



ASSOCIATED TRANSPORTATION ENGINEERS

100 N. Hope Avenue, Suite 4, Santa Barbara, CA 93110 • (805)687-4418 • FAX (805)682-8509 • main@atesb.com

Since 1978

Richard L. Pool, P.E.
Scott A. Schell

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19057.02.L05

EMC Planning Group
Attn: Teri Wissler Adam
601 Abrego Street
Monterey, CA 93940

TRAFFIC AND PARKING STUDY FOR THE CONSTRUCTION , DEMOLITION AND OPERATIONAL PHASES OF THE VISTRA ENERGY 600 MW BATTERY ENERGY STORAGE SYSTEM PROJECT – MORRO BAY

Associated Transportation Engineers (ATE) has prepared the following traffic and parking study for the Construction and Demolition Phases of the Vistra Energy 600 MW Battery Energy Storage System Project (the “Project”) proposed in the City of Morro Bay. The study focuses on the potential traffic and parking effects of the Project during the Construction Phase of the Project when the battery storage system is built, the Demolition Phase of the Project when the existing Morro Bay Power Plant will be removed, and the Operational Phase of the Project when the system is up and running.

PROJECT DESCRIPTION

The Project is proposing to construct and operate a 600-megawatt Battery Energy Storage System (BESS) to be located entirely within the existing Morro Bay Power Plant site. Figure 1 shows the location of the Project site within the Morro Bay area. Figure 2 illustrates the Project Site Plan. The BESS would be comprised of battery modules within three enclosed buildings. Each building would be surrounded by approximately 60 power conversion systems that convert direct current to alternating current. Three substations with transformers are also part of the Project.

The Construction Phase is anticipated to last approximately 36-48 months. Construction is anticipated to occur in three phases that will overlap:

- Phase 1 - Site Preparation: duration of 12-18 months.
- Phase 2 – Installation: duration of 18-36 months.
- Phase 3 – Commissioning (Start-up and Testing): duration of 12-18 months.

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Following construction of the BESS, Vistra would demolish and remediate the existing Morro Bay Power Plant building and stacks. These activities would be expected to commence within six months after completion of the BESS. Of the 43 acres included in the Project site, approximately 19 acres (Demolition Site) would be used for demolition and remediation of the power plant building and stacks. Figure 3 shows the approximate limits of the demolition activities. The Demolition Phase would include the removal of equipment, removal of remaining regulated materials, dismantling of plant facilities and infrastructure, salvage and recycling of remaining equipment, waste management transport and disposal, and backfill of below grade voids. The Demolition Phase is anticipated to take up to two years to complete.

Figure 4 illustrates the travel routes that will be used during the Construction and Demolition Phases. As shown, access to the site for employee vehicles and delivery/waste hauling trucks would be provided via the existing driveway that connects to Quintana Road.

EXISTING CONDITIONS

Existing Street Network

As shown in Figure 5, regional access for the Project is provided by State Route 1 and local access is provided by a network of arterial and collector streets within the City of Morro Bay. The following text provides a brief description of the study-area street network.

State Route 1 (SR 1) is a regional State Highway that extends north through the City of Morro Bay towards the Cambria area and southeast towards San Luis Obispo. SR 1 is a divided four-lane highway within the Morro Bay area. SR 1 would provide regional access to the Project site via the SR 1/Main Street interchange.

Main Street, designated as a Minor Arterial by the City, is a two-lane roadway that extends north and south of SR 1. North of the SR 1/Main Street interchange, Main Street parallels the east side of SR 1 and serves commercial uses and residential neighborhoods. South of the SR 1/Main Street interchange, Main Street extends through the downtown area to the Morro Bay State Park area. Project traffic would use the segment of Main Street south of SR 1, which is a designated truck route.

Quintana Road is a two-lane roadway that extends east and west of Main Street. The segment west of Main Street provides access to the Project site and segment east of Main Street serves commercial uses.

Beach Street is a two-lane roadway that extends east and west of Main Street. The segment between Main Street and Embarcadero, which is designated as a Minor Arterial, serves the adjacent commercial uses. This segment, which would be used by Project traffic, is a designated truck route.

Embarcadero, designated as a Minor Arterial, is a two-lane roadway that extends north and south of Beach Street. Embarcadero provides access to visitor-serving and marine uses along its reach. There is a driveway providing access to the Project site on the Embarcadero, however this driveway would not be used for vehicular access during the Construction and Demolition Phases of the Project due to the staging activities that would occur in this area of the site.

Existing Traffic Operations

Because traffic flow on street networks is most constrained at intersections, detailed traffic flow analyses focus on the operating conditions at key intersections during peak travel periods. Peak travel periods occur most often during the AM peak commuter period (7-9 AM) and PM peak commuter period (4-6 PM).

"Levels of Service" (LOS) A through F are used to rate intersection operations, with LOS A indicating very good operation and LOS F indicating poor operation. Table 1 provides brief definitions for the level of service grading system. The City does not have a formal LOS threshold defining acceptable operations, but historically has applied the Caltrans target of LOS C or better.

Table 1
Level of Service Definitions

LOS	Definition
A	Conditions of free unobstructed flow, no delays, and all signal phases sufficient in duration to clear all approaching vehicles.
B	Conditions of stable flow, very little delay, a few phases are unable to handle all approaching vehicles.
C	Conditions of stable flow, delays are low to moderate, full use of peak direction signal phases is experienced.
D	Conditions approaching unstable flow, delays are moderate to heavy, significant signal time deficiencies are experienced for short durations during the peak traffic period.
E	Conditions of unstable flow, delays are significant, signal phase timing is generally insufficient, congestion exists for extended duration throughout the peak period.
F	Conditions of forced flow, travel speeds are low and volumes are well above capacity. This condition is often caused when vehicles released by an upstream signal are unable to proceed because of back-ups from a downstream signal.

Source: Highway Capacity Manual, 2016.

Existing traffic volumes were collected at the key intersections in the study area in September 2019 (count data attached) and from the City's Circulation Element.¹ Figure 6 illustrates the Existing peak hour traffic volumes during the AM peak commuter period (7-9 AM) and PM peak commuter period (4-6 PM). Levels of service were calculated for the study-area intersections using the operations methods outlined in the Highway Capacity Manual (HCM).² Table 2 lists the Existing AM and PM peak hour levels of service for the key study-area intersections along the Project's proposed traffic route.

Table 2
Existing Levels of Service

Intersection	Control	AM Peak Hour		PM Peak Hour	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.4 Sec.	LOS B	10.5 Sec.	LOS B
SR 1 NB Ramps/Main Street	1-Way Stop	12.5 Sec.	LOS B	13.5 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	NA(b)	NA(b)	13.4 Sec.	LOS B

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operation method.

(b) AM peak hour data not available.

The data presented in Table 2 show that the key intersections currently operate at LOS B during the AM and PM peak commuter periods, which indicate good operations.

CONSTRUCTION PHASE ANALYSIS

The following section evaluates the Project's traffic effects during Construction Phase 2, which is forecast to generate the highest levels of traffic (see Table 3). Phases 1 & 3 would generate less traffic, are of shorter duration, and would therefore have a lesser effect on the study-area street network.

Construction Phase Trip Generation

Trip generation estimates were developed for each construction phase based on the anticipated number of construction employees and truck deliveries. The trip generation estimates are based on the number of employees, the proposed work schedule (7:00 AM-7:00 PM), and the number of deliveries per day (up to 60 per day for Phases 1 & 2; and up to 5 per day for Phase 3). The analysis assumes carpooling for employees with an average vehicle occupancy of 2.0 employees per vehicle. Table 3 presents the Project trip generation forecasts for each Construction Phase.

¹ Morro Bay Circulation Element Update Draft Technical Report, Central Coast Transportation Consulting, 2018.

² Highway Capacity Manual, Transportation Research Board, 2016.

As shown in Table 3, Phase 2 would generate the highest volume of traffic during the construction period. Phase 2 is forecast to generate 420 average daily trips (ADT) with 87 trips occurring during the AM peak hour and 12 trips occurring during the PM peak hour. The other construction phases would generate less traffic and are of shorter duration.

Table 3
Project Trip Generation – Construction

Project Phase	Number per Day	Shift Schedule	Trip Generation		
			ADT	AM Peak	PM Peak
Phase 1: Site Preparation (12-18 Months)					
Employees(a)	100	7:00 AM - 7:00 PM	100	25	0
Misc. Deliveries(b)	60	NA	<u>120</u>	<u>12</u>	<u>12</u>
Totals:			320	37	2
Phase 2: Installation (18-36 Months)					
Employees(a)	300	7:00 AM - 7:00 PM	300	75	0
Misc. Deliveries(b)	60	NA	<u>120</u>	<u>12</u>	<u>12</u>
Totals:			420	87	12
Phase 3: Commissioning (12-18 Months)					
Employees(a)	100	7:00 AM - 7:00 PM	100	25	0
Misc. Deliveries(b)	5	NA	<u>10</u>	<u>1</u>	<u>1</u>
Totals:			110	26	1

(a) Maximum number of employees on site. ADT assumes average vehicle occupancy of 2.0 employees per vehicle, 1 inbound + 1 outbound trip per employee. Peak hour trips assume 25% of employees arrive during the AM peak hour and no trips during the PM peak hour.

(b) Maximum number of deliveries per day. ADT assumes 1 inbound + 1 outbound trip per delivery. Peak hour trips assume 10% of trips occur during the AM and PM peak hours.

Construction Phase Access Route

As noted in the Project description, access to the site for employee vehicles and delivery trucks would be provided via the existing driveway that connects to Quintana Road (see Figure 4). The driveway on Embarcadero would not be used for vehicular traffic but would be open for employees walking to local retail/restaurant facilities during the lunch break period. Figure 7 shows the distribution and assignment of construction traffic on the study-area street network.

Existing + Construction Phase Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes shown on Figure 8. Tables 4 and 5 compare the Existing and Existing + Project levels of service for the AM and PM peak hour periods for Access Scenario 1.

**Table 4
Existing + Construction Phase Levels of Service – AM Peak Hour**

Intersection	Control	Existing		Existing + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.4 Sec.	LOS B	10.6 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	12.5 Sec.	LOS B	14.1 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	NA(b)	NA(b)	NA(b)	NA(b)

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operation method.

(b) AM peak hour data not available.

**Table 5
Existing + Construction Phase Levels of Service – PM Peak Hour**

Intersection	Control	Existing		Existing + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.5 Sec.	LOS B	10.5 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	13.5 Sec.	LOS B	13.5 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	13.4 Sec.	LOS B	13.4 Sec.	LOS B

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operation method.

As shown in Tables 4 and 5, the key intersections along the Project's traffic route are forecast to continue to operate at LOS B during the AM and PM peak hours with Existing + Construction Phase traffic – which indicate relatively good operations. While the City does not have a formal LOS threshold defining acceptable operations, it has historically applied the Caltrans LOS C standard. The Project would increase delays by less than 1 second per vehicle at the study-area intersections – which are considered less than significant impacts since the intersections are forecast to operate at LOS C or better.

Cumulative Analysis

Cumulative Traffic Volumes

Cumulative traffic volumes were forecast for the study-area intersections assuming development of the approved and pending projects located in the City (list of cumulative projects attached). Traffic generated by the cumulative projects was added to the Existing volumes to produce the Cumulative traffic forecasts. Figure 9 shows the Cumulative traffic volumes and Figure 10 shows the Cumulative + Project volumes.

Cumulative + Construction Phase Intersection Operations

Tables 6 and 7 compare the Cumulative and Cumulative + Construction Phase levels of service forecasts for the study-area intersections.

Table 6
Cumulative + Construction Phase Levels of Service – AM Peak Hour

Intersection	Control	Cumulative		Cumulative + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.5 Sec.	LOS B	10.7 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	13.3 Sec.	LOS B	15.2 Sec.	LOS C
Main Street/Beach Street	All-Way Stop	NA(b)	NA(b)	NA(b)	NA(b)

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operations method.

(b) AM peak hour data not available.

Table 7
Cumulative + Construction Phase Levels of Service – PM Peak Hour

Intersection	Control	Cumulative		Cumulative + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.7 Sec.	LOS B	10.7 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	14.2 Sec.	LOS B	14.3 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	15.0 Sec.	LOS B	15.0 Sec.	LOS B

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operation method.

As shown in Tables 6 and 7, the key intersections along the Project's traffic route are forecast to continue to operate in the LOS B – C range during the AM and PM peak hours with Cumulative and Cumulative + Project traffic – which indicate relatively good operations. The Project's traffic contributions are considered less than significant impacts since the intersections are forecast to operate at LOS C or better.

Construction Phase Parking

Figure 11 shows the designated employee parking area on the Project site. The parking area encompasses about 66,500 SF. Parking lots typically require between 300 SF to 350 SF per parking space (which includes the area needed for drive aisles, maneuver areas, etc.). Since this is an irregular shape area, assuming a conservative estimate of 350 SF per parking space yields about 190 parking spaces. During the peak Phase 2 construction period, the Project would generate a parking demand of 150 employee vehicles. Thus, the 190 parking spaces would accommodate the parking demand during the construction phase.

DEMOLITION PHASE ANALYSIS

Demolition activities would occur Monday through Friday (weekend demolition work is not expected, but may occur on occasion, depending on schedule considerations). Demolition would occur between the hours of 7:00 AM and 5:00 PM. During average periods, the Demolition Phase, there would be an average of 100 employees onsite and 5 export trucks per day. During the peak demolition activity periods, there would be a maximum of 107 employees onsite and a maximum of 25 trucks per day. The majority of the labor force is expected to come from the local area within San Luis Obispo County.

Demolition Phase Trip Generation

Trip generation estimates were developed for peak activity period of the demolition phase. As mentioned previously, the demolition phase would consist of an average of 100 workers and 5 trucks per day. As a worst case analysis, the trip generation estimates are based on the peak number of workers (107) and the peak number of export truck trips per day (maximum of 25 per day) with the work schedule of 7:00 AM-5:00 PM. Table 8 presents the trip generation forecasts for the demolition phase.

Table 8
Project Trip Generation – Demolition Phase

Project Phase	Number per Day	Shift Schedule	Trip Generation		
			ADT	AM Peak	PM Peak
Employees(a)	107	7:00 AM – 5:00 PM	107	13	54
Trucks(b)	25	7:00 AM – 5:00 PM	50	5	5
Total			157	18	59

(a) Maximum of 107 employees per day. ADT assumes an average vehicle occupancy of 2.0 employees per vehicle, 1 inbound + 1 outbound trip per employee. Peak hour trips assume 25% of employees arrive during the AM peak hour and 100% of employees depart during the PM peak hour.
(b) Maximum of 25 trucks per day. ADT assuming 1 inbound + 1 outbound trip per truck. Peak hour trips assume 10% of trips occur during the AM, Mid-day, and PM peak hours.

As shown in Table 8, the demolition phase of the Project would generate 157 ADT, 18 AM peak hour trips, and 59 PM peak hour trips.

Demolition Phase Access Route

The traffic route for traffic generated during the demolition phase is shown previously on Figure 4. Demolition employees and truck traffic would use SR 1 and the Main Street interchange and then use the Quintana Road access driveway. Figure 12 shows the distribution and assignment of demolition traffic on the study-area street network.

Existing + Demolition Phase Intersection Operations

Levels of service were calculated for the study-area intersections assuming the Existing + Project traffic volumes shown on Figure 13. Tables 9 and 10 compare the Existing and Existing + Project levels of service for the AM and PM peak hour periods for the demolition phase of the Project.

Table 9
Existing + Demolition Phase Levels of Service – AM Peak Hour

Intersection	Control	Existing		Existing + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.4 Sec.	LOS B	10.4 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	12.5 Sec.	LOS B	12.7 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	NA(b)	NA(b)	NA(b)	NA(b)

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operations method.

(b) AM peak hour data not available.

Table 10
Existing + Demolition Phase Levels of Service – PM Peak Hour

Intersection	Control	Existing		Existing + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.5 Sec.	LOS B	10.6 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	13.5 Sec.	LOS B	13.5 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	13.4 Sec.	LOS B	13.4 Sec.	LOS B

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operation method.

As shown in Tables 9 and 10, the key intersections along the Project's traffic route are forecast to continue to operate at LOS B during the AM and PM peak hours with Existing + Project traffic – which indicate relatively good operations. The Project's traffic contributions are considered less than significant impacts since the intersections are forecast to operate at LOS C or better.

Cumulative Analysis

Cumulative Traffic Volumes

Cumulative traffic volumes were forecast for the study-area intersections assuming development of the approved and pending projects located in the City (list of cumulative projects attached). Traffic generated by the cumulative projects was added to the Existing volumes to produce the Cumulative traffic forecasts. Figure 14 shows the Cumulative traffic volumes and Figure 15 shows the Cumulative + Project volumes.

Cumulative + Demolition Phase Intersection Operations

Tables 11 and 12 compare the Cumulative and Cumulative + Project levels of service forecasts for the study-area intersections.

Table 11
Cumulative + Demolition Phase Levels of Service – AM Peak Hour

Intersection	Control	Cumulative		Cumulative + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.5 Sec.	LOS B	10.5 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	13.3 Sec.	LOS B	13.6 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	NA(b)	NA(b)	NA(b)	NA(b)

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operations method.

(b) AM peak hour data not available.

Table 12
Cumulative + Demolition Phase Levels of Service – PM Peak Hour

Intersection	Control	Cumulative		Cumulative + Project	
		Delay	LOS(a)	Delay	LOS(a)
SR 1 NB Ramps/Main Street	1-Way Stop	10.7 Sec.	LOS B	10.7 Sec.	LOS B
SR 1 SB Ramps/Main Street	1-Way Stop	14.2 Sec.	LOS B	14.3 Sec.	LOS B
Main Street/Beach Street	All-Way Stop	15.0 Sec.	LOS B	15.0 Sec.	LOS B

(a) LOS based on average delay per vehicle in seconds pursuant to HCM operation method.

As shown in Tables 11 and 12, the key intersections along the Project's traffic route are forecast to continue to operate in the LOS B range during the AM and PM peak hours with Cumulative and Cumulative + Project traffic – which indicate relatively good operations. The Project's traffic contributions are considered less than significant impacts since the intersections are forecast to operate at LOS C or better.

Demolition Phase Parking

Parking for the employee vehicles would be provided within the demolition site. During the peak demolition periods, the Project would generate a parking demand of 54 employee vehicles. These vehicles would be accommodated on the demolition site.

OPERATIONAL PHASE ANALYSIS

The BESS site would be operated and maintained by 15 new employees for on-going operations working three shifts (8:00 AM-4:00 PM, 4:00 PM-12:00 AM, and 12:00 AM-8:00 AM). The Project would require only nominal long-term maintenance. Periodically, it may be necessary to test and/or replace individual battery modules. The BESS would be continuously monitored to determine if and when testing and possible replacement of individual battery modules is necessary. Table 13 shows the trip generation forecasts for on-going operations.

Table 13
Project Trip Generation – On-Going Operations

On-Going Operations	Number per Day	Shift Schedule	Trip Generation		
			ADT	AM Peak	PM Peak
Employees(a)					
1 st Shift	5	8:00 AM – 4:00 PM	15	5	5
2 nd Shift	5	4:00 PM – 12:00 AM	15	0	5
3 rd Shift	5	12:00 AM – 8:00 AM	<u>15</u>	<u>5</u>	<u>0</u>
Subtotals:			45	10	10
Deliveries	1	NA	2	0	0
Totals:			47	10	10

(a) ADT assumes 1 inbound + 1 outbound trip per employee and 50% of employees leave for lunch break.
Peak hour trips assume employee arrived during the AM peak hour and depart during the PM peak hour.

As shown in Table 13, the on-going operations of the Project would generate 47 ADT, 10 AM peak hour trips, and 10 PM peak hour trips. This relatively minor amount of daily and peak hour traffic would not affect the operation of the study-area roadways and intersections.

EMBARCADERO SAFETY ASSESSMENT

The following section reviews the Project's effects on the operation of the segment of the Embarcadero adjacent to the Project site.

Non-Tourist Season Operations

The Embarcadero is a two-lane arterial roadway that extends north and south of Beach Street. As outlined in the Morro Bay Circulation Element Draft Technical Report, the segment of the Embarcadero between Beach Street and the Project's access driveway currently operates at LOS C and is forecast to operate at LOS C under General Plan Buildout conditions. It is noted that these existing levels of service are for typical weekdays and Saturdays based on traffic volumes collected in 2016 for the Circulation Element.

Peak Spring-Summer Operations

Traffic volumes are higher on the Embarcadero during the Spring-Summer tourist season. In addition, pedestrian and bicycle activity is higher during peak tourist seasons. Table 14 shows the hourly traffic volumes on the Embarcadero on weekdays and Saturdays during the peak Spring-Summer tourist season (see attached count data).

Table 14
Spring-Summer Hourly Traffic Volumes
Embarcadero north of Beach Street

Time Period	Spring-Summer Hourly Volumes	
	Weekdays	Saturdays
8:00-9:00 AM	255	352
9:00-10:00 AM	302	481
10:00-11:00 AM	390	626
11:00 AM-12:00 PM	420	658
12:00-1:00 PM	531	731
1:00-2:00 PM	511	806
2:00-3:00 PM	499	711
3:00-4:00 PM	474	679
4:00-5:00 PM	448	674
5:00-6:00 PM	402	666
6:00-7:00 PM	384	623
7:00-8:00 PM	274	353
8:00-9:00 PM	94	126

Safety Analysis

Pedestrians

As shown in Table 14, the hourly traffic volumes on the Embarcadero are highest during the afternoon period between 12:00 PM and 5:00 PM during the peak Spring-Summer period. The roadway carries about 500 vehicles per hour during the weekday afternoon period. The by the Construction and Demolition phases of the Project would not generate any new vehicular traffic on the Embarcadero. The Project could, however, result in some employees walking out of the main gate along Embarcadero during the mid-day period to access local restaurant/retail facilities on the south side of the Embarcadero. As shown on Figure 16, there is an existing crosswalk for employees to cross the Embarcadero to access the local facilities for lunch. Sidewalks are provided on the east side of the Project site driveway and on the south of the Embarcadero to accommodate pedestrians. There is 40 feet of red curb along the north side of Embarcadero adjacent to the Project driveway, providing visibility to the east. It is recommended that landscaping vegetation at the northeast corner of the intersection be kept at a height of 3.5 feet or less to maintain visibility between vehicles and pedestrians crossing the street. Given the existing pedestrian facilities provided, no significant safety issues are anticipated. It is also noted that the Project will include frontage improvements along the Embarcadero that will enhance the pedestrian facilities in this area.

Bicycles

The City of Morro Bay Bike Map (attached for reference) shows that there are Class II bike lanes on Embarcadero adjacent to the Project site; and Class I bike paths extending north of the site to the Morro Bay High School and west of the site to the Morro Rock. As noted above, the Construction and Demolition phases of the Project would not generate any new vehicular traffic on the Embarcadero. It is not anticipated that there would be any new bicycle traffic generated by the Construction and Demolition phases as the majority of workers would drive to the site. There will be some additional mid-day pedestrian activity generated by the Project at the Embarcadero entrance, however it is not anticipated that this additional pedestrian activity would impact the existing bike facilities in the study area. It is also noted that the Project will include frontage improvements along the Embarcadero that will enhance the pedestrian facilities in this area.

VEHICLE MILES TRAVELED

The following section evaluates the potential VMT impacts of the Construction, Demolition, and Operational Phases of the Project. Per the State's Natural Resource Agency Updated Guidelines for the Implementation of the CEQA adopted in 2018, VMT has been designated as the most appropriate measure of transportation impacts. "Vehicle miles traveled" refers to the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel. For land use projects, vehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact.

VMT CEQA Thresholds

The City of Morro Bay has not yet developed VMT criteria and thresholds for evaluating potential VMT impacts. The VMT thresholds and calculation methodologies presented in the San Luis Obispo County Transportation Impact Analysis Guidelines³ were therefore used for this evaluation. The County's VMT thresholds for employment-based projects are reviewed below.

Employment VMT Threshold

Project VMT exceeds a level of 15 percent below existing county VMT for home-based work VMT per employee.

The County's guidelines indicate that the Countywide Home-Based Work VMT per employee is 30.2, and the significance threshold is 25.7 Home-Based Work VMT per employee (15 percent less than 30.2).

3 Transportation Impact Analysis Guidelines, Department of Public Works, 2021.

VMT Analysis – Construction and Demolition Phases

The potential VMT impacts associated with the Construction and Demolition Phases of the Project are reviewed below.

It is anticipated that the majority of the employees utilized during the construction and demolition phases would reside in San Luis Obispo County. There would also be some employees that travel from outside the County to work at the site for certain portions of the Construction Phase who would stay at local lodging facilities for extended periods of time.

As part of the County's transportation impact analysis guidelines, a sketch planning tool was developed to estimate project level VMT. The sketch planning tool was developed based on the SLOCOG Regional Transportation Demand Model and is the approved tool for evaluation of VMT within the County. The VMT Sketch-Planning Tool is an excel-based tool that has user inputs for project type, location, and number of units or employees; and produces VMT results based on the SLOCOG model that was used to establish baseline VMT.

The San Luis Obispo County VMT Sketch Planning Tool was used to develop VMT estimates for the Project. The Project is located within the City limits, therefore a neighboring parcel located outside the City in proximity to the Project site was analyzed with this tool (parcel number 073-051-059, see attached map). The neighboring parcel located outside of the City is estimated at 22.0 VMT per home-based employee, which is less than the County's threshold of 25.7 VMT (VMT Sketch Planning Tool worksheet attached). The calculations show that work-based Projects in the Morro Bay area generate home-base-employee VMT that are less than the County threshold level.

It is also noted that the Project proposes to implement an employee carpool program for both the Construction and Demolition Phases of the Project, with anticipated average vehicle occupancy of 2 employees per vehicle. In comparison, travel mode survey data published as part of the American Community Survey indicate that 11.2 percent of the workers in San Luis Obispo County participate in carpooling. The Project would therefore generate approximately 44% less VMT per worker when compared to the County average with the implementation of the carpool program. Based on these considerations, the Construction and Demolition Phases of the Project would have a less than significant VMT impact.

VMT Analysis – Operational Phase

The potential VMT impacts associated with the Operational Phase of the Project are reviewed below.

Screening Criteria

Section 3.2 of the San Luis Obispo County Transportation Impact Analysis Guidelines establishes screening criteria for certain projects that would not be required to determine or evaluate the Project VMT. If any of the screening criteria are met, a project's level of impact related to VMT would be considered less than significant. Section 3.2 states that:

“Small projects that are consistent with the SLOCOG SCS or San Luis Obispo County General Plan and generate fewer than 110 daily trips, consistent with trip generation associated with projects eligible for a Categorical Exemption under CEQA, are considered to have a less than significant VMT impact.”

The Vistra Energy BESS Project would be operated and maintained by 15 new employees after the Project is constructed. As shown in Table 13, the Operational Phase of the Project is forecast to generate 47 ADT, well below the screening criteria – indicating that the Project’s VMT impacts for this phase would be “less than significant”.

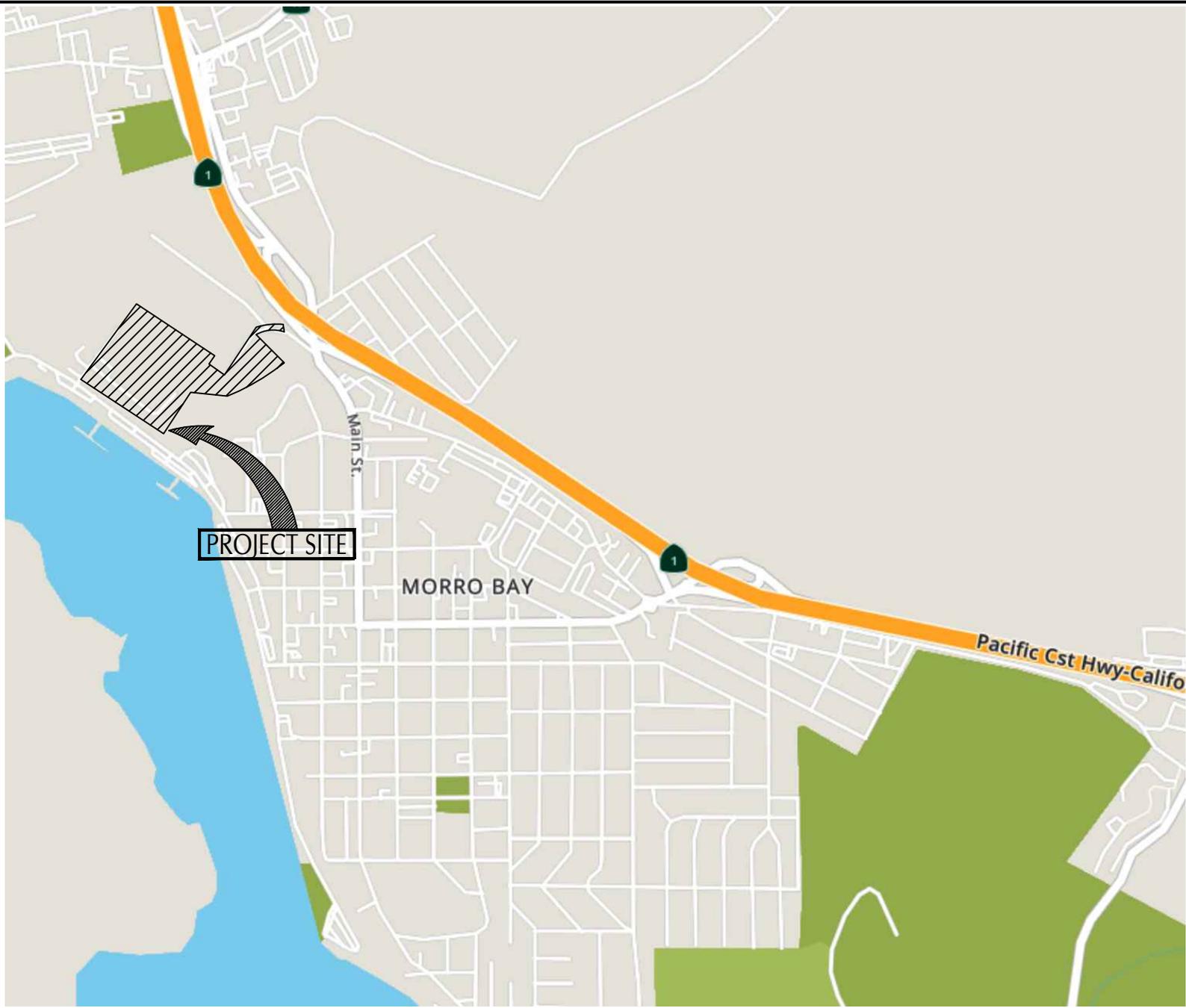
This concludes ATE’s traffic and parking study for the Construction, Demolition and Operational Phases of the Vistra Energy 600 MW Battery Energy Storage System Project.

Associated Transportation Engineers

A handwritten signature in black ink, appearing to read "Scott A. Schell". The signature is fluid and cursive, with the first name "Scott" being the most prominent.

Scott A. Schell,
Principal Transportation Planner

Attachments



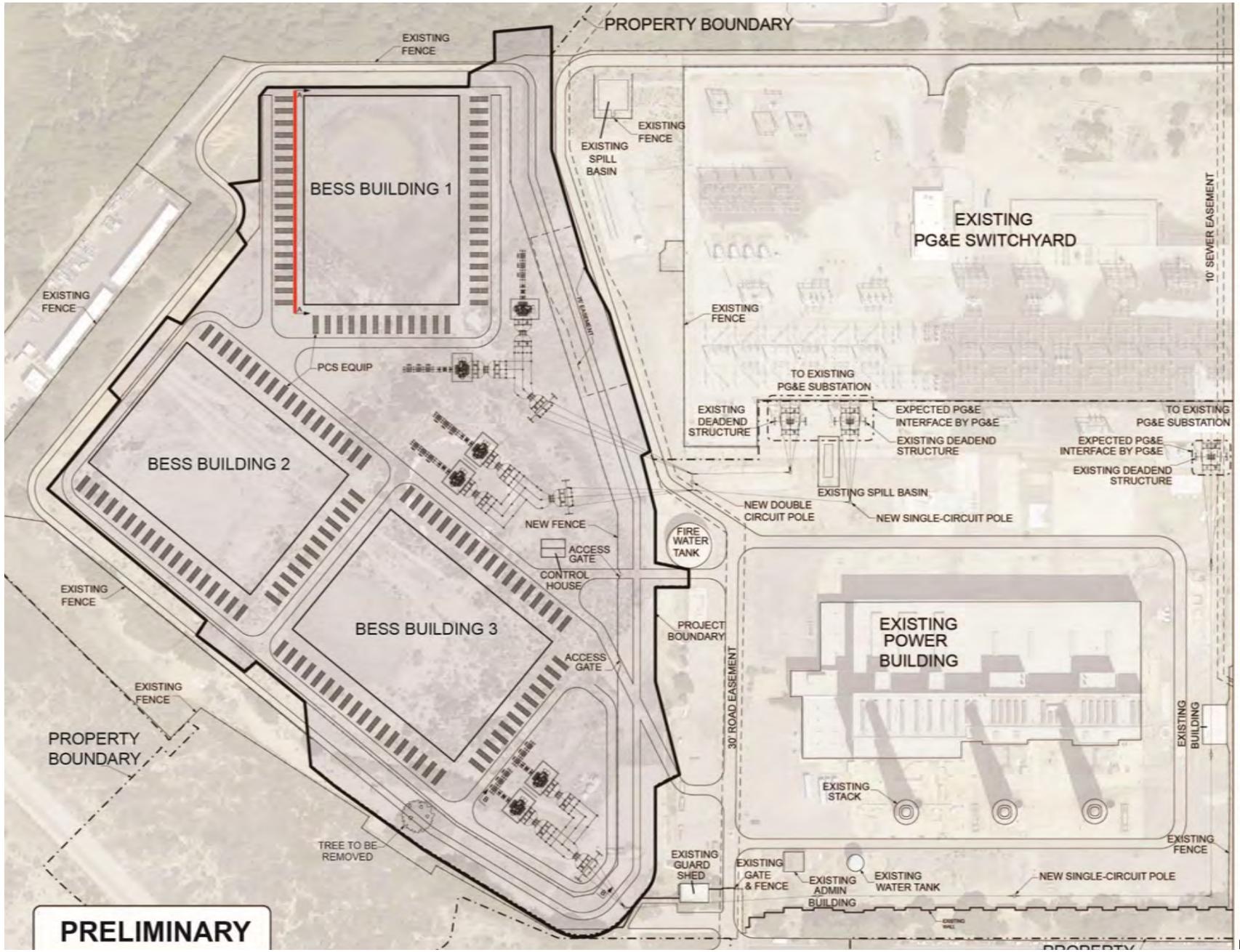
ASSOCIATED
TRANSPORTATION
ENGINEERS

PROJECT SITE LOCATION

FIGURE

1

JH - ATE#19057.02



PRELIMINARY

NOT TO SCALE

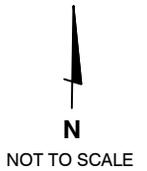


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PROJECT SITE PLAN - CONSTRUCTION

FIGURE 2

JH - ATE#19057.02

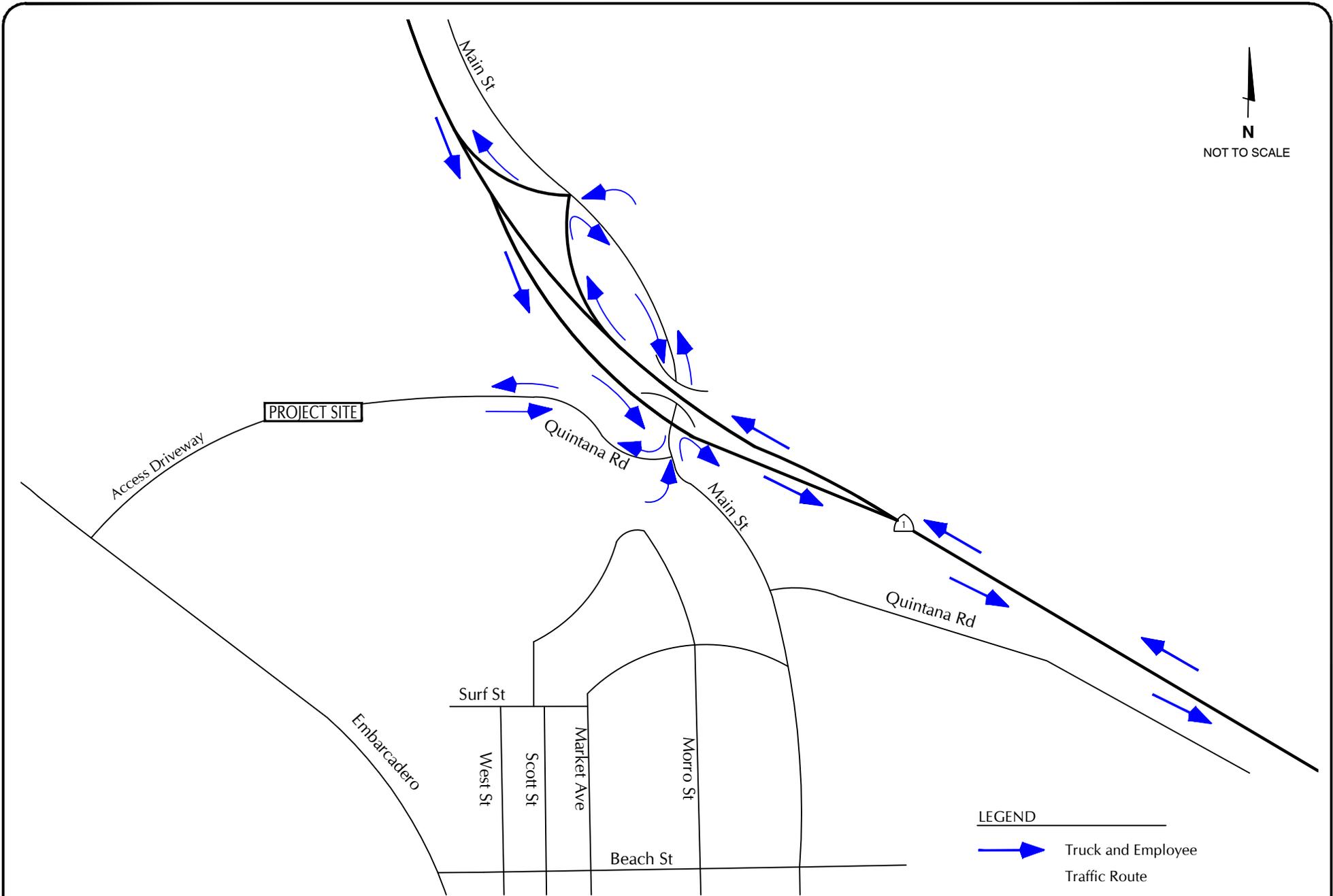


ASSOCIATED
TRANSPORTATION
ENGINEERS

PROJECT SITE PLAN - DEMOLITION

FIGURE 3

JH - ATE#19057.02

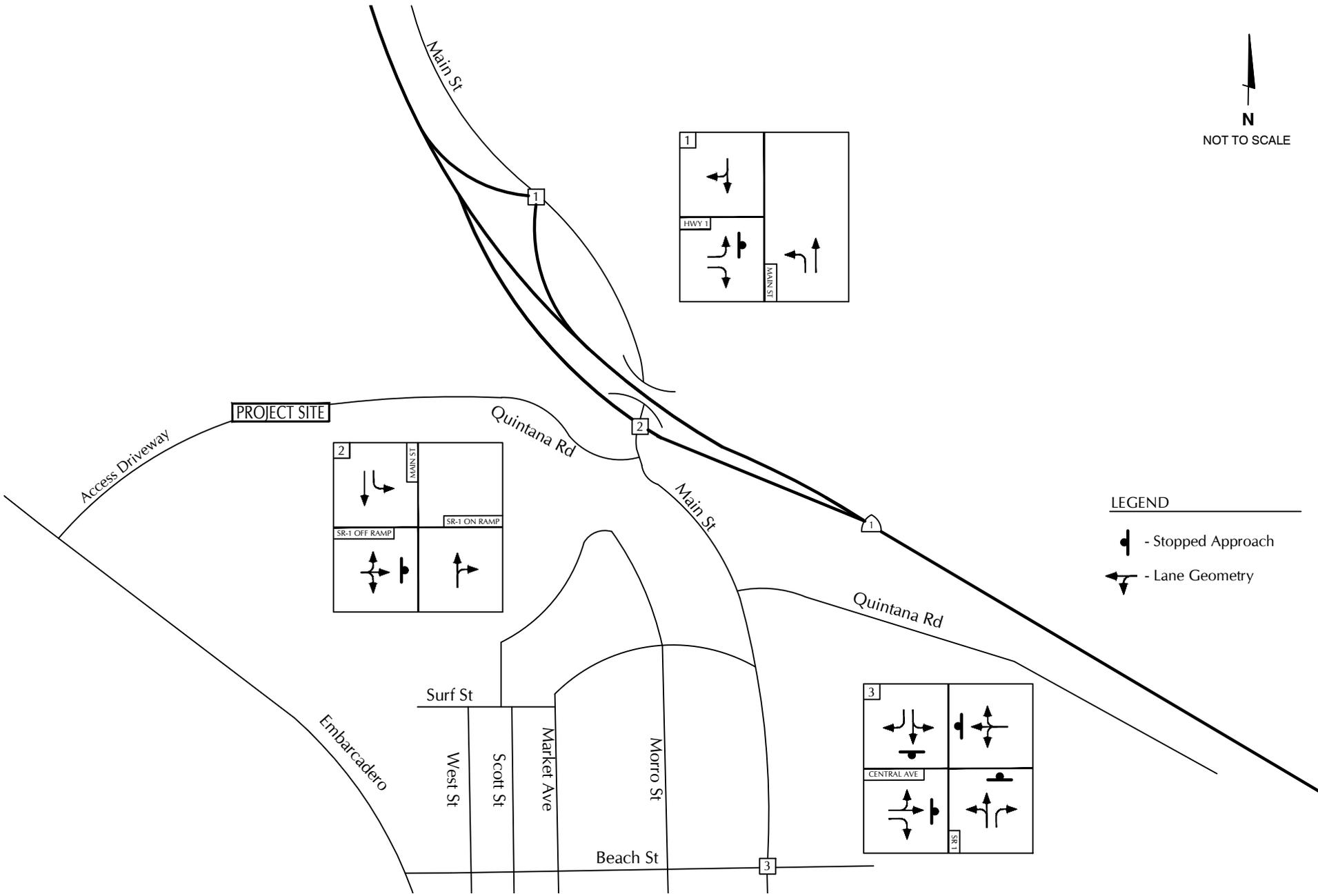
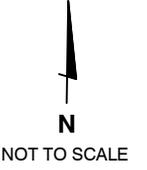


ASSOCIATED
TRANSPORTATION
ENGINEERS

TRAFFIC ROUTES - CONSTRUCTION AND DEMOLITION PHASES

FIGURE 4

JH - ATE#19057.02

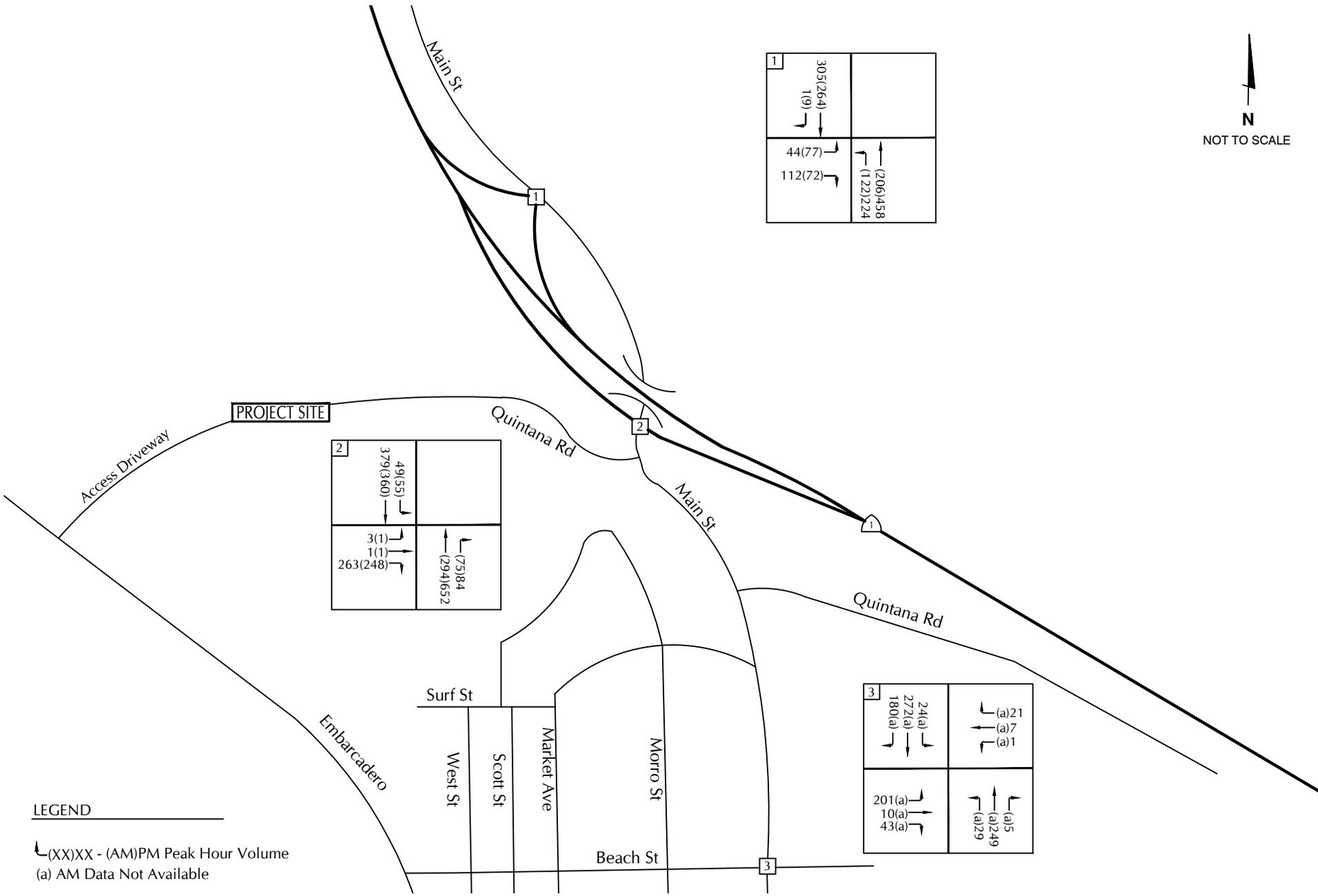
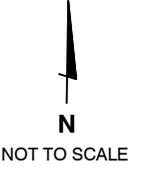


ASSOCIATED
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ENGINEERS

EXISTING STREET NETWORK

FIGURE 5

JH - ATE#19057.02



LEGEND

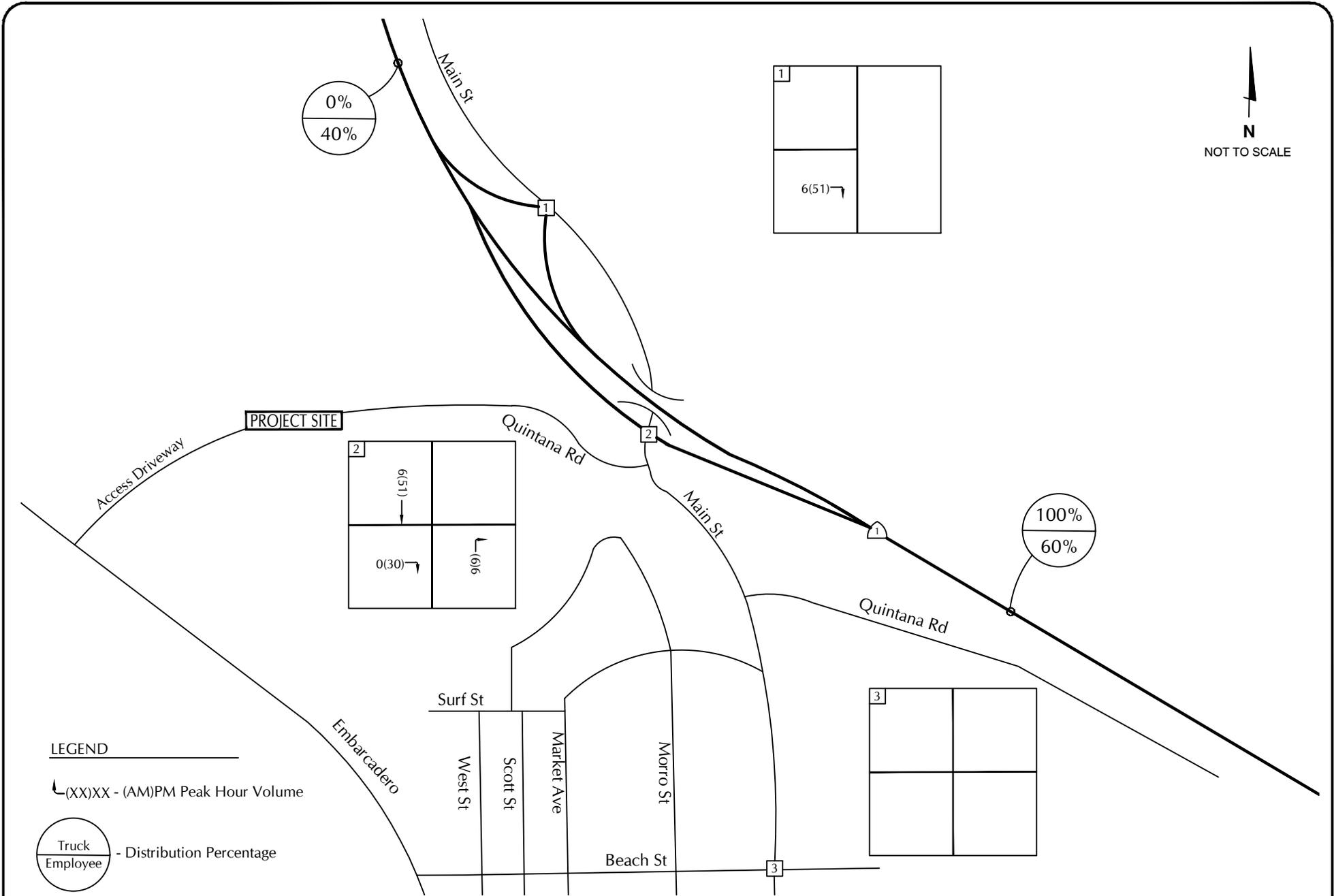
⤵(XX)XX - (AM)PM Peak Hour Volume
 (a) AM Data Not Available



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 ENGINEERS

EXISTING TRAFFIC VOLUMES

FIGURE 6

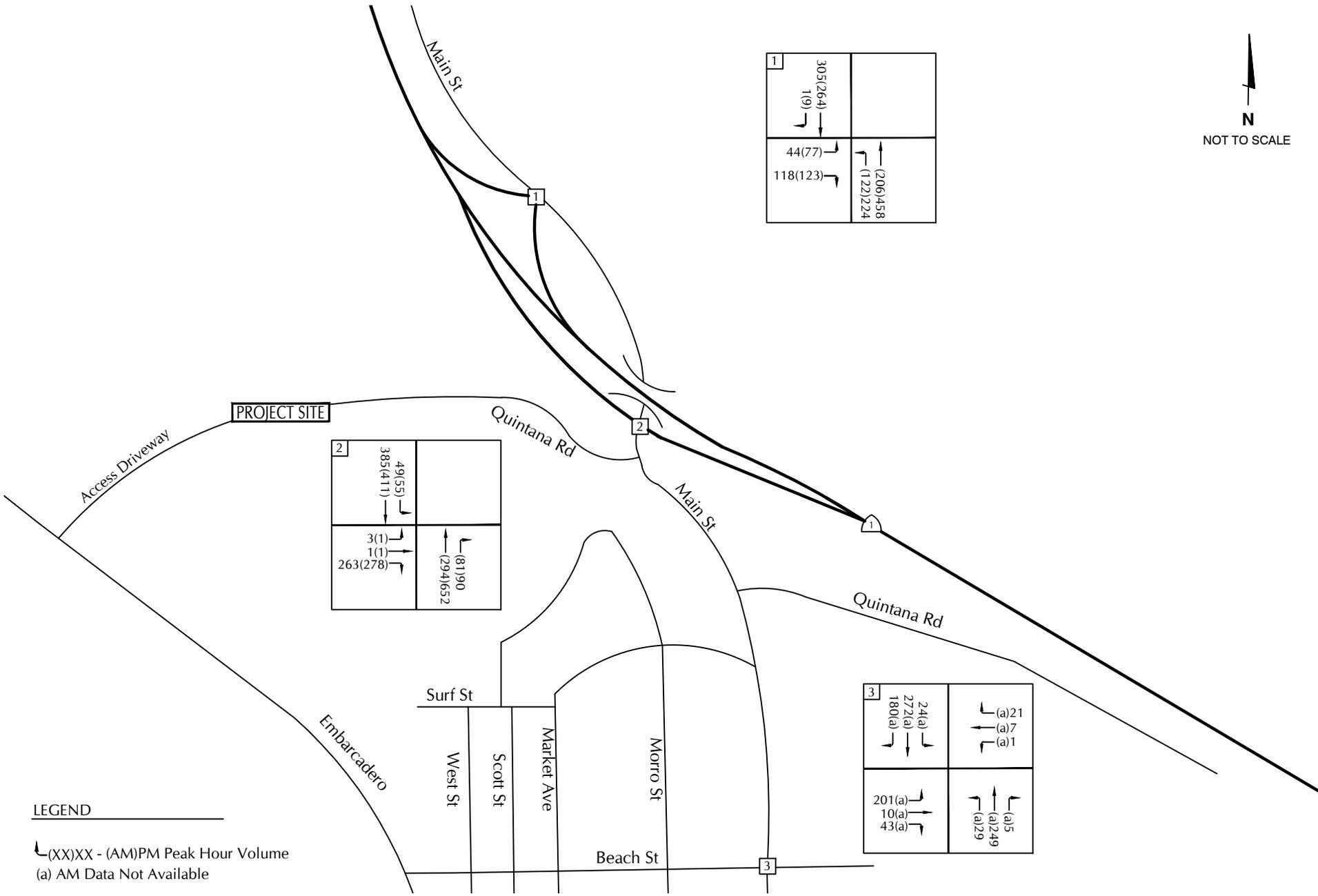
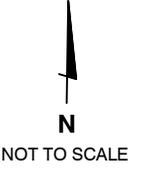


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PROJECT TRIP DISTRIBUTION AND ASSIGNMENT - CONSTRUCTION PHASE

FIGURE

7



1	305(264) 1(9)		
	44(77)	118(123)	206,458 (122)224

2	49(55) 385(411)		
	3(1) 1(1)	263(278)	81,90 (294)652

3	24(a) 272(a) 180(a)	(a)21 (a)7 (a)1	
	201(a) 10(a) 43(a)	(a)5 (a)2,49 (a)29	

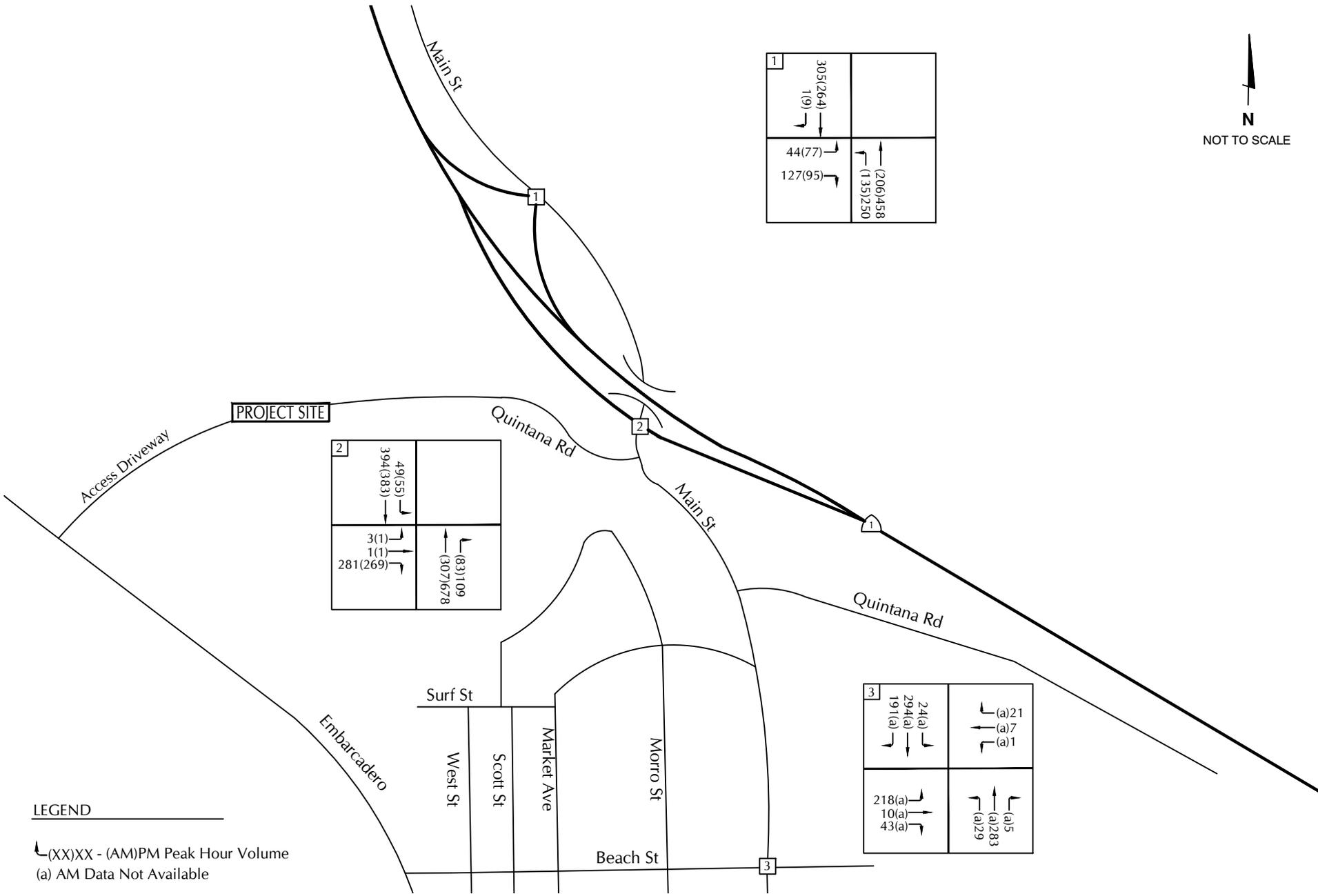
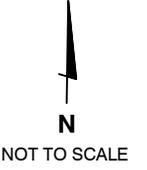
LEGEND

⤵(XX)XX - (AM)PM Peak Hour Volume
(a) AM Data Not Available



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EXISTING + PROJECT TRAFFIC VOLUMES - CONSTRUCTION PHASE



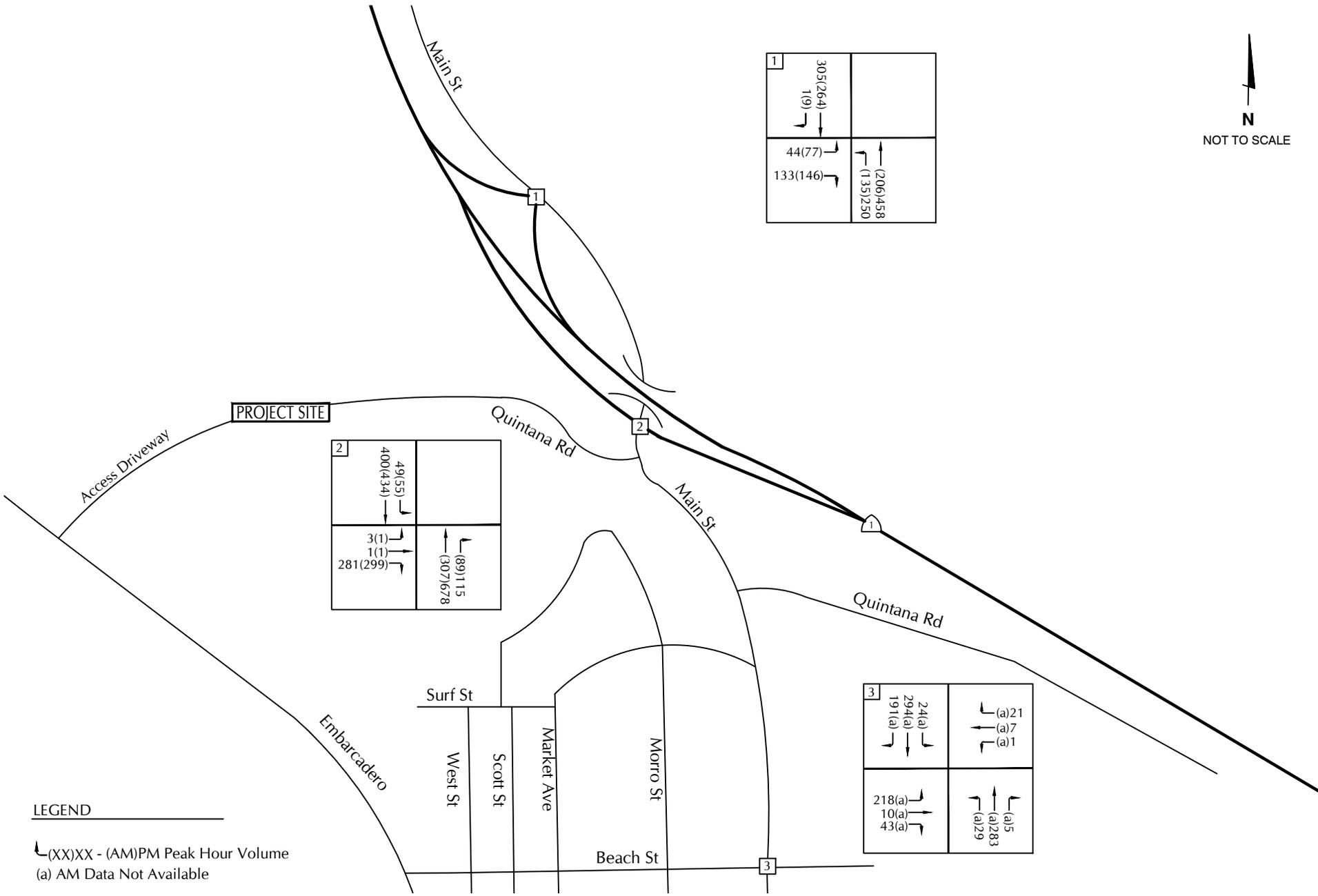
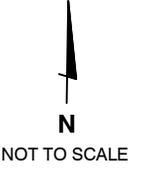
LEGEND

↙(XX)XX - (AM)PM Peak Hour Volume
 (a) AM Data Not Available



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CUMULATIVE TRAFFIC VOLUMES



LEGEND

⤵(XX)XX - (AM)PM Peak Hour Volume
(a) AM Data Not Available

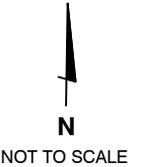


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ENGINEERS

CUMULATIVE + PROJECT TRAFFIC VOLUMES - CONSTRUCTION PHASE

FIGURE 10

JH - ATE#19057.02

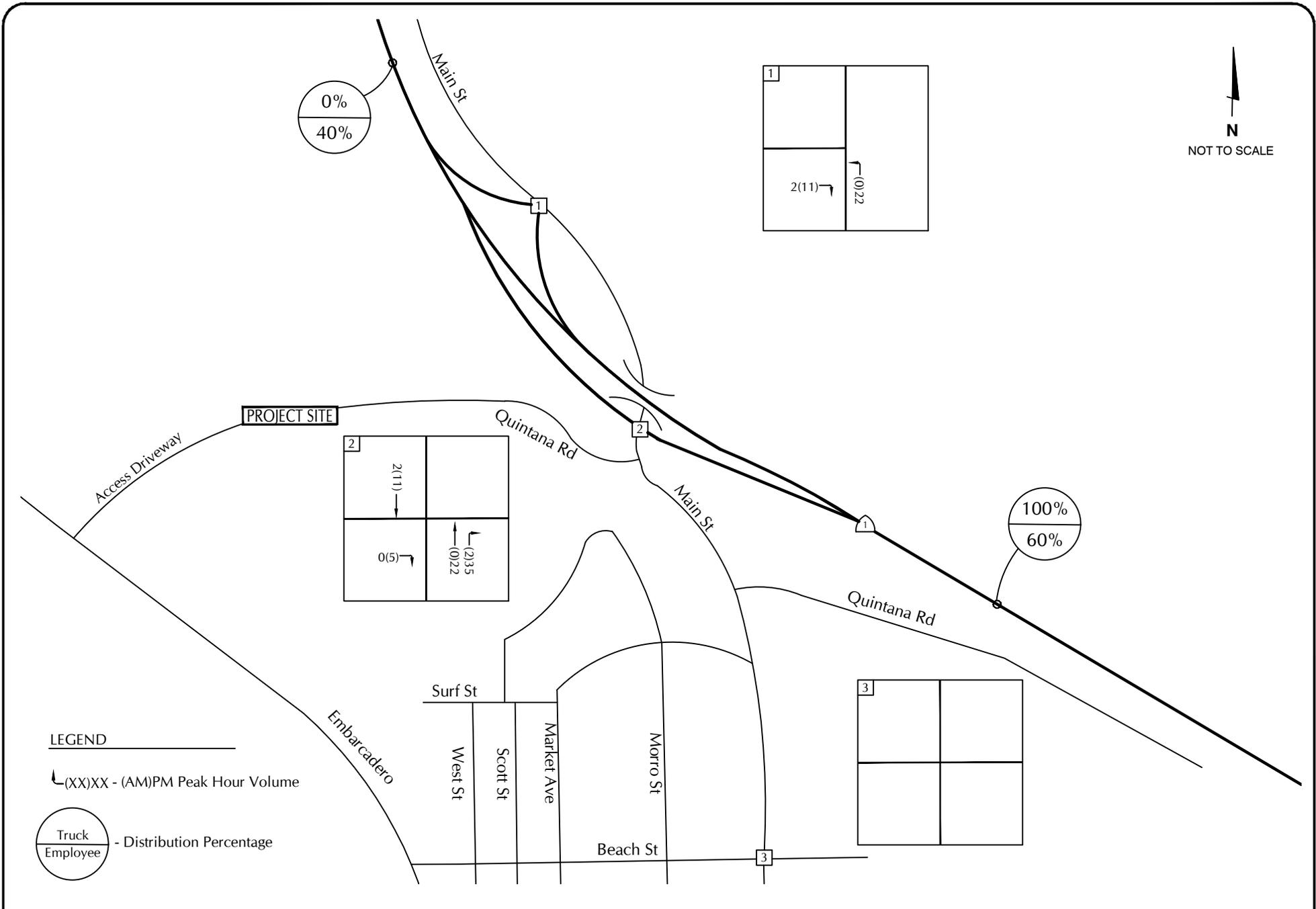


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ENGINEERS

EMPLOYEE PARKING AREA - CONSTRUCTION PHASE

FIGURE 11

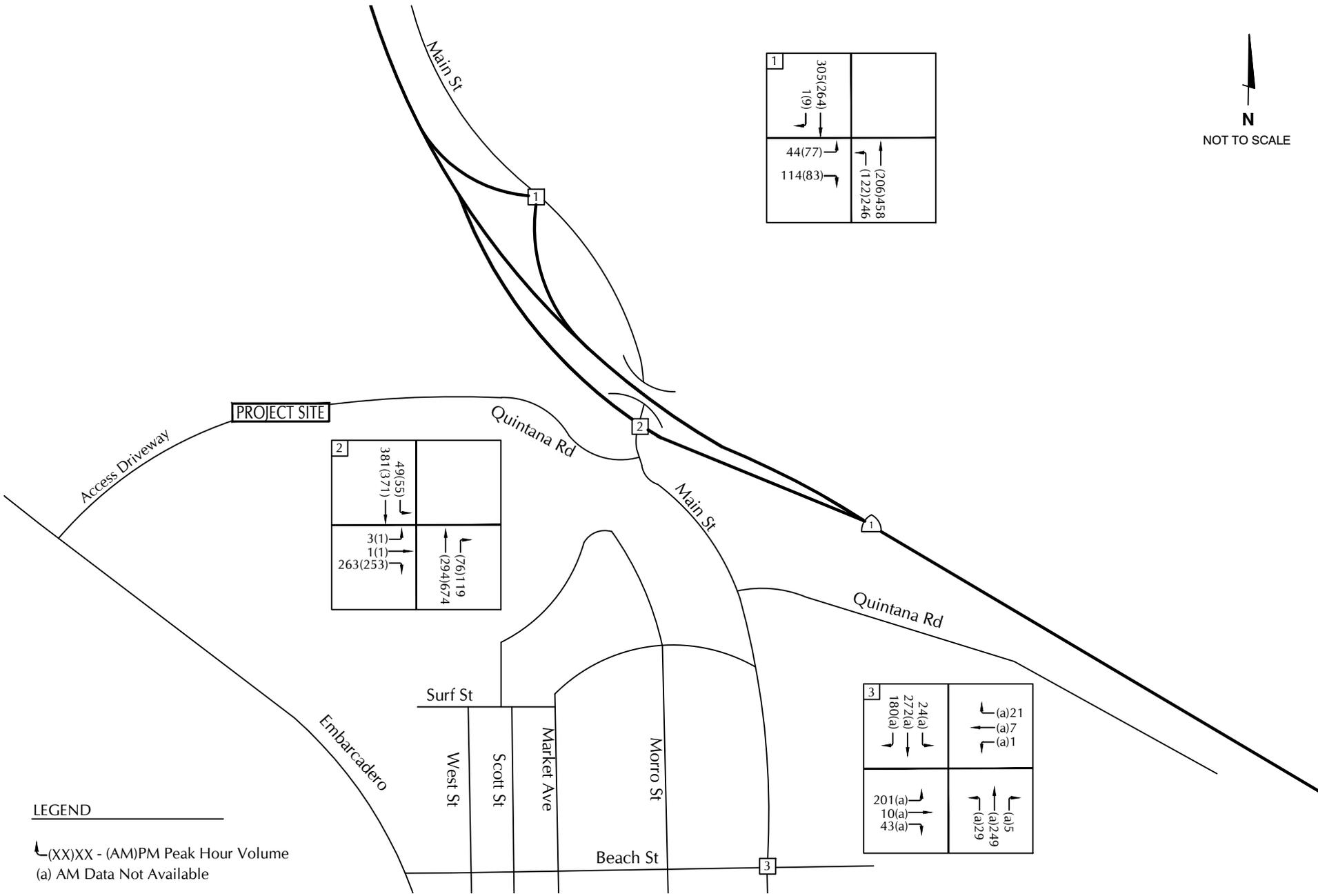
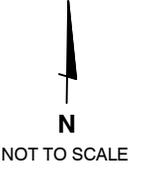
JH - ATE#19057.02



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PROJECT TRIP DISTRIBUTION AND ASSIGNMENT - DEMOLITION PHASE

FIGURE 12



1	305(264) 1(9)		
	44(77) 114(83)	↑(206)458 ↑(122)246	

2	49(55) 381(371)		
	3(1) 1(1) 263(253)	↑(76)119 ↑(294)674	

3	24(a) 272(a) 180(a)	↙(a)21 ↘(a)7 ↘(a)1	
	201(a) 10(a) 43(a)	↑(a)5 ↑(a)249 ↙(a)29	

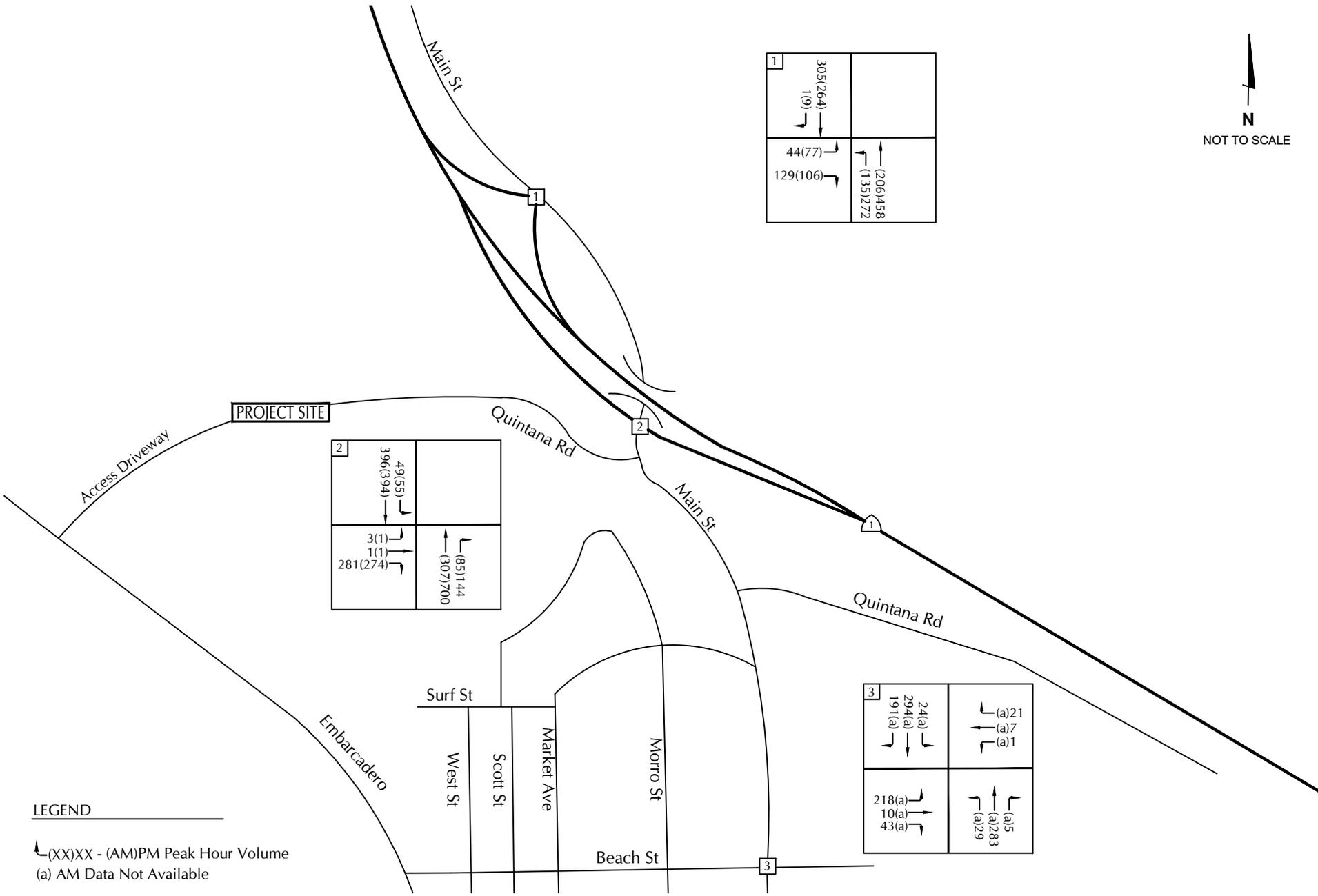
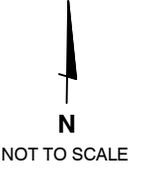
LEGEND

↙(XX)XX - (AM)PM Peak Hour Volume
 (a) AM Data Not Available



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 ENGINEERS

EXISTING + PROJECT TRAFFIC VOLUMES - DEMOLITION PHASE



1	305(264) ↓ 1(9)		
	44(77) ↘ 129(106) ↘	↑ (206) 458 ↑ (135) 272	

2	49(55) ↘ 396(394) ↘		
	3(1) ↘ 1(1) ↘ 281(274) ↘	↑ (85) 144 ↑ (307) 700	

3	24(a) ↘ 294(a) ↘ 191(a) ↘	↘ (a) 21 ↘ (a) 7 ↘ (a) 1	
	218(a) ↘ 10(a) ↘ 43(a) ↘	↑ (a) 5 ↑ (a) 283 ↑ (a) 29	

LEGEND

↘(XX)XX - (AM)PM Peak Hour Volume
(a) AM Data Not Available



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CUMULATIVE + PROJECT TRAFFIC VOLUMES - DEMOLITION PHASE



N
NOT TO SCALE



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ENGINEERS

EMBARCADERO / PROJECT ACCESS ROAD INTERSECTION

FIGURE 16

JH - ATE#19057.02



Metro Traffic Data Inc.
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 Hanford, CA 93230
 800-975-6938 Phone/Fax
 www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Associated Transportation Engineers
 100 N. Hope Avenue, Suite 4
 Santa Barbara, CA 93110

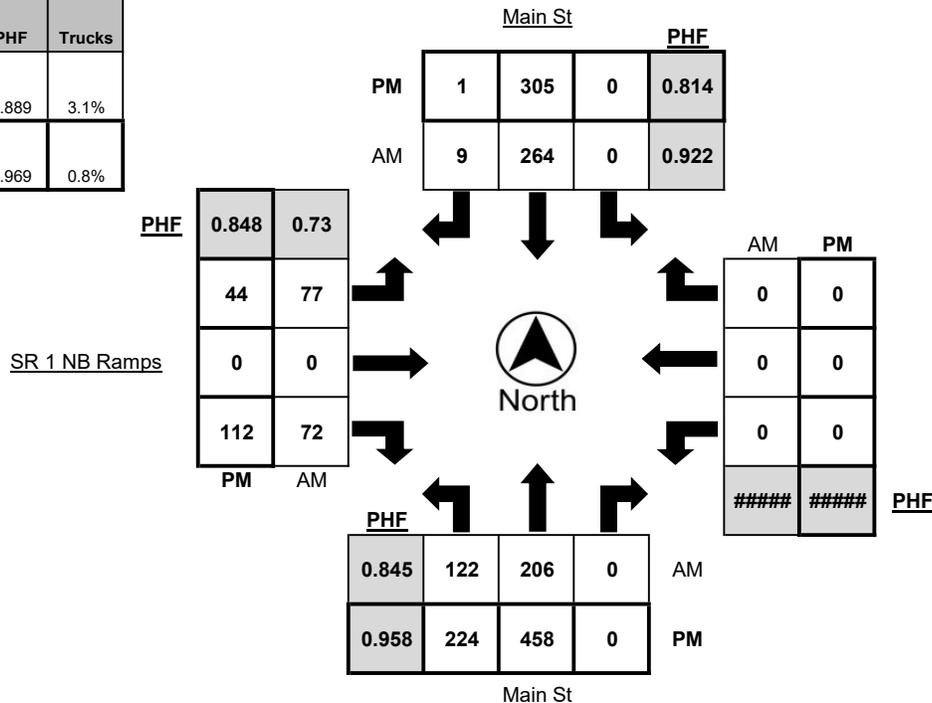
LOCATION SR1 NB Ramps @ Main St **LATITUDE** 35.3756
COUNTY San Luis Obispo **LONGITUDE** -120.8527
COLLECTION DATE Wednesday, September 25, 2019 **WEATHER** Clear

Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
7:00 AM - 7:15 AM	12	30	0	2	0	36	0	1	3	0	9	2	0	0	0	0
7:15 AM - 7:30 AM	18	27	0	2	0	47	0	4	7	0	11	1	0	0	0	0
7:30 AM - 7:45 AM	20	35	0	1	0	50	1	1	10	0	10	1	0	0	0	0
7:45 AM - 8:00 AM	29	68	0	3	0	64	0	3	39	0	11	1	0	0	0	0
8:00 AM - 8:15 AM	35	41	0	1	0	73	1	2	29	0	22	1	0	0	0	0
8:15 AM - 8:30 AM	30	58	0	3	0	62	8	1	7	0	23	0	0	0	0	0
8:30 AM - 8:45 AM	28	39	0	5	0	65	0	3	2	0	16	0	0	0	0	0
8:45 AM - 9:00 AM	30	51	0	4	0	64	1	1	3	0	11	0	0	0	0	0
TOTAL	202	349	0	21	0	461	11	16	100	0	113	6	0	0	0	0

Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	36	109	0	3	0	90	0	1	13	0	27	1	0	0	0	0
4:15 PM - 4:30 PM	53	95	0	1	0	80	0	0	14	0	25	0	0	0	0	0
4:30 PM - 4:45 PM	60	95	0	3	0	93	1	2	16	0	30	0	0	0	0	0
4:45 PM - 5:00 PM	51	122	0	1	0	71	0	0	13	0	30	1	0	0	0	0
5:00 PM - 5:15 PM	55	123	0	0	0	75	0	0	5	0	28	0	0	0	0	0
5:15 PM - 5:30 PM	58	118	0	2	0	66	0	0	10	0	24	0	0	0	0	0
5:30 PM - 5:45 PM	40	107	0	0	0	67	0	1	11	0	23	0	0	0	0	0
5:45 PM - 6:00 PM	44	85	0	2	0	53	0	0	8	0	19	0	0	0	0	0
TOTAL	397	854	0	12	0	595	1	4	90	0	206	2	0	0	0	0

PEAK HOUR	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
7:45 AM - 8:45 AM	122	206	0	12	0	264	9	9	77	0	72	2	0	0	0	0
4:30 PM - 5:30 PM	224	458	0	6	0	305	1	2	44	0	112	1	0	0	0	0

	PHF	Trucks
AM	0.889	3.1%
PM	0.969	0.8%





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 Hanford, CA 93230
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 www.metrotrafficdata.com

Turning Movement Report

Prepared For:
Associated Transportation Engineers
 100 N. Hope Avenue, Suite 4
 Santa Barbara, CA 93110

LOCATION SR1 SB Ramps @ Main St
COUNTY San Luis Obispo
COLLECTION DATE Wednesday, September 25, 2019

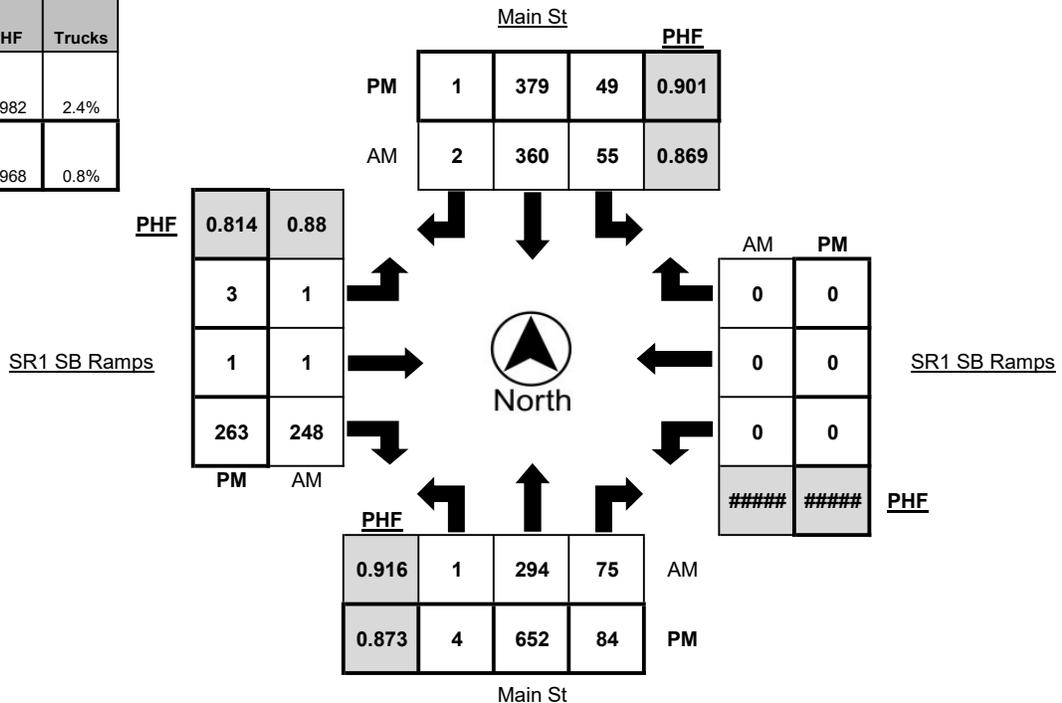
LATITUDE 35.3731
LONGITUDE -120.8514
WEATHER Clear

Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
7:00 AM - 7:15 AM	0	40	14	0	10	44	2	5	1	0	25	1	0	0	0	0
7:15 AM - 7:30 AM	0	42	10	2	16	53	0	3	1	0	34	3	0	0	0	0
7:30 AM - 7:45 AM	0	52	14	1	23	59	1	1	0	0	26	0	0	0	0	0
7:45 AM - 8:00 AM	0	84	14	1	21	62	1	3	1	0	61	0	0	0	0	0
8:00 AM - 8:15 AM	0	67	14	0	22	79	1	3	1	0	66	0	0	0	0	0
8:15 AM - 8:30 AM	1	79	21	6	7	84	1	0	0	0	71	1	0	0	0	0
8:30 AM - 8:45 AM	0	64	27	7	18	102	0	2	0	0	51	0	0	0	0	0
8:45 AM - 9:00 AM	0	84	13	4	8	95	0	0	0	1	60	2	0	0	0	0
TOTAL	1	512	127	21	125	578	6	17	4	1	394	7	0	0	0	0

Time	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	0	148	22	0	8	96	2	1	2	0	60	1	0	0	0	0
4:15 PM - 4:30 PM	1	142	20	2	13	99	0	0	0	0	82	1	0	0	0	0
4:30 PM - 4:45 PM	2	157	10	1	18	101	0	1	2	0	60	1	0	0	0	0
4:45 PM - 5:00 PM	1	170	25	2	8	95	0	0	0	0	59	1	0	0	0	0
5:00 PM - 5:15 PM	0	183	29	2	10	84	1	0	1	1	62	0	0	0	0	0
5:15 PM - 5:30 PM	1	181	23	0	8	72	0	0	0	0	59	1	0	0	0	0
5:30 PM - 5:45 PM	0	152	31	0	6	77	1	0	1	0	60	0	0	0	0	0
5:45 PM - 6:00 PM	1	132	23	4	7	63	1	0	0	0	55	0	0	0	0	0
TOTAL	6	1265	183	11	78	687	5	2	6	1	497	5	0	0	0	0

PEAK HOUR	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
8:00 AM - 9:00 AM	1	294	75	17	55	360	2	5	1	1	248	3	0	0	0	0
4:15 PM - 5:15 PM	4	652	84	7	49	379	1	1	3	1	263	3	0	0	0	0

	PHF	Trucks
AM	0.982	2.4%
PM	0.968	0.8%





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Turning Movement Report

Prepared For:
Central Coast Transportation Consulting
 895 Napa Avenue, Suite A-6
 Morro Bay, CA 93442

LOCATION Main Street @ Beach Street
COUNTY San Luis Obispo
COLLECTION DATE Thursday 3/17/16 & Saturday 3/19/16

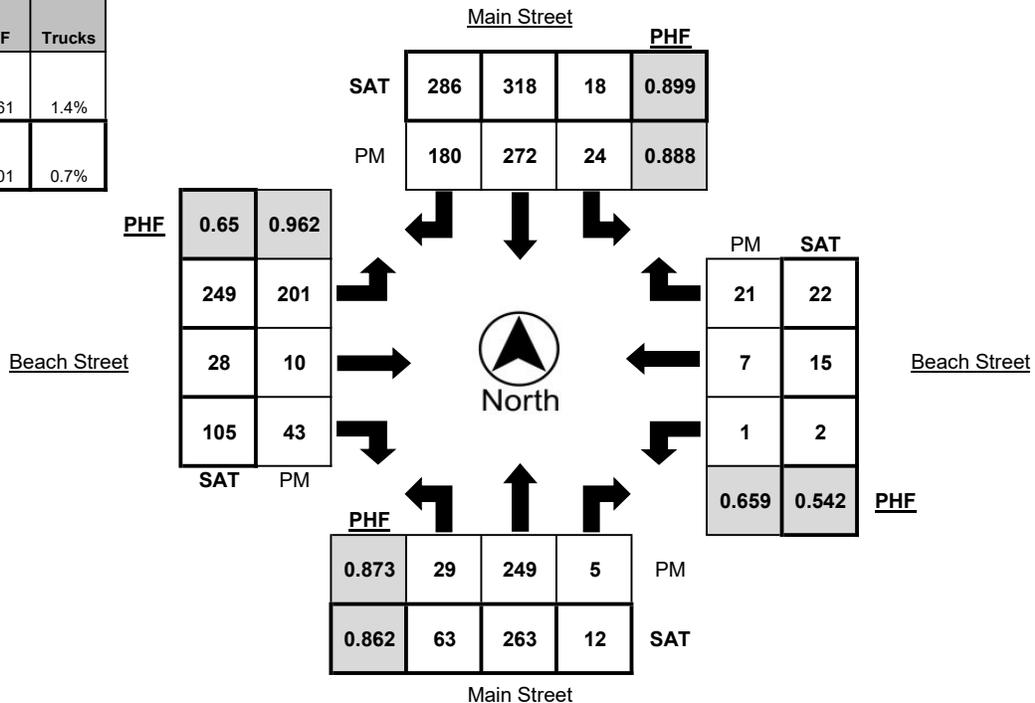
LATITUDE 35.368778°
LONGITUDE -120.850038°
WEATHER Clear

Time (Weekday)	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
4:00 PM - 4:15 PM	7	52	0	2	14	71	49	1	56	1	9	2	0	2	1	0
4:15 PM - 4:30 PM	5	74	1	2	5	67	43	0	50	3	12	0	1	1	9	0
4:30 PM - 4:45 PM	7	55	1	1	2	66	41	2	45	2	15	1	0	3	4	0
4:45 PM - 5:00 PM	10	68	3	2	3	68	47	0	50	4	7	2	0	1	7	0
5:00 PM - 5:15 PM	14	64	1	0	2	49	32	2	45	5	10	1	1	4	7	0
5:15 PM - 5:30 PM	15	54	1	0	7	52	40	0	38	3	9	0	0	1	4	0
5:30 PM - 5:45 PM	13	45	0	0	4	62	31	0	45	3	17	3	0	2	5	0
5:45 PM - 6:00 PM	10	39	0	0	3	51	35	1	35	3	12	0	0	0	4	0
TOTAL	81	451	7	7	40	486	318	6	364	24	91	9	2	14	41	0

Time (Saturday)	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
11:00 AM - 11:15 AM	18	48	4	1	4	71	73	3	52	5	21	0	1	5	9	0
11:15 AM - 11:30 AM	15	56	4	2	6	73	59	3	56	0	11	1	2	3	7	0
11:30 AM - 11:45 AM	13	60	0	2	4	72	61	0	57	5	22	1	1	0	3	0
11:45 AM - 12:00 PM	14	63	2	0	4	85	82	0	46	5	26	0	1	6	6	0
12:00 PM - 12:15 PM	17	78	3	0	3	73	67	2	55	6	22	0	0	1	4	0
12:15 PM - 12:30 PM	18	61	4	2	2	74	59	1	98	9	40	3	1	8	9	0
12:30 PM - 12:45 PM	14	61	3	1	9	86	78	0	50	8	17	1	0	0	3	0
12:45 PM - 1:00 PM	9	66	1	0	3	78	80	4	63	10	14	0	2	1	5	0
TOTAL	118	493	21	8	35	612	559	13	477	48	173	6	8	24	46	0

PEAK HOUR	Northbound				Southbound				Eastbound				Westbound			
	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks	Left	Thru	Right	Trucks
4:00 PM - 5:00 PM	29	249	5	7	24	272	180	3	201	10	43	5	1	7	21	0
11:45 AM - 12:45 PM	63	263	12	3	18	318	286	3	249	28	105	4	2	15	22	0

	PHF	Trucks
PM (Weekday)	0.961	1.4%
MID (Saturday)	0.901	0.7%





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Report Prepared For:

Central Coast Transportation Consulting
895 Napa Avenue, Suite A-6
Morro Bay, CA 93442

3 Day Volume Count Report

Location No. 1

Road Name Embarcadero

Nearest Cross St North of Beach

Survey Date 3/17/16 thru 3/19/16

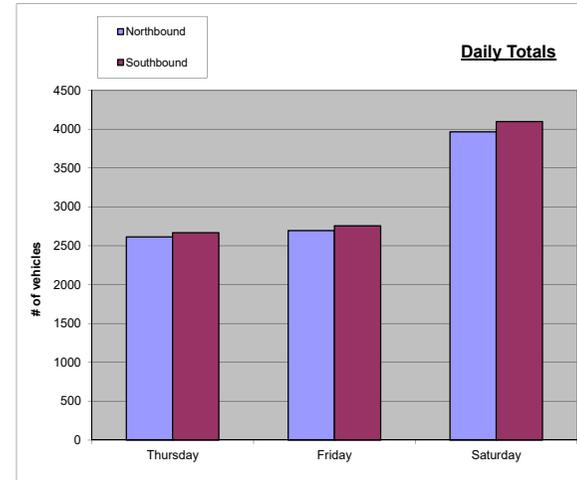
Latitude 35.369308°

Longitude -120.854688°

Peak Day Thursday

Number of Lanes 2

Comments



SUMMARY					
Hour	17-Thu	18-Fri	19-Sat	Total	ADT
12:00 AM	2	1	13	16	5
1:00 AM	2	2	6	10	3
2:00 AM	1	2	2	5	2
3:00 AM	2	0	5	7	2
4:00 AM	3	6	10	19	6
5:00 AM	8	19	25	52	17
6:00 AM	78	88	112	278	93
7:00 AM	125	162	221	508	169
8:00 AM	255	247	352	854	285
9:00 AM	302	338	481	1121	374
10:00 AM	390	410	626	1426	475
11:00 AM	420	499	658	1577	526
12:00 PM	531	488	731	1750	583
1:00 PM	511	524	806	1841	614
2:00 PM	499	465	711	1675	558
3:00 PM	474	492	679	1645	548
4:00 PM	448	471	674	1593	531
5:00 PM	402	432	666	1500	500
6:00 PM	384	353	623	1360	453
7:00 PM	274	220	353	847	282
8:00 PM	94	122	125	341	114
9:00 PM	59	57	79	195	65
10:00 PM	14	27	39	80	27
11:00 PM	4	26	65	95	32
Total	5282	5451	8062	18795	6265
Percentages	28.10%	29.00%	42.89%	100.00%	33.33%

Hour	Thursday					Friday					Hourly Totals
	Northbound					Southbound					
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	1	0	0	0	1	0	1	0	0	1	2
1:00 AM	0	0	1	0	1	0	0	1	0	1	2
2:00 AM	0	0	1	0	1	0	0	0	0	0	1
3:00 AM	0	0	0	0	0	1	0	0	1	2	2
4:00 AM	1	1	0	0	2	0	1	0	0	1	3
5:00 AM	1	0	1	3	5	0	0	1	2	3	8
6:00 AM	6	6	22	25	59	2	1	3	13	19	78
7:00 AM	16	23	19	13	71	7	14	17	16	54	125
8:00 AM	36	38	36	46	156	20	14	36	29	99	255
9:00 AM	31	38	50	54	173	29	21	31	48	129	302
10:00 AM	46	53	49	54	202	50	46	47	45	188	390
11:00 AM	58	67	38	57	220	55	45	46	54	200	420
12:00 PM	66	78	68	71	283	49	62	72	65	248	531
1:00 PM	68	52	50	59	229	73	64	73	72	282	511
2:00 PM	66	53	53	64	236	74	60	65	64	263	499
3:00 PM	61	62	49	64	236	68	69	51	50	238	474
4:00 PM	50	45	61	62	218	69	62	46	53	230	448
5:00 PM	55	57	53	46	211	48	50	55	38	191	402
6:00 PM	45	56	42	34	177	51	55	44	57	207	384
7:00 PM	27	21	19	10	77	53	66	50	28	197	274
8:00 PM	11	10	3	9	33	19	13	17	12	61	94
9:00 PM	7	4	2	1	14	22	7	10	6	45	59
10:00 PM	2	0	2	2	6	4	0	1	3	8	14
11:00 PM	0	1	2	0	3	0	0	1	0	1	4
12:00 AM	49.5%				2614	50.5%				2668	
	5282					5451					

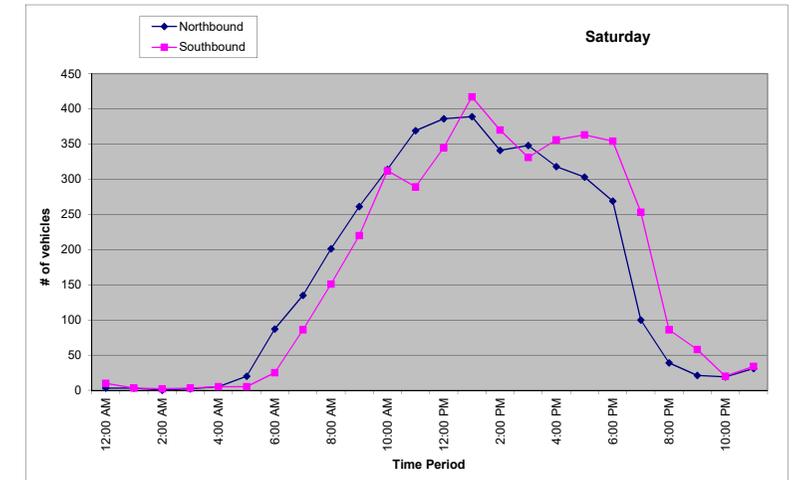
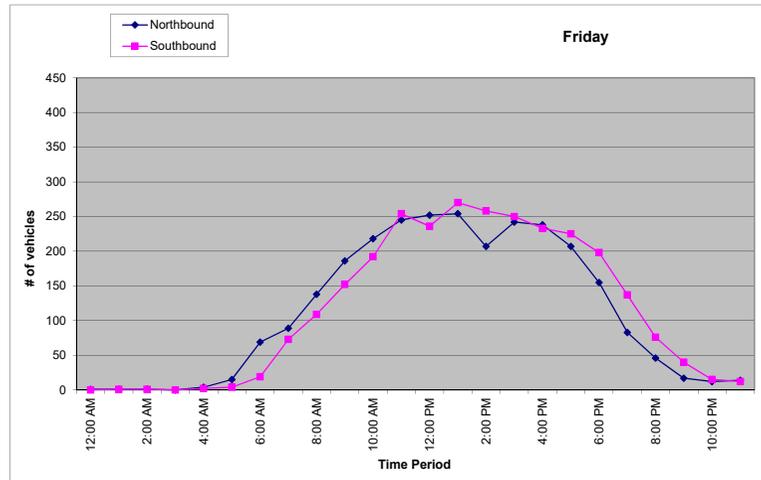
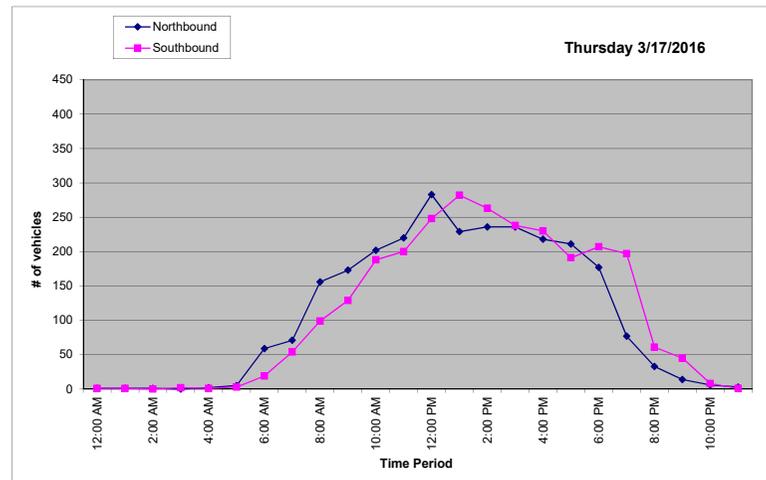
AM Peak Hr 11:00 am to 12:00 pm AM Peak 420 AM PHF 0.929204
PM Peak Hr 12:15 pm to 1:15 pm PM Peak 557 PM PHF 0.987589

Hour	Friday					Saturday					Hourly Totals
	Northbound					Southbound					
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	1	0	0	0	1	0	0	0	0	0	1
1:00 AM	0	0	1	0	1	0	0	0	1	1	2
2:00 AM	1	0	0	0	1	0	1	0	0	1	2
3:00 AM	0	0	0	0	0	0	0	0	0	0	0
4:00 AM	0	1	3	0	4	0	1	1	0	2	6
5:00 AM	0	1	4	10	15	1	0	1	2	4	19
6:00 AM	10	20	17	22	69	2	6	6	5	19	88
7:00 AM	12	20	27	30	89	15	14	13	31	73	162
8:00 AM	36	19	47	36	138	15	33	20	41	109	247
9:00 AM	44	47	40	55	186	31	50	36	35	152	338
10:00 AM	48	53	54	63	218	36	34	67	55	192	410
11:00 AM	58	54	68	65	245	70	51	64	69	254	499
12:00 PM	77	55	60	60	252	45	62	57	72	236	488
1:00 PM	54	64	60	76	254	67	66	69	68	270	524
2:00 PM	51	54	58	44	207	70	60	67	61	258	465
3:00 PM	64	58	57	63	242	55	72	62	61	250	492
4:00 PM	69	57	60	52	238	80	58	52	43	233	471
5:00 PM	52	55	55	45	207	63	48	61	53	225	432
6:00 PM	42	42	37	34	155	48	56	48	46	198	353
7:00 PM	26	22	19	16	83	41	34	32	30	137	220
8:00 PM	11	13	16	6	46	31	14	19	12	76	122
9:00 PM	5	5	3	4	17	16	9	8	7	40	57
10:00 PM	6	3	2	1	12	6	6	1	2	15	27
11:00 PM	3	5	5	1	14	6	1	4	1	12	26
Total	49.4%				2694	50.6%				2757	

AM Peak Hr 11:00 am to 12:00 pm AM Peak 499 AM PHF 0.93097
PM Peak Hr 1:15 pm to 2:15 pm PM Peak 524 PM PHF 0.909722

Hour	Saturday					Sunday					Hourly Totals
	Northbound					Southbound					
	1st	2nd	3rd	4th	Total	1st	2nd	3rd	4th	Total	
12:00 AM	1	1	1	0	3	3	3	3	1	10	13
1:00 AM	0	0	2	1	3	0	1	0	2	3	6
2:00 AM	0	0	0	0	0	0	0	1	1	2	2
3:00 AM	1	1	0	0	2	0	1	0	2	3	5
4:00 AM	1	2	0	2	5	1	0	1	3	5	10
5:00 AM	4	4	7	5	20	4	0	1	0	5	25
6:00 AM	12	19	26	30	87	3	11	3	8	25	112
7:00 AM	37	29	32	37	135	20	19	29	18	86	221
8:00 AM	46	36	69	50	201	33	33	32	53	151	352
9:00 AM	63	53	66	79	261	42	48	73	57	220	481
10:00 AM	71	79	92	72	314	84	87	76	65	312	626
11:00 AM	75	104	99	91	369	65	80	69	75	289	658
12:00 PM	109	91	92	94	386	72	76	102	95	345	731
1:00 PM	86	116	92	95	389	102	108	103	104	417	806
2:00 PM	94	85	83	79	341	78	95	106	91	370	711
3:00 PM	85	104	77	82	348	88	98	70	75	331	670
4:00 PM	75	76	86	81	318	84	94	81	97	356	674
5:00 PM	75	75	70	83	303	98	83	89	93	363	666
6:00 PM	94	64	67	44	269	77	95	86	96	354	623
7:00 PM	36	23	25	16	100	82	65	59	47	253	353
8:00 PM	9	12	11	7	39	33	22	18	13	86	125
9:00 PM	6	7	1	7	21	21	15	14	8	58	79
10:00 PM	2	10	3	4	19	7	4	6	3	20	39
11:00 PM	1	2	14	14	31	3	3	14	14	34	65
Total	49.2%				3964	50.8%				4098	

AM Peak Hr 11:00 am to 12:00 pm AM Peak 658 AM PHF 0.894022
PM Peak Hr 1:00 pm to 2:00 pm PM Peak 806 PM PHF 0.899554



**Associated Transportation Engineers #22024
Cumulative Trip Generation Worksheet #19057.02**

Vistra Energy 600 MW Battery Energy Storage System Project

Use	Size	Internal-Trip Factor	ADT		AM PEAK HOUR						PM PEAK HOUR					
			Rate	Trips	Rate	Trips	In %	Trips	Out %	Trips	Rate	Trips	In %	Trips	Out %	Trips
295 Atascadero (a)	85 Rooms	1.00	7.99	679	0.46	39	56%	22	44%	17	0.59	50	51%	26	49%	24
405 Atascadero (b)	35 DU	1.00	4.81	168	0.36	13	29%	4	71%	9	0.46	16	59%	9	41%	7
833 Embarcadero (c)	1,320 SF	1.00	10.84	14	1.52	2	88%	2	12%	0	1.44	2	17%	0	83%	2
2790 Main (a)	8 Rooms	1.00	7.99	64	0.46	4	56%	2	44%	2	0.59	5	51%	3	49%	2
205 Harbor Street (a)	6 Rooms	1.00	7.99	48	0.46	3	56%	2	44%	1	0.59	4	51%	2	49%	2
2900 Alder (a)	6 Rooms	1.00	7.99	48	0.46	3	56%	2	44%	1	0.59	4	51%	2	49%	2
2783 Coral (d)	5 DU	1.00	9.30	47	0.70	4	26%	1	74%	3	0.94	5	63%	3	37%	2
801 Embarcadero (e)	5,206 SF	1.00	83.84	436	0.73	4	50%	2	50%	2	7.80	41	67%	27	33%	14
3300 Panorama (d)	61 DU	1.00	9.30	567	0.70	43	26%	11	74%	32	0.94	57	63%	36	37%	21
1140 Allesandro Ave (f)	4 DU	1.00	6.74	27	0.40	2	24%	0	76%	2	0.51	2	63%	1	37%	1
1140 Allesandro Ave (c)	10,000 SF	1.00	10.84	108	1.52	15	88%	13	12%	2	1.44	14	17%	2	83%	12
541 Atascadero Road (f)	4 DU	1.00	6.74	27	0.40	2	24%	0	76%	2	0.51	2	63%	1	37%	1
1175 Scott Street (a)	4 Rooms	1.00	7.99	32	0.46	2	56%	1	44%	1	0.59	2	51%	1	49%	1
545 Atascadero (f)	15 DU	1.00	6.74	101	0.40	6	24%	1	76%	5	0.51	8	63%	5	37%	3
301-390 Seashell Cove (f)	70 DU	1.00	6.74	472	0.40	28	24%	7	76%	21	0.51	36	63%	23	37%	13
Theresa Road (f)	180 DU	1.00	6.74	1,213	0.40	72	24%	17	76%	55	0.51	92	63%	58	37%	34
Totals				4,051		242		87		155		340		199		141

- (a) Trip generation based on ITE rates for Hotel (ITE #310).
- (b) Trip generation based on ITE rates for Affordable Housing (ITE #223).
- (c) Trip generation based on ITE rates for General Office Building (ITE #710).
- (d) Trip generation based on ITE rates for Single-Family Detached Housing (ITE #210).
- (e) Trip generation based on ITE rates for Fine Dining Restaurant (ITE #931).
- (f) Trip generation based on ITE rates for Multifamily Housing (ITE #220).



City of Morro Bay - Bike Map



CLASSIFICATION

Bike Path (Class 1): Provides a completely separated right-of-way designated for the exclusive use of bicycles and pedestrians with crossflows by motorists minimized.

Bike Lane (Class 2): Provides a restricted right-of-way designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with vehicle parking and crossflows by pedestrians and motorists permitted. Bike lanes typically provide for one-way bicycle travel adjacent to the motor vehicle lane.

Bike Route (Class 3): Provides a right-of-way designated by signs or permanent pavement markings and shared with pedestrians or motorists. Bike Routes provide continuity to other bicycle facilities and have an advantage over alternative routes.

Recreational Route: A scenic route on low-traffic roads. Rural roads may have high speed vehicle traffic, varying shoulder widths, and challenging climbs. Travel way is shared with vehicles.

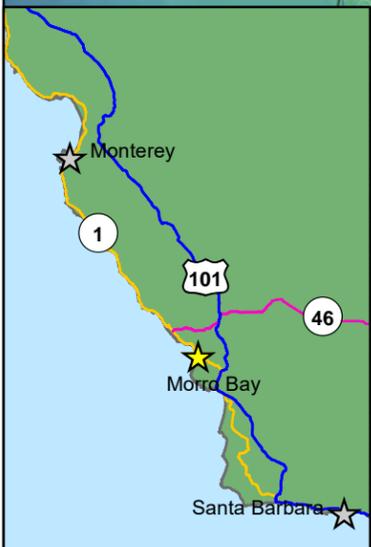
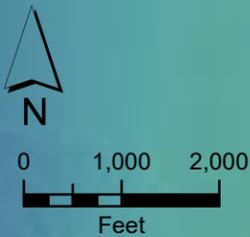
Transit Stop: Both regional (RTA) and local (MBT) serve Morro Bay. Bikes are not allowed on the bus, but they are equipped with bike racks on a firstcome, first-served basis. RTA buses have room for up to 6 bikes and MBT up to 2 bikes. Bus schedules and routes are posted at the stop and online at slorta.org and morro-bay.ca.us/mbt.

Legend

Bike Paths		State Park Trails		Controlled Crosswalks	
	Bike Bridge		Pedestrian Trail		Bike Racks
	Pacific Coast Bike Route		Bike/Pedestri... Trail		Transit Stops
	Class I (existing)		Unpaved Road		Campgrounds
	Class II (existing)	Countour Lines			Restrooms
	Class III (existing)		40 ft intervals		Shower Facilities
	Recreational Route	Elevation			Streets
			High		Streams
			Low		Shoreline
					Safe Route to School
					Parks
					Landmarks

NEW: Multi-Use Pedestrian and Bicycle Bridge

At Bus Stop: Restrooms, Bike Racks



For more info about Morro Bay State Park go to: http://www.parks.ca.gov/?page_id=594

State Park Marina with Cafe, Restrooms, and Trails

Work Only Land Use Projects

Work Only uses appropriate for this category include those where the primary source of trips is made by employees.

The analysis computes the VMT per employee and compares against the County thresholds



Project Information

Project Name: Vistra Energy Project - Phase II
Address: LITTLE MORRO CREEK CAYUCOS 00000
APN: 73051059
SLOCOG TAZ: 2081

VMT District: 70 Unincorp 5 Mile
Geographic Screening: Not eligible for geographic screening for this location

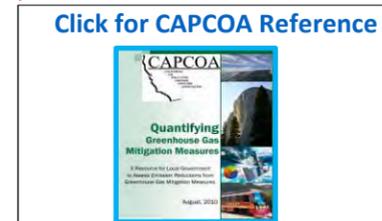
Employment Project Inputs

<--- Choose type of input (Jobs, Sq.Ft., Daily Trips)
 <--- Enter Number of Jobs

Mitigation:

If needed, Mitigation Analysis must be conducted separately, entered here, and approved by County of San Luis Obispo

<--- Choose type of Mitigation
 <--- Mitigation Percent
 <--- Slider for Mitigation Reduction



Notes:

- 1) Trip generation takes user input in units of Jobs
- 2) Default parameters used for VMT analysis
- 3) Mitigation Type = None; for a total reduction of 0%

Results

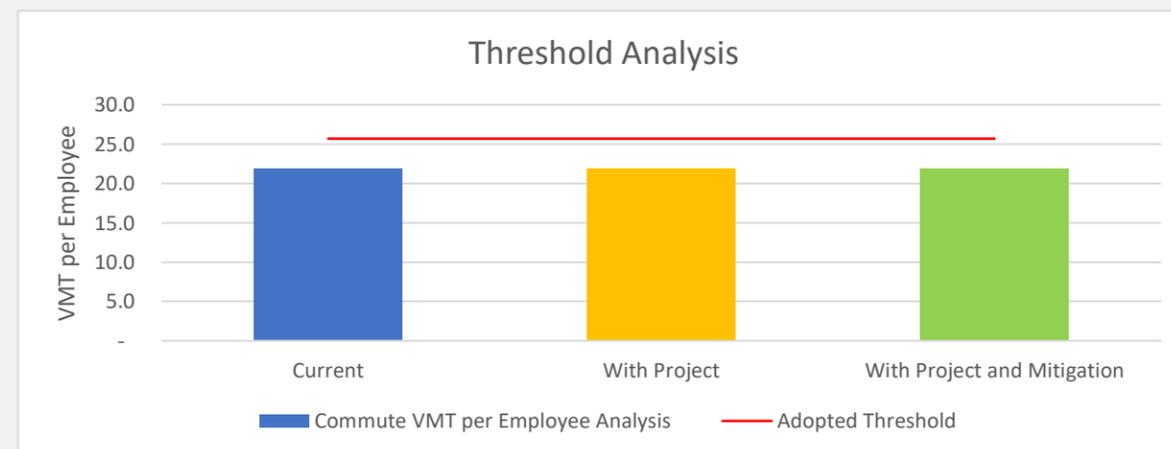
Not eligible for geographic screening for this location

Growth Assumptions

VMT District: Unincorp 5 Mile	Employment
Current	387
Added	300
New Total	687

Commute VMT per Employee Analysis

VMT District: Unincorp 5 Mile	VMT per Employee	Adopted Threshold
Current	21.9	25.7
With Project	22.0	25.7



Final Result:

Project Meets VMT per Employee Threshold

☆ 073-051-059

Link to [Assessment Information and Assessor Map](#)

Owner Address:

2460 GRACIA WAY
ARROYO GRANDE, CA
93420-5302

Assessor Street Address: 00000 LITTLE MORRO CREEK RD

Planning Property Addresses: click 'View Additional Details' below

Estimated Acres: 62.04* (survey required for accurate ac.)

Average Slope: 3%

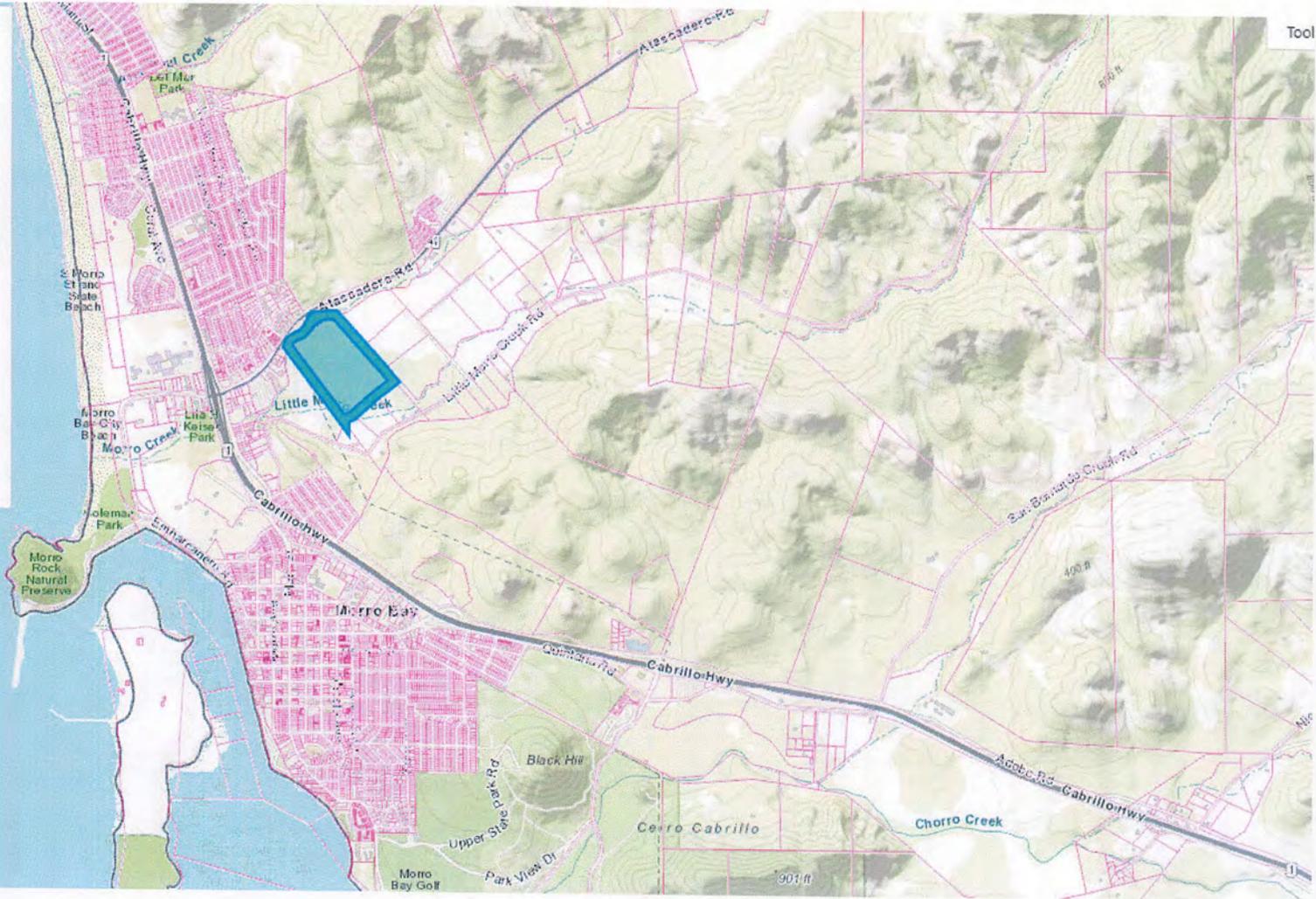
Description: PM 18-58 PTN PAR 1

Land Value: 896285

Improvement Value: 8650

Supervisor District: 2

[Add to Results](#) [View Additional Details](#) [Run a Report](#)



INTERSECTION LEVEL OF SERVICE CALCULATION WORKSHEETS

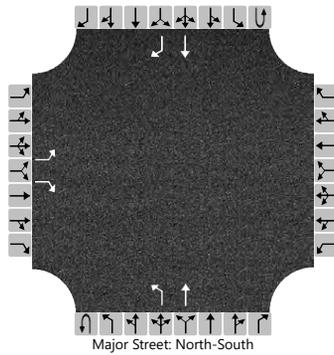
- Existing**
- Cumulative**
- Construction Phase**
- Demolition Phase**

EXISTING LEVEL OF SERVICE CALCULATION WORKSHEETS

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	DLD			Intersection	SR 1 NB/MAIN ST		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	1/13/2021			East/West Street	SR 1 NB RAMP		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	EXISTING CONDITIONS						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0		1	1	0		0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		77		72						122	206				264	9
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

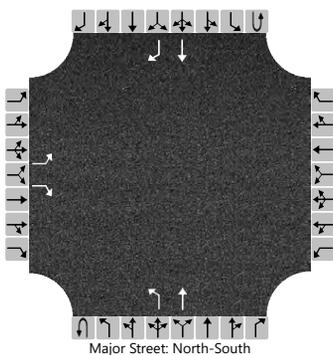
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		87		81						137						
Capacity, c (veh/h)		504		740						1248						
v/c Ratio		0.17		0.11						0.11						
95% Queue Length, Q ₉₅ (veh)		0.6		0.4						0.4						
Control Delay (s/veh)		13.6		10.5						8.2						
Level of Service (LOS)		B		B						A						
Approach Delay (s/veh)		12.1										3.1				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DLD	Intersection	SR 1 NB/MAIN ST
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	1/13/2021	East/West Street	SR 1 NB RAMP
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	EXISTING CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		44		112						224	458				305	1
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		45		115						231						
Capacity, c (veh/h)		297		724						1239						
v/c Ratio		0.15		0.16						0.19						
95% Queue Length, Q ₉₅ (veh)		0.5		0.6						0.7						
Control Delay (s/veh)		19.3		10.9						8.6						
Level of Service (LOS)		C		B						A						
Approach Delay (s/veh)		13.3										2.8				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

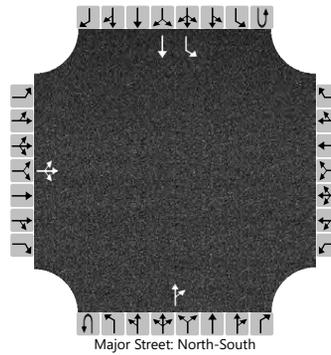
General Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	1/13/2021
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	North-South
Project Description	EXISTING CONDITIONS

Site Information

Intersection	SR 1 SB/MAIN STREET
Jurisdiction	MORRO BAY
East/West Street	SR 1 SB RAMPS
North/South Street	MAIN STREET
Peak Hour Factor	0.98
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		1	1	248							294	75		55	360		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.13	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

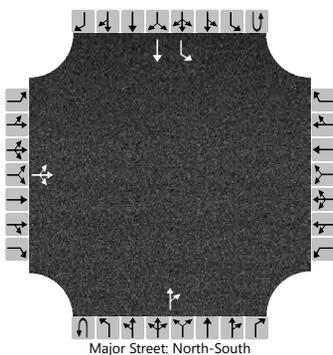
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			255												56			
Capacity, c (veh/h)			681												1176			
v/c Ratio			0.37												0.05			
95% Queue Length, Q ₉₅ (veh)			1.7												0.2			
Control Delay (s/veh)			13.4												8.2			
Level of Service (LOS)			B												A			
Approach Delay (s/veh)		13.4													1.1			
Approach LOS		B													A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	DLD	Intersection	SR 1 SB/MAIN STREET
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	1/13/2021	East/West Street	SR 1 SB RAMPS
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	EXISTING CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		3	1	263							652	84		49	379		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2											4.1	
Critical Headway (sec)		7.13	6.53	6.23											4.13	
Base Follow-Up Headway (sec)		3.5	4.0	3.3											2.2	
Follow-Up Headway (sec)		3.53	4.03	3.33											2.23	

Delay, Queue Length, and Level of Service

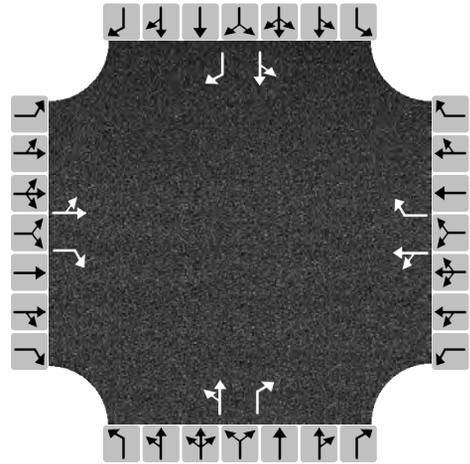
Flow Rate, v (veh/h)			275												51	
Capacity, c (veh/h)			666												848	
v/c Ratio			0.41												0.06	
95% Queue Length, Q ₉₅ (veh)			2.0												0.2	
Control Delay (s/veh)			14.2												9.5	
Level of Service (LOS)			B												A	
Approach Delay (s/veh)		14.2													1.1	
Approach LOS		B													A	

HCS All-Way Stop Control Report

General and Site Information

Analyst	DLD
Agency/Co.	ATE
Date Performed	1/13/2021
Analysis Year	
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	EXISTING CONDITIONS
Intersection	MAIN ST/BEACH ST
Jurisdiction	MORRO BAY
East/West Street	BEACH STREET
North/South Street	MAIN STREET
Peak Hour Factor	0.96

Lanes



Turning Movement Demand Volumes

Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	201	10	43	1	7	21	29	249	5	24	272	180
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments

Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		LT	R		LT	R		LT	R	
Flow Rate, v (veh/h)	220	45		8	22		290	5		308	188	
Percent Heavy Vehicles	2	2		2	2		2	2		2	2	
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.195	0.040		0.007	0.019		0.257	0.005		0.274	0.167	
Final Departure Headway, h _d (s)	7.00	5.82		7.07	6.31		6.15	5.40		5.93	5.19	
Final Degree of Utilization, x	0.427	0.072		0.016	0.038		0.495	0.008		0.508	0.270	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, t _s (s)	4.70	3.52		4.77	4.01		3.85	3.10		3.63	2.89	

Capacity, Delay and Level of Service

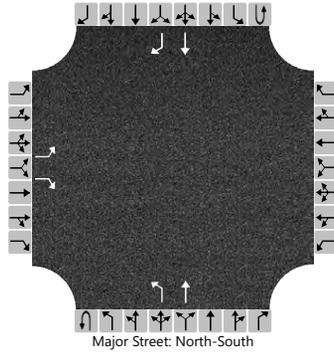
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		LT	R		LT	R		LT	R	
Flow Rate, v (veh/h)	220	45		8	22		290	5		308	188	
Capacity (veh/h)	515	619		509	570		585	667		607	693	
95% Queue Length, Q ₉₅ (veh)	2.1	0.2		0.0	0.1		2.7	0.0		2.9	1.1	
Control Delay (s/veh)	14.8	9.0		9.9	9.3		14.7	8.1		14.6	9.8	
Level of Service, LOS	B	A		A	A		B	A		B	A	
Approach Delay (s/veh) LOS	13.8		B	9.4		A	14.6		B	12.8		B
Intersection Delay (s/veh) LOS	13.4						B					

CUMULATIVE LEVEL OF SERVICE CALCULATION WORKSHEETS

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 NB/MAIN ST		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	10/17/2022			East/West Street	SR 1 NB RAMP		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE CONDITIONS						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0		0	1	1	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		77		95						135	206				264	9
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2							4.1					
Critical Headway (sec)		6.43		6.23							4.13					
Base Follow-Up Headway (sec)		3.5		3.3							2.2					
Follow-Up Headway (sec)		3.53		3.33							2.23					

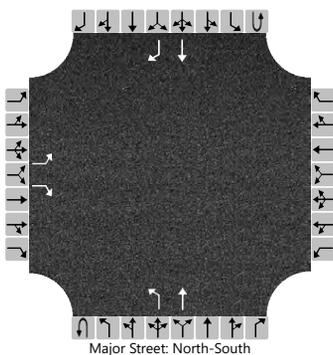
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		87		107							152					
Capacity, c (veh/h)		484		740							1248					
v/c Ratio		0.18		0.14							0.12					
95% Queue Length, Q ₉₅ (veh)		0.6		0.5							0.4					
Control Delay (s/veh)		14.0		10.7							8.3					
Level of Service (LOS)		B		B							A					
Approach Delay (s/veh)		12.2										3.3				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 NB/MAIN ST
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	10/17/2022	East/West Street	SR 1 NB RAMP
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	CUMULATIVE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		1	0	1		0	0	0		0	1	1	0	0	1	1	
Configuration		L		R						L	T				T	R	
Volume (veh/h)		44		127						250	458				305	1	
Percent Heavy Vehicles (%)		3		3						3							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No												No			
Median Type Storage		Left Only											3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2							4.1					
Critical Headway (sec)		6.43		6.23							4.13					
Base Follow-Up Headway (sec)		3.5		3.3							2.2					
Follow-Up Headway (sec)		3.53		3.33							2.23					

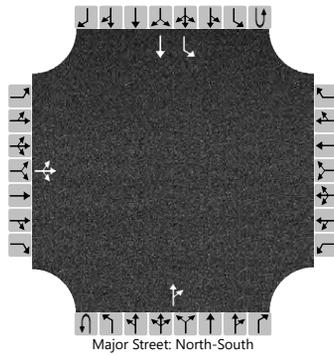
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		45		131							258							
Capacity, c (veh/h)		273		724							1239							
v/c Ratio		0.17		0.18							0.21							
95% Queue Length, Q ₉₅ (veh)		0.6		0.7							0.8							
Control Delay (s/veh)		20.8		11.1							8.7							
Level of Service (LOS)		C		B							A							
Approach Delay (s/veh)		13.6									3.1							
Approach LOS		B									A							

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 SB/MAIN STREET		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	10/17/2022			East/West Street	SR 1 SB RAMPS		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.98		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE CONDITIONS						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		1	1	269							307	83		55	383		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.13	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

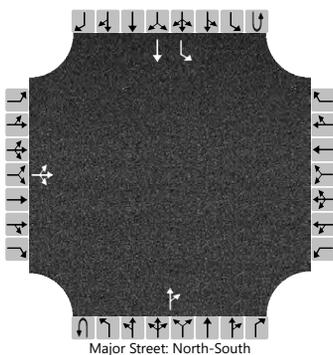
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			277											56			
Capacity, c (veh/h)			660											1155			
v/c Ratio			0.42											0.05			
95% Queue Length, Q ₉₅ (veh)			2.1											0.2			
Control Delay (s/veh)			14.3											8.3			
Level of Service (LOS)			B											A			
Approach Delay (s/veh)		14.3												1.0			
Approach LOS		B												A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 SB/MAIN STREET
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	10/17/2022	East/West Street	SR 1 SB RAMPS
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	CUMULATIVE CONDITIONS		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		3	1	281							678	109		49	394		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

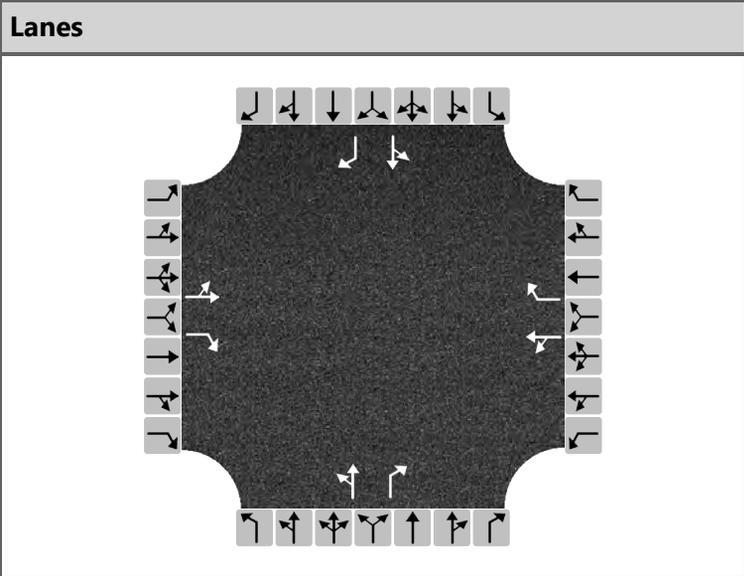
Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.13	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			294												51			
Capacity, c (veh/h)			652												811			
v/c Ratio			0.45												0.06			
95% Queue Length, Q ₉₅ (veh)			2.3												0.2			
Control Delay (s/veh)			15.0												9.7			
Level of Service (LOS)			B												A			
Approach Delay (s/veh)		15.0													1.1			
Approach LOS		B													A			

HCS All-Way Stop Control Report

General and Site Information	
Analyst	GOM
Agency/Co.	ATE
Date Performed	10/17/2022
Analysis Year	
Analysis Time Period (hrs)	0.25
Time Analyzed	PM PEAK HOUR
Project Description	CUMULATIVE CONDITIONS
Intersection	MAIN ST/BEACH ST
Jurisdiction	MORRO BAY
East/West Street	BEACH STREET
North/South Street	MAIN STREET
Peak Hour Factor	0.96



Turning Movement Demand Volumes												
Approach	Eastbound			Westbound			Northbound			Southbound		
	L	T	R	L	T	R	L	T	R	L	T	R
Movement												
Volume (veh/h)	218	10	43	1	7	21	29	283	5	24	294	191
% Thrus in Shared Lane												

Lane Flow Rate and Adjustments												
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		LT	R		LT	R		LT	R	
Flow Rate, v (veh/h)	238	45		8	22		325	5		331	199	
Percent Heavy Vehicles	2	2		2	2		2	2		2	2	
Initial Departure Headway, h _d (s)	3.20	3.20		3.20	3.20		3.20	3.20		3.20	3.20	
Initial Degree of Utilization, x	0.211	0.040		0.007	0.019		0.289	0.005		0.294	0.177	
Final Departure Headway, h _d (s)	7.18	6.00		7.34	6.57		6.30	5.55		6.09	5.35	
Final Degree of Utilization, x	0.474	0.075		0.017	0.040		0.569	0.008		0.560	0.296	
Move-Up Time, m (s)	2.3	2.3		2.3	2.3		2.3	2.3		2.3	2.3	
Service Time, t _s (s)	4.88	3.70		5.04	4.27		4.00	3.25		3.79	3.05	

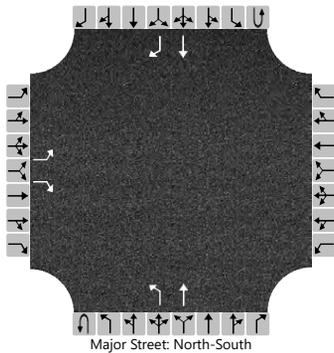
Capacity, Delay and Level of Service												
Approach	Eastbound			Westbound			Northbound			Southbound		
	L1	L2	L3	L1	L2	L3	L1	L2	L3	L1	L2	L3
Lane												
Configuration	LT	R		LT	R		LT	R		LT	R	
Flow Rate, v (veh/h)	238	45		8	22		325	5		331	199	
Capacity (veh/h)	501	600		491	548		571	648		592	673	
95% Queue Length, Q ₉₅ (veh)	2.5	0.2		0.1	0.1		3.5	0.0		3.5	1.2	
Control Delay (s/veh)	16.2	9.2		10.2	9.5		17.0	8.3		16.3	10.3	
Level of Service, LOS	C	A		B	A		C	A		C	B	
Approach Delay (s/veh) LOS	15.1	C		9.7	A		16.8	C		14.0	B	
Intersection Delay (s/veh) LOS	15.0						B					

CONSTRUCTION PHASE LEVEL OF SERVICE CALCULATION WORKSHEETS

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 NB/MAIN ST		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	1/13/2021			East/West Street	SR 1 NB RAMP		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	EXISTING + PROJECT - CONSTRUCTION PHASE						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0		0	1	1	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		77		123						122	206				264	9
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

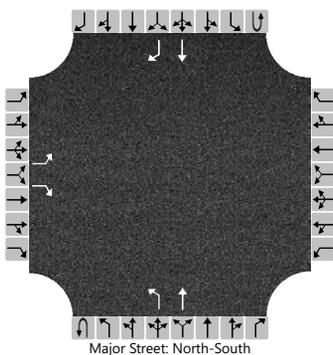
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		87		138						137						
Capacity, c (veh/h)		504		740						1248						
v/c Ratio		0.17		0.19						0.11						
95% Queue Length, Q ₉₅ (veh)		0.6		0.7						0.4						
Control Delay (s/veh)		13.6		11.0						8.2						
Level of Service (LOS)		B		B						A						
Approach Delay (s/veh)		12.0										3.1				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 NB/MAIN ST		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	10/17/2022			East/West Street	SR 1 NB RAMP		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE + PROJECT - CONSTRUCTION PHASE						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0		1	1	0		0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		77		146						135	206				264	9
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

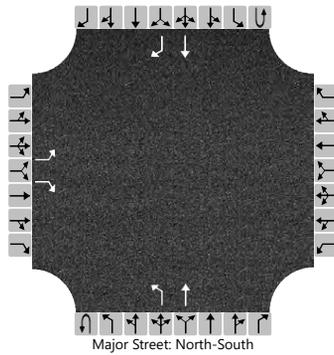
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		87		164						152						
Capacity, c (veh/h)		484		740						1248						
v/c Ratio		0.18		0.22						0.12						
95% Queue Length, Q ₉₅ (veh)		0.6		0.8						0.4						
Control Delay (s/veh)		14.0		11.2						8.3						
Level of Service (LOS)		B		B						A						
Approach Delay (s/veh)		12.2										3.3				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 NB/MAIN ST		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	1/13/2021			East/West Street	SR 1 NB RAMP		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	PM PEAK HOUR			Peak Hour Factor	0.97		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	EXISTING + PROJECT - CONSTRUCTION PHASE						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0		1	1	0		0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		44		118						224	458				305	1
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

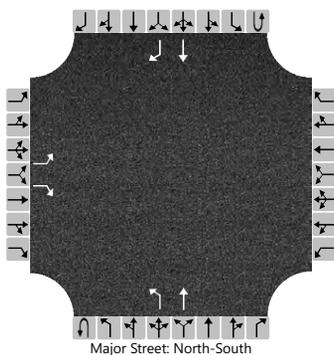
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		45		122						231						
Capacity, c (veh/h)		297		724						1239						
v/c Ratio		0.15		0.17						0.19						
95% Queue Length, Q ₉₅ (veh)		0.5		0.6						0.7						
Control Delay (s/veh)		19.3		11.0						8.6						
Level of Service (LOS)		C		B						A						
Approach Delay (s/veh)		13.2										2.8				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 NB/MAIN ST
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	10/17/2022	East/West Street	SR 1 NB RAMP
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	CUMULATIVE + PROJECT - CONSTRUCTION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		1	0	1		0	0	0		0	1	1	0	0	1	1	
Configuration		L		R						L	T				T	R	
Volume (veh/h)		44		133						250	458				305	1	
Percent Heavy Vehicles (%)		3		3						3							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No												No			
Median Type Storage		Left Only											3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2							4.1					
Critical Headway (sec)		6.43		6.23							4.13					
Base Follow-Up Headway (sec)		3.5		3.3							2.2					
Follow-Up Headway (sec)		3.53		3.33							2.23					

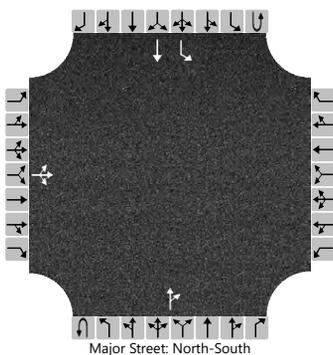
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		45		137							258							
Capacity, c (veh/h)		273		724							1239							
v/c Ratio		0.17		0.19							0.21							
95% Queue Length, Q ₉₅ (veh)		0.6		0.7							0.8							
Control Delay (s/veh)		20.8		11.1							8.7							
Level of Service (LOS)		C		B							A							
Approach Delay (s/veh)		13.5									3.1							
Approach LOS		B									A							

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 SB/MAIN STREET
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	1/13/2021	East/West Street	SR 1 SB RAMPS
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.98
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	EXISTING + PROJECT - CONSTRUCTION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		1	1	278							294	81		55	411		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2											4.1	
Critical Headway (sec)		7.13	6.53	6.23											4.13	
Base Follow-Up Headway (sec)		3.5	4.0	3.3											2.2	
Follow-Up Headway (sec)		3.53	4.03	3.33											2.23	

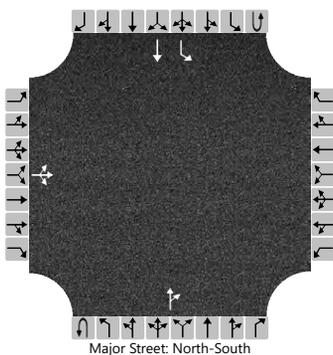
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			286												56	
Capacity, c (veh/h)			636												1170	
v/c Ratio			0.45												0.05	
95% Queue Length, Q ₉₅ (veh)			2.3												0.2	
Control Delay (s/veh)			15.2												8.2	
Level of Service (LOS)			C												A	
Approach Delay (s/veh)		15.2													1.0	
Approach LOS		C													A	

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 SB/MAIN STREET
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	10/17/2022	East/West Street	SR 1 SB RAMPS
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.98
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	CUMULATIVE + PROJECT - CONSTRUCTION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		1	1	299							307	89		55	434		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2											4.1	
Critical Headway (sec)		7.13	6.53	6.23											4.13	
Base Follow-Up Headway (sec)		3.5	4.0	3.3											2.2	
Follow-Up Headway (sec)		3.53	4.03	3.33											2.23	

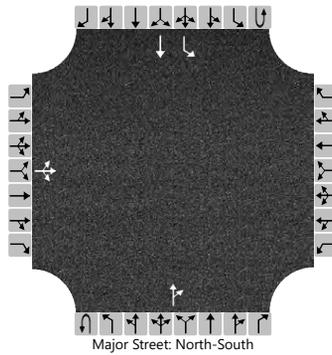
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			307												56	
Capacity, c (veh/h)			617												1149	
v/c Ratio			0.50												0.05	
95% Queue Length, Q ₉₅ (veh)			2.8												0.2	
Control Delay (s/veh)			16.5												8.3	
Level of Service (LOS)			C												A	
Approach Delay (s/veh)		16.5													0.9	
Approach LOS		C													A	

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 SB/MAIN STREET
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	1/13/2021	East/West Street	SR 1 SB RAMPS
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	EXISTING + PROJECT - CONSTRUCTION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		3	1	263							652	90		49	385		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.13	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

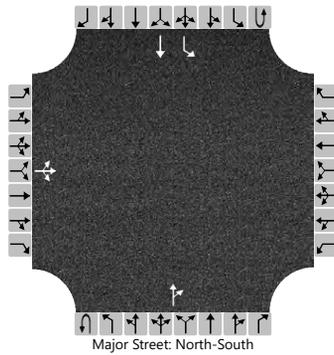
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			275												51			
Capacity, c (veh/h)			660												844			
v/c Ratio			0.42												0.06			
95% Queue Length, Q ₉₅ (veh)			2.1												0.2			
Control Delay (s/veh)			14.3												9.5			
Level of Service (LOS)			B												A			
Approach Delay (s/veh)		14.3													1.1			
Approach LOS		B													A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 SB/MAIN STREET
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	10/17/2022	East/West Street	SR 1 SB RAMPS
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	CUMULATIVE + PROJECT - CONSTRUCTION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		3	1	281							678	115		49	400		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2											4.1	
Critical Headway (sec)		7.13	6.53	6.23											4.13	
Base Follow-Up Headway (sec)		3.5	4.0	3.3											2.2	
Follow-Up Headway (sec)		3.53	4.03	3.33											2.23	

Delay, Queue Length, and Level of Service

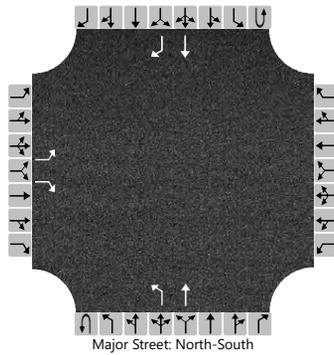
Flow Rate, v (veh/h)			294												51	
Capacity, c (veh/h)			647												806	
v/c Ratio			0.45												0.06	
95% Queue Length, Q ₉₅ (veh)			2.4												0.2	
Control Delay (s/veh)			15.1												9.8	
Level of Service (LOS)			C												A	
Approach Delay (s/veh)		15.1													1.1	
Approach LOS		C													A	

DEMOLITION PHASE LEVEL OF SERVICE CALCULATION WORKSHEETS

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 NB/MAIN ST		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	1/13/2021			East/West Street	SR 1 NB RAMP		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.89		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	EXISTING + PROJECT - DEMOLITION PHASE						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1	
Configuration		L		R						L	T				T	R	
Volume (veh/h)		77		83						122	206				264	9	
Percent Heavy Vehicles (%)		3		3						3							
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized		No												No			
Median Type Storage		Left Only											3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

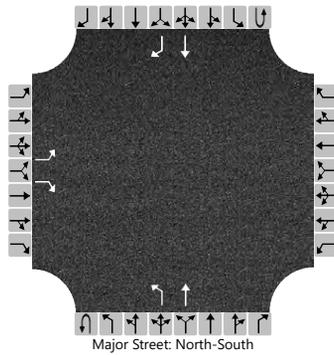
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		87		93						137						
Capacity, c (veh/h)		504		740						1248						
v/c Ratio		0.17		0.13						0.11						
95% Queue Length, Q ₉₅ (veh)		0.6		0.4						0.4						
Control Delay (s/veh)		13.6		10.6						8.2						
Level of Service (LOS)		B		B						A						
Approach Delay (s/veh)		12.0								3.1						
Approach LOS		B								A						

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 NB/MAIN ST
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	10/17/2022	East/West Street	SR 1 NB RAMP
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	AM PEAK HOUR	Peak Hour Factor	0.89
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	CUMULATIVE + PROJECT CONDITIONS - DEMOLITION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0		1	1	0		0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		77		106						135	206				264	9
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		87		119						152						
Capacity, c (veh/h)		484		740						1248						
v/c Ratio		0.18		0.16						0.12						
95% Queue Length, Q ₉₅ (veh)		0.6		0.6						0.4						
Control Delay (s/veh)		14.0		10.8						8.3						
Level of Service (LOS)		B		B						A						
Approach Delay (s/veh)		12.2										3.3				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

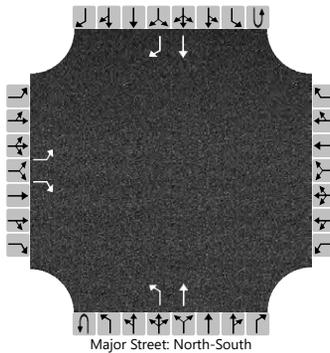
General Information

Analyst	GOM
Agency/Co.	ATE
Date Performed	1/13/2021
Analysis Year	
Time Analyzed	PM PEAK HOUR
Intersection Orientation	North-South
Project Description	EXISTING + PROJECT - DEMOLITION PHASE

Site Information

Intersection	SR 1 NB/MAIN ST
Jurisdiction	MORRO BAY
East/West Street	SR 1 NB RAMP
North/South Street	MAIN STREET
Peak Hour Factor	0.97
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0		0	1	1	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		44		114						246	458				305	1
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

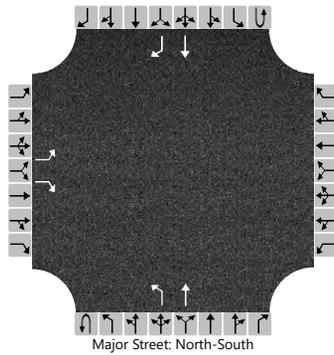
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		45		118						254						
Capacity, c (veh/h)		277		724						1239						
v/c Ratio		0.16		0.16						0.20						
95% Queue Length, Q ₉₅ (veh)		0.6		0.6						0.8						
Control Delay (s/veh)		20.5		10.9						8.7						
Level of Service (LOS)		C		B						A						
Approach Delay (s/veh)		13.6										3.0				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 NB/MAIN ST
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	10/17/2022	East/West Street	SR 1 NB RAMP
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	CUMULATIVE + PROJECT CONDITIONS - DEMOLITION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound			
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Movement																
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6
Number of Lanes		1	0	1		0	0	0	0	1	1	0	0	0	1	1
Configuration		L		R						L	T				T	R
Volume (veh/h)		44		129						272	458				305	1
Percent Heavy Vehicles (%)		3		3						3						
Proportion Time Blocked																
Percent Grade (%)		0														
Right Turn Channelized		No										No				
Median Type Storage		Left Only										3				

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1		6.2						4.1						
Critical Headway (sec)		6.43		6.23						4.13						
Base Follow-Up Headway (sec)		3.5		3.3						2.2						
Follow-Up Headway (sec)		3.53		3.33						2.23						

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)		45		133						280						
Capacity, c (veh/h)		254		724						1239						
v/c Ratio		0.18		0.18						0.23						
95% Queue Length, Q ₉₅ (veh)		0.6		0.7						0.9						
Control Delay (s/veh)		22.2		11.1						8.8						
Level of Service (LOS)		C		B						A						
Approach Delay (s/veh)		13.9										3.3				
Approach LOS		B										A				

HCS Two-Way Stop-Control Report

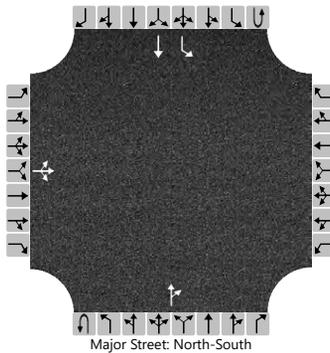
General Information

Analyst	GOM
Agency/Co.	ATE
Date Performed	1/13/2021
Analysis Year	
Time Analyzed	AM PEAK HOUR
Intersection Orientation	North-South
Project Description	EXISTING + PROJECT - DEMOLITION PHASE

Site Information

Intersection	SR 1 SB/MAIN STREET
Jurisdiction	MORRO BAY
East/West Street	SR 1 SB RAMPS
North/South Street	MAIN STREET
Peak Hour Factor	0.98
Analysis Time Period (hrs)	0.25

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		1	1	253							294	76		55	371		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.13	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

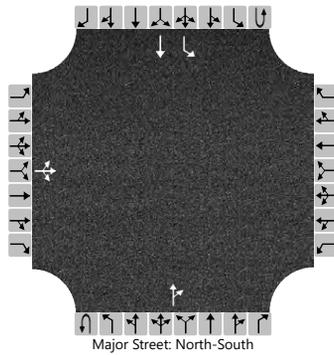
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			260												56			
Capacity, c (veh/h)			671												1175			
v/c Ratio			0.39												0.05			
95% Queue Length, Q ₉₅ (veh)			1.8												0.2			
Control Delay (s/veh)			13.7												8.2			
Level of Service (LOS)			B												A			
Approach Delay (s/veh)		13.7													1.1			
Approach LOS		B													A			

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 SB/MAIN STREET		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	10/17/2022			East/West Street	SR 1 SB RAMPS		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	AM PEAK HOUR			Peak Hour Factor	0.98		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE + PROJECT CONDITIONS - DEMOLITION PHASE						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		1	1	274							307	85		55	394		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2										4.1		
Critical Headway (sec)		7.13	6.53	6.23										4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3										2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33										2.23		

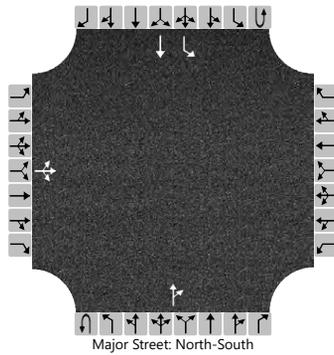
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			282												56			
Capacity, c (veh/h)			651												1153			
v/c Ratio			0.43												0.05			
95% Queue Length, Q ₉₅ (veh)			2.2												0.2			
Control Delay (s/veh)			14.7												8.3			
Level of Service (LOS)			B												A			
Approach Delay (s/veh)		14.7													1.0			
Approach LOS		B													A			

HCS Two-Way Stop-Control Report

General Information		Site Information	
Analyst	GOM	Intersection	SR 1 SB/MAIN STREET
Agency/Co.	ATE	Jurisdiction	MORRO BAY
Date Performed	1/13/2021	East/West Street	SR 1 SB RAMPS
Analysis Year		North/South Street	MAIN STREET
Time Analyzed	PM PEAK HOUR	Peak Hour Factor	0.97
Intersection Orientation	North-South	Analysis Time Period (hrs)	0.25
Project Description	EXISTING + PROJECT - DEMOLITION PHASE		

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound					
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R		
Movement																		
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6		
Number of Lanes		0	1	0		0	0	0	0	0	1	0	0	1	1	0		
Configuration			LTR									TR		L	T			
Volume (veh/h)		3	1	263							674	119		49	381			
Percent Heavy Vehicles (%)		3	3	3										3				
Proportion Time Blocked																		
Percent Grade (%)		0																
Right Turn Channelized																		
Median Type Storage		Undivided																

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2											4.1		
Critical Headway (sec)		7.13	6.53	6.23											4.13		
Base Follow-Up Headway (sec)		3.5	4.0	3.3											2.2		
Follow-Up Headway (sec)		3.53	4.03	3.33											2.23		

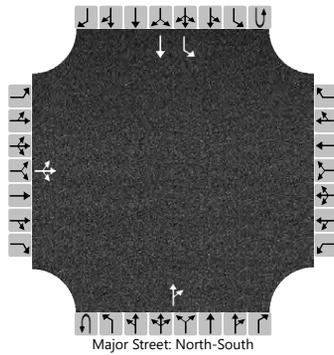
Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			275												51		
Capacity, c (veh/h)			664												806		
v/c Ratio			0.41												0.06		
95% Queue Length, Q ₉₅ (veh)			2.0												0.2		
Control Delay (s/veh)			14.2												9.8		
Level of Service (LOS)			B												A		
Approach Delay (s/veh)		14.2													1.1		
Approach LOS		B													A		

HCS Two-Way Stop-Control Report

General Information				Site Information			
Analyst	GOM			Intersection	SR 1 SB/MAIN STREET		
Agency/Co.	ATE			Jurisdiction	MORRO BAY		
Date Performed	10/17/2022			East/West Street	SR 1 SB RAMPS		
Analysis Year				North/South Street	MAIN STREET		
Time Analyzed	PM PEAK HOUR			Peak Hour Factor	0.97		
Intersection Orientation	North-South			Analysis Time Period (hrs)	0.25		
Project Description	CUMULATIVE + PROJECT CONDITIONS - DEMOLITION PHASE						

Lanes



Vehicle Volumes and Adjustments

Approach	Eastbound				Westbound				Northbound				Southbound				
	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R	
Movement																	
Priority		10	11	12		7	8	9	1U	1	2	3	4U	4	5	6	
Number of Lanes		0	1	0		0	0	0		0	1	0		0	1	0	
Configuration			LTR									TR		L	T		
Volume (veh/h)		3	1	281							700	144		49	396		
Percent Heavy Vehicles (%)		3	3	3										3			
Proportion Time Blocked																	
Percent Grade (%)		0															
Right Turn Channelized																	
Median Type Storage		Undivided															

Critical and Follow-up Headways

Base Critical Headway (sec)		7.1	6.5	6.2											4.1	
Critical Headway (sec)		7.13	6.53	6.23											4.13	
Base Follow-Up Headway (sec)		3.5	4.0	3.3											2.2	
Follow-Up Headway (sec)		3.53	4.03	3.33											2.23	

Delay, Queue Length, and Level of Service

Flow Rate, v (veh/h)			294												51	
Capacity, c (veh/h)			650												770	
v/c Ratio			0.45												0.07	
95% Queue Length, Q ₉₅ (veh)			2.4												0.2	
Control Delay (s/veh)			15.0												10.0	
Level of Service (LOS)			C												B	
Approach Delay (s/veh)		15.0													1.1	
Approach LOS		C													A	