (s), veh/h/ln	0	662	0	842	0	965	0	923
Q Serve Time (g_s), s	0.0	10.7	0.0	6.3	0.0	5.6	0.0	3.3
Cycle Q Clear Time (g_c), s	0.0	14.5	0.0	10.0	0.0	9.3	0.0	5.7
Perm LT Sat Flow (s_l), veh/h/ln	0	662	0	842	0	965	0	923
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	14.2	0.0	14.3	0.0	14.3	0.0	15.6
Perm LT Q Serve Time (g_ps), s	0.0	10.7	0.0	6.3	0.0	5.6	0.0	3.3
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	368	0	854	0	468	0	480
V/C Ratio (X)	0.00	0.46	0.00	0.33	0.00	0.32	0.00	0.19
Avail Cap (c_a), veh/h	0	368	0	854	0	468	0	480
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.2	0.0	12.6	0.0	12.4	0.0	10.7
Incr Delay (d2), s/veh	0.0	4.1	0.0	1.1	0.0	1.8	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.3	0.0	13.7	0.0	14.2	0.0	11.6
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	1.4	0.0	1.5	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	1.6	0.0	1.7	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.02	0.00	0.13	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	2	0	2
Grp Vol (v), veh/h	0	207	0	290	0	440	0	430
Grp Sat Flow (s), veh/h/ln	0	1770	0	1770	0	1770	0	1770
Q Serve Time (g_s), s	0.0	3.6	0.0	2.4	0.0	3.8	0.0	3.7
Cycle Q Clear Time (g_c), s	0.0	3.6	0.0	2.4	0.0	3.8	0.0	3.7
Lane Grp Cap (c), veh/h	0	708	0	1416	0	1416	0	1416
V/C Ratio (X)	0.00	0.29	0.00	0.20	0.00	0.31	0.00	0.30
Avail Cap (c_a), veh/h	0	708	0	1416	0	1416	0	1416
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	8.8	0.0	9.2	0.0	9.2
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.3	0.0	0.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.2	0.0	9.2	0.0	9.8	0.0	9.8
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.2	0.0	1.8	0.0	1.8

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	1.2	0.0	1.9	0.0	1.9
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.02	0.00	0.14	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	210	0	176	0	384	0	102
Grp Sat Flow (s), veh/h/ln	0	1756	0	1583	0	1583	0	1583
Q Serve Time (g_s), s	0.0	3.7	0.0	3.4	0.0	8.6	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	3.7	0.0	3.4	0.0	8.6	0.0	1.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.34	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	703	0	633	0	633	0	633
V/C Ratio (X)	0.00	0.30	0.00	0.28	0.00	0.61	0.00	0.16
Avail Cap (c_a), veh/h	0	703	0	633	0	633	0	633
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	9.1	0.0	10.7	0.0	8.7
Incr Delay (d2), s/veh	0.0	1.1	0.0	1.1	0.0	4.3	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.3	0.0	10.2	0.0	15.0	0.0	9.2
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.5	0.0	3.7	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.8	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	1.7	0.0	4.5	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.02	0.00	0.33	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	322	210	102	59	360	115	147	372	45	80	402	288
Future Volume (veh/h)	322	210	102	59	360	115	147	372	45	80	402	288
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	350	228	111	64	391	125	160	404	49	87	437	313
Adj No. of Lanes	2	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	876	1416	633	532	1416	633	384	1272	153	452	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Ln Grp Delay, s/veh	14.2	8.9	9.3	10.3	9.6	9.5	16.9	10.4	10.5	12.7	9.8	12.8
Ln Grp LOS	B	A	A	B	A	A	B	B	B	B	A	B
Approach Vol, veh/h		689			580			613			837	
Approach Delay, s/veh		11.7			9.7			12.1			11.2	
Approach LOS		B			A			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.5		5.1		4.8		4.9
Max Q Clear (g_c+I1), s		14.8		13.2		9.1		5.8
Green Ext Time (g_e), s		1.2		1.8		3.0		2.6
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		709		1710		934		1037

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3181		3539		3539		3539

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		384		1583		1583		1583

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment								

Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	160	0	350	0	87	0	64
Grp Sat Flow (s), veh/h/ln	0	709	0	855	0	934	0	1037
Q Serve Time (g_s), s	0.0	9.0	0.0	7.8	0.0	3.2	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	12.8	0.0	11.2	0.0	7.1	0.0	3.8
Perm LT Sat Flow (s_l), veh/h/ln	0	709	0	855	0	934	0	1037
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	14.2	0.0	14.6	0.0	14.0	0.0	16.1
Perm LT Q Serve Time (g_ps), s	0.0	9.0	0.0	7.8	0.0	3.2	0.0	1.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	384	0	876	0	452	0	532
V/C Ratio (X)	0.00	0.42	0.00	0.40	0.00	0.19	0.00	0.12
Avail Cap (c_a), veh/h	0	384	0	876	0	452	0	532
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.6	0.0	12.9	0.0	11.7	0.0	9.9
Incr Delay (d2), s/veh	0.0	3.3	0.0	1.4	0.0	0.9	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	16.9	0.0	14.2	0.0	12.7	0.0	10.3
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.8	0.0	0.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	2.0	0.0	0.9	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.03	0.00	0.07	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	2	0	2
Grp Vol (v), veh/h	0	224	0	228	0	437	0	391
Grp Sat Flow (s), veh/h/ln	0	1770	0	1770	0	1770	0	1770
Q Serve Time (g_s), s	0.0	3.9	0.0	1.9	0.0	3.8	0.0	3.4
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	1.9	0.0	3.8	0.0	3.4
Lane Grp Cap (c), veh/h	0	708	0	1416	0	1416	0	1416
V/C Ratio (X)	0.00	0.32	0.00	0.16	0.00	0.31	0.00	0.28
Avail Cap (c_a), veh/h	0	708	0	1416	0	1416	0	1416
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.3	0.0	8.7	0.0	9.2	0.0	9.1
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.2	0.0	0.6	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.4	0.0	8.9	0.0	9.8	0.0	9.6
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.9	0.0	1.8	0.0	1.6

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	0.9	0.0	1.9	0.0	1.7
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.14	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	229	0	111	0	313	0	125
Grp Sat Flow (s), veh/h/ln	0	1795	0	1583	0	1583	0	1583
Q Serve Time (g_s), s	0.0	4.0	0.0	2.0	0.0	6.7	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	2.0	0.0	6.7	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	718	0	633	0	633	0	633
V/C Ratio (X)	0.00	0.32	0.00	0.18	0.00	0.49	0.00	0.20
Avail Cap (c_a), veh/h	0	718	0	633	0	633	0	633
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.3	0.0	8.7	0.0	10.1	0.0	8.8
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.6	0.0	2.7	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.5	0.0	9.3	0.0	12.8	0.0	9.5
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.9	0.0	2.9	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	1.0	0.0	3.4	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.25	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.2
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	568	235	222	897	329	145
Future Volume (vph)	568	235	222	897	329	145
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.96		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3384		1770	3539	3332	
Flt Permitted	1.00		0.32	1.00	0.97	
Satd. Flow (perm)	3384		596	3539	3332	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	617	255	241	975	358	158
RTOR Reduction (vph)	112	0	0	0	133	0
Lane Group Flow (vph)	760	0	241	975	383	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	5	
Permitted Phases			8			
Actuated Green, G (s)	18.0		18.0	18.0	5.0	
Effective Green, g (s)	18.0		18.0	18.0	5.0	
Actuated g/C Ratio	0.56		0.56	0.56	0.16	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1903		335	1990	520	
v/s Ratio Prot	0.22			0.28	c0.11	
v/s Ratio Perm			c0.40			
v/c Ratio	0.40		0.72	0.49	0.74	
Uniform Delay, d1	4.0		5.1	4.2	12.9	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.6		12.5	0.9	9.0	
Delay (s)	4.6		17.7	5.1	21.8	
Level of Service	A		B	A	C	
Approach Delay (s)	4.6			7.6	21.8	
Approach LOS	A			A	C	

Intersection Summary			
HCM 2000 Control Delay	9.4	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	32.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	60.7%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	586	158	109	821	216	114
Future Volume (vph)	586	158	109	821	216	114
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.97		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3426		1770	3539	3318	
Flt Permitted	1.00		0.27	1.00	0.97	
Satd. Flow (perm)	3426		506	3539	3318	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	637	172	118	892	235	124
RTOR Reduction (vph)	54	0	0	0	74	0
Lane Group Flow (vph)	755	0	118	892	285	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	18.0		18.0	18.0	18.0	
Effective Green, g (s)	18.0		18.0	18.0	18.0	
Actuated g/C Ratio	0.40		0.40	0.40	0.40	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1370		202	1415	1327	
v/s Ratio Prot	0.22			c0.25	c0.09	
v/s Ratio Perm			0.23			
v/c Ratio	0.55		0.58	0.63	0.21	
Uniform Delay, d1	10.4		10.6	10.8	8.9	
Progression Factor	1.00		1.13	1.11	1.00	
Incremental Delay, d2	1.6		11.5	2.1	0.4	
Delay (s)	12.0		23.4	14.1	9.2	
Level of Service	B		C	B	A	
Approach Delay (s)	12.0			15.2	9.2	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	13.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	48.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	2.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	42	78	66	473	360	81
Future Vol, veh/h	42	78	66	473	360	81
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	46	85	72	514	391	88

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	836	240	479	0	-	0
Stage 1	435	-	-	-	-	-
Stage 2	401	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	306	761	1080	-	-	-
Stage 1	620	-	-	-	-	-
Stage 2	645	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	278	761	1080	-	-	-
Mov Cap-2 Maneuver	278	-	-	-	-	-
Stage 1	562	-	-	-	-	-
Stage 2	645	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	15.5	1.3	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1080	-	473	-	-
HCM Lane V/C Ratio	0.066	-	0.276	-	-
HCM Control Delay (s)	8.6	0.3	15.5	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	-	-

Intersection	
Int Delay, s/veh	1.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	14	60	46	300	222	18
Future Vol, veh/h	14	60	46	300	222	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	15	65	50	326	241	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	514	131	261	0	-	0
Stage 1	251	-	-	-	-	-
Stage 2	263	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	490	894	1300	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	757	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	467	894	1300	-	-	-
Mov Cap-2 Maneuver	467	-	-	-	-	-
Stage 1	732	-	-	-	-	-
Stage 2	757	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.3	1.1	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1300	-	762	-	-
HCM Lane V/C Ratio	0.038	-	0.106	-	-
HCM Control Delay (s)	7.9	0.1	10.3	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	2.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	145	362	35	84	368
Future Vol, veh/h	15	145	362	35	84	368
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	158	393	38	91	400

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	794	216	0	0	431	0
Stage 1	412	-	-	-	-	-
Stage 2	382	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	325	789	-	-	1125	-
Stage 1	637	-	-	-	-	-
Stage 2	660	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	291	789	-	-	1125	-
Mov Cap-2 Maneuver	291	-	-	-	-	-
Stage 1	637	-	-	-	-	-
Stage 2	591	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	12.1	0	1.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	680	1125	-
HCM Lane V/C Ratio	-	-	0.256	0.081	-
HCM Control Delay (s)	-	-	12.1	8.5	0.3
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1	0.3	-

Intersection	
Int Delay, s/veh	3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	111	205	50	61	215
Future Vol, veh/h	26	111	205	50	61	215
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	121	223	54	66	234

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	499	139	0	0	277	0
Stage 1	250	-	-	-	-	-
Stage 2	249	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	501	884	-	-	1283	-
Stage 1	768	-	-	-	-	-
Stage 2	769	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	471	884	-	-	1283	-
Mov Cap-2 Maneuver	471	-	-	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	724	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.9	0	1.8
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	758	1283	-
HCM Lane V/C Ratio	-	-	0.196	0.052	-
HCM Control Delay (s)	-	-	10.9	8	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.7	0.2	-

Intersection	
Intersection Delay, s/veh	14.1
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	173	56	110	325	339	231
Future Vol, veh/h	173	56	110	325	339	231
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	188	61	120	353	368	251
Number of Lanes	1	0	0	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	14.1	13.5	14.6
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1	SBLn2
Vol Left, %	50%	0%	76%	0%	0%
Vol Thru, %	50%	100%	0%	100%	33%
Vol Right, %	0%	0%	24%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	218	217	229	226	344
LT Vol	110	0	173	0	0
Through Vol	108	217	0	226	113
RT Vol	0	0	56	0	231
Lane Flow Rate	237	236	249	246	374
Geometry Grp	7	7	2	7	7
Degree of Util (X)	0.424	0.404	0.434	0.412	0.578
Departure Headway (Hd)	6.431	6.175	6.283	6.045	5.567
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	560	582	573	594	647
Service Time	4.18	3.924	4.329	3.791	3.314
HCM Lane V/C Ratio	0.423	0.405	0.435	0.414	0.578
HCM Control Delay	13.9	13.1	14.1	13	15.7
HCM Lane LOS	B	B	B	B	C
HCM 95th-tile Q	2.1	1.9	2.2	2	3.7

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	134	48	82	358	355	151
Future Vol, veh/h	134	48	82	358	355	151
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	146	52	89	389	386	164
Number of Lanes	1	0	0	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	12.3	12.6	12.4
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1	SBLn2
Vol Left, %	41%	0%	74%	0%	0%
Vol Thru, %	59%	100%	0%	100%	44%
Vol Right, %	0%	0%	26%	0%	56%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	201	239	182	237	269
LT Vol	82	0	134	0	0
Through Vol	119	239	0	237	118
RT Vol	0	0	48	0	151
Lane Flow Rate	219	259	198	257	293
Geometry Grp	7	7	2	7	7
Degree of Util (X)	0.368	0.422	0.337	0.415	0.439
Departure Headway (Hd)	6.059	5.852	6.124	5.802	5.404
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	593	615	588	620	667
Service Time	3.793	3.587	4.158	3.535	3.137
HCM Lane V/C Ratio	0.369	0.421	0.337	0.415	0.439
HCM Control Delay	12.3	12.8	12.3	12.6	12.3
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	1.7	2.1	1.5	2	2.2

Intersection	
Int Delay, s/veh	0.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	1	504	3	22	439
Future Vol, veh/h	0	1	504	3	22	439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	1	548	3	24	477

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	837	276	0	0	551	0
Stage 1	550	-	-	-	-	-
Stage 2	287	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	305	721	-	-	1015	-
Stage 1	542	-	-	-	-	-
Stage 2	736	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	295	721	-	-	1015	-
Mov Cap-2 Maneuver	295	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	712	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10	0	0.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	721	1015	-
HCM Lane V/C Ratio	-	-	0.002	0.024	-
HCM Control Delay (s)	-	-	10	8.6	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0	0.1	-

Intersection	
Int Delay, s/veh	0.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	0	280	2	19	227
Future Vol, veh/h	0	0	280	2	19	227
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	304	2	21	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	471	153	0	0	306	0
Stage 1	305	-	-	-	-	-
Stage 2	166	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	522	866	-	-	1252	-
Stage 1	721	-	-	-	-	-
Stage 2	846	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	512	866	-	-	1252	-
Mov Cap-2 Maneuver	512	-	-	-	-	-
Stage 1	721	-	-	-	-	-
Stage 2	830	-	-	-	-	-

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

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	-	1252	-
HCM Lane V/C Ratio	-	-	-	0.016	-
HCM Control Delay (s)	-	-	0	7.9	0.1
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	-	0.1	-

Appendix D – Opening Year With Project Level of Service Worksheets

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	287	162	86	436	94	156	317	66	138	405	377
Future Volume (veh/h)	275	287	162	86	436	94	156	317	66	138	405	377
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	299	312	176	93	474	102	170	345	72	150	440	410
Adj No. of Lanes	2	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	817	1416	633	469	1416	633	363	1169	241	468	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Ln Grp Delay, s/veh	14.5	9.2	10.2	11.8	10.0	9.2	18.6	10.2	10.3	14.2	9.8	16.0
Ln Grp LOS	B	A	B	B	A	A	B	B	B	B	A	B
Approach Vol, veh/h		787			669			587			1000	
Approach Delay, s/veh		11.5			10.1			12.7			13.0	
Approach LOS		B			B			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.7		5.1		4.7		5.1
Max Q Clear (g_c+I1), s		16.8		13.2		11.4		8.0
Green Ext Time (g_e), s		0.5		2.0		2.9		2.9
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		646		1617		965		904

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		2923		3539		3539		3539

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		603		1583		1583		1583

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment								

Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	170	0	299	0	150	0	93
Grp Sat Flow (s), veh/h/ln	0	646	0	809	0	965	0	904
Q Serve Time (g_s), s	0.0	11.0	0.0	7.1	0.0	5.6	0.0	3.4
Cycle Q Clear Time (g_c), s	0.0	14.8	0.0	11.2	0.0	9.3	0.0	6.0
Perm LT Sat Flow (s_l), veh/h/ln	0	646	0	809	0	965	0	904
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	14.2	0.0	13.8	0.0	14.3	0.0	15.4
Perm LT Q Serve Time (g_ps), s	0.0	11.0	0.0	7.1	0.0	5.6	0.0	3.4
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	363	0	817	0	468	0	469
V/C Ratio (X)	0.00	0.47	0.00	0.37	0.00	0.32	0.00	0.20
Avail Cap (c_a), veh/h	0	363	0	817	0	468	0	469
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	14.3	0.0	13.2	0.0	12.4	0.0	10.9
Incr Delay (d2), s/veh	0.0	4.3	0.0	1.3	0.0	1.8	0.0	0.9
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	18.6	0.0	14.5	0.0	14.2	0.0	11.8
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	1.6	0.0	1.5	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.1	0.0	0.2	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.4	0.0	1.7	0.0	1.7	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.03	0.00	0.13	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	2	0	2
Grp Vol (v), veh/h	0	207	0	312	0	440	0	474
Grp Sat Flow (s), veh/h/ln	0	1770	0	1770	0	1770	0	1770
Q Serve Time (g_s), s	0.0	3.6	0.0	2.6	0.0	3.8	0.0	4.2
Cycle Q Clear Time (g_c), s	0.0	3.6	0.0	2.6	0.0	3.8	0.0	4.2
Lane Grp Cap (c), veh/h	0	708	0	1416	0	1416	0	1416
V/C Ratio (X)	0.00	0.29	0.00	0.22	0.00	0.31	0.00	0.33
Avail Cap (c_a), veh/h	0	708	0	1416	0	1416	0	1416
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	8.9	0.0	9.2	0.0	9.4
Incr Delay (d2), s/veh	0.0	1.0	0.0	0.4	0.0	0.6	0.0	0.6
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.2	0.0	9.2	0.0	9.8	0.0	10.0
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.3	0.0	1.8	0.0	2.0

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	1.9	0.0	1.3	0.0	1.9	0.0	2.2
%ile Storage Ratio (RQ%)	0.00	0.04	0.00	0.02	0.00	0.14	0.00	0.07
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	210	0	176	0	410	0	102
Grp Sat Flow (s), veh/h/ln	0	1756	0	1583	0	1583	0	1583
Q Serve Time (g_s), s	0.0	3.7	0.0	3.4	0.0	9.4	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	3.7	0.0	3.4	0.0	9.4	0.0	1.9
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.34	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	703	0	633	0	633	0	633
V/C Ratio (X)	0.00	0.30	0.00	0.28	0.00	0.65	0.00	0.16
Avail Cap (c_a), veh/h	0	703	0	633	0	633	0	633
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.2	0.0	9.1	0.0	10.9	0.0	8.7
Incr Delay (d2), s/veh	0.0	1.1	0.0	1.1	0.0	5.1	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.3	0.0	10.2	0.0	16.0	0.0	9.2
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.5	0.0	4.1	0.0	0.8
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.2	0.0	0.9	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.0	0.0	1.7	0.0	5.0	0.0	0.9
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.02	0.00	0.37	0.00	0.03
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.9
HCM 2010 LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	327	218	102	59	368	115	147	372	45	80	402	293
Future Volume (veh/h)	327	218	102	59	368	115	147	372	45	80	402	293
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q, veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj (A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	355	237	111	64	400	125	160	404	49	87	437	318
Adj No. of Lanes	2	2	1	1	2	1	1	2	0	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Opposing Right Turn Influence	Yes			Yes			Yes			Yes		
Cap, veh/h	869	1416	633	527	1416	633	383	1272	153	452	1416	633
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Prop Arrive On Green	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Ln Grp Delay, s/veh	14.4	8.9	9.3	10.4	9.6	9.5	17.0	10.4	10.5	12.7	9.8	13.0
Ln Grp LOS	B	A	A	B	A	A	B	B	B	B	A	B
Approach Vol, veh/h		703			589			613			842	
Approach Delay, s/veh		11.8			9.7			12.2			11.3	
Approach LOS		B			A			B			B	

Timer:	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Case No		6.0		5.0		5.0		5.0
Phs Duration (G+Y+Rc), s		22.5		22.5		22.5		22.5
Change Period (Y+Rc), s		4.5		4.5		4.5		4.5
Max Green (Gmax), s		18.0		18.0		18.0		18.0
Max Allow Headway (MAH), s		5.5		5.2		4.8		4.9
Max Q Clear (g_c+I1), s		14.8		13.5		9.1		5.9
Green Ext Time (g_e), s		1.2		1.8		3.1		2.7
Prob of Phs Call (p_c)		1.00		1.00		1.00		1.00
Prob of Max Out (p_x)		0.00		0.00		0.00		0.00

Left-Turn Movement Data								
Assigned Mvmt		5		7		1		3
Mvmt Sat Flow, veh/h		706		1696		934		1029

Through Movement Data								
Assigned Mvmt		2		4		6		8
Mvmt Sat Flow, veh/h		3181		3539		3539		3539

Right-Turn Movement Data								
Assigned Mvmt		12		14		16		18
Mvmt Sat Flow, veh/h		384		1583		1583		1583

Left Lane Group Data								
Assigned Mvmt	0	5	0	7	0	1	0	3
Lane Assignment								

Lanes in Grp	0	1	0	2	0	1	0	1
Grp Vol (v), veh/h	0	160	0	355	0	87	0	64
Grp Sat Flow (s), veh/h/ln	0	706	0	848	0	934	0	1029
Q Serve Time (g_s), s	0.0	9.0	0.0	8.1	0.0	3.2	0.0	1.9
Cycle Q Clear Time (g_c), s	0.0	12.8	0.0	11.5	0.0	7.1	0.0	3.9
Perm LT Sat Flow (s_l), veh/h/ln	0	706	0	848	0	934	0	1029
Shared LT Sat Flow (s_sh), veh/h/ln	0	0	0	0	0	0	0	0
Perm LT Eff Green (g_p), s	0.0	18.0	0.0	18.0	0.0	18.0	0.0	18.0
Perm LT Serve Time (g_u), s	0.0	14.2	0.0	14.6	0.0	14.0	0.0	16.1
Perm LT Q Serve Time (g_ps), s	0.0	9.0	0.0	8.1	0.0	3.2	0.0	1.9
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop LT Inside Lane (P_L)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	383	0	869	0	452	0	527
V/C Ratio (X)	0.00	0.42	0.00	0.41	0.00	0.19	0.00	0.12
Avail Cap (c_a), veh/h	0	383	0	869	0	452	0	527
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	13.6	0.0	13.0	0.0	11.7	0.0	9.9
Incr Delay (d2), s/veh	0.0	3.3	0.0	1.4	0.0	0.9	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	17.0	0.0	14.4	0.0	12.7	0.0	10.4
1st-Term Q (Q1), veh/ln	0.0	1.7	0.0	1.9	0.0	0.8	0.0	0.5
2nd-Term Q (Q2), veh/ln	0.0	0.4	0.0	0.2	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	2.0	0.0	0.9	0.0	0.6
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.03	0.00	0.07	0.00	0.02
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Mvmt	0	2	0	4	0	6	0	8
Lane Assignment		T		T		T		T
Lanes in Grp	0	1	0	2	0	2	0	2
Grp Vol (v), veh/h	0	224	0	237	0	437	0	400
Grp Sat Flow (s), veh/h/ln	0	1770	0	1770	0	1770	0	1770
Q Serve Time (g_s), s	0.0	3.9	0.0	1.9	0.0	3.8	0.0	3.4
Cycle Q Clear Time (g_c), s	0.0	3.9	0.0	1.9	0.0	3.8	0.0	3.4
Lane Grp Cap (c), veh/h	0	708	0	1416	0	1416	0	1416
V/C Ratio (X)	0.00	0.32	0.00	0.17	0.00	0.31	0.00	0.28
Avail Cap (c_a), veh/h	0	708	0	1416	0	1416	0	1416
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.3	0.0	8.7	0.0	9.2	0.0	9.1
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.3	0.0	0.6	0.0	0.5
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.4	0.0	8.9	0.0	9.8	0.0	9.6
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.9	0.0	1.8	0.0	1.7

2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.1	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	1.0	0.0	1.9	0.0	1.8
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.14	0.00	0.06
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Right Lane Group Data								
Assigned Mvmt	0	12	0	14	0	16	0	18
Lane Assignment		T+R		R		R		R
Lanes in Grp	0	1	0	1	0	1	0	1
Grp Vol (v), veh/h	0	229	0	111	0	318	0	125
Grp Sat Flow (s), veh/h/ln	0	1795	0	1583	0	1583	0	1583
Q Serve Time (g_s), s	0.0	4.0	0.0	2.0	0.0	6.8	0.0	2.3
Cycle Q Clear Time (g_c), s	0.0	4.0	0.0	2.0	0.0	6.8	0.0	2.3
Prot RT Sat Flow (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prop RT Outside Lane (P_R)	0.00	0.21	0.00	1.00	0.00	1.00	0.00	1.00
Lane Grp Cap (c), veh/h	0	718	0	633	0	633	0	633
V/C Ratio (X)	0.00	0.32	0.00	0.18	0.00	0.50	0.00	0.20
Avail Cap (c_a), veh/h	0	718	0	633	0	633	0	633
Upstream Filter (I)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
Uniform Delay (d1), s/veh	0.0	9.3	0.0	8.7	0.0	10.1	0.0	8.8
Incr Delay (d2), s/veh	0.0	1.2	0.0	0.6	0.0	2.8	0.0	0.7
Initial Q Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.5	0.0	9.3	0.0	13.0	0.0	9.5
1st-Term Q (Q1), veh/ln	0.0	1.9	0.0	0.9	0.0	2.9	0.0	1.0
2nd-Term Q (Q2), veh/ln	0.0	0.2	0.0	0.1	0.0	0.5	0.0	0.1
3rd-Term Q (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile Back of Q Factor (f_B%)	0.00	1.00	0.00	1.00	0.00	1.00	0.00	1.00
%ile Back of Q (50%), veh/ln	0.0	2.1	0.0	1.0	0.0	3.4	0.0	1.1
%ile Storage Ratio (RQ%)	0.00	0.05	0.00	0.01	0.00	0.25	0.00	0.04
Initial Q (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Q (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Q (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sat Cap (cs), veh/h	0	0	0	0	0	0	0	0
Initial Q Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	11.3
HCM 2010 LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	568	285	286	897	354	158
Future Volume (vph)	568	285	286	897	354	158
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.95		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3362		1770	3539	3331	
Flt Permitted	1.00		0.30	1.00	0.97	
Satd. Flow (perm)	3362		551	3539	3331	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	617	310	311	975	385	172
RTOR Reduction (vph)	136	0	0	0	145	0
Lane Group Flow (vph)	791	0	311	975	412	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	5	
Permitted Phases			8			
Actuated Green, G (s)	18.0		18.0	18.0	5.0	
Effective Green, g (s)	18.0		18.0	18.0	5.0	
Actuated g/C Ratio	0.56		0.56	0.56	0.16	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1891		309	1990	520	
v/s Ratio Prot	0.24			0.28	c0.12	
v/s Ratio Perm			c0.56			
v/c Ratio	0.42		1.01	0.49	0.79	
Uniform Delay, d1	4.0		7.0	4.2	13.0	
Progression Factor	1.00		1.00	1.00	1.00	
Incremental Delay, d2	0.7		52.8	0.9	11.7	
Delay (s)	4.7		59.8	5.1	24.7	
Level of Service	A		E	A	C	
Approach Delay (s)	4.7			18.3	24.7	
Approach LOS	A			B	C	

Intersection Summary			
HCM 2000 Control Delay	15.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	32.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	586	168	109	834	226	127
Future Volume (vph)	586	168	109	834	226	127
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		4.5	4.5	4.5	
Lane Util. Factor	0.95		1.00	0.95	0.97	
Frt	0.97		1.00	1.00	0.95	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	3421		1770	3539	3313	
Flt Permitted	1.00		0.27	1.00	0.97	
Satd. Flow (perm)	3421		496	3539	3313	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	637	183	118	907	246	138
RTOR Reduction (vph)	59	0	0	0	80	0
Lane Group Flow (vph)	761	0	118	907	304	0
Turn Type	NA		Perm	NA	Prot	
Protected Phases	4			8	2	
Permitted Phases			8			
Actuated Green, G (s)	18.0		18.0	18.0	18.0	
Effective Green, g (s)	18.0		18.0	18.0	18.0	
Actuated g/C Ratio	0.40		0.40	0.40	0.40	
Clearance Time (s)	4.5		4.5	4.5	4.5	
Lane Grp Cap (vph)	1368		198	1415	1325	
v/s Ratio Prot	0.22			c0.26	c0.09	
v/s Ratio Perm			0.24			
v/c Ratio	0.56		0.60	0.64	0.23	
Uniform Delay, d1	10.4		10.6	10.9	8.9	
Progression Factor	1.00		1.14	1.11	1.00	
Incremental Delay, d2	1.6		12.2	2.2	0.4	
Delay (s)	12.1		24.3	14.3	9.3	
Level of Service	B		C	B	A	
Approach Delay (s)	12.1			15.4	9.3	
Approach LOS	B			B	A	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.44		
Actuated Cycle Length (s)	45.0	Sum of lost time (s)	9.0
Intersection Capacity Utilization	49.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

Intersection	
Int Delay, s/veh	3.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	85	78	66	554	399	102
Future Vol, veh/h	85	78	66	554	399	102
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	92	85	72	602	434	111

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	935	273	545	0	-	0
Stage 1	490	-	-	-	-	-
Stage 2	445	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	264	725	1020	-	-	-
Stage 1	581	-	-	-	-	-
Stage 2	613	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	236	725	1020	-	-	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	519	-	-	-	-	-
Stage 2	613	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.6	1.3	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1020	-	348	-	-
HCM Lane V/C Ratio	0.07	-	0.509	-	-
HCM Control Delay (s)	8.8	0.4	25.6	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.8	-	-

Intersection	
Int Delay, s/veh	1.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	22	60	46	316	238	27
Future Vol, veh/h	22	60	46	316	238	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	65	50	343	259	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	546	144	288	0	-	0
Stage 1	274	-	-	-	-	-
Stage 2	272	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	468	877	1271	-	-	-
Stage 1	747	-	-	-	-	-
Stage 2	749	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	445	877	1271	-	-	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	749	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.9	1.2	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1271	-	696	-	-
HCM Lane V/C Ratio	0.039	-	0.128	-	-
HCM Control Delay (s)	7.9	0.2	10.9	-	-
HCM Lane LOS	A	A	B	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	-	-

Intersection	
Int Delay, s/veh	3.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	15	195	393	35	112	383
Future Vol, veh/h	15	195	393	35	112	383
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	16	212	427	38	122	416

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	898	233	0	0	465	0
Stage 1	446	-	-	-	-	-
Stage 2	452	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	279	769	-	-	1093	-
Stage 1	612	-	-	-	-	-
Stage 2	608	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	239	769	-	-	1093	-
Mov Cap-2 Maneuver	239	-	-	-	-	-
Stage 1	612	-	-	-	-	-
Stage 2	520	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	13.2	0	2.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	664	1093	-
HCM Lane V/C Ratio	-	-	0.344	0.111	-
HCM Control Delay (s)	-	-	13.2	8.7	0.4
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	1.5	0.4	-

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	121	211	50	71	221
Future Vol, veh/h	26	121	211	50	71	221
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	132	229	54	77	240

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	530	142	0	0	283	0
Stage 1	256	-	-	-	-	-
Stage 2	274	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	479	880	-	-	1276	-
Stage 1	763	-	-	-	-	-
Stage 2	747	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	445	880	-	-	1276	-
Mov Cap-2 Maneuver	445	-	-	-	-	-
Stage 1	763	-	-	-	-	-
Stage 2	695	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.1	0	2.1
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	750	1276	-
HCM Lane V/C Ratio	-	-	0.213	0.06	-
HCM Control Delay (s)	-	-	11.1	8	0.2
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.8	0.2	-

Intersection	
Intersection Delay, s/veh	15.5
Intersection LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	180	74	146	325	339	245
Future Vol, veh/h	180	74	146	325	339	245
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	196	80	159	353	368	266
Number of Lanes	1	0	0	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	15.4	14.9	16
HCM LOS	C	B	C

Lane	NBLn1	NBLn2	EBLn1	SBLn1	SBLn2
Vol Left, %	57%	0%	71%	0%	0%
Vol Thru, %	43%	100%	0%	100%	32%
Vol Right, %	0%	0%	29%	0%	68%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	254	217	254	226	358
LT Vol	146	0	180	0	0
Through Vol	108	217	0	226	113
RT Vol	0	0	74	0	245
Lane Flow Rate	276	236	276	246	389
Geometry Grp	7	7	2	7	7
Degree of Util (X)	0.509	0.414	0.488	0.426	0.621
Departure Headway (Hd)	6.626	6.334	6.365	6.237	5.749
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	542	568	566	575	626
Service Time	4.388	4.095	4.417	3.995	3.507
HCM Lane V/C Ratio	0.509	0.415	0.488	0.428	0.621
HCM Control Delay	16.1	13.5	15.4	13.6	17.5
HCM Lane LOS	C	B	C	B	C
HCM 95th-tile Q	2.9	2	2.7	2.1	4.3

Intersection	
Intersection Delay, s/veh	12.8
Intersection LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	137	57	89	358	355	154
Future Vol, veh/h	137	57	89	358	355	154
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	62	97	389	386	167
Number of Lanes	1	0	0	2	2	0

Approach	EB	NB	SB
Opposing Approach		SB	NB
Opposing Lanes	0	2	2
Conflicting Approach Left	SB	EB	
Conflicting Lanes Left	2	1	0
Conflicting Approach Right	NB		EB
Conflicting Lanes Right	2	0	1
HCM Control Delay	12.6	12.9	12.7
HCM LOS	B	B	B

Lane	NBLn1	NBLn2	EBLn1	SBLn1	SBLn2
Vol Left, %	43%	0%	71%	0%	0%
Vol Thru, %	57%	100%	0%	100%	43%
Vol Right, %	0%	0%	29%	0%	57%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	208	239	194	237	272
LT Vol	89	0	137	0	0
Through Vol	119	239	0	237	118
RT Vol	0	0	57	0	154
Lane Flow Rate	226	259	211	257	296
Geometry Grp	7	7	2	7	7
Degree of Util (X)	0.386	0.426	0.359	0.419	0.45
Departure Headway (Hd)	6.131	5.914	6.128	5.868	5.467
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	587	610	586	615	657
Service Time	3.867	3.65	4.166	3.604	3.203
HCM Lane V/C Ratio	0.385	0.425	0.36	0.418	0.451
HCM Control Delay	12.7	13	12.6	12.8	12.6
HCM Lane LOS	B	B	B	B	B
HCM 95th-tile Q	1.8	2.1	1.6	2.1	2.3

Intersection	
Int Delay, s/veh	4.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	61	58	504	127	137	439
Future Vol, veh/h	61	58	504	127	137	439
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	66	63	548	138	149	477

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1154	343	0	0	686	0
Stage 1	617	-	-	-	-	-
Stage 2	537	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	190	653	-	-	904	-
Stage 1	501	-	-	-	-	-
Stage 2	550	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	147	653	-	-	904	-
Mov Cap-2 Maneuver	147	-	-	-	-	-
Stage 1	501	-	-	-	-	-
Stage 2	427	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	37.3	0	2.9
HCM LOS	E		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	236	904	-
HCM Lane V/C Ratio	-	-	0.548	0.165	-
HCM Control Delay (s)	-	-	37.3	9.8	0.7
HCM Lane LOS	-	-	E	A	A
HCM 95th %tile Q(veh)	-	-	3	0.6	-

Intersection	
Int Delay, s/veh	1.5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	26	24	280	26	42	227
Future Vol, veh/h	26	24	280	26	42	227
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	28	26	304	28	46	247

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	534	166	0	0	332	0
Stage 1	318	-	-	-	-	-
Stage 2	216	-	-	-	-	-
Critical Hdwy	6.84	6.94	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	-	-	2.22	-
Pot Cap-1 Maneuver	476	849	-	-	1224	-
Stage 1	710	-	-	-	-	-
Stage 2	799	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	455	849	-	-	1224	-
Mov Cap-2 Maneuver	455	-	-	-	-	-
Stage 1	710	-	-	-	-	-
Stage 2	764	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.8	0	1.3
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	585	1224	-
HCM Lane V/C Ratio	-	-	0.093	0.037	-
HCM Control Delay (s)	-	-	11.8	8.1	0.1
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.3	0.1	-